

**PRIMARY CARE, PUBLIC HEALTH AND THE INTERSECTORAL MANAGEMENT OF
HEALTH DETERMINANTS: A REALIST INQUIRY**

by

Veronic Clair

M.Sc., Montréal University, 1999

M.D., Montréal University, 2001

Certificant, Family Medicine, University of British Columbia, 2004

Fellow, Royal College of Physician and Surgeons of Canada, Public Health and Preventive
Medicine, University of British Columbia, 2006

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

in

THE FACULTY OF GRADUATE AND POSTDOCTORAL STUDIES
(Population and Public Health)

THE UNIVERSITY OF BRITISH COLUMBIA

(Vancouver)

October 2014

© Veronic Clair, 2014

Abstract

Problem: International bodies such as the World Health Organization call on nation-states to more adequately address health determinants (HD) and strengthen primary healthcare through *intersectoral action for health* (IAH). Despite many leaders expressing the desire to strengthen IAH, in many countries, practitioners and policy-makers struggle to succeed. This study aims to deepen the understanding of *how* to maximize the impact on health and HD through collaborations between primary care providers (PCP), public health professionals (PHP), and representatives of sectors other than the health sector (ROS).

Method: This research includes a supplementary analysis of a mixed-methods case study on Cuban IAH to clarify and compare the roles of the various actors of interest (PCP, PHP, ROS) in managing HD, including the contexts, mechanisms, and outcomes (CMO) in which IAH occurs in Cuba when involving those particular actors. This is followed by a knowledge synthesis of IAH interventions internationally, providing a variety of different contexts, which enables systematic comparison of the various CMO configurations extracted from those interventions, following a method inspired by realist synthesis. Data for the final CMO analysis and demi-regularity are drawn from both the Cuban case study and the other examples of IAH from around the world that involved PCP, PHP, and ROS.

Conclusions: IAH involving PHP, PCP, and ROS can lead to significant, positive health outcomes through the management of HD. A key context in which significant improvement in HD and health outcome occurs is when the IAH are carefully planned based on prior evidence and best practices related to partnership building and public health. Key mechanisms of those interventions include: 1) systematic attention to infrastructures, and activities that successfully increase social capital; 2) which in turn supports the negotiation of complementary and synergistic roles between PCP, PHP and ROS, and 3) using cycles of adjustment based on best practices of quality improvement which enable cumulative and reinforcing synergies over time (years and decades), as projects unfold in complex changing policy and practice environments, and as the multiple actors increase their social capital and experience in dealing with health determinants.

Preface

This study could not have taken the shape it has without building extensively on the work carried out by the University of British Columbia (UBC) - and Cuban-based research team of which I was a part. Along with colleagues and other researchers from UBC and Cuba, including Jerry Spiegel, Milagros Alegret, Nino Pagliccia, Barbara Martinez, Mariano Bonet, and Annalee Yassi among others, I participated in an in-depth case study of Cuban management of health determinants at the municipal level. From the development of the initial concept to the publication of our results, I played various roles and therefore performed a variety of tasks (primarily during 2004-2006), including collecting relevant literature and contributing to the development of the Spanish-language survey and focus group guide for that case study. In close collaboration with the other team members, I contributed significantly to the qualitative analysis of the main case study's focus groups to ascertain a correct interpretation of the transcripts. I participated in two field trips associated with the study, as well as in several workshops to collect the case examples and reach a final interpretation of the case study findings, under the leadership of Drs. Yassi and Spiegel, who are two members of my thesis committee. It should be noted that our team's approach was inspired, in part, by a similar study that explored how Canadian public health institutions address health determinants ([Frankish et al., 2007](#)).

The findings of the case study, of which I am a co-author, are presented in "Intersectoral action for health at a municipal level in Cuba," published in the International Journal of Public Health ([Spiegel et al., 2012](#)). I contributed to approximately 15% of the design, analysis, and writing of that study, under the leadership of Drs. Spiegel and Yassi. This article is quoted extensively in several places in the current document (with appropriate permissions obtained) as it provides useful information on the broad contexts, mechanisms, and outcomes of intersectoral collaboration to manage health determinants in Cuba.

The differing focus of my PhD thesis (as opposed to the full case study) was established prior to the obtainment of ethics approval, and I am acknowledged as a PhD student and a co-investigator on both the pilot study and the full case study. Both received ethics approval from the UBC Behavioural Research Ethics Board, respectively as (H04-80624) B04-0624 - Developing Methodology to Understanding the Cuban Paradox: A Pilot Study on the Determinants of Health in

Cuba and (H06-80184) B06-0184 - Inter-Sectoral Collaboration in Securing Excellent Health Outcome: A Multi-Methods Study.

Although my contribution to the case study forms an integral part of the work carried out in this thesis, it must be understood that in my supplementary analysis of the Cuban data, the frame of reference was shifted from a focus on the overall analysis of IAH (with some contrast of how it is practiced in rural communities and in urban communities), to a focus on the nature of the interaction *between the practitioners*, in an urban setting. I owe a great debt to the other team members, and am appreciative for their openness to using part of our collective findings in this thesis, which is appropriately cited, mainly in Chapter 3, section 3.1. Subsequent analysis of the data, mostly presented in section 3.2 to 3.4, were carried out by myself with much-appreciated advice from my thesis advisory committee members, Dr. Jerry Spiegel, Dr. Annalee Yassi, Dr. Robert Woollard, and Dr. Marjorie MacDonald.

The design of the supplementary analysis was developed to assess the similarities and differences between the roles of PCP, PHP, and ROS in managing HD through IAH in Cuba, as well as to determine in what context those collaborations occur, through what mechanisms, and with what outcomes. The supplementary analysis was mostly designed and performed by myself. The statistical plan and analysis presented in the article mentioned in the previous paragraph were designed and performed by Nino Pagliccia, a PhD statistician who worked with the Global Health Research Program until shortly before I started my own analysis plan for my PhD thesis ([Spiegel et al., 2012](#)). That analysis inspired part of my own statistical analysis plan. I also consulted with Jonathan Berkowitz, a PhD statistician affiliated with UBC's Department of Family Practice. He provided advice on the analysis strategy based on my draft analysis plan and research questions, helped to clean and reformat the data, and wrote some of the commands in the SPSS syntax files. Some of the statistical analyses were inspired by the analyses that were done as part of the full case study published in the article mentioned previously. However, due to a mistake in coding some of the categories and decisions to group some previously separated categories, I ended up re-running all the analyses. For the qualitative analysis, I consulted Dr. Guenther Krueger, a qualitative design and NVivo consultant recommended to me by my advisory committee. The analytic design for the supplementary analysis of the Cuban case study was discussed during thesis committee meetings, as well as during Canada-Cuba research team meetings, which did not result in any major changes.

Table of contents

Abstract.....	ii
Preface.....	iii
Table of contents	v
List of tables.....	vii
List of figures.....	viii
List of symbols and abbreviations	ix
Glossary	xi
Acknowledgements	xiv
Chapter 1: Introduction	1
1.1 Health determinants	1
1.2 Primary care.....	9
1.3 Intersectoral collaboration	16
1.4 Why Cuba's achievements matter	19
1.5 Research question and purposes	23
Chapter 2: Methodology.....	25
2.1 Evolution of the research process and researcher reflexivity	25
2.1.1 Secondary use of qualitative data and qualitative methods.....	27
2.1.2 Addition of a realist inquiry lens	29
2.2 Supplementary analysis of the Cuban case study	30
2.2.1 Focus group and survey participants	33
2.2.2 Focus group methods	37
2.2.3 Survey analysis.....	42
2.2.4 Integration of the supplementary analysis of the Cuban case study.....	45
2.3 Realist synthesis	46
2.3.1 Search strategy	56
2.3.2 Inclusion and exclusion criteria.....	58
2.3.3 Extraction tool.....	62
Chapter 3: Cuba's management of health determinants	63
3.1 Relevant information from the case study primary analysis including document review and field visits	63
3.2 Results of the focus groups.....	76
3.2.1 Conceptualization of health determinants	78
3.2.2 Priority in managing health determinants	85
3.2.3 Management of health determinants	87
3.2.3.1 Strategies to manage health determinants from the various professional groups.....	87
3.2.3.2 Internal actions and intersectoral collaboration to manage health determinants	90
3.2.3.3 Decision-making, evaluation, successes, and challenges	96
3.3 Quantitative findings and the integration of survey and focus group results	107
3.3.1 Prioritization of health determinants	108
3.3.2 Intensity of participation in internal actions to manage health determinants	112
3.3.3 Actions within participants' own organization mentioned most frequently as important in addressing each health determinants	116
3.3.4 Intersectoral collaboration.....	122
3.3.4.1 Intersectoral collaboration by health determinants and professional groups.....	122
3.3.4.2 Intersectoral collaboration by health determinants, sectors, and professional groups.....	123

3.3.4.3	Intensity of collaboration.....	128
3.3.4.4	Frequency of intersectoral collaboration	130
3.4	Building a framework to describe the system of intersectoral collaboration involving primary care providers and public health personnel with other sectors to address health determinants in Cuba	132
3.4.1	Context	132
3.4.2	General mechanisms	134
3.4.3	Mechanism of contributions of various groups: primary care, public health, municipal, and local leaders. 137	
3.4.4	Outcomes of the health creation system.....	144
Chapter 4:	Realist review results.....	147
4.1	Articles included in the realist review and the health determinants they address	147
4.2	CMO of larger initiatives initiated by organizations with expertise in IAH and public health	156
4.2.1	Context	156
4.2.2	Mechanisms.....	159
4.2.3	Outcomes.....	169
4.3	CMO of smaller projects	177
Chapter 5:	Conclusion.....	179
5.1	Discussion of key findings from the re-analysis of the Cuban case study and the realist review	179
5.1.1	Common and divergent contexts	180
5.1.2	Common mechanisms	186
5.1.3	Common outcomes.....	201
5.2	How rigour was ensured in the research process	205
5.3	Limitations.....	207
5.3.1	Limitations of the Cuban case study re-analysis	207
5.3.2	Limitations of the realist review.....	210
5.4	Implications for future research and practice	221
Bibliography	226
Appendix A	Focus group and survey instruments.....	250
A.1	Focus group guide	250
A.2	Final survey questionnaire	253
A.3	Definition of terms provided to participants in the focus groups.....	257
Appendix B	Details of the search strategies	259
Appendix C	Extra data tables and analysis from the survey priority ranking question	262
Appendix D	Detailed statistics on internal action to manage health determinants.....	273
Appendix E	Detailed statistics on intersectoral collaboration.....	285
Appendix F	Details of the studies included in the realist review	293

List of tables

Table 1 Public health and primary care collaboration barriers and facilitators adapted from Valaitis & al.....	14
Table 2 Specific databases searched	58
Table 3 Inclusion and exclusion criteria for the realist synthesis	61
Table 4 Vertical and horizontal integration of Cuban government and health institutions	71
Table 5 Organizations represented in the Santa-Clara focus group.....	77
Table 6 Health determinants priorities by focus groups	86
Table 7 Strategies used to manage health determinants	89
Table 8 Actions listed in the local leaders focus groups.....	93
Table 9 Actions listed in the municipal leaders focus groups	94
Table 10 Actions listed in the primary care and public health focus groups	96
Table 11 Intersectoral actions most important to further improve the health of the population	103
Table 12 Mean ranking of health determinants by professional groups	111
Table 13 Integration of priority health determinants across focus groups and survey	111
Table 14 Mean level of internal action on each health determinant by professional groups.....	115
Table 15 Actions most important in managing health determinants internally	119
Table 16 Intersectoral collaboration listed.....	123
Table 17 Sectors involved in addressing each health determinant by professional group	126
Table 18 Intensity of collaboration by professional groups.....	129
Table 19 Frequency of collaboration by professional groups.....	131
Table 20 Summary of social mechanisms facilitating Intersectoral Action for Health Determinants, involving PC, PH and OS, in the Cuban model.....	143
Table 21 Projects and references included in the realist review	152
Table 22 REACH outcomes.....	172
Table 23 Mechanisms in intersectoral action on health determinants (ISA HD) using complexity concepts.....	200
Table 24 Summary of research questions associated with gaps in knowledge, methods, and findings	204
Table 25 Normality tests, all participants	262
Table 26 Normality tests by professional groups	263
Table 27 Details statistics for priority ranking of health determinants by professional groups	264
Table 28 Tests of normality, all participants	266
Table 29 Tests of normality for each professional group	267
Table 30 Kruskal-Wallis analysis of health determinants prioritization	268
Table 31 Descriptive statistics of the level of internal action on health determinants by professional groups.....	270
Table 32 Test of normality of intensity of internal action for each health determinant	272
Table 33 Kruskal-Wallis analysis of internal action level	273
Table 34 Intensity of internal action by health determinant and professional group.....	283
Table 35 Organizations participating in intersectoral collaboration, by sector, for each health determinant	285
Table 36 Full and frequent collaboration by sector, health determinant, and group	287
Table 37 Interventions retained in the realist review and the health determinants they addressed	293
Table 38 Selected articles' contexts, mechanisms, and outcomes for large initiatives with organizations experienced in public health and/or intersectoral partnership.....	299
Table 39 Projects part of the small initiative CMO configurations	310

List of figures

Figure 1 CSDH conceptual framework.....	2
Figure 2 GDP per capita and life expectancy at birth.....	4
Figure 3 Trends in GDP per capita and life expectancy at birth.....	4
Figure 4 Female under 5 years old mortality rate by GDP for countries in the Americas	19
Figure 5 SciELO database search results combining public health and primary care keywords	32
Figure 6 Examples of intersectoral actions flows for various health issues in Cuba.....	69
Figure 7 Mean ranking of health determinants by professional groups.....	110
Figure 8 Level of internal action for each health determinants by professional group	114
Figure 9 Proportion of full collaboration, when collaboration is identified	128
Figure 10 Cuban health creation model to ensure its citizens' right to health.....	133
Figure 11 Realist review literature selection process	149
Figure 12 Demi-regularity of projects started as part of larger initiatives.....	176

List of symbols and abbreviations

ALBD:	Active Living by Design
bf:	Breastfeeding
CDC:	Centre for Disease Control and Prevention (US)
CIDA:	Canadian International Development Agency
CIHR:	Canadian Institute for Health Research
CMO:	Context mechanism and outcome
CNP:	Community Network Program
CSDH:	WHO Commission on Social Determinants of Health
EPODE:	Ensemble Prévenons l'Obésité des Enfants [Together, let's prevent childhood obesity]
HIC :	High Income Countries
IAH:	Intersectoral Action for Health
ISA HD:	Intersectoral Action for Health Determinants
INHEM:	Instituto Nacional de Higiene, Epidemiologia and Microbiología [National Institute of Hygiene, Epidemiology and Microbiology]
IOM:	Institute of Medicine
ISA HD:	Intersectoral action to manage health determinants
KP:	Kaiser Permanente
LMIC:	Low and Middle Income Countries
MICY:	Maternal, Infant, Child and Youth
NBCCEDP:	National Breast and Cervical Cancer Early Detection Program
NC:	North Carolina
NCPP:	North Carolina Prevention Partners
NIH:	National Institute of Health
NYACTY:	New York Asset Coming Together for Youth
OS:	Other sectors
PAHO:	Pan American Health Organization
PBRN:	Practice-based Research Network
PC:	Primary care
PH:	Public health
REACH:	Racial and Ethnic Approaches to Community Health
Rx for Health:	Prescription for Health

RWJF: Robert Wood Johnson Foundation

SC: South Carolina

SCMJ: South Carolina Medical Journal

SCCDCN: South Carolina Cancer Disparities Community Network

SES: Socio-economic status

WHO: World Health Organization

Glossary

The glossary below is an attempt to promote a common understanding of how certain terms are conceptualized in this research.

Health Equity: “Equity means fairness. Equity in health means that people’s needs guide the distribution of opportunities for well-being...This implies that all people have an equal opportunity to develop and maintain their health, through fair and just access to resources for health.” ([Nutbeam, 1998](#)) p. 355

Health Inequality: “[Health] Inequality refers to health differences that may be possible to reduce but not eliminate, such as those related to genetics or aging; inequity refers to differences that are unfair and preventable. Governments cannot necessarily fix all inequalities, but they can take action to reduce inequities.” ([Health Council of Canada, 2010](#))

Health Promotion and the Ottawa Charter: The first International Conference on Health Promotion led to the publication of the landmark Ottawa Charter for Health Promotion. It defines health promotion as: “the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social wellbeing, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. Health is therefore seen as a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities. Therefore, health promotion is not just the responsibility of the health sector, but goes beyond healthy life-styles to wellbeing.” ([WHO, 1986](#)) p.1

The Charter proposed the following set of strategies to improve population health:

- Build healthy public policy
- Create supportive environments
- Strengthen community actions
- Develop personal skills
- Reorient health services
- Moving into the Future

Intersectoral Action for Health: “a recognized relationship between part or parts of the health sector with part or parts of another sector which has been formed to take action on an issue to achieve health outcomes, (or intermediate health outcomes) in a way that is more effective, efficient or sustainable than could be achieved by the health sector acting alone.” ([WHO, 1997](#)) p.3

Neoliberalism: “the economic and political model known as “neoliberalism” (for its emphasis on “liberalizing” or freeing markets) or the “Washington consensus” (since its main proponents – the US government, the World Bank and the International Monetary Fund – are based in Washington, DC)... The core of the neoliberal vision was (and is) the conviction that markets freed from government interference “are the best and most efficient allocators of resources in production and distribution” and thus the most effective mechanisms for promoting the common good, including health. Government involvement in the economy and in social processes should be minimized, since state-led processes are inherently wasteful, cumbersome and averse to innovation.” ([WHO, 2010a](#)) p. 14.

Public Health: A recent article aiming to define global health provides us with a good review of the definitions of public health over time:

“Farr, Chadwick, Virchow, Koch, Pasteur, and Shattuck helped to establish the discipline on the basis of four factors: (1) decision making based on data and evidence (vital statistics, surveillance and outbreak investigations, laboratory science); (2) a focus on populations rather than individuals; (3) a goal of social justice and equity; and (4) an emphasis on prevention rather than curative care...

The definition of public health that has perhaps best stood the test of time is that suggested by Winslow almost 90 years ago:

“Public health is the science and art of preventing disease, prolonging life and promoting physical health and efficacy through organized community efforts for the sanitation of the environment, the control of communicable infections, the education of the individual in personal hygiene, the organization of medical and nursing services for the early diagnosis and preventive treatment of disease, and the development of social machinery which will ensure every individual in the community a standard of living adequate for the maintenance of health; so organizing these benefits in such a fashion as to enable every citizen to realize his birthright and longevity.”

The US Institute of Medicine (IOM) ... described public health in terms of its mission, substance, and organisational framework, which, in turn, address prevention, a community approach, health as a public good, and the contributions of various partners. The IOM report defined the mission of public health as “fulfilling society's interest in assuring conditions in which people can be healthy”. In the Dictionary of epidemiology (2001), Last defined public health as “one of the efforts to protect, promote and restore the people's health. It is the combination of sciences, skills and beliefs that is directed to the maintenance and improvement of the health of all the people through collective or social actions.”” ([Koplan et al., 2009](#)) p.1993.

More recently, as part of its 1998 glossary on health promotion, WHO defined public health as: “The science and art of promoting health, preventing disease, and prolonging life through the organized efforts of society.” ([Nutbeam, 1998](#)) p. 352.

Public Health Professionals: Considering the definitions above, as well as the Bangkok Charter of Health Promotion, which states that health promotion is a core function of public health, the rest of this document will use the terms ‘public health’ and ‘public health professionals’ to encompass the field and the professionals with knowledge and expertise in improving the health of populations through a variety of methods, including health promotion ([Bangkok Charter, 2006](#)). Public health practice can be seen as the efforts to improve population health through strategies that act on health determinants at various levels. Such strategies include, but are not limited to, health promotion, health protection, prevention, and the provision of healthcare services. Public health professionals also strongly rely on evidence as part of their paradigm, including the evidence generated from epidemiology.

Acknowledgements

The Canadian Institute of Health Research originally funded the Cuban case study. The secondary analysis and knowledge synthesis were self-funded.

I would like to thank all the Cubans and Canadians who donated their time to the original Cuban case study, as well as for agreeing to and facilitating the secondary analysis as part of this thesis.

A special thank you to my spouse, whose support, friendship, and companionship has made the completion of this thesis possible in the middle of starting a family.

I am also very thankful of my thesis supervisor's and committee members' guidance and commitment to see this thesis through to completion, despite all the obstacles encountered in the process.

This thesis would not have been written in proper English without the copy-editing work and suggestions of Michelle Everton and Rick Marcuse. A big thank you to both for the detailed work they have done.

Chapter 1: Introduction

In a significant publication that commemorated the 30th anniversary of the Alma-Ata International Conference on Primary Health Care, the World Health Organization 2008 World Health Report proposed to maximize the impact of investment in health and health systems by strengthening intersectoral action on health determinants ([WHO, 2008](#)). The recommendations of that report (titled Primary Health Care – Now More Than Ever) call for reducing global inequities in health outcomes by improving access to high-quality, comprehensive primary care services acting in collaboration with other sectors to address health determinants.

Traditionally, public health professionals have advocated for and engaged in intersectoral collaboration. However, little is known about primary care practitioners' contributions to intersectoral collaboration that addresses health determinants. Recognizing the need for research in this area, this study aims to add to the understanding of the nature of collaboration acting on health determinants when the collaboration involves primary care practitioners, public health professionals, and representatives of sectors other than the health sector.

This introductory chapter provides context for the research on intersectoral collaborations and health determinants. It lays out: a summary of the key literature on health determinants, primary care, public health, and intersectoral collaboration; a rationale for the selection of Cuba as central to this study; and the specific research questions and goals of the thesis.

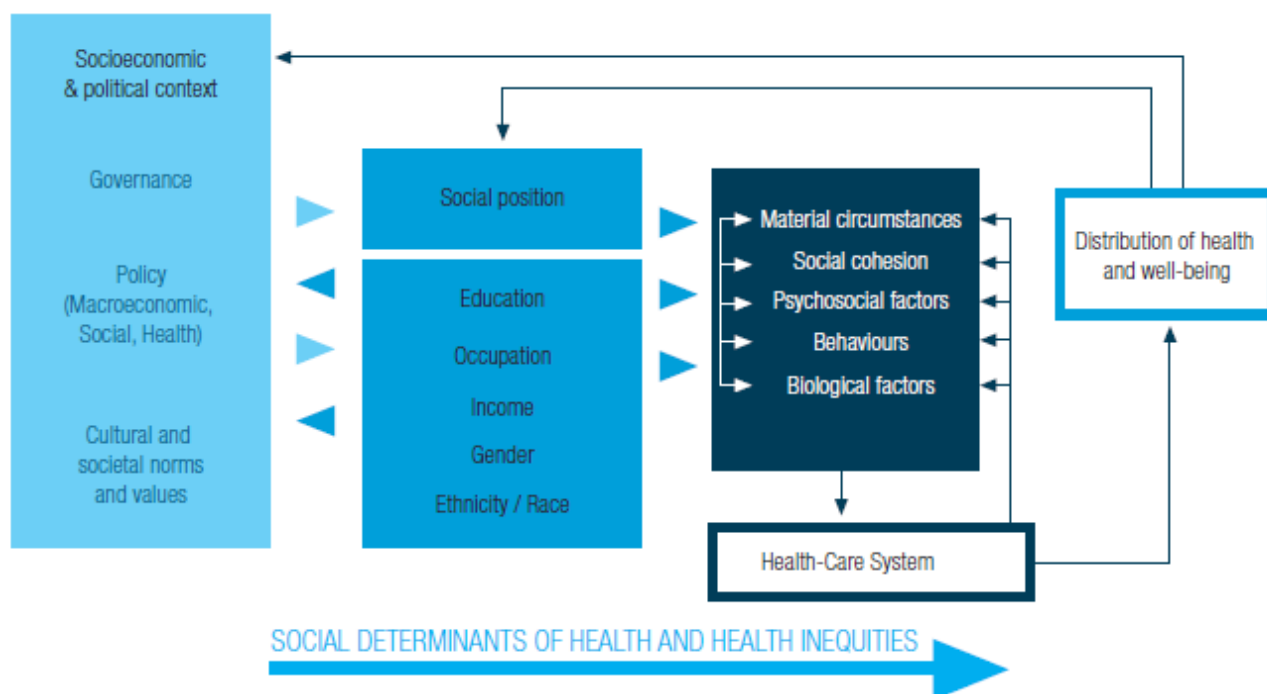
1.1 Health determinants

Factors that have a strong influence on health, such as lifestyle, environment, human biology, and healthcare services, are known as health determinants ([Evans & Stoddart, 1994](#)). Over time, cultural, social, and economic factors have been added to the list of health determinants. This has led to a useful, expanded definition of health determinants as “The range of personal, social, economic, and environmental factors that influence the health status of individuals or populations.” ([Nutbeam, 1998](#)) p. 354.

Healthcare systems can influence both more immediate (or proximal) health determinants (e.g., personal position and socio-economic status, social cohesion, psychosocial factors, behaviours and biological factors) and more distant (or distal) health determinants (e.g., governance;

macroeconomic, social, and health policies; and cultural norms and values), which are elements in broad socioeconomic and political settings ([CSDH, 2008a](#)). The framework developed by the WHO's Commission on Social Determinants of Health, ([CSDH, 2008a](#)) p. 43, is reproduced here, as Figure 1.

Figure 1 CSDH conceptual framework



Source: Amended from Solar & Irwin, 2007

It cannot be surprising that endless studies and reports suggest that maximizing improvement in the health of individuals – and entire population groups – is a worthwhile goal. More telling, however, is that many studies propose that the goal is achievable. Arguments presented include the following :

- Health is valued by populations worldwide ([Commission on Macroeconomics and Health, 2001](#); [CSDH, 2008a](#))
- Health has been recognized as a human right ([United Nation, 1948](#))¹

¹Article 25 states: “(1) Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control. (2) Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection.” (United Nations General Assembly, 1948).

- Improvements in population health are achievable even for low-income countries and even in conditions of zero economic growth ([Commission on Macroeconomics and Health, 2001](#); [WHO, 2008](#))
- Several countries with a low gross domestic product (GDP) have achieved better health outcomes than countries with higher GDP ([Commission on Macroeconomics and Health, 2001](#); [WHO, 2008](#)) ([CSDH, 2008a](#)).

As might be inferred from the previous point, investment in health systems, including some healthcare provision, can act as a powerful economic growth factor ([Commission on Macroeconomics and Health, 2001](#); [Nazeem ud et al., 2014](#); [Sachs, 2006](#); [Sachs & Malaney, 2002](#)). In situations, however, where the focus is on economic growth only, there is not necessarily an improvement in health outcomes. This is illustrated in the figures that follow. The first figure shows that for a given GDP of about \$1000, countries have a life expectancy at birth anywhere from less than 40 years old to more than 70 years old. The figure also shows that several countries with a much higher GDP (such as Namibia, South Africa, Botswana and Swaziland) have a lower life expectancy than would be expected, given the trend on average (redline).

Figure 3 confirms that the relationship between GDP and health is not straightforward. Different groups of countries have different starting point of life expectancies for a given GDP, and the evolution over time or as a function of GDP changes can follow many different paths. For example, the Russian Federation group of countries (line g, in purple) saw an increase in GDP and a decrease in life expectancy, following the break-up of the Soviet Union, while most developing countries outside of Africa (line d, in turquoise) have seen increases in life expectancy with increased GDP. Those low-income countries even reached a higher life expectancy at a lower average GDP (end of line d, in turquoise) than middle-income countries had reached at that same level of GDP (beginning of line b, light green). However, those low-income countries remained at a lower life expectancy than China had several years ago with a lower GDP (turquoise arrow of line d, in turquoise, versus line h of China in red). Figures 2 and 3 were both reproduced with the permission of WHO from ([WHO, 2008](#)) p. 4 and 5 respectively.

Figure 2 GDP per capita and life expectancy at birth

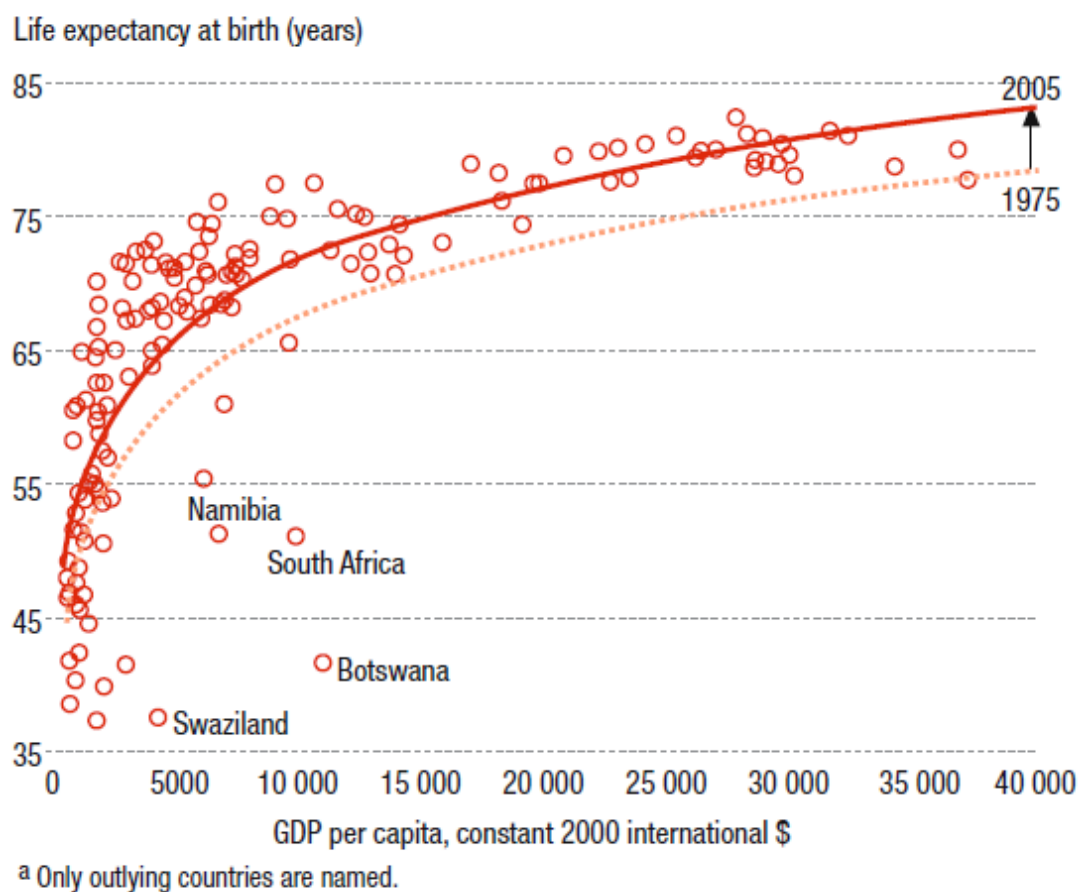
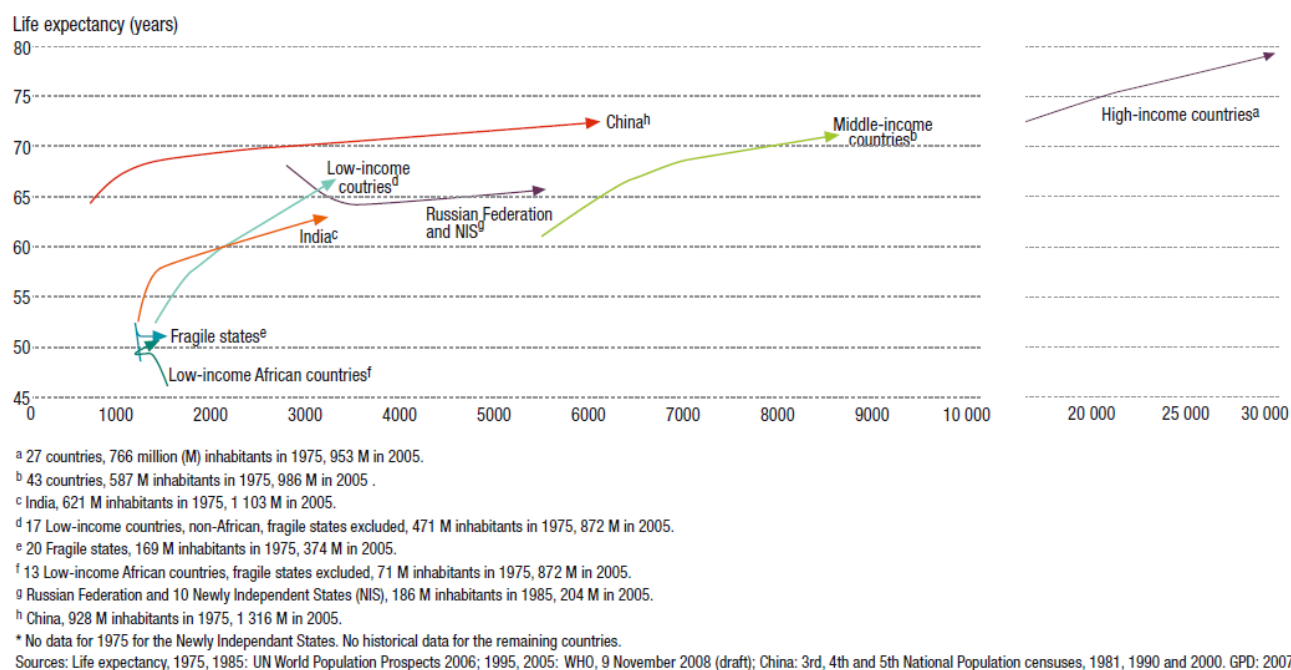


Figure 3 Trends in GDP per capita and life expectancy at birth



When attempts are made to measure the relative contribution of different types of health determinants, the data seem to indicate that health determinants *not related to the provision of healthcare services* are key drivers of population health. That is, what are often referred to as *social determinants of health*, (e.g., ethnicity², occupation, education) are more important in determining health status than the healthcare system ([McKeown, 1979](#)). This theory has been debated, but a comprehensive review of the literature on estimates of the contribution of various health determinants shows that clinical care provision is responsible for less than 50% of the determination of mortality and morbidity as indicator of health status. Most methodologies used to estimate the contribution to population health find that between 10 to 27% of population health can be attributed to the healthcare system ([Booske, Athens, Kindig, Park, & Remington, 2010](#)).

Another area of study, attempting to assess the link between increase in healthcare budget around the world and improvement in health indicators, shows that, in fact, there are few such increases in healthcare budgets that have resulted in significant improvements in the health of the population ([WHO, 2008](#)). That World Health Report of 2008 on primary healthcare also shows that the increased investments in healthcare are rarely directed toward the implementation of cost-effective interventions or policies that would maximize the health return of those investments, and are most often directed toward specialized type of health services with the least evidence of impact on population health ([WHO, 2008](#)).

Along these lines, advocates of a *social determinants approach* to improving population health have sometimes criticized investment in healthcare and medical professionals as being excessively costly (e.g., ([Muntaner, Sridharan, Solar, & Benach, 2009](#))). Against a backdrop of conflicting claims and competing political perspectives, it must be remembered that the ability of health systems to respond to the healthcare needs of clients is shaped by the same broad health determinants that affect the distribution of health results. Furthermore, these broader determining factors significantly affect the distribution of health outcomes among various groups, often significantly reducing health equity ([CSDH, 2008a](#)).

² Ethnicity is sometime viewed as a non-modifiable health determinant (therefore not part of social determinants), as one ethnicity is determined from birth. Others suggest that ethnicity is a social determinant of health as it relates to how various ethnic groups are treated in a given society. This thesis considers ethnicity to be a social determinant of health, as is the case in studies of health determinants in the United States, which form a large part of the studies included in the systematic review.

On the other hand, I have observed³ that healthcare practitioners, often armed with supportive research on effective health services, routinely ask for more investment in clinical personnel and interventions, in response to the clinical needs of individual patients who present to their doors. Other commentaries seem to relate similar observations ([Robinson, 2004](#); [Syme, 2004](#)). The practitioners' request for investment in clinical interventions is understandable, as explained by Black in his review of levels of evidence and levels of healthcare decision-making ([Black, 2001](#)). However, one needs to be careful to use clinical evidence to make population health and health systems investment decisions. It is essential to understand that many factors other than clinical evidence, population health evidence, or any other forms of evidence, legitimately influence decision-making ([Black, 2001](#)). One such source of influence is the advocacy by professional groups, which is legitimate, but often creates an environment in which evidence of population health impact is rarely considered or rarely a determining decision factor ([Black, 2001](#)).

A more unified perspective has been advocated by grassroots movements for rights to both health and healthcare (such as the People's Health Movement), in line with the vision for primary healthcare described in the Declaration of Alma-Ata ([Narayan & Schuftan, 2008](#)). The People's Health Movement recognized the imperative both to treat those who are sick, and to improve health through action on other health determinants ([People's Health, 2002](#); [People's Health Movement](#)). This view was supported by the report of the WHO Commission on Social Determinants of Health ([CSDH, 2008a](#)), which underscored that the provision of healthcare has global implications and, further, that it has been recognized as a human right – and not simply as a right to health, but a right to healthcare. Other authors recognize that health and healthcare are drivers of economic and human development ([Audibert, Mathonnat, & De Roodenbeke, 2003](#); [Commission on Macroeconomics and Health, 2001](#); [Das & Samarasekera, 2011](#)).

Despite countering claims and philosophical disputes, there is mounting evidence that health systems based in primary care result in better health outcomes at lower costs, *across income levels*, when compared to other types of healthcare systems ([Macinko, Starfield, & Erinosho, 2009](#)). This conclusion is also supported by the Wanless review, a comprehensive review of healthcare spending in relation to long-term health outcomes conducted for the UK government ([Wanless, 2002](#)), and in

³ This is from my experience in various administrative positions in the healthcare system in Canada and participation in various international conferences.

a follow-up report on progress with its implementation and the importance of investment in public health ([Wanless, 2004](#)).

After a long period of disinterest in the topic, there is now renewed interest in re-orienting health systems to address health inequities and population health, including through primary care approaches ([Wise & Nutbeam, 2007](#)). According to Wise and Nutbeam, most countries have neither the infrastructure nor an optimal system to deliver the health promotion programs and services that have been proven effective ([Wise & Nutbeam, 2007](#)). Considerable evidence suggests that even within the health system's contribution to health expectancy, a significant proportion is related to preventive services. In this regard, Wise and Nutbeam cite a Swedish review of the impact of health services which shows that health services might have contributed to a 5-year increase in the life expectancy of Swedes, but that clinical preventive services were responsible for 1.5 years of those 5 years, even with a smaller proportion of the healthcare budget ([Wise & Nutbeam, 2007](#)). Furthermore, rare is the health system that *equitably* reaches the entire population for promotion, prevention, or other healthcare services ([Wise & Nutbeam, 2007](#)). ([Wise & Nutbeam, 2007](#)), p. 24-25, point out that some of the effective yet frequently missing health promotion and prevention services include:

- Patient-education programs on effective self-management of chronic disease
- Patient engagement in care planning and delivery
- Brief interventions relating to tobacco, alcohol and or physical activity
- Interventions to prevent and treat depression and other mental illnesses
- Maternal and child health interventions, including immunisation and screening programs.

On this subject, Wise and Nutbeam sum up matters with this conclusion: "It is hard to find a country in which there is universal access to all the health promotion programs and services that have proven to be effective; an optimal system for the delivery of quality healthcare that includes the benefits of health promotion and that reaches, equitably, the whole population; and an optimal infrastructure for public health/health promotion. Indeed there has been continuing difficulty in obtaining and/or maintaining investment in health promotion." ([Wise & Nutbeam, 2007](#)) p. 25.

As the 2008 World Health Report noted, most increases in health budgets in countries around the world have failed to result in *policies* maximizing the health return of those investments:

“Health systems are developing in directions that contribute little to equity and social justice and fail to get the best health outcomes for their money. Three particularly worrisome trends can be characterized as follows:

- Health systems that focus disproportionately on a narrow offer of specialized curative care;
- Health systems where a command-and-control approach to disease control, focused on short-term results, is fragmenting service delivery;
- Health systems where a hands-off or laissez-faire approach to governance has allowed unregulated commercialization of health to flourish.

These trends fly in the face of a comprehensive and balanced response to health needs. In a number of countries, the resulting inequitable access, impoverishing costs, and erosion of trust in healthcare constitute a threat to social stability.” ([WHO, 2008](#)) p. xiii.

As a result of the evolving knowledge on health determinants and based on extensive review of the literature with expert and stakeholder consultations, the CSDH made three overarching recommendations to improve population health through addressing social determinants of health:

- “1. Improve daily living conditions
2. Tackle the inequitable distribution of power, money and resources
3. Measure and understand the problems and assess the impact of action” ([CSDH, 2008a](#)) p.2.

In summary, changes in the social determinants of health have a major impact on the health of populations – and perhaps a larger impact than improvements resulting from *direct* investment in the healthcare system alone. This is especially true when focused investments in specialized healthcare take place to the detriment of investments in primary care and in other sectors, such as housing, education, employment insurance and other critical areas affecting the social determinants of health ([CSDH, 2008a](#); [WHO, 2008](#)). Overwhelmingly, the literature supports an integrated approach to addressing health determinants – through macro- and micro-level interventions, including public policies, health promotion, clinical preventive services and access to comprehensive, high-quality primary care services. Furthermore, the literature indicates that such an approach appears to be both desirable and achievable, even for lower-income countries. In addition,

an integrated approach can lead to economic development and can increase productivity and wellbeing, even if the healthcare system is not the health determinant with the greatest impact on population health. Importantly, certain types of healthcare systems (particularly those based on primary care) have more impact on population health than other types of healthcare systems, and in addition, they cost less than systems based on more specialized clinical care provision.

1.2 Primary care

The seminal Declaration of Alma-Ata (1978) puts primary healthcare at the centre of the healthcare system. The Declaration defined primary healthcare as *essential healthcare to be made universally accessible*, constituting the first level of contact with the national health systems for individuals, families and communities in a continuum of care process ([Declaration of Alma-Ata, 1978](#)). The Declaration of Alma-Ata further noted that primary healthcare:

- Is reflective of a country's socio-cultural and political context
- Addresses the major health problems of the community, including access to treatment and essential drugs
- Invests in education and, disease prevention and control programs
- Promotes adequate food supplies and nutrition
- Provides access to safe water and basic sanitation
- Engages in intersectoral collaborations
- Is built as a sustainable system with integrated referral mechanisms, prioritizing those most in need, with progressive improvement towards comprehensive healthcare for all
- Supports and requires the participation of different individuals and community resources, building on community strengths

This historic declaration on primary healthcare clearly includes both initial care and comprehensive care. Essential characteristics linking primary care services to positive impacts on the health of the population include offering primary care services as the first level of patient contact with the healthcare system and covering comprehensive care needs (as opposed to a single disease-oriented program) ([Starfield, Shi, & Macinko, 2005b](#)). Those characteristics are clearly part of the Alma-Ata description of primary healthcare. The Alma-Ata declaration also included elements traditionally associated with public health: the understanding of the relevance of the socio-political context; the control of epidemic diseases; immunization; public sanitation and safe water and food

supplies; community participation; and intersectoral collaboration to address health issues ([Declaration of Alma-Ata, 1978](#)). Building on the steps laid out in the Alma-Ata Declaration, the World Health Report 2008: Primary Healthcare - Now More than Ever called for *returning* to a focus on primary healthcare, and proposed a series of reforms:

- “Reforms that ensure that health systems contribute to health equity, social justice and the end of exclusion, primarily by moving towards universal access and social health protection - **universal coverage reforms**;
- Reforms that reorganize health services as primary care, i.e. around people’s needs and expectations, so as to make them more socially relevant and more responsive to the changing world while producing better outcomes – **service delivery reforms**;
- Reforms that secure healthier communities, by integrating public health actions with primary care and by pursuing healthy public policies across sectors – **public policy reforms**;
- Reforms that replace disproportionate reliance on command and control on one hand, and laissez-faire disengagement of the state on the other, by the inclusive, participatory, negotiation-based leadership required by the complexity of contemporary health systems – **leadership reforms**” ([WHO, 2008](#)), p. xvi.

The WHO report on primary healthcare called for more intersectoral collaboration:

“In many regards, the responses of the health sector to the changing world have been inadequate and naïve. Inadequate, insofar as they not only fail to anticipate, but also to respond appropriately: too often with too little, too late or too much in the wrong place. Naïve insofar as a system’s failure requires a system’s solution – not a temporary remedy. Problems with human resources for public health and healthcare, finance, infrastructure or information systems invariably extend beyond the narrowly defined health sector, beyond a single level of policy purview and, increasingly, across borders: this raises the benchmark in terms of working effectively across government and stakeholders” ([WHO, 2008](#)) p. xiii.

In this report cited above, as well as in the Alma-Ata declaration, primary care was considered a subset of primary healthcare that focuses on the organization of health services at the point of entry to the healthcare system ([Declaration of Alma-Ata, 1978](#)). It is care that is continuous, comprehensive, and organized to respond to peoples’ needs and expectations based on an enduring relationship of trust between people and their healthcare providers ([Declaration of Alma-Ata, 1978](#)).

This view is shared by Starfield, who proposed that intersectoral collaboration is part of the responsibility of primary care ([Starfield, 1998](#)). In this thesis, I am looking at the role of primary care practitioners (rather than the role of primary healthcare practitioners, which might include public health professionals). However, the distinction is sometimes arbitrary and it is difficult to delineate where primary care becomes more akin to primary healthcare, as many authors do not distinguish between the two. Therefore, this thesis is not seeking to establish a firm distinction between the two, other than through the criteria for inclusion of primary care in the intersectoral interventions of the realist review, as defined in the methodology section.

To add further complexity to the delineation between primary care and primary health care, the WHO report further stated that primary care has a responsibility to tackle determinants of ill health (which might have been conceived more as a primary health care responsibility, since primary health care has a broader set of services and aims than primary care) ([WHO, 2008](#)). The WHO report went on describing primary care as a driver of specialized public health or social services, through referral and commissioning ([WHO, 2008](#)). However, the examples in the report were geared toward the clinical care systems responding with appropriate healthcare services to those who are rendered more vulnerable by various health determinants. The report did not contain examples of other types of interventions by public health or by other sectors, which are key in addressing health determinants. Furthermore, those clinical care systems' interventions were not aimed at tackling the social determinants of health as outlined in the report of the WHO Commission on Social Determinants of Health ([CSDH, 2008a](#)).

At the same time, the report cautions against certain pressures on healthcare systems that can undermine the effectiveness of comprehensive universal access to primary care. Those pressures include economic and political crises, blurring of public and private service provision, and power differentials in expression of entitlement and rights in relation to healthcare ([WHO, 2008](#)). This raised questions as to the appropriate role of primary care practitioners in relation to collaboration with public health professionals and representatives of other sectors also influencing health determinants.

Two independent research groups have recently published scoping reviews of public health and primary care collaborations. The scoping review by Levesque et al. (2013) focuses on functional roles and organizational models that bridge individual and population perspectives, while the one by

Martin-Misener et al. (2012) focuses on the topics of collaboration, the types of activities conducted, and reported barriers and facilitators of collaboration. The scoping review by Martin-Misener et al. (2012) covers collaborations only in Canada, the U.S., Western Europe, Australia and New Zealand ([Martin-Misener & Valaitis, 2008](#); [Martin-Misener et al., 2012](#); [Valaitis & al., 2012](#); [Valaitis et al., 2012](#)), while there were no such limitations in the review by Levesque et al. (2013); however, the latter still included only articles published in English or French.

The main finding from the review by Levesque et al., in terms of the functional roles of public health and primary care, was that the roles overlap significantly. Public health contributes to more effective primary care, and primary care contributes to a population health approach in various ways ([Levesque et al., 2013](#)). Contributions of public health to primary care included:

- Data analysis to understand population needs, develop interventions and assessment tools, and evaluate the impact of medical practices;
- Investigation of outbreaks with the provision of clinical interventions;
- Creation of partnerships to promote health and well-being, including policies and shared responsibility in relation to the prevention of diseases, injuries, and social problems;
- Support for screening, immunization, and early detection; and
- Acting as a moral authority to promote equity, quality, and access to primary care, and promotion of evidence based and efficient practices ([Levesque et al., 2013](#)).

Contributions of primary care to public health included:

- Being a source of knowledge and data related to the needs of the community;
- Monitoring and treating communicable diseases;
- Contributing to health promotion;
- Decreasing mortality and morbidity through providing primary care; and
- Engagement of local community and other primary care stakeholders in interventions and advocacy related to social issues and inequalities, as well as to patients' interests ([Levesque et al., 2013](#)).

Levesque et al. (2013) also document several different models of public health and primary care interactions in: community health centres, community oriented primary care policies, multidisciplinary health clinics, centres for health and social services, the integration of general practitioners with special interest and care provisions, patient-centered medical homes, etc.

However, the review by Levesque et al. (2013) does not demonstrate the impact of those models, as it remains descriptive of the roles and organizational models found in the literature.

Martin-Misener et al.'s (2012) scoping review had findings similar to those of Levesque et al. (2013), in terms of types of collaboration. Martin-Misener et al. (2012) showed that the most frequent types of collaborations found in the articles reviewed aimed to improve the quality and cost-effectiveness of care by applying a population perspective to primary care (22% of the collaborations described), or used clinical practices to identify and address community problems (17% of the collaborations described) ([Martin-Misener et al., 2012](#)). Similarly to Levesque et al. (2013), Martin-Misener et al. (2012) mention several papers related to the integration of the various components of the health system (mostly in the UK), while collaborations to improve access to care for the uninsured were only reported from the U.S. Martin-Misener et al. mentioned relatively frequent collaboration with academic partnerships to improve students' experience and service delivery. Academic collaboration was not discussed by Levesque et al., but was found to be relatively common by Martin-Misener et al. (2012). The scope of the activities carried out in those collaborations was reported as vast, and did include some community engagement and some multi-sectoral involvement in some cases, although there is no report of the proportion of the collaborations that included multiple sectors, nor whether these collaborations were of a different nature than the other collaborations.

The Martin-Misener et al. scoping review details are reported in the final research report to the funding agency by Valaitis et al. (2012). The final research report addresses the findings from the whole program of research on primary care and public health collaboration, and not just the scoping review by Martin-Misener et al.). Valaitis et al. (2012) collated the major facilitators of and barriers to collaborations described in the various publications they reviewed, and classified them in terms of system, organizational, and interactional levels. Those are presented in Table 1, which I adapted from the research report p.14-15.

Table 1 Public health and primary care collaboration barriers and facilitators adapted from Valaitis & al.⁴

	Major Facilitators	Major Barriers
System Level	<ul style="list-style-type: none"> • Government involvement, including the ‘fit’ of support for collaboration between PC and PH, and the endorsement of the value and benefits of collaboration in the community. • Relevant policy development (e.g., the reorganization of fiscal and structural resources). • Technical, informational, and financial support for the purpose of promoting integration, such as adequate funds for administrative functions and project implementation. • Sustained government funding. • Pooling and sharing of resources, volunteer and in kind contributions. • Professional education emphasizing a “system wide” approach for training and working collaboratively in public health. 	<ul style="list-style-type: none"> • Health care reform where national priorities take precedence over local priorities, and where reform causes uncertainty with how PC and PH sectors would function within newly created structures and governance processes. • A lack of stable funding, intermittent or one-off funding, for collaborative projects. • Separate, entrenched bureaucracies for PH and medical services. • Lack of an information structure, which limits the ability to adjust practice to the underlying risk of populations, and limits the ability to share or compare data. • Lack of population health needs assessments, relevant clinical data, and an evidence base for health promotion and cost-effective PH interventions, including effectiveness of collaborations.
Organizational Level	<ul style="list-style-type: none"> • Leadership development of community-based committees or boards with diverse membership to facilitate joint planning. • Involvement of multiple types of professionals. • Structures and processes that support team communication, autonomy, minimizing of competition, and opportunities for nurses and NPs to function at their full scope of practice. • Contractual agreements, parallel reporting, and common governance structures. • Use of a standardized, shared system for collecting data and disseminating information, and linked electronic records to support effective interdisciplinary care. • Shared protocols for multi-disciplinary, evidence based practice and quality assurance; • Dissemination of information and evidence-based toolkits and decision support tools. 	<ul style="list-style-type: none"> • Lack of a common agenda or vision as well as dominating and competing agendas. • Divergent focus of sectors (e.g., individuals and short term results in PC versus populations and long term outcomes in PH) and devaluing of key PH activities. • Deterrents to buy-in from PC, including physician workload issues, lack of joint planning, and challenges with multiple stakeholder engagement. • Role confusion in PH, and overall lack of clarity and variation in PH roles between sites. • Resource limitations, including human (resources for team building and change management), time (required for community mobilization or evaluation), financial, and space resources. • Lack of knowledge and skills, including the capabilities of management to manage diverse teams, and deficiencies in expertise related to PH skills in PC.
Interactional Level	<ul style="list-style-type: none"> • Clear roles and responsibilities for all partners. • Better knowledge of each other’s roles, skills and agencies, enhancing the speed and nature of decision making among teams. • Positive relationships including trust, tolerance, and respect of partners. • Effective team communication, including regular staff meetings, involvement of the whole team, consensus building and joint planning and listening to community partners. 	<ul style="list-style-type: none"> • Stereotypical views of PC and PH roles and a lack of trust or belief in the value of PH activities. • Resistance to change and refusal to participate in planned activities. • Lack of understanding of PH roles and interdisciplinary teamwork. • Competing priorities and agendas. • Poor rapport between PC and PH and communication issues.

⁴ The data in this table was directly extracted from lists in Valaitis et al (2012) p. 14-15.

Unfortunately, the Martin-Misener review did not address which facilitators and barriers were associated with various types of outcomes. Nonetheless, the reviewers attempted to extract markers of successful collaborations, which they described as sparingly found in the literature, and very broad. Markers of successful collaborations included elements such as new and sustained programs, improved access to health services, improved health knowledge, attitudes, behaviours or outcomes, team work, and increased capacity and expertise ([Valaitis & al., 2012](#)). These markers of successful collaboration were also described as *outcomes* of successful collaborations, creating confusion as to their nature, and confirming that this type of review is not equipped to distinguish what works, when, why, and with which outcomes (confusing markers of success - or markers of what works - with outcomes). The authors described some negative outcomes of the collaborations, without distinguishing what might have been pre-existing challenges not addressed by the collaborations. Negative outcomes included anxiety related to skills mix, fear of being marginalized in integrated teams, few health-related gains, skills spread too thin, loss of time for patient care, and loss of critical mass of public health staff needed to have impact, by spreading them throughout primary care teams with different paradigms and responding to different pressures.

Unfortunately, that review did not extend to collaborations with sectors outside of public health and primary care nor from publications outside of a very restricted group of high income, westernized countries. It is uncertain whether the findings apply to collaborations that are broader than public health and primary care, or to collaborations in LMIC or even to other HIC outside of the high-income, Westernized countries included. Furthermore, by nature, a scoping review does not attempt to explain what works, when, and why. It describes what is found in the selected documents, but does not describe how much agreement there is between the various documents, nor why there is agreement or not.

As alluded to previously, the Martin-Misener et al. (2012) scoping review was part of a larger program of research, which included: an environmental scan of public health and primary care collaboration in three Canadian provinces; a collation of key informants' perceptions on structures and processes influencing collaboration and the nature of existing collaboration; a synthesis of key Canadian stakeholders views regarding primary care and public health collaboration; and a series of 10 case studies of public health and primary care collaboration in two Canadian provinces. The

overall findings contributed to the development of a multilayered model of public health and primary care collaboration. The model included the level and factors outlined in Table 1, except with a change from an interactional level to intra- and inter-personal levels. The overall approach of Valaitis et al.'s (2012) program of research remained descriptive. It did not tease out the different outcomes arising from different types of collaboration in different contexts, or whether those outcomes are due to different mechanisms being present or absent (what works when, how, why, and with which outcomes). This is also the case of the review by Levesque et al. Both groups mentioned that most of the documents included were editorial or opinion papers, descriptive case reports, or reviews ([Levesque et al., 2013](#); [Valaitis et al., 2012](#)). Therefore, there are still many gaps in knowledge around how intersectoral collaborations involving primary care, public health, and other sectors work and what outcomes arise from various types of collaborations. Key literature on intersectoral collaboration will therefore be reviewed in the next section.

1.3 Intersectoral collaboration

Intersectoral health collaboration is “a recognized relationship between part or parts of different sectors of society, which has been formed to take action on an issue to achieve health outcomes or intermediate health outcomes in a way which is more effective, efficient or sustainable than might be achieved by the health sector acting alone.” ([Nutbeam, 1986](#)). Several reports from governments and other institutions called for more comprehensive intersectoral action on health determinants ([CSDH, 2008a](#); [PHAC, 2007](#); [PHAC & WHO, 2008](#); [Romanow, 2002](#); [Subcommittee on Population Health, 2009](#); [WHO, 2008](#)). However, such calls are rarely followed by concrete actions ([Health Council of Canada, 2010](#); [Raphael, 2003a, 2003b, 2008](#)). The complexity of intersectoral action was recognized via a systematic review of 18 countries engaged in addressing health determinants ([PHAC & WHO, 2008](#)). This review emphasized that how intersectoral action for health is developed and how it is implemented matter as much as what actions are taken.

To assist governments enacting intersectoral actions, several organizations have created toolkits and supporting materials. The Health Council of Canada⁵ created a practical document for decision makers on the rationale and the “how to” for government promotion and implementation of intersectoral action ([Health Council of Canada, 2010](#)). The document was produced based on an extensive literature review, key informant interviews, and expert advisory panel input. The Health

⁵ The Health Council of Canada is a non-profit organization created by federal and provincial governments' accords, with a mission to inform and strengthen the healthcare systems.

Council of Canada concluded that effective intersectoral action on health determinants would necessitate ([Health Council of Canada, 2010](#)):

- 1) An overriding philosophy and long-term commitment backed by adequate resources that governmental initiatives and decisions should be viewed through a population health lens, under the leadership of those at the top (including the prime minister). This long-term commitment should involve capacity building of both elected representatives and civil servants of all relevant ministries on the health implications of various programs and policies of various ministries, and on effective cross-sector interventions of those in government;
- 2) The use of evidence (even if not yet conclusive), data, and other information in a systematic fashion to create clear, identifiable, and measurable goals, with realistic timelines, support tools, and evaluation and communication of progress towards reaching the goals;
- 3) Establishing the appropriate infrastructures for society's participation in the initiatives, with an independent authority to coordinate activities across ministries and departments. Building the appropriate infrastructure and human capacity should include cross-ministry structures and processes. Such structures and processes need to enable various external stakeholder contributions, including sharing leadership, accountability, and rewards among partners, as well as balancing central direction and local discretion.

The need for appropriate infrastructure was also discussed by O'Neill, Lemieux, Groleau, Fortin, and Lamarche ([O'Neill, Lemieux, Groleau, Fortin, & Lamarche, 1997](#)). They examined how coalition theory can inform intersectoral action for health and summarized the main literature on coalition theory that was most relevant to the context of intersectoral action for health. O'Neill et al. (1997) used Gamson's parameters of functioning coalitions to illustrate the domains of infrastructure needed for successful collaboration. These parameters include: the effective distribution of resources; meaningful anticipated rewards as a result of being part of the coalition; support for building positive ties with the other players or sectors; and formal agreement on rules and decisions. They also noted that the power of the participating actors in the collaboration is important, and the formal and informal ties between the actors play a significant role in the sustainability of the coalitions. O'Neill et al. added another parameter relevant to sustainable collaboration, which is the 'organizational context', given that the organization environment plays a role in the behaviours and interactions of the members of the collaboration.

Furthermore, as noted by O’Neil et al. (1997) in their review of the literature on intersectoral collaboration for health, despite occasional suggestions on how to work in an intersectoral context, most authors concede that, in fact, this type of work fails more often than it succeeds. They attribute these failures to two factors. The first factor was that health professionals operate in prestigious sectors of society and often expect other sectors to “buy-in” to health-related issues without regard for the legitimate mandate and agenda of other sectors. The other reason advanced by O’Neil et al. was that recommendations for intersectoral action on health are usually based on lessons derived from trial and error, without rigorous scientific methodology or theory guiding the knowledge acquisition. O’Neil et al. concluded that ideology needs to be transformed into actual practice ([O’Neill et al., 1997](#)).

O’Neil et al. (1997) contributed significant theoretical advancement in that regard, using case studies to further develop the coalition theories as they apply to intersectoral action for health ([O’Neill et al., 1997](#)). As mentioned previously, they added organizational context as a factor that supports intersectoral collaboration, based on their literature review. Despite advances in building a sound theoretical basis for intersectoral action for health, O’Neil et al. called for more research, as their work was still preliminary and exploratory, based on three case studies and a review of the literature outlining the lack of sound theoretical understanding of why intersectoral action sometimes works, and often fails.

Intersectoral action promotes awareness of differing perspectives of the health consequences of current practices and policies ([Harris, Services, Health, & Promotion, 1995](#); [Nutbeam & Harris, 1995](#)). Theoretically, physicians and nurses have important insights about the impact of policies and practices on health. In practice, however, physicians, nurses, and other clinicians have only a partial understanding of various health determinants and their interactions or how to improve health by acting on health determinants ([PHAC, 2007](#)). This is frequently compounded through differing ideological perspectives, such as those described by Raphael - for example, in terms of personal responsibilities versus societal responsibilities in the adoption of healthier practices ([Raphael, 2001, 2003a, 2003b, 2009, 2011, 2013a, 2013b](#); [Raphael, Curry-Stevens, & Bryant, 2008](#)). The common lack of awareness among clinicians regarding their partial understanding and ability to act on health determinants can impede the health sector’s participation in intersectoral collaboration. Even though intersectoral collaborations have benefits, maintaining a collaborative environment has its share of difficulties ([Bauld et al., 2005](#); [Bauld & Langley, 2010](#)), such as: limited time for collaboration and

short-term projects; limited resources to invest in the collaboration itself (rather than in individual organizations' deliverables); and a lack of intersectoral collaboration skills.

Therefore, to fully implement the vision of primary care participation to broadly address health determinants (as recommended by WHO), there is a need for more than a broad statement of the responsibilities of primary care and public health professionals to address health determinants with intersectoral action. There is a need to develop and test how those collaborations work, how they are created and sustained, and what impacts are associated with the various ways those collaborations are created, managed, and sustained.

To summarize, the literature shows the scarce examination of specific contexts, mechanisms, and outcomes that determine how intersectoral collaboration can successfully address health determinants. This is especially true of collaborations involving primary care practitioners, public health professionals (the health sector's stakeholders most often perceived as having a prominent role to play in managing health determinants), and representatives from sectors other than the health sector. The next section will explain why the Cuban example is relevant to learn how to make these types of collaborations work, and how to fulfill the promises of the Ottawa Charter, the WHO Commission on Health Determinants and the WHO call for primary care renewal.

1.4 Why Cuba's achievements matter

Cuba, a relatively poor country, has achieved excellent health outcomes ([Pietroni, 2001](#); [World Economic Forum, 2003](#)). Considerable evidence indicates that Cuba is a distinct outlier when standard population health indicators are considered in relation to *per capita* Gross Domestic Product (GDP). As shown in Figure 4 (reproduced from Spiegel J.M., Yassi A. (2004) p. 87, with permissions) Cuba's female under-5 mortality rate is comparable to what is being achieved in developed countries such as the US and Canada ([Spiegel & Yassi, 2004b](#)). This female mortality rate in Cuba is well below that of Latin American countries with similar levels of economic performance, such as Bolivia, Honduras, and Ecuador. As pointed out by Spiegel and Yassi (2004), a similar success story emerges for Cuban life expectancy and other health outcome indicators ([PAHO](#); [Spiegel & Yassi, 2004b](#); [World Bank Group, 2003](#)).

Figure 4 Female under 5 years old mortality rate by GDP for countries in the Americas

Mortality rate



Cuba was not always an outlier ([MacDonald, 1999](#)). Prior to 1959, Cuba's health indices were similar to other poor countries. Then, from 1959 to the late 1980s, there was steady improvement in health indices in Cuba. For example, in 1959 the infant mortality rate was 60 per thousand live births; ten years later, this rate had dropped to 46.7, and by 1983 was 16.8 and steadily decreasing. In 1991, the rate was 10.7 per thousand live births. This dramatic improvement did not take place in other poor countries in the region ([MacDonald, 1999](#)). Cuba's disease patterns have in fact evolved to a stage where they are today more similar to developed than to developing countries, with the proportion of deaths from chronic non-communicable diseases, such as heart disease and cancer, far outweighing mortality from infectious and parasitic disease. This prompted the observation that "[Cubans] live like the poor and die like the rich" ([Macintyre & Hadad, 2002](#)).

Cuba has succeeded in having primary care providers and public health professionals contribute to intersectoral actions in a variety of ways, some of which described in the following paragraphs ([Alegret, Yassi, Spiegel, & Rodriguez, 2003](#); [Barcelo, Guzman Pineiro, Spiegel, & Rodriguez, 2003](#); [Bonet et al., 2007](#); [Castell-Florit Serrate, 2007](#); [Castell-Florit Serrate, Carlota Lausanne, Mirabel Jean-Claude, & Cabrera Gonzalez, 2007a](#); [de la Torre, Lopez Pardo, Gutierrez Muniz, & Rojas Ochoa, 2004](#); [Loucks et al., 2003](#); [Munoz et al., 2002](#); [Pagliccia et al., 2010](#); [Sanchez et al., 2009](#); [Saney, 2003](#); [Spiegel et al., 2003](#); [Spiegel, Yassi, Mas, & Tate, 2002](#); [Spiegel et al., 2007](#); [Spiegel et al., 2008](#); [Spiegel & Yassi, 2004b](#); [Whiteford & Branch, 2007](#); [Yassi et al., 2003](#); [Yassi et al., 1999](#)). An example of this occurred during the "Special Period" of the late 1980s, following the collapse of its Soviet Bloc trading partners.

During the “Special Period”, Cuba faced a drastic decrease in trade and aid, with severe economic repercussions. In response to the potentially severe impact of the crisis on its population, Cuba sustained an intensification of comprehensive community participation strategies that had been set in motion in advance of the crisis to manage the situation ([Saney, 2003](#)). This resulted in increased investments in primary care and social services, rather than massive cuts to and/or dismantlement of the publically funded healthcare system, which has occurred in other countries facing fiscal crisis. As a consequence, rather than experiencing a decline in health status like that observed in many former members of the Soviet Union (([WHO, 2008](#)) p. 4), Cuba suffered little impact on the health of its population and rapidly resumed its improving trend ([Spiegel, Labonte, & Ostry, 2004](#)). Overall, not only did Cuba achieve great health outcomes on average, but it achieved great equity in doing so across Cuba, in both rural and urban areas, both industrial and services-based economic areas, and both urban core and suburban areas ([Alegret et al., 2003](#); [Lopez Pardo, 2004](#)).

Cuba’s achievements, which have been widely acknowledged ([World Economic Forum, 2003](#)), have often been attributed to political will ([Spiegel et al., 2004](#)). While of course true, this does not explain the mechanisms and processes whereby the health sector and various other sectors collaborate to address health determinants. Despite recognition of Cuba’s accomplishments, global scientific and public policy communities are scarcely learning what they could from this experience ([Spiegel et al., 2004](#)).

Cuba’s success, in terms of improved mortality and morbidity, is sometimes attributed in part to its comprehensive, universal health coverage based on primary care services as the point of entry into the health system ([Spiegel & Yassi, 2004a](#)). Spiegel and Yassi (2004) described the Cuban health care system as a publicly financed, comprehensive health care system oriented toward primary care and preventive activities. They explain that the point of entry to the health system is through the local neighbourhood clinics, which are staffed with a family physician and a nurse. They described those clinics as being responsible for about 120 families each. They also explained that the doctor and the nurse live in the community they serve (they are frequently provided a house in that community) and they are therefore geographically very accessible in case of emergency. The responsibilities of the local clinic include providing medical care, as well as creating a health culture by supporting health promotion activities frequently delivered by other community organizations.

Spiegel and Yassi described another important element of the system: a strong vertical integration from the local clinic to the local polyclinic (with some basic specialists trained in internal medicine, pediatrics, obstetrics and gynecology, and public health, for example), to the local hospitals, and to the secondary and tertiary levels of services (hospitals, institutes, special programs), with strong attention paid to preventing hospitalization and re-hospitalization through intense, proactive community follow-up, even if patients do not present to the clinics' doors. However, the article by Spiegel and Yassi (2004) lacks details on *how* primary care became successfully integrated in multisectoral actions to address health determinants, *how* public health and primary care collaborate with other sectors and *what* outcomes, successes, and challenges they have encountered; and *why*.

Some might doubt the ability of countries with different political systems to learn from Cuba, because it is operating under a socialist system governed by a communist party, as explained in the Cuban Constitution ([Cuba, 1976](#)). However, the fact that several countries are expanding their primary care systems through components and approaches similar to Cuba somewhat counteracted this argument ([Macinko et al., 2009](#)). In devoting a special issue to examining what developed countries can gain by "learning from developing countries", the BMJ explicitly draws attention to the importance of conducting studies such as the one conducted for this thesis:

“The link between expenditure on health and health outcomes is not straightforward. Despite burgeoning health budgets, few countries in the developed world can claim to be delivering universally high quality, equitable healthcare. Could they have something to learn from less developed countries, whose meagre resources have long ensured that cost effectiveness is a dominant consideration?” ([Richards, 2004](#)) p. 239.

Our team (led by Dr. Spiegel and including Drs. Alegret, Pagliccia, Bonet, Yassi, various others in Canada and Cuba, as well as myself) sheds some light on how health determinants are managed at the municipal level. We, showed public health and primary care involvement based on the primary analysis of the case study on intersectoral collaboration to manage health determinants in Cuba ([Spiegel et al., 2012](#)). The relevant findings from our case studies that contribute to answering the research questions of this thesis are presented in Chapter 3:, section 3.1. However, as will be explained in more detail in the methodology chapter, a supplementary analysis of the original data is necessary to ascertain how primary care practitioners, public health professionals, and local and municipal leaders representative of various sectors *each* conceive of, prioritize, and manage health determinants. This is because in our original case study, the analysis amalgamated the answers from

all the stakeholder groups, describing as a whole the municipal management of health determinants ([Spiegel et al., 2012](#)).

Coalition theory specifies that differing actors have differing yet compatible goals, contributions, and rewards, and that effective collaboration depends on an actor's ability to be an effective part of the coalition. To learn more fully from the Cuban example, there is a need for further research on how primary care practitioners, public health professionals, and members of other sectors are able to participate together in intersectoral collaboration. This was echoed by Frenk and Chen (2011), who called for more research on addressing the divides between clinical and public health approaches, between public and private approaches, and between knowledge gained and action implemented:

“The way forward will entail a reinvigoration of research-generated knowledge as a crucial ingredient for global cooperation and global health advances. To do this we will need to overcome daunting gaps, including the divides between domestic and global health, among the disciplines of research (biomedical, clinical, epidemiological, health systems), between clinical and public health approaches, public and private investments, and between knowledge gained and action implemented.” ([Frenk & Chen, 2011](#)) p.1.

The next section will summarize the research questions and purposes that have arisen from this review of the key literature on the main concepts and domains central to this thesis.

1.5 Research question and purposes

Despite the calls to implement intersectoral action to address health determinants ([Bauld et al., 2005](#); [Health Council of Canada, 2010](#); [WHO, 2008](#)), barriers remain ([Bauld & Langley, 2010](#); [Raphael, 2003a, 2003b, 2008, 2009, 2011, 2013a, 2013b](#); [Raphael et al., 2008](#)). There is a need to generate more practical knowledge on *how* to implement intersectoral action to address health determinants. Within the health sector, the role of management of health determinants seems to fall heavily on primary care and public health. Many sectors, apart from the health sector, impact health determinants, with various degrees of purposeful attention to the issue ([Harris et al., 2005](#); [Nutbeam & Harris, 1995](#)). The literature is unclear regarding what works in terms of collaboration involving public health, primary care, and other sectors to address health determinants. Therefore, the research questions of this study are as follows. In situations where there is collaboration between primary

care and public health professionals within broader intersectoral collaborations to address health determinants, including in the exemplary case of Cuba:

- **What are the contexts in which those situations happen?**
- **What are the mechanisms leading to actions on health determinants?**
- **What are the outcomes of those collaborations?**

This study has two main purposes. One purpose of this study is to assist decision-makers in understanding and contributing to create conditions that have led to successful collaborations in addressing health determinants, including primary care, with enough detail to adapt the findings to their particular context. The other purpose is to assist stakeholders, especially primary care practitioners, in effectively participating in those collaborations to address health determinants. The next chapter provides details of the research methodology.

Chapter 2: Methodology

The research questions outlined in the previous chapter are complex. This is, in part, because similar interventions with either slightly different mechanisms of actions, or those in slightly different contexts, might lead to different outcomes ([Pawson, Wong, & Owen, 2011](#)). To cover the complexity of the topic adequately, this study involves two main components: (a) an inquiry into the Cuban experience through the re-analysis of an existing Cuban case study of the management of health determinants, and (b) a realist synthesis of the world literature on intersectoral collaboration to address health determinants by primary care, public health, and other sectors' representatives. This chapter will begin with a discussion of the rationale for this research approach, followed by the details of the specific methods used in the Cuban case-study re-analysis, and the realist review.

2.1 Evolution of the research process and researcher reflexivity

Researcher reflexivity is the explicit positioning of the researcher as part of the context of the study ([Creswell, 2013](#)). The researcher's biases, personal experiences, beliefs, and opinions are explicitly stated so that the validity of the results is upheld. Researcher reflexivity is particularly important in qualitative studies because of the subjectivity in the data analysis process. By explicitly stating the impetus for this research and my level of involvement in the topic of this research, I intend to increase the validity of this study.

As a family physician who has worked extensively in multidisciplinary primary care settings in Canada and other countries, my experience is that some practitioners and leaders in such settings fail to fully grasp the expertise of the public health community or to comprehensively address health determinants. This occurs, even if they work in multidisciplinary teams, and even if they are well-intentioned. This seems to be, in part, because of a lack of understanding by primary care providers of the vast field of public health, as well as their operating under a different paradigm and constraints than public health professionals. From my discussions with primary care colleagues, I learned that many also believe that they have the knowledge and skills to manage collaborations that addresses health determinants. However, in practice, I have not seen this demonstrated by these colleagues.

As a public health and preventive medicine specialist who has practiced this specialty concurrently with a clinical practice in family medicine, I have seen the power of public health

action and public health policies on the health determinants affecting my patients and on the health status of communities. I have also witnessed several times that when public health resources are combined with primary care resources under primary care leadership, it can lead to the use of public health professionals and resources to provide more one-on-one care and fewer public health interventions on public policies, health promotion, or surveillance.

Similarly, I have also witnessed friction, power imbalance, limited resources, and time constraints affecting collaboration between primary care providers and community organizations or community leaders. Overall, I would echo one of the findings of the literature review in the introduction of this thesis - despite many calls to action, addressing health determinants through intersectoral collaboration is difficult to pursue and to sustain. Furthermore, it seems even more difficult to study the impact of such interventions in an appropriate fashion, considering the complexity of those intersectoral interventions.

From my perspective, primary care practitioners, public health professionals, and representatives of various other sectors are all contributing relevant lenses with which to view issues. Nevertheless, more often than not, it is unclear how those groups can work effectively in intersectoral collaborations to address health determinants. It is currently unclear how best to best help with the issues I have observed and how to assess and ensure meaningful outcomes from intersectoral collaborations to manage health determinants. To prevent my perspective from unduly influencing the research process, I did not use those issues, as I have observed them, as the “a priori” organizing principle for the data extraction. Instead, I sought other models to extract data that might provide insight on how to manage health determinants through intersectoral collaboration involving primary care, public health, and other sectors’ representatives. I also discussed each step of the research process with my thesis advisory committee to seek different perspectives and verify that the research process appears sound, and that the conclusions of this thesis are solidly anchored in the data collected. Those procedures to increase validity are based on the discussion of the different elements that strengthen validity in qualitative studies, including researcher reflexivity from Creswell and Miller ([Creswell & Miller, 2000](#)).

The idea to conduct a more specific exploration of primary care participation in collaboration with public health and other stakeholders originated when I had the opportunity to participate in a workshop in Cuba in 2004 as part of a Canadian International Development Agency (CIDA)

University Partnerships in Cooperation and Development Tier 2 grant held by Drs. Spiegel and Yassi. It became evident from reviewing thesis proposals of the Cuban students (with whom we worked) that primary care practitioners were intricately involved in intersectoral management of health determinants in Cuba, including community-wide surveillance, health promotion, and health status reporting, and so on. Furthermore, the actors from the various sectors involved seemed to work well together, collaborating with public health professionals and other sectors in a very harmonious and productive fashion. While I contributed to two research projects funded by the Canadian Institute of Health Research (CIHR) in relation to the intersectoral management of health determinants in Cuba (Dr. Spiegel, principal investigator), there were no specific research questions regarding the involvement of primary care and public health as separate yet complementary stakeholders within the health sector. Therefore, this aspect became the focus of my PhD.

Since my PhD research question originated from my participation in the case study, it seemed rational to seek to understand in depth how Cubans carried out this type of collaboration (involving primary care, public health, and other sectors' representatives) was fostered in Cuba, based on the information collected as part of the original Cuban case study. This was supported by the fact that the Cuban case study collected information related to the role of various stakeholders involved, including primary care and public health representatives, with local and municipal leaders of various other sectors. The next section will discuss methods related to the secondary use of data previously collected in qualitative research.

2.1.1 Secondary use of qualitative data and qualitative methods

The secondary use of qualitative data carried in this thesis would be classified as a supplementary analysis of the original case study, as it took an emerging theme (the participation of primary care providers with public health professionals in a larger, intersectoral collaborative process) and sought to understand it better, although it was not the focus of the original study ([Heaton, 2004](#)). In her book, Heaton (2004) tries to bring more rigour to the typology and application of qualitative data re-analysis. As Heaton explains, the secondary analysis of qualitative and quantitative data, including mixing them to answer a new research question, to verify a primary analysis or for other purposes is becoming a more mainstream approach ([Heaton, 2004](#)). Heaton (2004) and others advocate the advantages and appropriateness of mixing methods, choosing and adapting them in innovative and creative ways based on the availability of information, feasibility, strengths, and limits of various

methods and sources of information, to better answer complex research questions ([Frost, 2011](#); [Heaton, 2004](#); [Pope, Mays, & Popay, 2007](#); [Sparkes & Smith, 2013](#); [Taylor & Francis, 2013](#); [Todd & et al., 2004](#)). This is exactly what this thesis is doing: using various available data, analysing them through different methods, and then combining the findings and generating more insight from all the components of this research together. This thesis combines the findings of the different sources of data in a manner that is closely related to constant comparison.

Constant comparison has been described as:

“The method of comparing and contrasting is used for practically all intellectual tasks during analysis: forming categories, establishing the boundaries of the categories, assigning the segments to categories, summarizing the content of each category, finding negative evidence, etc. The goal is to discern conceptual similarities, to refine the discriminative power of categories, and to discover patterns.” ([Boeije, 2002](#)) p. 392-3.

In other words, constant comparison techniques proceed through systematic comparison and categorization of all the data elements with each other, contrasting them and finding merging patterns, as well as data elements that do not fit these patterns ([Frost, 2011](#); [Heaton, 2004](#); [Taylor & Francis, 2013](#); [Todd & et al., 2004](#)).

Boeije recognizes that comparison can be done in a variety of ways, and that the researcher has an essential role to play in selecting the comparisons that contribute to meaningful interpretation through theoretical sampling. She continues by explaining that the new data collected based on the theoretical sampling process is analysed and compared with the previously collected data, which is also re-analyzed taking into consideration the new data ([Boeije, 2002](#)). This thesis follows this approach by comparing the data elements of each of the sources in relation to similarities and differences by types of health professionals or other sectors’ representatives, until no more new comparisons are possible and no new insight is gained. It then repeats the process, comparing the data from different sources of information to the original Cuban case study, and creating an extensive document describing the details of all those comparisons.

At that point, following the supplementary analysis of the Cuban data, I felt that the findings might not have been as meaningful or insightful as I wished they would be to support the implementation of intersectoral action to manage health determinants by decision makers around the world. Therefore, I decided to continue my research to find other examples of intersectoral

collaboration to manage health determinants that involved public health, primary care, and other sectors' representatives. As discussed later in this chapter, the method of realist review seemed the most appropriate to fulfill the purposes of this thesis.

2.1.2 Addition of a realist inquiry lens

The addition of a realist inquiry lens to the analysis of interventions (on health determinants through intersectoral collaboration involving primary care, public health, and other sectors' representatives) led me to re-immense myself into the Cuban data and to re-categorize the findings in terms of context, mechanisms, and outcomes. This led me to derive more coherent insight from all the data pieces and resulted in the creation of the framework explained in section 3.4. The development of this framework occurred in parallel with the analysis of the data collected through the realist review. A final process of comparison between the findings of the supplementary analysis of the Cuban case study and the most important findings of the realist review took place in an attempt to generate a meaningful conclusion from the two major parts of this thesis.

Traditionally, constant comparison methods have been used in grounded theory approaches, originally developed by Glasner and Strauss in the 1960s ([Frost, 2011](#)). This thesis did not use a grounded theory approach per se. Rather, I borrowed from and modified such approach, especially the constant comparison technique, combining it with other techniques, mostly using a realist approach, to better fulfill the purposes of this research. My aim was to generate as much insight as possible based on available data, generating some new theoretical understandings without necessarily generating a new theory.

The combination of a systematic review with the supplementary analysis of a case study is a very strong methodology. This is because of the complementarity of the two methods: the case study enables subtle, in-depth understanding in one specific context ([Khairul, 2008](#)), while systematic review provides the ability to study a wide range of interventions in a variety of contexts, accounting for the variability in context. Furthermore, it combines a classic and well defined methodology to study intersectoral collaboration to address health determinants, the case-study method ([Atkinson, Cohn, Ducci, & Gideon, 2005](#); [Borg & M.B, 2002](#); [Jansson & Tillgren, 2010](#); [Koller et al., 2009](#); [PHAC, 2007](#); [PHAC & WHO, 2008](#); [Plochg, Delnoij, Hoogedoorn, & Klazinga, 2006](#); [Signal & Durham, 2000](#); [Spiegel et al.](#)), with an innovative method (that of a realist review) to

further advance the methodological aspect of studying intersectoral collaboration to address health determinants. The next two subsections will describe in detail the data sources and methods of the supplementary analysis of the Cuban case study and of the realist review.

2.2 Supplementary analysis of the Cuban case study

As noted previously, this part of my thesis research was conducted as a subset of a program of research on public health in Cuba, carried out through the UBC Global Health Research Program and Cuba's National Institute of Hygiene, Epidemiology and Microbiology (INHEM). The original case study of Cuban intersectoral collaboration to address health determinants was pursued in the context of more than 15 years of collaboration between the Canadian and Cuban researchers including members of and advisors to my thesis committee. The original case study sought to improve the understanding of how Cuba manages health determinants at the municipal level, by describing and comparing the intersectoral management of health determinants of two municipalities in one Cuban province.

The original Cuban case study included: a document review, site visits, key informant interviews, focus groups, and surveys on the management of health determinants at the municipal level in Cuba ([Spiegel et al., 2012](#)). The original raw data were analyzed in this thesis with a focus on differences and similarities between the representatives of various sectors in relation to how they conceptualize, manage, and prioritize health determinants. Despite the original case study collecting information from various stakeholder groups, it did not originally seek to assess whether the various stakeholders had distinct patterns of conceptualization, prioritization, internal action, or intersectoral action in relation to health determinants.

As a member of the research team, I participated in all aspects of the research, and am a co-author in the synthesis article that is extensively quoted in the introduction and in my first results chapter of this thesis, as part of the broad context of management of health determinants in Cuba ([Spiegel et al., 2012](#)). For the purpose of this thesis, subsequent chapters will detail the understanding of the management of health determinants by various professionals, leaders, and representative of various sectors, rather than a comparison between municipalities.

I obtained the documents for the review from several sources between 2004 and 2010. One of those sources was a broad literature search in Medline using ‘Cuba’ and ‘health determinants’ as keywords. A second source of documents came from performing a literature search using SciELO (Scientific Electronic Library Online) a database of Spanish and Portuguese language publications from various Latin American countries. The database was searched with keywords such as ‘health determinants’, ‘primary care’, and ‘primary healthcare’. The term ‘public health’ was not used, as the goal was to find information on public health and primary care collaboration. The search using ‘primary care’ as a search term was sufficient to retrieve articles that included collaboration with public health. The search with the term ‘public health’ generated a large volume of articles that had no mention of primary care, while searches with both ‘public health’ and ‘primary care’ as keywords together systematically led the database to return no articles on the Scielo.sdl.cu (the Cuban-specific database) – see screen shot in Figure 5. When the search was attempted in the larger Latin American database (Scielo.org), the database would stay idle and not produce results (several trials for the combined search was done both from Cuba and from Canada over 2 years (2006-2008) before the combined search was abandoned). However, the search with the public health AND primary care keywords combined would have yielded fewer articles than the search with the keyword primary care alone, supplemented by a search with the keywords health determinants alone. As both those other searches were performed and were both fully reviewed, it did not appear necessary to pursue this combination search further. It seems that the database is not set up to handle this type of combined search. The research team was confident that the search with the other keywords alone and the request for relevant articles from key experts (described below) yielded the most relevant articles.

Figure 5 SciELO database search results combining public health and primary care keywords

SciELO

revistas artículos

alfab materia búsqueda autor materia búsqueda

Colección de la biblioteca

Base de datos : **article**

Búsqueda : **atencion primaria [Todos los índices] and salud publica [Todos los índices]**

Referencias encontradas : **0**

Refinar la búsqueda

Base de datos : **article** **Formulario básico**

Buscar por : [Formulario libre](#)

	Buscar	en el campo	
1	<input type="text" value="atencion primaria"/>	Todos los índices ▾	índice
2	and ▾ <input type="text" value="salud publica"/>	Todos los índices ▾	índice
3	and ▾ <input type="text"/>	Todos los índices ▾	índice

[config](#) [limpiar](#) [búsqueda](#)

Search engine: **iah** powered by [WWWISIS](#)

BIREME/OPS/OMS - Centro Latinoamericano y del Caribe de Información en Ciencias de la Salud

The third source of documents was through asking key informants in Cuba about relevant documents, including case examples of intersectoral collaboration in Cuba. The key informants interviewed included local primary care practitioners as well as provincial and national leaders in primary care, public health, and intersectoral collaboration in Cuba. I participated in collecting some of those documents during two field trips to Cuba (in 2004 and 2006). Along with other team members, I reviewed all the documents and case examples collected, and participated in summarizing the findings, which were reviewed by the Cuban team before publication. I paid particular attention to the documents related to the inclusion of primary care and public health professionals in intersectoral collaboration in Cuba.

As part of the two field trips, I engaged in key informant discussions of the roles of primary care practitioners, public health professionals, and members of other sectors. The field trips included

visits to organizations deemed by the local Cuban team to be relevant examples of primary care, public health, and other sectors' joint engagement in the management of health determinants. Those field visits and key informant discussions were recorded through extensive note-taking, followed by team discussions including both Cubans and Canadians to ensure adequate understanding of the examples. The key informants included: two primary care physicians deemed to be typical of primary care physicians in the region (one more in the city centre, and one more on the periphery); a primary care physician seen as a local leader in intersectoral collaboration to manage health determinants; the director of the provincial healthcare management team; and two municipal public health specialist physicians. The sites visited included: two family physicians' clinics; the intersectoral analysis unit of Santa-Clara; the regional hospital; the regional center for public health and epidemiology; a polyclinic (in which was located a public health physician); a maternal health centre; a centre for the elderly; a school with a community library; and a training facility for public health technicians.

The focus groups and surveys of the full case study were conducted in two municipalities: Santa-Clara, an urban city, and Camajuaní, a rural municipality. This thesis focuses on the management of health determinants in urban settings, due to feasibility considerations for the realist review and literature that seem to indicate that intersectoral collaboration in rural areas might follow different mechanisms than in urban settings, as mentioned in the realist review method section. Therefore, I excluded the data from Camajuaní from this re-analysis. The following sections describe the focus groups, survey participants, settings, and specific methodology used to re-analyze the data in relation to the main research questions of this thesis.

2.2.1 Focus group and survey participants

The Canada-Cuba research team chose Santa Clara, a municipality in the central province of Villa Clara, Cuba, for the in-depth study. The rationale for that choice was that Santa Clara is a typical Cuban urban and industrial setting, with a population of more than 238,000 ([Alegret et al., 2003](#)), while Havana, the capital, is unique and would not have informed the stakeholders on intersectoral collaboration in a typical urban setting. Santa Clara was also a city with several researchers interested in studying health determinants in Cuba ([Alegret et al., 2003](#)).

Scientists and practitioners in Cuba and Canada contributed to adapting the survey and focus group instruments from a similar study that had been conducted in Canada ([Frankish et al., 2007](#)). Two workshops held with senior scientists and decision makers from the Cuban health sectors refined the research methodology and instruments, and reviewed them for face and content validity ([Global Health Research Program, 2008a, 2008b](#)).

In Santa Clara, participants and participating institutions were identified through purposive sampling based on their known involvement in managing health determinants as local and municipal leaders, primary care practitioners, and public health professionals. With ethical approval granted in Canada and Cuba, focus groups and questionnaires were conducted during the first quarter of 2007. An experienced member of the Cuban research team who was familiar with the topic facilitated each focus group and ensured informed consent from participants in the study. Another person was responsible for recording the discussion. Each focus group lasted about two hours, and was conducted immediately after participants completed the surveys. All the participants were asked to answer the surveys individually. The Santa Clara case study included six such meetings, all with purposive invitation (purposive sampling) to participants, in locations deemed generally typical of the Santa Clara health system by the Cuban members of the research team. Participants included: long-standing decision-makers overseeing primary care in that region; local primary care, public health, and preventive medicine specialists very familiar with the region's intersectoral stakeholders; and national leaders and researchers in the area of intersectoral collaboration.

Two such meetings were conducted with local leaders from four different “Consejos del Poder Populares”, or Popular Power Councils. Within the Cuban government, Popular Power Councils are the lowest level of organization - the neighbourhood or circumscription level. The members of the Popular Power Councils are elected through local elections held every three years. Two other focus groups combined primary care practitioners, including family physicians and community nurses, from the local primary care clinic, with members from the area's polyclinic. The polyclinics have a mandate to support family physicians and are staffed with social workers, specialists in paediatrics, internal medicine, obstetrics, and gynaecology, and public health professionals.

One focus group was conducted with municipal leaders from the municipal assembly. The municipal assembly is composed of elected members from each of the Popular Power Councils, as well as non-elected representatives of Cuban ministries, institutes, sectors, and large civil organizations. The municipal assembly members are also members of the municipal health council, a structure responsible for addressing health issues at the municipal level. This council is composed of members of the municipal assembly as well as health services decision makers and clinicians.

The last focus group was conducted with members of the Municipal Unit of Hygiene and Epidemiology, and included public health professionals and decision makers. There are Municipal Units of Hygiene and Epidemiology in all of Cuba's 169 municipalities. They report (along with all the other health and healthcare institutions of the municipality) to the Municipal Health Directorate, which is accountable to the municipal level of government, as well as the Provincial Health Directorate, which in turn is accountable to the provincial level of government and the Ministry of Public Health ([Castell-Florit Serrate et al., 2007a](#)) .

As we explained in Spiegel et al. (2012) p. 17:

“All recruited participants responded positively and participated fully. The only exception was the second focus group with the Popular Power Council members in Santa Clara. Due to an unforeseen local event needing the immediate attention of some committee members, only one person from each Popular Power Council attended this focus group. All focus group participants completed the questionnaire.”

After obtaining informed consent, but prior to answering the survey, a document was distributed to all participants that defined the terms ‘health determinants’ and ‘intersectoral collaboration.’ These were based on the Public Health Agency of Canada definition ([PHAC, 2006](#)) and the WHO International Conference on Intersectoral Action for Health proceedings ([WHO, 1997](#)), but adapted to the Cuban context based on the recommendations of the Cuban research team. The adaptation by the Cuban team mentioned that political will, social organizations, and the health system can all influence health, but are not the only influences. The document explained that other factors determine health, such as life circumstances (e.g., physical and social environment, personal health practices, etc.). The final document in Spanish is reproduced in Appendix A.3. The goal of providing this document was to promote a common understanding of these terms, and to give examples to facilitate answering the survey.

The survey form collected the following identification information: focus group number; the participants' organization; and their location (municipality and local area). Below, I have summarized the main survey and focus group questions. The final versions of the focus group guide, survey, and terminology document were produced in Spanish. They are reproduced in section Appendix A. The health determinants in the survey were those mentioned as key health determinants by the Public Health Agency of Canada ([PHAC, 2006](#)), which were also used in the study conducted by Frankish et al. on the management of health determinants in Canada ([Frankish et al., 2007](#)). To facilitate understanding of the content of the documents, below is an English-language summary of the questions asked in the focus groups and survey.

There were six main questions that guided the discussion in the focus groups:

- 1) What constitutes a health determinant in Cuba?
- 2) How are health determinants prioritized?
- 3) Who is responsible for addressing health determinants; how is it done internally; and how is the intersectoral collaboration achieved?
- 4) Which of the strategies of the Ottawa Charter on health promotion are used to manage health determinants? (The list of the Ottawa Charter strategies are from ([WHO, 1986](#)))
- 5) How does the healthcare sector prevent diseases and promote and protect the health of the population?
- 6) What are the successes and challenges of intersectoral collaboration, and how are they evaluated?

The four main survey question themes were:

- 1) What are the five most important health determinants for your organization (rank them in order of priority, from 5 to 1, 5 being the most important)?
- 2) For each health determinant, what is the level of action carried by your organization?
 - 1) no action; 2) recognition of the relevance of the health determinant; 3) planning action; 4) action implemented recently; and 5) long standing program of action.
- 3) For each health determinant, please indicate what is the most important action conducted by your organization.
- 4) For each health determinant, please list the most important organizations with which your organization has collaborated in the last year and indicate the frequency and the level of

collaboration reached between the two organizations. The options for the frequency included: 0-2; 3-6; more than 6; unknown. The levels of collaboration option were: 1) no collaboration; 2) minimum informal collaboration; 3) collaboration through formal mechanisms of exchange of information, without joint action; 4) joint planning of action; and 5) joint planning, implementation and evaluation.

The following sub-sections will describe the analytic process followed to extract meaning from the focus group transcripts, followed by statistical methodology to analyse the survey answers. I chose this order as the focus group provides rich information that can then be supplemented by the survey answers, which contribute to their interpretation.

2.2.2 Focus group methods

Focus groups consist of interviewing a small group of individuals, emphasizing the interaction between the participants and the researcher(s), to gain important insights and information about a specific phenomenon ([Krueger, 1994b](#)). The main feature of focus groups that differentiates them from other types of group interviews is that the researcher takes a central role in encouraging focus group participants to interact with each other ([Barbour & Kitzinger, 1999](#)). Through interactive discussion, important insights and information can emerge, underscoring the importance for the researcher to encourage participant interaction ([Krueger, 1994b](#)). Even though focus groups encourage divergent views and opinions ([Powell & Single, 1996](#)), Krueger argued that because participant interaction involves discussion among the participants, the information forwarded by the group can be indirectly validated since everybody has the chance to confirm or challenge any part of the discussion.

The use of focus groups has both advantages and disadvantages. One advantage of using focus groups is the possibility of discovering a wide range of information because divergent views are encouraged ([Powell & Single, 1996](#)). Moreover, because focus groups are rooted in participant interaction, Powell noted that the discussion in focus groups is rich, and can contain deep elaborations. Because there are several participants, Powell also suggested that the possibility of neglecting several components of a topic becomes less likely in focus groups. Moreover, Morgan and Krueger (1993) noted the synergistic effect of a group discussion that is both dynamic and productive. It is expected that a comprehensive discussion will be produced in focus groups

because participants question each other and have an opportunity to agree or disagree with each other ([Morgan & Krueger, 1993](#)).

Regarding the disadvantages of the focus group research method, one area that can be considered a weakness is the possibility for a *group effect* ([Carey & Smith, 1994](#)). Even though divergent views are encouraged in focus groups, sometimes participants may resort to group thinking, and individual participants may not express his or her true opinions on a subject for fear of contradicting the group ([Powell & Single, 1996](#)). In addition, even though the moderator has the central role in encouraging productive discussion among the group, moderators can sometimes be a hindrance to a more productive focus group by disrupting conversations ([Powell & Single, 1996](#)). Finally, another possible weakness of focus groups is the possibility that some topics may not be easily discussed within a group setting, because some participants may find a topic sensitive ([Krueger, 1994b](#); [Morgan & Krueger, 1993](#)). Thus, the comprehensiveness of the discussion could be limited when some participants decline to take part in the discussion.

The limitations described above are generic limitations of focus groups. In the context of performing a supplementary analysis of a case study that was conducted with a slightly different goal, without the availability of the researchers who conducted the focus groups, and without full transcripts, it is difficult to ascertain how those limits might apply specifically to this study. However, the Cuban research team members who conducted the focus group had extensive training and experience in conducting focus groups as per best practices, and sought to create a climate in which discussion, including agreement and disagreement with other participants' views, was encouraged. The experience of the Canadian members of the research team, who were part of other focus groups conducted in collaboration with the Cuban researchers, confirmed that it was indeed the case that discussion was encouraged, and open challenge or support to the views expressed was frequent. This could, in part, be ascertained through the analysis, as it was clear that a variety of opinions were expressed and examples were given.

The Cuban research team provided the data from the focus groups in two documents. One document was labeled “resumen” (which will be referred to as the summary transcript), and the other one was labeled “relato” (which can be translated literally as ‘story line’ although does not refer to traditional story line extraction of focus group as understood in Canada). The summary transcript contains the participants' answers to the main focus group questions, in the form of lists

of themes and key expressions for each of the questions discussed. Within the document, lists of themes and key expressions were grouped in three broad focus group categories: (1) local leaders, (2) municipal leaders, and (3) primary care and public health professionals. The document labeled “relato” by the Cuban team is referred to as the general transcript in this thesis. It contains the transcript of the discussion in the form of quotes. It does not attribute quotes to any one participant, or to any one focus group. Instead, it has all the focus group results in one document, divided by the broad questions discussed. However, it is not divided by focus group categories. The Cuban research team was not able to provide full transcripts of the focus group discussions.

Furthermore, by the time this secondary analysis occurred, the Cuban team was not able to provide a separate set of answers from the two primary care focus groups versus the focus group consisting only of public health professionals. However, for each of the original individual focus groups, the Cuban research team was able to provide tables with the group’s consensual ranking of the health determinants. The general transcript has some sections labeled as responses from the healthcare sector, which had merged the answers from the public health and the primary care focus groups. There are some limitations arising from having only two documents describing the content of the six focus groups, with both documents appearing to fall short of full narrative transcripts. I discuss these limitations in the concluding chapter.

Within this thesis, the analysis of the focus group transcripts in combination with other qualitative data, such as the field visit, document review, and key informant interviews, is a hybrid between constant comparison analysis and thematic analysis. Thematic analysis seeks to extract the core patterns in a life story, as described by Sparkes and Smith, (2013) based on Riessmans’ (2008) book titled ‘Narrative methods for the human sciences’ ([Sparkes & Smith, 2013](#)). In this thesis, the intersectoral management of health determinants involving primary care, public health and representatives of other sectors in Cuba is the subject of this ‘life story’. Thematic narrative analysis is performed through *immersion* in the data, followed by *identification of key themes*, making connections across the evolution of the ‘life story’, in this case, across the evolution of intersectoral collaboration in Cuba. This supports the extraction of patterns and meanings constructed over time, by asking questions such as “‘What is going on here?’, ‘What does this theme mean?’, ‘What are the assumptions underpinning it?’, ‘What are the implications of this theme?’, ‘What conditions are likely to have given rise to it?’, and ‘What is the overall story the different themes reveal about the topic?’” ([Sparkes & Smith, 2013](#)) p. 133. I used this type of inquiry to gain further insight from the

various sources of information, asking questions such as why environmental health concerns seem to be a lower priority in one set of answers, while in another section, they seem to be considered a priority area to address.

However, because the data available is not in the form of a life story per se, much of the understanding of various practitioners' roles and of how intersectoral collaboration functions in Cuba was derived through more classical constant comparison approaches. The method of constant comparison looks at patterns, themes, and perspectives of the participants, enabling the researcher to assess similarities and differences between the various actors ([Boeije, 2002](#); [Sparkes & Smith, 2013](#)). In our case, the four groups of actors were the local leaders of various sectors, municipal leaders of various sectors, the primary care practitioners, and the public health professionals. To produce a systematic analysis of patterns, I alternated between the various categories, properties, and core roles and specific conceptualization and prioritization of health determinants of the various groups that seem to be emerging from the focus groups, as recommended by ([Bowling, 2009](#)).

Constant comparison analysis has been used extensively in grounded theory methodology ([Strauss & Corbin, 1990](#)). It is also frequently used with a more descriptive and interpretative aim ([Thorne, 2000](#)), which is an approach more appropriate to this study's goals and purposes. The more descriptive and interpretative approach assists in establishing the similarities and differences between the various stakeholder groups, in terms of their broad conceptualization of, prioritization of, and respective roles in the management of health determinants. This, in turn, provides relevant insight for the interpretation of how the contextual elements, mechanisms, and outcomes of collaboration in Cuba are configured. This is relevant to the later part of integrating the Cuban findings with those of the realist review, which is based on analysis of configurations of contexts, mechanisms, and outcomes, as explained in section 2.3.

Both the summary transcript from the professional group and the general transcript fall into the category of semi-structured data, following the questions in the interview guide very closely. Therefore, data groupings (or nodes) were created for each health determinant, each question, and each emerging sub-theme and important concept discussed. Those were linked and compared across professional groups, with extensive use of memos and annotations. The analytic process, including refinement of categories, emerging themes, similarities, and differences was done using NVivo 9 from April to July 2011.

The end of the process of constant comparative data analysis occurs when data saturation is achieved, wherein the constant comparison of data elements does not yield new categorizations or insight, a signal that adding new data can no longer improve the findings ([Strauss & Corbin, 1990](#)). Data saturation pertains to both the data collection and the data analysis processes. During the focus groups, the Cuban researchers sought to reach data saturation by using sub-questions, probing questions, and contrasting questions about what they were understanding from various participants, until they determined that the discussion had reached its full potential and was not yielding any new insight ([Barbour & Kitzinger, 1999](#); [Krueger, 1994a, 1994b](#); [Rabiee, 2004](#); [Strauss & Corbin, 1990](#)).

There are several limitations in terms of the level of saturation that can be reached in the supplementary analysis performed as part of this thesis. It was not possible to organize more focus groups, or to ensure that more probing questions were asked in relation to the roles of the various stakeholders, or even to have the full transcripts. However, based on the data I had at hand, I believe I have reached saturation in the analysis. In discussion with both Canadian and Cuban team members, I was not finding new insights, and in fact, many of the details of the differentiation of categories I established toward the end of the comparative analysis were deemed too detailed by other team members, leading to a state of “losing the forest for the trees”.

Furthermore, during the analysis process, many questions arose in relation to some of the specific answers in the focus group. This was also true of the survey, but to a lesser extent. I wanted to ensure I properly understood the answers. I had extensive discussions with the Cuban researchers as well as with key informants⁶, during my two field trips to Cuba in 2006 and 2009, through e-mail and a few international teleconferences, and in person during the multiple occasions that members of the Cuban research team came to UBC between 2006 and 2011. At several points during the analysis and interpretation of the findings, including while the team was writing the summary article by Spiegel et al. (2012), the Cubans had the opportunity to review my drafts and provide further comments. In addition, most of the information exchanged during the discussions and reflections

⁶ Dr. Pastor Castell-Florit Serrate, a preeminent Cuban researcher in the field of intersectoral management of health determinants; Dr. Barbara Martinez, who was the Director of the Provincial Centre of Hygiene and Epidemiology of Villa Clara, and had been the head of the municipal health directorate, the body responsible for the health system service delivery in Santa Clara; Miriam Concepcion and Mariano Bonet of the National Institute of Hygiene, Epidemiology and Microbiology; as well as the several family physicians I encountered during the field, though unfortunately, I did not take note of their names.

that arose in the course of reviewing the literature, preparing the methodology and various instruments, and performing the analysis, have been recorded in field notes and diaries. All field notes and diary entries were reviewed toward the end of the thesis redaction to ensure trustworthiness, rigour, and comprehensive inclusion of information, as well as saturation of the insight gained through the analytic processes.

2.2.3 Survey analysis

The supplementary analysis aimed to establish whether there were similarities or differences in the pattern of answers of the various stakeholders of interest (public health professionals, primary care practitioners, local leaders, and municipal leaders) for the four main question themes listed on page 30. The comparison of the various stakeholders' answers was performed with the hope that the various patterns of answers would provide insight on how health determinants are managed in Cuba. The analysis plan was determined in consultation with a biostatistician affiliated with UBC's Department of Family Practice. All analyses were performed with SPSS v.19. Both the statistician and I contributed to re-coding the data by professional group, type of organization, and type of action, as well as by intensity and frequency of engagement in intersectoral collaboration. These groupings were discussed with the Cuban research team to ensure accuracy.

For the purpose of this thesis, I use ≤ 0.05 as the threshold for statistical significance. Due to the small sample size in each professional group, and since this is a re-analysis of a data set that was originally meant to compare municipalities (not professionals within a given municipality) I also use $p < 0.1$ as the threshold for a tendency toward significance. Ultimately, both these levels are arbitrary, and the full p-values are displayed in the results.

For survey theme #1, respondents were asked to rank the five most important health determinants from the list provided (from 1 to 5, 5 being the most important). For survey theme #2, each respondent was also asked to rank their organization's level of participation in the management of each health determinant on a Likert scale from 1 ('no action') to 5 ('our organization has been acting on this health determinant for a long time').

For the purposes of answering the questions posed in this thesis, for each health determinant, I averaged the rank given by each professional group, for each of the research themes. To determine

which statistical test was appropriate to assess differences in these rankings, the normality of the distribution had to be assessed. This was done by visual inspection of the distribution and by comparison of mean and median values, as well as through the standard normality test available in SPSS (Kolmogorov-Smirnov and Shapiro-Wilk) ([SPSS, 2010](#)). The visual assessment, the comparison of the mean and the median, and the normality test all revealed that the data were not normally distributed.

When normality can be assumed, the differences between the various groups can be assessed with a one-way analysis of variance (ANOVA) ([Dawson-Saunders & Trapp, 1994](#); [SPSS, 2010](#)). If the data are not normally distributed, they can be analyzed using a Kruskal-Wallis test ([Dawson-Saunders & Trapp, 1994](#)), the non-parametric equivalent of the one-way ANOVA ([Dawson-Saunders & Trapp, 1994](#)). This test is appropriate for comparing several groups with different sample sizes, variances, and distributions, as it transforms the data to compare ranks of the whole distribution, rather than the original numerical values in each group ([Dawson-Saunders & Trapp, 1994](#)). The transformation involves ranking all the answers of all the respondents, regardless of professional group membership. Any tied value is assigned the average of the rank they would have been assigned had they not been tied, and the calculation is then adjusted for the number of ties. When the null hypothesis is rejected, it means that at least one of the group's distributions is statistically significantly different than the others, but it does not specify which one. If a difference in distributions is found, a pair-wise comparison, still using Kruskal-Wallis test, can be performed to determine between which groups lays the statistically significant difference([Dawson-Saunders & Trapp, 1994](#); [SPSS, 2010](#)).

For survey theme #3, participants were asked to name the most important action done by their organization to manage each health determinant. For purposes of this thesis, the actions listed for each health determinant were regrouped in various categories of interventions, and by each professional group. This enabled a description of the frequency of various types of actions. However, the small number of times each action was mentioned by each of the groups (even regrouped in categories) did not enable further meaningful statistical analysis by action.

For survey theme #4, each respondent was asked to name up to three organizations with which their organization engages in intersectoral collaboration, and identify the corresponding intensity and frequency of collaboration for each of those organizations. At first, the general pattern of

collaboration by health determinants, for all groups together, is described through simple counts and proportions. It was not necessary to carry out advanced statistical testing when the goal was a simple general description of the total pattern. However, to analyse whether there were differences between the professional groups, in accordance with the goal of this thesis, statistical comparisons were performed. Since departures from normality can occur, and because most of the intersectoral categorical variables are more akin to nominal categories than numerical ones, the differences between the various groups in terms of patterns of collaboration were assessed through the Chi-square test. The Chi-square test is the most appropriate statistical test to determine whether there are differences in frequencies or proportions between three or more independent groups (i.e., the various professional groups in this study) ([Dawson-Saunders & Trapp, 1994](#); [SPSS, 2010](#)).

Overall, the respondents listed 73 organizations. Removing duplicates reduced the list to 35, which is still too many to enable a meaningful comparison of patterns of intersectoral collaboration between the various groups. To obtain conceptually sound groupings of those organizations and to remain consistent with the study's goal related to intersectoral (not inter-organizational) collaboration, all organizations were classified into sectors. This regrouping into seven sectors also ensured there were no small frequencies expected, which could inflate the Chi-square value ([Dawson-Saunders & Trapp, 1994](#)).

The final classification was based on descriptions of the various organizations in Cuban documents and Cuban governmental webpages, as well as through discussion with the Cuban research team. Each of the organizations was grouped into one of seven sectors: education; community organizations; communication; political organizations; public work and governmental environmental institutions; health and social work; and commercial, industrial and financial organizations (details of the grouping from the original data can be made available). Organizations overlapping a few categories were categorized in the one sector judged to be the most pertinent by myself and another research team member very familiar with Cuba⁷. For example, the Association of University Students was grouped with the other organizations of the educational sector. Some organizations might appear to be more political, but were clearly described by Cubans as more akin to civil society/NGO functions than political organizations.

⁷ Nino Pagliccia, a UBC statistician part of the Cuba-Canada team studying intersectoral management of health determinants, and who has worked with Cuba for several decades in a variety of professional and volunteer capacities.

Even after reducing the sectors to the groupings mentioned above, the distribution of intersectoral collaboration by sector, health determinant, and professional group produced some cells with small frequencies. The expected frequencies were rarely below five, which indicates that the Chi-square is still a valid statistical test. Furthermore, supplemental statistical analysis performed on a grouping of organizations in an even smaller number of sectors and with the merging of the Santa Clara and the Camajuani data sets, still showed statistically significant differences in patterns of intersectoral collaboration (analysis not shown⁸). This supports the robustness of the Chi-square with the original sectorial grouping described in the prior paragraph.

The intensity of collaboration was measured on a scale of 1 (no collaboration) to 5 (full collaboration, described as long-term joint planning, execution, and evaluation of a program or action to address this health determinant). The ‘level of collaboration’ variable was transformed into two categories (full collaboration versus all other levels of collaboration) to account for a ceiling effect observed in the answer, as most answered at the level of full collaboration. This variable thusly became dichotomised. Similarly to assessing the sectors with which each organization collaborates, Chi-square tests are the most appropriate to assess whether there are differences between the professional groups in terms of intensity of collaboration, in total or by sector. The frequency of collaboration is measured through a categorical scale, from 0-3, 3 to 6, or more than 6 formal interactions per year. For each health determinant, the differences in frequency of collaboration between the professional groups are also best assessed through the Chi-square test.

2.2.4 Integration of the supplementary analysis of the Cuban case study

The re-analysis of the Cuban case study aimed to synthesize the diverse data sources in a manner that allowed for identifying the main contexts, mechanisms, and outcomes configurations. This iterative process started in 2011 and ended in 2013. It involved several other researchers, who reviewed the framework and the findings, and commented on their appropriateness until a framework that appeared valid and newly contributing to the world knowledge was created. This framework is presented in Chapter 3, section 3.4.

⁸ Those analyses were not adding any more meaning or insight, and the amount of data and detailed analysis in the appendix is already substantial.

The approach of creating a framework representing the Cuban system based on categorization by contexts, mechanisms, and outcomes was chosen to facilitate bridging the findings of the realist synthesis of the literature with the findings from the Cuban re-analysis. As mentioned earlier, because the Cuban experience is likely not the only relevant one to consider in relation to how public health, primary care, and other sectors' representatives manage health determinants. Thus, and to provide further insight into how to manage health determinants through that particular type of intersectoral collaboration, I decided to add a knowledge synthesis of the world literature to the Cuban supplementary analysis. This also increases the ability of this thesis to generate knowledge that will be useful in settings other than Cuba. Overall, the knowledge synthesis and the re-analysis of the Cuban case study data will contribute to creating a uniform realist inquiry to answer the research questions listed in the previous chapter.

The following section will present the methodology of the knowledge synthesis, which will also provide important insight on the rationale for using patterns of contexts, mechanisms, and outcomes to draw practical and relevant recommendations for decision-makers who implement interventions in a variety of contexts.

2.3 Realist synthesis

This section will describe the rationale for conducting a systematic review, inspired by realist synthesis methods, followed by a detailed description of the steps performed in this systematic review based on realist review standards ([Wong, Greenhalgh, Westhorp, Buckingham, & Pawson, 2013a](#)).

Conducting a knowledge synthesis, especially based on realist review standards, is an appropriate methodology to deepen the understanding of how complex interventions work in a variety of circumstances ([Pawson, Greenhalgh, Harvey, & Walshe, 2005](#)). It is also a very timely process, since no systematic literature reviews have been conducted on intersectoral collaboration to manage health determinants before, let alone with the stakeholders of interest in this research, or with a realist approach.

Other methods considered for the systematic review include the use of a scoping review methodology, as was done to describe collaboration between primary care and public health

([Martin-Misener & Valaitis, 2008](#); [Martin-Misener et al., 2012](#); [Valaitis et al., 2012](#)). Scoping review methodology could describe what the literature is reporting on the topic, through thematic analysis ([Levac, Colquhoun, & O'Brien, 2010](#)), however it does not possess the analytic process to determine theoretical structures, to determine how to best support collaboration, or to manage health determinants in various contexts ([Dixon-Woods, Agarwal, Jones, Young, & Sutton, 2005](#)). Scoping reviews of public health and primary care collaboration and various knowledge network reports express the need for increased research on the theoretical basis of collaboration between public health and primary care and on the management of health determinants ([Health Systems Knowledge Network, 2007](#); [Kelly, Morgan, Bonnefoy, Butt, & Bergman, 2007](#); [Martin-Misener & Valaitis, 2008](#); [Pfeiffer, 2003](#)). These needs arise because of the paucity of publications in that area of research, and the hope to be able to design better interventions once a theory is built in order to explain why some interventions are more or less successful when they involve the stakeholders of interest of this research ([Martin-Misener, 2009](#)) ([Pawson, 2002](#)).

Grounded theory research approaches have been proposed as an avenue for synthesising research and generating a sound theoretical basis in emerging fields ([Dixon-Woods et al., 2005](#)). However, these approaches lack procedural transparency, which is important in systematic reviews, and they suffer from what some researchers call ‘methodological anarchy’, as there is a variety of different ways grounded theory is produced, without consensus on appropriate methods for various uses ([Dixon-Woods et al., 2005](#)).

Another method mentioned by Dixon-Wood et al. is Miles and Huberman’s cross-case technique ([Dixon-Woods et al., 2005](#)). WHO, the Public Health Agency of Canada, and many of the knowledge networks that fed into the CSDH report used case studies and cross case-study comparison to provide guidance on how to address health determinants ([CSDH, 2008a](#); [PHAC, 2007](#); [PHAC & WHO, 2008](#)). However, those reports did not generate very much analytic insight of what works when, and why or why not in various circumstances. Those reports also did not have systematic review methods to find the cases, using mostly expert-written cases studies, supplemented by a narrative approach to reviewing the literature. Furthermore, they suffer the limitations of such approaches in terms of lack of transparency in how searches are conducted, and how information is selected for inclusion or not ([Dixon-Woods et al., 2005](#)).

At the other end of the synthesis spectrum, meta-analyses - which attempt to quantitatively synthesize the impact of interventions - have limited utility for the study of the impact of intersectoral collaboration on health outcomes, due to the paucity of randomized or even control trial methods to assess the impact of intersectoral collaboration to improve health ([Hayes et al., 2010](#)). It is even more difficult to produce a systematic, quantitative comparison of outcomes across different interventions on health determinants, since those interventions are usually long-term, complex interventions prone to changing over time, and rarely amenable to exact replication when implemented in different settings, or even at different times in the same setting ([Pawson, 2002](#); [Pawson, Greenhalgh, Harvey, & Walshe, 2004](#); [Pawson et al., 2005](#)). Realist synthesis method appears to be the most appropriate type of systematic literature review for the questions asked in this thesis, considering realist reviews are more structured and purposefully take into account the issues in synthesising evidence from complex interventions to guide decision-making in changing circumstances ([Pawson, 2002](#); [Pawson et al., 2004](#); [Pawson et al., 2005](#); [Shepperd et al., 2009](#)).

A realist review methodology is better suited to the research question posed by this thesis, by systematically assessing the context, mechanisms, and outcomes (CMO) configuration of interventions ([Pawson et al., 2004](#)). As explained in the Realist Synthesis Training Material, “A CMO configuration is a statement, diagram or drawing that spells out the relationship between particular features of context, particular mechanisms and particular outcomes. In a sentence, they take the form of “In ‘X’ context, ‘Y’ mechanism generates ‘Z’ outcome.”” Those material also cite an explanation provided by Jagosh et al (2012) “CMO configuring is a heuristic used to generate causative explanations pertaining to the data. The process draws out and reflects on the relationship of context, mechanism, and outcome of interest in a particular program. A CMO configuration may pertain to either the whole program or only certain aspects. One CMO may be embedded in another or configured in a series (in which the outcome of one CMO becomes the context for the next in the chain of implementation steps). Configuring CMOs is a basis for generating and/or refining the theory that becomes the final product of the review.”([Jagosh et al., 2012](#)) p.316.

As Pawson explains, “In common sense terms, this amounts to saying that more consequential lessons are to be learned if we try to test out the same policy idea by seeing how it turns out in diverse settings.” ([Pawson, 2002](#)) p. 344. Furthermore, a realist review can assist in the creation of a sound theoretical basis for the field by extracting demi-regularities from the CMO configurations ([Pawson, 2002](#); [Pawson et al., 2004](#); [Pawson et al., 2005](#); [Pawson et al., 2011](#)). Demi-regularity are

defined as “semipredictable patterns or pathways of program functioning. The term was coined by Lawson (1997), who argued that human choice or agency manifests in a semipredictable manner—“semi” because variations in patterns of behavior can be attributed partly to contextual differences from one setting to another.”([Jagosh et al., 2012](#)) p.317.

An important feature of realist synthesis is that it can help to build a framework representing the repetitive patterns found across data sources, which can then inform decision-makers and professionals as well as to help create or refine a middle-range theory. Middle-range theory “is an implicit or explicit explanatory theory that can be used to assess programs and interventions. “Middle-range” means that it can be tested with the observable data and is not abstract to the point of addressing larger social or cultural forces (i.e., grand theories).” ([Jagosh et al., 2012](#)) p. 316. Through the use of demi-regularity from the Cuban supplementary analysis and the realist review, a realist inquiry approach provides a way to interpret and integrate those two study component in a middle-range theory and discuss the findings in relation to the rest of the world literature on the topic ([Pawson, 2002](#); [Pawson et al., 2004](#); [Pawson et al., 2005](#); [Pawson et al., 2011](#); [Wong et al., 2013a](#)).

Examining the causality of a phenomenon is the root of a realist synthesis, but the process is different from the causality arising from quantitative studies ([Pawson et al., 2004](#)). Causality is determined in realist synthesis through a successionist model ([Pawson et al., 2004](#)). In a successionist approach to causality, it is the repetition of finding certain mechanisms leading to a certain outcome across some, but not all contexts, that helps describe the true relationships between the variables. For instance, X can be concluded to cause Y, within context A, B and C; while in different contexts (F, G and H), X leads to Z, and does not cause Y. Furthermore, whereas X can be the mechanism to lead to Y in context A, it may actually serve as the outcome (Y) in context B. Therefore, realist inquiries enable the researcher to situate the outcomes within a more specific frame, which is not normally sought through other systematic review methods, such as meta-analysis ([Shepperd et al., 2009](#)).

In other words, realist synthesis assesses the relationship of two events, taking into account a specific context and the specific mechanisms needed to occur in order for the relationship to exist ([Pawson et al., 2004](#)). Based on Pawson et al.’s article, ‘context’ is the environment or setting wherein the relationship occurs between a certain mechanism and a given outcome, whereas

‘mechanism’ is the specific condition that needs to be present in order for the relationship between two events to occur. Later publications on realist reviews have further precise the understanding of mechanisms within realism:

“There are many definitions and conceptualisations of mechanisms (even within realism) (see Section 2.3, Glossary). In realist philosophy, mechanisms are causal forces or powers. They cause things to happen, something realist have termed – generative causation (see Figure 1). Mechanisms in social science are comparable but not identical to mechanisms in natural science (e.g. the mechanism of gravity accounts for why a dropped object falls to the ground). Social mechanisms may usefully be defined as ‘... underlying entities, processes, or [social] structures which operate in particular contexts to generate outcomes of interest.’ Here ‘entities’ may refer to things such as norms or belief systems, ‘processes’ are sequences where later events depend on earlier ones, and social structures may refer to things such as gender, class, or cultural patterns of relationships. Like the mechanisms in natural sciences, they possess a number of features: they are not ‘visible’, but must be inferred from the observable data; they are context sensitive, and they generate outcomes (2).” ([Wong, Greenhalgh, Westhrop, & Pawson, 2013c](#)) p.5.

Since the publication of that seminal article by Pawson in 2004, the field of realist synthesis and realist evaluation has been refined considerably. One of the key project which has provided the basis for much of that evolution is the RAMESES (Realist And Meta-narrative Evidence Syntheses: Evolving Standards) project ([Greenhalgh, Pawson, Westhrop, & Wong, 2013](#)). The RAMESES project generated several guidance documents, such as reporting standards([Wong et al., 2013a](#)), quality standards ([Wong, Greenhalgh, Westhrop, & Pawson, 2013b](#)), and training material([Wong et al., 2013c](#)). Unfortunately, those tools were all published in 2013, after the research question, methodology, and analysis of the data included in this thesis was completed. The analysis was conducted mostly in 2011, and adjusted in part in 2013 based on some of the new publication, as much as feasible in the context of a PhD research project and timeline. The concluding chapter of this thesis discuss the strengths and limitations of the methods used in this thesis, which were based on published examples of realist synthesis and guidance that were available in 2009 and 2010 when the realist synthesis was designed, and the search strategy conducted.

The RAMESES project also includes a listserv where researchers involved in realist synthesis and evaluation discuss the evolution of the field. As acknowledged on the RAMESES listserv, it will likely be another 4 years before the recent publications guiding the field of realist review will

have impact on the quality of realist research outputs ([France, 2014](#)). Furthermore, the quality standards, the reporting standards and the training material were labeled as evolving standards. As one of the senior researcher involved in the list serve, who has published several realist review, and is recognized for his expertise has pointed out, “the current guidelines are mainly framed as ‘reporting standards’ ... some healthy distance needs to be maintained to prevent 'prescriptive application' of realist methodology (like adhering to a recipe to bake a cake). Not that prescriptive application is inherently bad, but the real value of applied realism is the privilege (perhaps the responsibility?) of thinking about solutions to problems in ways that are different from the thinking that created the problems. So in some way, shape or form, the realist process is both critical and creative and requires us to have a healthy distance from the idea of 'methodological instructions'. If it's possible to embody this spirit of realism in the evolution of the current guidelines” Justin Jagosh, Senior Researcher, Centre for Advancement in Realist Evaluation and Synthesis (CARES), University of Liverpool ([Jagosh, 2014](#)). Dr. Ray Pawson himself commented: “I’m inclined to agree with Justin and be a little fearful of being over-prescriptive and trying to ‘protocolise’ the very thing that can’t be formalised – the application of the research imagination.”([Pawson, 2014](#)) Dr. Pawson continues to describe that the guideline are needed as many are mislabelling work as part of the realist tradition that is not congruent with realist synthesis or evaluation, while at the same time expressing the need for further critic of the method ([Pawson, 2014](#)).

This thesis follows the four key steps of the realist synthesis process: 1) clarify the scope; 2) search for evidence; 3) appraise primary studies and extract data; and 4) synthesize evidence and draw conclusions ([Pawson et al., 2004](#)) ([Pawson et al., 2005](#)). Pawson et al. (2004 and 2005) admit that these steps are not simply linear, and that during the review process, the scope is frequently re-adjusted. Furthermore, data extraction is frequently an iterative process, based on insight gained as the data are extracted (as it occurred in this thesis). The four key steps that have been carried out in this thesis are described below in detail, including re-adjustments as the review progressed.

The step of clarifying the scope includes several sub-steps or tasks ([Pawson et al., 2004](#)) ([Pawson et al., 2005](#)), such as identifying the research question, clarifying the purpose of the realist synthesis, and articulating a theory to be explored, which helps to develop the theoretical framework to guide the data extraction. The area that I decided to focus on was examining how intersectoral collaborations that include both primary care and public health professionals were influencing

health determinants. This decision is based on the findings from previous literature. As shown in the literature review in the introduction of this thesis, intersectoral collaboration is believed to be a promising strategy to address health determinants. Primary care and public health professionals are especially thought to be the health system practitioners with important roles to play in addressing health determinants, but it is unclear how they can best collaborate between themselves and with other sectors to achieve that aim. Therefore, I wanted to identify the contexts, mechanisms, and outcomes of collaboration among primary care and public health professionals and members of non-health sectors, to address health determinants, and report on the outcomes of the various mechanisms and contexts of those collaborations. This type of realist synthesis is what Pawson et al. (2005) refer to as “Comparison” (how does the intervention work in different settings, for different groups?) ([Pawson et al., 2005](#)).

As explained in the introductory chapter of this thesis, there is a paucity of theoretical models to apply to this question of how intersectoral collaboration to manage health determinants works, and what are the roles of the various sectors. This thesis used some of the insight gained from the Cuban supplementary analysis, in terms of the roles of the various actors and infrastructures that support IAH in Cuba, as a basis for determining what data to extract in order to ascertain whether the context, mechanisms, and outcomes are similar to or different from those found in Cuba. Another framework that was used to guide the understanding of how to carry out intersectoral action was the guiding recommendation on how to implement whole of government approaches to address health issues, which originated from the Health Council of Canada’s report on intersectoral action ([Health Council of Canada, 2010](#)), and is summarized in the introductory chapter of this thesis. Another useful framework is the Ottawa Charter on Health Promotion, which is still a landmark publication in how to achieve better health outcomes. The strategies proposed in the charter can be considered mechanisms to manage health determinants, as done in the Cuban case studies, in which participants were asked to indicate which of the strategies were used to manage each health determinant.

The next key step of this realist synthesis was a search for evidence, starting with an exploratory background search to get a feel for the literature ([Pawson et al., 2005](#)). The evidence search served as a way to identify the recommendations from the Health Council of Canada (2010) that seemed to be followed in the interventions found in the literature search. It was also important to identify whether or not the features were aligned with the recommendations corresponding to the contexts, mechanisms, or outcomes (CMO) of the collaboration. That being said, CMO patterns can be

recursive, with a particular mechanism or outcome being construed as the context enabling another mechanism to lead to another particular outcome ([Pawson, 2002](#); [Pawson et al., 2004](#); [Pawson et al., 2005](#); [Pawson et al., 2011](#)). At this stage, I set the inclusion criteria broadly in order to provide an opportunity for triangulation through literature addressing a variety of health determinants, in a variety of contexts. As recommended for realist review, I did not exclude studies based on quality but rather on relevance of the information to answer the research question, and the trustworthiness of the information source ([Pawson et al., 2004](#)). Any given study can still contribute pieces of information on theory, mechanisms, and outcomes, regardless of the strength of the study design. The goal here was not to determine the best methodology to assess the impact of interventions on health determinants, but to determine what can be learned about how intersectoral collaboration to address health determinants operates when it includes public health and primary care representatives from the health sector, and representatives from other sectors as well. Finding repetitive CMO configuration of successful collaboration across studies of various methodological strengths is relevant to the creation of a mid-level theory, and add to the robustness of that theory. The detailed literature search strategy is presented in section 2.3.1., and the inclusion and exclusion criteria in section 2.3.2.

The third key step of the realist review involves the extraction and the synthesis of the findings ([Pawson et al., 2004](#)). From the selected studies, I extracted data based on the three components of realist synthesis, identifying the mechanisms, contexts, and outcomes described or inferred in each article and supplementary sources of information used. To do this, a template was developed in Excel. The specific extraction tool is described in section 2.3.3. I reviewed the full text articles to determine the mechanisms, contexts, and outcomes of each intersectoral collaboration. If an article referred to participating organizations or other articles, and if the information in the article was not sufficient to extract the contexts, mechanisms, and outcomes, websites or other publications related to the intervention mentioned in the article were searched for complementary information. The use of extra material, such as governmental and non-governmental agency websites, provided further details of interesting cases, leading to a greater understanding of the initiatives found in the peer-reviewed literature. These details of contexts and mechanisms are frequently absent from the peer-reviewed publications. After the relevant data were extracted for all the interventions included from the original literature search, the process of synthesising the data began.

The goal of the analysis was to dissect the mechanisms and contexts that might have influenced the outcomes of the intersectoral collaborations detailed in the articles included in the realist synthesis. At this stage, I first attempted to make sense of the data by grouping the articles in clusters of interventions that had similar goals, thinking that might be a relevant contextual factor driving mechanisms and outcomes. The clusters included interventions whose main goals were to address: (a) cancer disparity; (b) maternal and child health interventions; (c) racial and ethnic influences on individual and community health; (d) improving access and/or quality of primary care services; and (e) interventions addressing chronic diseases and their risk factors such as obesity, tobacco, physical activity, etc.

However, as the clustering progressed, it became apparent that there was substantial overlap between the categories. For example, cancer risk factors overlap with those of other chronic diseases, racial and ethnic differences were prevalent and addressed in most studies, and many studies in all clusters had a component related to improving access to or quality of primary care services. It became clear that this was not a meaningful clustering to determine differential patterns of CMO. This led to repetitive cycles of re-immersion in the data, and comparison of similarities and differences in contexts, mechanisms, and outcomes.

Through that process, I gained insight into what seemed to be a relevant cluster: interventions that appeared to be led by organizations with prior experience in public health and multisectoral partnerships. Such interventions seemed to: have a different scope; act through different mechanisms; and lead to different outcomes, compared to other interventions. The contrast between interventions arising in the context of large programs of intersectoral action (cluster 1) and those arising as part of smaller projects (cluster 2) became the focus of a second round of data extraction. During this second round of data extraction, I sought to find common mechanism and outcomes inside each clusters, as well as compare those mechanisms and outcomes between those two clusters.

This is in line with the realist review process, especially what is emerging as rapid realist review methods⁹, to inform decision makers of what works in particular sets of circumstances ([Saul, Willis, Bitz, & Best, 2013](#)). It is also consistent with emerging standards of realist review, where the

⁹ Although this realist review was not a “rapid” exercise per say, it borrowed on some methodological element of that approach that seem to enable best to answer the research question and the goals of the study.

understanding of the underlying contexts, mechanisms, and outcomes evolves and the selected studies are reviewed several times and decisions are made by researchers as to the most relevant direction to take in data extraction and analysis([Wong et al., 2013a](#); [Wong et al., 2013b](#), [2013c](#)). In this particular research, I determined, based on my extensive experience as a decision maker in both primary care and public health, that the common configurations of CMO that arise across a variety of larger order context (country characteristics, political system, political willingness to have a governmental approach (or not) to intersectoral action, type of health determinants addressed) constituted the most important priority CMOs configuration to extract and understand, as well as to theorize.

However, the theorization of the mechanisms, and at total the creation of a realist based program theory, faced many of the common challenges of realist synthesis in an area where there is little pre-existing theory, and where no original program theory could be found in the literature, as was discussed on the RAMESES listserv. A similar situation was experienced in a realist review of intermediate care (between independence at home and hospitalization)([Pearson et al., 2013](#)), co-authored by Dr. Pawson himself. The authors resolved their difficulty in theorizing the mechanisms by reporting what they referred to as context-mechanism combinations (which they labeled circumstances). The context-mechanism combinations were more akin to processes (as described in the discussion of different types of mechanisms in a prior paragraph) than to underlying theory component. Similarly, in this thesis, processes (such as role adopted, not necessarily explicit at the outset of the project) constitute some of the essential components of the pathway from context to outcomes of intersectoral action. I have kept the label of ‘mechanisms’ for those processes. Further research could help to move those mechanisms further away from constructionist mechanisms to positivist mechanisms, as defined earlier.

In the realist review presented in this thesis, I determined that evidence saturation was achieved when no new insights seemed to be gained from analyzing more literature on the priority CMO configurations selected. This is also in line with realist synthesis methodology, as focus, and focus re-adjustment is described as key in enabling feasible and meaningful realist synthesis (ref). In this thesis, due to the large number of interventions found in the literature search and the large amount of information found in the complementary sources related to those interventions, saturation (in terms of no new or significant patterns of contexts, mechanisms, and outcomes) was reached after reviewing about half of the interventions in the second round of data extraction mentioned above.

The information extracted on the other half of the interventions (information from the first round of data collection) was reviewed to see if they confirmed the CMOs found in the other half of the interventions, and ascertain there were no new significant CMOs arising. The review confirmed the finding from the first half of the interventions. I found that there was enough information from that first round of extraction to support the pattern found in the second detailed extraction of the other half of the study. It was possible to carry that review of the second half of the intervention based on the first round of data extraction because substantial information had already been extracted using the original template which is detailed in section 2.3.3. However, the primary data of that second half of the interventions was not re-organized in CMO configurations, as was the first half. The data from the second half of the interventions was therefore not included in Appendix F. The primary data for all interventions included are available upon request in the form of the raw Excel sheet that served to extract the data. Considering the large number of intervention, and the saturation reached from the original set of articles, I decided not to seek further examples of intersectoral interventions from systematically reviewing all the references in the articles selected from the database search.

The final step in a realist synthesis involves the generation of conclusions and recommendations based on the results of the previous steps. When the findings are synthesized, the collected information is compared and contrasted in order to examine the confirmatory (or not) nature of the evidence. In this final stage, the findings are reviewed and synthesized to make conclusions about demi-regularity, which represents partial theories. In this study, the synthesis and the conclusion report on the configuration of contexts, mechanisms, and outcomes found across the realist synthesis and the Cuban case-study re-analysis of intersectoral collaborations involving primary care, public health, and sectors other than the health sector. The next sections will cover the details of the databases searched, the search strategy, the inclusion and exclusion criteria, and the data extraction tool.

2.3.1 Search strategy

The search strategy was developed in collaboration with the UBC Public Health Head Librarian in March 2011. The search strategy included all the relevant terms used in the scoping literature review on public health and primary care collaboration ([Martin-Misener & Valaitis, 2008](#)). Four concepts are central to this study: 1) public health; 2) primary care; 3) health determinants; and 4) intersectoral actions. The strategy was refined through several waves of searches with several

different word combinations and review of the first 50 or so results (titles and abstracts) from those searches for relevance and comprehensiveness, as well as keywords associated with the most relevant articles. The final search strategy used an elaborated combination of key words and other search options (such as adjacencies and truncation), to capture all the relevant articles related to each of those concepts. The full search is presented in Appendix B.

In OvidSP databases, this was supplemented by the use of Medical Subject Headings (MeSH) terminology. MeSH terms alone were not sufficient, as some key concepts, such as ‘health determinant’ and ‘intersectoral collaboration’, were not found in the MeSH Ovid classification system. Even when a term existed in MeSH, the addition of keywords yielded more relevant articles. This was also reflected in the broad series of terms used in the descriptor field of the relevant articles’ citations. The search was limited to research articles published between 2005 and March 31, 2011, in English, French, or Spanish. The search was limited to the year 2005 - onward for feasibility reasons. This is because of the vast number of citations retrieved and the difficulties of ascertaining fulfilment of inclusion and exclusion criteria based on titles and abstracts, leading to a need to do a full text review to determine an article’s inclusion or exclusion. This will be discussed in the results sections, as part of the findings from the review of the first 100 articles. The search ended on March 31, 2011, because that was the date the final search was performed.

The databases selected for this study cover a variety of fields relevant to the study of health determinants, including databases covering health systems research, public health, public policies, health administration, primary care, medicine, nursing, and social sciences in general. The databases deemed relevant for this topic were those in OvidSP, Ebsco and the Canadian Research Index. The OvidSP databases included Medline, Cochrane reviews, and other evidence-based medical databases (full list in table below). Ebsco databases included more literature from the nursing and social science fields. In addition to OvidSP and Ebsco, we added the Canadian Research Index, a database of government documents, due to the potential to yield documents about intersectoral collaboration that describe programs not mentioned in peer-reviewed journals.

Table 2 Specific databases searched

OvidSP databases searched: <ul style="list-style-type: none">• EBM Reviews - ACP Journal Club• EBM Reviews - Cochrane Central Register of Controlled Trials• EBM Reviews - Cochrane Database of Systematic Reviews• EBM Reviews - Cochrane Methodology Register• EBM Reviews - Database of Abstracts of Reviews of Effects• EBM Reviews - Health Technology Assessment• EBM Reviews - NHS Economic Evaluation Database• EMBASE• Health and Psychosocial Instruments• International Pharmaceutical Abstracts• Ovid MEDLINE(R)• Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations• Ovid MEDLINE(R) Daily and Ovid OLDMEDLINE(R)
Ebsco databases searched (excluding articles in Medline): <ul style="list-style-type: none">• Academic Search Complete• CAB Abstracts• CINAHL• ERIC• PsycINFO• Social Work Abstracts
Canadian Research Index

2.3.2 Inclusion and exclusion criteria

The original inclusion and exclusion criteria included considerations for the variability in how authors define intersectoral collaboration, health determinants, and primary care. For the purpose of this study, intersectoral collaboration is defined as collaboration of the health sector with other sectors. Therefore, collaborations deemed to be exclusively within the health sector were excluded. For example, an article describing collaboration between primary care physicians, pharmacists, and public health professionals were deemed to refer to collaboration within the health sector, and were thus excluded.

Actions aiming to re-orient health systems toward primary care or primary healthcare were considered part of the scope of this review, if the action involved stakeholders in public health and representatives of sectors other than the health sector. This stems from the accumulation of evidence that primary care services are a significant health determinant ([Macinko et al., 2009](#); [Macinko, Starfield, & Shi, 2003, 2007](#); [Starfield et al., 1994](#); [Starfield & Shi, 2002](#); [Starfield & Shi, 2007a, 2007b](#); [Starfield, Shi, Grover, & Macinko, 2005a](#); [Starfield et al., 2005b](#); [WHO, 2008](#)). Similarly,

programs that affect donors' agencies and macro-economic institutions (which have a significant influence on health systems and other health determinants) were considered within the scope of this research.

Programs that focused on access to specialty care without accessing primary care first were deemed outside the scope of this review, because there is evidence that systems oriented toward specialty care without primary care do not perform as well as primary care-oriented systems ([Macinko et al., 2009](#); [Macinko et al., 2003, 2007](#); [Starfield et al., 1994](#); [Starfield & Shi, 2002](#); [Starfield & Shi, 2007a, 2007b](#); [Starfield et al., 2005a](#); [Starfield et al., 2005b](#); [WHO, 2008](#)). Similarly, when primary care is provided only inside a hospital, this was considered outside the scope of this review. Also, as per the scope of the Cuban re-analysis (which focuses on urban areas), and because, upon preliminary review, articles depicting intersectoral collaboration focusing only in rural areas appeared to be triggered by different circumstances, barriers, and imperatives than those including urban areas, we excluded articles that focused only on rural areas. We identified the articles that included the mention of “rural” through a keyword search in the RefWorks database containing the citations and abstracts produced by the original search. Articles for which the abstract clearly showed that the intersectoral actions occurred only in rural areas were then excluded.

The screen of the first 100 articles, abstracts, and titles revealed that there was a large number of articles that would need full text review to ascertain whether they included both primary care and public health, as well as other sectors. At that stage, it appeared that limiting the research to articles published between 2005 and March 31, 2011 would offer a sufficient number of articles to reach saturation. Therefore, from the original full search, the articles published before 2005 were excluded as part of re-scoping of the focus of the review. The re-scoping of a realist review is an integral part of the process of realist review, as the research question, methods, and focus evolve in the preliminary stages of realist reviews ([Pawson, 2002](#); [Pawson et al., 2004](#); [Pawson et al., 2005](#); [Pawson et al., 2011](#); [Wong et al., 2013a](#)).

Another aspect of re-scoping the literature review emerged from the preliminary review (which included full text review of some specific types of articles to decide whether they should be included or excluded): some literature seemed to include infectious diseases, dental health, mental health, or other health conditions as health determinants. Health conditions and specific illnesses and diseases can influence other health determinants (such as social status, social network, income,

education, and so on), and thus can influence health status above and beyond the direct health consequence of the disease process (as illustrated in the CSDH framework ([CSDH, 2008a](#))). However, in this thesis, I limited the scope to intersectoral action to access healthcare through primary care, and elected not to study the feedback loop of the effect of specific conditions on other health determinants.

From the preliminary review, I also decided to exclude articles related specifically to environmental contamination, as they seem to be of a very different nature than those addressing other health determinants. For example, those interventions seemed to be triggered by specific contamination events, or by legal actions related to long-standing contaminations. Intersectoral collaborations aimed simply at educating physicians, nurses, or other health professionals were also excluded. Table 3 presents a consolidated version of the inclusion and exclusion criteria.

Table 3 Inclusion and exclusion criteria for the realist synthesis

Inclusion criteria	Exclusion criteria
Published between 1-1-2005 and 31-03-2011	Published before 2005 or after 31-03-2011
In French, English or Spanish	In languages other than French, English, or Spanish
Intersectoral work carried out with public health and primary care practitioners, as well as members of sectors outside of health. For example, acceptable collaborations include: those with social workers employed by non-health ministries, such as the Ministry of Children and Family or by NGOs; outreach performed by community organizations or lay workers; and action involving the business sector, above and beyond private providers of primary care or pharmaceutical services.	Collaborations deemed to be only within the health sector, such as: <ul style="list-style-type: none"> - Between healthcare institutions such as pharmacies, hospitals, or long-term care facilities - Between public health and primary care only, without involving sectors other than the health sector - Between health professionals or employees of health institutions, such as: social workers; outreach workers who are health professionals (e.g., outreach of a specialized nurse from a hospital to a community GP); or mental health or addiction professionals employed by health facilities - Interventions done purely as part of a training program for MDs or nurses
Addressing any of the following health determinants: income; education, social or physical environment, healthy living (including action on the physical environment to address lifestyles), early childhood development, ethnicity/race, and access to primary care.	Addressing specific infectious diseases, dental health, mental health, or other health conditions as health determinants Addressing environmental contaminations Accessing specialty care directly (without primary care access) as a health determinant
Health assessment reported with resulting intersectoral action and related outcomes	Articles describing health issues if there is no clear intersectoral action
Primary care that fits the definition of “the provision of integrated, accessible healthcare services by clinicians who are accountable for addressing a large majority of personal healthcare needs, developing a sustained partnership with patients, and practicing in the context of family and community.” (Starfield et al., 2005b) p. 457 Primary care that is provided by nurses, regardless of whether they are public health or home care nurses - e.g., a street nurse who provides care that fits the criteria of primary care, district nurses in the UK, or nurse practitioners or GPs hired by public health agencies to provide primary care	Primary care that does not fit the definition cited in the inclusion criteria. This excludes dental health promotion or home health providers that do not provide comprehensive primary care, since health needs are not comprehensively addressed. Primary care provided in hospitals (described mostly in rural areas or for very specific groups of patients with complex morbidity)
Publication types: case reports/ or clinical conference/ or exp clinical trial/ or comparative study/ or exp consensus development conference/ or evaluation studies/ or meta-analysis/ or multicenter study/ or "scientific integrity review"/ or twin study/ or validation studies/or "review"/	Publication type: news or book Articles classified as editorial or commentaries; articles that do not include a description of methods; articles reporting a study protocol without research results available; history articles

2.3.3 Extraction tool

The extraction tool was adapted from the scoping PH PC literature review ([Martin-Misener & Valaitis, 2008](#)). The extracted categories of information were:

1. Publication characteristics: date of publication, authors, study date, type of methodology, title of periodical, and qualitative, quantitative or mixed methods research;
2. Context and purpose: purpose of the study, the country(s) involved, the health determinant addressed, general policy, research and health system context, and any other element that is reported as influencing the unfolding of mechanisms;
3. Mechanisms, stakeholders, and flow of the intervention: including, but not limited to, who initiates the interventions and why, what organizations or sectors are involved, and which groups are targeted by the interventions;
4. Outcomes: results achieved or not, as well as outputs and final outcomes;
5. Other information that might provide insight into the theoretical basis of the intervention, such as conceptual frameworks, models, or theories that guided the interventions (e.g., some interventions followed a social marketing approach, while others used the chronic disease model, and so on).

The articles' full citations and abstracts were exported from RefWorks to Excel. Columns were added for extraction of the various items mentioned above, if not already present from the citations. All included articles were saved in PDF format, in a specific folder on my computer.

If there was doubt at any point about the eligibility of a study, the citation was kept for final review by the research team, after full extraction of the relevant data. This section on the extraction tool concludes the methodology chapter. The next chapter will describe the findings from the supplementary analysis of the Cuban case study.

Chapter 3: Cuba's management of health determinants

This chapter will present the results of the document review and field visit (mostly included in the section reporting the results of the case study primary analysis), focus groups, and survey results from the supplementary analysis. It will conclude with a conceptual framework of how health determinants are managed in Cuba, including how public health professionals and primary care providers participate in that management.

3.1 Relevant information from the case study primary analysis including document review and field visits

The case study we conducted¹⁰ on how Cuba manages health determinants at the municipal level provides the most complete, yet succinct, review of how Cuba manages health determinants ([Spiegel et al., 2012](#)). The findings of the document review and field visits that were part of the study (to which I contributed as part of my thesis) are quoted below in depth to illustrate the policy context that led to an explicit goal of managing health determinants through intersectoral action:

“Pastor Castell-Florit noted that Cuba’s public health policies regarding intersectoral action have evolved in tandem with deepening understanding of population health determinants (Castell-Florit Serrate 2007; Castell-Florit Serrate et al. 2007 a,b). As he explains, the Cuban model passed through three stages since the 1959 Revolution. In the first stage, disease-based programming was primarily pursued alongside basic health and non-health (e.g. literacy, sanitation) system strengthening to remedy a situation of profound disparities similar to other Latin American countries. In the second stage, corresponding to the 1970s and 1980s, focus was concentrated on risk, with programming aimed at population groups in relation to health-disease processes associated with common diseases, and in support of comprehensive health promotion and disease preventive interventions (Castell-Florit Serrate 2007a. b; Pan American Health Organisation 2007). In this context, collaborations were increasingly pursued and decentralization of local capacities initiated, but supports for intersectoral action were not yet systemically in place.

¹⁰As explained in the introduction and methodology, this thesis is embedded within a larger program of research on Cuban management of health determinants, in which I collaborated from the inception to the publication of the results. One of my contributions was in regard to collecting relevant documents during several field visits and through searches in SciELO, the Latin American electronic library of health sciences journals.

The third stage, signaled by the 1991 Cuban Ministry of Public Health strategic plan: Objectives, Aims, and Guidelines for Improving the Health of the Cuban Population 1992–2000 (Ministry of Public Health Cuba 1991), sharpened the focus on the family and intersectoral collaboration. This plan defined health goals and objectives to be achieved by the year 2000 by reshaping the system despite a profound economic crisis faced in Cuba after the collapse of its Soviet Union trading partner. The strategy involved reorganization and decentralization within government and the National Health System specifically; encouragement of community participation in local decision-making, prioritization, and actions consistent with the World Health Organization’s “Healthy Cities” movement; creation of health commissions at the national, provincial and municipal levels of government (e.g. Health Council, Committee of Quality of Life and Health); and local task forces (e.g. Prevention Group against HIV/AIDS, Task Force against Use of Illegal Drugs) (Castell-Florit Serrate 2007a, b).” ([Spiegel et al., 2012](#)) p.16.

In summary, this quote illustrates the longstanding effort of the Cuban government to support intersectoral collaboration and to address health determinants, adjusting and improving the policies based on the results obtained by the prior attempts to improve the health of the population and the accessibility to healthcare services.

The Cuban case study sheds some light on how intersectoral collaboration functions to address health determinants, and which health determinants are considered a priority to address. We showed that in both of the municipalities we studied, the health determinants considered most important (averaging all the stakeholders’ rankings) were “income and standard of living” and “healthy child development”, while “culture” and “gender” were considered the least important ([Spiegel et al., 2012](#)). We also discovered that in those two Cuban municipalities, various institutions had a very high level of long-term, full engagement in internal actions aimed to address most determinants, as well as a high level of collaboration with other institutions on all health determinants ([Spiegel et al., 2012](#)). We identified high levels of social cohesion as part of the context in which health determinants are managed, especially between large community organizations and citizens, but also between the various members of society ([Spiegel et al., 2012](#)). These results, when compared to the level of collaboration observed by Frankish et al. ([Frankish et al., 2007](#)), led us to note that:

“While Healthy Child Development was observed in Cuba to be the area receiving the greatest attention for intersectoral action, as it was in the Canadian context (Frankish et al. 2007), we found that the extent of IAH [Intersectoral Action for Health] implementation was at a

considerably higher degree of intensity in Cuba. Furthermore, IAH attention more frequently extended to areas such as employment and working conditions, which were observed to receive far less attention in Canadian jurisdictions. As in high income countries, an outstanding IAH challenge is perhaps illustrated by the relatively low levels of IAH collaboration in the domain of built environments where intensified proactive pursuit of strategies is needed to deal with chronic disease and ageing, which are also prominent health concerns in Cuba.” ([Spiegel et al., 2012](#)) p. 22.

We also drew attention to the Cuban infrastructure supporting other sectors of society’s participation in intersectoral collaboration, which appears much more elaborated than in other countries:

“In addition to formal structures with an explicit health mandate, there is an established scaffolding to support a broader “intersectoral space” whereby those with a potential role to play in addressing health determinants are linked in a standing body, the Health Council, which is accountable for producing positive results. Furthermore, the inclusion of representatives from community organizations provides a space for including broader public involvement as well as raising areas of concern. An examination of “Civil Society and the health system in Cuba” conducted for the CSDH provides a more thorough documentation of how such social participation is systematically pursued (Ochoa and Visbal).” ([Spiegel et al., 2012](#)) p. 22.

Our findings support the findings of O’Neill et al. regarding organizational structures being key to how intersectoral collaboration for health works, and with the recommendation made by the Health Council of Canada report on how governments can support the creation of intersectoral action for health ([Health Council of Canada, 2010](#); [O’Neill et al., 1997](#); [O’Neill & Williams, 2004](#)). Furthermore, our conclusion linked the findings back to Cuba’s achievement in health status through mechanisms outlined in the Alma-Ata and Ottawa Charters and to differing economic policies choices as a determining factor in implementation of the strategies recommended in the Alma-Ata and the Ottawa Charters:

“Our study suggests that the Cuban experience validates the Alma-Ata and Ottawa Charter propositions that “organizational and community participation” are integral parts of producing good health results, something that has been explicitly observed by Kath (2010) and Spiegel (2009). That the head of the municipal Health Council is by statute a vice-president of the

People's Power Councils (Castell-Florit Serrate et al. 2007), the most basic level of elected government in Cuba, underscores the value placed on health by the political leadership in Cuba.

From an international perspective, despite the Ottawa Charter's highlighting of the strategic importance of IAH in 1986, it has been repeatedly observed that dominant economic and political conditions and priorities in the decades following the Ottawa Charter restricted the realization of this vision. In particular, the era of globalization that ensued generated a "harsher economic climate" that favoured policy coherence around fiscal austerity rather than the systematic pursuit of health and health equity in most countries (Sindall, 1997). For municipal governments subject to neo-liberal pressures, emphasis on "New Public Management Theory" (Hambleton 2004; Pierre and Rothstein 2008) created pressures for cost-cutting and the pursuit of "efficiencies", with concepts of community empowerment, decentralization and integration primarily subordinated to being adaptive strategies to compensate for weakened public sector commitments rather than as supported mechanisms for promoting health (Lapsley, 2009). In contrast, the structural reforms and policy measures adopted in Cuba in 1991 to support IAH amid a severe economic crisis responded to a very different expression of "political will". ([Spiegel et al., 2012](#)) p. 22.

Our case study also points to the consistent involvement in those intersectoral structures of primary care providers as well as public health professionals. This is illustrated by the three scenarios illustrated in Figure 6 below, reproduced with permission from ([Spiegel et al., 2012](#)) p. 21. This figure shows examples of how intersectoral actions flow, with primary care or public health professionals being some of the potential conduits of information to trigger action from the Popular Power Council, the Health Council or the district prevention group for problematic situations at the individual and community level:

"In-depth interviews with policy makers highlighted that no single model or process is capable of generically describing all instances of intersectoral action and decision-making in Cuba, but that examination of specific examples can best illustrate the flexible ways whereby different sectors interact (Fig. 2) [Figure 6 in this thesis].

Scenario 1: Detection of an *Aedes Aegypti* infestation

Dengue fever is a growing health concern across Latin America, and several outbreaks have occurred in Cuba since the late 1970s (Bonet et al. 2007). Detection of a breeding site of the

dengue vector, the *Aedes Aegypti* mosquito, was described as a typical starting point for action. Detection occurs through regular inspection of water-containing receptacles and collection of mosquito larvae in houses and open spaces by teams of field workers (campanistas) that had in fact initially been established following a serious dengue outbreak in the early 1980s. The Municipal Office of Hygiene and Epidemiology then tests the samples. If confirmed, the statistics office of the area polyclinic and the area's elected representative (community delegate) are informed. Immediately, intersectoral mechanisms are triggered and the following representatives are convened to the Health Council of the Popular Assembly to meet with health representatives: community delegate, FMC [Federation of Cuban Women], CDR [Committees for the Defense of the Revolution], Association of Combatants of the Cuban Revolution, Communist Party area representatives, Water and Sanitation personnel and representatives of workplaces in areas adjacent to the affected area.

The intersectoral team looks at circumstances associated with breeding sites such as garbage deposits, improper water management, abandoned lots and closed or unsanitary households. Based on this, action plans are developed for all sectors, to be implemented within 3 days. Common actions involve the FMC and CDR conducting community mobilization to clean areas and improve citizen participation in detecting risks, as well as health professionals fumigating infested sites and identifying dengue cases. Other actions may include health education and promotion. The detection of a case of dengue in a family medical centre or polyclinic also triggers the search for breeding sites that could lead to further transmission as well as isolation of virus-affected patients.

Scenario 2: A dysfunctional family

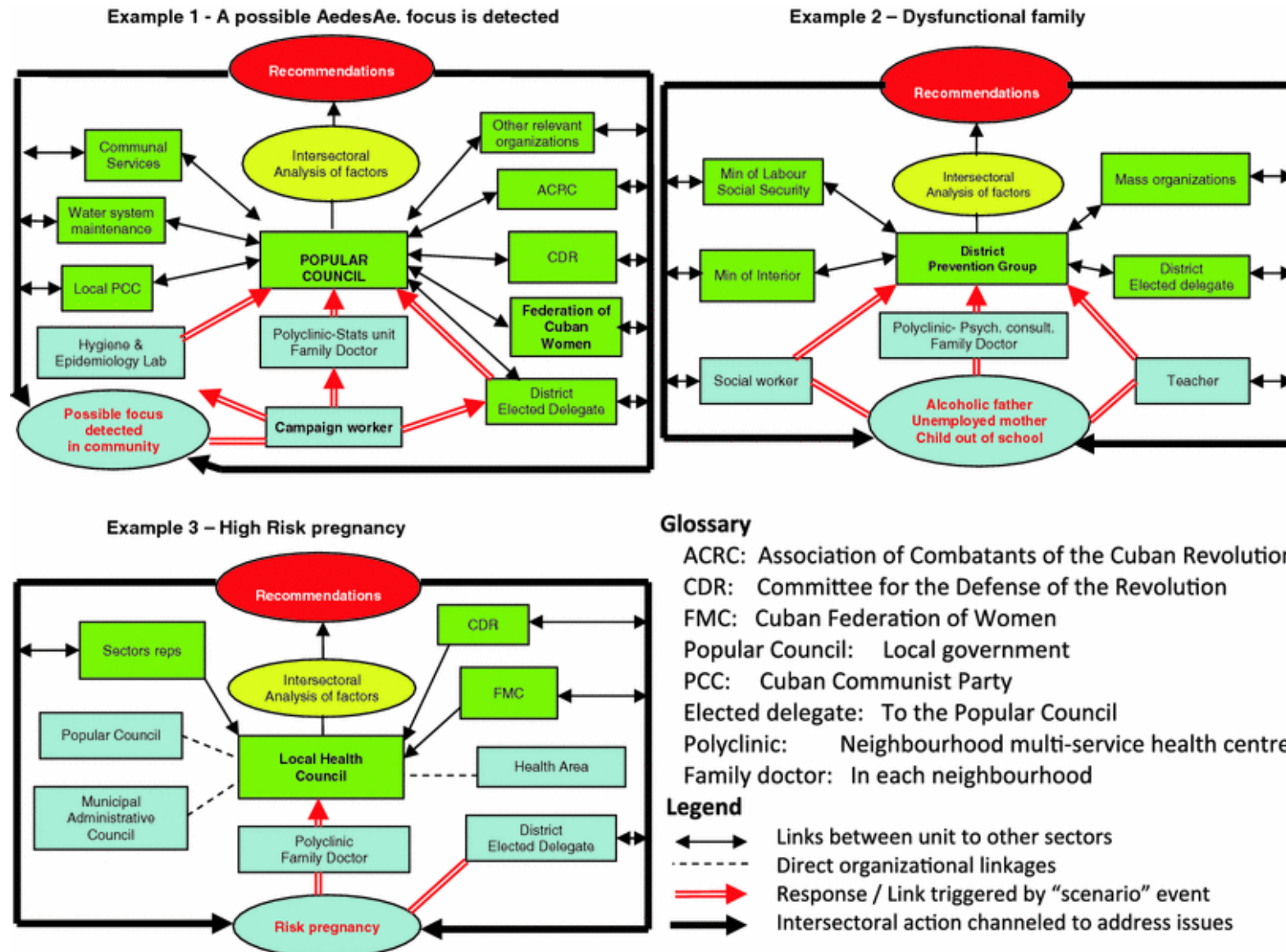
A dysfunctional family, for example one in which the father may be alcoholic, the mother unemployed or a child truant, can be identified by the social worker, polyclinic staff or school teacher. This type of situation is the responsibility of the Prevention Group in the health area. This intersectoral space comprises the community delegate, the social worker, a health and education representative and a municipal representative from both the Ministry of the Interior and the Ministry of Labour & Social Security. The Prevention Group collectively assesses the situation, determines the possible solutions and assigns tasks for implementation involving the whole family to avoid marginalization. In such a case, a typical IAH [Intersectoral Action for

Health] taken is the registration of the father in a detoxification programme supervised by health personnel, a social worker and the appropriate linked civil society (mass) organizations. The Ministry of Labour & Social Security representative would help the mother to reintegrate into the work force by linking her to available jobs. The Ministry of Education representative might be able to help her obtain additional training. The Ministry of Health representative would provide psychological support to facilitate the reintegration. Finally, health and education personnel together with mass organizations would help the child to be reintegrated in the school system.

Scenario 3: Mother–child health

The death of an infant is considered a very serious, albeit rare, event, and therefore, the occurrence of a child death prompts a full intersectoral review. The Health Council of the Popular Assembly monitors these issues during pregnancy. Possible causes such as low birth weight from insufficient nutrition of the pregnant mother is investigated. To avoid such adverse events, health professionals and the FMC identify pregnant women at risk and then assign them to a special home (hogar materno) in the community to ensure proper medical follow-up by family practitioners. Nutrition and provision of adequate diet are the responsibility of other specialists as well as the agriculture sector.” ([Spiegel et al., 2012](#)) p. 20-21.

Figure 6 Examples of intersectoral actions flows for various health issues in Cuba



(Reproduced from ([Spiegel et al., 2012](#)) p. 21)

The three examples above illustrates various involvement of public health, primary care and other sectors in managing health determinants in Cuba. Further observations, in relation to the management of health determinants and primary care and public health involvement, beyond the three examples above, were collected from the field visits, and are described below.

Each neighbourhood primary care clinic needs to report, on an annual basis, the statistics on various lifestyles and conditions, such as smoking and hypertension, of all the people in their catchment area. They need to report the statistics with a discussion of factors affecting the health of their local population, and what they have done to address those factors, as well as what they are planning to do to continue improving the health of their local population. The primary care clinics' reports on the status of the neighbourhood population are amalgamated at the various upper levels of the healthcare system, from the polyclinic areas and the municipal and provincial levels to the national level. This generates portraits of the health of the population, the services delivered, the issues encountered, and the avenues for addressing those issues considered by the various levels. The corresponding hygiene and epidemiology units do the amalgamation. This system was described during my visits to family practice clinics and discussion with central healthcare administrative unit physicians and directors and members of various levels of hygiene and epidemiology units. This system of monitoring and quality improvement is also partially described by the study on intersectoral practices in health in Cuba reported to PAHO as part of a collection of a series of case studies on intersectoral collaboration in several countries ([Castell-Florit Serrate et al., 2007a](#); [Castell-Florit Serrate et al., 2007b](#)). Table 4 shows the various levels of government structures and corresponding health sectors institutions on the administrative and service delivery side (modified from Castell-Florit Serrate, 2007). This health information system used in Cuba is seen as key in managing health determinants and evaluating impact of action by the various decision-makers visited in 2004 and 2006, and not needing to rely on high tech solutions such as computer-based registries.

Table 4 Vertical and horizontal integration of Cuban government and health institutions

Level	Government structure	Health sector administrative unit	Service delivery and information management organizations
National	National assembly (parliament) State Council Cabinet and Ministries	Ministry of Public Health	<ul style="list-style-type: none"> • Medical schools and faculties • Highly specialized treatment centres • Research institutes • Health-related commissions and institutes such as the Institute of Hygiene, Epidemiology and Microbiology
Provincial	Provincial assembly Provincial administration council	Provincial Health Directorate	<ul style="list-style-type: none"> • Provincial hospitals • Provincial Unit of Hygiene and Epidemiology • Specialized treatment centres • Technology support institutions • Other services' institutions
Municipal	Municipal assembly Municipal administration council	Municipal Health Directorate Municipal health council	<ul style="list-style-type: none"> • Municipal hospitals • Municipal Unit of Hygiene and Epidemiology • Polyclinics (who provide the public health and data monitoring with public health staff and physicians) • Community treatment and services centres (such as for seniors or pregnant women from outside of the municipality)
Neighborhood	Popular power council	Health Area Directorate (the head is the director of the polyclinic)	<ul style="list-style-type: none"> • Family medicine clinics (who collect and report administrative, surveillance, and monitoring data, as well as quality improvement data and registries) • Other local institutions such as childhood centres

Information systems in Cuba do not rely on advanced computerized systems, frequently out of reach of lower income countries budgets. For example, one way that primary care clinics manage vulnerable patients who do not necessarily come to the clinic on a regular basis is to have a series of patient cards. Those cards are placed in a “shoe” box, with monthly divisions. The card is moved to the next months the physician or nurse need to see the patient to monitor treatment. If a patient comes, the card is moved to the next time a patient follow-up is needed. If a patient does not come, the physician and the nurse know at the end of the month, because the card is left in that months section. When the card is left in that month section, it triggers outreach efforts from the nurse or the physician. That system is used to assist the nurse and physician in adequate chronic disease

management (versus only re-active care to patient presenting to the door of the clinic) as well as to trigger home, school, or workplace visits. This system is comparable to more complex computer based registries and computer generated recall seen in other countries such as Canada and the US ([Hung et al., 2008](#); [Hung et al., 2006](#); [2003](#); [Szeles et al., 2005](#)). For example, if a patient was identified as being diabetic and needing visits every three months to ensure adequate management and to monitor for complications, when the patient comes in May, his card will be placed in the August section. If the patient does not come back, the physician or the nurse will proactively go to see that patient at the end of August, or will ask family members or community organizations to help support that patient's disease management. This is an example of a local initiative to solve problems that have spread in Cuba, without relying on computer reminder systems or other advanced technology.

The family physicians I interviewed expressed a sense of responsibility for the health of their local population. They fulfil that responsibility by taking part in several health education activities, committees, and outreach to patients who need health services but are not presenting to the clinic for a variety of reasons, such as difficulty in social functioning, limited mobility, substance abuse, demanding work schedules, and so on. The local physician frequently visits the schools and the workplaces in his area. The physician is not always the one to participate in outreach and health education activities and various committees; the nurse paired with the family physician at each local clinic frequently does these activities. The physician and the nurse coordinate their input and work, in order to maximize efficiencies.

Another factor contributing to enabling the health system to support family physicians adequately, mentioned by Cuban family physicians during my field trip in 2006, is that all graduates have to practice family medicine for several years before being allowed into specialty training. I asked several family physicians (including some who planned to go into specialty care in the next few years) what those wanting to specialize thought of that. They explained that they view the period of family practice service as something important. They believed it was a good opportunity to give back to the community and understand the reality on the ground and the reality of their patients in their daily life and what is affecting their health, before moving into more specialized positions. Some also mentioned that needing to practice primary care first ensures that physicians understand primary care, and how to diagnosed and manage patients without having access to high level technology more available in specialized centers.

Another interesting aspect of primary care providers' contributions to the management of health determinants is that several primary care physicians also take on the role of local delegate at the neighbourhood level of government in Cuba, the "Consejo del Poder Popular"¹¹, or Popular Power Council. It is not expected that the family physician be the local delegate, but Cubans interpret it as being related to the deep sense of service to community that most family physicians espouse in Cuba.

Through several primary care providers being part of local Popular Power Council, and even being the local delegates, they take an integral part in what the Cubans referred to as "situation analysis" of various community problems. One example given was a discussion at a Popular Power Council meeting in which the local primary care physician was also the local delegate. In a discussion related to the most important issues to address, a community member mentioned that the most important issue was the alcohol bottles left on her property by the youth coming back from partying at night. Through discussion with the primary care physicians and others, it was identified that youth substance use, including alcohol use, was indeed the most important problem for the community. It affected school success, work productivity, sense of safety, local residents' sleep, etc. The individual health and well being of those youths was felt to be seriously threatened by their behaviours, with lifelong repercussions. The multiple actors needed deep discussion to arrive at that shared vision of the issue, without dismissing how community members or others presented their part of the issue. Stable, recurrent (monthly at the municipal level) intersectoral meeting, led by leaders accustomed to participatory leadership and composed of empowered members, helped members of the Popular Council to see others' concerns as relevant to their sector and to take citizen or other sectors formulation of issues seriously. Without all those mechanisms in place, it is less likely that a person's comment on alcoholic beverages bottles left on her lawn would lead to an agreement on youth alcohol consumption being the biggest health problem faced by the community.

During my extensive travel through various parts of Cuba, and confirmed by discussions with the Cuban research team, almost no one was left homeless and there were no slums as experienced in many other parts of the world. This is not to deny either the overcrowding situation in which several families are living daily, or the deteriorated state of many buildings, with some collapsing on their

¹¹Discussion with key informants during the 2009 field trip.

inhabitants. However, this is still a telling example of the power of the intersectoral collaboration mechanisms outlined in this section to manage housing (or lack thereof) as a health determinants. The management of homelessness is done intersectorally, with primary care personal flagging families or children in difficult social situation and linking them to social services, who are responsive to the need for housing regardless of someone's level of functionality in society.

Another issue pointed out by public health physicians in Cuba was the dilapidated state of the water system. The "potable" water pipes had holes and pathological bacteria contaminating the water. These public health physicians explained that it was a priority to fix the water system. At the same time, they explained that trucks deliver potable water and that people have access to rainwater, leading them to be proud of the large proportion of the Cuban population that has relatively easy access to potable water, even in rural areas, compared to most other developing countries. Cubans are well aware of the need to disinfect the water delivered through the pipes, and also have access to energy to the boil water and bleach to add as a disinfectant. This is an example of what Cubans are able to achieve through innovative government programs and individual initiatives to manage health determinants. The public health physicians described that the high level of education helps citizens make decisions related to their health. In this case, this results in a much lower burden of diarrheal and other waterborne diseases than in most developing countries. The Cubans achieved this despite the US embargo, which limited access to construction material and technology.

In working with the various Cuban research team members and visiting various institutions, it struck me that in Cuba, women seemed to have as much access to higher education and positions of power as men. This led to discussion on that particular topic, as gender is a specific health determinant that can influence many other health determinants, such as access to education and socio-economic status. Various key informants explained to me that women's participation in the Cuban revolution came with the explicit goals of increasing gender equality and access to opportunities, leading to policies and practices enabling women's access to education and fulfillment of career aspirations, and enabling a large proportion of political delegates to be women. One of the enabling practices and policies mentioned was the creation of quality childcare facilities for women contributing to the workforce, so that they could be at peace that their children were well cared for in a nearby location, with easy access in case of need. Another comment, made by a senior leader in the health system, was to the effect that he completely understood women's need for

flexibility in their work schedule to attend to family issues. He further explained that it should never be seen as something impairing women from being in senior leadership positions.

When the local primary care physician and public health specialist prepared the field visits to illustrate how they manage health determinants, they included a visit to a rehabilitation centre for the elderly. The Cubans explained that the elderly frequently increased women's work burden, which was not in agreement with the value of gender equality in work opportunities, part of the Cuban revolution and still very alive as a value in Cuba. They also explained that the elderly had contributed significantly to society and that it would not be right to leave them isolated and unwell at home. They had the right to services supporting their well-being. The creation of the rehabilitation centre also addressed the lack of access to physiotherapy for many Cubans of all ages, which was particularly affecting elderly people with joint issues. This explanation revealed a broad conceptualization of health determinants and a lifelong approach to their management, recognizing the interaction between the various health determinants. It also touched on the concept of a Cuban right to health as not only the absence of diseases, but as a state of complete physical, mental, and social well-being, as was defined by WHO (1946).

Altogether, the documents reviewed, the field visits, and the discussions with key informants revealed the following insights on how health determinants are conceptualized and managed:

- 1) Health determinants were viewed and managed broadly, taking into consideration complex interactions between the various determinants;
- 2) It was the norm for primary care providers to accept a responsibility to take part in the management of health determinants, and they were involved in a close relationship of support and information gathering and sharing with public health and other sectors of the community;
- 3) The infrastructures that enabled broad intersectoral collaboration were, in part, dependant on specific processes of primary care working with public health, including primary care providers reporting the health status of their patient population, and establishing improvement plans to reach their goals of improving the health of their local population;
- 4) And, the responsibilities of contributing to managing health determinants and improving the health of the population were shared among primary care providers, public health professionals and community leaders and organizations.

The next section will continue building on the findings from the results of the focus groups, which specifically included discussion on how health determinants are conceptualized, prioritized, and managed by the various groups.

3.2 Results of the focus groups

This chapter will describe the participation and results of the six focus groups that took place in Santa Clara in 2007. The participation of the various sectors and groups is detailed below. This is followed by a description of the findings by theme (conceptualization of health determinants, prioritization in managing health determinants, and management of health determinants). For each theme, the information is presented by the different focus group types (local leaders, municipal leaders, public health and primary care), first based on the summary transcript, then followed by supplementary findings from the general transcript.

The various focus groups types are listed in Table 5, and include Popular Power Councils (local leaders), municipal leaders, polyclinic areas personnel (primary care) and professionals from the municipal public health institution (public health). Each participant was also asked to report the primary institution they represented, and this information is also reported in Table 5.

Table 5 Organizations represented in the Santa-Clara focus group

Focus groups	N
1- Popular Power Council 1 and 2 (local leaders)	12
2- Popular Power Council 3 and 4 (local leaders)	2 ¹²
3- Municipal Council Assembly (municipal leaders)	19
4- Polyclinic Area 1 (primary care)	16
5- Polyclinic Area 2 (primary care)	10
6- Municipal Unit of Hygiene and Epidemiology (public health)	11
Total number of participants	70
Institutions represented¹³	N
Healthcare Sector	37
Popular Power Council ¹⁴	17
Federation of Cuban Women	2
Committee in Defense of the Revolution	2
Community Services ¹⁵	1
Ministry of Justice	1
Ministry of Agriculture	1
Ministry of Economy and Planning	1
National Institute of Hydraulic Resources ¹⁶	1
Ministry of Information and Communication	1
Ministry of Culture	1
National Institute of Housing	1
Ministry of Commerce	1
Ministry of Education	1
Ministry of Basic Industry	1
No answer	1

¹² This is the focus group impacted by an unforeseen local event requiring the attention of Popular Power Councils (PPC) members, resulting in only two of the 12 invited participants attending the focus group.

¹³ Many members of the PPC are also members of other institutions (e.g. Committee in Defense of the Revolution and Federation of Cuban Women). They might have identified the organization they represent as such in the questionnaire.

¹⁴ Members of the Popular Power Council Assembly can be from a variety of sectors of society, as they also carry other work. This is why more focus group participants identify themselves as members of an organization such as the PPC Assembly than the number invited in the focus groups specifically targeting members of specific PPC.

¹⁵ Those are referred as “Servicios Comunes” in Cuba. It includes the institutions that collect solid waste, clean the street and provide other such municipal services considered important for health, hygiene, and safety.

¹⁶ Responsible for managing water resources, including drinking water.

3.2.1 Conceptualization of health determinants

Local Leaders

When asked what constitutes a health determinant in Cuba, the local leaders (those who are part of the Neighbourhood or Popular Power Council) mentioned the following: social environment; culture; socio-economic status; physical environment (mostly hygiene); lifestyles, with a focus on nutrition; and health services. These are similar to the determinants that were listed in the survey questions (reproduced in Appendix A.2). The group added another determinant to the list provided: support for the care and rehabilitation of older adults. However, the summary transcript did not provide much detail on the rationale behind this addition.

Another health determinant theme that emerged from the discussion, but was absent from the list of health determinants provided to the participants, was the theme of “governance and rights”. This theme affected how the other determinants were conceptualized, as if addressing those determinants without paying attention to governance and rights reflects only part of the story about how Cubans conceptualize health determinants.

For example, health services were considered to be an important health determinant. But it was not only the reception of care that was a health determinant; it was also the character of how the health services were delivered. Access to health services without user fees was described as a right. It was not an abstract right; it was a right known to everyone, with monitoring and enforcement mechanisms. Also, the excellent access to medical services (including health promotion services provided in clinical care) is seen as health-promoting through alleviating the stress that would arise from lack of access. This is, in part, illustrated by the quotes below:

“Tener Buenos servicios médicos, que la atención a la salud no constituya una preocupación porque las personas todas sepan que tienen ese derecho y no tienen que pagarlo.” This can be translated as: “Having good medical services, that attention to health issues not be a preoccupation, because everybody knows they have that right and do not have to pay.”

“Saber que tienen derechos y que en caso de que los violen existen mecanismos para reclamarlos.” This can be translated as: “Knowing that one has rights and if they are violated, there are mechanisms to claim them.”

Another example of seeing governance and rights as health determinants was in relation to education. It was considered important that everyone has access to education that supports knowledge, values, and social norms that are considered health promoting. True access to education was seen as: 1) partially dependant on a decent standard of living (prior, during, and after the education period); and 2) needing to be linked to stable and just employment. This was partially illustrated by the following quote: *“Las prioridades para tener salud son el nivel de vida, la educación para todos, el empleo estable y justo, los valores y normas sociales”* This can be translated as “The priority to be in good health are standard of living, education accessible to all, stable and just work, values and social norms”.

The participants reported isolation, solitude, and exclusion from society as negatively affecting health. In contrast, a healthy social environment and everybody having the opportunity to benefit from society’s progress were reporting as health promoting. This is illustrated by the quote below:

“Existen muchos elementos, que las personas no se sientan solas, aisladas ni excluidas.” *“Sentir que la sociedad avanza de forma pareja, nadie queda excluido.”* *“Tener un ambiente sano social y del entorno.”* This can be translated as: “There are a lot of elements, that people do not feel isolated or excluded.” “To feel that society is progressing in a similar fashion for all, nobody is excluded [from benefiting from society’s progress].” “To have a healthy social and physical environment.”

The discourse from the local leaders and sectors’ representatives demonstrates that health determinants are seen as an integral part of the governance of Cuban society, with mechanisms to ensure a right to health. The discourse also supports that the right to health encompasses the right of citizens to live in a society that addresses health determinants, including those related to healthcare as well as the social determinants of health.

Municipal Leaders

The two most important themes related to what determines health discussed in the municipal leaders and sector representatives' focus group revolved around: 1) responsive and accountable governance; and 2) social cohesion with the importance of supporting all in society. The participants mentioned that the leaders know they are accountable, and they are responsive to the people in their community. The governance structure is such that it protects all in society. There is a right to free health services, including health promotion, and no one is excluded from accessing the services. Paying attention to the protection of communities and families with social disadvantages is one of the values underlining the policies and implementation of services. Social cohesion was discussed as an important health determinant, as illustrated by the quotes below (followed by how they can be translated).

“La estructura en si de la gobernabilidad, que tiende a proteger la sociedad en su conjunto.”
“The governance structure itself, which has to protect the whole society”

“La cohesión social y la concepción socialista de la dirección.” “The social cohesion and the socialist conception of the way forward”

“Los dirigentes saben que se deben al pueblo.” “The leaders know they have responsibilities toward the people”

“La protección a las familias y barrios donde existe desventaja social” “The protection of the families and neighborhoods experiencing social disadvantages”

“Las acciones para fomentar salud y atenderla gratuitamente y sin exclusión de nadie.” “The actions to promote health, and to receive health services, for free and without excluding anyone”

“La promoción cultural y la elevación constante del nivel educacional de la población” “The promotion of culture and the continuous improvement of the level of education of the population”

“Las prioridades para tener salud son los estilos de vida saludables, la educación, el empleo y las condiciones de trabajo, la calidad del ambiente físico.” “The priorities to be healthy are

healthy lifestyles, education, work and employment conditions, quality of the physical environment”

Primary Care and Public Health professionals

The discussions in the health professionals’ groups followed a different path. Rather than discussing governance and responsiveness to citizens, they discussed the complex interplay of health determinants. The discussion explained that one cannot assume that each health determinant is directly linked to health; the effects of health determinants are more complex than that. The various health determinants interact with each other, resulting in synergistic, catalytic, or buffering effects on one another. This was also mentioned to some degree through the examples of variable effects and interactions between culture, socio-economic status, and education (among others) by the local leaders. But the local leaders did not label or conceptualize it as precisely as the primary care and public health participants did.

This group also mentioned the topic of equal access to health services and health promoting services as a right, without limitations based on social status. They also added the dimension of special support and protection of the right to accessible health services for those in isolated rural areas. Furthermore, this was where that group also touched on the governance theme, by discussing that the protection of the right to accessible services was enacted through formal government planning and resource allocation.

Similar to the discussion in the other groups, additional determinants mentioned included: social unity, cultural promotion, general educational level, standard of living, and working conditions. However, this is the only group that explicitly mentioned healthy lifestyle, with specific mentions of nutrition, physical environment, and hygiene.

General Transcript

The general transcript was the amalgamated transcript of all the focus groups’ discussions, without distinction from which focus groups the statements originated. It includes more complex and specific discussions of a variety of health determinants, including what was described above. Overall, the general transcript followed the same themes around the conception of health

determinants, illustrating that health determinants as conceived in Cuba include: the rights to health and healthcare for all; education; supportive social networks; and responsiveness of the various institutions to citizens' needs, as well as obtaining benefits from society's progress. The general transcript sheds deeper light on the conceptualization of education as a health determinant, which is discussed below. The general transcript also provided more information on health determinants that are less well-covered in the summary focus group transcripts, such as lifestyles, culture, gender, and the physical environment.

A major topic of discussion was education. Education was conceptualized in two different ways: general level of education versus knowledge about what is affecting health. Some describe one's level of education as a fundamental health determinant, while others consider it a weak health determinant. The focus group participants reported the level of health knowledge in Cuba as high, though they also mentioned a wide gap between knowledge and action. Many perceive education level and health education as being insufficient to change unhealthy habits. A given example was that even among those who promote healthier lifestyles, many do not put their own advice into practice. Others comment that knowing what affects one's health is insufficient to change behaviour on its' own, even if it can contribute to adopting healthier practices. Participants explained the gap between knowledge of healthy and unhealthy habits and the practice of healthier habits as being due to disadvantageous life conditions, bad habits, and culture.

The participants contrasted education and life circumstances, explaining that even if someone knows what is good or bad for their health, their life circumstances can deter them from healthier behaviours. Participants' general understanding of how life circumstances affect health-related behaviours does not completely prevent judgemental remarks in relation to unhealthy behaviours, when one knows of the potential consequences. For example, a participant describing a situation in which an adolescent women gets pregnant and terminates the pregnancy, despite knowing the risk of sexual activity without contraception, labeled that women as immature, rather than looking for how her life circumstances might have affected her ability to make different choices.

“Hay un elemento fundamental que es la educación, sin una buena educación es imposible tener salud, sobre todo porque la gente empieza a entender que le pasa y empieza a cambiar, el ejemplo está en las personas que alcanzan la universidad y cambian la forma de vivir.” This can be translated as: “There is a fundamental element, which is the education, without a good education, it is impossible to be healthy, above all because people start to understand what is

happening to them and start to change, an example of that are the people who reach university and change their way of living.”

“Estamos hablando de muchas cosas pero la verdad es que a veces la gente tiene todas las condiciones para cuidar bien su salud y no lo hace porque sus costumbres no son buenas, es se sabe que no se debe comer carne de puerco, que se debe hacer ejercicios y sin embargo las mismas gente que te lo dicen no lo hacen.” This can be translated as: “We are talking about a lot of things, but the truth is that sometimes people have all the conditions to take care of their health and don’t do it because their habits are not good, they know they should not eat pork meat, they know they should exercise and regardless, those same people who tell you to do it, do not do it themselves.”

Some participants mentioned that aspects of the Cuban culture could lead to unhealthy behaviours despite high education level. However, the participants did not detail what they understood to be the aspects of Cuban culture that have a negative influence on health, other than in relation to some cultural activities, such as carnivals where people get drunk. The participants agreed that this type of activity is not one through which “culture” is truly accessed, but that other forms of accessing “culture” can have a positive influence on health. One theme discussed by the participants is that cultural activities done with others, especially with one’s own family, contribute to close relationships as well as general quality of life, health, and wellbeing. Such activities include visiting a museum, going to the theater, seeing a movie, or listening to music.

The impact of socio-economic status was also seen in a nuanced way. One participant explained that many people with a higher income may consume more things that can damage their health. For example, richer citizens may have access to more pork, sausages, and processed meat, which are seen as health damaging, especially due to artificial additives and salt. On the other hand, those with a higher income who have a good knowledge of healthy food can also buy more produce and healthier meats, thus improving their health in a way that is difficult for those with a lower income.

There was also a more detailed discussion of lifestyles in this general transcript than in the summary transcripts. This discussion added alcohol and physical activities as major lifestyle factors that determine health.

The polio immunization campaign was given as a specific example of how community organizations impact health through a well-organized structure linking them with each other, with health and social services professionals, and with municipal and local governments and priorities. The participant expressed that the community organizations could play a larger role in the future by supporting the ill and the elderly. Another way of describing the accountability of community organizations and the role they play was that people can ask those organizations for help, and those organizations feel compelled to help even if they are part of a voluntary sector.

The multiple roles and stresses of women, including paid work, unpaid housework, caring for others, and household-related stresses, were described as impacting women's health and quality of life more than men's.

Finally, the few details discussed in relation to physical environment determinants still illustrate broad and interacting pictures of how environmental determinants affect health and other determinants. The physical environment determinants mentioned were:

- Environmental contaminants
- Insufficient lighting of streets (linked to poorer security and decreased quality of life)
- Transport as an enabler and as a polluter, not only in relation to smog and air pollution but also through heat generation and noise
- Water quality and access to water
- Houses in poor conditions

Overall, a broad concept of interactions between governance and the various health determinants, as well as between the determinants themselves, demonstrates a complex understanding of how health determinants affect health. This contributes to answering the questions of “How are health determinants managed in Cuba?” and “What are the contexts, mechanisms, and outcomes of intersectoral management of health determinants?”, when both public health and primary care providers are involved as representatives of the health sector in those intersectoral collaborations. This shared understanding of the interaction between governance and health determinants and the complexity of how health determinants affect health can be classified as a context, a mechanism, or an outcome, depending on where one situates oneself in the chain of causality. It is a context in which intersectoral collaboration arises since it is a shared understanding rooted originally in values

driving the Cuban Revolution. It is also a mechanism, as responsive governance committed to enabling a right to health is seen by Cuban as a determining factor in enabling intersectoral and effective management of health determinant. Finally, the shared understanding of the interaction between governance and health determinants is also an outcome of long-standing intersectoral collaborations and work towards fulfilling the right to health. This was explained in Spiegel and al. (2012) in relation to the various phases of health system reform in Cuba from more specific disease-oriented programs, toward more and more primary health care and intersectoral management of health determinants with increased explicit responsibility of all sectors (including primary care) to manage health determinants through intersectoral collaborations ([Spiegel et al., 2012](#)). This could be seen as a circular process of context, mechanism, and outcome (CMO configuration) that re-enforces itself.

3.2.2 Priority in managing health determinants

Each of the focus groups was asked to discuss what they considered to be the most important health determinants. This resulted in the Cuban research team collecting group consensus rankings of the various health determinants. These results are presented in Table 6, with the darker background representing the first three priorities, the lighter background the middle priorities (ranked 4 to 6), and the white background the last priorities (7 to 11). This table shows general agreement on the priorities across the different groups. Almost all groups felt education and health services were among the most important health determinants. The physical environment is in the middle of the priority list for all the groups. Culture, values and social norms, social support networks, gender, and healthy child development are seen by most as lesser priorities. Looking at the difference in ranking by groups, the table shows that the local and municipal leaders ranked income and standard of living as a top priority, while the primary care and public health professionals groups ranked it among the least important. Municipal leaders as well as primary care professionals see lifestyles as a priority, and employment and working conditions as ‘middle of the pack’ priorities.

This picture of some agreement and some differences is compatible with the findings of the discussion of what constitutes a health determinant (from the prior section). There are no determinants consistently ranked in the lowest priority ranks (7, 8, 9, 10,11) by all the groups. This means that at least one of the groups ranked any given determinant as being in their top six

determinants. Even health workers considered health determinants other than health services as being important. The other groups also ranked health services as a higher priority determinant.

Table 6 Health determinants priorities by focus groups

	Local Leaders 1-2	Local Leaders 3-4	Municipal Leaders	Primary Care 1	Primary Care 2	Public Health
Income and standard of living	1	1	1	8	6	9
Values and social norms	5	9	10	7	7	10
Social networks	4	8	8	5	10	8
Physical environment	6	6	6	4	4	4
Education	3	2	2	1	3	2
Employment and working conditions	8	5	4	6	8	11
Healthy lifestyles	7	7	3	2	1	6
Healthy children	9	4	7	9	9	7
Health services	2	3	5	3	2	1
Gender	11	11	11	11	11	5
Culture	10	10	9	10	5	3

The distribution of the rankings seems compatible with two mechanisms:

- 1) Different groups act differently because they have different views of what priorities health determinants are (which is consistent with having different roles, such as local and municipal leaders having more responsibilities in relation to income and standard of living and prioritizing those health determinants).
- 2) The priority health determinants have enough overlap between the groups, that the various groups have common priority health determinants and common goals of addressing those determinants. Example of this include education and health services, which are ranked as high priorities by almost all groups.

The next section is dedicated to the respondents' answers to how health determinants were managed by internal actions and intersectoral collaborations. The analysis in the next section enabled deeper comparison of *how* the various group manage health determinants, and to ascertain similarities and differences between the groups.

3.2.3 Management of health determinants

3.2.3.1 Strategies to manage health determinants from the various professional groups

The various professional groups were asked to indicate which determinants are managed through the various strategies outlined in the Ottawa Charter of Health Promotion. Like other parts of the focus groups results, the document provided by the Cuban team regrouped the answers of the primary care and the public health groups into a single table. The results are in Table 7 below. In the table, if a strategy (column) is used by one of the groups to manage a given health determinant (row), the initials of the name of that group are placed in the cell corresponding to the intersection of the particular strategy with the particular determinant. For example, the strategy ‘Moving into the Future’ was used by almost all groups (PCR/PHR, MLSR, LLSR) and for almost all health determinants.

The table shows that all the groups used all the strategies, for one determinant or another, and that all the groups addressed all the determinants through at least one of the strategies. This supports the finding of the broad conceptualization and prioritization of health determinants by demonstrating that all groups act on all determinants and use all the strategies (even if they do not use all the strategies for all the determinants).

The table also displays some similarities between the various strategies used by different groups for the various health determinants. For example, a notable finding is that for almost all health determinants, most groups used the strategy “Moving into the Future”. The strategy of “Moving into the Future” from the Ottawa Charter refers to creation of health not only for today, but also for future generations, through caring for oneself, the environment, and the community and its social support structure, with mutual and reciprocal care of members of society ([WHO, 1986](#)). It includes strategies to empower those whose health is affected and for the equal participation of men and women in health and healthcare decisions and actions. It also puts an emphasis on societies creating conditions that support the achievement of health for everyone, not just some. It is the part of the Ottawa Charter that refers to health as being created and enjoyed in the various settings where one learns, works, plays, and loves ([WHO, 1986](#)). The use of this strategy for almost all health determinants is in accordance with the broad scope and nature of the strategy and the broad conceptualization and actions on health determinants used by the various groups in Cuba.

Local and municipal leaders used the development of healthy public policies for most health determinants, in accordance with their public policy roles and their discussion of governance.

Notably, primary care and public health professionals use all the strategies to address income and living standard. Similarly, to the other groups in Cuba, both primary care and public health representatives addressed employment and working conditions through the development of healthy public policies. This is in contrast to what might be seen as the role of primary care or even of public health in many part of the world, where the role are conceived as clinical roles.

It is important to remember at this point that participants were asked to rank the health determinants in order of priority, which does not mean that health determinants to which they give lower priorities were considered unworthy of their actions (either internally or in collaboration with others). Even if a health determinant is ranked lower in the priority order than other health determinants, it might still be considered important enough to carry out internal and/or intersectoral action to manage it. Furthermore, all the health determinants are ranked at least in the middle of the pack priority cluster by one group or another. And because health determinants in Cuba are fundamentally seen as needing to be managed intersectorally, if a health determinant is ranked as a more important priority for one group, it is understandable that this group can trigger intersectoral actions, or even convinced other sectors to act internally to address that health determinant.

Almost all groups addressed health services through the following strategies: healthy public policies, development of personal skills, and the re-orientation of health services, as well as “Moving into the Future”.

The local leaders groups added the care and rehabilitation of older adults as another health determinant. This was in part based on some of the recent changes in the health system, with the provision of more community services to support rehabilitation and independent living at home, such as physiotherapy, daytime care, and support and recreation in community elder centers, as explained by key informant discussions and field visits. Given that only the one group added this health determinant, they are the only group who had an opportunity to list strategies to address it. None of the other focus groups added this to the list of health determinants, and no focus group added any other important strategies to address health determinants.

Table 7 Strategies used to manage health determinants

	Development of healthy public policies	Creating supportive environments	Strengthening community actions	Develop personal skills	Reorient health services	Moving into the Future
Income and standard of living	PC/PH	PC/PH	PC/PH	PC/PH	PC/PH	LL, ML, PC/PH
Values and social norms		LL, PC/PH	LL, ML, PC/PH			ML, PC/PH
Social support network	LL, ML, PC/PH	LL, ML, PC/PH	LL, ML, PC/PH			PC/PH
Physical environment		ML	PC/PH			LL, ML, PC/PH
Education	LL, ML, PC/PH			LL, ML, PC/PH		LL, ML, PC/PH
Employment and working conditions	PC/PH					LL, ML, PC/PH
Lifestyles	LL, ML, PC/PH	LL, PC/PH	LL, PC/PH	LL, ML, PC/PH		LL, ML, PC/PH
Early childhood development	ML				PC/PH	LL, ML, PC/PH
Health services	LL, ML, PC/PH			LL, PC/PH	LL, ML, PC/PH	LL, ML, PC/PH
Gender	ML, PC/PH	LL, ML, PC/PH	LL, PC/PH			LL, ML, PC/PH
Culture	LL, ML, PC/PH	PC/PH	ML			LL, ML, PC/PH
Care and rehabilitation of older adults *	LL	LL		LL	LL	LL

*Mentioned only by the local leaders focus group, explaining why the other FG did not mark any strategies for this health determinant.

Legend: LL=local leaders, ML=municipal leaders, PC/PH = primary care and public health.

3.2.3.2 Internal actions and intersectoral collaboration to manage health determinants

The various focus groups were asked to brainstorm about which internal and intersectoral actions they are engaged that contribute to managing health determinants. This is discussed below and summarized in Table 8 to Table 9.

Local Leaders

The local leaders listed 20 important internal actions and 36 intersectoral ones (Table 8). The most important finding from those lists was that the actions (both internally and through intersectoral action) cover a very broad range of health determinants.

A large proportion of the internal actions relate to social support, social issues, and social equality (6), while four others touched on values and culture. This is an interesting finding in the context that those health determinants were not part of the highest priority health determinant cluster for local leaders (table 5). One group of local leader ranked both social networks, and values and social norms in the middle of the pack priorities, and the other group put both in the lowest third of the priorities, and that both groups ranked culture as part of the lowest third of the priorities.

The next largest group of internal actions is in relation to children and youth, to which five actions directly relate. Again, this was not a health determinant that was ranked by local leaders as part of the first priority group of health determinants. Another three actions are related to education, which was part of the first priority health determinant group. Two are linked to employment; two to health services; one is linked to public health; and one to gender.

For the intersectoral actions, the distribution in relation to various determinants is similar. Eight of the intersectoral actions mentioned touch on cultural activities, some of which could be construed as also touching on values, social support, social issues, and social equality. Seven actions are typical public health and health promotion activities, while five are related to clinical services (in which I include immunization). Many actions (five of them) target vulnerable groups, including three specifically for the elderly, one that talks about the nutrition of several vulnerable groups, including the elderly and the sick, and one for the disabled. Another theme was women's equality and participation in various aspects of society (four actions relate to that theme). Three actions relate to youth, and only one action related to employment.

One of the intersectoral actions listed is the Ideological Battle, and one of the internal actions is the Energy Revolution. Because the discussion in the focus group did not explain what the Ideological Battle or the Energy Revolution meant, we asked a key informant¹⁷. The Ideological Battle was described as a large intersectoral program in response to some of the US actions perceived as anti-Cuba. It included several components: 1) promotion of Cuban values to youth; 2) a reconnection with the purpose and success of the Cuban revolution; and 3) a special attention to opportunities for youth in Cuban society, including cultural activities. Some of the specific activities carried out as part of the Ideological Battle included: 1) an education series in schools, with poetry, songs, and science contests; 2) education campaigns for the general public; 3) new types of "social workers" with special training in home and workplace energy efficiencies; 4) infrastructure changes to support technological advances and energy efficiencies; 5) subsidies for individuals to purchase more energy efficient appliances, along with free distribution of other households items such as slow cookers, and layered costing schemes for energy consumption (higher cost at higher consumption brackets); and 6) mass media campaigns, TV shows, and journal articles on energy conservation and the successes of the Revolution. The key informants explained that the components of the Ideological Battle mentioned above that relate to energy efficiencies are sometimes referred to as the "Energy Revolution".

One of the internal action and intersectoral collaboration listed was the program Raise Your Child. That program is described by WHO as:

"Cuba's Educa a Tu Hijo (Growing-up with your child) programme is generally thought to be an important factor in Cuba's educational achievements at the primary school level (UNICEF, 2001). The programme, introduced in 1985, is a non-formal, non-institutional, community-based, family-centred ECD service under the responsibility of the Ministry of Education (Preschool Education). The programme operates with the participation of the Ministries of Public Health, Culture, and Sports, the Federation of Cuban Women, the National Association of Small Farmers, the National Committee for the Defence of the Revolution, and student associations.

This extended network includes 52 000 Promotres (teachers, pedagogues, physicians, and other trained professionals), 116 000 Executors (teachers, physicians, nurses, retired professionals, students, and volunteers), and more than 800 000 families. During the 1990s the

¹⁷ Discussion with Dr. Mariano Bonet, June 6th 2011.

programme was extended, reaching 99.8% of children aged 0-5 years in 2000 – probably the highest enrolment rate in the world.” ([CSDH, 2008a](#)), p. 55.

Keon (2009) provides further details:

“The majority of children take part in a noninstitutional program called Educa a Tu Hijo [Educate Your Child]. This program was designed to coach and empower families to stimulate their child's integrated development, based on their own experience, interests and needs. The program provides future mothers and fathers with information and counselling about healthy pregnancies and early child development during visits to doctors and nurses. Families with children under 2 years of age receive individual home visits once or twice per week. They are guided through games, conversations and other activities to enhance their babies' development. Children between the ages of 2 and 4 and their families go on weekly or semiweekly group outings to parks, cultural facilities and sports centres with counsellors trained in child development and family participation.

A network of counsellors and program promoters organize and deliver the program. Activities provide family guidance on stimulation of the social, affective, cognitive and motor development of the child, as well as health care and nutrition. However, Cubans have learned that simply teaching the proper activities to caregivers and having those activities repeated is not sufficient. The family must recognize that it has the primary responsibility for the child's development not only through stimulating activities but also through direct participation, affection and the classic conditions of security and others that are determinants of physical and mental health. Ultimately, the program is about creating families that foster child development.

Evaluation is an important component of the Educa a Tu Hijo program. Since the program began, regular monitoring and evaluation have been performed to assess the development level reached by boys and girls as a result of educational influences. The results obtained determine the strengths and weaknesses of the program and are used to improve the educational strategies.¹¹” ([Keon, 2009](#)) p. 315.

Both of those descriptions above demonstrate the intersectoral nature, as well as the comprehensiveness of interventions, which of course means that many sectors act internally as well as through intersectoral collaboration. It also is illustrative of the level of use of evidence in creating program, as this program follows best practices in early childhood education, and is constantly improved in Cuba, based on research, monitoring and quality improvement.

Table 8 Actions listed in the local leaders focus groups

Internal	Intersectoral
<ul style="list-style-type: none"> • Support of free healthcare for all • Community support to the fight against diseases transmitted by vectors • Preventive work with youth and the society in general • Working closely with youth • Providing the program Raise Your Child • Supporting the activities of the education system • Supporting activities so that all children receive good quality comprehensive healthcare • Enabling universal education and university level education to be available closer to villages • Linking youth to education and work opportunities • Supporting the provision of stable and secure work • Supporting social equality • Supporting women's equality in society • Participating in and supporting the "Energy revolution" • Performing a lot of community work to strengthen social support networks • Supporting social support network led by the Civil Society and the central committee of the communist party • Providing social work services to at-risk groups • Fighting social issues, including prostitution • Supporting the values of the "Ideological battle" • Participating in the "internationalism" activities • Needing to do more to promote "culture" 	<ul style="list-style-type: none"> • Family medicine services • Network of medical services from the family medicine level to other levels • Universal free immunization • Increase in the intensive care unit capacity • Improvement in dentistry services • Elders' circles¹⁸ • Care of elderly citizens in a variety of ways • Older adult program • Support programs for those with disabilities • Food supplementation to person with various diseases, elders, and low weight children • Release of food and special attention to nutrition • Promotion of physical activities • Sports facilities and programs accessible to everyone • Free entry to infrastructures to practice physical activities • Sanitation campaign • Program "Raise Your Child" • Integral health assessment in all schools • Repair of schools through community efforts • Creation of education program with large social impact such as social work and art teaching programs • Educational series of the Cuban Institute of Radio Diffusion • Presentation of/to diverse community organization • Culture accessible to all • Cultural activities • Culture as a right of citizens • Cultural festivals • Book fairs accessible to all • Cinema festival • Increase in public library, theaters, video room¹⁹ • Women's emancipation • Inclusion of women in a variety of work and leadership opportunities • Inclusion of women in all the aspects of the Revolution • Decrease in unemployment • Distribution of home appliances improving quality of life • Promotion of care of nature • Agenda 21 (relates to environmental sustainability) • Ideological Battle²⁰

¹⁸ Local level seniors' organizations where seniors organize themselves as well as receive support services to assist in socializing, staying healthy and active, as well as involved in the local community affairs.

¹⁹ Video rooms are community rooms with TV and video to facilitate access to movies, shows, or other TV programs, especially for more rural areas.

²⁰ The Ideological Battle was listed as both an internal and an intersectoral action, without more explanation from the focus group data. However, as the Ideological Battle consist of a large cluster of program and interventions, it is conceivable that some of the actions were considered internal, while other were considered intersectoral.

Municipal Leaders

The results from the municipal leaders are notable for their brevity, compared to the results given by the local leaders. The municipal leaders and sectors' representatives mentioned only six internal actions (Table 9), covering the improvement of working conditions and increases in salary, support to build new schools and to train more teachers, and infrastructures for health, such as rehabilitation centres. Only a few intersectoral actions are noted. Some relate to health promotion, with a mention that more health promotion is needed to complement what is being done about HIV and smoking. The others relate to collaboration with other organizations, largely around infrastructures, including collaborations with large mixed enterprises, "Empresas Mixta". Of note, both the internal and the intersectoral action listed are related to the priority health determinants identified in the Municipal Leaders focus group as displayed in table 5.

"Empresas Mixta", as per the information from a key informant¹⁷, are companies owned by the both the Cuban government and other entities, either through internal Cuban investments or foreign investments. As part of their intersectoral contribution, "Empresas Mixta" must provide resources to foster projects of social importance, such as better housing or building schools, hospitals, and other health services. COPEXTEL is one of those "Empresas Mixta". It generates resources that are then re-distributed for education, recreation, and information technology. Revenue is generated by the provision of catering, tourism, and other services, including managing large projects for other private investors in Cuba. ETECSA is another such mixed enterprise, and it must provide the information technologies needed for the education, health, and other sectors of social importance in Cuba.

Table 9 Actions listed in the municipal leaders focus groups

Internal	Intersectoral
<ul style="list-style-type: none">• Better care for men• Building new health services such as rehabilitation centres• Support to building schools• Training of qualified teachers• Increase in salaries• Improving working conditions	<ul style="list-style-type: none">• Health promotion including expansion of programs targeting issues other than HIV and smoking• Collaboration between sponsoring organizations that manage social services like the construction of schools, houses, hospital and other services• Mixed enterprises supporting social services. Examples: COPEXTEL, a tourism and food business, supporting the initiatives of the Ideological Battle, including resources for education, recreational activities and computers for some public services; while ETECSA, the phone and telecommunication company, supports the internet connection infrastructure of the health, education, and other important sectors of society.

Primary care and public health professionals

Eleven out of sixteen of the internal actions (table 9) relate to healthcare services, including quality improvement, training of health workers, and establishing specialized support structures for family physicians through "basic groups of work". Another five relate to maternal or child healthcare, support services, or policies. Five actions relate to health promotion programs, covering children, elders, lifestyles, and emergency management. Another three relate to improving income and working conditions, including one referring to increases in salaries and one on workplace health services as a way to reach men for the provision of more general health services (also counted in healthcare services).

The intersectoral collaboration reported by the primary care and public health representatives can be grouped in three themes. The first theme is the support that health services receive from other groups of the civil society (including the support of civil society organizations for the local health team and the creation of emergency management centres in case of emergencies). A second theme is the provision of health services in various settings, such as schools and workplaces. The third one is around broader health promotion work, such as education campaigns, sanitary restoration of parks and rivers, and comprehensive school health.

Again, some of those action relate to the highest priority health determinants identified by that group, but many relate to health determinant considered in the middle of the pack or in the lowest third in term of priority. The picture that emerges from the local leaders, the primary care and the public health professionals, is that they act, and list actions that are priorities, even for health determinants that they do not in average considered the highest priority. Basically they are willing to act on health determinants that are the priorities for other, both internal and through intersectoral collaboration. This means that there are other considerations than the average assessment of priority level of a given health determinant coming into play when deciding what actions are priority actions to act on health. It seems that other factors include consideration of what that sector can actually do for that health determinant, regardless of exact level of priority of the health determinant, perhaps meaning that in fact, despite an ability to rank health determinants by priority, that acting on all health determinants was considered a priority by those groups. Only the municipal leaders seem to act mostly on their highest ranked health determinants.

Table 10 Actions listed in the primary care and public health focus groups

Internal	Intersectoral
<ul style="list-style-type: none"> • Continuous improvement in health services • Creation of Emergency Command Centres to coordinate multiple sectors in case of emergencies • Healthcare for men in the workplace with attention to occupational health issues • Visits of family physician and community nurses to houses to influence lifestyles • Health promotion inside and outside the health sector • Presence of basic working groups composed of paediatricians, obstetrics and gynaecology specialists and psychologist supporting family physicians at the local level • Healthy child development • Medical care of children and immunization through the family medicine centers (which have a nurse and a MD) • Improvement to the Maternal and Child Health program • Childcare available at an early age and healthcare available starting at the prenatal stage • Laws that protect women, paid maternity leave for a full year • Gender sensitivity and protection of women • Creation of grandparent circles • Increase in the healthcare workforce • Improvement in working conditions • Increase in salaries 	<ul style="list-style-type: none"> • Support of the Civil Society organizations such as the CDR and FMC to the local health teams • TV and radio shows providing health information • A large network of organizations supporting the health education messages, always ready to help • Creation of Emergency Command Centres to coordinate multiple sectors in case of emergencies • Sanitary restoration of parks and rivers • Program Raise Your Child • Integral health assessment in schools in collaboration with the Ministry of Education • Physician and nurses available and supporting school health • Physicians and nurses in workplaces, including family physicians and occupational medicine specialists

3.2.3.3 Decision-making, evaluation, successes, and challenges

Local leaders

The Popular Power Council collects information on the needs of the community through the Assembly of Delegates. The delegates are accountable to the communities, who can re-call and re-elect delegates to the Popular Power Council at any time. They reported that they first attempt to resolve most issues locally through networks of mutual support between various organizations at the community level, such as evacuation in case of disaster. Issues that need extraordinary resources are brought to the attention of the next level, in this case the municipal level. The financial resources are centralized but available to communities that need them, for example, to build water pipes in neighbourhoods.

One of the main facilitating factors is the consistently similar structure from the local level to the national level, with most sectors of society represented in collaborative discussions on how to solve issues. Another facilitating factor is “political will” – not construed as a centralized political program, but as local leaders’ political will. The focus groups participants explain that the community will surpasses the individual challenges. All the complaints were listened to carefully.

The community was then reported as being enabled to address similar complaints in knowledgeable, coherent, and just ways. Organizations that do not respond to community complaints were reported as being openly criticized.

The focus groups' participants also talked about social cohesion as a contributor to the success of managing health determinants. Participants mentioned that social cohesion was improved by women's participation in all activities of society. However, social cohesion was also negatively affected by the Special Period²¹ and the devaluation of the Cuban currency. Those who earn tips for their work have moved further away from social cohesion. The participants express that those who earn tips now prioritize their own gain, and that they have access to this extra revenue not necessarily because of personal merit, education level, or capacity, but through a mix of chance and personal connections, and only to a point from personal initiative and the provision of good services.

The local leaders' discussion about successes and challenges was very similar to that of the other focus groups. All focus groups mentioned the following areas of successes: healthcare (including a high quality, equitable, and accessible primary care system, with aspects of health promotion and prevention); education; early childhood development; and employment opportunities. The participants described health determinants for which there are both successes and difficulties, such as for values and social norms, as well as gender issues. The participants considered the areas with the least successes to be those in relation to lifestyles and the physical environment (the built environment, such as housing and infrastructures, as well as the natural environment). One of the main challenges identified to addressing the physical environment is the US "blockade"²², limiting

²¹The "Special Period" refers to the late 1980s, following the collapse of its Soviet Bloc trading partners. During the "Special Period", Cuba faced a drastic decrease in trade and aid, with severe economic repercussions.

²²The US "blockade" is the term used in Cuba to describe the US embargo established after the Cuban Revolution and strengthened afterward several times. Drain and Barry (2010) explain the embargo as follows:

"In response to seizure of property owned by U.S. citizens, the United States restricted importation of Cuban sugar in 1960, followed in 1963 by prohibition of trade in food, medicines, and medical supplies (6)... By 1983, Cuba was producing >80% of its medication supply with raw chemical materials acquired from the Soviet Union and Europe, and there were scant reports of medication shortages (9, 10). ... When the Soviet Union collapsed in 1989, foreign aid faltered, and Cuba's economy and health suffered (7, 10, 12)... The U.S. "Torricelli Bill" of 1992 tightened the embargo (13); the number of foreign-based subsidiaries of U.S. companies granted licenses to sell medicines to Cuba declined dramatically (14). The 1996 U.S. "Helms-Burton Act" sought to further penalize foreign countries trading with Cuba (15). By the end of the 20th century, few international pharmaceutical companies supplied essential medicines or raw chemicals to Cuba (10, 14). ...Medication shortages were associated with a 48% increase in tuberculosis deaths from 1992 to 1993; the number of tuberculosis cases in 1995 was threefold that in 1990 (7, 17, 18). An increase in diarrheal diseases in 1993 and 1994, and an outbreak of Guillain-Barré syndrome in 1994, attributed to *Campylobacter*-

access to materials and resources, and having a financial impact on the country. Another challenge identified universally is the devaluation of the currency and the increase in self-employment, which is creating larger social differences.

Municipal Leaders

The municipal leaders echoed the local leaders' description of the successes and challenges. In relation to decision-making, the main structure that supports intersectoral collaboration at the municipal level is the Municipal Administrative Council, which feeds into similar structures up the ladder, from the community to the national level. The Municipal Administrative Council prioritizes and allocates resources based on the discussions and issues brought up at the Municipal Assembly. The Administrative Council manages health determinants through interaction, both vertically and horizontally. The issues that cannot be resolved by the Administrative Council are referred to the next level of organization. What makes it work is the political will to support actions that benefit society. This also influences how business is conducted, for example, with the “Empresas Mixta” that finance social programs. The provinces also keep reserves in case of extraordinary costs, such as disasters.

Primary care and Public health professionals

The participants mentioned that health was always seen as a priority in Cuba, and along with the education sector, the health sector was the recipient of most of the state's resources. This was manifested by the extra financial support obtained from the mixed enterprises and other organizations that generate and manage financial resources.

The resources were allocated to programs centrally, but the local level organizations can adapt and modify the implementation to suit the local level issues, and have the ability to make their own decisions to resolve local issues independently of the central level. Those adaptations are supported as long as they remain inside the scope of work of the organization, do not necessitate large or extra financial resources, or go against what other levels are attempting to achieve. If a solution is not found at any given level, the issue is brought to the attention of the next level.

contaminated water, followed a shortage of chlorination chemicals (12). A national epidemic of optic and peripheral neuropathy, which started in 1991, was associated with malnutrition and food shortages (19–22). Although the United States in 2000 ended restrictions on selling food to Cuba (2, 23, 24), restrictions on medicines or medical supplies were not repealed.”([Drain & Barry, 2010](#)) p. 572

There was recognition by the participants that the majority of the health system's work is clinical and medical, and is done really well and in a well-coordinated manner. The health sector was described as very involved in sickness and immunization, however it was neither very involved nor had a significant impact in other aspects that do have a large impact on health, such as waste disposal, potable water, and lighting in public places.

There was also a recognition that more could be done in relation to health promotion and prevention. Many health promotion and prevention activities were expected to be carried out at the level of the family physicians. The role of the family physician includes the coordination of community organizations in relation to health issues through the health council, as well as reaching out to community organizations to resolve a variety of issues affecting broad health determinants. Participants mention that even if family physicians and polyclinics do a lot of prevention and health promotion activities, they frequently do not unfold as well as planned. This is due in part to the challenge of answering to acute clinical needs. One participant mentioned that health promotion action depends a lot on the skill levels of the different actors of the health system. He continued by speculating that perhaps family physicians and polyclinics rely too much on other levels to set priorities and give direction, and they should take more initiative. Along the same theme, a participant mentioned that despite intersectoral action for many nationwide programs, health education actions are frequently left to be implemented at the local health level. Since health education necessitates the work of multiple people, it is impossible to realize it only through local health practitioners. Participants discussed that the education sector plays an important role, including in relation to transmitting values and social norms, but that the family and community also have major influences. Therefore, the participants acknowledge that there is a need for more intersectoral health education and health promotion, especially in relation to the physical environment. A participant also raised the issue of the difficulty of health education, with significant impacts only manifested after long-term interventions.

While there has been attribution of health promotion and prevention roles to the healthcare sectors, mostly at the primary care level with the support of public health (public health specialist are also located in the polyclinic which is considered a primary care level in Cuba), participants recognized that the role of providing health promotion and prevention is a shared responsibility with the government as a whole. To deliver sound health promotion and prevention, the primary care

providers and the various governmental bodies also both rely heavily on the communication sector as well as the support of the Civil Society organizations. Participants reiterated the importance of government bodies as decision makers as well as conveners of multiple stakeholders. Despite the challenges mentioned below, the participants reiterated that the political will to take ownership of issues and respond to individual and community problems (especially health related problems) has been essential to drive and support successes in intersectoral action and to improve the health status of the Cuban population following the Revolution. Without that leadership and without the willingness of the government to convene other sectors and to set broad priorities, there would be less intersectoral mobilization.

The primary care and public health focus groups referred to the Popular Power Council as the government body assisting them in carrying out intersectoral actions and leading several of those actions. Participants mentioned the importance of the health sector being present at those intersectoral tables, thereby enabling the health sector to raise awareness of the impact of government decisions on all aspects of health, both positive or negative. The drawback is that the health sector representative might have to sit through discussions that are less relevant to the health of individuals or to the health of the community. Some commented that many sectors attend only part of the meetings. This allows a compromise between time pressure and relevance, while also providing informal discussion opportunities throughout the meeting. The formal meetings and the informal discussions both contribute to many sectors having long-term relationships with other sectors they would normally not interact with. The formal meetings, informal discussions, and regular contact are all mentioned as facilitating responses to acute issues. The participants also agreed that reserve funds for extraordinary spending needs or crises has enabled them as health professionals to respond to concerning situations, and the funds also enabled other sectors to act in those critical situations.

This whole discussion on the benefits and limitations of intersectoral collaboration, in relation to health promotion and prevention relying heavily on family physicians, triggered the participants to wish for the creation of another type of professional, trained in health promotion and prevention, who would work at the local level.

The participants mentioned that the intersectoral programs led mostly (but not exclusively) by the health sector are:

- The maternal child health program
- The older adult care program
- The sexually transmitted infections and HIV program
- The school health program

Examples of intersectoral collaboration listed included donations from various organizations to build maternal centres, elders' houses, and rehabilitation services. The discussion mentions some actions considered important: the presence of physicians and nurses in schools; the "Raise Your Child" program; and the integral school health diagnosis. Similarly, nurses and MDs in the workplace, with the support of occupational health specialists, are also seen as important intersectoral collaborations. An intersectoral government body supported the HIV prevention program, but most of the actions were also conducted by the health sector. The hepatitis control program is an educational program that relies substantially on intersectoral action to disseminate health information. Such actions included information campaign to raise awareness of the need to prevent the transmission of hepatitis, such as ways to manage food contamination and early identification of food contamination related to hepatitis A, ways to prevent and when to get tested for hepatitis B and C, as well as promotion of immunization and deliveries of vaccine in various settings. The Health and Quality of Life program is intersectoral, but relies on a lot of leadership and coordination from the health sector.

Other intersectoral actions that are more ad hoc have occurred, such as an assessment of the situation of people with handicaps, a community genetics program, and an infant malnutrition diagnostic program. Even if these are labeled as diagnostic programs, they include follow-up plans, implementation, and evaluation.

The focus group participants also discussed the importance of the more recent intersectoral management of disaster, through recently created Emergency Control Centres. They attribute the low mortality in recent hurricanes and other natural disasters compared to other neighbouring countries, including the United States (especially as it relates to the devastating effect of hurricane Katrina), to those intersectoral Emergency Control Centres.

Examples of programs led by other sectors besides the health sector include the distribution of agricultural products and goods, led by the Municipal Administrative Council, who can also make decisions and lead local initiatives by dedicating more human resources and getting the cooperation of a variety of organizations. The improvement in sanitation of rivers and parks is mentioned as another important intersectoral action to which the health workers participate, but it did not make it to the list of the most important actions.

The management of health determinants is based on a layered information system, starting at the family physician clinic and reaching up to the national level. Each level produces health status analysis reports, reported by the participants to facilitate both the prioritization and evaluation of actions at each level of the system. When intersectoral action occurs, respondents expect that it will lead to health system improvement, and be reflected in improved health status indicators in the next health status analysis. The respondents also report that intersectoral programs are also evaluated through program specific indicators, which are closely followed by decision makers.

The participants recognize that intersectoral management of health determinants is not perfect. There is a necessity to work with a long-term view, building on the general education. For example, the environmental hygiene and the older adult programs, even if clearly intersectoral, are not working as well as intended. In the case of the environmental hygiene program, it is due to the high cost of improving the infrastructures. The respondents did not detail what is not working with the older adult program.

Participants mentioned that it has taken years of collaborative work to reach the recent level of awareness of a variety of organizations of their impact on health. Awareness of health impact has more recently reached the organizations responsible for waste, water, roads, and recreation. The more traditional alliances are with the educational sector, the Institute of Sports and Physical Education, the organizations of mass media and communication, and the civil society organizations. Slowly, the Administrative Councils have enlisted the collaboration of businesses, armed forces, the Ministry of Interior, and other less intuitive partners in contributing to population health. For example, all those sectors have contributed to the creation of Maternal Centres, even if it did not seem related to their primary mandate at first glance, the question was not if it was part of their mandate but rather, given the value Cuban place on healthy mothers and babies, what can those

sectors contribute. Participants note that long-term work still needs to occur in relation to some health determinants, such as health education and values and social norms, as well as in relation to the aging of the population and the need to reverse the reduction in birth rate. Others mentioned that intersectoral work will be needed to improve living conditions and stimulate the birth rate. Another participant mentioned that even if there is more recognition that not all health determinants are part of the health sector, he reports that representatives of other sectors are still reluctant to agree with that concept.

A participant mentioned that gender issues have not been dealt with in an intersectoral manner, being left mostly to the Federation of Cuban Women, as if the only gender was that of women. Another participant was of the opinion that the only health determinant not really addressed so far through intersectoral action is income and standard of living. At the time of the focus groups, he expressed that it is seen as almost the sole responsibility of the government. That participant thought that more intersectoral action on the issue would lead to faster progress. The participants of the public health and primary care focus groups named what they felt were the most important intersectoral actions to improve in the future, listed in Table 11.

Table 11 Intersectoral actions most important to further improve the health of the population

Actions	Frequency of mention
Improve water quality when reaching the various neighbourhoods, with less leaks in the pipes and less interruption in services	10
Increase health education activities, including mandating health education classes inside schools at all levels	9
Increase the opportunities for recreational activities for all ages, in local currency	8
Improve transportation, including addressing the problem of currently having so many cars and trucks in bad condition	7
Improve the skills and attitudes of the population in relation to lifestyles, diet, and physical activities	6
Improve waste collection	6
Cleaning river	5
Improve houses	5
Improve access to food with decreased prices	4
Implement lighting in public places where it is absent	4
Decrease the number of places where alcohol and tobacco products are sold	4
Improve the sewer system and open septic pits	3
Activities for the elderly	3
Use the primary care offices that are currently not in use	3

General Transcript

The most important theme is that the government is responsible for broad prioritization and allocation of resources, especially financial resources. At the same time, several participants mentioned that local, municipal, and regional levels of government and healthcare have the freedom to use financial resources, as well as to adapt program implementation to local situations. This enables flexibility and responsiveness, but is also criticized by the respondents as weakening the implementation of some programs and creating inefficiencies.

For priorities to be effectively implemented, respondents explained that several levels needed to act in a simultaneous and coordinated fashion. Each level of government, from the local to the national level, has an intersectoral space²³, which includes the health sectors. And in each of those intersectoral spaces, discussions of health issues take place. Respondents mentioned that there were no laws that mandate intersectoral action on health, but it was facilitated by those intersectoral spaces, which make possible joint action of various organizations at any given level, as well as joint action of different layers of the government and health system.

Sometimes the health sector takes the lead, especially in relation to technical clinical issues. For most problems, other sectors act as leaders. Healthcare practitioners involved in intersectoral action need to do more than just raise awareness of other sectors' impact on health; they need to ensure that other sectors see that they are needed to solve the problem, and let those other sectors lead. If the health sector takes charge of most programs, other sectors tend not to participate as much. Intersectoral discussions, which occur in the regular intersectoral spaces, provide a way for various organizations to assess what is needed and what they can best provide internally. It is important for other sectors to have particular tasks and an ability to lead those tasks, and to be accountable for the results while seeing benefits from their participation. These other sectors also need to be involved from the beginning of the planning, to take ownership and responsibility for the success. If these factors are not present, it is difficult to motivate other sectors. One of the main benefits perceived by the health sector is that intersectoral collaboration generates extra community, human, financial, and material resources contributing to solve complex issues, which neither the health sector nor the government alone can solve.

²³ An intersectoral space means a committee, or a regular meeting, or a regular forum that address intersectoral issues.

The focus group summary transcript explained that the healthcare sector determines priorities within its budget, which is provided by the state. The state and its local organizational units determine their priorities through discussion of the reports of the health analysis at the administrative councils. The health analysis reports describe health statuses, what influences them, and what is done to address them. They are done at each organizational level, from the primary care clinic to the national level. Intersectoral discussion of the implication of those reports occurs in the various intersectoral tables or spaces (such as intersectoral committees, forums, consultation processes, regularly scheduled administrative and political meetings). This offers an opportunity for the healthcare sector to gain more insight and to realign itself to the community reality as well as to benefit from the community mobilization arising from the intersectoral discussions and decisions to act on various priorities. This is thought of as being particularly applicable to action on health determinants, and less in relation to curative interventions. The quotes below illustrate some of those aspects:

"La intersectorialidad se manifiesta cuando al analizar un problema a un nivel determinado se buscan soluciones entre todos los sectores involucrados, se ha dado el caso en los consejos de la administración." This can be translated as: "The intersectorality manifests itself when a solution is searched for with all the sectors involved during the analysis of a problem at a specific level, which is the case in the administrative councils."

"En relación con los recursos humanos es importante señalar que las organizaciones de masas y los organismos o sectores juegan un papel importante en lo de movilizar los recursos humanos y apoyar para que salga adelante la salud del pueblo porque el gobierno solo por mucho que quiera no lo logra." This can be translated as: "In relation to the human resources, it is important to signal that the large civil society organizations and the other organizations and sectors play an important role in mobilizing the human resources necessary to support actions to improve the health of the population, because the government, even if it might desire to provide what is needed, can't do it alone."

"Los organismos de masa acceden y ejecutan en la base acciones intersectoriales, por ejemplo apoyar el Programa Materno Infantil, apoyar acciones educativas, incentivar a los jóvenes a mantenerse estudiando, actuar con grupos vulnerables a ITS [infección transmitible sexualmente], actuar con familias en desventaja social." This can be translated as: "The large

Civil Society organizations bring and execute the intersectoral action at the base level, for example, the Maternal and Child Health program, supporting educational activities, helping the youth to stay in school, working to prevent STI [sexually transmissible infections] with vulnerable groups, helping socially disadvantaged families.”

"La prioridad de las decisiones para mejorar los determinantes de salud debe depender del lugar donde usted se encuentre y los recursos que usted puede movilizar." This can be translated as: “The priority of the decisions to improve health determinants has to depend on the position where one finds oneself and the human resources that one can mobilize.”

Another recent support towards addressing social determinants of health has been the expansion of the number of and scope of work of social workers. Of note, they do not necessarily do the same type of work as is expected of social workers in developed countries. In Cuba, they are responsible for assisting families in relation to reaching goals of many government priorities, including training in energy efficiencies.

The importance of the local community groups in supporting action on health determinants is reiterated, coordinating cultural, school, and family activities, among others things. Intersectoral action is so common that participants qualify it as part of the Cuban culture. Individuals also contribute to intersectoral collaboration successes. While some participants mentioned high-level collaborative skills as being part of the Cuban culture, another participant mentioned the need for some leaders to increase their skills in how to carry out intersectoral work and to be less territorial.

Another factor facilitating intersectoral collaboration is when the problem is seen as being important. Along that line, an intersectoral action that works really well is disaster planning and response, called for and led by the Civil Defense; all sectors cooperate and put their resources toward supporting the Civil Defense.

Other successes mentioned include the dengue control program and the social support structure. The social support structure, based in part on a network of community organization, functions well. However, it could do more and be better utilized, both by individuals in need and communities in need. Community organizations tend to not be consulted or empowered as much as they could be. Similarly, while there has been success in relation to employment, working conditions could be

improved. Participants also mentioned that improvements are needed for lifestyles, values and social norms, health education, environmental health and sanitation, and gender issues (not just for women, but taking men's issues into consideration as well).

Some comments relate to values and social norms. For example, one participant was critical of the new generation of teachers. He labeled them as immature, stating they can transmit knowledge but are bad examples, and transmit bad habits to the children. One respondent gave an example related to values and social norm erosion: the noise and music coming at all hours of the night by partygoers, which disturbs others and does not show respect. Yet another example is the complaint by one participant that there is too much criticism of what has been done and achieved in relation to the health of the Cuban population by those voicing their opinions on the matter. The participant would like to see more discussions of what is working well, what people have achieved, and what people are able to do. He complained that discussions on positive achievements in health are not valued, and that critical stances are seen as contributing more to improvement than other types of conversations. Another participant agreed that more recognition of what is working is needed.

3.3 Quantitative findings and the integration of survey and focus group results

This re-analysis of the quantitative data collected from the survey conducted in Santa Clara aimed to shed light on how collaboration between primary care providers, public health professionals, and representatives of other sectors actually functions in Cuba. As part of the mechanism of collaboration, I wondered if the various types of stakeholders would be in agreement about the priority ranking of actions on health determinants. To assess whether the various groups were in agreement about the prioritization of the health determinants, I used the survey question where respondents ranked what they considered the five most important health determinants (reproduced in Appendix A). The various groups who answered the questionnaires were: primary care providers, public health professionals, municipal leaders, and local leaders (at the Popular Power Council level). The answers to the questionnaires by the various participants provided insight into the patterns of internal actions and intersectoral collaborations by each professional group, for each health determinant. Those patterns are described below.

3.3.1 Prioritization of health determinants

As noted in Chapter 2, with respect to the first survey question regarding health determinants, the respondents ranked the determinants from one to five, with five being the most important health determinant for their organization.

To ascertain whether the differences in average ranking by the different groups were statistically significant, I first needed to assess whether the data followed the normal distribution. The visual assessment indicated general departure from normality, with a skewed distribution and discrepancies between the mean and the median (Appendix A Table A1). The results of the normality tests offered by the SPSS software package (Appendix A Table A4) supported the visual finding of departure from normality. Therefore, the Kruskal-Wallis test was used to determine whether there were differences in the ranking of the health determinants between the various groups. The Kruskal-Wallis test is also recommended to compare groups with different sample sizes, which is the case in this study. The full statistical results of the Kruskal-Wallis test are in Appendix B.

The mean priority ranking of each health determinant is displayed in Figure 7. In that figure, the health determinants are the spokes of the web diagram, and the different coloured lines with the symbols represent the various groups being compared (the local leaders, the municipal leaders, the primary care providers, and the public health professionals). It is important to note that the ranking was done from 1 to 5, where 5 represented the most important health determinant. This means that health determinants with a higher ranking (closer to an average of four) are considered a more important priority in average for a particular group, while the lowest rank determinants (with an average closer to zero) are considered less of a priority for a given group in average.

For most health determinants, the ranking pattern is similar across the various groups, as shown by the various lines, which follow a similar spike pattern. In that pattern, culture, gender, and other were ranked close to 0, the physical environment and social support network were ranked close to 1, while the ranking for most of the other health determinants was around an average of 2 (exact means are shown in Table 12).

On average, the primary care professional group ranked healthcare as the first priority, while those in public health ranked lifestyles first, and the municipal leaders ranked education first. These rankings were consistent with the responsibilities identified by those groups in the focus groups, in terms of management of health determinants. However, the differences did not constitute a statistically significant difference in ranking pattern across those groups. There was only one health determinant where the total pattern was statistically significantly different between the groups, and that was for income and standard of living ($p=0.041$). The pair-wise comparison showed that the local leader group (especially the municipal leader group) gave this factor a statistically significant higher average ranking than the other groups (details of the Kruskal-Wallis and pair-wise statistical analysis are in Appendix B).

Despite very similar patterns of averages between the groups, there was a large variation in ranking by the various respondents within each group. This is shown by the larger standard deviation of individuals' means by group and in the total sample, compared to the standard deviation of the mean across groups (Table 12)²⁴. This indicates that in Cuba, various members within an organization do not need to give the same priority to various health determinants for an organization to act on that health determinant, or for different types of organizations to have similar average rankings for the priorities of health determinants (only one difference across groups was statistically significant, as found by the Kruskal-Wallis test described previously). And this might enable and explain in part the findings from the list of priority actions listed by members of the focus groups, that were covering many health determinants absent from the average highest priority health determinants cluster for a given focus group.

The integration of the results from the priority rankings assigned in the surveys of individuals were consistent with the priority ranking done as a group in the focus groups, as illustrated by the darker color distribution in Table 13. The most important health determinants (those noted as A, with the darker background) in the table summarizing the ranking from the respondents individually and from the consensus focus group rankings were: education; income and standard of living; health

²⁴ The standard deviations of the first 5 columns of Table 12 indicate the variation in answers between individual respondents in a group. It is a relatively large variation in prioritization, as the standard deviation is between 1.0 and 2.1 for most health determinants and most groups (excluding those health determinants ranked close to 0, such as Gender, Culture, and Other). And this is on a scale of 0-5, representing 20% to 42% of the scale. When looking at the agreement between groups on average (the last column), and assessing the standard deviation across groups (rather than across individuals), the standard deviation for the mean of those same health determinants is between 0.2 and 0.8, representing 4 to 16% of the scale.

services; and healthy lifestyles. The health determinants that received a lower priority ranking (noted as priorities in category C – with no background) were social networks, gender, and culture.

Figure 7 Mean ranking of health determinants by professional groups

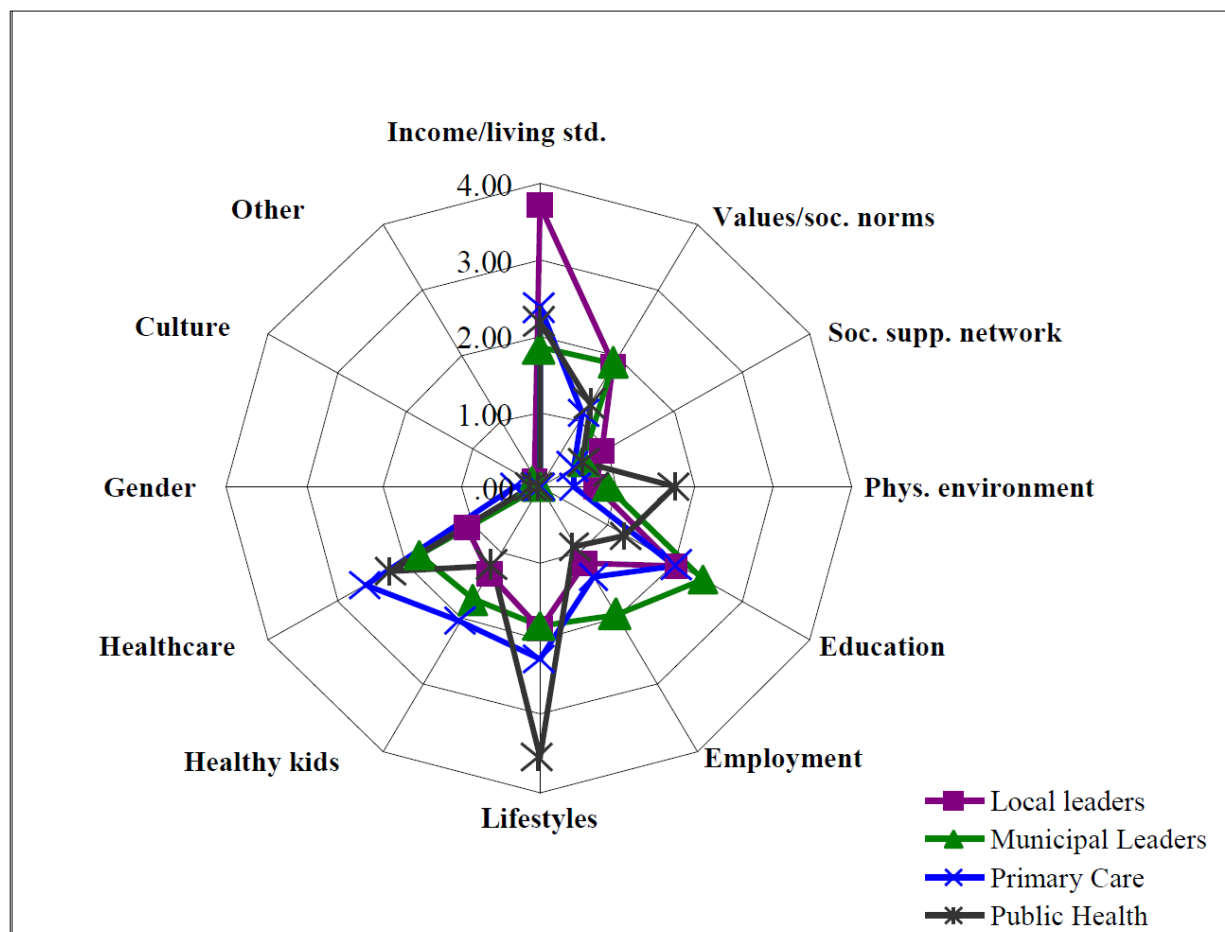


Table 12 Mean ranking of health determinants by professional groups

Health Determinant	Local Leaders	Municipal Leaders	Primary Care	Public Health	Across Individuals	Across Groups
	N=14	N= 17	N=24	N=11	N=66	N=4
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Income/living std.	*3.7 (2.1)	*1.8 (2.0)	2.4 (1.9)	2.2 (2.2)	2.5 (2.1)	2.5 (0.8)
Values/soc. norms	1.9 (1.8)	1.9 (2.0)	1.1 (1.3)	1.3 (1.6)	1.5 (1.7)	1.5 (0.4)
Soc. supp. network	0.9 (1.3)	0.7 (1.1)	0.5 (1.0)	0.6 (1.0)	0.7 (1.1)	0.7 (0.2)
Phys. environment	0.7 (1.5)	0.9 (1.5)	0.5 (1.0)	1.7 (1.9)	0.8 (1.5)	0.8 (0.6)
Education	2.0 (1.8)	2.4 (1.8)	2.0 (2.0)	1.3 (1.8)	2.0 (1.9)	2.0 (0.5)
Employment	1.1 (1.3)	1.9 (1.9)	1.4 (1.6)	0.9 (1.3)	1.4 (1.6)	1.4 (0.4)
Lifestyles	1.9 (2.0)	1.8 (2.2)	2.3 (1.8)	3.6 (1.5)	2.3 (1.9)	2.3 (0.8)
Healthy kids	1.3 (2.0)	1.7 (2.1)	2.0 (2.1)	1.2 (1.8)	1.6 (2.0)	1.6 (0.4)
Healthcare	1.1 (1.3)	1.8 (1.4)	2.6 (2.2)	2.2 (1.8)	2.0 (1.8)	2.0 (0.6)
Gender	0.1 (0.3)	0.0 (0.0)	0.3 (0.9)	0.1 (0.3)	0.2 (0.6)	0.6 (0.2)
Culture	0.1 (0.3)	0.1 (0.3)	0.0 (0.0)	0.0 (0.0)	0.1 (0.2)	0.1 (0.1)
Other	0.1 (0.3)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.1)	0.0 (0.1)

* Statistically significantly different pattern of prioritization across professional groups, Independent Samples Kruskal Wallis Test $p=0.041$, with pair-wise comparison identifying the difference as being between local leaders and municipal leaders. Detailed results presented in Appendix B.

Table 13 Integration of priority health determinants across focus groups and survey

	Local Leaders			Municipal Leaders		Primary Care			Public Health		Total
	FG 1-2	FG 3-4	Survey	FG	Survey	FG 1	FG 2	Survey	FG	Survey	
Income and standard of living	A	A	A	A	B	C	B	A	C	A	A
Values and social norms	B	C	A	C	A	C	C	B	C	B	B
Social networks	B	C	C	C	C	B	C	C	C	C	C
Physical environment	B	B	C	B	C	B	B	C	B	B	B
Education	A	A	A	A	A	A	A	B	A	B	A
Employment and working conditions	C	B	B	B	A	B	C	B	C	C	B
Healthy lifestyles	C	C	A	A	B	A	A	A	B	A	A
Healthy children	C	B	B	C	B	C	C	B	C	B	B
Health services	A	A	B	B	B	A	A	A	A	A	A
Gender	C	C	C	C	C	C	C	C	B	C	C
Culture	C	C	C	C	C	C	B	C	A	C	C

The differences between the individual ranking average and the focus group discussion consensual ranking might represent the impact of the discussion on the participants, which occurred after the individual ranking. It might also represent the impact of opinion leaders in the focus group influencing the ranking in a different fashion than when individual rank separately and in private. However, the most important finding is relative congruence with most health determinant ranking being consistent in focus group and in survey, as shown by very few priority health determinants (darker shading) being classified in the lowest priority group (no shading) and vice versa for any given type of representatives.

The integration of the findings from the survey with the comments in the transcripts of the focus groups (as opposed to only the consensual ranking) supports the observation that even if some health determinants were seen as lower priority, they were still considered important, such that it can be stated that there was a general understanding of the importance of all health determinants. This was particularly true for social networks, which were explained in the focus groups as being an important part of the Cuban conception of what determines health. Although this thesis did not examine the variable “social cohesion” per se, it is noteworthy that a high level of social cohesion was indeed found in the Cuban case study ([Spiegel et al., 2012](#)), supporting the focus group explanation regarding social networks. Even if some determinants were ranked as less important than others, the finding that various actions were still being conducted to address them internally and intersectorally confirms that all health determinants were still considered important enough to warrant purposeful management. For example, gender and culture, which were ranked as less important than most other determinants, were still being acted upon through both individual and intersectoral actions. This finding was supported by the focus group discourse, and the individual survey answers relating to action on health determinants both internally and externally, as discussed in the next sections.

3.3.2 Intensity of participation in internal actions to manage health determinants

In addressing the second survey question, Figure 8 and Table 14 display the mean level of internal participation in the management of each of the health determinants by professional group. The most striking result from the analysis of the level of internal participation was the very high average level of involvement in internal actions reported by almost all groups, on almost all health determinants. This continues to reinforce the interpretation that all determinants are considered

worthy of action internally regardless of average priority ranking, and that all group are consciously acting on almost all determinants.

The results for the primary care providers group were particularly interesting, as they indicated that primary care providers in Cuba considered themselves involved in long-term actions in relation to social support networks, education, lifestyles, healthy children, and healthcare. In addition, they indicated that they had started to act on all the other health determinants, with all other rankings averaging closer to level 4 ('started action recently') than to level 3 ('planning phase').

The only group that was mostly at the stage of initial planning for most of the health determinants was the municipal leaders group (green line in Figure 8, hovering mostly around level 3 of internal participation).

The results show that the patterns were statistically significantly different for all health determinants except culture and the physical environment, for which the distribution was deemed similar across all groups (p-value in table 13). The pair-wise comparison (Appendix C) confirms that the differences mostly lie between the level of participation of the municipal leaders on one hand, and one or more of the other groups on the other. The only exception was for income and standard of living, where the statistically significant difference pairwise was between local leaders and primary care providers (the latter being at a lower level of internal action than the former). The analysis without multiple comparison adjustment also showed a statistically significant difference between the municipal leaders and the local leaders. Similarly, for employment and working conditions, the pairwise comparison was statistically significant only when there was no multiple comparison adjustment, with a lower level of action for municipal leaders, compared to both local leaders and public health professionals (Appendix C, Section 1). The detailed distributions of the respondents' answers in each group are in Appendix C, Section 2.

Figure 8 Level of internal action for each health determinants by professional group

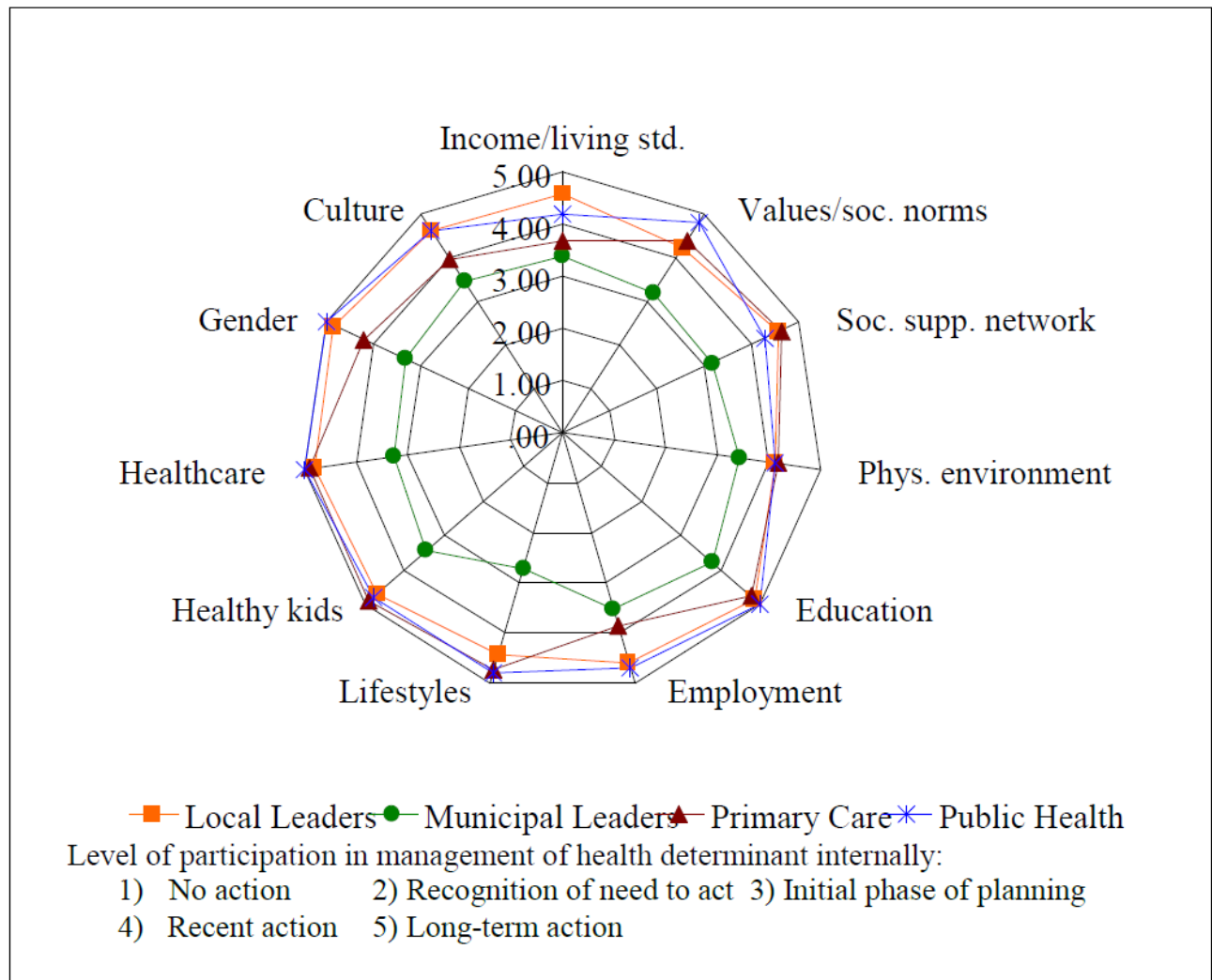


Table 14 Mean level of internal action on each health determinant by professional groups

	Local leaders			Municipal leaders			Primary care			Public health			Total		
	Mean	N	Std. Dev.	Mean	N	Std. Dev.	Mean	N	Std. Dev.	Mean	N	Std. Dev.	Mean	N	Std. Dev.
Income/living std. p=0.022	4.57	14	1.09	3.38	13	1.61	3.68	25	1.22	4.2	10	0.63	3.90	62	1.26
Values/soc. norms p=0.03	4.21	14	1.12	3.20	15	1.82	4.40	25	0.76	4.82	11	0.60	4.15	65	1.25
Soc. supp. network p=0.02	4.54	13	0.78	3.15	13	1.63	4.60	25	0.76	4.27	11	0.91	4.23	62	1.15
Phys. environment p=.36	4.08	12	1.17	3.43	14	1.40	4.17	24	0.96	4.09	11	0.94	3.97	61	1.13
Education p=0.01	4.86	14	0.36	3.80	15	1.47	4.76	25	0.52	5.00	10	0.00	4.59	64	0.90
Employment p=0.03	4.57	14	0.65	3.50	16	1.27	3.88	25	1.39	4.70	10	0.48	4.06	65	1.20
Lifestyles p=0.00	4.42	12	1.00	2.71	14	1.49	4.73	26	0.60	4.82	11	0.41	4.24	63	1.23
Healthy kids p=0.00	4.71	14	0.83	3.46	13	1.61	4.92	26	0.27	4.80	10	0.63	4.56	63	1.03
Healthcare p=0.00	4.77	13	0.60	3.27	11	1.56	4.88	25	0.44	5.00	10	0.00	4.58	59	0.99
Gender p=0.00	4.85	13	0.56	3.33	9	1.58	4.20	25	1.29	5.00	11	0.00	4.36	58	1.20
Culture p=0.20	4.62	13	0.65	3.44	9	1.59	3.96	23	1.36	4.60	10	0.70	4.15	55	1.22

3.3.3 Actions within participants' own organization mentioned most frequently as important in addressing each health determinants

This sub-section describes the most frequent types of internal actions to manage health determinants. The main finding is that all groups reported that their organizations were taking many actions for all health determinants. Although those actions were not very well defined, they appeared different yet complementary from one group to another. And frequently, the actions of public health and primary care organizations were similar, and the actions of municipal leaders were similar to that of local leaders. The local leader group reported the most action per respondent of all the groups (an average of 8.1 actions per respondent), followed by the public health professionals (6.4) and the municipal leaders (5.8); far behind, the primary care providers reported only an average of 2.0 internal actions per respondent. A more detailed description of the actions taken to manage each health determinant by professional group is provided below, followed by Table 15 at the end of this section, which provides even more details of internal action conducted by each professional group for each health determinant.

In relation to income and standard of living, both primary care and public health professionals reported being engaged in actions to increase the incomes of the various types of workers in society. The primary care group also reported being involved in actions to improve social security. Local and municipal leaders seemed more engaged in relation to the energy revolution and the distribution of household items. A variety of other actions that seem very similar in aim were listed under employment and working conditions, as shown in the table above.

In relation to values and social norms, local and municipal leaders listed more actions than the primary care and public health groups, mostly through the participation in the Commission on Prevention and Social Work. This is expected, considering this Commission is led by the social services sector, involving other government sectors at the municipal and provincial level²⁵. The Commission was created to prevent and address social issues such as prostitution, criminality, social re-insertion after imprisonment, youth unemployment, and extreme poverty. Many of the other actions listed revolve around the themes of the Commission.

²⁵ Personal Discussion with Dr. Mariano Bonet, June 6th 2011.

In relation to social support networks, all professional groups mentioned actions in relation to social security and intersectoral collaboration. The primary care and public health groups also mentioned the care of the elderly, while the municipal leaders mentioned support for education and culture, and the local leaders mentioned community work.

For the physical environment, all professional groups mentioned action on sanitation and vectors. The leaders mentioned action on broader environmental and sustainability initiatives while the primary care sector mentioned collaboration with a variety of Ministries and agencies involved in maintaining the environment. One local leader mentioned compact urban development. Public health respondents specifically mention identification of and action on environmental risk, which is a traditional area of public health practice.

In relation to education, most professional groups supported universal education, or collaborated with the Ministry of Education. An example of this included doctors and nurses in schools.

Lifestyles were addressed through health education by all professional groups, with the most mentions of this coming from the public health and the municipal leaders groups. Of note was the primary care and local leaders groups' mention of many actions in that area, comparable to the public health group. A variety of actions were mentioned a few times: elder circles, smoking and alcohol campaigns, and health promotion in general.

For the early childhood development health determinant, all groups listed the program Raise Your Child. Furthermore, all groups, except the primary care one, mentioned Immunization and the Maternal Infant Child Health Program (or its low birth weight component). Perhaps the primary care group participants simply did not detail those actions, but did include them in their mention of participating in intersectoral action, or, those actions might be so intrinsic to their daily work that they were not seen as specific actions, but simply part of their general practice.

In relation to healthcare, most of the other professional groups mentioned some form of support for primary care or free healthcare for all, while the primary care group mentioned continuous improvement of health services.

All groups mentioned action in relation to social equality of women, and all groups, except the municipal leaders, mentioned applying a gender lens in all actions. One respondent in the primary care group also mentioned acting on this health determinant through mass communication.

In relation to culture as a health determinant, the local and municipal leaders were the most involved, and they listed a variety of cultural activities.

Of note, many respondents did not list any priority action. This is particularly true for the primary care providers group. They listed a priority action only 20% of the time. For the public health professionals, municipal leaders, and local leaders, priority actions were listed 53%, 54%, and 68% of the time, respectively.

Table 15 Actions most important in managing health determinants internally

Health Determinant	Actions	Local leaders		Municipal leaders		Primary care		Public health		Total	
		N	%	N	%	N	%	N	%	N	%
Income/ living std.	Salary increase			1	9%	2	29%	10	100%	13	31%
	Energy revolution	11	79%	10	91%					21	50%
	Ideological Battle	3	21%							3	7%
	Social Security					5	71%			5	12%
Total		14	100%	11	100%	7	100%	10	100%	42	100%
Values/ soc. norms	Social Security					4	100%			4	13%
	Good family							1	25%	1	3%
	Values/ethic			2	17%					2	6%
	CPSW*	9	82%	8	67%			1	25%	18	58%
	Legality			2	17%					2	6%
	Action anti-prostitution	2	18%							2	6%
	Care of the elderly							1	25%	1	3%
	Lifestyles modification							1	25%	1	3%
Total		11	100%	12	100%	4	100%	4	100%	31	100%
Soc. supp. network	Social Security	2	22%	4	40%	4	67%	1	33%	11	39%
	Care of the elderly							1	33%	1	4%
	Intersectorality	5	56%	4	40%	2	33%	1	33%	12	43%
	Community work	2	22%							2	7%
	Support to education and culture			2	20%					2	7%
Total		9	100%	10	100%	6	100%	3	100%	28	100%
Phys. environment	Intersectorality					1	17%			1	3%
	Sanitation/vectors	5	63%	7	64%	1	17%	5	63%	18	55%
	Environment**	2	25%	3	27%					5	15%
	Limitation of resources			1	9%					1	3%
	Cooperation with MSTE***					2	33%			2	6%
	Cooperation with community services					1	17%			1	3%
	EOC****					1	17%			1	3%
	Identification/action on environmental risk							3	38%	3	9%
	Compact urban development	1	13%							1	3%
Total		8	100%	11	100%	6	100%	8	100%	33	100%

*CPSW: Commission of Prevention and Social Work and attention to vulnerable citizens

** Environmental and sustainability initiatives such as the worldwide program of Agenda 21.

*** MSTE: Ministry of Science Technology and the Environment. **** EOC: Emergency Operation Centres.

Table 15 Actions most important in managing health determinants internally (continued)

Health Determinant Actions		Local leaders		Municipal leaders		Primary care		Public health		Total	
		N	%	N	%	N	%	N	%	N	%
Education	Intersectorality					1	17%			1	3%
	Municipalisation							4	50%	4	10%
	Work with all ages	1	8%							1	3%
	Universal education	9	69%	9	69%			2	25%	20	50%
	Support for education			2	15%					2	5%
	Building schools			1	8%					1	3%
	School repairs	1	8%							1	3%
	Cooperation with the Ministry of Education					3	50%			3	8%
	MD and nurse in the school					1	17%			1	3%
	Working with all youth	1	8%							1	3%
	Program Raise Your Child	1	8%					1	13%	2	5%
	Improve workers' skills			1	8%					1	3%
	Educational revolution							1	13%	1	3%
	Health education					1	17%			1	3%
Total		13	100%	13	100%	6	100%	8	100%	40	100%
Employment	Intersectorality					2	40%			2	6%
	Limitation of resources					1	20%			1	3%
	Guarantee of employment	1	11%	8	67%					9	29%
	Decrease unemployment	4	44%							4	13%
	Improve working conditions			1	8%			2	40%	3	10%
	Integral school							2	40%	2	6%
	Support to FMC*					1	20%			1	3%
	MD and nurses in workplace					1	20%			1	3%
	Accessibility of specialists							1	20%	1	3%
	Linking youth to work and school	3	33%	3	25%					6	19%
	Interest circles	1	11%							1	3%
Total		9	100%	12	100%	5	100%	5	100%	31	100%
Lifestyles	Care of the elderly	2	25%	1	9%					3	9%
	Intersectorality	1	13%			2	33%			3	9%
	Health education	2	25%	8	73%	1	17%	5	63%	16	48%
	Smoking and alcohol campaign							2	25%	2	6%
	Health promotion					3	50%			3	9%
	Elder circles	3	38%							3	9%
	Healthy house			1	9%					1	3%
	Limitation of spread of HIV and smoking			1	9%					1	3%
	Immunization							1	13%	1	3%
Total		8	100%	11	100%	6	100%	8	100%	33	100%

* FMC is the 'Federation de las Mujeres Cubana' that can be translated as the Women Federation of Cuba.

Table 15 Actions most important in managing health determinants internally (continued)

Health Determinant	Actions	Local leaders		Municipal leaders		Primary care		Public health		Total	
		N	%	N	%	N	%	N	%	N	%
Healthy kids	Intersectorality					2	33%			2	6%
	Many important actions			1	10%			1	13%	2	6%
	Support for education			1	10%					1	3%
	Program Raise Your Child	6	55%	5	50%	1	17%	1	13%	13	37%
	Immunization	1	9%	1	10%			3	38%	5	14%
	Maternal infant child										
	Health program/LBW	1	9%	2	20%			1	13%	4	11%
	Support to the family medicine program	1	9%							1	3%
	Childcare					2	33%			2	6%
	Educational programs	2	18%					1	13%	3	9%
	Action toward ECD*					1	17%			1	3%
	Medical consultation in childcare							1	13%	1	3%
Total		11	100%	10	100%	6	100%	8	100%	35	100%
Healthcare	Intersectorality			2	25%	1	33%			3	11%
	Many important actions					1	33%			1	4%
	Support for education			1	13%					1	4%
	Immunization	1	10%							1	4%
	Support to the family medicine program			1	13%					1	4%
	Rehabilitation centre	4	40%	2	25%					6	21%
	Family MD	3	30%	1	13%					4	14%
	Free healthcare for all	1	10%					6	86%	7	25%
	Support co-location of dental chair	1	10%							1	4%
	Support/priority to the healthcare sector			1	13%					1	4%
	Continuous improvement of health services					1	33%	1	14%	2	7%
Total		10	100%	8	100%	3	100%	7	100%	28	100%
Gender	Social equality of women	11	92%	7	100%	1	33%	7	78%	26	84%
	Gender lens in all action	1	8%			1	33%	2	22%	4	13%
	Program of mass communication					1	33%			1	3%
Total		12	100%	7	100%	3	100%	9	100%	31	100%
Culture	Book fair/cinema festival	2	22%	3	50%	1	100%			6	38%
	Cultural activities	2	22%							2	13%
	Cultural expansion	3	33%	3	50%					6	38%
	Cultural infrastructure	1	11%							1	6%
	Art teaching	1	11%							1	6%
Total		9	100%	6	100%	1	100%			16	100%
Total number of actions listed for all determinants		114		111		115		70		348	
Average action per respondent in total		8.1		5.8		2.0		6.4		5.0	

*ECD is for early childhood development.

3.3.4 Intersectoral collaboration

The first part of the analysis below (3.3.4.1) examines what each participant listed as to the involvement of their group in intersectoral collaboration in relation to each of the health determinants. This allows an assessment of the proportion of intersectoral collaborations that involve the various professional groups. Next, I grouped all the various organizations represented in the survey into eight sectors, in order to be able to assess whether there are statistically significant differences between professional groups in their involvement with other sectors for each health determinant (3.3.4.2). The third analysis below (3.3.4.3) examines the intensity of the intersectoral collaboration by professional group and health determinant, and the fourth analysis (3.3.4.4) assesses the frequency of intersectoral collaboration by professional group and health determinant.

3.3.4.1 Intersectoral collaboration by health determinants and professional groups

As noted above, the survey findings and focus group results both substantiated that all professional groups were engaged in intersectoral action on all of the health determinants. In total, respondents listed more than a thousand intersectoral collaborations (Table 16). The top three health determinants managed through intersectoral collaboration were social support networks, the physical environment, and early childhood development. Lifestyles, values and social norms, and healthcare closely followed.

The public health workers mentioned the highest proportion of intersectoral collaborations (67%), and reported a high level of involvement for most health determinants. They reported being least involved with employment and working conditions and education (5%). Local leaders also mentioned that their organizations were involved in a high proportion of all the intersectoral collaborations listed (64%); municipal leaders listed the least intersectoral collaborations in proportion of the total they could have listed (41%). The primary care workers mentioned more intersectoral collaboration than the municipal leaders, but less than local leaders and public health professionals (52%). Primary care professionals reported being the least engaged in intersectoral collaboration in relation to income and living standards.

Table 16 Intersectoral collaboration listed

	Local leaders		Municipal leaders		Primary care		Public health		Total	
	Resp.	% *	Resp.	% *	Resp.	% *	Resp.	% *	Resp.	% *
Income/living std.	32	76%	28	49%	24	31%	22	67%	106	50%
Values/soc. norms	31	74%	26	46%	48	62%	19	58%	124	59%
Soc. supp. network	33	79%	23	40%	49	63%	29	88%	134	64%
Phys. environment	33	79%	26	46%	47	60%	29	88%	135	64%
Education	25	60%	29	51%	38	49%	12	36%	104	50%
Employment/work cond.	20	48%	20	35%	25	32%	12	36%	77	37%
Lifestyles	28	67%	20	35%	48	62%	28	85%	124	59%
Healthy child dvlp.	30	71%	26	46%	50	64%	23	70%	129	61%
Healthcare	27	64%	26	46%	40	51%	27	82%	120	57%
Gender	19	45%	18	32%	37	47%	24	73%	98	47%
Culture	17	40%	17	30%	36	46%	18	55%	88	42%
Total	295	64%	259	41%	442	52%	243	67%	1239	54%

Resp.: number of responses to the question on the organizations with which the respondent's organization interacts formally to manage each health determinant.

* Percent of what could have been listed if all respondents listed three organizations per health determinant

3.3.4.2 Intersectoral collaboration by health determinants, sectors, and professional groups

Table 17 provides the proportion of each sector's involvement with each professional group, by health determinant. The Pearson Chi-Square analysis reveals statistically significant differences in the pattern of intersectoral collaboration between the different professional groups, for all health determinants (Table 17).

In general, the analysis of the intersectoral collaboration by health determinants shows that local leaders mostly interacted with the civil society organizations. The exception was in relation to the physical environment, where they engaged most with the government institutions in charge of environment and sanitation. Local leaders collaborated frequently with the healthcare, education, and political sectors (most of the remaining green cells). Municipal leaders collaborated most with the organizations in the health and social work sector and the education sector, for almost all health determinants. For many of the health determinants, they also collaborated frequently with the civil society sector (values and social norms, gender, employment and working conditions, and social support network).

The primary care groups interacted most with the civil society sector. They also collaborate significantly with the following three sectors: education, political organizations, and government

institutions related to the environment (each mentioned more than 15% of the time for several health determinants). They also collaborate with others in the health and social work sector

To address income and standard of living, the public health professionals seem to interact more with different sectors than the other groups. They interact predominantly with the health and social work sector and the government institutions related to environment. They also interact with the commerce, finance and industry sector, even if that sector is mentioned less by others.

To address employment and working conditions, the public health professionals relied on the health and social work sectors. The primary care professionals and local leaders relied more on the civil society sector, and the municipal leaders relied most on the educational sector.

To address education as a health determinant, the various groups mentioned collaboration with the educational sector most frequently. This is especially the case for the public health professionals who mentioned almost exclusively collaborating with organizations of that sector to address this determinant. Civil society was the other important sector for local leaders and primary care workers. Municipal leaders also frequently mentioned organizations from the health and social work sector.

To address the physical environment, all professional groups, except the municipal leaders, predominantly mentioned the government institutions related to the environment. The municipal leaders predominantly mentioned organizations within the education sector, as well as some organizations from almost all other sectors. This can be a reflection of the intense municipal efforts to fight dengue, through mass media messages, cultural events that emphasize sanitation, and collaboration with schools to sensitize student to the risk factors for dengue.

To address gender, the organizations of the civil society sector were the most often mentioned, presumably because of the widespread involvement of the Federation of Cuban Women in Cuban society in general. The various professional groups also mentioned many other sectors.

To address culture, the organizations of the civil society and the communication and cultural sectors were the most mentioned. Municipal leaders and public health professionals also mentioned some organizations from the health and social work sector. This is likely in relation to the cultural aspects that were affecting health and social issues, such as smoking, alcohol, and food. The

municipal leaders predominantly mentioned organizations of the educational sector to address this health determinant. A similar picture to that of culture emerges for two other related health determinants: values and social norms, and social support network. There is less emphasis on collaboration with organizations from the communication and cultural sector. For both those health determinants, public health professional respondents mentioned several collaborations with organizations of the educational sector, while they did not mention any to address culture.

To address lifestyles, local leaders and primary care professionals participated predominantly in collaboration with the civil society sector. Public health professionals and municipal leaders participated in intersectoral collaboration predominantly with the educational sector. To address healthcare as a health determinant, the civil society organizations were the most mentioned by all groups except the municipal leaders, who mentioned the health and social work sector more frequently. The primary care and public health professionals did not mention intersectoral collaboration with the health and social work sector in relation to that health determinant. This was appropriate, as it would indicate more internal than intersectoral action. All groups, especially the municipal leaders, mentioned collaboration with the educational sector to address healthcare as a health determinant. This was congruent with Cuba-wide initiatives to increase the number and appropriateness of health workers trained.

Finally, to address early childhood development, the civil society was named predominantly by the local leaders and primary care workers, while the municipal leaders and the public health professionals mentioned the education sector most frequently.

Table 17 Sectors involved in addressing each health determinant by professional group

		Local leaders		Municipal leaders		Primary care		Public health		Total	
		n	%	n	%	n	%	n	%	n	%
Income/ living std. *p=0.00	Civil society	26	81%	3	11%	11	46%			40	38%
	Political	6	19%	1	4%	5	21%			12	11%
	Gv enviro			1	4%			7	32%	8	8%
	CIF			2	7%			4	18%	6	6%
	Health/SW			12	43%	8	33%	10	46%	30	28%
	Education			9	32%			1	5%	10	9%
Total		32	100%	28	100%	24	100%	22	100%	106	100%
Employ. / working conditions *p=0.00	Civil society	11	55%	4	20%	14	56%	1	8%	30	39%
	Political	2	10%	1	5%	3	12%	1	8%	7	9%
	Gv enviro					1	4%			1	1%
	Health/SW	3	15%	8	40%	7	28%	9	75%	27	35%
	Education	3	15%	6	30%			1	8%	10	13%
	Security	1	5%	1	5%					2	3%
Total		20	100%	20	100%	25	100%	12	100%	77	100%
Education *p=0.00	Civil society	15	60%			19	50%	1	8%	35	34%
	Political	2	8%	1	3%	2	5%			5	5%
	Gv enviro			2	7%					2	2%
	Com./ culture			3	10%			1	8%	4	4%
	CIF			1	3%					1	1%
	Health/SW	3	12%	9	31%	3	8%			15	14%
	Education	5	20%	13	45%	14	37%	10	83%	42	40%
Total		25	100%	29	100%	38	100%	12	100%	104	100%
Physical environ. *p=0.00	Civil society	12	36%	2	8%	7	15%			21	16%
	Political	1	3%	1	4%	3	6%	1	3%	6	4%
	Gv enviro	15	46%	2	8%	36	77%	28	97%	81	60%
	Com./ culture			5	19%	1	2%			6	4%
	Health/SW	5	15%	5	19%					10	7%
	Education			10	39%					10	7%
	All			1	4%					1	1%
Total		33	100%	26	100%	47	100%	29	100%	135	100%
Gender *p=0.00	Civil society	12	63%	4	22%	27	73%	15	63%	58	59%
	Political	3	16%	1	6%	3	8%	6	25%	13	13%
	Com./ culture	1	5%	2	11%			3	13%	6	6%
	CIF					1	3%			1	1%
	Health/SW	2	11%	6	33%	1	3%			9	9%
	Education	1	5%	5	28%	1	3%			7	7%
	Security					4	11%			4	4%
Total		19	100%	18	100%	37	100%	24	100%	98	100%
Culture *p=0.00	Civil society	6	35%	2	12%	17	47%	1	6%	26	30%
	Political	4	24%	1	6%	7	19%	1	6%	13	15%
	Com./ culture	3	18%	1	6%	7	19%	12	67%	23	26%
	CIF					1	3%	0		1	1%
	Health/SW			5	29%	1	3%	4	22%	10	11%
	Education	4	24%	8	47%	3	8%			15	17%
Total		17	100%	17	100%	36	100%	18	100%	88	100%

Table 17 Sectors involved in addressing each health determinant by professional group, (continued)

		Local leaders		Municipal leaders		Primary care		Public health		Total	
		n	%	n	%	n	%	n	%	n	%
Values and social norms *p=0.00	Civil society	18	58%	6	23%	32	67%	4	21%	60	48%
	Political	4	13%	2	8%	4	8%	4	21%	14	11%
	Gv enviro	1	3%							1	1%
	Com./ culture			1	4%	4	8%			5	4%
	Health/SW	3	10%	6	23%	3	6%			12	10%
	Education	1	3%	10	39%	4	8%	11	58%	26	21%
	Security	4	13%	1	4%	1	2%			6	5%
Total		31	100%	26	100%	48	100%	19	100%	124	100%
Social support network *p=0.00	Civil society	19	58%	9	39%	35	71%	19	66%	82	61%
	Political	5	15%	1	4%	6	12%	2	7%	14	10%
	Gv enviro	4	12%			2	4%			6	5%
	Com./ culture					1	2%	1	3%	2	2%
	CIF	1	3%							1	1%
	Health/SW	4	12%	5	22%	4	8%			13	10%
	Education			6	26%	1	2%	7	24%	14	10%
	All			2	9%					2	2%
Total		33	100%	23	100%	49	100%	29	100%	134	100%
Lifestyles *p=0.00	Civil society	11	39%			30	63%	1	4%	42	34%
	Political			1	5%	3	6%	4	14%	8	7%
	Gv enviro	2	7%					4	14%	6	5%
	Com./ culture			3	15%	8	17%	1	4%	12	10%
	CIF							1	4%	1	1%
	Health/SW	9	32%	8	40%	3	6%			20	16%
	Education	6	21%	8	40%	4	8%	17	61%	35	28%
Total		28	100%	20	100%	48	100%	28	100%	124	100%
Healthcare *p=0.00	Civil society	13	48%	2	8%	24	60%	11	41%	50	42%
	Political			1	4%	11	28%	13	48%	25	21%
	Gv. enviro.	3	11%	3	12%	2	5%	1	4%	9	8%
	Com./ culture					1	3%			1	1%
	CIF			1	4%					1	1%
	Health/SW	8	30%	10	39%	1	3%			19	16%
	Education	3	11%	9	35%	1	3%	2	7%	15	13%
Total		27	100%	26	100%	40	100%	27	100%	120	100%
Early childhood development *p=0.00	Civil society	14	47%			32	64%	2	9%	48	37%
	Political	1	3%	1	4%	4	8%	2	9%	8	6%
	Gv enviro			1	4%					1	1%
	Com./ culture					1	2%	3	13%	4	3%
	Health/SW	10	33%	11	42%	2	4%	1	4%	24	19%
	Education	5	17%	13	50%	11	22%	15	65%	44	34%
Total		30	100%	26	100%	50	100%	23	100%	129	100%

3.3.4.3 Intensity of collaboration

In total, for most health determinants, about 70% or more of the intersectoral collaborations listed are at the level of full collaboration (long-term joint planning, action, and evaluation), as shown in Table 18. The health determinant with the most reports of full collaboration is early childhood development (Figure 9). The primary care group reaches the highest level of intersectoral collaboration for healthcare (92% of the collaborations are at the level of full collaboration), among all the health determinants listed in the various columns on the left-hand side of Table 18. Employment and working conditions has the fewest reports of full collaboration, with only 53% of collaborations at that level.

The analysis by health determinant and professional groups shows statistically significant differences in the patterns of intensity of collaboration. One notable difference is the lower proportion of full collaboration reported by local leaders and municipal leaders compared to the public health and primary care groups, even if they report more collaboration altogether.

Figure 9 Proportion of full collaboration, when collaboration is identified

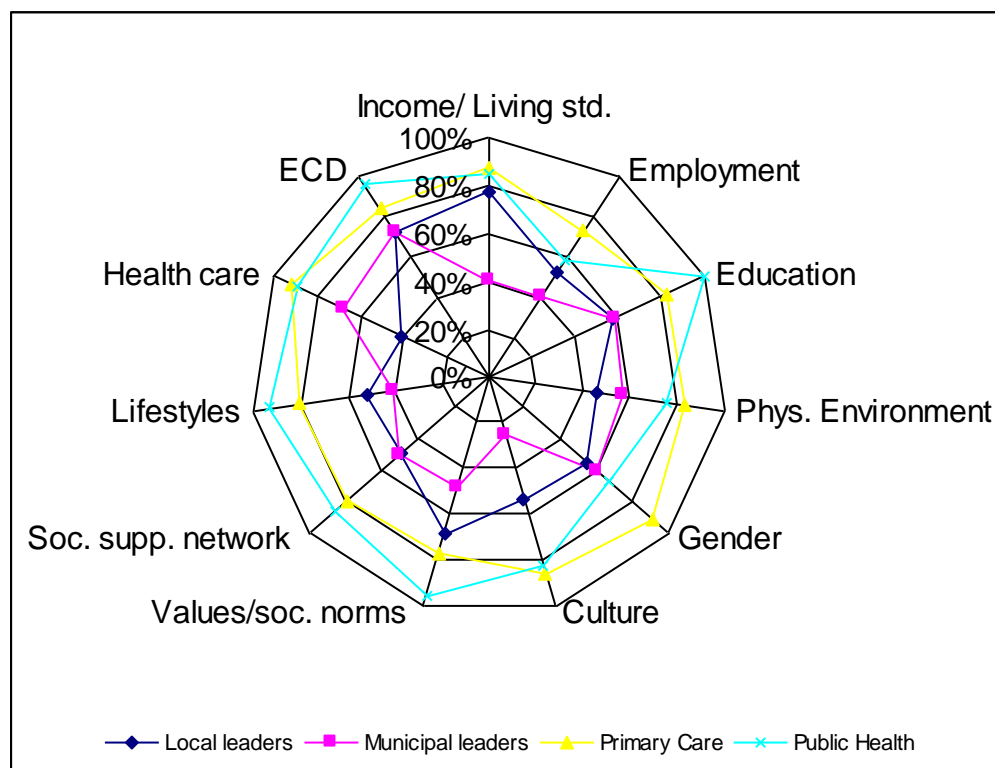


Table 18 Intensity of collaboration by professional groups

		Local leaders		Municipal leaders		Primary care		Public health		Total	
		n	%	n	%	n	%	n	%	n	%
Income/ living std. p= 0.001	Joint planning to minimal coll.	9	28%	15	60%	3	13%	3	15%	30	30%
	Full collaboration	23	72%	10	40%	20	87%	17	85%	70	70%
	Total	32	100%	25	100%	23	100%	20	100%	100	100%
Employment p= 0.099	Joint planning to minimal coll.	12	60%	12	60%	6	27%	5	42%	35	47%
	Full collaboration	8	40%	8	40%	16	73%	7	58%	39	53%
	Total	20	100%	20	100%	22	100%	12	100%	74	100%
Education p= 0.000	Joint planning to minimal coll.	12	48%	11	42%	6	18%	0	0%	29	30%
	Full collaboration	13	52%	15	58%	28	82%	12	100%	68	70%
	Total	25	100%	26	100%	34	100%	12	100%	97	100%
Phys. environment p= 0.007	Joint planning to minimal coll.	17	52%	10	44%	7	17%	7	24%	41	33%
	Full collaboration	16	49%	13	57%	34	83%	22	76%	85	68%
	Total	33	100%	23	100%	41	100%	29	100%	126	100%
Gender p= 0.057	Joint planning to minimal coll.	6	32%	6	40%	3	9%	8	33%	23	25%
	Full collaboration	13	68%	9	60%	30	91%	16	67%	68	75%
	Total	19	100%	15	100%	33	100%	24	100%	91	100%
Culture p= 0.000	Joint planning to minimal coll.	8	47%	12	75%	5	14%	3	18%	28	33%
	Full collaboration	9	53%	4	25%	31	86%	14	82%	58	67%
	Total	17	100%	16	100%	36	100%	17	100%	86	100%
Values/soc. norms p= 0.002	Joint planning to minimal coll.	14	45%	12	52%	11	23%	1	5%	38	31%
	Full collaboration	17	55%	11	48%	37	77%	18	95%	83	69%
	Total	31	100%	23	100%	48	100%	19	100%	121	100%
Soc. supp. network p= 0.000	Joint planning to minimal coll.	18	55%	10	50%	10	21%	4	14%	42	32%
	Full collaboration	15	46%	10	50%	38	79%	25	86%	88	68%
	Total	33	100%	20	100%	48	100%	29	100%	130	100%
Lifestyles p= 0.000	Joint planning to minimal coll.	12	43%	12	60%	8	20%	2	7%	34	29%
	Full collaboration	16	57%	8	40%	33	81%	25	93%	82	71%
	Total	28	100%	20	100%	41	100%	27	100%	116	100%
Healthcare p= 0.001	Joint planning to minimal coll.	13	48%	8	33%	3	8%	3	11%	27	24%
	Full collaboration	14	52%	16	67%	34	92%	24	89%	88	77%
	Total	27	100%	24	100%	37	100%	27	100%	115	100%
ECD p= 0.156	Joint planning to minimal coll.	7	23%	7	28%	7	16%	1	4%	22	18%
	Full collaboration	23	77%	18	72%	36	84%	22	96%	99	82%
	Total	30	100%	25	100%	43	100%	23	100%	121	100%

3.3.4.4 Frequency of intersectoral collaboration

Table 19 displays the frequencies of formal interactions by the various groups, for each health determinant. About 50% to 60% of the collaborations resulted in 6 or more formal encounters per year (or high frequency collaborations). The pattern of interaction frequency is statistically significantly different ($p \leq 0.05$), or with a tendency to be statistically significant ($p < 0.1$), for all health determinants except early childhood development. Local leaders had the lowest proportion of high frequency interactions (34%). The average for primary care participants was 48%, with lower levels of high frequency collaboration regarding culture, and higher levels for healthcare. For municipal leaders, high frequency collaboration was achieved 61% of the time, on average. It was especially high for education, at 90%. The public health group had the highest level of high frequency collaboration, with an average of 79%. It was the only group where collaboration around culture resulted in a large proportion of high frequency collaboration. Detailed patterns of frequency of collaboration by organization are in Table 35 and Table 36 in Appendix F.

Table 19 Frequency of collaboration by professional groups

	Frequency per yr.	Local leaders		Municipal leaders		Primary care		Public health		Total	
		n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Income/living std. p=.065**	0-2	6	19%	4	20%	2	13%	2	11%	14	17%
	3-6	10	31%	3	15%	6	40%	0	0%	19	22%
	Over 6	16	50%	13	65%	7	47%	16	89%	52	61%
Total		32	100%	20	100%	15	100%	18	100%	85	100%
Values/soc. norms p=.004*	0-2	2	7%	2	10%	4	13%	0	0%	8	8%
	3-6	19	63%	6	30%	13	43%	2	11%	40	41%
	Over 6	9	30%	12	60%	13	43%	16	89%	50	51%
Total		30	100%	20	100%	30	100%	18	100%	98	100%
Soc. supp. network p=.030*	0-2	9	27%	2	12%	5	14%	2	8%	18	16%
	3-6	11	33%	6	35%	14	38%	2	8%	33	30%
	Over 6	13	39%	9	53%	18	49%	20	83%	60	54%
Total		33	100%	17	100%	37	100%	24	100%	111	100%
Phys. environment p=.000*	0-2	12	36%	2	11%	1	4%	1	4%	16	16%
	3-6	14	42%	4	22%	14	56%	4	15%	36	35%
	Over 6	7	21%	12	67%	10	40%	22	82%	51	50%
Total		33	100%	18	100%	25	100%	27	100%	103	100%
Education p=.000*	0-2	4	16%	0	0%	0	0%	0	0%	4	5%
	3-6	16	64%	2	11%	11	50%	5	42%	34	44%
	Over 6	5	20%	17	90%	11	50%	7	58%	40	51%
Total		25	100%	19	100%	22	100%	12	100%	78	100%
Employment p=.057**	0-2	7	35%	0	0%	4	31%	0	0%	11	18%
	3-6	6	30%	7	37%	3	23%	4	40%	20	32%
	Over 6	7	35%	12	63%	6	46%	6	60%	31	50%
Total		20	100%	19	100%	13	100%	10	100%	62	100%
Lifestyles p=.004*	0-2	3	11%	2	11%	1	3%	0	0%	6	6%
	3-6	18	64%	8	44%	13	45%	5	19%	44	43%
	Over 6	7	25%	8	44%	15	52%	22	82%	52	51%
Total		28	100%	18	100%	29	100%	27	100%	102	100%
Healthy kids p=.287	0-2	4	13%	3	12%	2	6%	0	0%	9	8%
	3-6	12	40%	7	28%	13	41%	5	23%	37	34%
	Over 6	14	47%	15	60%	17	53%	17	77%	63	58%
Total		30	100%	25	100%	32	100%	22	100%	109	100%
Healthcare p=.016*	0-2	6	22%	2	9%	2	7%	0	0%	10	10%
	3-6	11	41%	7	32%	9	33%	4	15%	31	30%
	Over 6	10	37%	13	59%	16	59%	23	85%	62	60%
Total		27	100%	22	100%	27	100%	27	100%	103	100%
Gender p=.001*	0-2	5	26%	3	20%	0	0%	0	0%	8	10%
	3-6	8	42%	2	13%	10	46%	4	17%	24	30%
	Over 6	6	32%	10	67%	12	55%	20	83%	48	60%
Total		19	100%	15	100%	22	100%	24	100%	80	100%
Culture p=.025*	0-2	3	18%	3	23%	3	13%	2	12%	11	16%
	3-6	8	47%	5	39%	13	57%	1	6%	27	39%
	Over 6	6	35%	5	39%	7	30%	14	82%	32	46%
Total		17	100%	13	100%	23	100%	17	100%	70	100%
Average percent Over 6			34%		61%		48%		79%		54%

*Statistically significant (p<0.05) **Tendency toward statistical significance (0.1 < p > 0.05)

3.4 Building a framework to describe the system of intersectoral collaboration involving primary care providers and public health personnel with other sectors to address health determinants in Cuba

The findings from the re-analysis of the Cuban case study can be integrated into a coherent story of contributions by various sectors to a health system that focuses on health creation through managing health determinants, including clinical services as well as social determinants of health. The framework is presented in figure 9. How this framework relates to the findings from this study will be presented in the section below, in terms of contexts, mechanisms, and outcomes of the intersectoral collaboration - including primary care, public health, and other sectors - to manage health determinants.

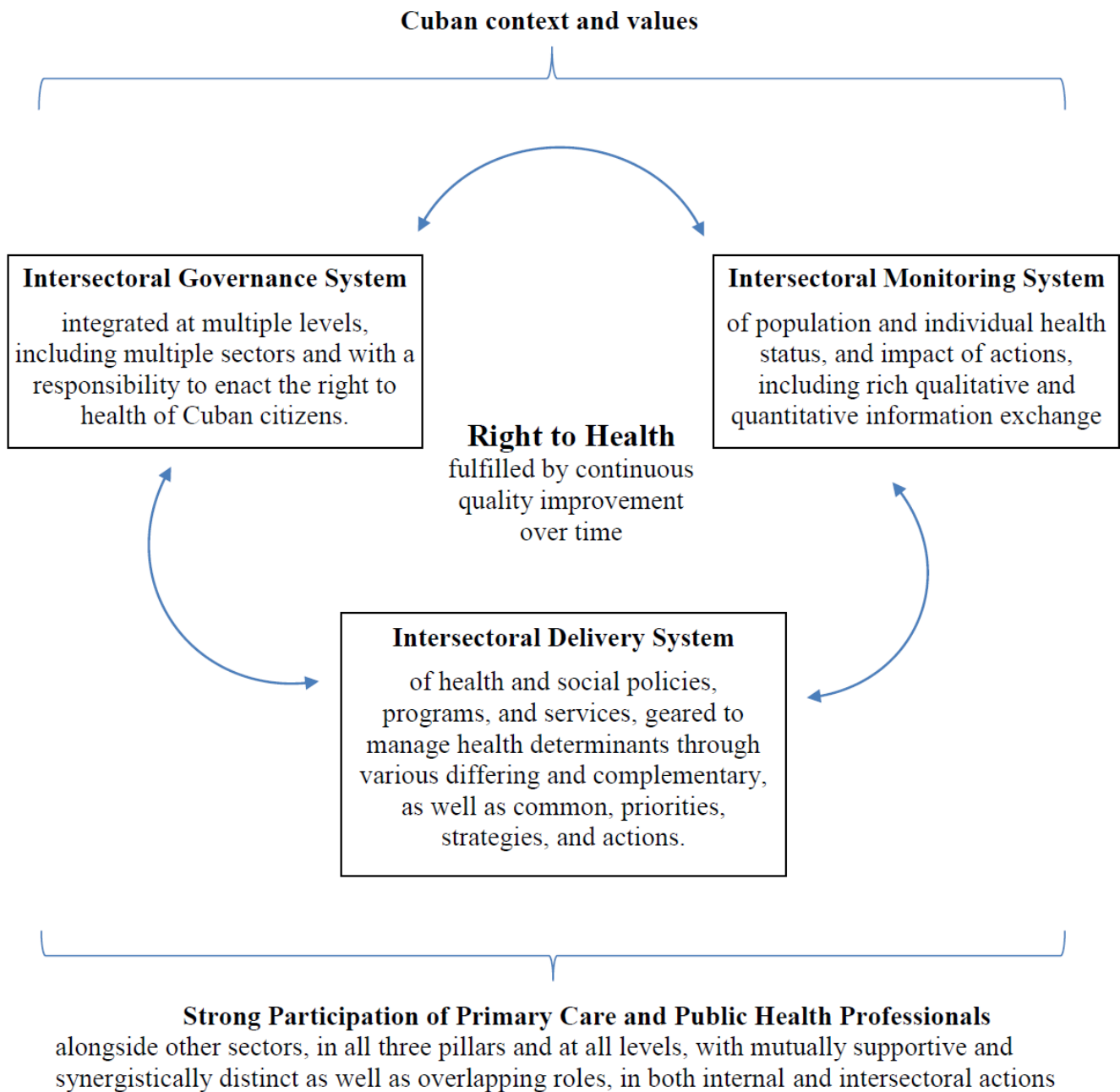
3.4.1 Context

The Cuban integrated and intersectoral health determinant management systems arose in the context of the right to health being made explicit in the Cuban constitution, as a post-Cuban Revolution aspiration to guarantee that right to all Cuban citizens. As noted in Section 3.1 and Section 3.2, essential rights and values, as extracted from the focus group discussion and the document review, included:

- Awareness of the right to access healthcare and other health and social services
- A healthy social environment with social cohesion, social inclusion, and social support
- Accountable governance structures
- Community participation in decision making, planning, implementation, monitoring, and improvement
- Protection of vulnerable communities and families
- Fair employment and safe working conditions
- Access to basic prerequisites for well-being, such as water, sanitation, housing, nutritious food, and a healthy physical environment in general
- Access to culture
- Access to education, from primary to post-secondary levels
- Access to health promotion, including health literacy and healthy lifestyles
- Access to primary healthcare and basic specialized care

The survey data also corroborates the above.

Figure 10 Cuban health creation model to ensure its citizens' right to health



3.4.2 General mechanisms

The various general mechanisms by which Cuba manages health determinants include, at their core, a *shared* vision that Cuban citizens have a right to health, and that the various actors are responsible for continually improving the delivery of that right to health. The themes of the focus groups and the results of the survey analysis, document review, and key informant discussions all support this conclusion. The results can be synthesized in picturing that the right to health rests on three main pillars involved in short and longer-term cycles of planning, acting, studying the impacts, and re-adjusting as needed. The three pillars are: a governance system, a monitoring system, and a delivery system. This section will explain the findings, starting with the mechanism illustrated at the centre of the framework: the use of continuous quality improvement. The continuous quality improvement processes tie the governance, monitoring, and delivery systems to the fulfilment of the Cuban citizens' right to health. Another mechanism that supports the continuous improvement of the fulfilment of the right to health is the contribution of primary care and public health professionals, in conjunction with other sectors, to the improvement of all those systems, and at various levels, with both distinct as well as overlapping roles and priorities. Importantly, all the *mechanisms* described above are embedded in the Cuban historical and social context, as described in the *context* section. The three pillars, embedded in the Cuban context, and supported by a strong participation of primary care and public health alongside other sectors, is illustrated in Figure 10 Cuban health creation model to ensure its citizens' right to health.

A very significant finding from the focus groups was that the strategy of “Moving Into the Future” was used by all groups, for almost all health determinants. This supports the conclusion that Cubans view their health creation system as one that needs constant improvement, to continue to ensure its performance for future generations. This is because the strategy refers to the creation of health not only for today, but also for future generations, through caring for oneself, the environment, and the community and its social support structure. It includes strategies to empower those whose health is affected, and to encourage the equal participation of men and women. It also puts an emphasis on societies to create conditions that support the achievement of health for everybody, not just for some. This results in services being considered essential and provided to all, regardless of ability (not only ability to pay, but ability to function in society). It represents more than a goal of universal coverage of basic services; it includes helping further those with the most

difficulties. This can be seen as seeking to maximize the impact of universal services with targeted programs.

Another important finding is that the Cuban right to health refers to a broad conception of health and its determinants. Correspondingly, the governance system goes beyond the healthcare system management structure. The governance systems, constituting the first pillar supporting the enactment of the right to health through continuous quality improvement, includes multiple integrated levels of intersectoral structures, inclusive of both primary care and public health, as well as various other sectors of society. The governance system was described overall as:

- Including and enabling local decision-making and community participation structures, with an attitude that problems can be solved and that the community should participate in solving them;
- Having stable communication structures and channels between sectors of society and levels of governments, enabling relationships to be built and information to flow back and forth, with horizontal intersectoral links at each level. This supports very frequent and very high levels of full collaboration to address most health determinants, as was illustrated by the data presented in Section 3.3;
- Being responsive to instances of individual difficulties and complaints;
- Acting on problems based on best available knowledge, without waiting for definitive evidence of effectiveness, but with refinement of learning and implementation as they unfold based on the monitoring of the impacts;
- Inclusive of health professionals (mostly primary care providers and public health physicians), alongside many other voices (community organizations, multiple other sectors) in structures attached to each level of government, under the leadership of official government leaders (and not healthcare providers).

The second pillar of the enactment of the right to health in Cuba, exemplified in all the data sources, is a sophisticated population and individual health status monitoring system, which includes qualitative and quantitative information and perspectives exchanged between sectors and across levels of governance. The monitoring system was described as:

- Being integrated from the local primary care level to the national level
- Functioning based on the responsibility of all actors in the system to contribute to monitoring
- Being expected to inform practitioners and decision-makers
- Using qualitative and quantitative information related to all factors affecting health
- Including well-known complaint mechanisms
- Using international scientific knowledge as well as local understanding
- Enabling rapid and accurate flow of information among and between sectors and levels
- Being supported by competent human resources

The third pillar, the delivery system (for the health and social policies, programs, and services to manage health determinants) was described as being based on primary healthcare principles, such as those of the Alma-Ata declaration, as well as using all the strategies mentioned in the Ottawa Charter. All groups (primary care providers, public health professionals, and other sectors) viewed the management of health determinants, including both health services and social determinants, as part of their responsibility.

Still, in relation to the intersectoral delivery system, the focus groups revealed that local leaders were seeing universal access to health services and other essential services as health promoting. They were seeing the health promotion impact of those services not only because they were addressing or preventing illnesses, but also by removing important sources of stress. Those sources of stress would have been from potentially facing illness without access to health services, or due to a lack of basic resources needed to be healthy, such as food, water, and shelter.

From the health professionals' and local leaders' contributions in the focus group, a broad concept of interactions between governance and the various health determinants, as well as between the determinants themselves, demonstrates a complex understanding of how health determinants impact health. It is not a black and white view that there is either personal responsibility, or there is

societal responsibility. Cubans engaged in the management of health determinants recognize the complex interplay of a variety of individual, community, and societal factors. The next section will delve in more detail into the contribution mechanisms of primary care providers versus other representatives.

3.4.3 Mechanism of contributions of various groups: primary care, public health, municipal, and local leaders.

Similarly to what is promoted by the WHO, primary care physicians in Cuba are expected to pay attention to the provision of quality health services, and as a consequence, primary care providers in Cuba do consider health services to be a priority health determinant. The expectation of primary care professionals' contribution in Cuba is much broader than providing clinical one-on-one service. Primary care providers are expected to address health in a comprehensive fashion, including health promotion and prevention, as well as participating in improving the healthcare system (not just through the provision of good one-on-one care). They have a mandate to raise the awareness of a variety of stakeholders about issues affecting health. Those stakeholders include other levels of the health system and various levels of government, as well as a variety of sectors and community organizations.

Primary care providers participate very frequently and with a high level of collaborative actions for all health determinants, as was shown in Section 3.3. The fact that primary care providers in Cuba considered themselves involved in long-term actions in relation to social support networks, education, lifestyles, healthy children, and healthcare was quite noteworthy. In addition, they indicated that they started to act on all the other health determinants, with all other rankings averaging closer to level 4 ('started action recently') than to level 3 ('planning phase'). However, it is also important to note that primary care providers were not expected to lead intersectoral action (unless they are closely related to technical clinical issues). Conversely, there is an expectation that local and municipal governments and other levels of the healthcare system, as well as many sectors and community organizations, contribute to improving the health of the population through addressing health determinants, as well as by supporting primary care providers, as also shown in survey data presented in Section 3.3.

Primary care providers are expected to take time to connect their patients to broad social networks and/or to community resources, not just to refer to specialists or other healthcare providers. Some of the expected ways to do this is by monitoring their patient population, planning interventions, and reporting their results. There is also an expectation and an acceptance of the responsibility of primary care providers to facilitate universal access to their services, including by being posted in a variety of settings - rural or urban, in schools or work places (to reach men who are seen as underutilizing primary care services) - and being distributed in all neighbourhoods, rich or poor. Providing access in settings where it is most needed is seen as one of the primary care physician's contributions to improving income and working conditions.

Primary care providers are seen as being privileged to have received the training they have, and as therefore having a responsibility to give back ([Huish, 2008](#)). Importantly, that responsibility to give back is highly supported by the health system in general and by the various community organizations. This is not necessarily the case in many other countries, leaving international students trained in Cuba and returning to their home countries, including the US, feeling unsupported and hopeless in acting in a major way on health determinants, including access to health services ([Huish, 2008](#)).

Primary care providers also feel they have a responsibility to re-orient the health system to address some of the health determinants. This was manifested in part by the increased emphasis on maternal, infant, and child health, as described by key informants, and confirmed by the large proportion of internal actions (i.e., actions taken by the organization itself) mentioned that are related to those services, as shown in Section 3.3.

Importantly, the results of this thesis show that primary care physicians and nurses act as leaders in relation to programs that have more clinical aspects, such as maternal and child health, care of older adults, programs related to sexually transmitted infections or HIV, and school health programs. This thesis shows that primary care physicians and nurses also participated in addressing other health determinants, but rarely with the role of leader. This does not mean that the role of the Cuban primary care professionals is mostly clinical, as understood in Canada. They are key stakeholders in programs that address the health of the community and that have close links to clinical care. This was reflected in the high level of participation in intersectoral action reported by primary care physicians in Section 3.3. Upon integrating the information from the various data

sources, it can be said that in most instances, the role of primary care providers is much more akin to information-sharing in a structured fashion, with a role in clinical prevention, clinical referral to other services, and health education (at the individual and community level). Examples of information-sharing, liaison, and actions include:

- 1) Being a voice at various intersectoral tables
- 2) Providing organized information in annual reports, in relation to the health of the citizens they serve
- 3) Acting on that information and documenting their attempts to address the most important problems faced by their population of patients, not only medically, but also by being a resource to the community in general.

Even if there are variations in prioritization of health determinants and action to manage them, in general, the findings of this thesis support that primary care providers in Cuba are embracing a model in which health is determined not only by access to health services, but by a complex interplay of health determinants. Furthermore, Cuban primary care providers consider it part of their responsibilities to contribute to addressing health determinants, both at an individual patient level as well as at the community level. This is also in line with the focus group and survey findings that lifestyles are addressed through most of the population health strategies defined in the Ottawa Charter. For any cases that are deemed as needing more than what primary care physicians and nurses provide, primary care physicians and nurses receive support from various community organizations. This includes support to act at the individual patient level, to address the root causes of ill health in the community, and to prevent further problematic cases. The community has structured itself in a way that facilitates primary care physicians to both call on its various resources, and to contribute to them.

The role of primary care providers in the Cuban system includes facilitating and supporting public health campaigns, health promotion and health literacy activities, early childhood services, and controlling diseases transmitted by vectors, both at the individual and community level. This was illustrated in the three intersectoral examples from the main case study reported in Spiegel et al (2012), the field visit observations, and the large proportion of internal actions by primary care providers related to health promotion programs across the lifespan (as shown in the survey findings reported in Section 3.3).

The results of the focus groups and surveys both showed that the role of the local leaders is distinctively different from that of the primary care providers, although overlapping in some aspects. The broad strategies they use to address health determinants include healthy public policies, “Moving into the Future”, strengthening community actions, creating supportive environments, developing personal skills, and reorienting health services. This translates into internal actions that create programs to support children, youths, the education system, stable work opportunities, gender equality, and social equity. Local leaders also see their role as supporting access for all children to quality, comprehensive healthcare, and supporting primary care providers in their various roles.

Some of the more frequently mentioned areas of local leaders’ intersectoral collaboration were in relation to: cultural activities; health promotion (for example, in relation to environmental health, access to physical activities, and health education); and infrastructures, including health infrastructures (such as the expansion of intensive care units, as well as a broader contribution to supporting a comprehensive health system). Similar to what is found for the internal actions, local leaders collaborate with other sectors to support groups perceived as vulnerable, such as the elderly, youth, and women.

Municipal leaders in Cuba have similar roles, priorities, internal actions (i.e., actions taken within their own organizations), and intersectoral collaboration strategies as that of local leaders, but at a different level of intensity, as was shown in Section 3.3. The municipal leaders are part of a large intersectoral table that has decision-making capacity at the municipal level, with the municipal health council chaired by the highest level of elected representatives of the municipal government. The chair has the ability to call on a larger or smaller representation by the various sectors, depending on the issues at stake. The local leaders have local tables, with various sectors and civil society represented, but with very few specific resources other than themselves.

Those in local public health positions seemed also to take a more proximal approach to health determinants, prioritizing lifestyles, while those in local and municipal positions of leadership prioritized more distal health determinants, such as education and income or standard of living. The fact that the overall differences were not statistically significant (except for the prioritization of income and standard of living by local leaders) might essentially be due to a lack of statistical power to detect differences, as the study was not powered to do this type of analysis. Nonetheless, the

overall congruence in prioritization shown in the data in Section 3.3 substantiates that there are indeed shared values, as discussed above.

The fact that all groups ranked the environment as a lower priority in the survey merits comment, as this was in contrast with the findings from my field visits, where the public health professionals frequently commented on the dilapidated water system as an important infrastructure to fix. Perhaps this could be explained by the fact that the infrastructure was in such poor condition that it was seen by all as unrealistic to make it a priority at this point in time. Key informants explained that the dilapidated state of the water infrastructure resulted in part from difficulties in accessing needed construction material and technology, due to the US embargo. The field visits revealed that Cubans find very effective means to mitigate the faulty infrastructure, such as: rainwater accumulation and potable water delivery trucks; an educated population that knows how to disinfect water and has access to the resources to do so; and having an effective dengue control program.

Overall, across all the focus groups, the discourse reflected a balanced view of health determinants, with none having the capacity to resolve all health issues, yet all contributing to health in an important and distinct manner. One example of this nuanced understanding related to education and health education. All focus groups gave a relatively high priority to education as a health determinant. They also recognized that health education and general education alone were insufficient to change lifestyles substantially. Participants understood the need for a supportive culture and social environment, with multiple actions from multiple sources. Other examples arose from the Cuban discourse on lifestyle, with clear mention of the limitations of health education and of one's personal ability to result in change without a supportive environment.

It was also noteworthy overall that community organizations, leaders, primary care providers, and public health professionals were all conducting a series of internal actions (within their own respective organizations) to address a large variety of health determinants, as well as taking part in a multitude of programs aiming to manage health determinants intersectorally. They were doing so in an organized fashion, with both overlapping and distinct roles, and with substantial overlap in conceptualization of health determinants and priorities. They have been doing so for decades and attribute their success in reaching an impressive level of population health status compared to most other countries to purposeful intersectoral governance structures, policies, programs, and services

addressing health determinants, and continuous monitoring and improvement of the fulfillment of a right to health.

This leads to the conclusion that Cuba combines a systematic “whole of government” approach with a systematic “whole of community” approach. The systematic use of whole of government and whole of community approaches is generating specific actions to address multiple health determinants at once, as well as creating social cohesion and social capital along the way. This system has resulted in “activated communities” being empowered to address health determinants within an “activated government”. Furthermore, this system has maintained the activation over time and across health issues, health determinants, and economic cycles. Moreover, this has been done in a systematic way from the local to the national level, with organized structures, accountability mechanisms, and information systems to monitor impact and continue improvement over time.

Table 20 classifies the mechanisms discussed in this section (and illustrated in the Cuban health creation model), in terms of mechanisms such as norms, cultural patterns of relationships, social processes and sequences, and reasoning, as per terminology used in realist review:

“Social mechanisms may usually be defined as ‘... underlying entities, processes, or [social] structures which operate in particular contexts to generate outcomes of interest.’ Here ‘entities’ may refer to things such as norms or belief systems, ‘processes’ are sequences where later events depend on earlier ones, and social structures may refer to things such as gender, class, or cultural patterns of relationships. Like the mechanisms in natural sciences, they possess a number of features: they are not ‘visible’, but must be inferred from the observable data; they are context sensitive, and they generate outcomes” Wong et al. 2013 p. 5.

“Mechanisms are the agents of change. They describe how the resources embedded in a program influence the reasoning and ultimately the behaviour of program subjects.” Wong et al. 2013 p. 14

Table 20 Summary of social mechanisms facilitating Intersectoral Action for Health Determinants, involving PC, PH and OS, in the Cuban model.

Mechanism	Explanation
Normative	<p>All (PH, PC, OS) believe that they have a responsibility to enact the right to health of all Cuban citizens through health determinants approaches with consideration of equity, social inclusion and social support, norms, employment, housing, working conditions, income and standard of living, nutrition, empowerment, access to health services, and quality assurance, taking into account the availability of financial, technical, and human resources, all part of the “Norm” of conceptualization of health determinants.</p>
Cultural patterns of relationships	<p>Creation and sustainment of intersectoral tables at various levels of the service delivery, governance, and monitoring systems, all organized and refined over time, facilitating horizontal (across sectors, across types of systems) and vertical (both bottom-up and top-down) flows of influences. Those help to see how various sectors impact health and health determinants, and influence the reasoning mechanisms and social processes.</p> <p>Resistance to neo-liberal views of decreasing investments in health and social programs in cases of economic crisis and decreasing national access to financial and other resources (Cuban revolution, and reaction to the dismantlement of the Soviet bloc, and to the US blockade).</p>
Social processes and sequences	<p>There is a social norm in Cuba that supports the right to health and the taking of responsibility for it by the various stakeholders. This norm arose in reaction to inequality prior to the Cuban revolution, and the revolution’s desire to address health inequality and other inequalities such as access to resources, education, housing, employment, working conditions, etc. The ability to efficiently address those inequalities has been improved and adjusted in part by the accountability and monitoring systems – which provide “data” influencing the reasoning of the actors, with ongoing quality improvement.</p> <p>Understanding of health determinants occurs through education (general health education and the education of health professionals), political programs (e.g., community participation in health campaigns), participation in intersectoral tables addressing health issues (among others), and by including health considerations in the dealing of other issues.</p> <p>Public health knowledge, skills, and attitudes includes helping others to see how various sectors impact health and health determinants over time.</p>
Reasoning	<p>High-level political, governmental, and scientific (medical, public health, social sciences) leaders decided to adopt and strengthen intersectoral actions to address health determinants, and to include primary care and public health alongside other sectors.</p> <p>All (PH, PC, OS) reasoning is influenced by their contact with other sectors in the intersectoral tables; the influence by others is facilitated by trust built over time, by learning from other groups doing the same, and by appreciative leadership of “what can be done” from each sector (rather than why it cannot be done, or how it should be done by experts’ views or other sectors).</p>

In other words, in Figure 10:

- The centre part of the model represents the normative mechanisms of a right to health established in the context of the Cuban history and economic and geopolitical situations (at the top of the figure);
- The boxes represent systems in which the stakeholders are thinking and acting based on those generated thoughts about ISA HD (a ‘reasoning’ mechanism), and are important systems in enacting the right to health. Each box (system) has vertical and horizontal coordination mechanisms influencing the ‘reasoning’.
- The arrows between all the components, with the notion of quality improvement over time in the centre, represent the sequences and interactive social processes, with feedback loops between the various systems influencing the enactment of the right to health.
- The notation below the accolade at the bottom of the figure adds the notion that each box (i.e., each system) includes participation of primary care, public health, and other sectors. Although the governance system is more political, it still includes primary care and public health practitioners as political, elected officials and as administrators working with the politicians. The delivery system has at its core the primary care providers and the various local to national medical, community, and sectorial organizations; while the monitoring system has public health as a core cadre of professionals supporting and enabling other systems to carry out the monitoring; all (PC, PH and OS) play roles in the other systems, influencing the reasoning of others, and supporting each other in the enactment of the right to health through a norm of shared responsibility to do so.

The next section will summarize the outcomes arising from the Cuban context and mechanisms of management of health determinants, as found from the document review, field visits, key informant discussions, focus groups, and survey analysis.

3.4.4 Outcomes of the health creation system

The various sources of data showed that the Cubans involved in the management of health determinants believed that they have been very successful in managing key, specific health determinants, such as:

- Healthcare, with high quality, equitable, and accessible primary care services, including health promotion and prevention services;

- Education that is of good quality and universally accessible up to the secondary and technical levels, and increased accessibility of higher education even in rural areas;
- Early childhood development, with no child left without support, housing, food, or access to education, even if his parents have difficulties functioning in society;
- Employment opportunities with safe, stable working conditions.

The Cubans were critical of their successes in managing several health determinants, and they identified areas for improvement, which is in line with their sense of needing to continually improve their performance. At the same time, the focus groups and key informant discussions revealed that Cubans were aware and proud of the individual and population health levels they have reached, especially when they compared their achievements to those of other countries.

Cubans also mentioned that they have had successes and challenges in managing the health determinants of values and social norms as well as of culture. The values and social norms were seen as contributing vastly to achievement, from the conceptualizations and prioritization across sectors of enacting a right to health, in a way that values monitoring and improvement, accountable governance, and community participation. Furthermore, the Cubans explained that intersectoral collaboration, and the skills needed to partake in it, are part of the Cuban culture, despite acknowledgement that some leaders can still improve their collaboration skills.

In terms of gender issues, the successes were also notable from the field visits and through the prioritization of child and maternal health. Women had access to quality primary care, higher education, remunerated employment, and quality childcare services. Women occupied positions of power in all sectors of society. Furthermore, all groups, except the municipal leaders, mentioned performing gender analyses when planning and evaluating their actions on various health determinants.

In relation to lifestyles, the various focus groups revealed a need for more actions in relation to diet, alcohol, and physical activity. Despite an understanding of the influence of broad determinants on individual risk behaviours, the discussion by participants still showed some judgmental attitudes towards those who engage in risky behaviours.

Despite their own criticisms of their successes, the Cubans recognized that they have achieved impressive outcomes in terms of the health status of their population, as well as equity in the distribution of health across different groups of the population, compared to other similar countries in terms of GDP ([Alegret, Spiegel, & Yassi, 2004](#); [Spiegel et al., 2012](#); [Spiegel & Yassi, 2004b](#)). The analysis of the various Cuban data sources presented in this study supports the argument that those successes in terms of fulfillment of the right to health are supported by the mechanisms explained in the previous sections. In summary, those *mechanisms* to achieve the impressive health *outcome* in the Cuban *context* include the very active participation of primary care, public health, and other sectors in a responsive governance system, a comprehensive delivery system for the management of health determinants, and a good monitoring system, with continuous quality improvement processes. The next chapter will present the results of the realist review inquiring into the context, mechanisms, and outcomes of other primary care collaborations with public health and other sectors to manage health determinants.

Chapter 4: Realist review results

This chapter will describe, in section 4.1, the articles that were selected based on the literature search and the main health determinants addressed by the projects described in those articles. Then, sections 4.2 and 4.3 will present the two most significant combinations of contexts, mechanisms, and outcomes (CMO) arising from the initiatives or projects described in the articles found in the literature search and supplemented by other documents. When a consistent pattern of CMO is found, across varying contexts, it is referred to as a demi-regularity. This thesis found two main demi-regularities, one for large initiatives, and one for smaller initiatives. In the next chapter, the conclusion, those demi-regularities will be compared with the Cuban findings and discussed in light of the scientific published literature.

4.1 Articles included in the realist review and the health determinants they address

From the original search, which resulted in 1098 articles, the final set of selected citations included fifty-eight articles. Figure 11 illustrates the selection process, which included the common re-scoping step of realist review based on review of the first set of 100 titles and abstracts. The selection process included obtaining more data on the projects mentioned in those articles to confirm that they fulfill the inclusion criteria, as well as to obtain more detail on the context, mechanisms, and outcomes of those projects. Supplementary data came from more than fifteen websites and more than thirty-seven other articles or documents related to the projects described in the fifty-eight included articles.

The fifty-eight articles from the original search represent 53 different projects, including several projects that are part of overall initiatives spanning multiple local projects. The vast majority of articles relate to interventions in high-income countries (47 interventions), including most taking place in the US (40), with another five in the United Kingdom and two in Australia. There are therefore only six interventions in low- or middle- income countries: two in Brazil, one in Pakistan, one in Iran, and one in Papua New Guinea, as well as one article that describes a similar intervention in three countries (the Philippines, Vietnam, and Cambodia). Of note, no articles have been retained describing interventions in Cuba. And despite searching in French, Spanish, and English, only two articles were retained in a language other than English (two articles in Spanish).

The fifty-eight articles are listed in Table 19 at the end of this section. The articles are listed either by the intervention name or the title of the article. The table includes the country where each

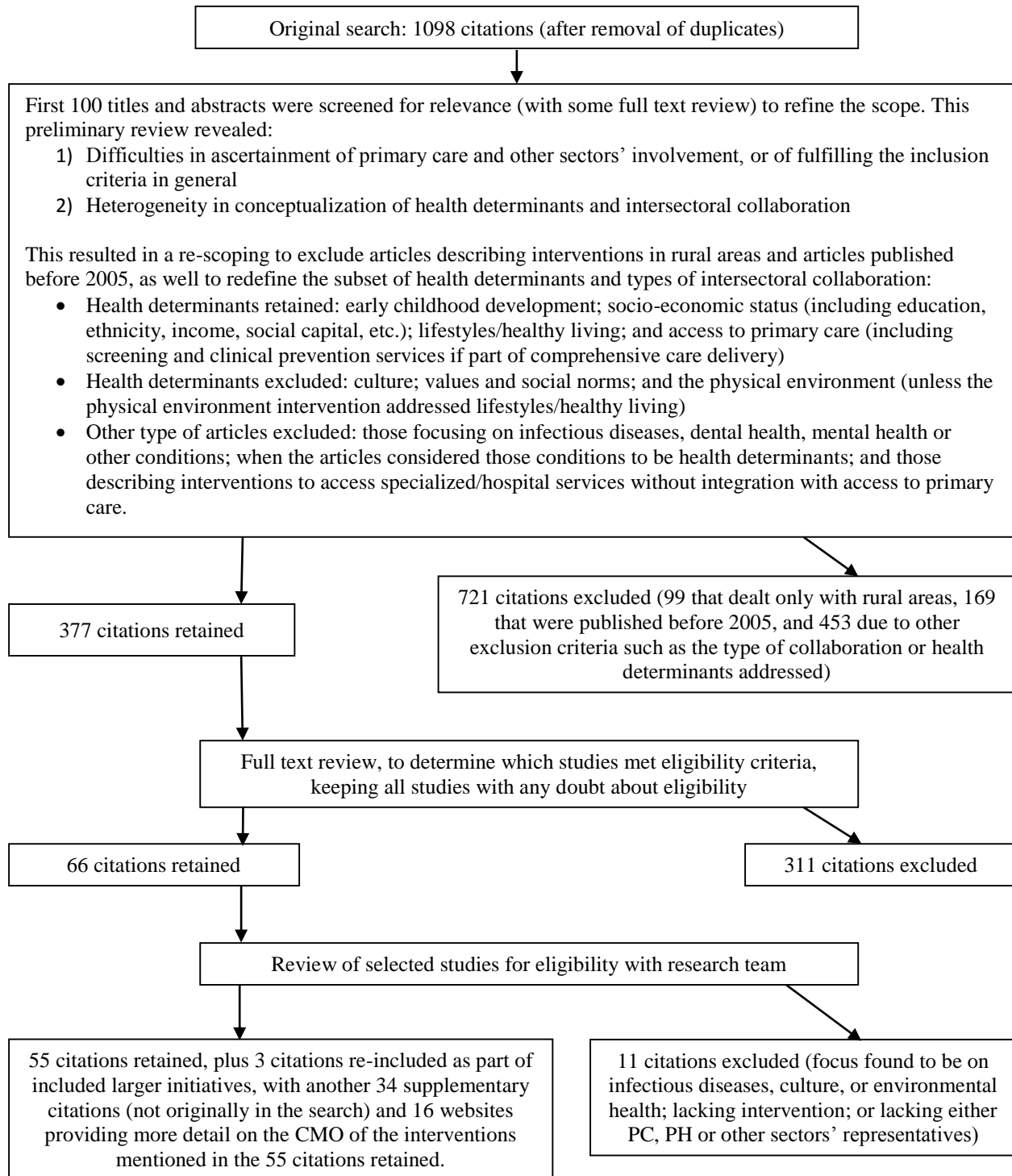
intervention took place, as well as the authors and date of the published articles, and other references if they have been used to collect more information on contexts, mechanisms, and outcomes. The table also includes abbreviated article titles, which are used in the next section to detail the various interventions' context, mechanism, and outcome configurations. Table 37 in Appendix F lists all the health determinants addressed or taken into account by each intervention.

To help organize the information arising from the large number of included articles, they have been clustered by broad health determinant themes. Most interventions address several health determinants and could therefore fit in several clusters. Nonetheless, the articles have been classified by the *primary* health determinant they aimed to address. The clusters are: access to care; socio-economic status (SES); maternal, infant, child, and youth (MICY) health; and healthy lifestyles.

The access to care cluster includes interventions aimed at improving access to primary care in general (two interventions) as well as interventions to improve access to cancer screening in communities with low SES (three interventions). The articles related to cancer include two interventions in South Carolina. A full special edition of the South Carolina Medical Journal (SCMJ) described the epidemiological situation in relation to nine different types of cancer. However, most of those articles did not report interventions that fulfill the eligibility criteria of this study, and were therefore excluded. Three articles from SCMJ's special issue included descriptions of two interventions that fulfilled the eligibility criteria. These interventions also had websites that gave further information on contexts, mechanisms, and outcomes. In addition to the two South Carolina cancer interventions, one article described an intervention aimed at increasing knowledge of breast health and early detection of breast cancer for African American women in a low SES neighbourhood. Another article in the SES cluster also addressed breast and cervical cancer screening and access to treatment.

The interventions that fit in the SES cluster are those hoping to address the health inequities associated with SES as the primary focus of the intervention. Specifically, it includes interventions addressing health inequities related to ethnicity, low income, low education, and low social position.

Figure 11 Realist review literature selection process



The eight interventions in the MICY cluster specifically target the health of mothers, infants, children, and youth as the primary focus of the intervention (rather than starting from an objective of addressing health inequity in general). However, all those interventions in the MICY cluster also target those with low SES. Two interventions focusing on childhood obesity have been classified as part of the healthy lifestyle cluster, as they were more similar to the interventions in the healthy lifestyle cluster than the MICY cluster.

The healthy lifestyle cluster is the largest (with twenty-two original citations), including two main groups of interventions. The first group includes interventions that mostly originate from the healthcare system. The second group includes community-wide interventions²⁶ or interventions driven by community organizations (even if they are not whole-of-community interventions), including two interventions specifically targeting childhood obesity. Within that second group, a large number of projects attempt to influence the built environment to promote physical activities and healthy lifestyles. This group includes Active Living by Design (ALBD). One community involved in ALBD (Somerville), had an ALBD intervention intricately intertwined with another local intervention that met the inclusion criteria: Shape Up Somerville. Shape Up Somerville was partially described in the ALBD Somerville article. Further information was obtained both from the ALBD website and several websites related to Shape Up Somerville.

The main interventions to address each of the health determinant clusters are as follows:

1) Access to care was mostly addressed through increased provision of insurance coverage, support to access existing insurance (that were not taken advantage of by community members), and outreach to populations suffering from lack of access, as well as improving the quality and breadth of services offered in particular clinical settings. Several initiatives aimed to increase access to screening and preventive clinical services; some aimed to increase access to comprehensive primary care; some aimed to increase access to all types of healthcare; others attempted to improve the quality of care.

²⁶ Community-wide interventions, sometime called whole-of-community interventions, refer to interventions that use various strategies in different sectors of the community in an organized and coherent way, with the aim of improving the health status of those who are part of that community.

2) Lifestyles (especially the use of tobacco and alcohol, healthy eating, and physical activity), were mostly addressed through individual or small group behaviour change approaches (in clinical care or in the community), whole-of-community approaches, and advocacy for changes in policy and the built environment.

3) Health literacy, especially as it relates to lifestyles (but also to cardiovascular diseases, diabetes, and various types of cancers), was mostly addressed through didactic sessions or one-on-one support.

4) Low SES, frequently interacting with ethnicity (especially in the US), was often addressed through interventions targeting a lower SES community or healthcare organizations providing services to those with low SES. Few interventions attempted to address the causes of the lower SES of the community or of the individuals. Although this category overlap significantly with the access to care cluster, I kept it separated, as the stated aim of those interventions was to address health inequality related to low SES rather than stating an overarching goal of improving access to health services.

5) Social networks of individuals and organizations was frequently addressed through creating special types of human resources or devices to more systematically connect individuals with services and resources, or through creating advocacy networks with an aim of decreasing duplication and maximizing the reach of interventions at the most appropriate and cost-effective setting.

This section shows that the included articles and related interventions addressed many health determinants both as primary and secondary goal. It also shows that those interventions were relatively similar within a given health determinant cluster. However, that information is not sufficient to unpack the mechanisms by which those interventions function and what outcomes they reach. This is described in the next two sections, where the CMO configurations have been summarized into two main demi-regularities. The first one, which includes most of the studies found, is the demi-regularity related to large initiatives with either several community projects across a country or several countries, or large municipal or state wide initiatives (as opposed to initiatives in only a few neighbourhoods). The second demi-regularity is for small projects.

Table 21 Projects and references included in the realist review

Title (articles or initiative)	Project number and short name	Country	References
Access to healthcare	HC access		
Facilitating the development of a county health coverage plan with data from a community-based health survey.	1. Insurance coverage	US	(Kruger et al., 2010) Supplementary: (W. K. Kellogg Foundation, 2013)
Developing comprehensive health care for an underserved population	2. Senior care	US	(Penprase, 2006)
National Breast and Cervical Cancer Early Detection Program and the Best Chance Network	3. NBCCEDP and BCN	US	(Adams et al., 2006 ; Brandt et al., 2006 ; Hebert, Elder, & Ureda, 2006) Supplementary: (South Carolina Department of Health and Environmental Control) (Division of Cancer Prevention and Control, 2013)
The South Carolina Cancer Disparities Community Network	4. SCCDCN	US	(Adams et al., 2006 ; Brandt et al., 2006 ; Hebert et al., 2006) Supplementary: (South Carolina Cancer Disparities Community Network) ²⁷ , (Braun et al., 2011 ; Center to Reduce Cancer Health Disparities Community Network Program (CNP) ; National Breast and Cervical Cancer Early Detection Program, 2013)
The Ohio Collaborative Breast Health Intervention	5. Breast health	US	(Fowler, Rodney, Roberts, & Broadus, 2005)
SES	SES		
Racial and Ethnic Approaches to Community Health overall initiative	6. REACH overall	US	Supplementary: (National Center for Chronic Disease Prevention and Health Promotion Division of Community Health), (Buckner-Brown et al., 2011 ; CDC, 2007 ; Giles, 2010 ; Liao et al., 2010a ; Liao et al., 2010b ; Liburd, 2011)
Community health navigators for breast- and cervical-cancer screening among Cambodian and Laotian women	7. REACH California	US	(Ngoc Nguyen, Tanjasiri, Kagawa-Singer, Tran, & Foo, 2008)
REACH Detroit Partnership: Improving Diabetes-Related Outcomes Among African American and Latino Adults	8. REACH Detroit	US	(Two Feathers et al., 2005) Supplementary: (CDC, 2007)
Nashville REACH 2010's approach to eliminating disparities in diabetes and cardiovascular diseases	9. REACH Nashville	US	(McClellan & Schlundt, 2006) Supplementary: (Greene, McClellan, Gardner, & Larson, 2006 ; Larson et al., 2009 ; Patel et al., 2010 ; Pichert et al., 2010 ; Schlundt & McClellan, 2006 ; Schlundt et al., 2010)
Improving health behaviors in an African American community: The Charlotte Racial and Ethnic Approaches to Community Health project	10. REACH Charlotte	US	Plescia, Herrick, & Chavis, 2008 Supplementary (part of the original search, but were originally excluded as they did not fit the criteria's on their own): (DeBate, Plescia, Joyner, & Spann, 2004 ; Plescia, Groblewski, & Chavis, 2008a)
Making health equality a reality: The Bronx takes action	11. REACH Bronx	US	(Calman, 2005)

Title (articles or initiative)	Project number and short name	Country	References
Maternal infant child and youth	MICY		
The Papua New Guinea Women and Child Health Project	12. PNG	Papua New Guinea	(Ashwell & Barclay, 2009)
Use of health care assistants to support breastfeeding by disadvantaged women	13. Assistant bf	UK	(Beake, McCourt, Rowan, & Taylor, 2005)
Enhancing Resource Utilization Among Pregnant Adolescents	14. Pregnant teen	US	(Flynn, Budd, & Modelski, 2008)
Using a mobile safety centre to disseminate safety information and products to low-income urban families	15. Mobile safety	US	(Gielen et al., 2009)
New York State's "Assets Coming Together (ACT) for Youth"	16. NY ACT	US	(Riser, Mesler, Tallon, & Birkhead, 2006) Supplementary: (Carter et al., 2006 ; Dotterweich, 2006)
Implementing preventive iron-folic acid supplementation among women of reproductive age in some Western Pacific countries: possibilities and challenges	17. Iron-folic supplement	Philippines, Vietnam, Cambodia	(Smitasiri & Solon, 2005)
Promotion of service integration among home visiting programs and community coalitions working with low-income, pregnant, and parenting women.	18. Integration for mothers	US	(Tandon, Parillo, Jenkins, Jenkins, & Duggan, 2007)
Health promotion in Brazil	19. HP Brazil	Brazil	(Buss & de Carvalho, 2007)
Lifestyle, healthcare	Lifestyle HC		
Prescription for health: changing primary care practice to foster healthy behaviors	20. Rx for Health overall	US	(Cifuentes et al., 2005) Supplementary: (Prescription for Health) (Woolf et al., 2005)
Bridging primary care practices and communities to promote healthy behaviors	21. Rx for health linking	US	(Etz et al., 2008)
A medical assistant-based program to promote healthy behaviors in primary care (PC)	22. Rx for health assistant	US	(Ferrer, Mody-Bailey, Jaen, Gott, & Araujo, 2009)
The Community Health Educator Referral Liaison (CHERL). A Primary Care Practice Role for Promoting Healthy Behaviors	23. Rx for health CHERL	US	(Holtrop, Dosh, Torres, & Thum, 2008)
An Electronic Linkage System for Health Behavior Counseling. Effect on Delivery of the 5A's	24. Rx for health eLink	US	(Krist et al., 2008) Supplementary: (Wilson et al., 2010)
Taking health care into black and minority communities - A pharmacist-led initiative	25. Pharmacist-led	UK	(Huckerby, Hesselewood, & Jagpal, 2006)
Feasibility and benefits of implementing a Slimming on Referral service in primary care using a commercial weight management partner	26. Weight	UK	(Lavin et al., 2006)

²⁷ Accessed in June 2011, and again in October and November 2012, after the site had been modified.

Title (articles or initiative)	Project number and short name	Country	References
Lifestyle, community action	Lifestyle CA		
CAN DO Houston: a community-based approach to preventing childhood obesity	27. Child Obesity Houston	US	(Correa et al., 2010)
Reducing obesity in early childhood: results from Romp & Chomp, an Australian community-wide intervention program	28. Romp & Chomp	Australia	(de Silva-Sanigorski et al., 2010) Supplementary: (Government of Victoria)
'People pull the rug from under your feet': Barriers to successful public health (PH) programmes	29. Smoking	UK Scotland	(Ritchie, Gnich, Parry, & Platt, 2008)
Community-based interventions to promote blood pressure control in a developing country: A cluster randomized trial	30. BP	Pakistan	(Jafar et al., 2009)
Social work's partnership in community-based stroke prevention for older adults: a collaborative model	31. Stroke	US	(Mjelde-Mossey, 2005)
The Community Wellness Program: An intergenerational seminar for African Americans (AA)	32. Wellness AA	US	(Ralston et al., 2007)
Healthy hearts--a community-based primary prevention programme to reduce coronary heart disease	33. Healthy Hearts	UK	(Richardson et al., 2008)
Assembling the puzzle for promoting physical activity (PA) in Brazil: a social network analysis	34. PA Brazil	Brazil	(Brownson et al., 2010)
The WellingTONNE Challenge Toolkit: Using the RE-AIM framework to evaluate a community resource promoting healthy lifestyle behaviours	35. WellingTONNE	Australia	(Caperchione & Coulson, 2010) supplementary: (Lyle et al., 2008)
A community-organizing approach to promoting physical activity (PA) in older adults: the southeast senior physical activity network	36. PA senior	US	(Cheadle, Egger, LoGerfo, Walwick, & Schwartz, 2010)
Urban fitness centers: Removing barriers to promote exercise in underserved communities	37. PA underserved	US	(Choitz et al., 2010)
Ke 'Ano Ola: Moloka'i's community-based healthy lifestyle modification program	38. Native Hawaiian	US	(Gellert, Aubert, & Mikami, 2010)
Isfahan healthy heart program: Evaluation of comprehensive, community-based interventions for non-communicable disease prevention	39. Isfahan	Iran	(Sarrafzadegan et al., 2006b) Supplementary: (Kelishadi et al., 2011 ; Khosravi et al., 2010 ; Mohammadifard et al., 2009 ; Rabiei et al., 2009 ; Sarrafzadegan et al., 2009a ; Sarrafzadegan et al., 2006a ; Sarrafzadegan et al., 2009b ; Sarrafzadegan et al., 2009d ; Sarrafzadegan et al., 2010)
Tipping the scales of prevention advocacy with \$10,000 and a notebook. The North Carolina Prevention Partners	40. NCPP	US	(Hastings, van Staveren, Bikoff, Knaack, & Molloy, 2006) Supplementary: (NC Prevention Partners)
Promoting policy and environmental change using photovoice in the Kaiser Permanente (KP) Community Health Initiative	41. KP photovoice	US	(Kramer et al., 2010) supplementary: (Kaiser Permanente)

Title (articles or initiative)	Project number and short name	Country	References
Lifestyle Healthy Build Environment	Lifestyle HBE		
Active living by design overall	42. ALBD overall	US	(Bors et al., 2009 ; Bussel et al., 2009 ; Kraft & Brown, 2009) Supplementary: (Robert Wood Johnson Foundation, 2013) and (Bors, 2012 ; Brennan, Brownson, & Hovmand, 2012a ; Evenson, Sallis, Handy, Bell, & Brennan, 2012 ; Glasgow & King, 2009 ; Killingsworth, 2009 ; Kraft, Lee, & Brennan, 2012 ; Rockey Moore, 2009 ; Sallis et al., 2009 ; Simon & Fielding, 2009 ; Strunk, 2009)
The path to active living: physical activity through community design in Somerville, Massachusetts	43. Shape up and ALBD Somerville	US	(Burke et al., 2009) Supplementary: (Active Living by Design; Active Living by Design) (John Hancock Research Center on Physical Activity Nutrition and Obesity Prevention; Somerville Department of Health)
Active Seattle: achieving walkability in diverse neighborhoods	44. ALBD Seattle	US	(Deehr & Shumann, 2009)
From partnership to policy: the evolution of Active Living by Design in Portland, Oregon	45. ALBD Portland	US	(Dobson & Gilroy, 2009)
Active Living Logan Square: joining together to create opportunities for physical activity	46. ALBD Logan	US	(Gomez-Feliciano et al., 2009)
Building the base: two active living projects that inspired community participation	47. ALBD Kalihi	US	(Hamamoto, Derauf, & Yoshimura, 2009)
Activate Omaha: the journey to an active living environment	48. ALBD Omaha	US	(Huberty, Dodge, Peterson, & Balluff, 2009)
Get Active Orlando: changing the built environment to increase physical activity	49. ALBD Orlando	US	(McCreedy & Leslie, 2009)
Achieving built-environment and active living goals through Music City Moves	50. ALBD Nashville	US	(Omishakin, Carlat, Hornsby, & Buck, 2009)
Leveraging neighborhood-scale change for policy and program reform in Buffalo, New York	51. ALBD Buffalo	US	(Raja, Ball, Booth, Haberstro, & Veith, 2009)
Promoting and developing a trail network across suburban, rural, and urban communities	52. ALBD Wyoming	US	(Schasberger et al., 2009)
Project U-Turn: increasing active transportation in Jackson, Michigan	53. ALBD Jackson	US	(TenBrink, McMunn, & Panken, 2009)

4.2 CMO of larger initiatives initiated by organizations with expertise in IAH and public health

This section describes the demi-regularities (or common CMO configuration) found when projects were initiated in the context of larger initiatives funded and supported by organizations or foundations with expertise in IAH and public health. In summary, this section will show that initiatives that were carefully planned, implemented, supported, and researched IAH systematically led to projects capable of changing norms, policies, infrastructure, or behaviours. They also systematically contributed to the improvement of research methods and the scientific knowledge basis of the IAH field. Sub-sections 4.2.1 to 4.2.3 will detail those common contexts, mechanisms, and outcomes. Each of the CMOs is illustrated with examples from some of the typical initiatives found in the literature search. Further details on the CMO found for all the articles and projects included in the realist review are available in Table 38 of Appendix F.

4.2.1 Context

As mentioned above, a defining contextual element in which those mechanisms and outcomes aroused was related to the way they were initiated and to their scope. Those initiatives were initiated by organizations with public health and IAH expertise. They were large initiatives covering either several community projects in different states and municipalities, or covering a large municipality or state in its entirety (as opposed to a few neighbourhoods).

Two main large professional organizations that funded interventions in this cluster are the US CDC and the US NIH. The CDC funded: 1) REACH and 2) Early Breast and Cervical Cancer Detection program (EBCCD, with the article describing the Best Chance Network). The CDC is the main national public health organization in the US, and it has the following roles associated with classical public health functions: surveillance and monitoring, public health response, tackling health issues with high burdens of disease, prevention through science and technology, promotion of healthy and safe behaviours, communities and environment, and developing the public health workforce at all levels of the public health system ([CDC](#)). The CDC webpage also highlights that throughout its history, the CDC has put an emphasis on developing and nurturing partnerships with various public and private entities to improve and expand the scope and depth of public health services ([CDC](#)).

The NIH funded the Cancer Community Network Program illustrated in this review by the SCCDN. The NIH is the US's main medical research agency (and the largest funding agency for health research in the world). It is composed of several institutes, including the National Cancer Institute, which has a division responsible for cancer control and population science, bridging cancer public health research, practice and policy, and a center dedicated to reducing cancer health disparities, both with a significant proportion of staff with public health training ([National Cancer Institute](#)).

The Robert Wood Johnson Foundation (RWJF) is the main foundation that funded and supported several projects as part of two large initiatives found in the literature search: Rx for Health and ALBD especially. The RWJF website specifies that it is part of their mission to improve the health of all Americans. This has been part of the work they have done since their inception, through action on several health determinants and through public health approaches:

“For 40 years, the Robert Wood Johnson Foundation has worked to improve the health and healthcare of all Americans. We have been leaders in a national dialogue that has engaged the public and health professionals alike, the sick and the well, the young and the old. We have focused on the quality of care, its measurable outcomes, the equity of access to it and how to avoid getting sick in the first place. As we move forward, we look back to our beginnings and to the men and women who shared and helped shape the vision of our founder, Robert Wood Johnson.” ([RWJF](#))

The CDC, NIH and large foundations that have supported these projects are US institutions, which have included large research programs as part of those initiatives to assess the outcomes, and have promoted the publication of the results of those initiatives in several peer-reviewed articles. This explains why so many of the articles meeting inclusion criteria are from the US. From the original search, there was five articles about the Racial and Ethnic Approaches to Community Health (REACH) initiative; twelve articles related to the Active Living by Design (ALBD) initiative; and five articles about the Prescription for Health..

Some individual articles pointed to larger initiatives for which other articles and documents were sought in order to obtain enough details on the CMO. This was the case for a cancer disparity network in South Carolina, which is one of 23 cancer disparity networks funded by the National Cancer Institute in the US. This was also the case for the New York State Asset Coming Together

for Youth, the Isfahan Healthy Heart program, Shape Up Somerville, the Kaiser Permanente Community Health Initiative, the Genesis Health Plan, the Romp and Chomp community-wide intervention to reduce obesity in early childhood, and the WellingTONNE challenge toolkit used across Australia.

For the last group of large initiatives, no other documents were sought, as the description was complete enough in the articles obtained from the original search to extract CMO configurations. Those initiatives included the health promotion programs in Brazil, the physical activity network in Brazil, the iron and folic acid supplementation in several Asian countries, the community-based blood pressure intervention in Pakistan, and the women and child health project in Papua New Guinea.

For those large initiatives, there was also evidence of awareness and intent to address health inequities related to those health issues. This awareness was present both at the large organization level and at the community level. Illustrative examples are detailed below, while more details on those initiatives and the details of the CMO of the other large initiatives can be found in Table 38 of Appendix F.

Example 1. ALBD: The RWJF explains that physical inactivity is responsible for a high burden of diseases, and there was early literature on the influence of the built environment on the level of physical activity as part of the context in which ALBD arose ([Busse et al., 2009](#)). The specific ALBD research program also addresses various issues of access to infrastructure for healthy living along SES and ethnic divisions, as illustrated by all the articles of the ALBD communities in Table 38 and in the RWJF articles describing their perspective on ALBD ([Busse et al., 2009](#)). It is also specifically stated on the RWJF website that they are aware of and aim at addressing health disparities, as illustrated by their theme of Vulnerable Populations and Disparities in their 40-year anniversary timeline: “Helping those most at-risk has always been an important part of the Robert Wood Johnson Foundation’s work, a mission galvanized and expanded by the insight that health happens where we live, learn, work, and play. Awareness of these social and environmental determinants has honed the moral edge of our programming and augmented its impact.” ([RWJF](#))

Example 2. Rx for Health: The rationales to initiate Rx for Health included: 1) the number of Americans with one or more risk factors for chronic diseases, and the high level of disease burden of

tobacco, alcohol, unhealthy diet, and physical inactivity; and 2) the promising impact of interventions in primary care, while recognizing several barriers to re-organizing primary care services to support behaviour changes ([Cifuentes et al., 2005](#)). Cifuentes et al. recognized that the chronic care model, which recognizes the influence of communities on health, was a relevant model to assist in this endeavour. As such, the article concluded that one of the success factors of the 17 practice networks was related to “forming partnerships with community groups by engaging opinion leaders, attending community meetings, and actively seeking opportunities to create linkages with community resources, such as local walking clubs, fitness centers, support groups, and other community agencies, to optimize available resources to patients outside the office.” ([Cifuentes et al., 2005](#)) p.56. Although not all the exploratory projects included consideration of health inequalities, several networks included locations that served lower SES populations in the US ([Cifuentes et al., 2005](#); [Etz et al., 2008](#); [Ferrer et al., 2009](#); [Holtrop et al., 2008](#); [Krist et al., 2008](#)). Also, the RWJF suggested the Chronic Care Model to its grantees, which recognizes the influence of the community on health and healthcare, as well as the personal barriers that need to be addressed in a patient-centered fashion. It also takes into consideration patients’ life circumstances, empowerment and self-management capacity ([Cifuentes et al., 2005](#)). Furthermore, the research associated with Rx for Health showed that perhaps the patient populations that have lower SES and/or poorer health status are cared for differently and in different settings than other patients ([Hung et al., 2008](#); [Hung et al., 2006](#)).

Example 3. REACH: REACH targets health priority areas with high burdens of diseases, such as cardiovascular disease, diabetes, breast and cervical cancer, infant mortality, asthma, immunization preventable diseases, and obesity ([CDC, 2012](#)). “REACH partners use community-based, participatory approaches to identify, develop, and disseminate effective strategies for addressing health disparities ... Because the causes of racial and ethnic health disparities are complex and include individual, community, societal, cultural, and environmental factors, REACH’s approaches cut across a number of evidence- and practice-based interventions.” ([CDC, 2012](#))

4.2.2 Mechanisms

This section will describe the three main mechanisms found across the large initiatives initiated in the contexts described in the previous section. These mechanisms are:

- 1) By design, those initiatives selected communities that shared a set of common characteristics linked to better chances of successful outcomes, based on the current understanding of IAH
- 2) Public health professionals fulfilling a core role based on their strength and training, including surveillance, needs assessment, monitoring, and support to adjustment of the initiatives
- 3) Purposefully supported infrastructures facilitating the creation of social capital which synergises the human and physical resources of the various organizations involved

First Mechanism

The first common mechanism, found across the large initiatives that achieved significant outcomes on health determinants, is that *by design* those initiatives selected communities that shared common characteristics prior to the reception of the funding. The call for proposal attracted communities: 1) for which the issue was of interest and prevalent; 2) who already had awareness and motivation to use IAH to contribute to solving the issues; who were welcoming of the provision of extra financial and technical resources to resolve community health inequalities; and 4) who were able to gather various partners to apply to the call for proposal at a level that was competitive. Illustrative examples are detailed below.

ALBD: The selection process started with more than 900 brief proposals, and was narrowed down to a final selection of 25 community partnerships to receive 5 years of funding ([Bors et al., 2009](#); [Bussel et al., 2009](#)).

Rx for Health: The round one selection started with pre-identified networks that had expertise and interest in the topic, and resulted in the selection of 17 exploratory community-practice partnership projects from July 2003 to October 2004. The process took 2 years from the start of Rx for Health within the RWJF to the selection of the 17 exploratory projects ([Cifuentes et al., 2005](#)).

REACH: The awareness and desire to act on health inequities was central to the inception of REACH and the selection of the communities. REACH began in 1999 and selected 40 communities in its first round of funding, called REACH 2010, which is the initiative generating articles that have been included in the original search ([CDC, 2012](#)).

Second Mechanism

A second common mechanism found across those initiatives relates to the core role of public health professionals. Public health professionals provided a large part of the technical support. Those initiatives had core principles of implementation across communities, closely following classical public health approaches. They also supported the appropriate use and adaptation of the evidence to local contexts and opportunities. The planning of the call for proposals included pre-granting steps and infrastructure development to ensure that the funders would be able to provide technical support to communities to help them understand how to use evidence and to adapt their interventions based on the community context. The technical support also frequently included road maps, guidebooks, and frameworks to guide the intersectoral partnerships to act based on evidence and to exert evidence-informed influences through the various existing societal structures. By existing societal structures, I mean municipal or state planning processes, laws, policies, federal and provincial healthcare funding, insurance processes, and reach, media coverage, educational institutions, and so on. The funders (frequently public health organizations or foundations with extensive public health expertise and mission) included planned time in the funding process to support both the use of evidence as well as the development of partnerships. Therefore, those interventions qualify as evidence-based, supported IAH interventions. Illustrative examples are detailed below.

ALBD: The RWJF states that it built the ALBD program as an IAH based on their prior experience dealing with the issue of tobacco and other substance use control as well as best practices from the literature recommending multi-level

Box 1. ALBD complementary supportive programs

- “1. The Active Living Network ... to build a national coalition of leaders and organizations committed to designing healthy, active communities.
2. The Active Living Research National Program Office ... to build the evidence about the modifiable environmental and policy determinants of active living.
3. The Active Living by Design National Program ... a community demonstration initiative to apply and expand growing knowledge about effective programs and policies to make neighborhoods and communities more activity-friendly.
4. The Active Living Resource Center ... to provide communities and public health advocates with the tools and resources needed to make walking and biking part of healthy communities and neighborhoods.
5. The Leadership for Active Living program (expanded to cover issues related to both active living and healthy eating with the new name Leadership for Healthy Communities) ... to build political will, leadership, and advocacy for implementing effective active living policies and programs.
6. Active for Life® ... to support and evaluate replicable action-oriented community demonstrations to increase active living among adults aged 50 and older.” ([Bussel, Leviton, & Orleans, 2009](#)) p.S310

preventive actions ([Busse et al., 2009](#)). The RWJF website also explains that partnerships are needed to address the health issues faced by Americans, and that those partnerships can be between public and private agencies, or among various community stakeholders. ALBD was built with several complementary programs meant to support each other and the community grantees, as well as the advancement of knowledge in the field (Box 1 lists the complementary suite of programs). The grantees were expected to follow an ecological framework with multi-level strategies referred to as the ALBD Community Action Model ([Bors et al., 2009](#)), inclusive of 5 different strategies for interventions, referred to as the 5P, which stands for:

1. *Preparation*, an ongoing process of attention to multidisciplinary partnerships, getting ready and reinforcing actions, and pursuing financial and in-kind resources to build capacity and support sustainability.

2. *Promotion*, which are the means used for the initiative to connect with opinion leaders and the public to promote a social environment in which active living becomes the norm.

3. *Programs*, which consist of ongoing organized activities engaging individuals in physical activities (such as walking clubs) and/or incentive or rewards to engage in active living.

4. *Policy*, which are attempts at influencing policy makers to create policy changes or organizational procedures in governments, schools, and workplaces.

5. *Physical projects*, which are activities that create opportunities or remove barriers to physical activities by changing the built environment, with or without policy changes (for example, new parks, crosswalks, bike lanes, or trails).

Rx for Health: Participants received the suggestion to use the chronic care model. They also had to address a combination of four specific behaviours through a practice network approach with flexibility in individual research project innovation and methods of evaluation (Cifuentes et al., 2005). “Recognizing that primary care practices could have considerable impact on health-related behaviors, the Robert Wood Johnson Foundation (RWJF) organized a national invitational meeting of practice-based research network (PBRN) leaders, practicing clinicians, practice staff members, and community partners, along with leading researchers in health behavior change, chronic illness care, and practice change. This conference engaged the perspectives of the potential participants to inform the design of a new research initiative and identified the potential of community-practice partnerships and the need to reconcile idealized models of health promotion and the realities of most practices” ([Cifuentes et al., 2005](#)) p.S5.

REACH: The need for the use of best practices in terms of community-based participatory research is outlined in the description of REACH on the CDC website, which explains that through REACH, the CDC supports community coalitions and provides infrastructure and technical support to implement, coordinate, refine, disseminate, and evaluate evidence- or practice-based approaches and programs in local communities ([CDC, 2012](#)) ([Division of Community Health National](#)). Furthermore, the CDC has a core value of basing its programs on the highest quality scientific data and best practices of putting science into action to prevent diseases ([CDC](#)). Further details of the CDC's and REACH's prior experience with public health and IAH are in Box 2.

The second mechanism includes the use of surveillance and needs assessment with on-going monitoring and evaluation of individual community initiatives and of the larger initiative to trigger improvement based on evidence of impact and evidence of implementation, successes and difficulties, and that supports intersectoral discussion by providing a basic set of indicators to follow and address. The insight generated serves to inform the adjustment of interventions as they unfold. Further insight is also gained by the sharing of experiences from the various communities. Therefore, those interventions can be referred to as benefiting from supported co-evolution and co-learning based on best practices. Examples are detailed after Box 2.

Box 2 REACH planning and IAH

REACH is part of the Division of Community Health, which uses IAH approaches at the national and community level. Giles (2010) explains that REACH, at the national level:

“...had a number of federal and private sector partners who were instrumental in guiding it. These partners included the Offices of Minority Health, Public Health Science, and the Assistance Secretary for Program Planning and Evaluation from the Department of Health and Human Services. Other partners included the Office of Minority Health and Health Disparities at the National Institutes of Health, the Administration on Aging, the California Endowment, and the Society for Public Health Education. Without the advice, guidance, and partnership of these influential organizations, the REACH program would not have been as successful as it has been.” ([Giles, 2010](#)), p. 273.

The program was also planned to unfold at the local community level through IAH:

“The expectation with funding was for each community to create a community coalition that would develop, implement and evaluate a community action plan to address disparities in health. The coalitions were required to include one or more non-governmental agencies, a local public health agency, and an academic institution; many of the coalitions also included representatives from local hospitals and professional organizations. Each community identified the local organizations that they felt were best suited to implement activities related to the elimination of health disparities. The interventions that the communities implemented were evidence-based and tailored to the needs of the local community. CDC provided funding to each of the communities at the level of approximately US\$800,000 per year. CDC also provided technical assistance to the communities through monthly conference calls, annual meetings and periodic site visits.

Each of the communities focused on three overriding areas. The first of these focused on providing community supports for the achievement of a healthy lifestyle. This was largely accomplished by implementing community-wide policy and environmental changes, such as creating more healthy eating options and safe places for physical activity. The second focus area involved supporting community health workers to assist in patient navigation and chronic disease management. Finally, the third focus area created activated patients by educating community members through the use of media campaigns or community health workers. These community members were educated about their chronic conditions and trained to work with their healthcare providers as active participants in the management of their diseases.”([Giles, 2010](#)) p. 274.

ALBD

“The grant making approach that RWJF employed can best be described as a “high touch/low-dollar” approach, through which grantees received modest grants (i.e., approximately \$200,000 each over 5 years) along with encouragement to secure matching funds and considerable hands-on technical assistance by the ALBD NPO staff to increase local capacity for action and sustainability. The ALBD NPO provided technical assistance through a multidisciplinary team of project officers and a comprehensive learning network, which included activities like coordinated grantee meetings, teleconferences, trainings, site visits, and ongoing support and coaching calls.” ([Bussel et al., 2009](#)) p.S310.

ALBD 10th anniversary lessons learned further stated that:

“Effective learning networks provide venues for the sharing and testing approaches across settings. In some cases, they offer leaders a broader vision of what is possible based on successes from other communities. In other cases, they can influence the content of action plans, policy and program decisions, partnership composition, staff development, partner performance, and/or resource development. Collaborative, multi-disciplinary, multi-strategy approaches to behavior change are complex, burdensome and new to many people. Professionals and advocates at all levels of experience need opportunities to learn, build skills and supportive relationships, access new resources, recharge their motivation and remind themselves that they are part of something larger than their daily experience. It is especially valuable to integrate learning networks into community grant initiatives and provide material resources and other support to grantees to enhance their active participation.” ([ALBD](#))

Rx for Health:

The RWJF evaluation report on the Rx for Health explains that:

“The information gathered as part of the evaluation was fed back to the program’s participants for their use in their work to improve health behavior counseling.

- The evaluation team and the PBRNs [Practice Based Research Network] could look at the data quickly.
- The investigators (in the PBRNs) used these data as they implemented and evaluated their interventions.
- The program management analyzed and shared the data among PBRNs and practices, to support collaboration and learning.” ([Garrett et al., 2013](#)) p. 9.

REACH:

As explained in the description of the prior mechanism, REACH supports the infrastructure to implement, coordinate, refine, evaluate, and disseminate the results of community initiatives. It also supports national and international organizations to share evidence-based strategies and culturally-based community practices to eliminate racial and ethnic health disparities ([Division of Community Health National](#)).

Third Mechanism

The third mechanism is the creation of social capital that synergises the human and physical resources of the various organizations involved. Although the creation of social capital is enabled by best practices for partnership building and improvement of population health status through action on health determinants, the building of social capital is a core role of the two other main actors of interest in this review: the primary care providers and the representatives from sectors of society other than the health sector. The extraction of the roles of those two types of actors in the projects part of this review showed that they had surprisingly similar roles in relation to social capital. In order to distinguish between various types of social capital, I used the Szreter and Woolcock (2004) categorisation, which was discussed as part of the background papers developed for the CSDH ([Szreter & Woolcock, 2004](#)) ([CSDH, 2008a](#)).

Szreter and Woolcock (2004), as explained in the CSDH background paper (2008), distinguish between three types of social capital: bonding, bridging, and linking social capital. *Bonding social capital* refers to trusting and cooperative relations between members of a network who see themselves *as being similar in terms of their social identity* (like the mortar between the bricks of a house). An example of bonding social capital observed in many initiatives is the hiring of community members to provide outreach, health education, self-management groups, and other activities (such as recreational physical activities) to fellow community members. An example of how public health is building infrastructure to enable this is through funding and support for building the capacity of community members hired either as outreach, education, or self-management workers and core staff in community organizations for periods of several years. Most of those initiatives are structured to request the involvement of community organizations, and many promote community empowerment in the intersectoral partnership. The infrastructure supports community organizing.

Our findings also show that public health professionals/organizations use their own bonding social capital with medical and research institutions as well as other types of professionals and political organizations to promote initiatives that address health determinants. This is exemplified by the large number of public health institutions that were leading the inception of large initiatives, and of local initiatives within those larger ones.

Bridging social capital refers to respectful relationships and mutuality between individuals and groups that are aware that they do not possess the same socio-demographic characteristics (e.g., a bridge between two cities, or between elders and youth, or between Caucasians and those of other ethnicities) ([Szreter & Woolcock, 2004](#)). From the initiatives studied as part of this thesis, examples of infrastructure established by public health-type institutions that enabled bridging social capital included the organization of meetings between communities involved in those initiatives all over the US (rural, urban, and suburban, of various ethnic compositions); as well as the collection and dissemination of communities' local project methods, lessons learned, successes, and challenges.

Linking social capital refers to the “norms of respect and networks of trusting relationships between people who are interacting across explicit, formal or institutionalized power or authority gradients in society” ([Szreter & Woolcock, 2004](#)) p. 655. An example of linking social capital would be an explicit structure that develops and supports respectful links between black citizens in a poor neighbourhood and police officers and municipal policy makers (as seen in REACH communities). The public health organizations created some of the infrastructure for linking social capital from the start of the initiatives by calling for local level applications that had intersectoral participation, including from members of various socio-demographic groups and levels of authority in society (i.e., community members affected disproportionately by one or several health determinants, as well as formal institutional and political leaders). Those intersectoral applications were strengthened through formal support by public health organizations, including funding to strengthen the partnership and to ensure that the appropriate time and technical support is available to enable the various actors to plan, implement, and monitor actions on health determinants jointly. This is exemplified by the large array of organizations of various statures participating in the REACH local coalition in Table 38.

The findings reveal that the support for building linking social capital was not limited to creating coalitions with members of various organizations of various statures, or to several years of funding with explicit time to further develop the partnership and the joint planning. The support from public health organizations for building linking social capital included capacity building in leadership, in cross-cultural issues, and in understanding of historical, social, and biological roots of health issues. It also included support and facilitation of action with organizations that were not part of the coalition. Such support again included funding and technical support for planning, partnership building, and on-going interaction mechanisms between groups internal and external to the coalition. Such funding was frequently used to employ core staff to coordinate the projects locally between all the internal and external actors.

When primary care practitioners or organizations are involved in the initiatives originated by large public health organizations or foundations, the realist review and the Cuban supplementary analysis shows that they consistently fulfill the following roles:

1. Contributing their organization's human and physical resources as synergistically needed and feasible
2. Contributing to the social capital of the partnership through their existing bridging and linking social capital (lending credibility and connection to the partnership)
3. Contributing to the linking social capital by bringing their own perspective on health issues (clinical field intelligence)
4. Using their bonding social capital to influence peers (medical community activators)
5. Using their linking social capital to build capacity in local organization and communities (for example, to address risk factors, manage chronic diseases, and facilitate access)
6. Using their linking social capital to the benefit of patients (linking them to community organizations or other services in an explicit and organized fashion)

When various sectors are involved, they play a set of roles very similar to the primary care practitioners/organizations, from the Cuban supplementary analysis and the realist review. They consistently:

1. Contribute their own organization's human and physical resources as synergistically needed and feasible
2. Contribute to the social capital of the partnership through their existing bonding, bridging, and linking social capital (lending credibility and connection to the partnership)

3. Contribute and use the linking social capital by bringing their own perspective on health issues, and refine how they can act in conjunction with others across sectors and authority levels (community organizations' field intelligence)
4. Use their bonding social capital to influence peers (outreach, peer educator, lay health workers)
5. Use the linking social capital to build capacity in their own community members and in other local organizations, for example, by creating initiatives that help address risk factors, manage chronic diseases, facilitate access, and address cultural issues (community activator)
6. Use the linking social capital to the benefit of clients they serve to bring them access to health services or the services of other organizations, or to provide their services to referred patients from other organizations

In summary, in initiatives initiated by large organizations or foundations, the public health professionals and organizations planned for infrastructure and funding to support the creation of various types of social capital, as well as for the use of evidence on how to act on social determinants. They also provided funding and infrastructure support to document, monitor, research, and evaluate those initiatives. The resulting creation of the various social capitals across representatives and organizations in primary care, public health, and other sectors seemed to be one of the important mechanisms supporting the outcomes reached by those initiatives. This is not to say that public health organizations were the leaders of the community level initiatives; different stakeholders in different communities enacted leadership at the community level. At the local level, the initiatives were led by community organizations, research organizations, or local public health or healthcare organizations (public or private). Because of variations in who is assuming the leadership of the projects at the local level, it is not part of the demi-regularity (DR) described in this section, since it is not a common mechanism.

4.2.3 Outcomes

There are several common outcomes to projects aiming to address health determinants and involving public health, primary care, and representatives of other sectors when they are part of larger initiatives. Those outcomes include: increased capacity and funds; increased social capital (as social capital is also a health determinant to be address); increased chances of change in norms, policies, infrastructures, behaviour and health status; as well as increased sustainability of and

learning from those initiatives. Some detailed examples are given below, mostly based on the REACH initiatives.

1. Increased capacity at the community, provider, funder, and decision maker levels for evidence-based, feasible, and acceptable interventions resulting in increased social network/social capital, and changes in norms, policies, infrastructures, behaviours and/or health status.

For the ALBD, the Rx for Health, and the REACH, the evaluations of the initiatives support the feasibility, acceptability, and sustainability of several of the interventions implemented in various local contexts, as demonstrated by all the community results reporting implemented interventions addressing several health determinants and several health issues all over the US. Table 22 details the outcomes of the REACH initiative overall, as well as the selected projects that fit the realist review criteria.

As is seen in the REACH evaluation, impacts on health status have been demonstrated, along with changes in policies, infrastructures, and access to care, in accordance with the REACH logic model ([CDC, 2012](#); [Division of Community Health National](#); [Giles, 2010](#); [Jenkins et al., 2010](#); [Larson et al., 2009](#); [Liao et al., 2010a](#); [McClellan & Schlundt, 2006](#); [Patel et al., 2010](#); [Schlundt & McClellan, 2006](#); [Schlundt et al., 2010](#); [Tucker, Liao, Giles, & Liburd, 2006](#)). Similarly, the ALBD evaluation shows changes in social norms, policies, infrastructures, and behaviours (physical activity and healthy eating) that are strongly associated with improved health outcomes ([ALBD](#); [Baker, Wilkerson, & Brennan, 2012](#); [Bors et al., 2009](#); [Bors, 2012](#); [Bors, Brownson, & Brennan, 2012](#); [Brennan et al., 2012a](#); [Brennan, Brownson, Kelly, Ivey, & Leviton, 2012b](#); [Brownson, Brennan, Evenson, & Leviton, 2012](#); [Claus, Dessauer, & Brennan, 2012](#); [Dobson & Gilroy, 2009](#); [Evenson et al., 2012](#); [Kraft et al., 2012](#); [McCreary et al., 2012](#)). The Rx for Health shows changes in access to preventive care and evidence-based interventions for individuals' self-management of chronic conditions ([Cifuentes et al., 2005](#); [Cohen et al., 2011](#); [Garrett et al., 2013](#); [Green, 2008](#); [Hung et al., 2008](#); [Hung et al., 2006](#); [Prescription for Health](#); [Woolf et al., 2005](#)). Romp and Chomp shows changes in behaviours and risk factors strongly associated with health status ([de Silva-Sanigorski et al., 2010](#); [Government of Victoria](#)), and the Isfahan Healthy Heart ([Kelishadi et al., 2011](#); [Khosravi et al., 2010](#); [Mohammadifard et al., 2009](#); [Rabiei et al., 2009](#); [Sarrafzadegan et al., 2006a](#); [Sarrafzadegan et al., 2009c](#); [Sarrafzadegan et al., 2009d](#); [Sarrafzadegan et al., 2010](#);

[Shahrokhi et al., 2008](#)), show changes in social norms, policies, behaviours, access to care, self-management and health status. Many other interventions' examples of outcomes on social norms, social network/social capital, policies, infrastructures, behaviours, and health status are found in Table 38 of Appendix F.

Table 22 REACH outcomes

REACH overall	Giles (2010) summarizes some of the key outcomes of REACH: “It is not just local community results that are so impressive. A look across all REACH communities shows that disparities in healthcare are being reduced or eliminated. For example, African-Americans within the REACH communities now surpass the national average in terms of the percentage of adults who have had their cholesterol checked in the last five years. Among Hispanics, while nationwide the percentage of adults who have had their cholesterol checked has actually decreased, within the REACH communities the percentage screened has increased and the disparity has been almost completely eliminated.” (Giles, 2010) p. 275
REACH: smoking in Asian communities	Liao et al. (2010) reported the results of the comparison of the prevalence of smoking from the Behavioral Risk Factor Surveillance System in four REACH Asian communities with their state results and those of the rest of the US, from 2002 to 2006: “Prevalence of current smoking decreased dramatically among men in REACH communities. The reduction rate was significantly greater than that observed in the general US or API [Asian and Pacific Islander] male population, and it was greater than reduction rates observed in the states in which REACH communities were located. There was little change in the quit ratio of men at the state and national levels, but there was a significant increase in quit ratios in the REACH communities, indicating increases in the proportions of smokers who had quit smoking.” (Liao et al., 2010a) p. 853
REACH: Social network / social capital and community health workers	Liburd (2010) describes how community engagement and community building are hallmarks of the REACH program and how they support REACH health outcomes: “Social and community networks influence health by providing support, helping members secure access to resources needed for health, and creating avenues for solving societal problems. These networks and supportive relationships are linked to good health and also to the development of social and political power that can be used to positively influence neighborhood conditions and opportunities.” (Liburd, 2011) p. S3 Liburd also explains the role of community health workers, which is linked to the building of social network and social capital: “A national survey of community health workers conducted in 1998 identified 7 core roles: “cultural mediation, informal counseling and social support, providing culturally appropriate health education, advocating for individual and community needs, assuring that people get services they need, building community capacity, and providing direct services.” Articles in this special issue highlight the role of community health workers as cultural translators and change agents in REACH communities. They have been effective in implementing chronic disease self-management interventions, increasing access to quality healthcare among persons feeling alienated from the system because of language and other barriers and building community capacity for health promotion—all elements of a health promoting social environment.” (Liburd, 2011) p. S5

2. Increased publication and dissemination of the learning and outcomes of the intersectoral collaborations and interventions.

The second main outcome is the increase in publications and dissemination activities of the learning and the outcomes of the intersectoral collaborations and interventions. This is evidenced by the large number of publications included in this review that have arisen from ALBD, Rx for Health, and REACH, as well as through the original and supplementary websites, articles, and documents found to be related to those projects. It is also notable that they all have websites diffusing the learning through peer-reviewed publications and other means to cater to several audiences. They all organize grantees' meeting or exchanges, and send news items and press releases, for example. The evaluations of those initiatives have contributed not only to the knowledge of what works in IAH, but also to the knowledge of how to evaluate such initiatives, bringing important considerations of adaptation of the evaluation method as the outcome evolves ([Baker et al., 2012](#); [Bors, 2012](#); [Bors et al., 2012](#); [Brennan et al., 2012a](#); [Brownson et al., 2012](#); [Cifuentes et al., 2005](#); [Green, 2008](#); [Kraft et al., 2012](#); [McCreary et al., 2012](#)).

After the period covered by this realist review, a whole new supplement of the American Journal of Preventive Medicine (vol. 43, issue 5 supplement 4 – November 2012) was issued with the various results of further evaluation and research around ALBD. The findings further support the conclusion that ALBD was successful in generating acceptable, feasible local interventions in sustainable partnerships that led to changes in policies, infrastructures, and behaviours, as well as in building the capacity of the communities and of the RWJF and acting as a springboard for the next series of multisectoral interventions ([Baker et al., 2012](#); [Bors et al., 2012](#); [Brennan et al., 2012a](#); [Brennan et al., 2012b](#); [Brownson et al., 2012](#); [Claus et al., 2012](#); [Evenson et al., 2012](#); [Kraft et al., 2012](#); [Sallis & Green, 2012](#); [Strunk, Justin, & Bussel, 2012](#)). It also confirmed the difficulties of carrying out evaluations of such complex natural experiments and the role of monitoring and evaluation as enablers of interventions' improvement and adjustment ([Baker et al., 2012](#); [Bors et al., 2012](#); [Brennan et al., 2012a](#); [Brennan et al., 2012b](#); [Brownson et al., 2012](#); [Claus et al., 2012](#); [Evenson et al., 2012](#); [Kraft et al., 2012](#); [Sallis & Green, 2012](#); [Strunk et al., 2012](#)).

3. Providing a foundation for sustainability at the community level, as well as supporting the creation of large-scale follow-up initiatives that can address issues found in prior initiatives, or other health issues.

Those programs have led to subsequent initiatives, either under the same umbrella program or in new programs, building on the learning from the ALBD, Rx for Health, REACH, EBCCD, and CNP. Several of the communities and networks that participated in those initiatives are still engaged in the same types of activities, have secured other implementation and research funding, and have expanded or refined their partnership networks.

ALBD: As an example, the original investment of \$15.1 million in the ALBD national program (about \$200,000 per project for five years, plus the technical support and associated infrastructure) generated about \$249 million in additional funds or commitments ([Bussey et al., 2009](#)).

Rx for Health: the first round led to a second round of funding to continue studying and improving how to support behaviour change from primary care practice, followed by other RWJF initiatives to address obesity and quality of care, including access to preventive care.

REACH: The original REACH 2010 led to five subsequent REACH initiatives, funded until 2015, as part of two groups of funding initiatives: “Action Communities, for which there are 22 funded; and Centers of Excellence in the Elimination of Disparities (CEEDS), for which there are 18 funded. The Action Communities are expected to develop and implement effective interventions for the elimination of health disparities. This component of funding is very similar to the design of the original REACH program. The CEEDS, in addition to designing and implementing effective interventions for the elimination of health disparities, are expected to mentor communities across the country and help them implement effective interventions to eliminate health disparities. Each CEED is expected to mentor at least six communities over the five-year funding cycle.” ([Giles, 2010](#)) p. 275.

In total, this series of outcomes can be seen as creating activated learning communities and organizations with increased social capital, leading to increased chances of sustained whole-of-community changes in terms of norms, policies, infrastructures, service provision, healthcare funding, behaviours, and health status.

It is not a guarantee that communities that are part of these types of initiatives will be successful in achieving changes in health outcomes within the timeframe of the initiatives. It is also difficult to

measure those types of changes and to attribute them to the community initiatives. However, in many instances of the ALBD and REACH communities, the demonstration of the impact on health status related to the initiative is very strong.

In summary, the large initiatives (such as the REACH, Cancer Community Network, ALBD, Rx for Health, Isfahan, Health Promotion in Brazil) have all documented impacts on health determinants (such as the creation of social capital and changes in infrastructures, norm, policies), intermediary outcomes (such as increased access to preventive care, changes in behaviour, increases in healthcare financial and cultural accessibility, changes in knowledge and attitudes), and many have shown impacts on health outcomes, (such as decreased smoking rates as well as decreased diabetes and cardiovascular complications rates). Those initiatives have also impacted the knowledge in the field of IAH through large research programs and dissemination efforts, as well as generating sustained IAH. That set of consistent outcomes is very impressive and is unprecedented in terms of systematic impact on health and health determinants. This CMO configuration of large initiatives is summarized in Figure 12. This is especially impressive when the outcomes in this demi-regularity of large initiatives are compared to the CMO of smaller initiatives, which are detailed in the next section.

Figure 12 Demi-regularity of projects started as part of larger initiatives

Context:

Carefully planned large initiatives, based on prior experience with IAH, select several project sites or a large municipality, a state, or a country, where decision makers have awareness of the need of IAH to address health issues that the health sector cannot solve alone.



Mechanisms:

1. Selection of communities/sites and participants that demonstrate some capacity and interest in participating in IAH or in solving a particular problem that is sought to be addressed by the initiative (selection of communities/sites/participants already partially activated).
2. Public health methods and involvement are central to those initiatives, including planning, technical support for implementation, monitoring, research, and building of enabling infrastructures (supporting further community activation and synergistic learning, based on best practices):
 - a. Supporting communities through core implementation principles based on evidence, including best practices for intersectoral action and best practices to improve health through action on health determinants at the individual and community levels;
 - b. Support for flexibility and for local initiatives to meet local needs and use local capacity, while still being based on best practices of what promotes health improvement;
 - c. Funding and infrastructures that support strengthening partnerships, joint coordinated actions, and joint learning, including, in many cases, community empowerment, capacity building for participatory leadership, and attention to increasing the participatory nature of governance systems;
 - d. Monitoring and evaluation of individual community/site/participants' projects, as well as monitoring and evaluation of the overall program, informing the adjustment of interventions as they unfold.
3. Community organizations' and primary care organizations' roles include the use of their own human and physical capital, which is synergized with that of other partner organizations. The synergies arise in part from the social capital built by the supported intersectoral collaboration, as well as by generating new human, physical, and social capital with a range of outside organizations.



Outcomes:

1. Increased capacity at the community, provider, funder, and decision maker levels for evidence-based, feasible, and acceptable interventions resulting in increased social network/social capital and changes in norms, policies, infrastructures, behaviours and/or health status.
2. Increased publication and dissemination of the learning and outcomes of the intersectoral collaborations.
3. Providing a foundation for sustainability at the community level, as well as supporting the creation of large-scale follow-up initiatives that can address issues found in prior initiatives or other health issues.

4.3 CMO of smaller projects

In the other projects identified through this systematic review, there is a demi-regularity found across smaller projects that is different from the demi-regularity of larger initiatives. This section will describe the common CMO found for those smaller projects.

As mentioned above, one common contextual element is that those projects tended to be smaller initiatives, led or initiated by one or a few practitioners or community organizations. Another common contextual element is that they were funded for much shorter periods than the initiatives described in the demi-regularity of the larger initiatives.

In terms of mechanisms, those projects seem to be a side activity from the main workload of those involved in leading, implementing, assessing, and disseminating the results. In addition, the projects, or those involved, do not seem to benefit from a lot of support for capacity building. Those who initiate those projects do not necessarily have prior expertise in public health or IAH. Many are proposing that other professionals provide educational and screening interventions in lieu of conducting them in the physician office. There is less attention paid to the planning and implementation of the collaboration and less attention paid to how to sustain the project after the initial funding ends. There are fewer resources invested in building the initiatives based on prior learning or in diffusing the lessons learned. Public health professionals and organizations are playing a much smaller role in these projects compared to the ones described in the prior section.

In terms of outcomes, these projects reached a much smaller number of people. There was less attention paid to how these projects were evaluated, which outcomes were important and appropriate to track, and how to study them. These projects tended to repeat what other, prior projects had tried, such as providing educational initiatives, often with no or few complementary actions. Nonetheless, these projects show increased awareness of health issues among participants, and the participants seemed to appreciate those opportunities (when they answered survey or evaluation questions). Those initiatives are sometimes the basis for applications to larger, more consistent sources of funding and the start of building local capacity to implement larger, more evidence-based IAH interventions. However, most of the time, the literature did not provide evidence of continued action or actions that became institutionalized. Details of CMO configurations extracted for all the smaller interventions are found in Table 38 of Appendix F.

In total, this realist review shows that for all the initiatives with significant, documented reach and outcomes, public health expertise and the use of surveillance, monitoring, and evaluation to inform planning and adjustment of action has been found to be central. The inclusion of primary care practitioners demonstrates that they play an important role in catalyzing some of those initiatives, as well as contributing significant synergies to the partnership by sharing their social capital, gaining new social capital, and using other organizations' social capital. This has resulted in partnerships in which a variety of individuals and organizations (including primary care practitioners/organizations) are able to contribute to, and use, various types of social capital and evidence to improve the management of health determinants, resulting in changes in policies, practices, infrastructures, norms and behaviours, resulting in turn in improved living conditions, improved distribution of power, money and resources, and better understanding of the problem and of the impact of actions (the three overarching recommendations of the CSDH) ([CSDH, 2008a](#)).

This realist review also shows that the initiatives with the most impressive outcomes of changing health determinants and health statuses are part of large, well-planned, long-term (5 to 10 years) initiatives, build on prior experiences, and are implemented in sites where there is an awareness of participants and decision makers as to the impact of health determinants on health and the need to address those in part through IAH. Smaller initiatives much less frequently lead to significant changes in health determinants or health status. This is due to multiple reasons: smaller reach, lack of monitoring and adjustment as the project evolves with much smaller ability to evaluate impact, lack of sustainability mechanism, lack of use of prior evidence, and lack of attention and resources invested in capacity building for intersectoral partnerships among others. The next chapter, the conclusion, will discuss the findings of this realist review in light of the Cuban re-analysis and the current literature on IAH.

Chapter 5: Conclusion

In the re-analysis of the Cuban case study, I paid particular attention to the distinct contribution of primary care practitioners to the management of health determinants, complemented by the realist review exploring how primary care, public health, and other sectors collaborate to manage health determinants. This has provided a rich variety of data sources and methodologies to answer the main research questions posed by this thesis and to contribute to the two main purposes of this research.

Regarding situations where there is collaboration between primary care practitioners and public health professionals within broader intersectoral collaborations meant to address health determinants (including the exemplary case of Cuba), this thesis posed three questions:

1. What are the contexts in which those situations happen?
2. What are the mechanisms leading to actions on health determinants?
3. What are the outcomes of those collaborations?

The two key objectives of conducting this research were:

1. To assist decision-makers in understanding and recreating conditions that lead to intersectoral collaboration addressing health determinants; and
2. To assist stakeholders - in particular, primary care practitioners - to effectively participate in these systems of collaboration

First, this concluding chapter reviews and integrates the key findings from the Cuban reanalysis and the realist review in CMO demi-regularities, building on the current state of knowledge. This is followed by a discussion of the rigour and limitations of the study. Finally, this chapter looks at the implications of the findings for future research as well as for improving current practices to assist decision-makers and representatives of public health, primary care, and other sectors in the intersectoral management of health determinants.

5.1 Discussion of key findings from the re-analysis of the Cuban case study and the realist review

Lessons learned from the examples selected in this realist review, triangulated with what was found in the Cuban reanalysis, reveal a set of contexts, mechanisms, and outcomes common to the large initiatives and the Cuban model. These features appear constant even though other contextual factors vary enormously across the presented examples of IAH (e.g., different countries, political

systems, health systems, priority health determinants, or health issues addressed). The identified commonality of CMO configurations supports the creation of a mid-level theory clarifying how intersectoral collaboration, involving primary care, public health, and representatives of other sectors, works in practice to address health determinants. Some important lessons also arise from what is divergent from the Cuban model to the realist review findings. Those are highlighted as divergent contexts, mechanisms, and outcomes at the end of this section.

As reflected in the introductory chapter's overview of key literature, explanations of *how* to manage health determinants and the roles of the various sectors are not typically found in peer-reviewed scientific journals. This is partly explained by the relative newness of conducting research on intersectoral collaboration to improve health. Despite the long-standing recommendation to practice intersectoral action (especially in public health), scientific studies of how best to carry out those interventions is a relatively new field ([Loewenson, 2013](#); [Ndumbe-Eyoh & Moffatt, 2013](#); [WHO, 2010b](#)) ([CSDH, 2008a](#); [Jackson et al., 2006](#); [Koh et al., 2010](#); [Lawn et al., 2008](#); [Rawaf, De Maeseneer, & Starfield, 2008](#); [Sanders & Haines, 2006](#); [Walley et al., 2008](#)). Nonetheless, public health organizations and other overarching advisory bodies have attempted to answer the “how-to” questions based on expert advice, available case studies, and key informant interviews, combined with attempts to review the relevant peer-reviewed publications and compile the knowledge in reports and case series ([PHAC, 2007](#); [PHAC & WHO, 2008](#); [WHO, 1997, 2014](#); [WHO Centre for Health Development, 2011](#)). In comparison, most of the peer-reviewed academic publications have focused on *how* health determinants affect health, rather than how to *act* on them. Consequently, the reports cited above provide the most adequate comparison point for the findings of this research. This literature requires supplementation by relevant models and theoretical constructs from peer-reviewed articles, as presented in the following subsections.

5.1.1 Common and divergent contexts

Two common contexts were found in both the realist review and the Cuban re-analysis: one is the prior awareness of decision-makers and many participants in these initiatives of the impact of health determinants on health and health inequities, as well as an understanding that addressing these health determinants cannot be done solely by the healthcare system (or even the public health system). The second is that large IAH initiatives that included both primary care and public health within broader collaborations to address health determinants were initiated as *follow-ups* to prior

attempts to address health determinants through public health and prior experiences in intersectoral collaboration. Several divergent contexts also shed important insight into what does and does not matter to establish successful intersectoral collaborations involving public health, primary care, and other sectors to manage health determinants. The divergent contexts that are reviewed in this section include who initiated the interventions, universal and non-universal health systems with various mixes of public and private health care provision, high ratio of health professionals versus low ratio of health professionals per capita, and high, middle or low-income countries.

First common contextual factor: awareness of IAH and health determinants on health

One of the main finding is that a common contextual element of the initiatives that lead to significant outcomes is the awareness of the health impact of IAH and health determinants by decision-makers and participants. This finding suggests that to improve health through IAH on HD, activities that raise the awareness of decision makers about the impact of IAH on health through action on HD are needed. Both the contextual factor and it's implication for practice are echoed (at least in part) by the Health Council of Canada's report on improving the health of Canadians through a health determinant approach ([Health Council of Canada, 2010](#)). This report recommended that IAH be led by IAH-aware, committed, *elected* officials at the highest levels, and implemented through a whole-of-government approach, and that funds and resources be invested into raising awareness of IAH and HD in *elected officials* (among others). This thesis supports the conclusion that IAH arises in a context in which decision-makers and participants have awareness of the importance of health determinants, however, our findings suggest that this awareness does not need to be awareness among elected officials.

Cases in which whole-of-government approaches were combined with joint participation of other actors (whole-of-community) in intersectoral action on health determinants were described in the interventions section of the realist review. Examples include actions in: Brazil (health promotion and physical activity intervention and primary healthcare reform); New York State ACT; Isfahan in Iran; several of the ALBD communities in the US; the Urban Health Initiative in the US; and the Romp and Chomp community initiative in Australia. Nonetheless, even the successful initiatives identified in the realist review implemented IAH less systematically, less broadly, and in a less well-integrated fashion across levels of governments, sectors, and health determinants, compared to what was observed in Cuba, where there was awareness and commitment at the highest level of government.

Notwithstanding those whole-of-government initiatives, this thesis also demonstrates that large, successful, intersectoral initiatives can impact health determinants *without* an overarching awareness of and commitment to IAH by elected officials (at the top level or at other levels). Awareness of health determinants and commitment to intersectoral action were commonly found among the non-elected officials who initiated and funded interventions analyzed as part of the realist review (e.g., foundations, large public health institutions, commercial healthcare entities such as Kaiser Permanente, international development programs, and large research funding institutions).

An example (outside of the realist review findings) of successful IAH that started outside of the context of government leader awareness of IAH or HD impact on health is the Bangladesh Rural Advancement Committee (BRAC). It started as an NGO rehabilitation effort in Bangladesh after the 1970 war, and evolved into a intersectoral, multi-country operation targeting many health determinants, including education, work and income generation, healthcare, sanitation, and the empowerment of women and the ultra-poor (BRAC website www.brac.net accessed Dec 3 2013). One of the BRAC's programs was highlighted in the CSDH report:

“The proportion of people in these areas living on less than US\$ 1/day decreased from 89% to 59% during the first three years of the project and chronic food deficit fell from 60% to around 15% for project households. Factors contributing to the success of this project include: work with local elite to create an enabling environment for the programme; the provision of health education and identity cards to facilitate access to local health facilities; the provision of training and refresher training for income-generating skills; and the installation of latrines and tube-wells to improve sanitation.” ([CSDH, 2008a](#)) p.70.

Furthermore, even initiatives implemented through whole-of-government and whole-of-community approaches to address health determinants were not necessarily started by governments or elected officials. The Urban Health Initiative and ALBD, for example, started from IAH initiatives outside of government. Examples outside of those found from the realist review also support this finding. One such example is the EPODE²⁸ program addressing childhood obesity. EPODE, in its current format, combines a whole-of-community with a whole-of-municipal government approach to address childhood obesity. The initiative involves primary care, public

²⁸ EPODE stands for Ensemble Prevenons l'Obésité Des Enfants [Together let's prevent childhood obesity].

health, and many other sectors in the community. However, it started as a school-based program, led by a care provider. Since the school intervention alone was not sufficient to affect the childhood obesity rate, it was expanded to a whole-of-community intervention, with strong involvement of local elected officials. EPODE evaluation showed a decreasing obesity rate in EPODE communities in France, compared to control communities ([Romon et al., 2009](#)). This example also illustrates our second main finding in terms of a contextual factor, which is that IAH initiatives frequently evolve from prior, less effective or less comprehensive initiatives, improved and broadened over time, as is discussed next.

Second common contextual factor: the IAH initiatives evolved from prior initiatives to address health issues

The other contextual element common to Cuba and the large IAH initiatives of the realist review is that they evolved from prior initiatives seeking to address health issues. The lead organizations started to act on health determinants at some earlier time and had prior public health methods and/or intersectoral collaboration experience in addressing health issues. This is consistent with the recommendations from the WHO CSDH and the Health Council of Canada report, namely, to plan IAH carefully, and to expect that it will require several years of trial and error to have an impact on health outcomes ([CSDH, 2008a](#)) ([Health Council of Canada, 2010](#)). This finding also ties in nicely with common mechanisms and outcomes found in this thesis. Those common mechanisms and outcomes include the use of best practices in public health and intersectoral action along with monitoring of outcomes, resulting in the generation of new knowledge informing subsequent initiatives to become even more effective, synergistic, and refined over time.

This type of CMO configuration, in which the outcome of one initiative constitutes either a contextual element or a mechanism of subsequent initiatives, is consistent with other realist review literature that highlights the existence of recursive pathways ([Jagosh et al., 2012](#); [Pawson et al., 2004](#); [Pawson et al., 2011](#)).

Feedback loops of learning are also consistent with theories on complex systems and the development of innovation to address complex issues ([Patton, 2010](#)). MacDonald et al. define complex systems and problems as being composed of a collection of interconnected relationships and parts interacting in ways that are dynamic, unpredictable, and multi-dimensional, and in which cause and effect are non-linear ([MacDonald et al., 2012b](#)). MacDonald et al. (2012) further explain

that public health deals with complex issues, and public health systems are complex systems. Viewed through this lens, interventions to address health determinants can be conceptualized as complex interventions, addressing complex issues in complex systems. Patton adds that complex systems are systems “in which there is no central control; self-organizing and emergent behaviors based on sophisticated information processing generate learning, evolution and development.” Patton (2010) p.1.

Patton further suggests that complex environments for social interventions involve uncertainty and key stakeholders’ diverging views on how to proceed. This is very similar to what is encountered in some of the contexts in which collaborations to manage health determinants emerge, as shown in this thesis. As explained in the introduction, management of health determinants falls under the purview of many different stakeholders who are not necessarily in agreement on how to proceed, coming from diverging perspectives and sectors, with no one having control of all the other stakeholders.

The finding that divergence in contexts does not preclude one from obtaining meaningful outcomes is an important finding. It provides important insight on what should ***not*** be construed as incompatible contexts with managing health determinants through intersectoral collaboration involving public health and primary care alongside other sectors. The next section will review some of those diverging contexts that do not preclude intersectoral collaboration to manage health determinants when the common mechanisms found in this thesis are present.

Implications from divergent contexts

Some differences in contexts found in this study show that when the common mechanisms outlined below are present, there can be meaningful outcomes despite those differences.

First, many large, successful intersectoral collaborations involving public health, primary care, and other sectors to manage health determinants are initiated by organizations others than governments. They arise from non-governmental organizations, from private foundations, and from international organizations. This is an important finding, as many current recommendations place governments and political will at the centre of those initiatives’ successes ([Canada, 2007](#); [Commonwealth of Australia, 1993](#); [CSDH, 2008b](#); [Federal/Provincial/Territorial Advisory Committee on Population Health, 1999](#); [Fortin, Groleau, Lemieux, O'Neill, & Lamarch, 1994](#);

[Hancock, 2011](#); [Health Council of Canada, 2010](#); [Loewenson, 2013](#); [Ndumbe-Eyoh & Moffatt, 2013](#); [PHAC & WHO, 2008](#); [Shankardass, Solar, Murphy, Greaves, & O'Campo, 2012](#); [WHO, 1997, 2014](#); [WHO Centre for Health Development, 2011](#); [World Health Organization, 1997](#)), including the case study in Cuba ([Spiegel et al., 2012](#)). This finding does not mean that governments have no responsibilities in initiating, supporting, and scaling those types of collaborations. In fact, our results clearly show that governments are very important initiators, supporters, and actors in bringing to scale such collaborations. However, when governments are not committed to those types of collaborations, it should not discourage other stakeholders from initiating such projects, as long as they still pay attention to other common CMO configurations associated with the meaningful outcomes they are interested in generating.

Second, this thesis shows that intersectoral action to manage health determinants involving primary care (and public health and other sectors) occurs in a variety of health systems: in LMIC, MIC, and HIC with or without universal health insurance, with various forms of governments (socialist, communist, democratic, post-conflict, and fragile governments), with large variations in per capita public investment in health care, in systems with mostly public or mostly private delivery of primary care services, in systems with a high ratio of primary care practitioners per capita (Cuba, Canada, US, and others) as well as in countries with much lower ratios (Papua New Guinea, Bangladesh, Cambodia, Pakistan, Iran, etc.). This has implications. It shows that it is not necessary to have a vast supply of primary care providers per capita, or a publicly funded system, to find mechanisms enabling meaningful primary care participation in intersectoral action to manage health determinants. This is one of the frequent criticisms about the generalizability of intersectoral collaboration inspired by the Cuban model.

This summary of divergent contexts that do not preclude collaboration involving primary care, public health, and other sectors to manage health determinants with meaningful outcomes has to be viewed as part of the CMO configurations, as it is also clear that in those various contexts, several interventions also seem to lead to much less meaningful outcomes than others.

5.1.2 Common mechanisms

The common mechanisms found across the Cuban re-analysis and the large initiatives (with large, meaningful outcomes) from the realist review relate to: 1) the roles of public health, primary care, and representatives of other sectors; and 2) how the role distribution among the various actors lead to synergistic community activation. Before discussing these roles and mechanisms in more detail, it is important to lay out how they are embedded in broader series of CMOs, in which the outcomes of one CMO become part of contextual elements of subsequent CMOs.

The recursive nature of the context, mechanism, and outcome configuration is closely aligned with the literature on healthcare quality improvement. In that literature, improvement is achieved through relatively rapid cycles of planning, implementation, studying of the impact, and subsequent action based on the insights gained through the process (plan, do, study, act model) ([Berwick, Godfrey, & Roessner, 2002](#); [2003](#); [Newton, Lefebvre, Donahue, Bacon, & Dobson, 2010](#); [Schoenbaum et al., 2001](#); [Solberg et al., 1996](#); [Strumpf et al., 2012](#); [Trimino, Williamson, & Martinez, 2005](#)). These learning and improvement cycles seem to be part of how communities can improve the management of health determinants, keeping in mind that these cycles are a lot slower, usually spanning more than 5-10 years. Recursive learning in this thesis is seen in initiatives as large as involving entire countries, and as small as involving only neighbourhoods. Furthermore, the recursive learning seems potentiated and accelerated by exchanging the learning across communities/sites/participants, as seen in the community-of-practice model, used in quality improvement and other fields ([Barcelo et al., 2010](#); [Barwick, Peters, & Boydell, 2009](#); [2003](#); [Strumpf et al., 2012](#)). It is observed especially strongly in the Cuban re-analysis, with various layers of learning communities interacting and exchanging experiences, but is also seen in ALBD, REACH, Rx for Health, and the various cancer network interventions included in this review, among others.

This is in line with the Health Council of Canada report, which recommends that decisions should be made based on good information and data, with clear goals and monitoring as well as appropriate infrastructures to support the work over time and to establish the means for inclusive participation in the initiatives ([Health Council of Canada, 2010](#)). The report even recognizes that most of the assessed countries and jurisdictions that have implemented more systematic intersectoral

management of health determinants acknowledge that they did so through iterative learning over extended periods ([Health Council of Canada, 2010](#)).

In fact, the learning feedback loop processes seen in this thesis (both in Cuba and within the large initiatives) are also closely akin to how Patton describes learning from developmental evaluation for solving complex issues: asking evaluative questions, applying evaluation logic, and gathering real-time data to inform on-going decision making and adaptations ([Patton, 2010](#)) p.1. It is also in line with the approach of starting with what can be done based on the strength of the stakeholders (a strength-based approach), adjusting as outcomes emerge ([Patton, 2010](#)). Using complexity theory, these mechanisms could be labeled as planning based on the assumption of unpredictability, considering a range of possible outcomes for which one must continuously monitor and respond ([Lanham et al., 2013](#); [Leykum, Pugh, Lanham, Harmon, & McDaniel, 2009](#); [McDaniel Jr, Lanham, & Anderson, 2009](#); [Sornette, 2006](#)).

Common roles of public health professionals and organizations

Both the Cuban re-analysis and the realist synthesis show that one of the mechanisms by which IAH seems to work is through the central involvement of public health professionals, who provide technical support and infrastructure to support both the further activation of the community and the creation of evidence-informed synergistic actions. This thesis found that both in Cuba and in the large initiatives from the realist review, specific attention was paid by public health professionals to the use of best practices for intersectoral collaboration and for action on health determinants, which supported the creation of synergies in the roles of public health professionals, primary care practitioners, and representatives of other sectors.

In the Cuban health determinant management system, public health plays a key role, with some of the highest frequencies of formal participation in intersectoral action. Public health professionals play the role of expert advisors regarding evidence-based implementation of actions to improve health through managing health determinants. They play a very important role in monitoring burdens of disease, equity, and the impact of action on health determinants on both the burden of disease and the distribution of that burden in relation to equity considerations. They also have a direct role in managing health determinants, particularly in relation to proximal health determinants such as lifestyle and health education, as well as health promotion, preventive clinical interventions, and primary care. They also serve as a bridge between the various sectors, facilitating dialogue by

linking various perspectives to the ways they contribute to the understanding of health determinants' impact on health, and how action on these health determinants, in large part, can be the responsibility of multiple sectors other than the healthcare system.

The realist review also found that public health institutions and professionals have a central role in planning, funding, supporting, and delivering interventions that address health determinants, as well as acting as a bridge between different actors' contributions and perspectives. They also act as expert advisers, researchers, managers, and leaders in many of the large initiatives examined in the realist review. The development of evidence-based initiatives that catalyze and synergise individuals and organizations to act on health determinants as social capital requires specific support to maximize the chances of success; this public health support is frequently provided by national and international institutions and publicly-funded academic institutions. Sometimes foundations or other not-for-profit institutions provide it, but even in such cases, there is collaboration with local or state-level public health professionals in public institutions.

In total, this realist review shows that public health professionals do have a set of knowledge, skills, and attitudes that maximise the chances of success of intersectoral collaborations to manage health determinants, both in Cuba and in the realist review. This set includes specific skills related to: 1) collaboration and partnership across sectors, 2) leadership, 3) cultural and contextual adaptation, 4) use and dissemination of evidence, and 5) capacity building, among many other skills ([Carter et al., 2011](#); [Gostin, 2010](#); [Harvard School of Public Health](#); [Hill, Ainsworth, & Partap, 2012](#); [Public health Agency of Canada, 2007, 2010](#); [Sambo, 2012](#); [World Federation of Public Health Associations](#)). These are well aligned with public health's core values of social justice/social responsibility, health equity, evidence-based and critical thinking, ethics, action and learning by doing, and community empowerment ([Carter et al., 2011](#); [Gostin, 2010](#); [Harvard School of Public Health](#); [Hill et al., 2012](#); [Public health Agency of Canada, 2007, 2010](#); [Sambo, 2012](#); [World Federation of Public Health Associations](#)).

Using a complexity lens, public health professionals can be viewed as having specific skills and attitudes that shape the self-organization of the complex system. The self-organization is influenced by providing and building capacity not just in terms of epidemiological or public health scientific knowledge, but also in relation to:

- how to build and take advantage of social capital

- how to engage in collaborative and appreciative leadership
- how to perform cycles of quality improvement
- how to mesh research, evaluation, and implementation
- how to understand and appropriately use evidence.

The influence in self-organizing behaviour is even more potent when there is also support for common meaning-making across all the stakeholders coming from different professional backgrounds, each with different assumptions, perspectives, and languages. The common meaning-making (or interpretation of the evolution of the collaboration and its impact) influences stakeholders' actions. The selection of actions by stakeholders takes into consideration a lot more information, techniques and attitudes than would occur without that common meaning-making. The impact of common meaning-making aligns with complex networks functioning. The common meaning-making occurring in intersectoral actions involving primary care, public health and other sectors bridges interpretations across major hubs, into sub-networks. In turn, this increases the effectiveness of the link between those sub-networks, creating new connection between stakeholders, and enabling change in stakeholders connection path, as well as increasing sustainability in the event a major hub gets inactivated. That creates exponential reach and influence and increases the robustness of the network, which are typical properties of scale-free networks. This is similar to a finding by Lanham et al. (2013) that attention to interdependencies and meaning-making can leverage self-organization in a way that promotes successful scale-up of interventions in health care. The findings from this thesis suggest that public health professionals play a key role in influencing self-organization toward the development of ISA HD. They are also important actors in improving the ability of the ISA HD (as a complex adaptive system) to *adapt* the interventions to other local contexts, while maintaining effectiveness. Public health professionals are not attempting to replicate exactly the same intervention in a different context, an approach that has failed in many health intervention scale-up attempts ([Lanham et al., 2013](#); [Paina & Peters, 2012](#)). Our findings support the conclusion that public health professionals are able to generate useful intersectoral meaning-making into what might work in different contexts, based on evidence, local practice, and understanding of interactions of the underlying mechanisms with norms, social structures, processes, beliefs and other relevant contextual factors and mechanisms.

This finding is in direct contrast to the argument that state and public institutions should not take responsibility for health or health inequalities because communities and individuals can address

these issues on their own by increasing their social capital. That argument was summarized by O. Solar and A. Irwin in their discussion paper for the Commission on Social Determinants of Health, where they also noted that it was frequently used in political discourse advocating for reduced government spending: “Logically, if communities can take care of their own health problems by generating ‘social capital,’ then government can be increasingly discharged of responsibility for addressing health and healthcare issues, much less taking steps to tackle underlying social inequities.” ([Solar & Irwin, 2007](#)) p.41

Although the Health Council of Canada acknowledges that some public health structures can support intersectoral action at the level of government, it falls short of describing the full scope and beneficial role of central involvement of public health in successful initiatives. The technical support provided by the public health professionals noted in the realist review also included capacity building for participatory leadership and governance.

The key finding regarding the important role of public health professionals in managing health determinants is supported by a US study of the impact of investment in public health on the health of the population served ([Mays & Smith, 2011](#)) as well as several US reports ([IOM, 2012](#); [Levi, Segal, & Laurent, 2011](#)). The study showed that higher investment was associated with lower levels of preventable mortality, despite controlling for other socioeconomic factors that might influence health. The finding that it is primarily public health professionals who are behind most of these IAH to address HD is also aligned with the conclusion of *Social determinants approaches to public health: from concept to practice* ([Blas, Sommerfeld, & Kurup, 2011](#)). This book concludes with the following statement: “The vision for multisectoral action on the social determinants of health needs to germinate within the health sector, including identification of required actions by and potential benefits to other sectorial actors. Only then is the vision ripe for convincing and passing on to someone who can navigate the core agendas of other sectors.” ([Blas et al., 2011](#)) p.197.

The findings of this thesis go further by showing that in most cases, public health professionals play the role of supporting other sectors and other parts of the health system in envisioning and implementing IAH on HD. This is an important clarification, as without this awareness, this role *could* be given to other parts of the health sector, or to other sectors (with good intentions), but without as much evidence that those other parts of the health sector or other sectors have as much potential as the public health professionals to support large, successful IAH to address HD.

The need for participatory leadership to enable synergistic action among the various sectors is also highlighted in Lasker and Weiss's model of community health governance to support multidisciplinary participation in community problem-solving ([Lasker & Weiss, 2003a, 2003b](#); [Lasker, Weiss, & Miller, 2001a, 2001b](#); [Weiss, Anderson, & Lasker, 2002](#)). It seems that the public health professionals involved in the initiatives found in the realist review had some skills in promoting participatory leadership through promoting models of governance with significant involvement of formal and informal leaders from various sectors and social strata, and with local customization and agenda-setting being welcomed.

Lasker and Weiss's research also highlights the difficulties that can be encountered when "experts" lead community problem-solving ([Lasker & Weiss, 2003a, 2003b](#)). Their model suggests that "experts" might have a narrow view of what can and what needs to be done, and be blind to the limitations of their field. This seems to be the case with interventions done as part of research projects led mostly by academics. On the one hand, long-term partnerships of community organizations with academic institutions pertaining to a particular issue do seem to facilitate monitoring, adjustment, evaluation, and dissemination of what is learned through the IAH. In addition, research funding seems to help with community activation. On the other hand, initiatives that were mostly constructed as research interventions, with prescriptive implementation models and leadership from academicians, do not always lead to sufficient community activation to generate improved health outcomes or sustainability.

Common roles of primary care professionals and organizations

An important finding in both the Cuban re-analysis and the realist synthesis is that despite being less frequently and less intensively involved in intersectoral collaboration to manage most health determinants compared to public health professionals or practitioners in other sectors, *primary care practitioners play three important roles when mechanisms are in place to facilitate their participation*:

1. They use their social capital to link individual patients to various community organizations, social services, and public health services (especially when there are mechanisms that facilitate the linkages and the building of that social capital between primary care practitioners and other organizations).

2. They use their insights into individual health issues and primary care, as well as their social capital, to influence and synergise broader intersectoral collaborations, including addressing issues such as poverty, education, and the physical environment, and other, more distal health determinants than the healthcare system itself. This is done most often if they are part of a primary care system that supports and values their participation. Their involvement includes participation in planning, surveillance, and evaluations systems, both in person and through written communication.
3. They lead or play a prominent role in initiatives that are closely related to health services as a determinant of health, such as providing preventive clinical services, access to primary care (even in relation to insurance status), and, to a certain degree, lifestyle and health education.

The main mechanism found to enable the participation of primary care providers was the presence of an organized system of primary care practitioners within a larger organization's participation. In Cuba, as illustrated in Figure 10, this organized system included the specific elements of:

1. An organized system of monitoring and information management (collection, analysis, and action on the findings) in primary care, linked to (and supported by) an information system in public health and linked with broader health care and other sectors' information systems;
2. A system of primary care's (and other sectors') governance and accountability to the health of the population, a health determinants approach, and mutual support between primary care, public health, and other sectors. The system of governance and accountability includes laws, policies, procedures, intersectoral space, guidance documents, etc.
3. An intersectoral delivery system with policies and procedures for primary care input, and with primary care participation in local, municipal, provincial, and national intersectoral tables addressing health and other issues. The delivery system also included training health care professionals to participate in those intersectoral actions and to understand health and health determinants broadly. It also included community organizations and local and municipal leaders having an explicit mandate to support primary care, so that primary care participation in those intersectoral spaces would benefit primary care service delivery improvement as well as address other health determinants.
4. A health system and a society based on values related to a right to health and the aim to continually improve the fulfillment of that right with evidence and quality improvement.

In other words, the Cuban health system paid attention to both the tangible infrastructure of the health system (system hardware) as well as what is referred to as the soft components (system software or ideas and interest, values and norms, relationship and power dynamics) of the health system, in a global context where most health system research is focused only on systems hardware (human resources, finance, medication and technology, organizational structure, service infrastructure, and information systems) ([Sheikh et al., 2011](#)).

From the realist review, all the large initiatives leading to significant impacts on health determinants benefited from the participation of primary care practitioners who are part of larger primary care organizations. Those larger organizations also have communication, monitoring and information management systems. Furthermore, those large initiatives paid attention to strengthening the leadership and governance capacity of the stakeholders, as well as paying attention to and addressing the values and means of participation of the various groups within the collaboration. On the other hand, the small initiatives involved practitioners working in solo or very small practices, lacked a link to overall governance systems or leadership capacity building, and did not have well documented impacts on health determinants.

Another main mechanism enabling the participation of primary care practitioners (in both the Cuban study and the realist review) was the presence of an established network of community organizations and social services, and/or a dedicated person in a facilitation role to support linkages, to support the patients of primary care practitioners in their need to access community organizations and social services, to mitigate the effects of health determinants, and to support clinical prevention efforts. This approach arose in the context of the recognition that primary care practitioners and organizations are very busy providing one on one clinical consultation. Coordinated network and/or dedicated liaison role are approaches that aim to minimize the burden of intersectoral collaboration on busy primary care practices. Even if the person facilitating these linkages was not a primary care practitioner, the appointment of a person to facilitate the linkages seems to arise in a context in which the primary care practitioners had an awareness of, and a desire for, that type of facilitation and linkage. It is therefore important to acknowledge the context in which these intersectoral collaborations have been inclusive of primary care. Awareness of the impact of social determinants in primary care representatives or organizations participating in IAH was found in the Cuban supplementary analysis and in the realist review. Although the awareness is a contextual element, the facilitating mechanism associated with that awareness is the sense of responsibility of those

primary care representatives or organizations to contribute to addressing those health determinants with other groups, and their willingness to dedicate resources to that.

To my knowledge, the roles and enablers of primary care practitioners' participation in the intersectoral management of health determinants across initiatives and health systems have not been outlined as such in the literature to date. Therefore, this thesis contributes to knowledge in this area, especially compared to what is found in some of the key documents on the intersectoral management of health determinants. For example, the Health Council of Canada report takes a limited view of how the healthcare system can contribute to managing health determinants. It does recognize the role of the healthcare system in focusing on the needs of disadvantaged individuals and communities, and in mitigating the causes and effects of other determinants of health through interventions with disadvantaged individuals and communities ([Health Council of Canada, 2010](#)). The report also features equity audits of the health system as a way to improve fulfillment of the healthcare system role in managing health determinants. Equity audits and equity training are widespread in the UK health system ([European portal for action on health inequalities](#)). However, neither the UK health system nor the Health Council of Canada outline the importance of primary care in these equity audits. In contrast, the role of primary care in relation to health equity is considered central in Cuba, with the primary care system reporting and auditing incidents, as well as evaluating access and quality of care among defined vulnerable populations, all with the support of public health professionals. Also, in Cuba, each basic primary care team (consisting of a physician and a nurse, who both typically live in the community) reports on issues affecting their patient population. Several initiatives in the realist review also focus on primary care as an entry point to addressing equity in the health system.

The Health Council of Canada report mentions the need for leadership in the health sector, along with leaders in other sectors. However, it does not address how that leadership can be shared in relation to various health determinants. In addition, both the realist review and the Cuban re-analysis show that initiatives related to health determinants can be led by leaders from different sectors, depending on the main type of health determinant being addressed. The Health Council of Canada report did not address intersectoral collaboration at the practitioners' level (as opposed to a higher leadership level in the health system). Involvement at the practitioners' level is seen in both the Cuban re-analysis and in the realist review; this involvement includes information sharing, creation and exchange of social capital, monitoring, and action planning (both internally and intersectorally)

([Health Council of Canada, 2010](#)). Two examples of primary care practitioners' involvement in intersectoral action at the local level include Rx for Health in the US and Cuban primary care practitioners' facilitated referrals and support for community agencies and social services to assist with education or employment.

The lack of specific attention to the role of and what enables primary care participation in the intersectoral management of health determinants is a significant gap in the literature, which this thesis intends to narrow. It is a key gap to close, since primary care-based systems seem to contribute more to population health than specialized systems, and many primary care organizations and practitioners want to participate in action on health determinants, but sometimes find it difficult to do so ([Armada, Muntaner, Chung, Williams-Brennan, & Benach, 2009](#); [Blount & Miller, 2009](#); [Brcic, Eberdt, & Kaczorowski, 2011](#); [Breton, Levesque, Pineault, & Hogg, 2011](#); [Bursztyn et al., 2010](#); [Cavers, Tregillus, Micco, & Hollander, 2010](#); [Doolan-Noble, Mann, & Tracey, 2010](#); [Etz et al., 2008](#); [Grandes et al., 2008](#); [Green, 2008](#); [Haggerty, Levesque, Hogg, & Wong, 2013](#); [Hogg & Hanley, 2008](#); [Kruk, Porignon, Rockers, & Van Lerberghe, 2010](#); [Lewis, Baeza, & Alexander, 2008](#); [Loignon et al., 2013](#); [Macinko et al., 2009](#); [Neuwelt et al., 2009](#); [Spivack, Swietlik, Alessandrini, & Faith, 2010](#); [Starfield, 2009, 2010](#); [Starfield & Birn, 2007](#); [Starfield & Shi, 2007a, 2007b](#); [Tapp & Dulin, 2010](#); [Thomson, Gripton, Lutchmiah, & Caan, 2007](#); [Valaitis & al., 2012](#); [Wiggers & Sanson-Fisher, 1997](#)).

Common roles of other sectors representatives and organizations

Finally, the roles of other sectors in managing health determinants in collaboration with primary care and public health found in both the Cuban re-analysis and the realist review are as follows:

1. In organized intersectoral spaces, various sectors play key roles in addressing many of the more distal health determinants, such as employment and working conditions, the physical environment, culture, the social environment (including social support networks and social services and policies, e.g., health insurance policies), gender issues, early childhood development, and education.
2. The representatives from other sectors share and use their social capital (among themselves and with public health and primary care providers) to synergise internal and intersectoral action on health determinants, increasing the feasibility and sustainability of action on both proximal determinants (e.g., access to health services) and more distal

health determinants (e.g., socio-political contexts, infrastructures, civic participation mechanisms, and responsive governances to all members of society).

3. The representatives from the other sectors facilitate the participation of primary care organizations in a way that limits the burden on primary care practices and supports the one-on-one work of primary care practitioners, as well as facilitates referral to their sectors' organizations by primary care practitioners.

The first role listed above is frequently the main role expected of other sectors ([Bacigalupe, Esnaola, Martin, & Zuazagoitia, 2010](#); [Bell, Donkin, & Marmot, 2013](#); [Health Council of Canada, 2010](#); [Marmot, Allen, Bell, Bloomer, & Goldblatt, 2012](#); [Marmot, Friel, Bell, Houweling, & Taylor, 2008](#); [Ndumbe-Eyoh & Moffatt, 2013](#); [Shankardass et al., 2012](#); [Sherring, Robson, Morris, Frost, & Tirupati, 2010](#); [WHO, 2014](#)). The second role, sharing social capital with other sectors and using the social capital of other sectors, is less well documented in the literature. This role appears to be an important mechanism in generating feasible actions in the various sectors, as well as synergising and sustaining those actions. The third role, facilitating the work of primary care organizations, is in line with the Chronic Care Model ([Barcelo et al., 2010](#); [Glasgow, Orleans, & Wagner, 2001](#); [Hung et al., 2008](#); [Jenkins et al., 2010](#); [Tufano, Ralston, Tarczy-Hornoch, & Reid, 2010](#)), which shows the health system being influenced by and influencing community policies and resources. This thesis provides further relevant and complementary considerations for assessing broad community action on health determinants and linking those actions to the work carried out in primary care as well as to the health outcomes of primary care patients.

Common overarching mechanism resulting from the various actors' roles: synergistic community activation

In the Chronic Care Model, attention is given to how patients are activated to self-manage their chronic conditions. *Community activation* can be seen as a concept similar to that of patient activation for self-management. In the model arising from this thesis, activated communities and synergistic intersectoral action have a profound influence on the ability of patients to take part in self-management, on practitioners' ability to support patient interactions with various community resources, on societal structures' responsiveness to emerging and/or persistent health issues, and ultimately, on improved individual and community health status.

In the Chronic Care Model, an activated patient within an evidence-based support system takes charge and is empowered to act in a process of self-management of a chronic condition. The activated patient benefits from accessing resources and expertise to maximize the beneficial health impact of his actions, while recognizing each patient's particular situation. In a similar process, community activation entails various sectors in a community taking charge and being empowered to act on health determinants, in the context of the evidence base that already exists to maximize the impact of the interventions. The findings of this thesis suggest that such support can be provided by public health organizations (governmental, academic, and non-governmental public health agencies), locally, regionally, nationally, and globally.

Furthermore, similar to the *concept of self-efficacy* in individual behaviour change, many initiatives seem to work through the development of community self-efficacy, starting by building capacity and engaging with some focused IAH initiatives, and building on these to increase and expand the scope of the IAH partnerships and the issues addressed. *In sum, through community activation and with the development of self-efficacy, synergistic infrastructures, and technical support, it seems that IAH involving public health, primary care, and other sectors leads to sustained actions with meaningful impact on health determinants and health outcomes.*

Another concept from the literature that can be used as an analogy for part of the findings is the concept of patient-centred care. In best practices of patient-centred care, patients select which health issues to address first, with guidance and support from professionals in terms of the impact of disease processes and interventions. The provider-patient discussion integrates scientific evidence with the patient's and the provider's personal experiences. The goal is to generate a plan to which the patient is committed and likely able to abide by, with support and monitoring to assist the patient and to re-adjust the plan as necessary, as events unfold. In addition, in patient-centred care, patients frequently decide to act on issues that affect several conditions simultaneously - for example, deciding to act on housing first, which serves to decrease the burden of mental illness and addiction, as well as facilitate linkages with primary care, while many providers would advocate a treatment-first approach. In community-centred care, the community would self-select which health issues to address in a priority sequence, in tandem with support from experts and relevant infrastructures. Furthermore, as seen in the Cuban re-analysis and in the realist review, action on one determinant usually involves considerations of and actions on other health determinants, as well as having potential ripple effects on other health and social issues. In the realist review, some communities

were activated to address issues of racial and socio-economic disparities in access to healthcare, cancer prevention, outreach, chronic disease prevention, and other health issues. Moreover, quite definitively, it seems that whether or not communities are activated prior to receiving financial and technical support, the support has catalytic effects on the ability of the community to mobilize, use existing evidence, and generate new evidence in relation to addressing health issues through health determinants.

This does not mean that an activated community needs activated primary care practitioners to implement intersectoral collaboration addressing health determinants. The literature search generated many studies that were excluded because they did not include primary care practitioners or public health professionals. This study focused on primary care and public health participation based on the interesting Cuban situation, and because there are more and more reports calling for primary care to be at the centre of health systems, arguing that this would improve population health. However, there is little research on how primary care practitioners can fully collaborate and what they can bring to the table in intersectoral collaboration in order to address health determinants, other than providing clinical care. So, this thesis aims to help close that particular gap in knowledge.

One could also use the complex language of creating and utilizing scale-free networks in a description of the components of social capital creation, to which all the stakeholders are contributing in Cuba and in the large initiatives uncovered in this thesis. Many complex systems are described as having scale-free networks ([Barabási & Bonabeau, 2003](#); [Paina & Peters, 2012](#)). Scale-free networks are best understood in contrast to random networks. Random networks consist of nodes with randomly placed connections, with the majority of nodes having a similar number of links (a distribution of links by nodes that follow a bell shape curve) ([Barabási & Bonabeau, 2003](#)). Scale-free networks, like the world wide web, are different in the sense that some nodes have just a few connections, while some have an extremely large number of connections – or no “scale” ([Barabási & Bonabeau, 2003](#)). Collaborations between scientists in several disciplines, including in medicine, were found to follow the structure of scale-free networks ([Barabási & Bonabeau, 2003](#)). Intersectoral collaborations to manage health determinants involving public health, primary care, and other sectors would find it advantageous to use collaborators who are major strategic hubs in order to facilitate reach and impact. It does seem that the large initiatives were able to attract collaborators who had those characteristics. The Cuban system might not have followed a scale-free

network structure, but it was built in a way that engaged major hubs, such as political representatives, leads of various sectors, large community organizations, primary care (which, in Cuba and in many other countries, reaches a large proportion of the population), and public health professionals who are trained to work through networks, aiming for large population reach and impact.

In summary, applying a complexity lens to the findings, both the Cuban supplementary analysis and the large initiatives in the realist review could be construed as expanding and maximizing the impact of major hubs (through scale-free networks, self-organizing networks, or planned networks) with supported self-organization mechanisms (with generation of common sense-making, and purposeful attention to positive, collaborative, and evidence-informed leadership) and purposeful attention to unpredictability of outcomes by monitoring and serial adaptations based on evidence (feedback loops). The funding, the relationships, and the support seem to have acted as catalysts, helping to reach critical tipping points (phase transition ([Paina & Peters, 2012](#))), energizing the various elements of the complex systems, focusing them on potential actions, and improving synergies across the various actors. Table 23 attempts to summarize the mechanisms explained in this section using the characteristics of complex adaptive systems. Table 23 is followed by the section on common outcomes. Through this complexity lens, the finding could be generalizable to most interventions aimed at influencing complex adaptive systems.

Table 23 Mechanisms in intersectoral action on health determinants (ISA HD) using complexity concepts

<p>In large initiatives' CMO, the mechanisms (using complexity concepts) can be seen as:</p> <ul style="list-style-type: none"> • Taking advantage of emergent and self-organizing behaviours aligned with the specific goal of the ISA HD (selecting groups with an interest and some capacity in addressing the health determinant at stake, or in Cuba, taking advantage of the intersectoral tables). • Knowledge, skills and attitude of public health professional influencing the emergent and self-organizing behaviours through social processes that facilitate intersectoral understanding and support (sharing of evidence, intersectoral sense-making of the evidence, appreciative and strength based leadership). • Providing a small but critical level of resources (financial, technical, and normative), such as frameworks to guide proposal development, revision and improvement of proposals to help the various sub-groups reach tipping points, awarding grants, organizing joint learning opportunities as the interventions evolve, etc. • Use of strategic intersectoral linkages (both requested, and some emergent; e.g., the participation of primary care was not mandated or core in most of those examples, but emerged in many) in a scale-free network structure, • Social capital building processes akin to scale free network structures, connecting large hubs that were not necessarily connected before (e.g. building social capital across levels of society, across sectors of society at a given level, across geographic areas and contexts). It also seem key that when primary care is involved the primary care stakeholder plays an important role in bridging social capital across sub network, due to the primary care system contact with large numbers of patients as well as with many other parts of the health and social systems. • Creation of learning and capacity-building systems, with quality improvement methods influencing self-organizing and emerging behaviours based on learning feedback loops within and across groups. • Participation of primary care hubs well organized internally and valuing practitioners' participation in ISA (cross-coverage network of primary care so that one person being away does not critically disrupt provision of care, support to care provision by other parts of the system that multiply the effect of primary care provider intervention, and leadership of those organizations and primary care providers valuing primary care participation in those ISA HD).
<p>List of mechanisms in smaller ISA HD initiatives' CMO using complexity concepts:</p> <ul style="list-style-type: none"> • Self-emerging behaviours and organizations around ISA HD are not frequently synergized through critical support to reach a tipping point for phase transition. Sometime, small initiatives repeated over time have led to the generation of larger initiatives, which have eventually supported phase transition. • Emergent and self-organizing behaviours less frequently influenced through public health knowledge, skills, and attitudes. For example, there is less attention paid to creating sustainability structures for the partnerships; less attention paid to capacity building in collaborative and appreciative leadership; and less attention paid to generating interpretations in the light of the evidence and the body of knowledge in public health (e.g. more repetition of educational interventions alone, which are known in public health to rarely lead to behaviour change in isolation, even if the education is intersectoral). • Less use of on-going learning feedback loops and capacity building as the intervention unfolds • Primary care in a context that is not as well linked or supported, or in a system that gives less value to ISA HD • ISA HD linkages across less influential hubs, or with less attention to building and increasing hubs' social capital.

5.1.3 Common outcomes

The common outcomes found in both the Cuban re-analysis and the realist review mirror the ones outlined as the outcomes of the large initiatives:

1. Increased capacity at the community, provider, funder, and decision-maker levels for evidence-based, feasible, and acceptable interventions resulting in increased social network/social capital and changes in norms, policies, infrastructures, behaviours, and/or health status.
2. Increased publication and dissemination of the learning and outcomes of the intersectoral collaborations.
3. Provision of a foundation for sustainability at the community level, as well as supporting the creation of large-scale follow-up initiatives that can address issues found in prior initiatives, or other health issues.

The first outcome is similar to the responsive and evidence-based intersectoral governance and delivery systems described in the Cuban Health Creation Model. There is evidence in the Cuban re-analysis of high levels of social capital generation and social networking arising, at least in part, from the intersectoral governance and implementation system. There is also evidence of changes in norms, policies, and infrastructures, such as changes in primary care requirements for reporting and undertaking actions on the health of the community, as well as the creation of infrastructures and policies to further support IAH. The focus groups, survey, and key informant interviews have provided many examples that followed established evidence of improving health (e.g., better access to potable water, access to primary care, access to early childhood services, extra support and social protection in case of vulnerabilities, provision of housing, and opportunities for education and work for the vast majority of the population). None of those outcomes could be attributed completely to the intersectoral system. However, the realist review shows that similar outcomes, perhaps on a smaller scale, are observed through other large IAH involving primary care, public health, and other sectors in conditions that are studied much more closely and allow for closer attribution of the outcomes to the intersectoral collaboration. In sum, this suggests that there is good evidence that the intersectoral system is contributing to those outcomes.

The second outcome is similar to the Cuban intersectoral monitoring system, which promotes learning from prior experiences, and from the voices of many who are involved in the IAH initiatives, as well as those targeted by such initiatives.

Finally, the third outcome is akin to the continuous quality improvement cycles over time in the Cuban model. The cyclical nature of improvement interaction between the governance, implementation, and monitoring systems is represented by the reciprocal arrows of influences between these three systems in Figure 10 Cuban health creation model to ensure its citizens' right to health, Chapter 3.

These common outcomes correspond to the three key recommendations of the CSDH. The three CSDH key recommendations are:

1. Improving daily living conditions (which includes a major emphasis on early childhood development, girls' and women's living conditions, education, working conditions, and universal social protection policies);
2. Tackling the inequitable distribution of power, money, and resources with 1) emphases on strengthening governance and the equal participation in governance of men and women, the vulnerable and the privileged, the civil society and the private sector; and 2) significant investment in a) collective action from the community level to global institutions and b) action in the public interest intending to solve the issues faced by all groups – even the marginalized and less powerful; and
3. Measuring and understanding the problem and assessing the impact of action. This process includes health inequity surveillance from the local to the global level; the training of policy-makers and others to understand and participate effectively in action to address health inequity; the creation of organizational spaces in which to do so; and including a stronger focus on social determinants of health throughout public health research. ([CSDH, 2008a](#)) p.2

Because the outcomes found from interventions with common contexts and mechanisms in this thesis align so well with the three main CSDH recommendations, this thesis' findings shed an important new light on how to implement those three CSDH recommendations named above. In other words, in a context of awareness of decision makers in relation to IAH and health determinants, IAH initiatives that are well planned and supported, with interventions adaptation based on experiential learning, quality improvement best practices, and past evidence-based community intervention, where public health plays a central role in supporting the synergistic activation over time of primary care and other sectors through increase social capital, the expected

outcomes are improvements in individual and population health, improvement in daily living conditions, better governance, and a better understanding of issues and successes related to interventions addressing health determinants. This represents a smaller number of areas to consider when developing IAH, compared to the full 56 recommendations of the CSDH aimed at supporting its three overarching recommendations ([CSDH, 2008a](#)).

Table 24, next page, summarizes the main gaps in knowledge, methods, and findings, organized by research question. It provides important and robust contributions to world knowledge in how to conduct ISA HD involving PC, PH, and OS. However, this research has clear limitations, which will be discussed in the following section.

Table 24 Summary of research questions associated with gaps in knowledge, methods, and findings

Gap in Knowledge	Methods	Main Findings
In situations where there is collaboration between primary care and public health professionals within broader intersectoral collaborations to address health determinants, including in the exemplary case of Cuba:		
1. What are the contexts in which those situations happen?		
There is little systematic analysis of the contexts in which ISA to manage HDs have arisen, and even less so examining cases where there was involvement of PC, PH, and OS. This is despite recommendations to manage HD through ISA, with some organizations recommending the involvement of PC.	Systematic and comprehensive search for, extraction of, and analysis of the contextual factors that promoted the management of HDs through ISA and the involvement of PC and PH alongside OS in the Cuban and international grey and published literature, as well as through field visits, focus groups, key informant discussions, and the validation of findings with Cuban decision makers, practitioners and researchers.	<p>Cuba’s political context and values, heavily influenced by a revolution fighting inequities and with a stated right to health for all enshined in the constitution, provided fertile ground to a HD approach to health, including access to comprehensive PC country-wide. Cuba’s effort to address HDs for their own intrinsic value (not just for their contribution to health) through universal access policies (such as for housing, education, employment, and potable water), as well as in relation to the empowerment of groups marginalized prior to the revolution, provides a specific context in which HD are addressed as part of various sectors’ roles. Cuba’s leadership, and the leadership of large ISA HD involving PC, PH, and OS at various levels, have an understanding of HD’s impact on health (and have had that understanding for some time).</p> <p>Whether the initiatives found in the realist review occurred in HIC or LMIC, in countries with a high or a low ratio of medical practitioners per population, or in countries of different political systems*, the same mechanisms lead to the same outcomes. This means that those differing contextual factors are not prohibitive of the mechanisms uncovered in this thesis.</p> <p>Most large ISA initiatives found are from the US and other HIC, probably in part because most publications in the scientific literature are from those countries.</p>
2. What are the mechanisms leading to actions on HDs?		
The knowledge on HD is mostly in relation to their influence on health and less so on how to intervene to manage those HD. Many groups have attempted to provide guidance on how to do ISA HD, creating long lists of strategies with little theoretical or empiric bases.	Systematic search for mechanisms in Cuba and in ISA HD involving PC, PH, and OS through multiple and mixed research methods, with validation of findings with Cuban decision makers, practitioners, and researchers. Using realist review methods including the search for a theory that might apply to the interventions.	In total, the findings from both the large initiatives and from Cuba support that the ISA HD are operating through mechanisms compatible with the complex adaptive nature of ISA HD, such as using, influencing, and spreading scale-free network and social capital; influencing emergent behaviours, and catalytic use of relatively small resources to help stakeholders reach tipping points and phase transition. Furthermore, the norms, values, knowledge, and skills of public health promote and influence learning feedback loops, including through supporting processes that favour common meaning-making, and the building of social capital of stakeholders in vertical and horizontal influence networks, in turn facilitating common and complementary action potentiated by appreciative inquiry and leadership, strength-based approaches and experiential learning. Smaller initiatives were less able to use or generate those mechanisms, and rarely generated critical tipping points leading to phase transition.
3. What are the outcomes of those collaborations?		
There is conflicting evidence of the effectiveness of ISA HD, and a lack of synthesis of outcomes, especially when PH, PC, and OS are involved.	Systematic and comprehensive search for, extraction of, and synthesis of outcomes attributed to the ISA HD involving PC, PH, and OS in Cuba and elsewhere, through constant comparison and realist review methods.	The outcomes in both small and large initiatives from the realist review, as well as in Cuba, include: 1) Increased capacity at the community, provider, funder, and decision-maker levels for evidence-based, feasible, and acceptable interventions resulting in increased social network/social capital and changes in norms, policies, infrastructures, behaviours, and/or health status; 2) Increased publication and dissemination of the learning and outcomes of the intersectoral collaborations; and 3) Provision of a foundation for sustainability at the community level, as well as supporting the creation of large-scale follow-up initiatives that can address issues found in prior initiatives or other health issues. However, the magnitude of the outcomes, their documentations, and links to context and mechanisms are much stronger in large ISA and in Cuba. They mechanisms in smaller ISA do not seem to reach the tipping point of phase transition that seem to occur in Cuba and large initiatives.

*E.g., the US, Brazil, and the Philippines has presidential republic political systems; Pakistan has a parliamentary republic; the UK, Australia, Cambodia and Papua New Guinea have ceremonial constitutional monarchies; Vietnam has a single communist party political system; Iran is a theocracy.

5.2 How rigour was ensured in the research process

In total, this thesis uses multiple methods to improve the understanding of ISA HD involving PH, PC, and OS. The rigour of the research process can best be viewed through the lens of mixed methods research, which includes a substantial amount of qualitative research methods and review methods, as is the case for this thesis. The rigour in this type of research can be assessed through different perspectives, as outlined by ([Garside, 2014](#)) based on Siverman (2000) (reproduced below) and explained in more detail in the rest of this section.

Garside (2014) list of perspectives used to assess rigour:

- The replication perspective;
- The parallel perspective;
- The diversification of meanings perspective;
- The letting go of validity perspective

The replication perspective applies well to both qualitative and quantitative data, and is mostly procedural, looking at refutability, the constant comparative method, comprehensive data treatment, deviant case analysis, and the use of appropriate tabulation ([Garside, 2014](#)). Using those criteria, this thesis has ensured rigour by careful selection of the research process, broad data inclusion, and attempts to find large meaningful patterns. Furthermore, those patterns and all other findings have been verified by sequential data re-immersion and re-analysis, using a constant comparison approach until saturation was reasonably achieved. As there were no more large patterns (even though there could be additional smaller patterns extracted from the data), and because those patterns were confirmed by triangulation across methods, the findings appeared robust. No data were found that could refute those findings. The findings were then adequately tabulated and represented in tables and graphs, giving a comprehensive representation of the data and the results of the analysis.

The parallel perspective presents a different view of rigour for qualitative and quantitative studies and suggests that qualitative research can be judged by its credibility, transferability, dependability and confirmability ([Garside, 2014](#)). In this perspective, credibility relates to extent of the engagement of the researcher with the field of study – which in the case of this thesis is extensive.

As explained in the reflexivity section, my personal involvement with the field is extensive and longstanding, both as a practitioner and a researcher. Furthermore, the implementation of this research occurred in a long-standing collaboration with Cuba, including longstanding stakeholders responsible at various levels for primary care, public health, and intersectoral collaboration in Canada and Cuba. In terms of credibility and confirmability, the findings from this research have been supported across multiple data sources and analysis methods, and confirmed by stakeholders' (and peer) review of the findings.

In the parallel perspective, transferability refers to the ability of the findings to be relevant in other contexts, and relies on a description of how the context of the research interacts with the findings. This whole thesis has paid particular attention to describing the contexts found in Cuba and in the studies included in the realist review, as well as discussing the variability and implication of the variability of those contexts on the mechanisms and outcomes. Dependability and confirmability are related to the extent of the audit trail, which again in this thesis, is substantial, with audit trails for both the Cuban case study qualitative and quantitative data analysis in SPSS and NVIVO, as well as in Excel for the realist review data collection and analysis, with clear documentation of research decisions.

Dependability includes the attempts to avoid bias. Although I do not believe biases are completely avoidable, I discussed the perspective I came from in order to facilitate judgment on the influence that perspective could have had on my finding. One such influence is in relation to the extraction of the mechanisms at play for public health and primary care participation, which was influenced by my understanding as a practitioner in these areas of the skills and processes involved. My prior experience as both a public health specialist and a primary care physician involved in ISA HD can also be viewed as a strength of this research, as it grounds it in practice. Furthermore, I came to the research with some insight into the type and format of knowledge that is needed from practitioners and decision-makers.

In contrast to the prior two approaches that assume rigour can be sought and evaluated, the diversification of meanings perspective and the letting go of validity perspective do not assume that there is an objective reality to be uncovered by research ([Garside, 2014](#)). These two perspectives argue either that validity is a reflection of social agreement – agreement arising from persuasion – or that validity lies in the evocation of a feeling of authenticity in the readers ([Garside, 2014](#)). These

two approaches are less well fitted to the research in this thesis, which does assume that there is value in the approach to rigour described in the first two perspectives above.

Pope et al. (2000) also outline the considerable amount of debate about the concept of validity application to qualitative research. However, they propose some further specifications in relation to how validity can be appraised. They include a criterion of respondent validation of the findings. This was done in the analysis and interpretation of the Cuban case study, as the decision makers and researchers from Cuba who participated in the data collection reviewed the findings and the interpretations iteratively as the research and analysis progressed, up to the penultimate version of the Cuban model produced in this thesis. For the realist review, the original authors and participants in the interventions were not contacted, but there was a very systematic attempt to confirm the findings and expand the data from intervention websites or from other articles about the same intervention or cluster of interventions. In addition, the findings were reviewed by other primary care practitioners and public health and preventive medicine specialists, as well as researchers in the area (through the research team and the thesis committee) and were found to have face validity and credibility.

Notwithstanding the rigour of the research presented in this thesis, there are still some important limitations, discussed next.

5.3 Limitations

The limitations of the Cuban case study re-analysis are presented here, followed by a review of the limitations of the realist review, and of the totality of conclusions reached when the two components of this research are combined.

5.3.1 Limitations of the Cuban case study re-analysis

The major limitation of the re-analysis of the Cuban case study is in relation to the data from the focus groups. Due to a change in policy vis-à-vis foreign participation in research, Canadian investigators were not allowed to participate in the focus groups. Cuban researchers provided focus group transcripts, but it remains unclear whether they are truly full transcripts. Despite assurances from the Cuban investigators that they have provided the Canadian investigators with all the information they have, these transcripts may well be far from full verbatim transcripts. For example, one document that was provided to the Canadian investigators resembles more of a summary

transcript. The Cuban investigators called that transcript a “relato,” a word suggestive of a story line or account. That document amalgamated the primary care and the public health focus groups into one group, without distinct identifiers. The two municipal leaders’ focus groups were also amalgamated, as was the case for the two local leaders’ focus groups. Another document that was provided included more details, and was referred to as a “full” transcript. It presented a discourse that seems closer to a verbatim transcription; however, it did not offer a clear division of the information by the various types of focus groups.

Several factors mitigate this limitation. One is the triangulation of the findings with several other sources of information. The focus group results are closely aligned with the findings from the individuals’ survey (which were easy to group by type of focus group participant, as they had individual and focus group identifiers). In addition, both the survey and the focus group findings are consistent with the literature published on Cuba from other parts of the world, as well as the literature (scientific and grey) from Cuba. Moreover, the findings from all those sources are aligned with the key informant interviews and field visits conducted by the Canadian research team.

Another factor mitigating the impact of this limitation is that the interpretation of the results was confirmed with the Cuban researchers, decision-makers, and public health professionals and primary care practitioners in workshops, key informant interviews, and field visits.

The last, but not the least, mitigating factor is that the data collection and the verification of the interpretation were done in the context of a twenty-year research partnership involving the principal investigators from Canada and Cuba, in which both “sides” have expressed sufficient trust in each other to discuss issues openly. Both the Canadian and Cuban principal investigators have had extensive prior experience in conducting and analysing focus group and key informant interviews that sought to understand the Cuban health system. The observation of the principal investigators regarding the focus groups and key informant interviews was that criticisms of how the Cuban health system works were welcome, both from Cuban citizens and from foreigners. Moreover, such criticisms were seen as a way to continue improving the system. This was also reflected in the focus group findings, although it was revealed that participants felt that criticism was perhaps overvalued compared to other approaches, such as appreciative inquiries, which seek to improve the system through focusing on strengths, rather than on weaknesses.

Considering these observations, which support the validity of the findings from the focus groups, as well as the richness of the data still present in the transcripts, there is reason to be confident that “saturation” has been reached, and that further qualitative data collection would not have yielded much more relevant insight.

Another limitation of the survey data is the relatively small sample size for the representatives of each of the various sectors. The original case study was not designed with these types of statistical analyses in mind. However, statistical significance in a study in which survey answers are used to *supplement* additional sources of qualitative data suggests that one does not necessarily need to rely heavily on statistical significance to ascertain meaningfulness and validity of findings.

A limitation of both the survey and the focus groups is that the document circulated to assist participants in using a common language and approach (providing specific definitions of various health determinants and referring to the strategies of the Ottawa Charter) might have influenced answers to some degree. However, it should be noted that most participants made comments to the effect that the list of health determinants seemed complete, and were in accordance with their understanding of health determinants and health promotion. Furthermore, participants generated further clarification and contextualization in relation to the Cuban context. In addition, the provision of the list of definitions did not inhibit the mention of a broad scope of actions that were seen as important in the management of health determinants by the various groups.

Also, the list of internal and intersectoral actions that arose in the focus group discussions and in the survey answers (Table 15 and Table 16) suggested a much broader use of the various health promotion strategies than those reported in Table 7, especially in relation to creating a supportive environment, strengthening community actions, addressing cultural and social norms, and developing personal skills. For example, local and municipal leaders did not mention the development of healthy public policies, strengthening community actions, or the development of personal skills to address the physical environment. Several programs in Cuba were already in place, involving both local and municipal leaders and using these and other strategies to address the physical environment. Among them: the dengue campaign; regulations around mosquito prevention; a waste management campaign; housing and lighting improvement; and the energy revolution. For example, the Ottawa Charter on Health Promotion strategy of “Moving into the Future” explicitly refers to values and social norms, but was not necessarily listed as a strategy used to address those

health determinants. Perhaps this indicates that participants had difficulty understanding the scope of these strategies on the basis of the definitions provided. There is also some indication that the various groups were not necessarily conceptualizing their various internal actions the same way in relation to which health determinants they belong. For example, it is clear that in Cuba, the primary care providers treat the elderly (as well as the rest of the family). As there were no pre-identified list for the survey respondents, they answered based on their own classification of their actions. As such, the primary care providers did not list that as an action under values and social norms (as did the public health professionals), nor under lifestyles (as did the local leaders). The primary care providers listed treating the elderly as part of what they do for social support networks, and included intersectoral action broadly to address lifestyles and health care, and mentioned “many important actions” under health care, which can be construed to include the medical care of the elderly. However, these difficulties or divergences in understanding do not affect the validity of the findings in relation to the large scope of strategies used to manage health determinants, as well as the broad range of health determinants addressed by all groups.

Another limitation of both the focus groups and the surveys is that they involved representatives from only one large municipality. Although that municipality was selected as typical, the detailed findings in the survey and focus groups might well have been different in other municipalities. To mitigate this apparent limitation, field visits and key informant interviews included stakeholders from other parts of Cuba. These contacts confirmed that the findings appeared valid for other regions of Cuba.

In sum, the concordance found through triangulation of all the sources of information on Cuba support the validity of the findings (despite some of the issues outlined) and support that the data collection process had reached saturation, with little additional insight gained by the final workshop and the last field visit to Cuba.

5.3.2 Limitations of the realist review

The main limitations of the realist review can be divided in t main categories:

1. Limitations arising from the nature of a realist review; and
2. Limitations arising from the search strategy.

Limitations arising from the nature of a realist review

Realist reviews aim to assist in the evaluation of complex service interventions, and can be conceptualized as dynamic systems within complex systems, as Pawson et al. have explained ([Pawson et al., 2005](#)). They clearly make the point that reviewing systems-within-systems can lead to three important limitations, described below.

The first limitation relates to how much ground can be covered by any given realist review. Complex interventions can have multiple stages, each with its associated theory and permutation of individual, interpersonal, institutional, and infrastructural contexts, mechanisms, and outcomes. For example, the outcome of a particular CMO can be also conceptualized as the *context of a subsequent CMO* (e.g., $C_0 \rightarrow M_0 \rightarrow O_0 = C_1 \dots$). Another example is when a given mechanism supports a subsequent mechanism(s) before leading to an outcome of interest. This can be represented as $C_1 \rightarrow M_1 \rightarrow O_1 = M_2 \rightarrow O_2$. It also means that a series of CMOs might be needed to get from a particular context (C_0) to a particular outcome (O_3), as outlined here:

$$C_0 \rightarrow M_0 \rightarrow O_0 = C_1 \rightarrow M_1 \rightarrow O_1 = M_2 \rightarrow O_2 = C_3 \rightarrow M_3 \rightarrow O_3.$$

Therefore, as Pawson et al. point out, the complexity and the potentially infinite scope of CMO configurations means that the reviewer needs to set limits, prioritize a particular stage or process in a particular setting, and carefully articulate which aspect(s) of the intervention will be examined. This is exactly what was done in this review with an a priori decision to examine interventions that involved primary care, public health, and representatives from other sectors. This led to the finding of two main demi-regularities, each with a set of different contexts, mechanisms, and outcome configurations.

Even if this review did not seek to understand how the common contexts of large IAH initiatives were created, the findings of the recursive nature of IAH suggest that this awareness was, in part, gained from either prior attempts to address this particular issue or prior experiences with IAH to address other issues. Furthermore, the recursive nature of the creation of large IAH involving primary care, public health, and other sectors' representatives supports the validity of a realist review approach to assist in decision-making, as it is exactly how the realist approach works – that is, learning from prior interventions to creatively construct and adapt new ones to different contexts or issues ([Pawson et al., 2004](#)).

The second limitation outlined by Pawson et al. relates to the quality and nature of the information that can be retrieved ([Pawson et al., 2005](#)). They acknowledge that information related to interpersonal relationships and power struggles and subtle information on contexts and mechanisms is difficult to collect. And, since variations in those factors can lead to the success or failure of an intervention, the difficulty of collecting that information is an important limitation.

To address this limitation, they suggest drawing on a wide range of information from diverse primary sources, as well as considering “fitness-for-purpose” in the critical appraisal of the quality of the studies. For the purposes of this thesis, there was certainly a large variety of primary sources of information, from qualitative and quantitative studies of IAH involving public health, primary care and representatives from other sectors, to lessons learned published in the scientific and grey literature; from websites specific to interventions, to the websites of organizations that initiated those projects at the local, national, or international level. Furthermore, converting the re-analysis of the Cuban study into a CMO configuration further strengthened the results of the realist review. In addition, each source of information was appraised through a fit-for-purpose lens, with a customized extraction tool. This led to the exclusion from the literature review of published articles for which no methodology could be found, as well as the retention of studies with various methodological strengths and weaknesses, from independent evaluations with concurrent, pre- and post-comparative designs, to qualitative studies describing the experience of various stakeholders in IAH processes.

This third limitation mentioned by Pawson et al. is closely related to the first two. The limitations on how much of all the potentially relevant literature can be covered in a given realist review, and the limitations on available information in the literature, lead to limitations in the generalizability of recommendations from a realist review ([Pawson et al., 2005](#)). Realist reviews cannot deliver hard and fast truths about what works. Recommendations can only take a general form – e.g., “*When implementing C, watch out for D, or when condition A is in place, trying B seems to lead to more meaningful outcomes than trying E*” ([Pawson et al., 2005](#)) p. S1-24.

Limitations from the search strategy

As stated in the realist review literature selection process, there is no MeSH term for health determinant, and the keyword “health determinant” misses a lot of interventions that address one or more health determinants. In part, this is because authors might have not conceived of the particular issue addressed by the intervention as a health determinant. Many articles addressing poverty, the

physical environment, healthy lifestyles, or public policies that have the ability to promote health (which are referred to as healthy public policies), were not found from the health determinant keyword search. They were found when more specific terms related to those specific issues were added to the search. This resulted in the need to search for each health determinant individually with a large combination of keywords and MeSH terms. This was also the case with the concept of intersectoral collaboration, which can be described with a variety of terms by different authors, e.g.: partnership; coalition; collaboration; whole-of-government; or whole-of-community. These broad searches resulted in a very large volume of citations, which was difficult to process in a reasonable amount of time.

The search was further limited by the fact that many intersectoral interventions, which include public health and/or primary care, do not necessarily use these terms as keywords. This may have contributed to missing some interventions that would have otherwise met the inclusion criteria. To illustrate, the RWJF website features interventions that could have fit the inclusion criteria, and for which articles are cited, but were nevertheless not found using the search strategy constructed for this thesis. The limitations of the terms used to describe primary care in the search strategy are perhaps especially true for interventions from LMIC that do not have a medical residency in family medicine or primary care, and have health systems based partly on vertical programs and a lack of (but increasing) universal coverage ([WHO, 2013](#)).

In addition, it is likely that many other interventions that could have fit the inclusion criteria are simply not reported in the scientific literature. This is certainly the case for several interventions mentioned in the CSDH report, such as the health system reform in Mexico and Venezuela, the initiative by BRAC in Bangladesh, the UK action on health inequities, and many of the intersectoral actions in Cuba ([CSDH, 2008a](#)). This limitation highlights the fact that many intersectoral interventions involving public health, primary care, and other sectors' representatives are simply not published in the peer-reviewed scientific journals found in the most common and renowned databases, which mostly include publications from the US and other HIC with high research outputs; in other words, publications from LMIC are underrepresented in global scientific publications ([Chan, Kirsop, & Arunachalam, 2011](#); [McKee, Stuckler, & Basu, 2012](#); [Sridhar, 2012](#); [WHO, 2013](#)). It is also possible that some of the publication of findings related to ISA HD (in the US and in the UK) could reflect the history of the US and the UK health care and social systems in valuing neo-liberalism, contrasted to political and social leadership and norms to manage health through

health determinant and ISA approaches ([Beaglehole, Bonita, Horton, Adams, & McKee, 2004](#); [Coburn, 2000, 2004](#); [Harvey, 2005](#); [Homedes & Ugalde, 2005](#); [Kearns & Moon, 2002](#); [Kim, Millen, Irwin, & Gershman, 2000](#); [Martin, 2001](#); [Muntaner, Lynch, & Smith, 2001](#); [Navarro, 1994, 2007](#); [Raphael, 2003a](#); [Szreter & Woolcock, 2004](#); [Teeple, 1995](#); [Walt & Gilson, 1994](#)). Because of the dominant position of the neoliberal perspective in the US and in other major stakeholders investing in global health and development, and because the neoliberal perspective devalues ISA HD ([WHO, 2010a](#)), reforms focusing on ISA HD have lacked international support, which is key in influencing LMIC' health sector reforms through the donors' financial resources ([Beaglehole et al., 2004](#); [Coburn, 2000, 2004](#); [Homedes & Ugalde, 2005](#); [Kearns & Moon, 2002](#); [Kim et al., 2000](#); [Martin, 2001](#); [Muntaner et al., 2001](#); [Navarro, 2007](#); [Szreter & Woolcock, 2004](#); [Teeple, 1995](#); [Walt & Gilson, 1994](#)). In turn, this may have led pockets of leadership that valued ISA HD, professionals knowledgeable in the field, and professional public health organizations at arms' length from political leadership to seek to demonstrate and improve the impact of ISA HD through research and dissemination ([Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2020, 2010](#)).

Issues limiting publication from LMIC, such as disparity in research funding in LMIC, narrowly focused agenda-setting from donors' perspective in narrow focus, limited research capacity (which limits the quality of research and publications), language issues, and ethical issues in authorship are all well documented ([Bennett et al., 2011](#); [Chan et al., 2011](#); [Gilson et al., 2011](#); [McKee et al., 2012](#); [Pastrana et al., 2010](#); [Razzouk et al., 2010](#); [Resnik, 2004](#); [Sheikh et al., 2011](#); [Smith, Hunt, & Master, 2014](#); [Sridhar, 2012](#); [WHO, 2013](#)). Moreover, due to considerations of feasibility, the current research limited the grey literature search exclusively to Canadian grey literature (inclusion of more grey literature from WHO databases could have potentially helped to find more ISA HD with PH, PC, and OS from LMIC). Nonetheless, even the Canadian grey literature search did not find documents on known intersectoral interventions that would have otherwise met the inclusion criteria. This shows the limited ability of the Canadian Research Index, a searchable repository of Canadian government publications (including national, provincial, and territorial government documents) to be searched with keywords related to "health determinant." Further research could evaluate whether interventions that were either not published or not found using this particular search strategy also follow the CMO found in this research and, of course, clarify whether further CMO configurations could be uncovered.

The CSDH report also mentions other examples of IAH which seem at first glance to meet the inclusion criteria, such as some interventions in Sri Lanka and in Indonesia, but that did not seem to have led to significant changes in health determinants or health outcomes ([CSDH, 2008a](#)). This could indicate a bias in the published literature toward reporting interventions that led to positive outcomes. However, it is difficult to create a methodology that would uncover IAH involving primary care, public health and other sectors that have failed to result in positive outcomes. This is in part due to the difficulties of searching the grey literature on the topic. The attempt to find Canadian grey literature on IAH involving public health, primary care, and representatives from other sectors did not result in any documents meeting eligibility criteria. All the grey literature documents included in this research were found based on my own awareness of those interventions and documents, or that of my colleagues on the Canadian-Cuban research team. This relates to the lack of scientific research in this field that was highlighted in the introductory chapter of this thesis, as well as similar observations made by the CSDH report ([CSDH, 2008a](#)).

Another limitation comes from the difficulty in establishing the boundaries between what constitutes public health and what constitutes primary care. The review of full-text articles and further attempts to determine whether a given service was part of primary care or public health revealed that the boundary between these two components of the health system is porous, and varies from one country to another. For example, services such as immunization and most preventive clinical interventions are sometimes considered public health, and sometimes considered primary care. Even programs such as home-nurse visitation for vulnerable mothers are sometimes seen as part of public health services, and on other occasions as primary care services. This made it difficult to determine by search term or through the review of abstracts whether public health, primary care, and representatives from other sectors were all involved.

Considering the large number of citations found, and the difficulties encountered in the review of the first 100 citations, feasibility and methodological considerations led to a re-scoping of the review, limiting the time span and the health determinants included, as well as a decision to exclude interventions in exclusively rural areas.

Re-scoping is a typical step in realist reviews, as the review process informs the search inclusion and exclusion criteria and leads to refinement of the realist review research questions ([Pawson et al., 2004](#); [Pawson et al., 2005](#); [Pawson et al., 2011](#); [Wong et al., 2013a](#)). The limited time span covered

by the search (from 2005 to 2011, when the search was conducted) likely has a very minor impact on the reliability of the findings, since the publication of research on action on health determinants and their impacts started to expand significantly only around 2005. The exclusion of articles from 2001 to the end of 2004 removed only 15% of the articles. Keeping those articles in the review likely would not have provided much more insight, since saturation was reached with the articles that were retained; to illustrate, no new main common contexts, mechanisms, and outcomes configurations were found after about half of the studies were reviewed in the third iteration.

Exclusion of the rural areas removed only 9% of the citations from the initial search. However, it must also be noted that intersectoral collaboration in rural areas seemed different in nature from those in urban areas. However, it is clear that this exclusion affects the generalizability of the findings and limits their applicability to planning, implementing, and evaluating IAH with primary care, public health, and representatives from other sectors to interventions that were carried out in urban areas or in whole states or countries (even if those interventions in whole states or countries included rural areas).

Excluding some health determinants, such as the physical environment for interventions unrelated to lifestyles (which primarily excluded articles related to environmental contamination) also constitutes a limitation. It is certainly possible that those types of intersectoral action follow different CMO configurations, as seen in the screen of the first 100 articles, where they seemed to be triggered in different contexts, such as in the context of legal actions.

The screen of the first 100 articles also revealed that some *health conditions* are seen in some literature as health determinants. These health conditions were usually conditions that are much more prevalent in those with low SES or those facing significant stigma. This was the case for infectious diseases such as TB and HIV, as well as mental health conditions, which constitute most of the conditions defined (by others) as “health determinants” that were excluded from the analysis. This may mean that for some particularly vulnerable populations in which the health condition presents a threat to the general population (e.g., violent behaviour, social stigmatisation of the family or of those interacting with victims of stigma, fear of transmission of infectious diseases, etc.), intersectoral action is triggered through a different set of contexts, with different mechanisms and outcomes.

The other exclusion criteria, such as collaborations that do not include both primary care and public health, also limit the generalizability of the findings of this research. Other intersectoral collaborations that do not involve primary care or public health are very likely to have different CMO configurations.

Another limitation of the literature search is that the review of citations, abstracts, and full-text documents, as well as the extraction of the relevant information, has been conducted by only one reviewer, the author of this thesis. In the context of realist reviews, this is not an unmanageable limitation, as it is acknowledged that reviews are not entirely reproducible, and that complex judgments influence the selection and extraction process ([Pawson et al., 2004](#)). In their introduction to the realist review approach, Pawson et al. describe the endless task of reviewing literature on complex interventions. They suggest that when admitting all kinds of empirical research, one must, at some point, arbitrarily terminate the process, relying on a mixture of experience and sagacity to retrieve the pieces that have the greatest relevance. I suggest that by way of my experience in research, as well as in the practice of public health, primary care, and multisectoral interventions to address health determinants, my judgement is as valid as that of others. Furthermore, decisions on scope, process, extraction, and termination of the review have been made through discussion with my thesis research advisory team, including individuals who have experience conducting realist reviews.

Areas for which the findings of this thesis cannot be extended constitute areas for further research in order to ascertain whether similar CMO configurations are present in those IAHs. However, it seems clear that the findings of this thesis have valid implications for research and practice in the future, considering the strengths of the realist approach combined with the re-analysis of the Cuban case study, and the efforts to minimize and account for the various limitations.

Limitations in the application of the realist review method

Realist review methodology is an emerging field that is ill defined, with only a few examples at the time that this work was started (2009), and with very limited guidance on how to implement such a method and address difficulties encountered along the way. The seminal article by Pawson et al. (2005) that triggered the adoption of the realist review methods for this thesis proposed four types of realist review purpose:

1. Theory integrity – assessing whether the intervention worked as predicted;

2. Theory adjudication – assessing which theory best fit the intervention
3. Comparison – assessing how the intervention worked in different settings or for different groups;
4. Reality testing – assessing how the policy intent of the intervention translated into practice.

This thesis adopted the purpose of comparison – assessing how interventions work in different settings or for different groups. The next stage, after setting the purpose, included the search for theory. Despite a search that was very broad, this step generated very limited theory to go about exploring how ISA HD involving primary care, public health, and other sectors work differently in different settings or groups. Since then, other authors have outlined the lack of theoretical development in this field, and have been leaders in generating a new field of research: public health system research ([Kothari et al., 2014](#); [Martin-Misener et al., 2012](#); [Pauly, MacDonald, Hancock, Martin, & Perkin, 2013](#); [PHAC & WHO, 2008](#); [Valaitis et al., 2012](#); [WHO, 2010b](#)) ([Wilson Stroscher, MacDonald, & Hancock, 2012](#)). In the absence of a theory to guide the literature review extraction, this thesis reverted to an extraction tool inspired by scoping review methods and results available at the time ([Martin-Misener, 2009](#); [Martin-Misener & Valaitis, 2008](#)). This resulted in challenges in identifying mechanisms as well as extracting common and contrasting patterns of CMO. Difficulties and debate about what constitute mechanisms are still prevalent in the field, as found in the abundance of posts on the RAMESES listserv. The RAMESES listserv enables a community of practice for researchers in the area to support each other ([Greenhalgh et al., 2013](#)). Pawson and others have attempted to help new researchers by clarifying what is and what is not a mechanism or a theory, and describing how to conduct realist reviews ([Greenhalgh et al., 2013](#); [Pawson, 2014](#); [Pawson et al., 2011](#); [Pearson et al., 2013](#); [Wong, Greenhalgh, Westhorp, & Pawson, 2012](#); [Wong et al., 2013b, 2013c](#)). However, all of those supporting material to carry and evaluate realist review arose once the realist review had already been completed. Therefore, as experienced by even the most prominent realist synthesis scientists, this thesis has encountered difficulties in creating or refining a mid-range theory ([Davies & Sherriff, 2011](#); [Dieleman, Gerretsen, & van der Wilt, 2009](#); [Jagosh et al., 2012](#); [O'Campo et al., 2009](#); [Vassilev et al., 2011](#); [Wong, 2011](#)).

It is only after careful, persistent, and systematic appraisal and analysis of the data that this work was able to create a meaningful unit of comparison in terms of larger and smaller initiatives. In the face of the challenges presented by the application of the realist review method to this area, it is not a small achievement. It also offers a sound description and comparison of what worked, when, how and with what outcomes – ultimately the goal of this type of realist review with a comparison

purpose ([Pawson et al., 2005](#)). Furthermore, emerging patterns have shown the path toward some potential theories (social capital, appreciative leadership, complex adaptive system, self-efficacy) that could explain and unify some of the mechanisms at play. In total, the review inspired by the realist method conducted in this research, and as reported in this thesis, is congruent with adequate quality for realist synthesis ([Wong et al., 2013b](#)), in terms of:

- 1) Research topic – there is a need to know why there is variation in outcomes and why they vary across contexts, the mechanisms sought to understand a reality at a level other than the outcome they generate, and realist review is more appropriate than other approaches, as explained in the method section;
- 2) Research question – included a focus on why and how the intervention worked and with which outcomes, was narrow enough to be manageable, was framed with the understanding of the limitations of the theoretical background, and did not attempt to arbitrate or generate theory;
- 3) Application of the principles of realist review – recognition of the difficulties of developing a program theory and the use of the Cuban re-analysis to generate a program theory – although understanding a very context-specific one, supplemented with the understanding of key recommendations of what works in a variety of other contexts from the review of the publications in the area of public health and primary care practice;
- 4) Construction and refining of a realist program theory – the main thoughts of why and how intersectoral action to manage health determinants are believed to work were outlined in the introduction of this thesis, although it was very difficult to offer explanations of contexts, mechanisms and outcomes, other than by referring to the Cuban model, which was created in part as a potential program theory as a synthesis of what promotes intersectoral action to manage health determinants.
- 5) Developing a search strategy – the search for and the immersion in the data was also iterative as patterns emerged, and the search included different domains and types of data.
- 6) Selection and appraisal of documents: there was in-depth review of the various pieces of data and appraisal for relevance, and search for complementary information as needed.
- 7) Data extraction: there was specific data collected on contexts, potential mechanisms, and outcomes, as well as the configuration of those, with re-extraction and refinement as the data emerged. It led to the discovery of demi-regularities. It is a limitation that this

review did not generate a middle-range theory, although this is not necessarily essential to a high quality realist synthesis ([Wong et al., 2013b](#)).

As the field of understanding realist review and public health systems evolves, this thesis provides key insight into what could be constitutive elements of a middle range theory, although it falls short of articulating such a theory. Wong and al. (2013) define middle range theory as:

“A theory that is specific enough to generate hypotheses (for example in the form of propositions) to be tested in a particular case, or to help explain findings in a particular case, but general enough to apply across a number of cases or a number of domains.”([Wong et al., 2013c](#)) p. 14

Wong et al. further explain middle range theory as:

“...the level of abstraction at which useful theory for realist work is written: detailed enough and ‘close enough to the data’ that testable hypotheses can be derived from it, but abstracted enough to apply to other situations as well. This is a theory that lies; “...between the minor but necessary working hypotheses that evolve in abundance during day-to-day research and the all-inclusive systematic efforts to develop a unified theory that will explain all the observed uniformities of social behavior, social organization and social change...It is intermediate to general theories of social systems which are too remote from particular classes of social behavior, organization and change to account for what is observed and to those detailed orderly descriptions of particulars that are not generalized at all. Middle range theory involves abstraction, of course, but they are close enough to observed data to be incorporated in propositions that permit empirical testing. [our emphases]” (4)” ([Wong et al., 2013c](#)) p. 12.

Therefore, the lack of elaboration of a full middle-range theory limits the ability to generate and test hypotheses. However, it provides elements that could be tested, such as assessing the network characteristics of the network created – are they scale-free networks, and is that a factor that improves the effectiveness of the intervention? Could other people with the skills and attitudes of public health professionals also be key in other forms of ISA –HD (for example, in poverty reduction interventions, in which public health professionals were not playing important roles)? ([Hancock, 2011](#)) This leads us to consider what further research could be conducted to continue advancing the science of intersectoral action to manage health determinants.

5.4 Implications for future research and practice

Many countries, communities, and health systems of various sizes and political and economic contexts lack systems to assess and address health determinants ([Bell et al., 2013](#); [Marmot et al.](#)). Health inequities, social exclusion and stratification, and lack of responsiveness through inadequate governance, alongside healthcare systems with limited access to comprehensive primary care, are still major contributors to the low health status of populations all over the world ([Bell et al., 2013](#); [Marmot et al.](#)). The WHO CSDH and the subsequently related initiatives in several countries seem to indicate an appetite to manage health determinants through IAH, as well as an awareness on the part of decision-makers of the potential of IAH to improve health ([WHO Secretariat, 2012](#)) ([CSDH, 2008a](#)). However, it has been five years since the publication of the report of the WHO CSDH, and progress in implementing IAH to address health determinants is slow ([Bell et al., 2013](#); [EQUINET, 2012](#); [Marmot et al.](#)). Perhaps more concrete guidance on how to replicate multisectoral initiatives to manage health determinants (when the collaboration include primary care, public health, and representatives from other sectors) could help to spread and magnify the impact of current actions to manage health determinants. Such guidance could test some of the demi-regularities by comparing various guidance or applications based on the various demi-regularities found. One such test could assess whether other groups of people can be taught the skills and attitudes of public health professionals and subsequently contribute to the success of such initiatives. Or, could there be an assessment created to test whether people who already have those skills are better than others in leading such types of collaboration? Can there be techniques developed to help choose the right groups to support intersectoral action, based on the findings from this thesis? Can policy makers be informed of the design limitations of small and marginally supported interventions, and could we assess whether that is changing their reasoning on effective interventions and structures to support those interventions?

This thesis lends new support to the ability of intersectoral action on health determinants to consistently and significantly impact health determinants and health outcomes at the individual and population levels, in certain contexts and through certain mechanisms. For example, we learn from Cuba and from many of the interventions retained in the realist review that healthy lifestyles and health services are considered priority health determinants to address, and are the object of many ISA HD collaborations involving PC, PH, and OS²⁹. This is similar to findings from Levesque et al.

²⁹ Table 12 and Table 13 for Cuba, Appendix F for the realist reviews studies health determinants addressed.

(2013) and Martin-Misener et al. (2012) as a focus of collaboration between public health and primary care, and broadens the actors involved to multiple other sectors. The finding that income and standard of living as well as education and health literacy are priorities across sectors, and are acted on by various interventions, broadens the scope of priorities to be addressed when there is collaboration between public health and primary care (as priorities to be acted on with the health sectors), compared to what was described by Martin-Misener et al. (2012) and Levesque et al. (2013)²⁹.

This thesis provides the first realist review of intersectoral collaboration to manage health determinants. This constitutes an important advance in methods to research IAH, and yields new insights into the contexts, mechanisms, and outcomes of IAH to manage health determinants. This is especially meaningful since there have been several calls by national and international organizations to develop and apply new research methods to strengthen the knowledge in IAH addressing health determinants ([Bell et al., 2013](#); [EQUINET, 2012](#); [Loewenson, 2013](#); [Marmot et al., 2012](#); [Nasmith et al., 2010](#); [Resource Group on Social Determinants of Health, 2010](#)).

This thesis shows that the initiatives that seemed to lead to meaningful impacts on health and health determinants shared a common pattern of contexts, mechanisms and outcomes. They are large, well-planned initiatives based on evidence, in which a central role of support is played by public health, and they arise in a context of prior awareness of IAH and HD's impact on health. On the other hand, small, less well-supported initiatives seem to have less health impact. These are useful findings that can help decision-makers, practitioners, and researchers in scaling up efforts to address health determinants and health inequality, at least when there is a desire to act.

This thesis also shows that some of the success of public health involvement in those initiatives is directly linked to the knowledge, skills, attitudes, and values associated with public health competencies taught in schools of public health and other public health trainings, including how to practice in a way that is responsive to the knowledge, local context, ethics, and values of public health ([Carter et al., 2011](#); [Gostin, 2010](#); [Harvard School of Public Health](#); [Hill et al., 2012](#); [Public health Agency of Canada, 2007, 2010](#); [Sambo, 2012](#); [World Federation of Public Health Associations](#)).

This thesis outlines the roles played by primary care practitioners in collaborations, but remained silent on how to train primary care practitioners to participate in those collaborations. Nonetheless, it shows that common contextual factors seem key in promoting practitioners participation: being part of primary care organizations (or even broader systems) that recognize the determinants of health, values collaboration to address HD, engaged in quality improvement initiatives rather than being in isolated solo practice. Therefore, perhaps some implications for primary care systems would be to pay attention to teaching the values and skills associated with the management of health determinants, collaboration, leadership, and quality improvement to a number of (if not all) primary care practitioners and leaders. For this, primary care could learn from some of the teachings of those skills in public health, and answer calls to revamp medical education in that direction – such as the eloquent call by Berwick et al. (2010): Preparing Medical Students for the Continual Improvement of Health and Health Care: Abraham Flexner and the New “Public Interest”. ([Berwick & Finkelstein, 2010](#)).

The strategies outlined in this thesis to maximize the impact of ISA HD involving PH, PC, and OS seem to be appropriate strategies to address core characteristics of complex adaptive systems. As such, the findings of this thesis would suggest to improve the teaching of complex adaptive systems theory and emerging applications in public health, health systems, and medical practice to health professionals and policy makers. This idea seems to be shared by the same group developing the public health system research agenda and exploring concepts of complexity and how they inform public health practice through a recent meta-narrative review and dissemination grant ([MacDonald et al., 2012a](#)).

Furthermore, the mechanisms and outcomes of these large initiatives and of the Cuban system touch on all the key recommendations of the WHO CSDH: improve living conditions; change the distribution of power, money and resources; and understand the problem and the impact of action ([CSDH, 2008a](#)).

This thesis cannot answer the question of how to generate that desire to act, although it seems that *awareness work* on the part of public health institutions has helped to sensitize decision-makers and practitioners to the issues of health determinants, and that starting with some IAH helps to raise awareness of issues in many sectors that can be built on over time. This is the point at which the

outcomes of IAH initiatives, small or large, can become contextual elements in a subsequent set of CMO configurations.

This thesis also cannot adequately address the question of the cost-effectiveness of supporting intersectoral actions. Some literature suggests that it can be expensive, and that the intended impact may not be achieved or proven. Other research suggests it is very cost-effective, in part by mobilizing the resources of various sectors, as well as providing other benefits to society, such as increased social capital, productivity, and general wellbeing ([IOM, 2012](#)). Issues related to difficulties in proving causal impact of the intervention on the outcomes, difficulties in replicating IAH, and the cost of comprehensive evaluation, as well as the fact that many IAH are not planned as research projects, but rather as government or civil society initiatives, are all factors contributing to the difficulties in arriving at a consistent set of conclusions on the effectiveness and cost-effectiveness of IAH. The lack of consistent terminology and classification of IAH is another element in play. These issues highlight the need to strengthen this field of research.

Further research could be conducted to assess if the CMO demi-regularities found in this thesis hold true when prospectively planning or adjusting IAH. Further research is also needed to build a full middle range theory and continue address the gaps and limitations of this first realist review in this emerging field of ISA HD involving PC, PH and OS.

However, the gap in knowledge in relation to IAH and health determinants is not an excuse for inaction. The comprehensive sets of reports, case studies, tools, and evidence reviews produced by WHO and its regional offices provide sufficient evidence to enhance action on health determinants. Similar to the conclusion of this thesis, which shows that IAH builds on itself, the WHO recommends a step-by-step approach: to start IAH on SDH work; if already started, to do more of it; and if significant initiatives are implemented, to work on doing it better ([WHO Centre for Health Development, 2011](#)).

In relation to initiatives in Canada, this thesis provides insight into how they could be carried out better. British Columbia has been celebrated for its attempts to create a whole-of-government approach to addressing health issues ([Greneau, Fraser, Legowski, & Stachenko, 2009](#); [Health Council of Canada, 2010](#); [Nasmith et al., 2010](#); [White & Nanani, 2008](#)). One of the whole-of-government initiatives is Act Now BC ([Greneau et al., 2009](#); [Health Council of Canada, 2010](#);

[Nasmith et al., 2010](#); [White & Nanan, 2008](#)). This initiative offered small grants to community organizations, alone or in collaboration with other parts of the BC governments, in order to improve levels of physical activity and the diet of BC residents. However, the call for proposals did not include a critical phase - that of strengthening an initial application through the support of public health professionals - nor did it involve many primary care organizations. On the other hand, the Government of BC has recently funded the creation of *divisions of family practice*. The hope is that it will promote a more efficient and coordinated primary care sector and primary care services in a given geographic area, and will increase the number of British Columbians who are connected to primary care clinicians, as well as providing resources for these organizations to address what they see as pressing issues, in the way they think is best ([GPSC, 2014](#)). The findings of this thesis suggest that a way to strengthen both Act Now and the division of family practice initiatives would be to link them with comprehensive support from public health professionals. The findings also suggest that establishing a formal infrastructure linking both of those initiatives, coupled with the provision of comprehensive public health and intersectoral collaboration support, research, and evaluation, could further augment their impact on the health of the population.

Based on the evidence of the contribution of social capital and social cohesion to health, it is also likely that intersectoral spaces, which contribute to increased social capital and social cohesion, have an independent impact on health, above and beyond the contribution of the specific actions generated and synergised in those spaces. Could similar systematic intersectoral spaces at various levels in BC and Canada have a similar impact? Could they help reduce the substantial health equity gap between those in lower socioeconomic strata and those in the higher ones? The findings of this thesis, combined with the insights drawn from the literature on the topic, support the idea that the creation of such systematic, intersectoral infrastructures with substantive public health support could play an important role in addressing the health equity gap, but also in improving the overall health of the population, decreasing health systems costs, and improving the economic productivity of citizens, municipalities, provinces, and the country as a whole.

Bibliography

- Active Living by Design. Active Living by Design. Retrieved 11/2013, from <http://www.activelivingbydesign.org/>
- Active Living by Design. Somerville, MA Active Living by Design. Retrieved 11/2013, from www.activelivingbydesign.org/communities/profiles/somerville-ma
- Adams, S. A., Hebert, J. R., Bolick-Aldrich, S., Daguise, V. G., Mosley, C. M., Modayil, M. V., . . . Brandt, H. M. (2006). Breast cancer disparities in South Carolina: early detection, special programs, and descriptive epidemiology. *Journal of the South Carolina Medical Association* (1975), 102(7), 231-239.
- ALBD. Ten Years of Lessons Learned: Utilize learning networks. Retrieved 30/09/2013, from http://www.activelivingbydesign.org/10_7b
- Alegret, M., Spiegel, J. M., & Yassi, A. (2004). Importance of Stratification and Territorial Ordering in Prospecion. Prediction and Surveillance in Public Health 4th Annual Meeting of the Canadian Coalition for Global Health Research. Ottawa.
- Alegret, M., Yassi, A., Spiegel, J., & Rodriguez, M. R. (2003). *Importance of stratification and territorial ordering for monitoring, forecasting and planning for public health outcomes*. (PhD), Superior Institute of Medical Sciences of Cuba, Villa Clara Cuba.
- Armada, F., Muntaner, C., Chung, H., Williams-Brennan, L., & Benach, J. (2009). Barrio Adentro and the reduction of health inequalities in Venezuela: an appraisal of the first years. *International Journal of Health Services*, 39(1), 161-187.
- Ashwell, H. E. S., & Barclay, L. (2009). A retrospective analysis of a community-based health program in Papua New Guinea. *Health Promotion International*, 24(2), 140-148. doi: <http://dx.doi.org/10.1093/heapro/dap009>
- Atkinson, S., Cohn, A., Ducci, M. E., & Gideon, J. (2005). Implementation of promotion and prevention activities in decentralized health systems: comparative case studies from Chile and Brazil. *Health Promotion International*, 20(2), 167-175.
- Audibert, M., Mathonnat, J., & De Roodenbeke, E. (2003). Evolution and new perspectives of health care financing in developing countries. *Cahiers Sante*, 13(4), 209-214.
- Bacigalupe, A., Esnaola, S., Martin, U., & Zuazagoitia, J. (2010). Learning lessons from past mistakes: how can Health in All Policies fulfil its promises? *Journal of Epidemiology & Community Health*, 64(6), 504-505.
- Baker, E. A., Wilkerson, R., & Brennan, L. K. (2012). Identifying the Role of Community Partnerships in Creating Change to Support Active Living. *American Journal of Preventive Medicine*, 43(5, Supplement 4), S290-S299. doi: <http://dx.doi.org/10.1016/j.amepre.2012.07.003>
- Bangkok Charter. (2006). The Bangkok charter for health promotion in a globalized world. *Health Promotion International*, 21, 10-14.
- Barabási, A.-L., & Bonabeau, E. (2003). Scale-free. *Scientific American*.
- Barbour, R., & Kitzinger, J. (1999). Developing focus group research: politics, theory and practice London: Sage.
- Barcelo, A., Cafiero, E., de Boer, M., Mesa, A. E., Lopez, M. G., Jimenez, R. A., . . . Robles, S. (2010). Using collaborative learning to improve diabetes care and outcomes: the VIDA project. *Primary care diabetes*, 4(3), 145-153.
- Barcelo, C., Guzman Pineiro, R., Spiegel, J., & Rodriguez, T. E. (2003). Vivienda y salud en residents de Centro Habana. Parte 1, Ambiente fisio. (In Press) *Revista Cubana De Higiene y Epidemiologia*.

- Barwick, M. A., Peters, J., & Boydell, K. (2009). Getting to uptake: do communities of practice support the implementation of evidence-based practice? *Journal of the Canadian Academy of Child & Adolescent Psychiatry = Journal de l'Académie canadienne de psychiatrie de l'enfant et de l'adolescent*, 18(1), 16-29.
- Bauld, L., Judge, K., Barnes, M., Benzeval, M., Mackenzie, M., & Sullivan, H. (2005). Promoting social change: the experience of Health Action Zones in England. *Journal of Social Policy*, 34(03), 427-445.
- Bauld, L., & Langley, D. (2010). Learning from the partnership literature: Implications for UK University/National Health Service relationships and for research administrators supporting applied health research. *Photos: Courtesy of US Navy, Dreamstime. com, istock. com and Fotosearch, Inc.*, 41(1), 201049.
- Beaglehole, R., Bonita, R., Horton, R., Adams, O., & McKee, M. (2004). Public health in the new era: improving health through collective action. *The Lancet*, 363(9426), 2084-2086.
- Beake, S., McCourt, C., Rowan, C., & Taylor, J. (2005). Evaluation of the use of health care assistants to support disadvantaged women breastfeeding in the community. *Maternal and Child Nutrition*, 1(1), 32-43. doi: <http://dx.doi.org/10.1111/j.1740-8709.2004.00007.x>
- Bell, R., Donkin, A., & Marmot, M. (2013). *Tackling structural and social issues to reduce inequities in children's outcomes in low to middle-income countries*. Office of Research Discussion Paper, (No.2013-02). Florence.
- Bennett, S., Agyepong, I. A., Sheikh, K., Hanson, K., Ssengooba, F., & Gilson, L. (2011). Building the field of health policy and systems research: an agenda for action. *PLoS Medicine*, 8(8), e1001081.
- Berwick, D. M., & Finkelstein, J. A. (2010). Preparing Medical Students for the Continual Improvement of Health and Health Care: Abraham Flexner and the New "Public Interest". *Academic Medicine*, 85(9), S56-S65 10.1097/ACM.1090b1013e3181ead1779.
- Berwick, D. M., Godfrey, A. B., & Roessner, J. (2002). *Curing Health Care: New Strategies for Quality Improvement*. San Francisco: Jossey-Bass.
- Black, N. (2001). Evidence based policy: proceed with care. *BMJ: British Medical Journal (International Edition)*, 323(7307), 275.
- Blas, E., Sommerfeld, J., & Kurup, A. S. (2011). *Social determinants approaches to public health: from concept to practice* (E. Blas, J. Sommerfeld & A. S. Kurup Eds. WHO ed.).
- Blount, F. A., & Miller, B. F. (2009). Addressing the workforce crisis in integrated primary care. *Journal of Clinical Psychology in Medical Settings*, 16(1), 113-119.
- Boeije, H. (2002). A Purposeful Approach to the Constant Comparative Method in the Analysis of Qualitative Interviews. *Quality and Quantity*, 36(4), 391-409. doi: 10.1023/A:1020909529486
- Bonet, M., Spiegel, J., Ibarra, A. M., Kouri, G., Pintre, A., & Yassi, A. (2007). An integrated ecosystem approach for sustainable prevention and control of dengue in Central Havana. *International Journal of Occupational & Environmental Health*, 13(2), 188-194.
- Booske, B. C., Athens, J. K., Kindig, D. A., Park, H., & Remington, P. L. (2010). *County health rankings working paper: Different perspectives for assigning weights to determinants of health*.
- Borg, Jr., & M.B. (2002). The Avalon Gardens Men's Association: A community health psychology case study. *Journal of Health Psychology*, 7(3), 345-357. doi: <http://dx.doi.org/10.1177/1359105302007003226>
- Bors, P., Dessauer, M., Bell, R., Wilkerson, R., Lee, J., & Strunk, S. L. (2009). The Active Living by Design national program: community initiatives and lessons learned. *American Journal of Preventive Medicine*, 37(6 Suppl 2), S313-321.

- Bors, P. A. (2012). Capturing community change: Active Living by Design's progress reporting system. *American Journal of Preventive Medicine*, 43(5 Suppl 4), S281-289. doi: 10.1016/j.amepre.2012.07.008
- Bors, P. A., Brownson, R. C., & Brennan, L. K. (2012). Assessment for Active Living: Harnessing the Power of Data-Driven Planning and Action. *American Journal of Preventive Medicine*, 43(5, Supplement 4), S300-S308. doi: <http://dx.doi.org/10.1016/j.amepre.2012.06.023>
- Bowling, A. (2009). *Research Methods In Health: Investigating Health and Health Services*: McGraw-Hill Education.
- Brandt, H. M., Modayil, M. V., Hurley, D., Pirisi-Creek, L. A., Johnson, M. G., Davis, J., . . . Hébert, J. R. (2006). Cervical cancer disparities in South Carolina: an update of early detection, special programs, descriptive epidemiology, and emerging directions. *Journal of the South Carolina Medical Association* (1975), 102(7), 223-230.
- Braun, K. L., Nguyen, T. T., Tanjasiri, S. P., Campbell, J., Heiney, S. P., Brandt, H. M., . . . Hébert, J. R. (2011). Operationalization of Community-Based Participatory Research Principles: Assessment of the National Cancer Institute's Community Network Programs. *American Journal of Public Health*, 102(6), 1195-1203. doi: 10.2105/AJPH.2011.300304
- Brcic, V., Eberdt, C., & Kaczorowski, J. (2011). Development of a Tool to Identify Poverty in a Family Practice Setting: A Pilot Study. *International Journal of Family Medicine*, 2011, 7. doi: 10.1155/2011/812182
- Brennan, L. K., Brownson, R. C., & Hovmand, P. (2012a). Evaluation of Active Living by Design: implementation patterns across communities. *American Journal of Preventive Medicine*, 43(5 Suppl 4), S351-366. doi: 10.1016/j.amepre.2012.07.007
- Brennan, L. K., Brownson, R. C., Kelly, C., Ivey, M. K., & Leviton, L. C. (2012b). Concept Mapping: Priority Community Strategies to Create Changes to Support Active Living. *American Journal of Preventive Medicine*, 43(5, Supplement 4), S337-S350. doi: <http://dx.doi.org/10.1016/j.amepre.2012.07.015>
- Breton, M., Levesque, J. F., Pineault, R., & Hogg, W. (2011). Primary Care Reform: Can Quebec's Family Medicine Group Model Benefit from the Experience of Ontario's Family Health Teams? *Healthc Policy*, 7(2), e122-135.
- Brownson, R. C., Brennan, L. K., Evenson, K. R., & Leviton, L. C. (2012). Lessons from a Mixed-Methods Approach to Evaluating Active Living by Design. *American Journal of Preventive Medicine*, 43(5, Supplement 4), S271-S280. doi: <http://dx.doi.org/10.1016/j.amepre.2012.07.002>
- Brownson, R. C., Parra, D. C., Dauti, M., Harris, J. K., Hallal, P. C., Hoehner, C., . . . Pratt, M. (2010). Assembling the puzzle for promoting physical activity in Brazil: a social network analysis. *Journal of physical activity & health*, 7 Suppl 2, S242-252.
- Buckner-Brown, J. P. M. H. S. R. R. T., Tucker, P. B. S. N. M. P. H. D., Rivera, M. P., Cosgrove, S. M. H. A., Coleman, J. L. E., Penson, A. M. C., & Bang, D. P. M. P. H. C. (2011). Racial and Ethnic Approaches to Community Health: Reducing Health Disparities by Addressing Social Determinants of Health. *Family & Community Health January/March*, 34, S12-S22.
- Burke, N. M., Chomitz, V. R., Rioles, N. A., Winslow, S. P., Brukilacchio, L. B., & Baker, J. C. (2009). The path to active living: physical activity through community design in Somerville, Massachusetts. *American Journal of Preventive Medicine*, 37(6 Suppl 2), S386-394.
- Bursztyn, I., Kushnir, R., Giovanella, L., Stolkiner, A., Sterman-Heimann, L., Riveros, M. I., & Sollazzo, A. (2010). [Notes for studying primary care within the context of segmented health systems.] [Spanish] Notas para el estudio de la Atención Primaria en contextos de sistemas de salud segmentados. *Revista de Salud Pública*, 12(S. 1), 77-88.
- Buss, P. M., & de Carvalho, A. I. (2007). Health promotion in Brazil. *Promotion et Education*, 14(4), 209-213.

- Bussell, J. B., Leviton, L. C., & Orleans, C. T. (2009). Active living by design: perspectives from the Robert Wood Johnson Foundation. *American Journal of Preventive Medicine*, 37(6 Suppl 2), S309-312.
- Calman, N. (2005). Making health equality a reality: The Bronx takes action. *Health Affairs*, 24(2), 491-498. doi: <http://dx.doi.org/10.1377/hlthaff.24.2.491>
- Canada, P. H. A. o. (2007). Lessons learned from Canadian experiences with intersectoral action to address the social determinants of health. *Chomik Consulting & Research*.
- Caperchione, C., & Coulson, F. (2010). The WellingTONNE Challenge Toolkit: Using the RE-AIM framework to evaluate a community resource promoting healthy lifestyle behaviours. *Health Education Journal*, 69(1), 126-134. doi: <http://dx.doi.org/10.1177/0017896910363301>
- Carey, M. A., & Smith, M. W. (1994). Capturing the group effect in focus groups: A special concern in analysis. *Qualitative Health Research*.
- Carter, S. M., Rychetnik, L., Lloyd, B., Kerridge, I. H., Baur, L., Bauman, A., . . . Zask, A. (2011). Evidence, Ethics, and Values: A Framework for Health Promotion. *American Journal of Public Health*, 101(3), 465-472. doi: 10.2105/AJPH.2010.195545
- Carter, T. P., Spitalny, K. C., Marsh, N. R., Eaton, N., Herrick, S. A., & M, H. R. (2006). Comprehensive statewide approach to improve youth outcomes: experience of the New York State Youth Development Team. *Journal of Public Health Management & Practice, Suppl*, S32-40.
- Castell-Florit Serrate, P. (2007). Comprension conceptual y factores que intervienen en el desarrollo de la intersectorialidad. *Revista Cubana de Salud Publica*, 33.
- Castell-Florit Serrate, P., Carlota Lausanne, R., Mirabel Jean-Claude, M., & Cabrera Gonzalez, t. (2007a). Study on the intersectoral practices in health in Cuba, report to the Pan American Health Organization, stage one (pp. 17). Havana: National School of Public Health.
- Castell-Florit Serrate, P., Carnota Lauzán, C. O., Mirabal Jean-Claude, M., Santana Espinosa, C., Hadda Hadda, J., & Cabrera González, T. (2007b). Study on intersector practices in health in Cuba report to the Pan American Health Organization (PAHO) *Document complementing the report to the Pan American Health Organization* (pp. 11). Cuba: PAHO.
- Cavers, W. J., Tregillus, V. H., Micco, A., & Hollander, M. J. (2010). Transforming family practice in British Columbia: the General Practice Services Committee. *Canadian Family Physician*, 56(12), 1318-1321.
- CDC. (19/04/2013). CDC Promotes Health through Strong Partnerships. Retrieved 11/2013, from www.cdc.gov/about/business/partners.htm
- CDC. (29/01/2013). Mission, Role and Pledge. Retrieved 11/2013, from www.cdc.gov/about/organization/mission.htm
- CDC. (2007). Reaching across the divide; finding solutions to health disparities (pp. 37). Atlanta: CDC.
- CDC. (2012, October 19, 2012). Racial and Ethnic Approaches to Community Health (REACH). Retrieved 27-09, 2013, from www.cdc.gov/reach
- Center to Reduce Cancer Health Disparities Community Network Program (CNP). (7/23/2009). CNP Background. Retrieved 11/2013, from <http://crchd.cancer.gov/cnp/background.html>
- Chan, L., Kirsop, B., & Arunachalam, S. (2011). Towards open and equitable access to research and knowledge for development. *PLoS Medicine*, 8(3), e1001016.
- Cheadle, A., Egger, R., LoGerfo, J. P., Walwick, J., & Schwartz, S. (2010). A community-organizing approach to promoting physical activity in older adults: the southeast senior physical activity network. *Health Promotion Practice*, 11(2), 197-204. doi: <http://dx.doi.org/10.1177/1524839908318167>
- Choitz, P., Johnson, M. P., Berhane, Z., Lefever, G., Anderson, J. K., & Eiser, A. R. (2010). Urban fitness centers: Removing barriers to promote exercise in underserved communities. *Journal*

- of *Health Care for the Poor and Underserved*, 21(1), 221-228. doi: <http://dx.doi.org/10.1353/hpu.0.0239>
- Cifuentes, M., Fernald, D. H., Green, L. A., Niebauer, L. J., Crabtree, B. F., Stange, K. C., & Hassmiller, S. B. (2005). Prescription for health: changing primary care practice to foster healthy behaviors. *Annals of Family Medicine*, 3 Suppl 2, S4-11.
- Claus, J. M., Dessauer, M., & Brennan, L. K. (2012). Programs and Promotions: Approaches by 25 Active Living by Design Partnerships. *American Journal of Preventive Medicine*, 43(5, Supplement 4), S320-S328. doi: <http://dx.doi.org/10.1016/j.amepre.2012.07.005>
- Coburn, D. (2000). Income inequality, social cohesion and the health status of populations: the role of neo-liberalism. *Social Science & Medicine*, 51(1), 135-146.
- Coburn, D. (2004). Beyond the income inequality hypothesis: class, neo-liberalism, and health inequalities. *Social Science & Medicine*, 58(1), 41-56.
- Cohen, D. J., Balasubramanian, B. A., Isaacson, N. F., Clark, E. C., Etz, R. S., & Crabtree, B. F. (2011). Coordination of Health Behavior Counseling in Primary Care. *The Annals of Family Medicine*, 9(5), 406-415. doi: 10.1370/afm.1245
- Commission on Macroeconomics and Health. (2001). *Macroeconomics and Health: Investing in Health for Economic Development*. Geneva: World Health Organization,.
- Commonwealth of Australia. (1993). *Pathways to Better Health - Intersectoral action*. National Health Strategy. Canberra.
- Correa, N. P., Murray, N. G., Mei, C. A., Baun, W. B., Gor, B. J., Hare, N. B., . . . Jones, L. A. (2010). CAN DO Houston: a community-based approach to preventing childhood obesity. *Preventing Chronic Disease*, 7(4), A88.
- Creswell, J. (2013). *Designing a Qualitative Study Qualitative Inquiry and Research Design; Choosing Among Five Approaches* (3rd ed., pp. 47): SAGE.
- Creswell, J. W., & Miller, D. L. (2000). Determining validity in qualitative inquiry. *Theory into Practice*, 39(3), 124-130. doi: 10.1207/s15430421tip3903_2
- CSDH. (2008a). *Closing the Gap in a Generation; Health Equity Through Action on the Social Determinants of Health. Final Report of the Commission on Social Determinants of Health*. Geneva: World Health Organization.
- CSDH. (2008b). *Closing the Gap in a Generation; Health Equity Through Action on the Social Determinants of Health. Final Report of the Commission on Social Determinants of Health, Executive Summary* (pp. 36). Geneva: World Health Organization.
- Cuba, R. d. (1976). *Constitution of Cuba [CONSTITUCIÓN DE LA REPUBLICA DE CUBA]*. 2014, from <http://www.cuba.cu/gobierno/cuba.htm>
- Das, P., & Samarasekera, U. (2011). The Commission on Macroeconomics and Health: 10 years on. *The Lancet*, 378(9807), 1907-1908.
- Davies, J. K., & Sherriff, N. (2011). The gradient in health inequalities among families and children: a review of evaluation frameworks. *Health Policy*, 101(1), 1-10. doi: <http://dx.doi.org/10.1016/j.healthpol.2010.09.015>
- Dawson-Saunders, B., & Trapp, R. G. (1994). *Basic & Clinical Biostatistics* (Vol. 2nd). Norwalk: Appleton & Lange.
- de la Torre, M., Lopez Pardo, C., Gutierrez Muniz, J., & Rojas Ochoa, F. (2004). *Salud para todos si es posible [Health for all yes it is possible]* (Vol. Rosario Parodi y Hugo Vergara). Habana: Sociedad Cubana de Salud Publica, Seccion de Medicina Social.
- de Silva-Sanigorski, A. M., Bell, A. C., Kremer, P., Nichols, M., Crellin, M., Smith, M., . . . Swinburn, B. A. (2010). Reducing obesity in early childhood: results from Romp & Chomp, an Australian community-wide intervention program. *The American journal of clinical nutrition*, 91(4), 831-840. doi: <http://dx.doi.org/10.3945/ajcn.2009.28826>

- DeBate, R., Plescia, M., Joyner, D., & Spann, L. (2004). A qualitative assessment of Charlotte REACH: an ecological perspective for decreasing CVD and diabetes among African Americans. *Ethnicity & Disease*, 14(3 Suppl 1), S77-82.
- Declaration of Alma-Ata. (1978). Paper presented at the International Conference on Primary Health Care, Almaty (formerly Alma-Ata) Kazakhstan (formerly USSR).
- Deehr, R. C., & Shumann, A. (2009). Active Seattle: achieving walkability in diverse neighborhoods. *American Journal of Preventive Medicine*, 37(6 Suppl 2), S403-411.
- Dieleman, M., Gerretsen, B., & van der Wilt, G. (2009). Human resource management interventions to improve health workers' performance in low and middle income countries: a realist review. *Health Research Policy & Systems*, 7, 7.
- Division of Cancer Prevention and Control. (2013, 10/09/2013). National Breast and Cervical Cancer Early Detection Program (NBCCEDP). Retrieved 7/11/2013, from <http://www.cdc.gov/cancer/nbccedp/about.htm>
- Division of Community Health National. *Investments in Community Health, Racial and Ethnic Approaches to Community Health (REACH)*. Atlanta: CDC Retrieved from www.cdc.gov/reach/pdf/FINAL_REACH_Fact%20Sheet-092012_TAG508.pdf.
- Dixon-Woods, M., Agarwal, S., Jones, D., Young, B., & Sutton, A. (2005). Synthesising qualitative and quantitative evidence: a review of possible methods. *Journal of Health Services & Research Policy*, 10, 45 - 53.
- Dobson, N. G., & Gilroy, A. R. (2009). From partnership to policy: the evolution of Active Living by Design in Portland, Oregon. *American Journal of Preventive Medicine*, 37(6 Suppl 2), S436-444.
- Doolan-Noble, F., Mann, S., & Tracey, J. (2010). An exploratory study of the barriers and facilitators to the optimal management of high CVD risk within primary health care. *Heart Lung and Circulation*, 19, S9. doi: <http://dx.doi.org/10.1016/j.hlc.2010.04.017>
- Dotterweich, J. A. (2006). Building effective community partnerships for youth development: lessons learned from ACT for Youth. *Journal of Public Health Management & Practice*, Suppl, S51-59.
- Drain, P. K., & Barry, M. (2010). Global health. Fifty years of U.S. embargo: Cuba's health outcomes and lessons. *Science*, 328(5978), 572-573. doi: 10.1126/science.1189680
- EQUINET. (2012). Regional Equity Watch 2012: Assessing progress towards equity in health in East and Southern Africa (pp. 176). Harare: EQUINET.
- Etz, R. S., Cohen, D. J., Woolf, S. H., Holtrop, J. S., Donahue, K. E., Isaacson, N. F., . . . Olson, A. L. (2008). Bridging primary care practices and communities to promote healthy behaviors. *American Journal of Preventive Medicine*, 35(5 Suppl), S390-397.
- European portal for action on health inequalities. Health Equity Audit. *Tools*. Retrieved 23/01/2014, from http://www.health-inequalities.eu/HEALTHY/EN/tools/health_equity_audit/
- Evans, R. G., & Stoddart, G. L. (1994). Producing health, consuming health care. *Why are some people healthy and others not*, 27-64.
- Evenson, K. R., Sallis, J. F., Handy, S. L., Bell, R., & Brennan, L. K. (2012). Evaluation of physical projects and policies from the Active Living by Design partnerships. *American Journal of Preventive Medicine*, 43(5 Suppl 4), S309-319. doi: 10.1016/j.amepre.2012.06.024
- Federal/Provincial/Territorial Advisory Committee on Population Health. (1999). Intersectoral Action toward Population Health. Ottawa Ontario.
- Ferrer, R. L., Mody-Bailey, P., Jaen, C. R., Gott, S., & Araujo, S. (2009). A medical assistant-based program to promote healthy behaviors in primary care. *Annals of Family Medicine*, 7(6), 504-512. doi: <http://dx.doi.org/10.1370/afm.1059>

- Flynn, L., Budd, M., & Modelski, J. (2008). Enhancing resource utilization among pregnant adolescents. *Public Health Nursing*, 25(2), 140-148. doi: <http://dx.doi.org/10.1111/j.1525-1446.2008.00690.x>
- Fortin, J. P., Groleau, G., Lemieux, V., O'Neill, M., & Lamarch, P. (1994). Intersectoral action for health gains. Summary of Research Findings. Montreal Quebec: Laval University.
- Fowler, B. A., Rodney, M., Roberts, S., & Broadus, L. (2005). Collaborative breast health intervention for African American women of lower socioeconomic status. *Oncology nursing forum*, 32(6), 1207-1216.
- France, E. (2014, 10/02/2014). [What's the research question for RAMESES II?].
- Frankish, C. J., Moulton, G. E., Quantz, D., Carson, A. J., Casebeer, A. L., Eyles, J. D., . . . Evoy, B. E. (2007). Addressing the non-medical determinants of health: a survey of Canada's health regions. *Canadian Journal of Public Health. Revue Canadienne de Sante Publique*, 98(1), 41-47.
- Frenk, J., & Chen, L. (2011). Overcoming gaps to advance global health equity: a symposium on new directions for research. *Health Research Policy and Systems*, 9(1), 11.
- Frost, N. (2011). *Qualitative Research Methods In Psychology : Combining Core Approaches* Retrieved from <http://ubc.ebilib.com/patron/FullRecord.aspx?p=744149>
- Garrett, K., Melichar, L., Holmes, S., Woodrum, A., Gibson, R., Hassmiller, S., . . . Green, L. (2013). Prescription for Health: Promoting Healthy Behaviors in Primary Care Research Networks (pp. 17): Robert Wood Johnson Foundation.
- Garside, R. (2014). Should we appraise the quality of qualitative research reports for systematic reviews, and if so, how? *Innovation: The European Journal of Social Science Research*, 27(1), 67-79.
- Gellert, K. S., Aubert, R. E., & Mikami, J. S. (2010). Ke 'Ano Ola: Moloka'i's community-based healthy lifestyle modification program. *American Journal of Public Health*, 100(5), 779-783. doi: <http://dx.doi.org/10.2105/AJPH.2009.176222>
- Gielen, A. C., McDonald, E., Frattaroli, S., McKenzie, L. B., Backes, B., Glenshaw, M., . . . Partnership, C. M. S. C. (2009). If you build it, will they come? Using a mobile safety centre to disseminate safety information and products to low-income urban families. *Injury Prevention*, 15(2), 95-99.
- Giles, W. H. (2010). The US perspective: lessons learned from the Racial and Ethnic Approaches to Community Health (REACH) Program. *Journal Of The Royal Society Of Medicine*, 103(7), 273-276. doi: 10.1258/jrsm.2010.100029
- Gilson, L., Hanson, K., Sheikh, K., Agyepong, I. A., Ssengooba, F., & Bennett, S. (2011). Building the field of health policy and systems research: social science matters. *PLoS Medicine*, 8(8), e1001079.
- Glasgow, R. E., & King, D. K. (2009). Implications of Active Living by Design for Broad Adoption, Successful Implementation, and Long-Term Sustainability. *American Journal of Preventive Medicine*, 37(6), S450-S452.
- Glasgow, R. E., Orleans, C. T., & Wagner, E. H. (2001). Does the chronic care model serve also as a template for improving prevention? *Milbank Quarterly*, 79(4), 579-612, iv-v.
- Global Health Research Program. (2008a). *Intersectoral action to improve health: applying evidence, achieving impact. Workshop proceedings*, Vancouver.
- Global Health Research Program. (2008b). *Intersectorality in the social production of health: sharing perspectives and experiences to orient a Cuba-Canada research program*, Havana.
- Gomez-Feliciano, L., McCreary, L. L., Sadowsky, R., Peterson, S., Hernandez, A., McElmurry, B. J., & Park, C. G. (2009). Active Living Logan Square: joining together to create opportunities for physical activity. *American Journal of Preventive Medicine*, 37(6 Suppl 2), S361-367.

- Gostin, L. O. (2010). *Public health law and ethics: a reader* (Vol. 4): Univ of California Press.
- Government of Victoria. Romp & Chomp. Retrieved 10/2011, from www.goforyourlife.vic.gov.au/rompandchomp
- GPSC. (2014). Divisions of Family Practice. Retrieved 22/01/2014, from <https://www.divisionsbc.ca/provincial/home>
- Grandes, G., Sanchez, A., Cortada, J. M., Balague, L., Calderon, C., Arrazola, A., . . . Millan, E. (2008). Is integration of healthy lifestyle promotion into primary care feasible? Discussion and consensus sessions between clinicians and researchers. *BMC Health Services Research*, 8, 213.
- Green, L. W. (2008). From Alma Ata to Prescription for Health: correcting 30 years of drift in primary care prevention and behavioral interventions. *American Journal of Preventive Medicine*, 35(5), S434-S436.
- Greene, C. M., McClellan, L. M. P. H., Gardner, T. r., & Larson, C. O. P. (2006). Diabetes Management Among Low-Income African Americans: A Description of a Pilot Strategy for Empowerment. *Journal of Ambulatory Care Management*, 29(2), 162-166.
- Greenhalgh, T., Pawson, R., Westhorp, G., & Wong, G. (2013, 2013). The RAMESES Project. Retrieved 14/02/2014, from www.ramesesproject.org
- Greneau, R., Fraser, G., Legowski, B., & Stachenko, S. (2009). The Case of ActNow BC *Mobilizing Intersectoral Action to Promote Health* (pp. 28): WHO Collaborating Centre on Chronic Non Communicable Disease Policy,.
- Haggerty, J. L., Levesque, J. F., Hogg, W., & Wong, S. (2013). The strength of primary care systems. *BMJ*, 346, f3777. doi: 10.1136/bmj.f3777
- Hamamoto, M. H., Derauf, D. D., & Yoshimura, S. R. (2009). Building the base: two active living projects that inspired community participation. *American Journal of Preventive Medicine*, 37(6 Suppl 2), S345-351.
- Hancock, T. (2011). Health promotion in Canada: 25 years of unfulfilled promise. *Health Promotion International*, 26(suppl 2), ii263-ii267. doi: 10.1093/heapro/dar061
- Harris, E., Services, A. D. o. H., Health, & Promotion, U. o. S. N. C. f. H. (1995). *Working Together: Intersectoral Action for Health*: Australian Government Publishing Service.
- Harris, M. F., Hobbs, C., Powell Davies, G., Simpson, S., Bernard, D., & Stubbs, A. (2005). Implementation of a SNAP intervention in two divisions of general practice: a feasibility study. *Medical Journal of Australia*, 183(10 Suppl), S54-58.
- Harvard School of Public Health. Core values, concepts, and principles of the Harvard School of Public Health. Retrieved 30/07/2014, from <http://www.hsph.harvard.edu/about/core-values/>
- Harvey, D. (2005). *A brief history of neoliberalism*: Oxford University Press.
- Hastings, J., van Staveren, M., Bikoff, R., Knaack, J., & Molloy, M. (2006). Tipping the scales of prevention advocacy with \$10,000 and a notebook. *North Carolina Medical Journal*, 67(4), 288-291.
- Hayes, S., Mann, M. K., Morgan, F., Carter, B., Kitcher, H., Playle, R., . . . Kelly, M. J. (2010). Collaboration between local health and local government agencies for health improvement. *Cochrane Database of Systematic Reviews*, 6(6).
- Health Council of Canada. (2010). *Stepping It Up: Moving the Focus from Health Care in Canada to a Healthier Canada* (pp. 34). Toronto Canada: Health Council of Canada.
- Health Systems Knowledge Network. (2007). *Challenging inequity through health systems - final report of the Health Systems Knowledge Network*.
- Heaton, J. (2004). *Reworking Qualitative Data*. London, GBR: SAGE Publications Inc. (US).
- Hebert, J. R., Elder, K., & Ureda, J. R. (2006). Meeting the challenges of cancer prevention and control in South Carolina: focusing on seven cancer sites, engaging partners. *Journal of the South Carolina Medical Association*, 102(7), 177-182.

- Hill, D. R., Ainsworth, R. M., & Partap, U. (2012). Teaching Global Public Health in the Undergraduate Liberal Arts: A Survey of 50 Colleges. *The American journal of tropical medicine and hygiene*, 87(1), 11-15. doi: 10.4269/ajtmh.2012.11-0571
- Hogg, R., & Hanley, J. (2008). Community development in primary care: opportunities and challenges. *Community practitioner : the journal of the Community Practitioners' & Health Visitors' Association*, 81(1), 22-25.
- Holtrop, J. S., Dosh, S. A., Torres, T., & Thum, Y. M. (2008). The Community Health Educator Referral Liaison (CHERL). A Primary Care Practice Role for Promoting Healthy Behaviors. *American Journal of Preventive Medicine*, 35(5 SUPPL.), S365-S372. doi: <http://dx.doi.org/10.1016/j.amepre.2008.08.012>
- Homedes, N., & Ugalde, A. (2005). Why neoliberal health reforms have failed in Latin America. *Health Policy*, 71(1), 83-96.
- Huberty, J. L., Dodge, T., Peterson, K., & Balluff, M. (2009). Activate Omaha: the journey to an active living environment. *American Journal of Preventive Medicine*, 37(6 Suppl 2), S428-435.
- Huckerby, C., Hesslewood, J., & Jagpal, P. (2006). Taking health care into black and minority communities - A pharmacist-led initiative. *Pharmaceutical Journal*, 276(7404), 680-682.
- Huish, R. (2008). *Going where no doctor has gone before: The Place of Cuba's Latin American School of Medicine in Building Health Care Capacity for Ecuador*. (Doctor of Philosophy), Simon Fraser University, Burnaby, BC.
- Hung, D. Y., Glasgow, R. E., Dickinson, L. M., Froshaug, D. B., Fernald, D. H., Balasubramanian, B. A., & Green, L. A. (2008). The Chronic Care Model and Relationships to Patient Health Status and Health-Related Quality of Life. *American Journal of Preventive Medicine*, 35(5, Supplement), S398-S406. doi: <http://dx.doi.org/10.1016/j.amepre.2008.08.009>
- Hung, D. Y., Rundall, T. G., Crabtree, B. F., Tallia, A. F., Cohen, D. J., & Halpin, H. A. (2006). Influence of Primary Care Practice and Provider Attributes on Preventive Service Delivery. *American Journal of Preventive Medicine*, 30(5), 413-422. doi: <http://dx.doi.org/10.1016/j.amepre.2005.12.012>
- Institute for Healthcare Improvement. (2003). The Breakthrough Series: IHI's Collaborative Model for Achieving Breakthrough Improvement. *IHI Innovation Series white paper*. Boston: Institute for Healthcare Improvement.
- IOM. (2012). For the Public's Health: Investing in a Healthier Future. Washington, DC.
- Jackson, S. F., Perkins, F., Khandor, E., Cordwell, L., Hamann, S., & Buasai, S. (2006). Integrated health promotion strategies: a contribution to tackling current and future health challenges. *Health Promotion International*, 21(suppl 1), 75-83. doi: 10.1093/heapro/dal054
- Jafar, T. H., Hatcher, J., Poulter, N., Islam, M., Hashmi, S., Qadri, Z., . . . Chaturvedi, N. (2009). Community-based interventions to promote blood pressure control in a developing country: A cluster randomized trial. *Annals of Internal Medicine*, 151(9), 593-601. doi: <http://dx.doi.org/10.1059/0003-4819-151-9-200911030-00004>
- Jagosh, J. (2014). *What's the research question for RAMESES II?* e-mail on a listserv. University of Liverpool.
- Jagosh, J., Macaulay, A., Pluye, P., Salsberg, J., Bush, P., Henderson, J., . . . Greenhalgh, T. (2012). Uncovering the benefits of participatory research: implications of a realist review for health research and practice. *Milbank Quarterly*, 90, 311 - 346.
- Jansson, E. V. G., & Tillgren, P. E. (2010). Health promotion at local level: a case study of content, organization and development in four Swedish municipalities. *BMC Public Health*, 10, 455.
- Jenkins, C., Pope, C., Magwood, G., Vandemark, L., Thomas, V., Hill, K., . . . Zapka, J. (2010). Expanding the chronic care framework to improve diabetes management: the REACH case study. *Prog Community Health Partnersh*, 4(1), 65-79. doi: 10.1353/cpr.0.0108

- John Hancock Research Center on Physical Activity Nutrition and Obesity Prevention. Children in Balance. Retrieved 11/2013, from www.childreninbalance.org
- Kaiser Permanente. Community Health Initiatives. Retrieved 10/2011, from http://info.kp.org/communitybenefit/html/our_work/global/our_work_3_c.html
- Kearns, R., & Moon, G. (2002). From medical to health geography: novelty, place and theory after a decade of change. *Progress in Human Geography*, 26(5), 605-625.
- Kelishadi, R., Sarrafzadegan, N., Sadri, G. H., Pashmi, R., Mohammadifard, N., Tavassoli, A. A., . . . Bahonar, A. (2011). Short-term results of a community-based program on promoting healthy lifestyle for prevention and control of chronic diseases in a developing country setting: Isfahan Healthy Heart Program. *Asia-Pacific Journal of Public Health*, 23(4), 518-533. doi: 10.1177/1010539509348241
- Kelly, M. P., Morgan, A., Bonnefoy, J., Butt, J., & Bergman, V. (2007). Developing an evidence base for political action; Final report to World Health Organization Commission on the Social Determinants of Health. In Measurement and Evidence Knowledge Network (Ed.), (pp. 165).
- Keon, W. J. (2009). Cuba's system of maternal health and early childhood development: lessons for Canada. *CMAJ Canadian Medical Association Journal*, 180(3), 314-316. doi: 10.1503/cmaj.080487
- Khairul, B. M. (2008). Case Study: A Strategic Research Methodology. *American Journal of Applied Sciences*, 5(11), 1602-1604.
- Khosravi, A., Mehr, G., Kelishadi, R., Shirani, S., Gharipour, M., Tavassoli, A., . . . Sarrafzadegan, N. (2010). The impact of a 6-year comprehensive community trial on the awareness, treatment and control rates of hypertension in Iran: experiences from the Isfahan healthy heart program. *BMC cardiovascular disorders*, 10(1), 61.
- Killingsworth, R. E. (2009). Active Living—Past, Present, and Future: Implications for the Field. *American Journal of Preventive Medicine*, 37(6), S445-S447.
- Kim, J. Y., Millen, J. V., Irwin, A., & Gershman, J. (2000). *Dying for growth: global inequality and the health of the poor* (Vol. 8): Common Courage Press Monroe^ eMaine Maine.
- Koh, H. K., Oppenheimer, S. C., Massin-Short, S. B., Emmons, K. M., Geller, A. C., & Viswanath, K. (2010). Translating Research Evidence Into Practice to Reduce Health Disparities: A Social Determinants Approach. *American Journal of Public Health*, 100(S1), S72-S80. doi: 10.2105/AJPH.2009.167353
- Koller, T., Morgan, A., Guerreiro, A., Currie, C., Ziglio, E., & International, H. s. g. (2009). Addressing the socioeconomic determinants of adolescent health: experiences from the WHO/HBSC Forum 2007. *International Journal of Public Health*, 54 Suppl 2, 278-284.
- Koplan, J. P., Bond, T. C., Merson, M. H., Reddy, K. S., Rodriguez, M. H., Sewankambo, N. K., & Wasserheit, J. N. (2009). Towards a common definition of global health. *The Lancet*, 373(9679), 1993-1995.
- Kothari, A., Regan, S., Gore, D., Valaitis, R., Garcia, J., Manson, H., & O'Mara, L. (2014). Using an integrated knowledge translation approach to build a public health research agenda. *Health Research Policy and Systems*, 12(1), 6.
- Kraft, M. K., & Brown, L. D. (2009). Active Living by Design as a political project challenges at three levels. *American Journal of Preventive Medicine*, 37(6 Suppl 2), S453-454.
- Kraft, M. K., Lee, J. J., & Brennan, L. K. (2012). Active living by design sustainability strategies. *American Journal of Preventive Medicine*, 43(5 Suppl 4), S329-336. doi: 10.1016/j.amepre.2012.06.025
- Kramer, L., Schwartz, P., Cheadle, A., Borton, J. E., Wright, M., Chase, C., & Lindley, C. (2010). Promoting policy and environmental change using photovoice in the Kaiser Permanente Community Health Initiative. *Health Promotion Practice*, 11(3), 332-339.

- Krist, A. H., Woolf, S. H., Frazier, C. O., Johnson, R. E., Rothemich, S. F., Wilson, D. B., . . . Kerns, J. W. (2008). An electronic linkage system for health behavior counseling effect on delivery of the 5A's. *American Journal of Preventive Medicine*, 35(5 Suppl), S350-358.
- Krueger, R. A. (1994a). Asking questions in a focus group. *Focus groups: A practical guide for applied research*, 53-73.
- Krueger, R. A. (1994b). *Focus Groups: A Practical Guide for Applied Research*. Thousand Oaks, CA: Sage.
- Kruger, D. J., Hamacher, L., Strugar-Fritsch, D., Shirey, L., Renda, E., & Zimmerman, M. A. (2010). Facilitating the development of a county health coverage plan with data from a community-based health survey. *Journal of Public Health Policy*, 31(2), 199-211. doi: <http://dx.doi.org/10.1057/jphp.2010.8>
- Kruk, M. E., Porignon, D., Rockers, P. C., & Van Lerberghe, W. (2010). The contribution of primary care to health and health systems in low- and middle-income countries: A critical review of major primary care initiatives. *Social Science & Medicine*, 70(6), 904-911. doi: 10.1016/j.socscimed.2009.11.025
- Lanham, H. J., Leykum, L. K., Taylor, B. S., McCannon, C. J., Lindberg, C., & Lester, R. T. (2013). How complexity science can inform scale-up and spread in health care: understanding the role of self-organization in variation across local contexts. *Social Science & Medicine*, 93, 194-202.
- Larson, C. O., Schlundt, D. G., Patel, K., Wang, H., Beard, K., & Hargreaves, M. K. (2009). Trends in Smoking Among African-Americans: A Description of Nashville's REACH 2010 Initiative. *Journal of Community Health*, 34(4), 311-320.
- Lasker, R. D., & Weiss, E. S. (2003a). Broadening participation in community problem solving: a multidisciplinary model to support collaborative practice and research. *Journal of Urban Health*, 80(1), 14-47; discussion 48-60. doi: 10.1093/jurban/jtg014
- Lasker, R. D., & Weiss, E. S. (2003b). Creating partnership synergy: the critical role of community stakeholders. *J Health Hum Serv Adm*, 26(1), 119-139.
- Lasker, R. D., Weiss, E. S., & Miller, R. (2001a). Partnership synergy: a practical framework for studying and strengthening the collaborative advantage. *Milbank Quarterly*, 79(2), 179-205, iii-iv.
- Lasker, R. D., Weiss, E. S., & Miller, R. (2001b). Promoting collaborations that improve health. *Educ Health (Abingdon)*, 14(2), 163-172. doi: 10.1080/13576280110051046
- Lavin, J. H., Avery, A., Whitehead, S. M., Rees, E., Parsons, J., Bagnall, T., . . . Ruxton, C. H. S. (2006). Feasibility and benefits of implementing a Slimming on Referral service in primary care using a commercial weight management partner. *Public Health*, 120(9), 872-881.
- Lawn, J. E., Rohde, J., Rifkin, S., Were, M., Paul, V. K., & Chopra, M. (2008). Alma-Ata 30 years on: revolutionary, relevant, and time to revitalise. *Lancet*, 372(9642), 917-927.
- Levac, D., Colquhoun, H., & O'Brien, K. K. (2010). Scoping studies: advancing the methodology. *Implementation Science*, 5, 69.
- Levesque, J.-F., Breton, M., Senn, N., Levesque, P., Bergeron, P., & Roy, D. A. (2013). The Interaction of Public Health and Primary Care: Functional Roles and Organizational Models that Bridge Individual and Population Perspectives. *Public Health Reviews*, 35(1).
- Levi, J., Segal, L. M., & Laurent, R. S. (2011). Investing in America's Health: A state-by-state look at public health funding and key health facts *Issue Report*: Trust for America's Health,.
- Lewis, J. M., Baeza, J. I., & Alexander, D. (2008). Partnerships in primary care in Australia: network structure, dynamics and sustainability. *Social Science & Medicine*, 67(2), 280-291.
- Leykum, L. K., Pugh, J. A., Lanham, H. J., Harmon, J., & McDaniel, R. R. (2009). Implementation research design: integrating participatory action research into randomized controlled trials. *Implementation Science*, 4(1), 69.

- Liao, Y., Tsoh, J. Y., Chen, R., Foo, M. A., Garvin, C. C., Grigg-Saito, D., . . . Giles, W. H. (2010a). Decreases in Smoking Prevalence in Asian Communities Served by the Racial and Ethnic Approaches to Community Health (REACH) Project. *American Journal of Public Health*, 100(5), 853-860.
- Liao, Y., Tucker, P., Siegel, P., Liburd, L., Giles, W. H., & for the, R. I. (2010b). Decreasing disparity in cholesterol screening in minority communities-findings from the Racial and Ethnic Approaches to Community Health 2010. *Journal of Epidemiology & Community Health*, 64(4), 292-299.
- Liburd, L. C. P. M. P. H. M. A. (2011). Foreword: REACH U.S. in Action: Inspiring Hope, Rewarding Courage. *Family & Community Health January/March*, 34, S2-S6.
- Loewenson, R. (2013). *Evaluating intersectoral processes for action on the social determinants of health: learning from key informants*. Social Determinants of Health Discussion Paper Series, (5). Geneva.
- Loignon, C., Hudon, C., Boudreault-Fournier, A., Dupere, S., Macaulay, A., Pluye, P., . . . Lemieux, M. (2013). Transforming primary healthcare by including the stakeholders involved in delivering care to people living in poverty: EQUihealthY study protocol. *BMC Health Services Research*, 13(1), 92.
- Lopez Pardo, C. M. (2004). El desarrollo humano y la equidad en Cuba: una visión actualizada. *Rev Cubana Salud Pública*, 30(1).
- Loucks, E., Aldama, A., Ibarra, A. M., Barcelo, C., Guzman, R., Spiegel, J. M., & Yassi, A. (2003). Vivienda y salud en residentes de Centro Habana. Parte II. Condiciones de vida y salud. *Accepted by Revista Cubana de Higiene y Epidemiología*.
- Lyle, D., Hobba, J., Lloyd, K., Bennett, D., George, T., Giddings, N., . . . Heading, G. (2008). Mobilising a rural community to lose weight: impact evaluation of the WellingTonne Challenge. *Australian Journal of Rural Health*, 16(2), 80-85. doi: 10.1111/j.1440-1584.2008.00958.x
- MacDonald, M., Best, A., Bruce, T., Carroll, S., Doyle-Waters, M., Hancock, T., . . . Riley, B. (2012a). Complexity science. Retrieved 31/07/2014, from <http://www.uvic.ca/research/groups/cphfri/projects/currentprojects/complexity/index.php>
- MacDonald, M., Jackson, B., Best, A., Bruce, E., Carroll, S., Hancock, T., . . . Riley, B. (2012b). Complexity Science in Brief (pp. 2).
- MacDonald, T. H. (1999). *A development analysis of Cuba's health care system since 1959. Studies in health and human services* (Vol. 32). Lewiston, NY: Edwin Mellen Press.
- Macinko, J., Starfield, B., & Erinosho, T. (2009). The impact of primary healthcare on population health in low- and middle-income countries. *Journal of Ambulatory Care Management*, 32(2), 150-171.
- Macinko, J., Starfield, B., & Shi, L. (2003). The contribution of primary care systems to health outcomes within Organization for Economic Cooperation and Development (OECD) countries, 1970-1998. *Health Services Research*, 38(3), 831-865.
- Macinko, J., Starfield, B., & Shi, L. (2007). Quantifying the health benefits of primary care physician supply in the United States. *International Journal of Health Services*, 37(1), 111-126.
- Macintyre, K. C. E., & Hadad, J. (2002). Cuba. In L. M. Gaydos (Ed.), *World Health Systems: Challenges and Perspectives*. Chicago: Health Administration Press.
- Marmot, M., Allen, J., Bell, R., Bloomer, E., & Goldblatt, P. (2012). WHO European review of social determinants of health and the health divide. *The Lancet*, 380(9846), 1011-1029. doi: [http://dx.doi.org/10.1016/S0140-6736\(12\)61228-8](http://dx.doi.org/10.1016/S0140-6736(12)61228-8)
- Marmot, M., Friel, S., Bell, R., Houweling, T., & Taylor, S. (2008). Closing the gap in a generation: health equity through action on the social determinants of health. *Lancet*, 372, 1661 - 1669.

- Martin-Misener, R. (2009). A Scoping Literature Review of Collaboration between Primary Care and Public Health (pp. 35): A Report to the Canadian Health Services Research Foundation.
- Martin-Misener, R., & Valaitis, R. (2008). A Scoping Literature Review of Collaboration between Primary Care and Public Health; A Report to the Canadian Health Services Research Foundation *Stengthening Primary Health Care through Primary Care and Public Health Collaboration* (pp. 35).
- Martin-Misener, R., Valaitis, R., Wong, S. T., MacDonald, M., Meagher-Stewart, D., & Kaczorowski, J. (2012). A scoping literature review of collaboration between primary care and public health. *Primary health care research & development*, 13(04), 327-346.
- Martin, R. (2001). Geography and public policy: the case of the missing agenda. *Progress in Human Geography*, 25(2), 189-210.
- Mays, G. P., & Smith, S. A. (2011). Evidence Links Increases In Public Health Spending To Declines In Preventable Deaths. *Health Affairs*, 30(8), 1585-1593. doi: 10.1377/hlthaff.2011.0196
- McClellan, L., & Schlundt, D. (2006). Overview of Nashville REACH 2010's approach to eliminating disparities in diabetes and cardiovascular disease. *Journal of Ambulatory Care Management*, 29(2), 106-111.
- McCreary, L. L., Park, C. G., Gomez, L., Peterson, S., Pino, D., & McElmurry, B. J. (2012). A Mixed-Methods Evaluation of School-Based Active Living Programs. *American Journal of Preventive Medicine*, 43(5, Supplement 4), S395-S398. doi: <http://dx.doi.org/10.1016/j.amepre.2012.06.030>
- McCreedy, M., & Leslie, J. G. (2009). Get Active Orlando: changing the built environment to increase physical activity. *American Journal of Preventive Medicine*, 37(6 Suppl 2), S395-402.
- McDaniel Jr, R. R., Lanham, H. J., & Anderson, R. A. (2009). Implications of complex adaptive systems theory for the design of research on health care organizations. *Health Care Manage Rev*, 34(2), 191-199.
- McKee, M., Stuckler, D., & Basu, S. (2012). Where there is no health research: what can be done to fill the global gaps in health research? *PLoS Medicine*, 9(4), e1001209.
- McKeown, T. (1979). *The role of Medicine: Dream, Mirage or Nemesis?* (Vol. 2nd). Oxford: Basil Blackwell.
- Mjelde-Mossey, L. A. (2005). Social work's partnership in community-based stroke prevention for older adults: a collaborative model. *Social Work in Health Care*, 42(2), 57-71.
- Mohammadifard, N., Kelishadi, R., Safavi, M., Sarrafzadegan, N., Sajadi, F., Sadri, G. H., . . . Sarmadi, F. (2009). Effect of a community-based intervention on nutritional behaviour in a developing country setting: the Isfahan Healthy Heart Programme. *Public Health Nutrition*, 12(09), 1422-1430.
- Morgan, D. L., & Krueger, R. A. (1993). When to use focus groups and why. In S. f. editions (Ed.), *Successful focus groups: Advancing the state of the art* (Vol. 156, pp. 3-19). Thousand Oaks, CA, US: Sage.
- Munoz, L., Spiegel, J., Garcia, M., Alegret, M., Mas, P., & Yassi, A. (2002, 2002). *Building environmental health capacity across Cuba*. Paper presented at the 9th Canadian Conference on International Health (CCIH), Ottawa, Canada.
- Muntaner, C., Lynch, J., & Smith, G. D. (2001). Social capital, disorganized communities, and the third way: understanding the retreat from structural inequalities in epidemiology and public health. *International Journal of Health Services*, 31(2), 213-238.
- Muntaner, C., Sridharan, S., Solar, O., & Benach, J. (2009). Commentary: Against unjust global distribution of power and money: The report of the WHO commission on the social

- determinants of health: Global inequality and the future of public health policy. *Journal of Public Health Policy*, 30(2), 163-175.
- Narayan, R., & Schuftan, C. (2008). People's Health Movement. In H. K. Heggenhougen (Ed.), *International Encyclopedia of Public Health* (pp. 41-45). Oxford: Academic Press.
- Nasmith, L., Ballem, P., Baxter, R., Bergman, H., Colin-Thomé, D., Herbert, C., . . . Zimmerman, B. (2010). Transforming care for Canadians with chronic health conditions: Put people first, expect the best, manage for results. Ottawa: Canadian Academy of Health Sciences.
- National Breast and Cervical Cancer Early Detection Program. (2013, 23/08/2013). South Carolina Five-Year Summary: July 2007 to June 2012. Retrieved 7/11/2013, from http://www.cdc.gov/Cancer/nbccedp/data/summaries/south_carolina.htm
- National Cancer Institute. (6/12/2013). Cancer Control and Population Sciences, NCI's Bridge to Public Health Research, Practice, and Policy. Retrieved 12/11/2013, from <http://cancercontrol.cancer.gov/od>
- National Center for Chronic Disease Prevention and Health Promotion Division of Community Health. (25/10/2013). Retrieved 11/2013, from www.cdc.gov/reach
- Navarro, V. (1994). *The politics of health policy: The US reforms, 1980-1994*: Blackwell.
- Navarro, V. (2007). *Neoliberalism, globalization, and inequalities: Consequences for health and quality of life*: Baywood Pub.
- Nazeem ud, d., Zaman, K., Ashraf, S., Sajjad, F., Saleem, S., & Raja, U. (2014). Quality versus quantity in health care and educational reforms: combating poverty. *Quality and Quantity*, 1-27. doi: 10.1007/s11135-013-9986-2
- NC Prevention Partners. NC Prevention Partners. Retrieved 11/2013, from www.ncpreventionpartners.org/
- Ndumbe-Eyoh, S., & Moffatt, H. (2013). Intersectoral action for health equity: a rapid systematic review. *BMC Public Health*, 13(1), 1056.
- Neuwelt, P., Matheson, D., Arroll, B., Dowell, A., Winnard, D., Crampton, P., . . . Cumming, J. (2009). Putting population health into practice through primary health care. *New Zealand Medical Journal*, 122(1290), 98-104.
- Newton, W. P., Lefebvre, A., Donahue, K. E., Bacon, T., & Dobson, A. (2010). Infrastructure for large-scale quality-improvement projects: early lessons from North Carolina Improving Performance in Practice. *Journal of Continuing Education in the Health Professions*, 30(2), 106-113.
- Ngoc Nguyen, T.-U., Tanjasiri, S. P., Kagawa-Singer, M., Tran, J. H., & Foo, M. A. (2008). Community health navigators for breast- and cervical-cancer screening among Cambodian and Laotian women: intervention strategies and relationship-building processes. *Health Promotion Practice*, 9(4), 356-367.
- Nutbeam, D. (1986). Health promotion glossary. *Health Promotion International*, 1(1), 113-127.
- Nutbeam, D. (1998). Health Promotion Glossary. *Health Promotion International*, 13(4), 349-364. doi: 10.1093/heapro/13.4.349
- Nutbeam, D., & Harris, E. (1995). Creating supportive environments for health: a case study from Australia in developing national goals and targets for healthy environments. *Health Promotion International*, 10(1), 51-59. doi: 10.1093/heapro/10.1.51
- O'Campo, P., Kirst, M., Schaefer-McDaniel, N., Firestone, M., Scott, A., & McShane, K. (2009). Community-based services for homeless adults experiencing concurrent mental health and substance use disorders: a realist approach to synthesizing evidence. *Journal of Urban Health*, 86(6), 965-989.
- O'Neill, M., Lemieux, V., Groleau, G., Fortin, J.-P., & Lamarche, P. A. (1997). Coalition theory as a framework for understanding and implementing intersectoral health-related interventions. *Health Promotion International*, 12(1), 79-87.

- O'Neill, M., & Williams, G. (2004). Developing community and agency engagement in an action research study in South Wales. *Critical Public Health*, 14(1), 37-47. doi: <http://dx.doi.org/10.1080/09581590410001701298>
- Omishakin, A. A., Carlat, J. L., Hornsby, S., & Buck, T. (2009). Achieving built-environment and active living goals through Music City Moves. *American Journal of Preventive Medicine*, 37(6 Suppl 2), S412-419.
- Pagliccia, N., Spiegel, J., Alegret, M., Bonet, M., Martinez, B., & Yassi, A. (2010). Network analysis as a tool to assess the intersectoral management of health determinants at the local level: a report from an exploratory study of two Cuban municipalities. *Social Science & Medicine*, 71(2), 394-399.
- PAHO. Regional Core Health Data Initiative. Retrieved August 31, 2008, from <http://www.paho.org/English/SHA/coredata/tabulator/newTabulator.htm>
- Paina, L., & Peters, D. H. (2012). Understanding pathways for scaling up health services through the lens of complex adaptive systems. *Health Policy and Planning*, 27(5), 365-373.
- Pastrana, T., Vallath, N., Mastrojohn, J., Namukwaya, E., Kumar, S., Radbruch, L., & Clark, D. (2010). Disparities in the contribution of low-and middle-income countries to palliative care research. *Journal of pain and symptom management*, 39(1), 54-68.
- Patel, K. P., Larson, C. P., Hargreaves, M. P., Schlundt, D. P., Wang, H. M. S., Jones, C. P. M. B. A., & Beard, K. M. S. (2010). Community Screening Outcomes for Diabetes, Hypertension, and Cholesterol: Nashville REACH 2010 Project. *Journal of Ambulatory Care Management Tracking the Six Aims of the Quality Chasm in Ambulatory Care*, 33(2), 155-162.
- Patton, M. Q. (2010). *Developmental evaluation: Applying complexity concepts to enhance innovation and use*: Guilford Press.
- Pauly, B., MacDonald, M., Hancock, T., Martin, W., & Perkin, K. (2013). Reducing health inequities: the contribution of core public health services in BC. *BMC Public Health*, 13(1), 550.
- Pawson, R. (2002). Evidence-based policy: the promise of 'realist synthesis'. *Evaluation*, 8, 340 - 358.
- Pawson, R. (2014, 11/02/2014). [What's the research question for RAMESES II?].
- Pawson, R., Greenhalgh, T., Harvey, G., & Walshe, K. (2004). *Realist synthesis: an introduction*. ESRC Research Methods Programme, Methods Paper, (2/2004). Manchester.
- Pawson, R., Greenhalgh, T., Harvey, G., & Walshe, K. (2005). Realist review--a new method of systematic review designed for complex policy interventions. *Journal of Health Services & Research Policy*, 10(Suppl 1), 21-34.
- Pawson, R., Wong, G., & Owen, L. (2011). Known knowns, known unknowns, unknown unknowns: the predicament of evidence-based policy. *Am J Eval*.
- Pearson, M., Hunt, H., Cooper, C., Shepperd, S., Pawson, R., & Anderson, R. (2013). Intermediate care: a realist review and conceptual framework (2013 ed.): National Institute for Health Research, National Health System,.
- Penprase, B. (2006). Developing comprehensive health care for an underserved population. *Geriatric Nursing*, 27(1), 45-50.
- People's Health, A. (2002). People's Charter for Health. People's Health Assembly. *Journal of Public Health Policy*, 23(4), 387-398.
- People's Health Movement. Health for All Now! People's Health Movement. Retrieved 21/1/2014, from <http://www.phmovement.org/>
- Pfeiffer, J. (2003). International NGOs and primary health care in Mozambique: the need for a new model of collaboration. *Social Science & Medicine*, 56(4), 725-738.
- PHAC. (2006). Key Determinants. Retrieved June, 2006, from www.phac-aspc.gc.ca/ph-sp/determinants/

- PHAC. (2007). Crossing sectors. Ottawa: Public Health Agency of Canada.
- PHAC, & WHO. (2008). Health Equity Through Intersectoral Action: An Analysis of 18 Country Case Studies (pp. 40): Public Health Agency of Canada and World Health Organization.
- Pichert, J. W. P., McClellan, L. H. M. P. H., Larson, C. P., Kenerson, D. M. P. A. R. N., Brown, A. R. N. N. P., Reid, R., . . . Hargreaves, M. P. (2010). Development and Evaluation of a Bible College-based Course on Faith and Health. *Journal of Ambulatory Care Management REACH*, 29(2), 141-150.
- Pietroni, P. (2001). Cuban health care systems and its implications for the NHS plan. *London, UK House of Commons Health Select Committee*.
- Plescia, M., Groblewski, M., & Chavis, L. (2008a). A lay health advisor program to promote community capacity and change among change agents. *Health Promotion Practice*, 9(4), 434-439.
- Plescia, M., Herrick, H., & Chavis, L. (2008b). Improving health behaviors in an African American community: the Charlotte Racial and Ethnic Approaches to Community Health project. *American Journal of Public Health*, 98(9), 1678-1684.
- Plochg, T., Delnoij, D. M. J., Hoogedoorn, N. P. C., & Klazinga, N. S. (2006). Collaborating while competing? The sustainability of community-based integrated care initiatives through a health partnership. *BMC Health Services Research*, 6, 37.
- Pope, C., Mays, N., & Popay, J. (2007). *Synthesising Qualitative and Quantitative Health Research : A Guide to Methods*. Buckingham, GBR: Open University Press.
- Powell, R. A., & Single, H. M. (1996). Focus groups. *International Journal for Quality in Health Care*, 8(5), 499-504.
- Prescription for Health. Prescription for Health. Retrieved 11/2013, from <http://www.prescriptionforhealth.org/>
- Public health Agency of Canada. (2007). Core Competencies for Public Health in Canada: Release 1.0 (Release 1.0 ed., pp. 25). Ottawa.
- Public Health Agency of Canada. (2010). Public Health Practice Glossary of Terms. Retrieved 31/07/2014, from <http://www.phac-aspc.gc.ca/php-psp/ccph-cesp/glos-eng.php>
- Rabiee, F. (2004). Focus-group interview and data analysis. *Proceedings of the Nutrition Society*, 63(04), 655-660. doi: doi:10.1079/PNS2004399
- Rabiei, K., Kelishadi, R., Sarrafzadegan, N., Abedi, H. A., Alavi, M., Heidari, K., . . . Sadeghi, S. (2009). Process evaluation of a community-based program for prevention and control of non-communicable disease in a developing country: The Isfahan Healthy Heart Program, Iran. *BMC Public Health*, 9, 57. doi: <http://dx.doi.org/10.1186/1471-2458-9-57>
- Raja, S., Ball, M., Booth, J., Haberstro, P., & Veith, K. (2009). Leveraging neighborhood-scale change for policy and program reform in Buffalo, New York. *American Journal of Preventive Medicine*, 37(6 Suppl 2), S352-360.
- Ralston, P. A., Furlow, J., Brickler-Hart, C., Baker, L., Austin, D., Ford, C., & Dilworth, L. (2007). The Community Wellness Program: An intergenerational seminar for African Americans. *Journal of Health Care for the Poor and Underserved*, 18(1), 21-27. doi: <http://dx.doi.org/10.1353/hpu.2007.0014>
- Raphael, D. (2001). Letter from Canada: paradigms, politics and principles: An end of the millennium update from the birthplace of the Healthy Cities movement. *Health Promotion International*, 16(1), 99-101. doi: 10.1093/heapro/16.1.99
- Raphael, D. (2003a). Addressing the social determinants of health in Canada: bridging the gap between research findings and public policy. *POLICY OPTIONS-MONTREAL*-, 24(3), 35-40.

- Raphael, D. (2003b). Barriers to addressing the societal determinants of health: public health units and poverty in Ontario, Canada. *Health Promotion International*, 18(4), 397-405. doi: 10.1093/heapro/dag411
- Raphael, D. (2008). Getting serious about the social determinants of health: new directions for public health workers. *Promotion & education*, 15(3), 15-20. doi: 10.1177/1025382308095650
- Raphael, D. (2009). Escaping from the Phantom Zone: social determinants of health, public health units and public policy in Canada. *Health Promotion International*, 24(2), 193-198. doi: 10.1093/heapro/dap005
- Raphael, D. (2011). Mainstream media and the social determinants of health in Canada: is it time to call it a day? *Health Promotion International*, 26(2), 220-229. doi: 10.1093/heapro/dar008
- Raphael, D. (2013a). The political economy of health promotion: part 1, national commitments to provision of the prerequisites of health. *Health Promotion International*, 28(1), 95-111. doi: 10.1093/heapro/dar084
- Raphael, D. (2013b). The political economy of health promotion: part 2, national provision of the prerequisites of health. *Health Promotion International*, 28(1), 112-132. doi: 10.1093/heapro/dar058
- Raphael, D., Curry-Stevens, A., & Bryant, T. (2008). Barriers to addressing the social determinants of health: Insights from the Canadian experience. *Health Policy*, 88(2-3), 222-235. doi: 10.1016/j.healthpol.2008.03.015
- Rawaf, S., De Maeseneer, J., & Starfield, B. (2008). From Alma-Ata to Almaty: a new start for primary health care. *Lancet*, 372(9647), 1365-1367.
- Razzouk, D., Sharan, P., Gallo, C., Gureje, O., Lamberte, E. E., de Jesus Mari, J., . . . Olifson, S. (2010). Scarcity and inequity of mental health research resources in low-and-middle income countries: a global survey. *Health Policy*, 94(3), 211-220.
- Resnik, D. B. (2004). The distribution of biomedical research resources and international justice. *Dev World Bioeth*, 4(1), 42-57. doi: 10.1111/j.1471-8731.2004.00066.x
- Resource Group on Social Determinants of Health. (2010). Intersectoral action to tackle the social determinants of health and the role of evaluation; Report of the first Meeting of the WHO Policy Maker Resource Group on Social Determinants of Health, Viña del Mar, Chile, 27-29 January 2010. In W. H. Organization (Ed.), (pp. 38). Geneva: World Health Organization.
- Richards, T. (2004). Exchanging health lessons globally - Editorial. *BMJ*(328), 239-240.
- Richardson, G., van Woerden, H. C., Morgan, L., Edwards, R., Harries, M., Hancock, E., . . . Bowley, M. (2008). Healthy hearts--a community-based primary prevention programme to reduce coronary heart disease. *BMC cardiovascular disorders*, 8, 18. doi: <http://dx.doi.org/10.1186/1471-2261-8-18>
- Riser, M. H., Mesler, K., Tallon, T. C., & Birkhead, G. S. (2006). New York State's "Assets Coming Together (ACT) for Youth": A statewide approach effects community change. *Journal of Public Health Management and Practice*, 12(SUPPL. 6), S41-S47.
- Ritchie, D., Gnich, W., Parry, O., & Platt, S. (2008). 'People pull the rug from under your feet': Barriers to successful public health programmes. *BMC Public Health*, 8(173). doi: <http://dx.doi.org/10.1186/1471-2458-8-173>
- Robert Wood Johnson Foundation. (2013). Active Living Research; Using Evidence to Prevent Childhood Obesity and Create Active Communities Retrieved 07/11/2013, from <http://activelivingresearch.org/>
- Robinson, R. G. (2004). Responses to S. Leonard Syme's essay. *Preventing Chronic Disease*, 1(2), A13.

- Rockey Moore, M. (2009). Active Living by Design: implications for state and local officials. *American Journal of Preventive Medicine*, 37(6 Suppl 2), S455-456. doi: 10.1016/j.amepre.2009.09.017
- Romanow, R. (2002). Building on values. The Future of Health Care in Canada *Commission on the Future of Health Care in Canada*. Ottawa.
- Romon, M., Lommez, A., Tafflet, M., Basdevant, A., Oppert, J. M., Bresson, J. L., . . . Borys, J. M. (2009). Downward trends in the prevalence of childhood overweight in the setting of 12-year school- and community-based programmes. *Public Health Nutrition*, 12(10), 1735-1742. doi: doi:10.1017/S1368980008004278
- RWJF. Robert Wood Johnson Foundation Interactive Timeline (1972-present). Retrieved 30/09/2013, from <http://www.rwjf.org/at40>
- Sachs, J. (2006). *The end of poverty: economic possibilities for our time*: Penguin. com.
- Sachs, J., & Malaney, P. (2002). The economic and social burden of malaria. *Nature*, 415(6872), 680-685.
- Sallis, J. F., & Green, L. W. (2012). Active Living by Design and Its Evaluation: Contributions to Science. *American Journal of Preventive Medicine*, 43(5, Supplement 4), S410-S412. doi: <http://dx.doi.org/10.1016/j.amepre.2012.07.014>
- Sallis, J. F., Linton, L. S., Kraft, M. K., Cutter, C. L., Kerr, J., Weitzel, J., . . . Cervero, R. (2009). The Active Living Research program: six years of grantmaking. *American Journal of Preventive Medicine*, 36(2), S10-S21.
- Sambo, L. (2012). Towards global health equity: opportunities and threats. *Global Health Action*.
- Sanchez, L., Perez, D., Cruz, G., Castro, M., Kouri, G., Shkedy, Z., . . . Van der Stuyft, P. (2009). Intersectoral coordination, community empowerment and dengue prevention: six years of controlled interventions in Playa Municipality, Havana, Cuba. *Tropical Medicine & International Health*, 14(11), 1356-1364.
- Sanders, D., & Haines, A. (2006). Implementation research is needed to achieve international health goals. *PLoS Medicine*, 3(6), e186.
- Saney, I. (2003). *Cuba A Revolution in Motion* (Vol. Brenda Conroy). Winnipeg: Fernwood Publishing.
- Sarrafzadegan, N., Azadbakht, L., Mohammadifard, N., Esmailzadeh, A., Safavi, M., Sajadi, F., . . . Kelishadi, R. (2009a). Do lifestyle interventions affect dietary diversity score in the general population. *Public Health Nutr*, 12(10), 1924-1930.
- Sarrafzadegan, N., Baghaei, A., Sadri, G., Kelishadi, R., Malekafzali, H., Boshtam, M., . . . Rezaeiashtiani, A. (2006a). Isfahan healthy heart program: Evaluation of comprehensive, community-based interventions for non-communicable disease prevention. *Prevention and Control*, 2(2), 73-84.
- Sarrafzadegan, N., Baghaei, A., Sadri, G., Kelishadi, R., Malekafzali, H., Boshtam, M., . . . O'Loughlin, J. (2006b). Isfahan healthy heart program: Evaluation of comprehensive, community-based interventions for non-communicable disease prevention. *Prevention and Control*, 2(2), 73-84. doi: <http://dx.doi.org/10.1016/j.precon.2006.10.003>
- Sarrafzadegan, N., Kelishadi, R., Esmailzadeh, A., Mohammadifard, N., Rabiei, K., Roohafza, H., . . . Amani, A. (2009b). Do lifestyle interventions work in developing countries? Findings from the Isfahan Healthy Heart Program in the Islamic Republic of Iran. *Bulletin of the World Health Organization*, 87(1), 39-50.
- Sarrafzadegan, N., Kelishadi, R., Esmailzadeh, A., Mohammadifard, N., Rabiei, K., Roohafza, H., . . . Malekafzali, H. (2009c). Do lifestyle interventions work in developing countries? Findings from the Isfahan Healthy Heart Program in the Islamic Republic of Iran. *Bulletin of the World Health Organization*, 87(1), 39-50.

- Sarrafzadegan, N., Sadeghi, M., Tavassoli, A., Mohseni, M., Alikhasi, H., Rabiei, K., & Bahonar, A. (2009d). Sex differences in the impact of a community-based program for non-communicable disease prevention: The Isfahan Healthy Heart Program (IHHP). *Journal of Public Health*, 17(4), 257-263. doi: 10.1007/s10389-008-0240-7
- Sarrafzadegan, N., Talaei, M., Sadeghi, M., Kelishadi, R., Oveisgharan, S., Mohammadifard, N., . . . Thomas, G. N. (2010). The Isfahan cohort study: Rationale, methods and main findings. *Journal of human hypertension*, 25(9), 545-553.
- Saul, J. E., Willis, C. D., Bitz, J., & Best, A. (2013). A time-responsive tool for informing policy making: rapid realist review. *Implement Sci*, 8, 103. doi: 10.1186/1748-5908-8-103
- Schasberger, M. G., Hussa, C. S., Polgar, M. F., McMonagle, J. A., Burke, S. J., & Gegaris Jr, A. J. (2009). Promoting and developing a trail network across suburban, rural, and urban communities. *American Journal of Preventive Medicine*, 37(6 Suppl 2), S336-344.
- Schlundt, D. G., & McClellan, L. (2006). Nashville REACH 2010: Changes in Diabetes and Other Disparities from 2001 to 2004: 1859-P. *Diabetes*, 55 Supplement(1), A429.
- Schlundt, D. G. P., Greene, C. B. A., Reid, R., McClellan, L. M. P. H., Dowling, L. B. A., Sheats, J. L. M. P. H., & Brown, A. M. S. N. R. N. A. N. P. C. D. E. (2010). An Evaluation of the Nashville REACH 2010 Community Health Screening Strategy. *Journal of Ambulatory Care Management REACH*, 29(2), 151-161.
- Schoenbaum, M., Unützer, J. r., Sherbourne, C., Duan, N., Rubenstein, L. V., Miranda, J., . . . Wells, K. (2001). Cost-effectiveness of Practice-Initiated Quality Improvement for Depression. *JAMA: The Journal of the American Medical Association*, 286(11), 1325-1330. doi: 10.1001/jama.286.11.1325
- Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2020. (2010). *Healthy People 2020: An Opportunity to Address Societal Determinants of Health in the U.S.* (pp. 16).
- Shahrokhi, S., Kelishadi, R., Sarrafzadegan, N., Khosravi, A., Roohafza, H. R., Pooya, A., & Mollabashi, R. (2008). Evaluation of the Quit and Win contest for smoking cessation in the Islamic Republic of Iran. *Eastern Mediterranean Health Journal*, 14(6), 1270-1279.
- Shankardass, K., Solar, O., Murphy, K., Greaves, L., & O'Campo, P. (2012). A scoping review of intersectoral action for health equity involving governments. *Int J Publ Health*, 57, 25 - 33.
- Sheikh, K., Gilson, L., Agyepong, I. A., Hanson, K., Ssengooba, F., & Bennett, S. (2011). Building the field of health policy and systems research: framing the questions. *PLoS Medicine*, 8(8), e1001073.
- Shepperd, S., Lewin, S., Straus, S., Clarke, M., Eccles, M. P., Fitzpatrick, R., . . . Sheikh, A. (2009). Can We Systematically Review Studies That Evaluate Complex Interventions? *PLoS Med*, 6(8), e1000086. doi: 10.1371/journal.pmed.1000086
- Sherring, J., Robson, E., Morris, A., Frost, B., & Tirupati, S. (2010). A working reality: evaluating enhanced intersectoral links in supported employment for people with psychiatric disabilities. *Aust Occup Ther J*, 57, 261 - 267.
- Signal, L., & Durham, G. (2000). A case study of health goals in New Zealand. *Australian & New Zealand Journal of Public Health*, 24(2), 192-197.
- Simon, P. A., & Fielding, J. E. (2009). Establishing best practices for changing the built environment to promote physical activity. *American Journal of Preventive Medicine*, 37(6 Suppl 2), S448-449. doi: 10.1016/j.amepre.2009.09.015
- Smitasiri, S., & Solon, F. S. (2005). Implementing preventive iron-folic acid supplementation among women of reproductive age in some Western Pacific countries: possibilities and challenges. *Nutrition reviews*, 63(12 Pt 2), S81-86.

- Smith, E., Hunt, M., & Master, Z. (2014). Authorship ethics in global health research partnerships between researchers from low or middle income countries and high income countries. *BMC Medical Ethics*, 15(1), 42.
- Solar, O., & Irwin, A. (2007). *A Conceptual Framework for Action on the Social Determinants of Health*. Discussion paper for the Commission on Social Determinants of Health.
- Solberg, L. I., Kottke, T. E., Brekke, M. L., Calomeni, C. A., Conn, S. A., & Davidson, G. (1996). Using continuous quality improvement to increase preventive services in clinical practice--going beyond guidelines. *Preventive Medicine*, 25(3), 259-267.
- Somerville Department of Health. Shape Up Somerville. Retrieved 11/2013, from www.somervillema.gov/departments/health/sus
- Sornette, D. (2006). *Critical phenomena in natural sciences: chaos, fractals, selforganization and disorder: concepts and tools*: Springer Science & Business.
- South Carolina Cancer Disparities Community Network. (2012). South Carolina Cancer Disparities Community Network. Retrieved 06/2011 and 11/2012, from sccdnc.sph.sc.edu
- South Carolina Department of Health and Environmental Control. (2012). Cancer Prevention & Control; . Retrieved 16/11/2012, from www.scdhec.gov/health/chcdp/cancer/bcn.htm
- Sparkes, A. C., & Smith, B. (2013). *Qualitative Research Methods in Sport, Exercise and Health : From Process to Product* Retrieved from <http://ubc.ebib.com/patron/FullRecord.aspx?p=1480779>
- Spiegel, J., Alegret, M., Clair, V., Pagliccia, N., Martinez, B., Bonet, M., & Yassi, A. (2012). Intersectoral action for health at a municipal level in Cuba. *International Journal of Public Health*, 57(1), 15-23.
- Spiegel, J., Bonet, M., Yassi, A., Mas, P., Tate, R., & Ibarra, A. (2001, 2001). *Social capital and health in Cuba: Case study of a community-based intervention program*. Paper presented at the 129th American Public Health Association Annual Meeting, Atlanta, Georgia.
- Spiegel, J., Bonet, M., Yassi, A., Tate, R. B., Concepcion, M., & Canizares, M. (2003). Evaluating the effectiveness of a multi-component intervention to improve health in an inner-city Havana community. *International Journal of Occupational & Environmental Health*, 9(2), 118-127.
- Spiegel, J., & Yassi, A. (2004a). Lessons from the margins of globalization: appreciating the Cuban health paradox. *Journal of Public Health Policy*, 25(1), 85-110.
- Spiegel, J., Yassi, A., Mas, P., & Tate, R. (2002). Dengue in Cuba: mobilization against *Aedes aegypti*. *Lancet Infectious Diseases*, 2, 207-208.
- Spiegel, J. M., Bonet, M., Ibarra, A. M., Pagliccia, N., Ouellette, V., & Yassi, A. (2007). Social and environmental determinants of *Aedes aegypti* infestation in Central Havana: results of a case-control study nested in an integrated dengue surveillance programme in Cuba. *Tropical Medicine & International Health*, 12(4), 503-510.
- Spiegel, J. M., Gonzalez, M., Cabrera, G. J., Catasus, S., Vidal, C., & Yassi, A. (2008). Promoting health in response to global tourism expansion in Cuba. *Health Promotion International*, 23(1), 60-69.
- Spiegel, J. M., Labonte, R., & Ostry, A. S. (2004). Understanding Globalization as a Determinant of Health Determinants: A Critical Perspective. *International Journal of Occupational and Environmental Health*, 10(4), 360-367.
- Spiegel, J. M., & Yassi, A. (2004b). Lessons from the margins of globalization: appreciating the Cuban health paradox. *Journal of Public Health Policy*, 25(1), 85-110.
- Spivack, J. G., Swietlik, M., Alessandrini, E., & Faith, M. S. (2010). Primary care providers' knowledge, practices, and perceived barriers to the treatment and prevention of childhood obesity. *Obesity*, 18(7), 1341-1347. doi: <http://dx.doi.org/10.1038/oby.2009.410>
- SPSS. (2010). *IBM SPSS Statistics Base 19*.

- Sridhar, D. (2012). Who sets the global health research agenda? The challenge of multi-bi financing. *PLoS Medicine*, 9(9), e1001312.
- Starfield, B. (1998). *Primary care: balancing health needs, services, and technology*: Oxford University Press.
- Starfield, B. (2009). Toward international primary care reform. *CMAJ Canadian Medical Association Journal*, 180(11), 1091-1092.
- Starfield, B. (2010). Primary care, specialist care, and chronic care: can they interlock? *Chest*, 137(1), 8-10.
- Starfield, B., & Birn, A.-E. (2007). Income redistribution is not enough: income inequality, social welfare programs, and achieving equity in health. *Journal of Epidemiology & Community Health*, 61(12), 1038-1041.
- Starfield, B., Powe, N. R., Weiner, J. R., Stuart, M., Steinwachs, D., Scholle, S. H., & Gerstenberger, A. (1994). Costs vs quality in different types of primary care settings. *JAMA*, 272(24), 1903-1908.
- Starfield, B., & Shi, L. (2002). Policy relevant determinants of health: an international perspective. *Health Policy*, 60(3), 201-218.
- Starfield, B., & Shi, L. (2007a). Commentary: primary care and health outcomes: a health services research challenge. *Health Services Research*, 42(6), 2252-2256; discussion 2294-2323.
- Starfield, B., & Shi, L. (2007b). The impact of primary care and what States can do. *North Carolina Medical Journal*, 68(3), 204-207.
- Starfield, B., Shi, L., Grover, A., & Macinko, J. (2005a). The effects of specialist supply on populations' health: assessing the evidence. *Health Affairs, Suppl Web Exclusives*, W5-97-W95-107.
- Starfield, B., Shi, L., & Macinko, J. (2005b). Contribution of primary care to health systems and health. *Milbank Quarterly*, 83(3), 457-502.
- Strauss, A. L., & Corbin, J. M. (1990). *Basics of qualitative research: grounded theory procedures and techniques*: Sage Publications.
- Strumpf, E., Levesque, J. F., Coyle, N., Hutchison, B., Barnes, M., & Wedel, R. J. (2012). Innovative and diverse strategies toward primary health care reform: lessons learned from the Canadian experience. *Journal of the American Board of Family Medicine: JABFM*, 25 Suppl 1, S27-33. doi: 10.3122/jabfm.2012.02.110215
- Strunk, S. L. (2009). Active Living by Design: Building and Sustaining a National Program. *American Journal of Preventive Medicine*, 37(6), S457-S460.
- Strunk, S. L., Justin, W. S., & Bussel, J. B. (2012). Technical Assistance for Environmental and Policy Change: The Active Living by Design Experience. *American Journal of Preventive Medicine*, 43(5, Supplement 4), S269-S270. doi: <http://dx.doi.org/10.1016/j.amepre.2012.07.010>
- Subcommittee on Population Health. (2009). A Healthy, Productive Canada: A Determinant of Health Approach. In S. Standing Senate Committee on Social Affairs, and Technology (Ed.), (pp. 43). Ottawa: Senate.
- Syme, S. (2004). Social determinants of health: the community as an empowered partner. . *Preventing Chronic Disease*, 1(1).
- Szeles, G., Voko, Z., Jenei, T., Kardos, L., Pocsai, Z., Bajtay, A., . . . Adany, R. (2005). A preliminary evaluation of a health monitoring programme in Hungary. *European Journal of Public Health*, 15(1), 26-32.
- Szreter, S., & Woolcock, M. (2004). Health by association? Social capital, social theory, and the political economy of public health. *International Journal of Epidemiology*, 33(4), 650-667.
- Tandon, D., Parillo, K., Jenkins, C., Jenkins, J., & Duggan, A. (2007). Promotion of service integration among home visiting programs and community coalitions working with low-

- income, pregnant, and parenting women. *Health Promotion Practice*, 8(1), 79-87. doi: <http://dx.doi.org/10.1177/1524839905278851>
- Tapp, H., & Dulin, M. (2010). The science of primary health-care improvement: potential and use of community-based participatory research by practice-based research networks for translation of research into practice. *Experimental Biology & Medicine*, 235(3), 290-299.
- Taylor, B., & Francis, K. (2013). *Qualitative Research in the Health Sciences: Methodologies, Methods and Processes*. Retrieved from <http://ubc.ebib.com/patron/FullRecord.aspx?p=1244832>
- Teeple, G. (1995). *Globalization and the decline of social reform*: Cambridge Univ Press.
- TenBrink, D. S., McMunn, R., & Panken, S. (2009). Project U-Turn: increasing active transportation in Jackson, Michigan. *American Journal of Preventive Medicine*, 37(6 Suppl 2), S329-335.
- Thomson, K., Gripton, J., Lutchmiah, J., & Caan, W. (2007). Health facilitation in primary care seen from practice and education. *British journal of nursing (Mark Allen Publishing)*, 16(18), 1156-1160.
- Thorne, S. (2000). Data analysis in qualitative research. *Evidence Based Nursing*, 3(3), 68-70. doi: 10.1136/ebn.3.3.68
- Todd, Z., & et al. (2004). *Mixing Methods in Psychology : The Integration of Qualitative and Quantitative Methods in Theory and Practice*: Taylor & Francis.
- Trimino, E. M., Williamson, K., & Martinez, J. M. (2005). A multidisciplinary approach to improve clinical outcomes in patients with congestive heart failure. *Ashp Midyear Clinical Meeting*, 40.
- Tucker, P., Liao, Y., Giles, W. H., & Liburd, L. (2006). The REACH 2010 logic model: an illustration of expected performance. *Preventing Chronic Disease*, 3(1), A21.
- Tufano, J. T., Ralston, J. D., Tarczy-Hornoch, P., & Reid, R. J. (2010). Participatory (re)design of a sociotechnical healthcare delivery system: the Group Health Patient-Centered Medical Home. *Studies in Health Technology & Informatics*, 157, 59-65.
- Two Feathers, J., Kieffer, E. C., Palmisano, G., Anderson, M., Sinco, B., Janz, N., . . . James, S. A. (2005). Racial and Ethnic Approaches to Community Health (REACH) Detroit partnership: improving diabetes-related outcomes among African American and Latino adults. *American Journal of Public Health*, 95(9), 1552-1560.
- United Nation. (1948). Universal Declaration of Human Rights. Retrieved 16 January, 2014, from <http://www.un.org/en/documents/udhr/index.shtml#a25>
- Valaitis, R., & al., e. (2012). Strengthening Primary Health Care through Primary Care and Public Health Collaboration; Final Report for CHSRF (pp. 47). Hamilton, On: McMaster University.
- Valaitis, R., Martin-Misener, R., Wong, S. T., MacDonald, M., Meagher-Stewart, D., Austin, P., & Kaczorowski, J. (2012). Methods, strategies and technologies used to conduct a scoping literature review of collaboration between primary care and public health. *Primary health care research & development*, 13(03), 219-236.
- Vassilev, I., Rogers, A., Sanders, C., Kennedy, A., Blickem, C., Protheroe, J., . . . Morris, R. (2011). Social networks, social capital and chronic illness self-management: a realist review. *Chronic Illness*, 7(1), 60-86.
- W. K. Kellogg Foundation. (2013). W. K. Kellogg Foundation. 2013, from <http://www.wkkf.org>
- Walley, J., Lawn, J. E., Tinker, A., de Francisco, A., Chopra, M., Rudan, I., . . . Lancet Alma-Ata Working, G. (2008). Primary health care: making Alma-Ata a reality. *Lancet*, 372(9642), 1001-1007.
- Walt, G., & Gilson, L. (1994). Reforming the health sector in developing countries: the central role of policy analysis. *Health Policy and Planning*, 9(4), 353-370. doi: 10.1093/heapol/9.4.353

- Wanless, D. (2002). *Securing our Future Health: Taking a Long-Term View. Final Report* (pp. 164). London: HM Treasury.
- Wanless, D. (2004). *Securing Good health for the Whole Population*. London: HM Treasury.
- Weiss, E. S., Anderson, R. M., & Lasker, R. D. (2002). Making the most of collaboration: exploring the relationship between partnership synergy and partnership functioning. *Health Education & Behavior*, 29(6), 683-698.
- White, F., & Nanan, D. (2008). Community health case studies selected from developing and developed countries—common principles for moving from evidence to action. *Arch Med Sci*, 4, 358-363.
- Whiteford, L., & Branch, L. (2007). *Primary health care in Cuba: The other revolution.a*. Lanham, MD: Rowman & Littlefield.
- WHO. (1986, November 21). *Ottawa charter for health promotion*. Paper presented at the First International Conference on Health Promotion, Ottawa.
- WHO. (1997). *Intersectoral Action for Health A Cornerstone for Health-for-All in the Twenty-First Century; Report of the International Conference*. Paper presented at the Intersectoral Action for Health A Cornerstone for Health-for-All in the Twenty-First Century, Halifax.
- WHO. (2008). *The World Health Report 2008 : Primary Health Care - Now More Than Ever* (pp. 119). Geneva: World Health Organization.
- WHO. (2010a). Action on the social determinants of health: learning from previous experiences. *Discussion Paper Series on Social Determinants of Health* (pp. 48).
- WHO. (2010b). Intersectoral action to tackle the social determinants of health and the role of evaluation (pp. 38). Vina Del Mar, Chile.
- WHO. (2013). *The World Health Report 2013: Research for Universal Health Coverage*. Luxembourg: World Health Organization.
- WHO. (2014). Publications- intersectoral action and Health in All Policies. Retrieved 15/01/2014, from http://www.who.int/social_determinants/publications/isa/en/
- WHO Centre for Health Development. (2011). *Intersectoral Action on Health; A path for policy-makers to implement effective and sustainable action on health* (pp. 31). Kobe: WHO.
- WHO Secretariat. (2012). *Social determinants of health, report by the Secretariat* (pp. 5). Geneva: World Health Organization.
- Wiggers, J. H., & Sanson-Fisher, R. (1997). Practitioner provision of preventive care in general practice consultations: association with patient educational and occupational status. *Social Science & Medicine*, 44(2), 137-146.
- Wilson, D. B., Johnson, R. E., Jones, R. M., Krist, A. H., Woolf, S. H., & Flores, S. K. (2010). Patient weight counseling choices and outcomes following a primary care and community collaborative intervention. *Patient Education & Counseling*, 79(3), 338-343. doi: 10.1016/j.pec.2010.01.025
- Wilson Stroscher, H., MacDonald, M., & Hancock, T. (2012). *Advancing Public Health Systems and Services Research in Canada: Developing a Pan-Canadian Agenda* (pp. 67). Montreal.
- Wise, M., & Nutbeam, D. (2007). Enabling health systems transformation: what progress has been made in re-orienting health services? *Promotion & education*, 14(2 suppl), 23-27.
- Wong, G. (2011). The internet in medical education: a worked example of a realist review. *Synthesising Qualitative Research: Choosing the Right Approach*.
- Wong, G., Greenhalgh, T., Westhorp, G., Buckingham, J., & Pawson, R. (2013a). RAMESES publication standards: realist syntheses. *BMC Medicine*, 11(1), 21.
- Wong, G., Greenhalgh, T., Westhorp, G., & Pawson, R. (2012). Realist methods in medical education research: what are they and what can they contribute. *Medical Education*, 46, 89 - 96.

- Wong, G., Greenhalgh, T., Westthrop, G., & Pawson, R. (2013b). Quality standards for realist syntheses and meta-narrative reviews (pp. 24).
- Wong, G., Greenhalgh, T., Westthrop, G., & Pawson, R. (2013c). Realist synthesis RAMESES training materials (pp. 54): RAMESES.
- Woolf, S. H., Glasgow, R. E., Krist, A., Bartz, C., Flocke, S. A., Holtrop, J. S., . . . Wald, E. R. (2005). Putting it together: finding success in behavior change through integration of services. *Annals of Family Medicine*, 3 Suppl 2, S20-27.
- World Bank Group. (2003). World Development Report: Sustainable development in a dynamic world. Retrieved September 15, 2003, from <http://econ.worldbank.org/wdr/wdr2003>
- World Economic Forum. (2003). Global competitiveness report 2002-2003. Retrieved September 3, 2003, from <http://www.weforum.org/>
- World Federation of Public Health Associations. Values. Retrieved 31/07/2014, from <http://www.wfpha.org/about-us-wfpha/values-and-goals>
- World Health Organization. (1997). *Intersectoral action for health*. Paper presented at the Intersectoral Action for Health Conference Report, Halifax Nova Scotia.
- Yassi, A., Fernandez, N., Fernandez, A., Bonet, M., Tate, R. B., & Spiegel, J. (2003). Community Participation in a Multisectoral Intervention to Address Health Determinants in an Inner-City Community in Central Havana. *Journal of Urban Health*, 80(1), 61-80.
- Yassi, A., Mas, P., Bonet, M., Tate, R., Fernandez, N., Spiegel, J., & Perez, M. (1999). Applying an ecosystem approach to the determinants of health in Centro Habana. *Ecosystem Health*, 5(1), 3-19.

Appendix A Focus group and survey instruments

A.1 Focus group guide

Guión para todos los grupos focales sobre manejo intersectorial de los determinantes de salud

Los grupos focales serán facilitados por dos personas. Una que facilita el proceso de grabación y manejo de materiales, cuestionarios, diagramas. La otra para la animación de la discusión del grupo focal. Las dos personas pueden apoyarse mutuamente para cumplir con las tareas.

1. Introducción

- a. Entregar y revisar las páginas que describen el propósito del estudio, y algunas definiciones básicas. Responder preguntas y comentarios.
- b. Explicar a los participantes que buscamos diferentes puntos de vista y que todos pueden sugerir cambios sobre la conceptualización de la intersectorialidad o los determinantes de salud. **Estamos buscando una concepción cubana de estos conceptos.**
- c. Pedir el consentimiento a participar en el estudio permaneciendo en la sala; el que no desee participar puede salir.

2. ¿Cómo conceptualizan ustedes los determinantes de salud?

- a. Si los conceptos tradicionales asociados a los determinantes de salud no son discutidos el facilitador los introducirá y preguntará cómo ellos se ajustan a la conceptualización descrita por el grupo. Los determinantes de la salud (incluyendo el status socio-económico - educación, ingreso, disparidad económica y nutrición adecuada), los determinantes de la salud ambiental, (incluyendo agua, alimentos, saneamiento, calidad del aire, vivienda), los factores relacionados con los servicios médicos, y los factores relacionados con las características psico-sociales (incluyendo los conceptos de unidad o cohesión social y disparidades de modo y condiciones de vida en las comunidades)
- b. ¿Cuáles son los determinantes de salud en Cuba?
- c. La lista de determinantes de salud en el cuestionario, la consideran completa o incompleta; ¿Hay otros? ¿Cuáles sobran?
- d. ¿Cuáles son las prioridades en estos determinantes de salud de acuerdo al criterio de los miembros del grupo?

3. Estrategias de manejo de los determinantes de salud

En una hoja de papel grande copie una tabla como la que se muestra a continuación, escriba de un lado los determinantes y arriba las estrategias de manejo. Si se sugieren otras durante la discusión se pueden añadir.

La finalidad es identificar las estrategias que se usan para el manejo de cada uno de los determinantes de salud. [Las estrategias están definidas en el material que se distribuyó a los participantes – página 4] Si se usa más de una estrategia, marcar todas las que se usan por cada determinante.

<div>Estrategia de manejo</div> <div>Determinante</div>	Desarrollar políticas saludables de salud pública	Crear entornos de apoyo mutuo	Fortalecer acciones comunitarias	Desarrollar habilidades personales	Reorientar los servicios de salud	Proyectar para el futuro	Otro _____
Ingreso y nivel de vida							
Valores y normas sociales							
Redes de apoyo social							
Ambiente físico							
Educación							
Empleo y condiciones de trabajo							
Estilos de vida saludables							
Desarrollo sano del niño							
Servicios de salud							
Género							
Cultura							
Otros							

4. Cuáles acciones se toman para manejar estos determinantes?

5. Cómo es el proceso de toma de decisiones para priorizar y ubicar recursos, humanos o financieros para manejar estos determinantes de salud?

6. El sistema de salud y su manejo interno de determinantes de salud

- Preguntar cuales son las decisiones que se toman a cada nivel del sistema de salud sobre el manejo del sistema de salud en relación a la prevención, promoción y protección de la salud
- Como se integra el manejo clínico, preventivo, protectivo y promocional de la salud a dentro del sistema de salud?
- Quien es responsable de los servicios:
 - Clínico
 - Preventivo
 - Protectivo
 - Promocional de la salud.

7. Intersectorialidad

- a. ¿Cuáles son los factores que facilitan la intersectorialidad? ¿Quién promueve la intersectorialidad? *Sugerencias:* leyes, reglamentos, estructuras sociales, participación comunitaria, cultura, normas sociales, voluntad política, voluntad de la comunidad, voluntad de los individuos
- b. ¿Cómo se integra el manejo clínico, preventivo, protectivo y promocional de la salud en colaboración con otros sectores?
- c. ¿Cuáles son los programas de salud que son claramente intersectoriales?
Sugerencias: atención al niño, atención al abuelo, otros.
- d. ¿Cómo funciona la colaboración intersectorial en el manejo de estos determinantes?
- e. ¿Cómo se evalúa el éxito en el manejo de estos determinantes de salud?
- f. Los funcionarios y practicantes dentro del sistema de salud, ¿qué acciones intersectoriales considerarían importantes para lograr mejor impacto en la salud y en sus comunidades? (el facilitador tratará de identificar un orden)

8. Éxito y mejoramiento en el manejo de los determinantes de salud

¿Qué áreas son exitosas y cuáles necesitan ser mejoradas en el manejo de estos determinantes de salud? Fomentar una tormenta de ideas sobre los factores que influyen en el éxito:

- a. valores, interés y metas comunes
- b. voluntad política y apoyo basado en un ambiente de políticas públicas positivas
- c. liderazgo, responsabilidad y reconocimiento distribuido entre los asociados
- d. equipos estables con personas que trabajan bien juntas y soporte apropiado

9. Matriz de organizaciones para marcar relación/colaboración

En una hoja de papel grande ponga una matriz como la que se muestra al final, escriba en la primera columna y primera fila todas las organizaciones representadas en el grupo focal;

Ayude al grupo a que definan por consenso las relaciones de trabajo o colaboración que tienen con cada una y escriba en la casilla correspondiente el tipo de relación: no relación (1), casual mínima (2), formal de información (3), planificación conjunta (4), acciones conjuntas (5).

10. ¿Hay otros comentarios o ejemplos concretos que pudieran ayudar a comprender el manejo actual de los determinantes de salud en Cuba?

11. Agradecer el valor de la participación de todos y responder cualquier otra pregunta que realice el grupo.

Nota final: Después finalizar la sesión del grupo focal, las dos personas encargadas deben discutir y anotar sus propios comentarios de qué salió bien, qué resultó difícil en la facilitación, que se puede mejorar del contenido, qué respuestas sorprendieron, o cualquier otros comentarios relevante.

A.2 Final survey questionnaire

Para uso interno

Grupo focal _____

Cuestionario de manejo intersectorial de determinantes de la salud

Este es un cuestionario anónimo y que no recogerá ningún dato personal sobre Ud. Le agradecemos sea respondido con sinceridad y espíritu de cooperación hacia nuestra investigación. GRACIAS

Partes de este cuestionario

Parte A – Clasificación de los determinantes de salud

Parte B – Acciones dentro su organismo por cada determinante de salud

Parte C – Colaboración entre su organismo y otras instituciones

Las definiciones de términos usados en este estudio se dan en hoja separada Léalas antes de responder.

Para cada sección lea la pregunta al comienzo y responda de forma adecuada

Con el siguiente cuestionario deseáramos conocer cómo usted considera la importancia (Parte A), el grado de participación que tiene su organismo o institución de pertenencia en el **manejo intersectorial de los determinantes de la salud** dentro de su institución (Parte B) y en la colaboración con otras instituciones u organismos (Parte C). Puede ampliar con algún comentario o ejemplo cuando lo considere necesario.

Su organismo de pertenencia: _____

Municipio _____

Consejo Popular _____

Parte A – Clasificación de los determinantes de la salud

Por favor clasifique los primeros CINCO determinante de salud de acuerdo a la importancia que usted le asigna dentro de su organización. Escriba 1 para el determinante más importante hasta 5 para el determinante de menor importancia. (Por favor revise las definiciones de los determinantes en la guía de definiciones para su ayuda)

Determinante	Clasificación de importancia (los 5 más importantes)
Ingreso y nivel de vida	
Valores y normas sociales	
Redes de apoyo social	
Ambiente físico	
Educación	
Empleo y condiciones de trabajo	
Estilos de vida saludables	
Desarrollo sano del niño	
Servicios de salud	
Género	
Cultura	
Otros _____	

Parte B - Participación *dentro* de su organismo.

La participación dentro de su organismo se refiere solamente a aquellas acciones, actividades o programas que son de iniciativa propia de su organismo y no de otros organismos en los determinantes de la salud. Para cada determinante abajo use la siguiente escala para indicar la etapa de participación dentro de su organismo en los últimos seis meses y mencione la actividad más importante:

Escala	Etapa de participación
1	No ha habido ninguna acción sobre este determinante en mi organización
2	Mi organización ha apenas reconocido la importancia de este determinante
3	Mi organización ha desarrollado solo planes sobre este determinante
4	Mi organización se encuentra en la fase inicial de ejecución de planes sobre este determinante
5	Hace tiempo que mi organización ejecuta acciones sobre este determinante

Determinante	Escala	Acción más importante
Ingreso y nivel de vida	1 2 3 4 5 No se	
Valores y normas sociales	1 2 3 4 5 No se	
Redes de apoyo social	1 2 3 4 5 No se	
Ambiente físico	1 2 3 4 5 No se	
Educación	1 2 3 4 5 No se	
Empleo y condiciones de trabajo	1 2 3 4 5 No se	
Estilos de vida saludables	1 2 3 4 5 No se	
Desarrollo sano del niño	1 2 3 4 5 No se	
Servicios de salud	1 2 3 4 5 No se	
Género	1 2 3 4 5 No se	
Cultura	1 2 3 4 5 No se	
Otros _____	1 2 3 4 5 No se	

Parte C - Colaboración entre su organismo y otras instituciones u organismos

Para cada determinante abajo use la siguiente escala para indicar el nivel de colaboración intersectorial en los últimos seis meses y hasta 3 organismos (de salud o no) con que tiene esa colaboración en orden de **estrechez de colaboración**. Para cada organización indique también la frecuencia de interacción en forma de reuniones o contactos formales realizados para el cumplimiento de las metas (nunca, 1 a 4 al año, más de 4 al año).

Escala	Estrechez o nivel de colaboración
1	Actualmente no hay ninguna colaboración sobre este determinante
2	Mi organización tiene una colaboración informal mínima con otros organismos sobre este determinante
3	Mi organización y otras tienen una colaboración formal de intercambio de información pero no planificación o acciones conjuntas sobre este determinante
4	Mi organización y otras hacen una planificación conjunta sobre este determinante
5	Mi organización planifica, ejecuta y evalúa acciones y programas conjuntos con otras organizaciones sobre este determinante

1. Ingreso y nivel de vida

Organizaciones colaboradoras	Nivel de colaboración	Frecuencia de interacciones por año
i) _____	1 2 3 4 5 No se	0-2 3-6 más de 6 No se
ii) _____	1 2 3 4 5 No se	0-2 3-6 más de 6 No se
iii) _____	1 2 3 4 5 No se	0-2 3-6 más de 6 No se

2. Valores y normas sociales

Organizaciones colaboradoras	Nivel de colaboración	Frecuencia de interacciones por año
i) _____	1 2 3 4 5 No se	0-2 3-6 más de 6 No se
ii) _____	1 2 3 4 5 No se	0-2 3-6 más de 6 No se
iii) _____	1 2 3 4 5 No se	0-2 3-6 más de 6 No se

3. Redes de apoyo social

Organizaciones colaboradoras	Nivel de colaboración	Frecuencia de interacciones por año
i) _____	1 2 3 4 5 No se	0-2 3-6 más de 6 No se
ii) _____	1 2 3 4 5 No se	0-2 3-6 más de 6 No se
iii) _____	1 2 3 4 5 No se	0-2 3-6 más de 6 No se

4. Ambiente físicos

Organizaciones colaboradoras	Nivel de colaboración	Frecuencia de interacciones por año
i) _____	1 2 3 4 5 No se	0-2 3-6 más de 6 No se
ii) _____	1 2 3 4 5 No se	0-2 3-6 más de 6 No se
iii) _____	1 2 3 4 5 No se	0-2 3-6 más de 6 No se

5. Educación

Organizaciones colaboradoras	Nivel de colaboración	Frecuencia de interacciones por año
i) _____	1 2 3 4 5 No se	0-2 3-6 más de 6 No se
ii) _____	1 2 3 4 5 No se	0-2 3-6 más de 6 No se
iii) _____	1 2 3 4 5 No se	0-2 3-6 más de 6 No se

6. Empleo y condiciones de trabajo

Organizaciones colaboradoras	Nivel de colaboración	Frecuencia de interacciones por año			
i) _____	1 2 3 4 5 No se	0-2	3-6	más de 6	No se
ii) _____	1 2 3 4 5 No se	0-2	3-6	más de 6	No se
iii) _____	1 2 3 4 5 No se	0-2	3-6	más de 6	No se

7. Estilos de vida saludables

Organizaciones colaboradoras	Nivel de colaboración	Frecuencia de interacciones por año			
i) _____	1 2 3 4 5 No se	0-2	3-6	más de 6	No se
ii) _____	1 2 3 4 5 No se	0-2	3-6	más de 6	No se
iii) _____	1 2 3 4 5 No se	0-2	3-6	más de 6	No se

8. Desarrollo sano del niño

Organizaciones colaboradoras	Nivel de colaboración	Frecuencia de interacciones por año			
i) _____	1 2 3 4 5 No se	0-2	3-6	más de 6	No se
ii) _____	1 2 3 4 5 No se	0-2	3-6	más de 6	No se
iii) _____	1 2 3 4 5 No se	0-2	3-6	más de 6	No se

9. Servicios de salud

Organizaciones colaboradoras	Nivel de colaboración	Frecuencia de interacciones por año			
i) _____	1 2 3 4 5 No se	0-2	3-6	más de 6	No se
ii) _____	1 2 3 4 5 No se	0-2	3-6	más de 6	No se
iii) _____	1 2 3 4 5 No se	0-2	3-6	más de 6	No se

10. Género

Organizaciones colaboradoras	Nivel de colaboración	Frecuencia de interacciones por año			
i) _____	1 2 3 4 5 No se	0-2	3-6	más de 6	No se
ii) _____	1 2 3 4 5 No se	0-2	3-6	más de 6	No se
iii) _____	1 2 3 4 5 No se	0-2	3-6	más de 6	No se

11. Cultura

Organizaciones colaboradoras	Nivel de colaboración	Frecuencia de interacciones por año			
i) _____	1 2 3 4 5 No se	0-2	3-6	más de 6	No se
ii) _____	1 2 3 4 5 No se	0-2	3-6	más de 6	No se
iii) _____	1 2 3 4 5 No se	0-2	3-6	más de 6	No se

Otros _____

Organizaciones colaboradoras	Nivel de colaboración	Frecuencia de interacciones por año			
i) _____	1 2 3 4 5 No se	0-2	3-6	más de 6	No se
ii) _____	1 2 3 4 5 No se	0-2	3-6	más de 6	No se
iii) _____	1 2 3 4 5 No se	0-2	3-6	más de 6	No se

GRACIAS POR SU COOPERACIÓN

A.3 Definition of terms provided to participants in the focus groups

Definiciones de términos para los efectos del estudio de manejo intersectorial de los determinantes de la salud en Cuba

Antecedentes

La gestión de este proyecto tiene sus antecedentes en la colaboración que durante ya más de 8 años, ha llevado a cabo un grupo de profesores canadienses de las Universidades de Manitoba y Columbia Británica. Estos proyectos se han desarrollado en la esfera ambiental y han involucrado como contraparte cubana principalmente al Instituto Nacional de Higiene y Epidemiología. Esta colaboración internacional profundiza en la estructura de la sociedad cubana y en el excelente soporte y prioridad que nuestra sociedad recibe en los aspectos de asistencia médica y que han permitido a Cuba mostrar excelentes indicadores de salud, comparables con los países más desarrollados del mundo.

En esta ocasión, y dadas las similitudes del sistema sanitario canadiense y el cubano (accesibilidad, universalidad, carácter gratuito), los investigadores canadienses han mostrado interés en este proyecto por tratarse de un estudio tendiente a demostrar cómo la cohesión social, la intersectorialidad y el trabajo coordinado sobre los determinantes no médicos de la salud hacen posible el beneficio de toda la población por igual, más allá de su lugar de residencia, condiciones de vida, nivel intelectual y salarial etc. Por lo tanto, los beneficios fundamentales para la parte canadiense será aprender de las estructuras multisectoriales que actúan en apoyo a los determinantes no médicos de la salud. Por su parte, Cuba se beneficiará al conocer de primera mano y con el apoyo tecnológico que brindará el proyecto, los aspectos determinantes de su gestión pro-salud y entorno, desde la base hasta las municipalidades, lo cual redundará en un perfeccionamiento de las acciones y programas en el futuro.

La vigencia de este proyecto se pone de manifiesto en las palabras del Ministro de Salud Pública, José Ramón Balaguer Cabrera, quien destacó que “un sistema que permite la colaboración y la intersectorialidad, entre todos los ministerios que tienen importancia, influye en que se tenga una atención de salud adecuada.” (*Periódico Granma*, 21 de octubre de 2004. Año 8 / Número 295).

“Los niveles de salud de la población cubana son en última instancia el resultado del decisivo papel del estado, de la voluntad política de convertir a la salud en una política de estado y en un derecho humano de todos los ciudadanos; política que se hace realidad a través de cuatro ejes fundamentales: la inversión en desarrollo social; el desarrollo permanente del sistema y los servicios de salud; la formación de capital humano y social; y el desarrollo de redes y la participación social.”

“Estos ejes fundamentales son atravesados por un principio integrador a los mismos, una intersectorialidad promovida y controlada por el estado y liderada por el sistema de salud.”

Adolfo Gerardo Álvarez Pérez, Master en Salud Pública, Especialista en Salud Internacional OPS/OMS. INHEM, Cuba

Usted ha sido seleccionado para participar en estas sesiones de discusión en grupos focales por cuanto se considera que usted puede contribuir valiosa información con relación al proyecto basado en su experiencia.

A continuación se dan algunas definiciones de partida que serán las bases de las preguntas que se discutirán. El facilitador del grupo hará referencia a ellas. Al final de la sesión usted puede guardar este material.

Intersectorialidad

“La planeación y organización consciente de procesos de integración con otros sectores para enfrentar problemas de salud, bienestar y calidad de vida cuya naturaleza demanda una solución que va más allá de las posibilidades del sector salud.”

Adolfo Gerardo Álvarez Pérez, Master en Salud Pública, Especialista en Salud Internacional OPS/OMS. INHEM, Cuba

Colaboración intersectorial

“Una relación reconocida entre una parte o partes del sector salud con una parte o partes de otro sector que se ha establecido para tomar acción acerca de un asunto y así lograr un resultado en salud ... de forma más efectiva, eficiente o sostenible que pudiera haberse logrado por el sector salud solo.”

OMS Conferencia Internacional sobre Acción Intersectorial para la Salud, 1997

Determinantes de la Salud:

No hay duda que la voluntad política, la organización social y el desarrollo permanente del sistema y los servicios de salud ejercen una influencia importante en los niveles de salud, sin embargo esta influencia actúa a través de los “determinantes de los niveles de salud”. Estos son un conjunto de factores complejos que al actuar de manera combinada *determinan* los niveles de salud de los individuos y comunidades.

Los determinantes de la salud son los factores y las condiciones (como el ambiente físico y social, la conducta y la biología humana) que se cree que influyen en la salud. Ellos no actúan aisladamente y *las interacciones complejas entre estos factores* tienen una repercusión aun más profunda en la salud.

Se cree que un buen manejo de los *determinantes* de la salud humana a nivel de individuos - sumados a la voluntad política y a un mayor acceso a los servicios de salud - contribuyen positivamente al mejoramiento de los niveles de salud.

Appendix B Details of the search strategies

Search strategy in OvidSP databases

The term “health determinant” was not part of the MeSH index system database. One way to find the literature related to health determinants is to search for each health determinant, based on a Public Health Agency of Canada list of key health determinants ([PHAC, 2006](#)). The final search for health determinants was:

exp culture/ or family/ or exp family characteristics/ or single-parent family/ or exp hierarchy, social/ or exp minority groups/ or exp social change/ or exp social class/ or social conditions/ or exp social environment/ or social isolation/ or exp social planning/ or socioeconomic factors/ or exp poverty/ or exp poverty areas/ or environment.mp. or income.mp. or Income/ or education.mp. or health behavior/ or risk reduction behavior/ or life style/ or sedentary lifestyle/ or psychosocial deprivation/ or social values/ or life style.mp. or healthy living.mp. or environmental health/ or sanitation/ or Water Pollutants/

OR

(health adj2 determinant\$).mp. [mp=ti, ab, tx, kw, ct, ot, sh, hw, tn, dm, mf, ac, de, md, sd, so, rw, ps, rs, nm, ui]

The term “public health” was indexed as a MeSH heading. The exploded term leads to more than 400,000 citations, many of which are not relevant to this study. I elected to use the focus option for this MeSH term, complementing it with other relevant key words and MeSH terms, including: health promotion, an approach particularly relevant to health determinants; preventive medicine; public health administration (which captures public health literature in another area of the MeSH tree); environmental medicine; preventive psychiatry; social medicine; and public health nursing. The final search terms for public health, including all public health practice subheadings in the MeSH tree were:

public health/ or preventive medicine/ or environmental medicine/ or preventive psychiatry/ or social medicine/ or exp Health Promotion/ or Public Health Administration/ or public health nursing/

The term “primary care” is also a MeSH heading, falling under the subcategory of Primary Healthcare. However, many relevant articles known to me before the start of this review did not appear in the search, so additional keywords were added. My final search was:

Primary Healthcare/ or general practice/ or family practice/ or community health nursing/ or community health services/ or child health services/ or community mental health services/ or exp Physicians, Family/ or Community Health Centers/

“Intersectoral” is not a MeSH term. A search for ‘intersectoral’ as a key word led to 511 references. The truncated version, “intersect\$” (which includes intersectoral, intersectorality, or any other term with a different ending) led to 637 citations. The concept of intersectoral collaboration has been developed to include the truncated *intersector\$.mp.* and the other terms listed below. Other MeSH terms and keywords yielding relevant articles and sometimes used in related studies ([Martin-Misener & Valaitis, 2008](#)) included cooperative behavior, partnership practice, coalition, alliances, community networks. I did not use “cooperation.mp.” in this search as it generates many articles that did not appear relevant, without adding relevant ones. The final search terms for intersectoral collaboration were: Cooperative Behavior/ or Partnership Practice/ or coalition.mp. or alliance.mp. or Community Networks/ or community-institutional relations/ or interinstitutional relations/ or healthcare coalitions/ or health planning councils/ or "Delivery of Healthcare, Integrated"/ or collaboration.mp.

I used subcategories of MeSH headings “Publication Characteristics” and “Research” to fine-tune the type of publications included, and called that search “Research”. The use of selected categories of those two MeSH headings enabled obtaining fewer commentaries or opinion pieces and yielded more scientific studies.

My final choice of search terms under “Research” included the following keywords, and MeSH terms: case reports/ or clinical conference/ or exp clinical trial/ or comparative study/ or exp

consensus development conference/ or evaluation studies/ or meta-analysis/ or multicenter study/ or "scientific integrity review"/ or twin study/ or validation studies/or "review"/

And

research/ or behavioral research/ or health services research/ or comparative effectiveness research/ or exp human experimentation/ or exp nursing research/ or "outcome assessment (healthcare)"/ or translational research/ or community-based participatory research/ or empirical research/ or qualitative research/ or human experimentation/ or operations research/ or peer review, research/ or research design/ or research report/

The final search consisted of a combination of the five searches: health determinants AND public health AND primary care AND intersectoral collaboration AND research.

Search strategy in Ebsco databases

The final search included two keyword searches, one with “intersect\$” AND health, and another one with health determinant AND public health AND primary care.

Search in the Canadian Research Index

This database did not use MeSH terms. Searches with different key words were performed and screened for relevance. The search with the terms intersectorality, intersectorial, intersectoral or intersectorality yielded 19 documents. A search with the terms primary care and public health retrieved 16 documents. The term health determinant yielded 38 documents. No articles remained when combining all the search terms, or adding either primary care or primary healthcare to the health determinant or the intersectoral searches.

Search in other sources

Online searches of relevant websites such as the US CDC, the National Health System from the UK, and other countries’ or relevant institutions’ major webpages were performed to complement the findings of the published articles. This was to obtain further information on the contexts, mechanisms, or outcomes of the interventions.

Appendix C Extra data tables and analysis from the survey priority ranking question

Table 25 Normality tests, all participants

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
1: Income/living std.	.199	66	.000	.809	66	.000
2: Values/soc. norms	.254	66	.000	.817	66	.000
3: Soc. supp. network	.407	66	.000	.648	66	.000
4: Phys. environment	.411	66	.000	.611	66	.000
5: Education	.222	66	.000	.837	66	.000
6: Employment	.296	66	.000	.804	66	.000
7: Lifestyles	.199	66	.000	.855	66	.000
8: Healthy kids	.320	66	.000	.724	66	.000
9: Healthcare	.208	66	.000	.854	66	.000
10: Gender	.526	66	.000	.280	66	.000
11: Culture	.540	66	.000	.213	66	.000
12: Other	.534	66	.000	.103	66	.000

a. Lilliefors Significance Correction

Table 26 Normality tests by professional groups

Focus groups - Recode 4		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Local leaders	1: Income/living std.	.441	14	.000	.609	14	.000
	2: Values/soc. norms	.273	14	.006	.762	14	.002
	3: Soc. supp. network	.401	14	.000	.669	14	.000
	4: Phys. environment	.470	14	.000	.532	14	.000
	5: Education	.230	14	.043	.805	14	.006
	6: Employment	.312	14	.001	.769	14	.002
	7: Lifestyles	.186	14	.200*	.824	14	.010
	8: Healthy kids	.385	14	.000	.657	14	.000
	9: Healthcare	.290	14	.002	.804	14	.006
	10: Gender	.534	14	.000	.297	14	.000
	11: Culture	.534	14	.000	.297	14	.000
	12: Other	.534	14	.000	.297	14	.000
Municipal leaders	1: Income/living std.	.289	17	.001	.796	17	.002
	2: Values/soc. norms	.239	17	.011	.812	17	.003
	3: Soc. supp. network	.425	17	.000	.627	17	.000
	4: Phys. environment	.364	17	.000	.603	17	.000
	5: Education	.164	17	.200*	.895	17	.056
	6: Employment	.256	17	.004	.830	17	.005
	7: Lifestyles	.272	17	.002	.757	17	.001
	8: Healthy kids	.320	17	.000	.747	17	.000
	9: Healthcare	.179	17	.150	.901	17	.070
	11: Culture	.521	17	.000	.385	17	.000
Primary care	1: Income/living std.	.182	24	.038	.862	24	.004
	2: Values/soc. norms	.260	24	.000	.807	24	.000
	3: Soc. supp. network	.404	24	.000	.588	24	.000
	4: Phys. environment	.459	24	.000	.509	24	.000
	5: Education	.222	24	.004	.828	24	.001
	6: Employment	.270	24	.000	.824	24	.001
	7: Lifestyles	.192	24	.022	.880	24	.008
	8: Healthy kids	.263	24	.000	.768	24	.000
	9: Healthcare	.254	24	.000	.780	24	.000
	10: Gender	.517	24	.000	.403	24	.000
Public health	1: Income/living std.	.248	11	.058	.800	11	.009
	2: Values/soc. norms	.239	11	.080	.809	11	.012
	3: Soc. supp. network	.369	11	.000	.698	11	.000
	4: Phys. environment	.273	11	.022	.823	11	.019
	5: Education	.300	11	.007	.736	11	.001
	6: Employment	.394	11	.000	.689	11	.000
	7: Lifestyles	.255	11	.044	.848	11	.040
	8: Healthy kids	.377	11	.000	.633	11	.000
	9: Healthcare	.156	11	.200*	.897	11	.168
	10: Gender	.528	11	.000	.345	11	.000

Table 27 Details statistics for priority ranking of health determinants by professional groups

			Income/livi ng std.	Values/soc. norms	Soc. supp. network	Phys. enviro.	Education	Employment	Lifestyles	Healthy kids	Health care	Gender	Culture	Other
Local leaders	N	Valid	14	14	14	14	14	14	14	14	14	14	14	14
		Missing	0	0	0	0	0	0	0	0	0	0	0	0
	Mean		3.71	1.86	0.93	0.71	2	1.14	1.86	1.29	1.07	0.07	0.07	0.07
	Std. error of mean		0.569	0.49	0.355	0.398	0.469	0.345	0.523	0.529	0.355	0.071	0.071	0.071
	Median		5	2	0	0	2.5	0.5	1.5	0	0.5	0	0	0
	Mode		5	0	0	0	0	0	0	0	0	0	0	0
	Std. deviation		2.128	1.834	1.328	1.49	1.754	1.292	1.956	1.978	1.328	0.267	0.267	0.267
	Variance		4.527	3.363	1.764	2.22	3.077	1.67	3.824	3.912	1.764	0.071	0.071	0.071
	Range		5	4	3	4	4	3	5	5	4	1	1	1
	Minimum		0	0	0	0	0	0	0	0	0	0	0	0
	Maximum		5	4	3	4	4	3	5	5	4	1	1	1
	Percentiles	25	1	0	0	0	0	0	0	0	0	0	0	0
		50	5	2	0	0	2.5	0.5	1.5	0	0.5	0	0	0
		75	5	4	2.25	0.5	4	2.25	3.5	4	2	0	0	0
Municipal leaders	N	Valid	17	17	17	17	17	17	17	17	17	17	17	17
		Missing	2	2	2	2	2	2	2	2	2	2	2	2
	Mean		1.82	1.88	0.65	0.88	2.41	1.94	1.82	1.71	1.76	0	0.12	0
	Std. error of mean		0.487	0.484	0.27	0.373	0.438	0.466	0.523	0.513	0.338	0	0.081	0
	Median		1	2	0	0	3	2	1	0	2	0	0	0
	Mode		0	0	0	0	0a	0	0	0	0a	0	0	0
	Std. deviation		2.007	1.996	1.115	1.536	1.805	1.919	2.157	2.114	1.393	0	0.332	0
	Variance		4.029	3.985	1.243	2.36	3.257	3.684	4.654	4.471	1.941	0	0.11	0
	Range		5	5	3	4	5	5	5	5	4	0	1	0
	Minimum		0	0	0	0	0	0	0	0	0	0	0	0
	Maximum		5	5	3	4	5	5	5	5	4	0	1	0
	Percentiles	25	0	0	0	0	0.5	0	0	0	0.5	0	0	0
		50	1	2	0	0	3	2	1	0	2	0	0	0
		75	4	4	1.5	1	4	3	4.5	4	3	0	0	0

Table 27 Details statistics for priority ranking of health determinants by professional groups (cont.)

			Income/living std.	Values/soc. norms	Soc. supp. network	Phys. Enviro.	Education	Employment	Lifestyles	Healthy kids	Healthcare	Gender	Culture	Other
Primary care	N	Valid	24	24	24	24	24	24	24	24	24	24	24	24
		Missing	2	2	2	2	2	2	2	2	2	2	2	2
	Mean		2.38	1.13	0.5	0.46	2	1.38	2.25	2	2.58	0.33	0	0
	Std. error of mean		0.394	0.271	0.2	0.217	0.399	0.317	0.357	0.438	0.45	0.187	0	0
	Median		3	1	0	0	1.5	1	2.5	1	3	0	0	0
	Mode		0	0	0	0	0	0	0	0	0	0	0	0
	Std. deviation		1.929	1.329	0.978	1.062	1.956	1.555	1.751	2.147	2.205	0.917	0	0
	Variance		3.723	1.766	0.957	1.129	3.826	2.418	3.065	4.609	4.862	0.841	0	0
	Range		5	4	4	4	5	5	5	5	5	3	0	0
	Minimum		0	0	0	0	0	0	0	0	0	0	0	0
	Maximum		5	4	4	4	5	5	5	5	5	3	0	0
	Percentiles	25	0	0	0	0	0	0	0	0	0	0	0	0
		50	3	1	0	0	1.5	1	2.5	1	3	0	0	0
		75	4	2	1	0	4	2	4	4	5	0	0	0
Public health	N	Valid	11	11	11	11	11	11	11	11	11	11	11	11
		Missing	0	0	0	0	0	0	0	0	0	0	0	0
	Mean		2.18	1.27	0.64	1.73	1.27	0.91	3.55	1.18	2.18	0.09	0	0
	Std. error of mean		0.672	0.488	0.31	0.574	0.557	0.392	0.455	0.553	0.553	0.091	0	0
	Median		1	1	0	2	0	0	4	0	2	0	0	0
	Mode		0	0	0	0	0	0	4	0	0a	0	0	0
	Std. deviation		2.228	1.618	1.027	1.902	1.849	1.3	1.508	1.834	1.834	0.302	0	0
	Variance		4.964	2.618	1.055	3.618	3.418	1.691	2.273	3.364	3.364	0.091	0	0
	Range		5	5	3	5	5	3	5	4	5	1	0	0
	Minimum		0	0	0	0	0	0	0	0	0	0	0	0
	Maximum		5	5	3	5	5	3	5	4	5	1	0	0
	Percentiles	25	0	0	0	0	0	0	3	0	0	0	0	0
		50	1	1	0	2	0	0	4	0	2	0	0	0
		75	5	2	1	4	3	2	5	4	3	0	0	0

Table 28 Tests of normality, all participants

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
1: Income/living std.	.199	66	.000	.809	66	.000
2: Values/soc. norms	.254	66	.000	.817	66	.000
3: Soc. supp. network	.407	66	.000	.648	66	.000
4: Phys. environment	.411	66	.000	.611	66	.000
5: Education	.222	66	.000	.837	66	.000
6: Employment	.296	66	.000	.804	66	.000
7: Lifestyles	.199	66	.000	.855	66	.000
8: Healthy kids	.320	66	.000	.724	66	.000
9: Healthcare	.208	66	.000	.854	66	.000
10: Gender	.526	66	.000	.280	66	.000
11: Culture	.540	66	.000	.213	66	.000
12: Other	.534	66	.000	.103	66	.000

a. Lilliefors Significance Correction

Table 29 Tests of normality for each professional group

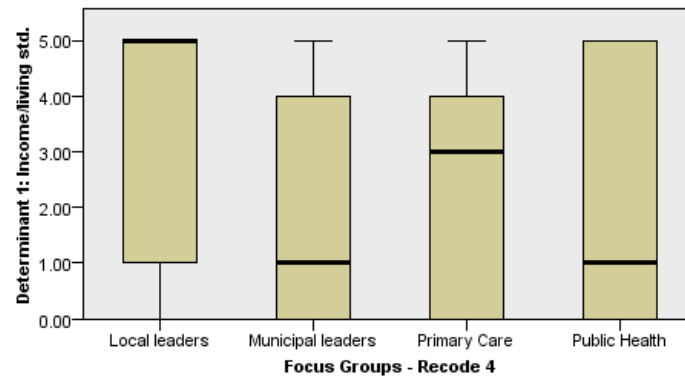
Focus groups - Recode 4		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statisti	df	Sig.	Statisti	df	Sig.
Local leaders	1: Income/living	.441	14	.000	.609	14	.000
	2: Values/soc.	.273	14	.006	.762	14	.002
	3: Soc. supp.	.401	14	.000	.669	14	.000
	4: Phys.	.470	14	.000	.532	14	.000
	5: Education	.230	14	.043	.805	14	.006
	6: Employment	.312	14	.001	.769	14	.002
	7: Lifestyles	.186	14	.200*	.824	14	.010
	8: Healthy kids	.385	14	.000	.657	14	.000
	9: Healthcare	.290	14	.002	.804	14	.006
	10: Gender	.534	14	.000	.297	14	.000
	11: Culture	.534	14	.000	.297	14	.000
	12: Other	.534	14	.000	.297	14	.000
Municipal leaders	1: Income/living	.289	17	.001	.796	17	.002
	2: Values/soc.	.239	17	.011	.812	17	.003
	3: Soc. supp.	.425	17	.000	.627	17	.000
	4: Phys.	.364	17	.000	.603	17	.000
	5: Education	.164	17	.200*	.895	17	.056
	6: Employment	.256	17	.004	.830	17	.005
	7: Lifestyles	.272	17	.002	.757	17	.001
	8: Healthy kids	.320	17	.000	.747	17	.000
	9: Healthcare	.179	17	.150	.901	17	.070
	11: Culture	.521	17	.000	.385	17	.000
Primary care	1: Income/living	.182	24	.038	.862	24	.004
	2: Values/soc.	.260	24	.000	.807	24	.000
	3: Soc. supp.	.404	24	.000	.588	24	.000
	4: Phys.	.459	24	.000	.509	24	.000
	5: Education	.222	24	.004	.828	24	.001
	6: Employment	.270	24	.000	.824	24	.001
	7: Lifestyles	.192	24	.022	.880	24	.008
	8: Healthy kids	.263	24	.000	.768	24	.000
	9: Healthcare	.254	24	.000	.780	24	.000
	10: Gender	.517	24	.000	.403	24	.000
Public health	1: Income/living	.248	11	.058	.800	11	.009
	2: Values/soc.	.239	11	.080	.809	11	.012
	3: Soc. supp.	.369	11	.000	.698	11	.000
	4: Phys.	.273	11	.022	.823	11	.019
	5: Education	.300	11	.007	.736	11	.001
	6: Employment	.394	11	.000	.689	11	.000
	7: Lifestyles	.255	11	.044	.848	11	.040
	8: Healthy kids	.377	11	.000	.633	11	.000
	9: Healthcare	.156	11	.200*	.897	11	.168
	10: Gender	.528	11	.000	.345	11	.000

Table 30 Kruskal-Wallis analysis of health determinants prioritization

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Determinant 1: Income/living std. is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.041	Reject the null hypothesis.
2	The distribution of Determinant 2: Values/soc. norms is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.624	Retain the null hypothesis.
3	The distribution of Determinant 3: Soc. supp. network is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.874	Retain the null hypothesis.
4	The distribution of Determinant 4: Phys. environment is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.140	Retain the null hypothesis.
5	The distribution of Determinant 5: Education is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.469	Retain the null hypothesis.
6	The distribution of Determinant 6: Employment is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.475	Retain the null hypothesis.
7	The distribution of Determinant 7: Lifestyles is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.113	Retain the null hypothesis.
8	The distribution of Determinant 8: Healthy kids is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.479	Retain the null hypothesis.
9	The distribution of Determinant 9: Health care is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.155	Retain the null hypothesis.
10	The distribution of Determinant 10: Gender is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.503	Retain the null hypothesis.
11	The distribution of Determinant 11: Culture is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.276	Retain the null hypothesis.
12	The distribution of Determinant 12: Other is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.294	Retain the null hypothesis.

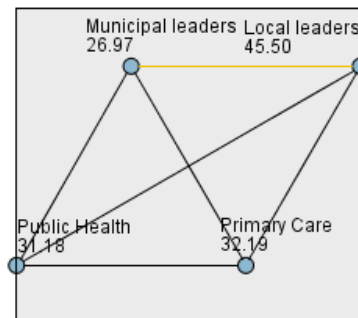
Asymptotic significances are displayed. The significance level is .05.

Independent-Samples Kruskal-Wallis Test



Total N	66
Test Statistic	8.241
Degrees of Freedom	3
Asymptotic Sig. (2-sided test)	.041

Pairwise Comparisons of Focus Groups - Recode 4



Each node shows the sample average rank of Focus Groups - Recode 4.

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Municipal leaders-Public Health	-4.211	7.185	-.586	.558	1.000
Municipal leaders-Primary Care	-5.217	5.886	-.886	.375	1.000
Municipal leaders-Local leaders	18.529	6.701	2.765	.006	.034
Public Health-Primary Care	1.006	6.761	.149	.882	1.000
Public Health-Local leaders	14.318	7.481	1.914	.056	.334
Primary Care-Local leaders	13.312	6.244	2.132	.033	.198

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

Table 31 Descriptive statistics of the level of internal action on health determinants by professional groups

			Income/ living std.	Values/ soc. norms	Soc. supp. network	Phys. environment	Education	Employment	Lifestyles	ECD	Healthcare	Gender	Culture
Local leaders	N	Valid Missing	14 0	14 0	13 1	12 2	14 0	14 0	12 2	14 0	13 1	13 1	13 1
	Mean		4.57	4.21	4.54	4.08	4.86	4.57	4.42	4.71	4.77	4.85	4.62
	Std. error of mean		.291	.300	.215	.336	.097	.173	.288	.221	.166	.154	.180
	Median		5.00	5.00	5.00	4.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
	Mode		5	5	5	4 ^a	5	5	5	5	5	5	5
	Std. deviation		1.089	1.122	.776	1.165	.363	.646	.996	.825	.599	.555	.650
	Variance		1.187	1.258	.603	1.356	.132	.418	.992	.681	.359	.308	.423
	Skewness		-3.128	-1.250	-1.413	-1.847	-2.295	-1.303	-1.712	-3.205	-2.682	-3.606	-1.576
	Kurtosis		10.345	.280	.546	4.132	3.792	.951	2.226	10.558	6.964	13.000	1.801
	Range		4	3	2	4	1	2	3	3	2	2	2
	Minimum		1	2	3	1	4	3	2	2	3	3	3
	Maximum		5	5	5	5	5	5	5	5	5	5	5
	Percentiles	25	4.75	3.75	4.00	4.00	5.00	4.00	4.00	5.00	5.00	5.00	4.00
		50	5.00	5.00	5.00	4.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
		75	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Municipal leaders	N	Valid Missing	13 6	15 4	13 6	14 5	15 4	16 3	14 5	13 6	11 8	9 10	9 10
	Mean		3.38	3.20	3.15	3.43	3.80	3.50	2.71	3.46	3.27	3.33	3.44
	Std. error of mean		.446	.470	.451	.374	.380	.316	.398	.447	.469	.527	.530
	Median		4.00	4.00	3.00	3.50	5.00	3.00	2.00	4.00	3.00	4.00	3.00
	Mode		5	5	5	3 ^a	5	3	2	5	2 ^a	2 ^a	5
	Std. deviation		1.609	1.821	1.625	1.399	1.474	1.265	1.490	1.613	1.555	1.581	1.590
	Variance		2.590	3.314	2.641	1.956	2.171	1.600	2.220	2.603	2.418	2.500	2.528
	Skewness		-.321	-.259	-.153	-.518	-.686	-.226	.572	-.622	.032	-.217	-.230
	Kurtosis		-1.665	-1.938	-1.642	-.688	-1.197	-.790	-1.063	-1.109	-1.876	-1.886	-1.725
	Range		4	4	4	4	4	4	4	4	4	4	4
	Minimum		1	1	1	1	1	1	1	1	1	1	1
	Maximum		5	5	5	5	5	5	5	5	5	5	5
	Percentiles	25	2.00	1.00	1.50	2.75	2.00	3.00	1.75	2.00	2.00	2.00	2.00
		50	4.00	4.00	3.00	3.50	5.00	3.00	2.00	4.00	3.00	4.00	3.00
		75	5.00	5.00	5.00	5.00	5.00	5.00	4.25	5.00	5.00	5.00	5.00

			Income/ living std.	Values/ soc. norms	Soc. supp. network	Phys. environment	Education	Employment	Lifestyles	ECD	Healthcare	Gender	Culture
Primary care	N	Valid	25	25	25	24	25	25	26	26	25	25	23
		Missing	1	1	1	2	1	1	0	0	1	1	3
	Mean		3.68	4.40	4.60	4.17	4.76	3.88	4.73	4.92	4.88	4.20	3.96
	Std. error of mean		.243	.153	.153	.197	.105	.279	.118	.053	.088	.258	.285
	Median		4.00	5.00	5.00	4.00	5.00	4.00	5.00	5.00	5.00	5.00	5.00
	Mode		4	5	5	5	5	5	5	5	5	5	5
	Std. deviation		1.215	.764	.764	.963	.523	1.394	.604	.272	.440	1.291	1.364
	Variance		1.477	.583	.583	.928	.273	1.943	.365	.074	.193	1.667	1.862
	Skewness		-1.140	-.854	-2.196	-.997	-2.197	-1.073	-2.191	-3.373	-3.882	-1.667	-1.091
	Kurtosis		.860	-.684	4.978	.171	4.463	-.011	3.840	10.156	15.339	1.647	-.029
	Range		4	2	3	3	2	4	2	1	2	4	4
	Minimum		1	3	2	2	3	1	3	4	3	1	1
	Maximum		5	5	5	5	5	5	5	5	5	5	5
	Percentiles	25	3.00	4.00	4.00	4.00	5.00	3.00	5.00	5.00	5.00	4.00	3.00
		50	4.00	5.00	5.00	4.00	5.00	4.00	5.00	5.00	5.00	5.00	5.00
		75	4.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Public health	N	Valid	10	11	11	11	10	10	11	10	10	11	10
		Missing	1	0	0	0	1	1	0	1	1	0	1
	Mean		4.20	4.82	4.27	4.09	5.00	4.70	4.82	4.80	5.00	5.00	4.60
	Std. error of mean		.200	.182	.273	.285	.000	.153	.122	.200	.000	.000	.221
	Median		4.00	5.00	5.00	4.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
	Mode		4	5	5	4	5	5	5	5	5	5	5
	Std. deviation		.632	.603	.905	.944	.000	.483	.405	.632	.000	.000	.699
	Variance		.400	.364	.818	.891	.000	.233	.164	.400	.000	.000	.489
	Skewness		-.132	-3.317	-.647	-1.081		-1.035	-1.923	-3.162			-1.658
	Kurtosis		.179	11.000	-1.548	1.206		-1.224	2.037	10.000			2.045
	Range		2	2	2	3	0	1	1	2	0	0	2
	Minimum		3	3	3	2	5	4	4	3	5	5	3
	Maximum		5	5	5	5	5	5	5	5	5	5	5
	Percentiles	25	4.00	5.00	3.00	4.00	5.00	4.00	5.00	5.00	5.00	5.00	4.00
		50	4.00	5.00	5.00	4.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
		75	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00

Table 32 Test of normality of intensity of internal action for each health determinant

	Focus groups - Recode 4	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Income/living std.	Local leaders	.439	14	.000	.465	14	.000
	Municipal leaders	.227	13	.066	.835	13	.018
	Primary care	.284	25	.000	.812	25	.000
	Public health	.324	10	.004	.794	10	.012
Values/soc. norms	Local leaders	.330	14	.000	.723	14	.001
	Municipal leaders	.239	15	.021	.771	15	.002
	Primary care	.344	25	.000	.731	25	.000
	Public health	.528	11	.000	.345	11	.000
Soc. supp. network	Local leaders	.416	13	.000	.638	13	.000
	Municipal leaders	.180	13	.200*	.861	13	.040
	Primary care	.420	25	.000	.593	25	.000
	Public health	.335	11	.001	.733	11	.001
Phys. environment	Local leaders	.305	12	.003	.748	12	.003
	Municipal leaders	.165	14	.200*	.886	14	.071
	Primary care	.265	24	.000	.795	24	.000
	Public health	.280	11	.016	.826	11	.021
Education	Local leaders	.510	14	.000	.428	14	.000
	Municipal Leaders	.326	15	.000	.775	15	.002
	Primary Care	.477	25	.000	.520	25	.000
Employment	Local leaders	.389	14	.000	.688	14	.000
	Municipal leaders	.216	16	.044	.883	16	.043
	Primary care	.269	25	.000	.776	25	.000
	Public health	.433	10	.000	.594	10	.000
Lifestyles	Local leaders	.388	12	.000	.668	12	.000
	Municipal leaders	.256	14	.014	.855	14	.026
	Primary care	.480	26	.000	.504	26	.000
	Public health	.492	11	.000	.486	11	.000
Healthy kids	Local leaders	.493	14	.000	.411	14	.000
	Municipal leaders	.214	13	.104	.818	13	.011
	Primary care	.535	26	.000	.301	26	.000
	Public health	.524	10	.000	.366	10	.000
Healthcare	Local leaders	.496	13	.000	.458	13	.000
	Municipal leaders	.248	11	.057	.831	11	.024
	Primary care	.528	25	.000	.307	25	.000
Gender	Local leaders	.532	13	.000	.311	13	.000
	Municipal leaders	.245	9	.127	.846	9	.066
	Primary care	.332	25	.000	.659	25	.000
Culture	Local leaders	.415	13	.000	.650	13	.000
	Municipal leaders	.281	9	.040	.836	9	.052
	Primary care	.300	23	.000	.767	23	.000
	Public health	.416	10	.000	.650	10	.000

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.

b. Action Level: Education is constant when Focus Groups = Public Health in one or more split files. It has been omitted.

c. Action Level: Healthcare is constant when Focus Groups= Public Health in one or more split files. It has been omitted.

d. Action Level: Gender is constant when Focus Groups = Public Health in one or more split files. It has been omitted.

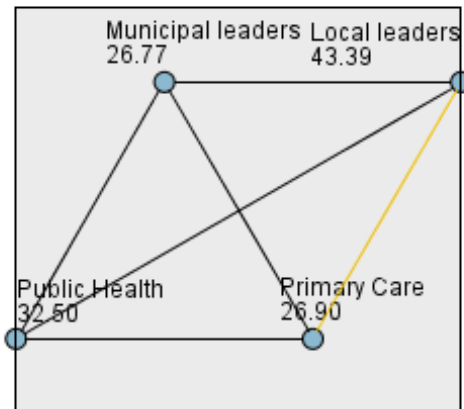
Appendix D Detailed statistics on internal action to manage health determinants

Table 33 Kruskal-Wallis analysis of internal action level

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Action level: Income/living std. is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.022	Reject the null hypothesis.
2	The distribution of Action Level: Values/soc. norms is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.032	Reject the null hypothesis.
3	The distribution of Action Level: Soc. supp. network is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.015	Reject the null hypothesis.
4	The distribution of Action Level: Phys. environment is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.360	Retain the null hypothesis.
5	The distribution of Action Level: Education is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.014	Reject the null hypothesis.
6	The distribution of Action Level: Employment is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.030	Reject the null hypothesis.
7	The distribution of Action Level: Lifestyles is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.000	Reject the null hypothesis.
8	The distribution of Action Level: Healthy kids is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.000	Reject the null hypothesis.
9	The distribution of Action Level: Health care is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.000	Reject the null hypothesis.
10	The distribution of Action Level: Gender is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.002	Reject the null hypothesis.
11	The distribution of Action Level: Culture is the same across categories of Focus Groups - Recode 4.	Independent-Samples Kruskal-Wallis Test	.196	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Pairwise Comparisons of Focus Groups - Recode 4



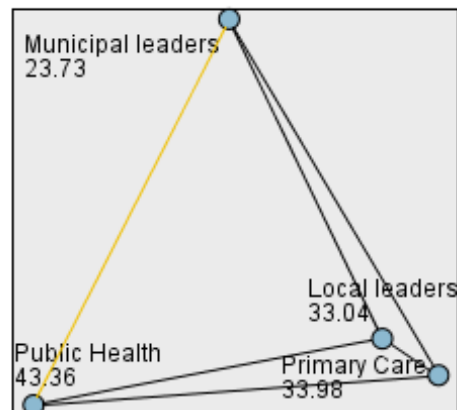
Each node shows the sample average rank of Focus Groups - Recode 4.

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Municipal leaders-Primary Care	-.131	5.831	-.022	.982	1.000
Municipal leaders-Public Health	-5.731	7.173	-.799	.424	1.000
Municipal leaders-Local leaders	16.624	6.568	2.531	.011	.068
Primary Care-Public Health	-5.600	6.380	-.878	.380	1.000
Primary Care-Local leaders	16.493	5.692	2.897	.004	.023
Public Health-Local leaders	10.893	7.060	1.543	.123	.737

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

Pairwise Comparisons of Focus Groups - Recode 4



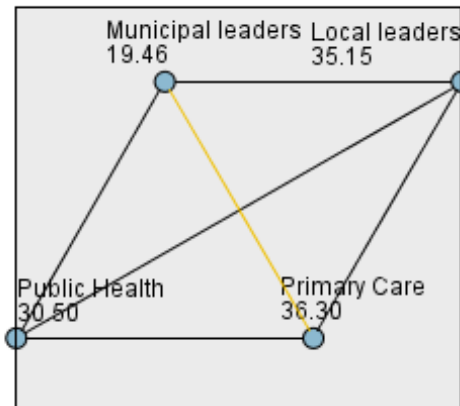
Each node shows the sample average rank of Focus Groups - Recode 4.

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Municipal leaders-Local leaders	9.302	6.254	1.487	.137	.821
Municipal leaders-Primary Care	-10.247	5.497	-1.864	.062	.374
Municipal leaders-Public Health	-19.630	6.681	-2.938	.003	.020
Local leaders-Primary Care	-.944	5.618	-.168	.867	1.000
Local leaders-Public Health	-10.328	6.781	-1.523	.128	.766
Primary Care-Public Health	-9.384	6.089	-1.541	.123	.740

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

Pairwise Comparisons of Focus Groups - Recode 4



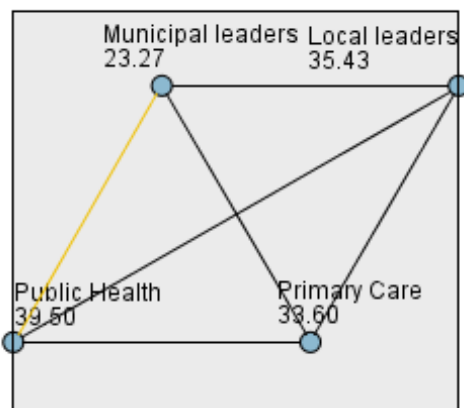
Each node shows the sample average rank of Focus Groups - Recode 4.

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Municipal leaders-Public Health	-11.038	6.526	-1.691	.091	.545
Municipal leaders-Local leaders	15.692	6.249	2.511	.012	.072
Municipal leaders-Primary Care	-16.838	5.447	-3.091	.002	.012
Public Health-Local leaders	4.654	6.526	.713	.476	1.000
Public Health-Primary Care	5.800	5.764	1.006	.314	1.000
Local leaders-Primary Care	-1.146	5.447	-.210	.833	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

Pairwise Comparisons of Focus Groups - Recode 4



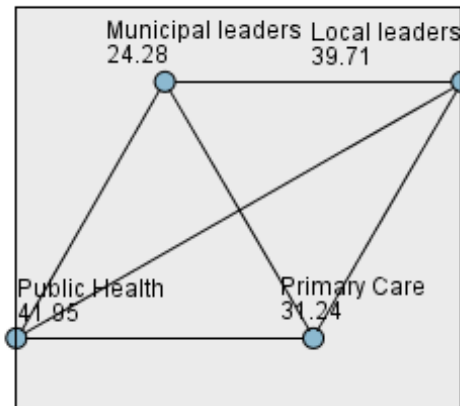
Each node shows the sample average rank of Focus Groups - Recode 4.

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Municipal leaders-Primary Care	-10.333	4.392	-2.353	.019	.112
Municipal leaders-Local leaders	12.162	4.998	2.433	.015	.090
Municipal leaders-Public Health	-16.233	5.491	-2.957	.003	.019
Primary Care-Local leaders	1.829	4.489	.407	.684	1.000
Primary Care-Public Health	-5.900	5.032	-1.172	.241	1.000
Local leaders-Public Health	-4.071	5.568	-.731	.465	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

Pairwise Comparisons of Focus Groups - Recode 4



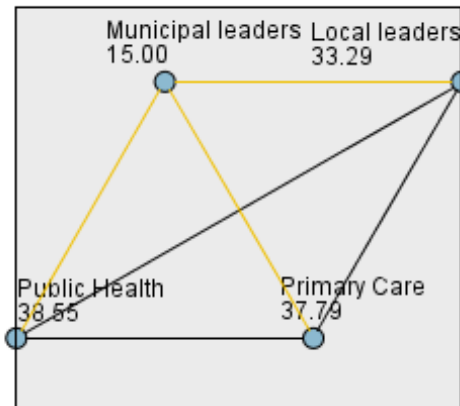
Each node shows the sample average rank of Focus Groups - Recode 4.

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Municipal leaders-Primary Care	-6.959	5.595	-1.244	.214	1.000
Municipal leaders-Local leaders	15.433	6.395	2.413	.016	.095
Municipal leaders-Public Health	-17.669	7.044	-2.508	.012	.073
Primary Care-Local leaders	8.474	5.833	1.453	.146	.878
Primary Care-Public Health	-10.710	6.538	-1.638	.101	.609
Local leaders-Public Health	-2.236	7.235	-.309	.757	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

Pairwise Comparisons of Focus Groups - Recode 4



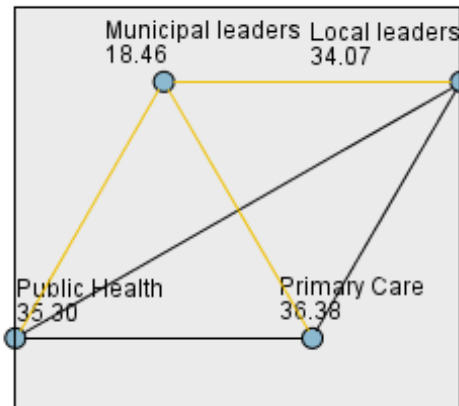
Each node shows the sample average rank of Focus Groups - Recode 4.

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Municipal leaders-Local leaders	18.292	6.123	2.987	.003	.017
Municipal leaders-Primary Care	-22.788	5.160	-4.417	.000	.000
Municipal leaders-Public Health	-23.545	6.271	-3.754	.000	.001
Local leaders-Primary Care	-4.497	5.432	-.828	.408	1.000
Local leaders-Public Health	-5.254	6.497	-.809	.419	1.000
Primary Care-Public Health	-.757	5.598	-.135	.892	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

Pairwise Comparisons of Focus Groups - Recode 4



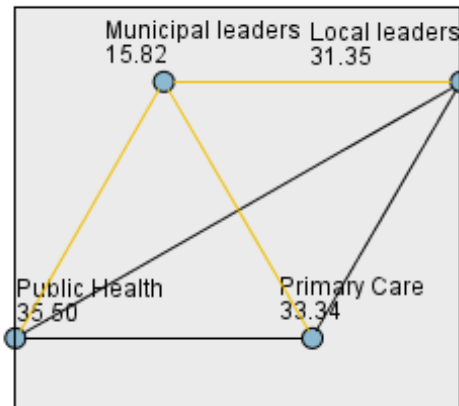
Each node shows the sample average rank of Focus Groups - Recode 4.

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Municipal leaders-Local leaders	15.610	4.989	3.129	.002	.011
Municipal leaders-Public Health	-16.838	5.448	-3.091	.002	.012
Municipal leaders-Primary Care	-17.923	4.400	-4.073	.000	.000
Local leaders-Public Health	-1.229	5.363	-.229	.819	1.000
Local leaders-Primary Care	-2.313	4.294	-.539	.590	1.000
Public Health-Primary Care	1.085	4.820	.225	.822	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

Pairwise Comparisons of Focus Groups - Recode 4



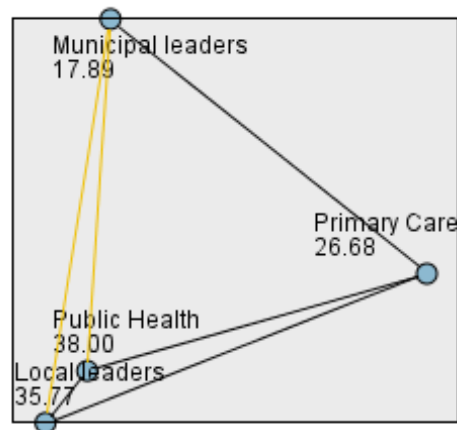
Each node shows the sample average rank of Focus Groups - Recode 4.

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Municipal leaders-Local leaders	15.528	4.778	3.250	.001	.007
Municipal leaders-Primary Care	-17.522	4.220	-4.152	.000	.000
Municipal leaders-Public Health	-19.682	5.096	-3.862	.000	.001
Local leaders-Primary Care	-1.994	3.988	-.500	.617	1.000
Local leaders-Public Health	-4.154	4.906	-.847	.397	1.000
Primary Care-Public Health	-2.160	4.364	-.495	.621	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

Pairwise Comparisons of Focus Groups - Recode 4



Each node shows the sample average rank of Focus Groups - Recode 4.

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Municipal leaders-Primary Care	-8.791	5.266	-1.669	.095	.570
Municipal leaders-Local leaders	17.880	5.874	3.044	.002	.014
Municipal leaders-Public Health	-20.111	6.089	-3.303	.001	.006
Primary Care-Local leaders	9.089	4.632	1.962	.050	.298
Primary Care-Public Health	-11.320	4.901	-2.310	.021	.125
Local leaders-Public Health	-2.231	5.550	-.402	.688	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

Table 34 Intensity of internal action by health determinant and professional group

		Local leaders		Municipal leaders		Primary care		Public health		Total	
		n	%	n	%	n	%	n	%	n	%
Income/living std.	No action taken	1	7	2	15	3	12			6	10%
	Recognized importance			3	23					3	5%
	Developed plans			1	8	5	20	1	10	7	11%
	Started implementing	2	14	2	15	11	44	6	60	21	34%
	Long time action	11	79	5	38	6	24	3	30	25	40%
	Total	14	100	13	100	25	100	10	100	62	100%
	Missing			6		1		1		8	
	N	14		19		26		11		70	
Values / soc. norms	No action taken			5	33					5	8%
	Recognized importance	2	14	1	7					3	5%
	Developed plans	1	7	1	7	4	16	1	9	7	11%
	Started implementing	3	21	2	13	7	28			12	18%
	Long time action	8	57	6	40	14	56	10	91	38	58%
	Total	14	100	15	100	25	100	11	100	65	100%
	Missing			4		1				5	
	N	14		19		26		11		70	
Soc. supp. network	No action taken			3	23					3	5%
	Recognized importance			2	15	1	4			3	5%
	Developed plans	2	15	2	15	1	4	3	27	8	13%
	Started implementing	2	15	2	15	5	20	2	18	11	18%
	Long time action	9	69	4	31	18	72	6	55	37	60%
	Total	13	100	13	100	25	100	11	100.0	62	100%
	Missing	1		6		1				8	
	N	14		19		26		11		70	
Phys. environment	No action taken	1	8	2	14					3	5%
	Recognized importance			1	7	2	8	1	9	4	7%
	Developed plans	1	8	4	29	3	13	1	9	9	15%
	Started implementing	5	42	3	21	8	33	5	46	21	34%
	Long time action	5	42	4	29	11	46	4	36	24	39%
	Total	12	100	14	100	24	100	11	100	61	100%
	Missing	2		5		2				9	
	N	14		19		26		11		70	
Education	No action taken			1	7					1	2%
	Recognized importance			3	20					3	6%
	Developed plans			2	13	1	4			3	6%
	Started implementing	2	14	1	7	4	16			7	13%
	Long time action	12	86	8	53	20	80	10	100	50	93%
	Total	14	100	15	100	25	100			54	100%
	Missing			4		1		1		6	
	N	14		19		26		11		70	

		Local leaders		Municipal leaders		Primary care		Public health		Total	
		n	%	n	%	n	%	n	%	n	%
Employment	No action taken			1	6	3	12			4	6%
	Recognized importance			2	13	1	4			3	5%
	Developed plans	1	7	6	38	4	16			11	17%
	Started implementing	4	29	2	13	5	20	3	30.0	14	22%
	Long time action	9	64	5	31	12	48	7	70.0	33	51%
	Total	14	100	16	100	25	100	10	100.0	65	100%
	Missing			3		1		1		5	
N		14		19		26		11		70	
Lifestyles	No action taken			3	21					3	5%
	Recognized importance	1	8	5	36					6	10%
	Developed plans	1	8	2	14	2	8			5	8%
	Started implementing	2	17	1	7	3	12	2	18.2	8	13%
	Long time action	8	67	3	21	21	81	9	81.8	41	65%
	Total	12	100	14	100	26	100	11	100.0	63	100%
	Missing	2		5						7	
N		14		19		26		11		70	
ECD	No action taken			3	23					3	5%
	Recognized importance	1	7							1	2%
	Developed plans			3	23			1	10.0	4	6%
	Started implementing	1	7	2	15	2	8			5	8%
	Long time action	12	86	5	38	24	92	9	90.0	50	79%
	Total	14	100	13	100	26	100	10	100.0	63	100%
	Missing			6				1		7	
N		14		19		26		11		70	
Healthcare	No action taken			1	9					1	2%
	Recognized importance			4	36					4	8%
	Developed plans	1	8	1	9	1	4			3	6%
	Started implementing	1	8	1	9	1	4			3	6%
	Long time action	11	85	4	36	23	92	10	100.0	48	98%
	Total	13	100	11	100	25	100			49	100%
	Missing	1		8		1		1		11	
N		14		19		26		11		70	
Gender	No action taken			1	11	2	8			3	5%
	Recognized importance			3	33	2	8			5	9%
	Developed plans	1	8							1	2%
	Started implementing			2	22	6	24			8	14%
	Long time action	12	92	3	33	15	60	11	100.0	41	71%
	Total	13	100	9	100	25	100	11		58	100%
	Missing	1		10		1				12	
N		14		19		26		11		70	
Culture	No action taken			1	11	2	9			3	5%
	Recognized importance			2	22	2	9			4	7%
	Developed plans	1	8	2	22	3	13	1	10.0	7	13%
	Started implementing	3	23			4	17	2	20.0	9	16%
	Long time action	9	69	4	44	12	52	7	70.0	32	58%
	Total	13	100	9	100	23	100	10	100.0	55	100%
	Missing	1		10		3		1		15	
N		14		19		26		11		70	

Appendix E Detailed statistics on intersectoral collaboration

Table 35 Organizations participating in intersectoral collaboration, by sector, for each health determinant

Sectors	Organizations	Income/ living standard		Values and social norms		Social Support Network		Physical Environ.		Education		Employment and working conditions		Life styles		Early Childhood Development		Health		Gender		Culture		Total		
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	% Sector	% All
1. Civil society/ NGO	Committee of Defense of the Revolution	17	43	28	47	38	46	15	71	17	49	7	23	23	55	24	50	23	46	21	36	13	50	226	46	18
	Federation of Women	14	35	25	42	35	43	6	29	16	46	13	43	17	41	23	48	22	44	35	60	11	42	217	44	18
	Workers Central Union	5	13	1	2	2	2			1	3	8	27					3	6	2	3			22	4	2
	ACRF*	4	10	4	7	3	4					1	3	1	2			1	2					14	3	1
	Community					1	1							1	2							1	4	3	1	0
	TOTAL	40	100	60	100	82	100	21	100	35	100	30	100	42	100	48	100	50	100	58	100	26	100	492	100	40
2. Political	Popular Power	5	42	4	29	3	21	4	67	2	40	3	43	2	25	4	50	14	56	5	39	6	46	52	42	4
	Communist Party (CP)	4	33	3	21	2	14	1	17	1	20	2	29	2	25	1	13	8	32	3	23	4	31	31	25	3
	CP Central committee	2	17	3	21	2	14					2	29							1	8			10	8	1
	Union of Cuban Youth	1	8	3	21	4	29	1	17	2	40					1	13	2	8	4	31	1	8	19	15	2
	Popular Power Council			1	7	3	21							4	50	2	25	1	4			2	15	13	10	1
	TOTAL	12	100	14	100	14	100	6	100	5	100	7	100	8	100	8	100	25	100	13	100	13	100	125	100	10
3. Government Institutions related to Environment, Infrastructures, and Transport	Ministry of Science, Technology and Environ.	1	13					19	24			1	100			1	100	1	11					23	20	2
	Waste and community services			1	100	4	67	37	46					2	33			4	44					48	42	4
	Housing	7	88			1	17	4	4.9															12	10	1
	Water mains					1	17	19	24									1	11					21	18	2
	Ministry of Construction									1	50							1	11					2	2	0
	Ministry of Agriculture									1	50			4	67			1	11					6	5	0
	TOTAL	8	100	1	100	6	100	81	100	2	100	1	100	6	100	1	100	9	100					115	100	9
4. Communication and Culture	Institute of Radio and TV			4	80	1	50							4	33	1	25			1	17	6	26	17	27	1
	Culture			1	20	1	50	3	50	4	100			5	42	3	75	1	100	5	83	4	17	27	43	2
	Writers and Artists Union							2	33													1	4	3	5	0
	Press													1	8							7	30	8	13	1
	TOTAL			5	100	2	100	6	100	4	100			12	100	4	100	1	100	6	100	23	100	63	100	5
5. Commercial, Industrial and Financial	Businesses					1	100													1	100	1	100	3	25	0
	Ministry of Commerce	4	67							1	100			1	100									6	50	0
	TOTAL	6	100			1	100			1	100			1	100			1	100	1	100	1	100	12	100	1

Table 35 Organizations participating in intersectoral collaboration, by sector, for each health determinant (continued)

Sectors	Organizations	Income/ living standard		Values and social norms		Social Support Network		Physical Environ.		Education		Employment and working conditions		Life styles		Early Childhood Development		Health		Gender		Culture		Total		
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	% Sector	% All
6. Health and Social Work	Social Security Worker	20	67	2	17	3	23					20	74	1	5	2	8.3			1	11			49	26	4
	Health	8	27	6	50	9	69	10	100	10	67	5	19	18	90	21	88	19	100	7	78	5	50	118	62	10
	National Society of Health Workers	1	3			1	8					1	4	1	5									4	2	0
	CPSW **			3	25					1	7	1	4											5	3	0
	Health Education Provincial Centre									2	13					1	4.2							3	2	0
	Health Promoters																					5	50	5	3	0
	TOTAL	30	100	12	100	13	100	10	100	15	100	27	100	20	100	24	100	19	100	9	100	10	100	189	100	15
7. Education	INSPEP**	2	20	2	8	1	7	4	40	5	12			18	51	12	27	4	27	2	29	3	20	53	23	4
	Ministry of Education	8	80	23	89	12	86	6	60	28	67	7	70	16	46	30	68	8	53	5	71	12	80	155	68	13
	University of Villa Clara					1	7											3	20					4	2	0
	Ministry of Superior Education			1	4					7	17	1	10											9	4	1
	TOTAL	10	100	26	100	14	100	10	100	42	100	10	100	35	100	44	100	15	100	7	100	15	100	228	100	18
8. Security Organizations	Police			4	67							1	50											5	42	0
	Ministry of Interior			2	33							1	50							2	50			5	42	0
	TOTAL			6	100							2	100							4	100			12	100	1
9. All sectors mentioned indistinctively	All					2	100	1	100															3	100	0
TOTAL ALL		106	9	124	10	134	11	135	11	104	8	77	6	124	10	129	10	120	10	98	8	88	7	1239		100

*Association of Cuban Revolution Fighters

**Commission of Prevention and Social Work

*** Institute National of Sports, Physical Education, and Recreation

Table 36 Full and frequent collaboration by sector, health determinant, and group

Income/living std		Full collaboration		Formal interaction > 6 times a year	
		n	%**	n	%
Local leaders	Civil society	19	73%	12	46%
	Political	4	67%	4	67%
	Total	23	72%	16	50%
Municipal leaders	Civil society	3	43%	4	100%
	Political	1	100%	1	100%
	GvEnviro*	0	0%	0	0%
	CIF	1	50%	2	100%
	Health/SW	3	43%	4	67%
	Education	2	29%	2	33%
	Total	10	40%	13	65%
Primary care	Civil society	13	81%	4	36%
	Political	5	100%	2	67%
	Health/SW	2	100%	1	100%
	Total	20	87%	7	47%
Public health	Civil society	10	100%	8	89%
	GvEnviro	4	67%	5	100%
	CIF	3	100%	3	100%
	Education	0	0%	0	0%
	Total	17	85%	16	89%
Total		70	75%	52	65%
Values and social norms					
Local leaders	Civil society	9	50%	3	17%
	Political	2	50%	1	25%
	GvEnviro	1	100%	1	100%
	Health/SW	2	67%	2	100%
	Education	1	100%	1	100%
	Security	2	50%	1	25%
	Total	17	55%	9	30%
Municipal leaders	Civil Society	6	100%	6	100%
	Political	1	50%	1	50%
	Com/Cult	0		0	
	Health/SW	2	40%	2	50%
	Education	2	25%	3	43%
	Security	0		0	
	Total	11	48%	12	60%
Primary care	Civil Society	24	71%	9	43%
	Political	4	100%	1	25%
	Com/Cult	5	100%	1	100%
	Education	4	100%	2	67%
	Security	0		0	
	Total	37	77%	13	43%
Public health	Civil Society	2	100%	1	50%
	Political	4	100%	4	100%
	Education	12	92%	11	92%
	Total	18	95%	16	89%
Total		83	72%	50	60%

* It has been listed as a sector where there is collaboration, but none is at the level of full collaboration

** Percent of those who answered the full collaboration in the intensity of collaboration question, total N is not equal to the total N of those who answered the question on which organization they collaborate with.

Social support networks		Full collaboration		Formal interaction > 6 times a year	
		n	%**	n	%
Local leaders	Civil society	6	32%	6	32%
	Political	2	40%	1	20%
	GvEnviro	3	75%	2	50%
	CIF	1	100%	1	100%
	Health/SW	3	75%	3	75%
	Total	15	46%	13	39%
Municipal leaders	Civil society	6	67%	6	100%
	Political	0		0	
	Health/SW	2	50%	2	50%
	Education	0		0	
	All	2	100%	1	50%
	Total	10	50%	9	53%
Primary care	Civil society	27	73%	12	46%
	Political	6	100%	4	67%
		2	100%	1	50%
	Com/Cult	1	100%	0	
	Health/SW	2	100%	1	50%
	Total	38	79%	18	49%
Public health	Civil society	16	89%	12	86%
	Political	1	50%	1	100%
	Com/Cult	1	100%	0	
	Education	7	88%	7	88%
	Total	25	86%	20	83%
Total		88	72%	60	59%
Physical environment		Full collaboration		Formal interaction > 6 times a year	
		n	%**	n	%
Local leaders	Civil society	5	42%	0	
	Political	0		0	
	GvEnviro	6	40%	4	27%
	Health/SW	5	100%	3	60%
	Total	16	49%	7	21%
Municipal leaders	Civil society	2	100%	2	100%
	Political	0		0	
	GvEnviro	2	100%	2	100%
	Com/cult	4	80%	4	100%
	Health/SW	2	50%	2	67%
	Education	2	25%	2	40%
	All	1	100%	0	
	Total	13	57%	12	67%
Primary care	Civil Society	7	100%	0	
	Political	2	67%	0	
	GvEnviro	25	83%	9	47%
	Com/cult	0		1	100%
	Total	34	83%	10	40%
Public health	Political	0		0	
	GvEnviro	22	79%	22	85%
	Total	22	76%	22	82%
Total		85	71%	51	62%

Education		Full collaboration		Formal interaction > 6 times a year	
		n	% **	n	%
Local leaders	Civil society	9	56%	2	13%
	Political	1	50%	1	50%
	Health/SW	0		0	
	Education	3	75%	2	50%
	Total	13	52%	5	20%
Municipal leaders	Political	0		1	100%
	GvEnviro	2	100%	2	100%
	Com/cult	2	67%	2	100%
	CIF	1	100%	1	100%
	Health/SW	4	50%	5	100%
	Education	6	55%	6	75%
	Total	15	58%	17	90%
Primary care	Civil society	13	81%	1	14%
	Political	2	100%	2	100%
	Health/SW	3	100%	3	100%
	Education	10	77%	5	50%
	Total	28	82%	11	50%
Public health	Civil society	1	100%	0	
	Com/cult	1	100%	0	
	Education	10	100%	7	70%
	Total	12	100%	7	58%
Total		68	74%	40	64%
Employment and working conditions		Full collaboration		Formal interaction > 6 times a year	
		n	% **	n	%
Local leaders	Civil society	4	31%	4	31%
	Political	1	50%	0	
	GvEnviro	0		0	
	Health/SW	1	100%	1	100%
	Education	2	100%	2	100%
	Security	0		0	
	Total	8	40%	7	35%
Municipal leaders	Civil society	3	43%	7	100%
	Political	0		0	
	Health/SW	2	40%	2	40%
	Education	2	33%	2	40%
	Security	1	100%	1	100%
	Total	8	40%	12	63%
Primary care	Civil society	13	77%	6	55%
	Political	1	33%	0	
	GvEnviro	1	100%	0	
	Health/SW	1	100%		46%
	Total	16	73%	6	67%
Public Health	Civil society	6	60%	0	
	Political	0		0	60%
	Education	1	100%	0	0%
	Total	7	58%	6	100%
Total		39	57%	31	65%

Lifestyles		Full collaboration		Formal interaction > 6 times a year	
		n	%**	n	%
Local leaders	Civil society	4	36%	0	
	GvEnviro	2	100%	1	50%
	Health/SW	6	67%	3	33%
	Education	4	67%	3	50%
	Total	16	57%	7	25%
Municipal leaders	Political	0		0	
	Com/cult	3	100%	3	100%
	Health/SW	3	38%	3	43%
	Education	2	25%	2	29%
	Total	8	40%	8	44%
Primary care	Civil Society	23	85%	7	44%
	Political	1	33%	0	
	Com/cult	4	80%	3	75%
	Health/SW	1	50%	1	50%
	Education	4	100%	4	100%
	Total	33	81%	15	52%
Public health	Civil Society	1	100%	0	
	Political	4	100%	4	100%
	GvEnviro	4	100%	4	100%
	Com/cult	1	100%	0	
	CIF	0		1	100%
	Education	15	94%	13	81%
	Total	25	93%	22	100%
Total		82	76%	52	67%
Early childhood development		Full collaboration		Formal interaction > 6 times a year	
		n	%**	n	%
Local leaders	Civil society	10	71%	6	43%
	Political	1	100%	0	
	Health/SW	8	80%	5	50%
	Education	4	80%	3	60%
	Total	23	77%	14	47%
Municipal leaders	Political	1	100%	1	100%
	GvEnviro	1	100%	0	
	Health/SW	8	80%	7	70%
	Education	8	62%	7	54%
	Total	18	72%	15	60%
Primary care	Civil Society	21	78%	6	35%
	Political	4	100%	4	100%
	Com/cult	1	100%	0	
	Health/SW	1	100%	1	100%
	Education	9	90%	6	60%
	Total	36	84%	17	53%
Public health	Civil society	3	100%	1	33%
	Political	2	100%	2	100%
	Com/cult	3	100%	3	100%
	Education	14	93%	11	79%
	Total	22	96%	17	77%
Total		99	83%	63	60%

Health services		Full collaboration		Formal interaction > 6 times a year	
		n	% **	n	%
Local leaders	Civil society	5	42%	4	33%
	GvEnviro	1	25%	0	
	Health/SW	7	70%	6	60%
	Education	1	100%	0	
	Total	14	52%	10	37%
Municipal leaders	Civil society	0		0	
	Political	1	100%	0	
	GvEnviro	3	100%	3	100%
	CIF	1	100%	1	100%
	Health/SW	7	78%	5	63%
	Education	4	50%	4	50%
	Total	16	67%	13	59%
Primary care	Civil society	18	90%	6	43%
	Political	11	100%	8	73%
	GvEnviro	2	100%	1	100%
	Com/Cult	0		1	100%
	Education	2	100%	0	
	Total	33	92%	16	59%
Public health	Civil society	9	82%	10	91%
	Political	12	92%	10	77%
	GvEnviro	1	100%	1	100%
	Education	2	100%	2	100%
	Total	24	89%	23	85%
Total		87	80%	62	65%
Gender		Full collaboration		Formal interaction > 6 times a year	
		n	%**	n	%
Local leaders	Civil society	7	58%	5	42%
	Political	3	100%	0	
	Com/cult	1	100%	0	
	Health/SW	1	50%	1	50%
	Education	1	100%	0	
	Total	13	68%	6	32%
Municipal leaders	Civil society	3	60%	5	100%
	Com/cult	2	100%	1	50%
	Health/SW	3	75%	3	75%
	Education	1	25%	1	25%
	Total	9	60%	10	67%
Primary care	Civil society	24	92%	8	47%
	Political	2	100%	2	100%
	CIF	1	100%	1	100%
	Education	1	100%	0	
	Security	2	67%	1	100%
	Total	30	91%	12	55%
Public health	Civil society	8	53%	12	80%
	Political	6	100%	6	100%
	Com/cult	2	67%	2	67%
	Total	16	67%	20	83%
Total		68	77%	48	66%

Culture		Full collaboration		Formal interaction > 6 times a year	
		n	%**	n	%
Local leaders	Civil society	2	40%	1	20%
	Political	1	25%	1	25%
	GvEnviro	1	100%	0	
	Com/cult	3	100%	3	100%
	Education	2	50%	1	25%
	Total	9	53%	6	35%
Municipal leaders	Civil society	1	100%	1	100%
	Political	0		0	
	Com/cult	1	100%	1	100%
	Health/SW	0		0	
	Education	2	25%	3	50%
	Total	4	25%	5	39%
Primary care	Civil society	17	100%	4	44%
	Political	5	71%	2	33%
	Com/cult	5	71%	1	25%
	CIF	1	100%	0	
	Health/SW	1	100%	0	
	Education	2	67%	0	
	Total	31	86%	7	30%
Public health	Civil society	0		0	
	Political	1	100%	0	
	Com/cult	9	82%	10	91%
	Health/SW	4	100%	4	100%
	Total	14	82%	14	82%
Total		58	76%	17	104%

Appendix F Details of the studies included in the realist review

Table 37 Interventions retained in the realist review and the health determinants they addressed

Abbreviated title	Health determinants addressed
HC access	
Insurance coverage	<ul style="list-style-type: none"> • Access to comprehensive primary care including preventive services • Low SES (unable to afford insurance or medical care and not eligible for the coverage by the US government for senior or those below 200% of the poverty line) • Healthy lifestyles comprehensive • Culture, values, and social norms • Social network of individual and of community organizations
Senior care	<ul style="list-style-type: none"> • Access to comprehensive primary and specialized care including preventive services • Seniors with Low SES especially as it relates to African American ethnicity and poor neighbourhoods • Health literacy of various chronic conditions affecting seniors • Healthy Lifestyles comprehensive • Culture, values, and social norms • Social network of organizations
NBCCEDP and BCN	<ul style="list-style-type: none"> • Access to breast and cervical cancer screening and care • Low SES especially as it relates to African American, native American ethnicity and poor neighbourhoods • Health literacy as it relates to breast and cervical cancer • Culture, values, and social norms • Social network of individual and of community organizations
SCCDCN	<ul style="list-style-type: none"> • Access to cancer screening and care • Low SES especially as it relates to African American ethnicity and poor neighbourhoods • Health literacy as it relates to cancer prevention and care • Culture, values, and social norms • Social network of individual and of community organizations
Community network breast health	<ul style="list-style-type: none"> • Access to breast cancer screening • Low SES especially as it relates to African American ethnicity and poor neighbourhoods • Health literacy as it relates to breast health • Culture, values, and social norms • Social network of individual and of community organizations

Abbreviated title	Health determinants addressed
REACH	
REACH California	<ul style="list-style-type: none"> • Access to breast and cervical cancer screening • Low SES especially as it relates to ethnicity (Cambodian and Laotian) and poor neighbourhoods • Health literacy as it relates to breast and cervical cancer • Culture, values, and social norms • Social network of individual and of community organizations
REACH Detroit	<ul style="list-style-type: none"> • Access to self-management support and preventive care as it relate to diabetes • Low SES especially as it relates to African American and Latinos ethnicity and poor neighbourhoods • Health literacy as it relates to diabetes and its risk factor, including stress and depression. • Healthy lifestyles related to diet and physical activities • Culture, values, and social norms • Social network of individual and of community organizations
REACH Nashville	<ul style="list-style-type: none"> • Access to care, including screening, self-management support and preventive care (with a focus on cardiovascular diseases and diabetes) • Low SES especially as it relates to African American ethnicity and poor neighbourhoods • Health literacy as it relates to hypertension, cholesterol and diabetes • Healthy lifestyles (including tobacco, diet and physical activities) • Culture, values, and social norms • Social network of individual and organizations
REACH Charlotte	<ul style="list-style-type: none"> • Access to care, including screening, self-management support and preventive care (with a focus on cardiovascular diseases and diabetes) • Low SES especially as it relates to African American ethnicity and poor neighbourhoods • Health literacy as it relates to hypertension, cholesterol and diabetes • Healthy lifestyles (tobacco, diet and physical activities) • Culture, values, and social norms • Social network of individual and organizations
REACH Bronx	<ul style="list-style-type: none"> • Access to care and better quality care through a policy and advocacy agenda • Low SES especially as it relates to African American and Latinos ethnicity and poor neighbourhoods • Health literacy as it relates to rights and discrimination in the health system • Culture, values, and social norms • Social network of organizations

Abbreviated title	Health determinants addressed
MICY	
PNG	<ul style="list-style-type: none"> • Access maternal and infant care of better quality • Low SES especially as it relates to women being in lower social position, poorer, less educated and more illiterate than men, but also in relation to widespread issues in those health determinants for both men and women • Health literacy as it relates to maternal and child health and appropriate health services seeking • Culture, values, and social norms including perception of health care services, and community empowerment • Social network of individual and organizations
Assistant bf	<ul style="list-style-type: none"> • Health literacy as it relates to breastfeeding • Low SES neighbourhoods • Social network of individual and organizations
Pregnant teen	<ul style="list-style-type: none"> • Access to prenatal care, mental health, and substance abuse counselling including through provision of transportation • Health literacy as it relates to healthcare services available and pregnancy • Early childhood development • Low SES and ethnic neighbourhoods • Social network of individual and organizations
Mobile safety	<ul style="list-style-type: none"> • Health literacy as it relates to injuries • Low SES neighbourhoods • Build environment as it relates to injuries • Social network of individual and organizations
NGO Pakistan	<ul style="list-style-type: none"> • Access to maternal and child care (primary focus), as well as comprehensive primary care • Low SES • Social network of organizations
NY ACT	<ul style="list-style-type: none"> • Social network of youth, parents, and various organizations • Employment • Health literacy of parents, youth, and stakeholders in various organization on youth health • Culture, values and social norms (youth empowerment and strength-based approach) • Healthy lifestyles (healthy recreational activities, sexual health, mental health, alcohol and substance use)
Iron-folic supplement	<ul style="list-style-type: none"> • Healthy lifestyles and health literacy (iron and folic acid supplementations for pregnancy and long-term need) • Low SES • Social network of individuals and organizations
Integration for mothers	<ul style="list-style-type: none"> • Access to nutrition services, primary care for mother and children, and to mental health and addiction care • Health literacy in general and especially as it relates to maternal and child health as well as parenting • Early childhood development • Low SES and ethnic neighbourhoods, individual SES (education and job training) • Social network of individuals and organizations
HP Brazil	<ul style="list-style-type: none"> • Access to primary care, (with quality improvement programs) including childhood immunization, dental care • Health literacy, health promotion, and lifestyles (tobacco, physical activity, healthy eating, hygiene, breastfeeding, alcohol and drugs, traffic accidents prevention, prevention of violence, among others) • Early childhood development and education • Low SES families and areas, including housing, income supplement, education and access to food for the poorest • Social network of individuals and organizations

Abbreviated title	Health determinants addressed
Lifestyles HC	
Rx for Health overall	<ul style="list-style-type: none"> • Access to preventive care • Lifestyles (tobacco, physical activity, diet, alcohol consumption) • Social network of individuals and organizations
Rx for health linking	<ul style="list-style-type: none"> • Access to preventive care • Lifestyles (tobacco, physical activity, diet, alcohol consumption) • Social network of individuals and organizations
Rx for health assistant	<ul style="list-style-type: none"> • Access to preventive care • Lifestyles (tobacco, physical activity, diet, alcohol consumption) • Low SES, high proportion of Hispanic • Social network of organizations
Rx for health CHERL	<ul style="list-style-type: none"> • Access to preventive care • Lifestyles (tobacco, physical activity, diet, alcohol consumption) • Social network of individuals and organizations
Rx for health eLink	<ul style="list-style-type: none"> • Access to preventive care • Health literacy as it relates to lifestyles • Lifestyles (tobacco, physical activity, diet, alcohol consumption) • Low SES, and ethnic communities • Social network of individuals and organizations
Pharmacist-led	<ul style="list-style-type: none"> • Access to preventive care (hypertension screening, monitoring and referrals) • Low SES, and ethnic communities • Health literacy as it relates to medication usage • Social network of individuals and organizations
Weight	<ul style="list-style-type: none"> • Lifestyles (diet, physical activity) • Some Low SES • Social network of individuals and organizations

Abbreviated title	Health determinants addressed
Lifestyles CA	
Child Obesity Houston	<ul style="list-style-type: none"> • Health literacy and lifestyles (diet, physical activity) • Low SES neighbourhood • Social network of individuals and organizations
Child Obesity Australia	<ul style="list-style-type: none"> • Health literacy and lifestyles (diet, physical activity, and tooth brushing) • Social network of individuals and organizations
Smoking	<ul style="list-style-type: none"> • Access to primary care that includes better quality smoking cessation interventions (brief and longer term counselling interventions as well as access to nicotine replacement therapy) • Health literacy and lifestyle related to smoking • Low SES neighbourhood • Social network of organizations
BP	<ul style="list-style-type: none"> • Access to care and quality of care • Health literacy and healthy lifestyles (smoking, diet, physical activity and adherence to medication) • Low SES neighbourhood • Social network of organizations
Stroke	<ul style="list-style-type: none"> • Access to screening • Health literacy and healthy lifestyles (smoking, diet, physical activities, medication and stroke) • Low SES neighbourhood • Social network of organizations
Wellness AA	<ul style="list-style-type: none"> • Access to care including preventive care • Health literacy and healthy lifestyles (smoking, diet, physical activities, medication) • Low SES and ethnicity • Social network of individuals and organizations
Healthy Hearts	<ul style="list-style-type: none"> • Access to care including preventive care • Health literacy and healthy lifestyles (tobacco, alcohol, diet, physical activities, and cardiovascular diseases) • Low SES • Social network of individuals and organizations
PA Brazil	<ul style="list-style-type: none"> • Healthy lifestyles (physical activities) • Social network of individuals and organizations
WellingTONNE	<ul style="list-style-type: none"> • Health literacy and healthy lifestyles (diet, physical activity, cardiovascular diseases, and diabetes) • Social network of individuals and organizations
PA senior	<ul style="list-style-type: none"> • Healthy lifestyles (physical activities) • Low SES seniors • Social network of individuals and organizations
PA underserved	<ul style="list-style-type: none"> • Healthy lifestyles (physical activities) • Low SES and ethnic neighbourhood • Social network of individuals and organizations
Native Hawaiian	<ul style="list-style-type: none"> • Lifestyles (diet, physical activity) • Health literacy as it relates to lifestyles and self-management of health issues • Social network of individuals and organizations
Isfahan	<ul style="list-style-type: none"> • Access to screening, primary care and specialized care • Lifestyles (tobacco, diet, physical activity) • Health literacy as it relates to lifestyles and self-management of health issues • Social network of individuals and organizations
NCPP (North Carolina Prevention Partners)	<ul style="list-style-type: none"> • Access to preventive care, • Health literacy and lifestyle (physical activity, nutrition and tobacco) through a settings approach with toolkits for policy in medical offices, schools and workplaces • Low SES neighbourhoods • Social network of organizations
KP photovoice	<ul style="list-style-type: none"> • Lifestyles (diet, physical activity) • Public policies, infrastructures and the built environment as it relate to lifestyle and safety • Low SES neighbourhoods, economic conditions • Social network of individuals and organizations

Abbreviated title	Health determinants addressed
Lifestyles HBE	
ALBD	<ul style="list-style-type: none"> • Lifestyle (physical activity mostly, some also nutrition) • Health literacy • Built environment as it relates to physical activities and safety • Low SES neighbourhoods (except Nashville) • Social network of individuals and organizations <p>Note: only ALBD articles that address other health determinants than the ones mentioned above are listed below.</p>
Shape up and ALBD Somerville	<ul style="list-style-type: none"> • Lifestyles included healthy eating
ALBD Portland	<ul style="list-style-type: none"> • Lifestyles also included healthy eating
ALBD Buffalo	<ul style="list-style-type: none"> • Lifestyles also included healthy eating
ALBD Wyoming	<ul style="list-style-type: none"> • Access to preventive healthcare • Low SES neighbourhoods with high proportion of seniors
ALBD Jackson	<ul style="list-style-type: none"> • Low SES city

Table 38 Selected articles’ contexts, mechanisms, and outcomes for large initiatives with organizations experienced in public health and/or intersectoral partnership

Project	Context	Mechanisms	Outcomes
Genesis Health Plan	<ul style="list-style-type: none">• Community with a long history of community-based public health projects funded and supported by large organizations with community health expertise, such as the W.K. Kellogg Foundation, and then by the CDC, as part of community, health, government, and university research partnerships, which helped raise awareness of health inequities and served as a foundation to create a community-generated solution	<ul style="list-style-type: none">• Coalition’s recognition of both the need for local data to inform policy, and for intersectoral participation in the survey design, while respecting principles of mutual respect, shared decision making, and involvement of the various partners (including the local state primary care association) in the design, methods, analysis, and dissemination, led to a survey revealing local issues with health status and access to care. This survey was able to continuously inform needs and issues as the situation evolved, to help reach the uninsured, supplemented by focus group data.• Seeds funds from the local public health department to a community coalition, supplemented by another local foundation, helped to form a community organization (Genesis Health Plan - GHP) designed to provide primary and other healthcare to uninsured or low-income people through a network of physicians, clinics and hospitals• Community coalition board chaired by the state Senator, with directors being instrumental in building partnerships• County Health Officer, with a vision of covering all the county’s uninsured, involved the County Board Commissioners in developing initial and continuing funding structure• Local foundation linking to other foundations and supporting the creation of a business plan• Primary care organization involved in shaping the data collection, advocacy, and creation of a model of care delivery• Other sectors included: the media; academics; elected officials; labour unions; churches; community leaders; citizens; and community organizations and foundations. These sectors participated in the advocacy efforts to fund the GHP and in recruiting members.	<ul style="list-style-type: none">• 1 year after the seed funding started, several healthcare organization were on board• GHP was able to raise funds from other foundations and eventually from the state (through increased property tax), to increase coverage from 6,000 members to nearly all uninsured with an income up to a certain threshold• Focus group revealed that new members of the GHP reported improved health status by stabilizing a chronic condition of diagnosis and treating a condition that had not received medical attention in the past• Self-reported survey results 6 months post-enrolment showed increased physical activity, increased consumption of fruits and vegetables, decreased smoking, and some specific health condition improvement (e.g., diabetes, pain)• Community reported a positive impact on the local economy
NBCCEDP and BCN	<ul style="list-style-type: none">• Originally funded by the CDC Breast and Cervical Cancer Early Detection program, which originally only covered the cost of screening• In South Carolina (SC), the BCN builds on the work of the local division of the American Cancer Society and of the Bureau of Community Health and Chronic Disease Prevention	<ul style="list-style-type: none">• In South Carolina, the BCN project has been managed by the Department of Health and Environmental Control, but relied largely on community organizations to recruit and assist underserved women in accessing screening• The main BCN primary care involvement is that of the federally funded primary care centers in the South Carolina Primary Health Care Association, as well as other free clinics and university sponsored clinics• At the national level, the program is described as follows: “To reach underserved women, the NBCCEDP Conceptual Framework supports an array of strategies, including program management, screening and diagnostic services, data management, quality assurance and quality improvement, evaluation, partnerships, professional development, and recruitment. Providers in the program work collaboratively to provide breast and cervical cancer screening, diagnostic evaluation, and treatment referrals (where appropriate). The program's continued success depends in large part on the complementary efforts of a	<ul style="list-style-type: none">• The BCN evolved over time to acquire funding from variety of other sources, including newer national funding programs and state funding to cover the cost of care following screening, and eventually, provision of extended eligibility to Medicaid coverage for those diagnosed with particular cancers• The BCN now contracts healthcare providers, including those in private practice, hospitals, and federally funded primary care centres as well as surgery, laboratory, and radiology services, for screening and diagnostic follow-up of women who meet the eligibility criteria in terms of lack of coverage and low income• BCN led to the creation of adjunct projects in relation to cancer prevention and education, with many community organizations involved in facilitating access and delivery of the range of programs in the

Project	Context	Mechanisms	Outcomes
	of the SC Department of Health and Environmental Control	variety of national partner organizations, as well as on state and community partners.”	<p>underserved communities</p> <ul style="list-style-type: none"> • BCN was also instrumental in helping to secure funds to expand screening and treatment for women who have no healthcare coverage and low income, even if they are not screened through BCN activities • Between 2007 and 2012, the BCN has provided more than 36,000 women with breast and cervical cancer screening and follow-up. (National Breast and Cervical Cancer Early Detection Program, 2013) • “Since 1991, NBCCEDP-funded programs have served more than 4.4 million women, provided more than 11 million breast and cervical cancer screening examinations, and diagnosed more than 59,457 breast cancers, 3,367 invasive cervical cancers, and 158,722 premalignant cervical lesions, of which 40% were high-grade.” (Division of Cancer Prevention and Control, 2013) • The CDC website offers several publications on achievement from the local BCCEDP, as well as progress in screening and access to care for vulnerable women.
CNP and SCCDCN	<ul style="list-style-type: none"> • The Community Network Program (CNP; 2005-2010) builds on the prior Special Population Network for Cancer Awareness, Research, and Training (2000-2005). Both were funded by the US National Cancer Institute Center to Reduce Cancer Health Disparities (CRCHD). • Awareness of disparities: This is illustrated in an editorial by one of the SCCDN leaders: “Although we have made considerable progress in the past year, South Carolinians continue to experience some of the highest cancer incidence rates in the world. Relative to other populations, our mortality rates are even more striking.” (Hebert et 	<ul style="list-style-type: none"> • The CNP funded the SCCDN as one of the 25 communities’ networks • The CNP included objectives related to community and academic capacity building, and the CNP website list several initiatives that aimed at doing that (Center to Reduce Cancer Health Disparities Community Network Program (CNP)). • Braun et al. (2011) describe how the CNP work followed several community-based participatory research best practices, such as “recognizing the community as a unit of identity, assessing and building on community strengths, facilitating co-learning, embracing iterative processes in developing research and capacity, and achieving a balance between data generation and intervention” (Braun et al., 2011). • Several qualitative research and pilot projects are mentioned as part of monitoring and implementing changes in the health system and the community to influence cancer disparities in the SCCDN website, also explaining the principle of close collaboration between the academic community and the community organizations involved in the SCCDN, including churches, ethnic group organizations, professional organizations, cancer organizations (e.g., the Cancer Society), media, and business organizations. • The South Carolina Department of Health and Environmental Control has been a key partner in the work of the Cancer Alliance and the SCCDNC, especially in relation to providing information from a cancer registry and linking with academicians to analyze the data on cancer disparities, as well as being available to clinicians, professionals, or the lay public wishing to query cancer related facts (Hebert et al., 2006) • There are several subcommittees of the network, illustrating the spread of their activities: evaluation, communication, education, and policy subcommittees. There is also a project advisory team, which is composed of community leaders and includes a Preventive 	<ul style="list-style-type: none"> • Most CNP (75%) thought they would continue functioning after the end of the funding, despite mentioning barriers to sustainability (Braun et al., 2011) • Other types of outcomes found from the SCCDN website include that the network was able to receive funding from the next call for proposals from the Center to Reduce Cancer Health Disparities, and to obtain another large source of funding from the US Centre for Disease Control • The SCCDN was successful in recruiting junior researchers and building capacity in the community and in academia to conduct cancer disparity research • The University of SC renewed and continued its commitment to the network and affiliated programs • Power and resources in the CNP were frequently distributed unequally between the community and the researchers, staying mostly in the direct control of the researchers (Braun et al., 2011) • The website of the South Carolina Cancer Disparity Community Network is focused on describing projects in the second phase of funding (from 2010 onward), but includes several broken links, including the publication link • The website of the Center to Reduce Cancer Health Disparities displays little outcome or results of the 25 community network programs, despite stating that the program of research is completed. This is in contrast to the large number of outcomes reported from other initiatives in this section,

Project	Context	Mechanisms	Outcomes
	<p>al., 2006)</p> <ul style="list-style-type: none"> In SC the CNP was predated by a Cancer Alliance, an organization of about 900 members, including more than 140 institutional members 	<p>Medicine Specialist. The three main partners are: the Woman’s Auxiliary, the SC Primary Health Care Association, and the Carolina Community-Based Health Support Network.</p> <ul style="list-style-type: none"> Other public health involvement includes that most researchers are in the field of public health and epidemiology from academic institutions in the area, and the National Cancer Institute and its prevention/control infrastructure supports the work of the network The South Carolina Primary Care Association provides a link to the National Health Disparities Collaborative as well as access to 128 care delivery sites across the states that have agreed to provide access to those who are facing cancer disparity issues and lack of access to care. 	<p>such as the Reach, Rx for Health, and ALBD initiatives(Center to Reduce Cancer Health Disparities Community Network Program (CNP)).</p>
REACH California	<ul style="list-style-type: none"> Funded by the CDC REACH 2010 and the California Endowment There was awareness of low rates of cervical and breast cancer screening in Asian American and Pacific Islander groups in California Multi-ethnic community groups already had a collaborative relationship with a primary care medical provider who offered cancer screening programs and other women’s health initiatives 	<ul style="list-style-type: none"> The projects are described as following a participatory action research and community collaboration model Health navigators (HN) in the cultural communities received training from health professionals and organized some extra training by themselves, above what was planned in the project. HN provided information to educate the community (both one-on-one and through community training sessions), supporting women in getting screened and encouraging re-screening, as well as performing policy advocacy activities to decrease the institutional barriers to screening. A medical centre providing primary care services was involved in the organization and implementation i.e. some physicians received training, some gave training, and the centre provided the space to host the community organization that led the partnership. Local public health professionals (other than those involved in providing technical support from the CDC) were involved in providing the training, supporting the partnership, and researching the impact of the project. Various community-based cultural organizations were involved, alongside organizations from many sectors who gave and hosted trainings from lawyers, medical insurance organizations, media, and religious groups. These community organizations were responsible for hiring and managing the HN, and the HN were using many other community organizations to do the outreach and health education, and to obtain training. Ethnic media and businesses were also involved in recruitment of participants and promotion of cancer screening. 	<ul style="list-style-type: none"> This REACH initiative targeted breast and cervical cancer screening through educating community members to become community health navigators, with a responsibility to educate and support women in being screened, as well as educating providers and other community stakeholders on issues of access faced by women of the various ethnic communities. It also includes a policy advocacy role (Ngoc Nguyen et al., 2008), and results were reported as follows: "During a 4-year time period, the CHNs educated 24,077 community members (22,756 women and 1,321 men) in workshop presentations or one-on-one sessions. The CHNs personally accompanied 1,823 women through the healthcare system, helping 686 to receive breast exams, 509 to receive cervical exams, and 628 to receive both types of exams. Of these 1,823 women, nearly one third had re-screening exams. The CHNs also organized mobile units to provide a total of 573 mammograms and 45 Pap smears to community women." (Ngoc Nguyen et al., 2008) p.359. A further result of interest was in relation to the community health navigators, who started organizing their own continuing education training sessions, which demonstrates the community capacity building and empowerment resulting from this initiative (Ngoc Nguyen et al., 2008).
REACH Detroit	<ul style="list-style-type: none"> Awareness of African Americans and Latinos experiencing a much larger burden of diseases and mortality from diabetes than Caucasian Americans. In addition, awareness that diabetes education and self-management have shown 	<ul style="list-style-type: none"> This was a community-based intervention, adapted from a previous intervention program for Native Americans. The adaptation of the format, content, and method of delivery was guided by a steering committee composed of community health leaders, clinical providers, researchers, REACH Detroit staff, and focus groups from community residents. It was based on theory and evidence, as explained by Two Feathers et al. (2005): “Current recommendations from the American Diabetes Association and the CDC guided dietary and physical activity content of the intervention. Social cognitive theory constructs were combined with selected cultural symbols and themes, cultural patterns and concepts, values, norms, and relationships to promote healthy eating, exercise, and stress-reducing 	<ul style="list-style-type: none"> The community-based diabetes lifestyle intervention delivered by trained community residents to 151 African Americans and Latinos with type 2 diabetes resulted in significant diabetes-related changes in knowledge and behaviour, and improved glycemic control. Outcomes are further detailed by the report called ‘REACHing Across the Divide: Finding Solutions to Health Disparities from the Centers for Disease Control and Prevention’ (2007): “Participants in a project of the REACH Detroit Partnership demonstrated significant improvements. The proportion of participants with diabetes who had uncontrolled blood sugar

Project	Context	Mechanisms	Outcomes
	promising results, but very few African Americans or Latinos have been included in those studies, and even fewer studies have looked at culturally appropriate, community health worker-led interventions that might be more acceptable and cost-effective than interventions by healthcare professionals.	<p>activities.” p.1553 The intervention was delivered through five monthly sessions of two hours each, covering topics pertinent to diabetes. The sessions covered the recommendation from the American Diabetes Association and the CDC guidelines. Social cognitive theory and cultural context informed the curricula.</p> <ul style="list-style-type: none"> The participants were recruited in collaboration with two hospitals, a specialty clinic, and one community health center that also provided social services. Primary care practitioners were instrumental in recruitment, were part of the steering committee, and contributed to the adaptation of the curriculum. A number of physicians are co-authors of the article, but it is not disclosed whether they are primary care practitioners. Public health participation, other than through the CDC funding and support, includes the involvement of public health staff and researchers in the design and conduct of the study, in the adaptation of the intervention, and in training the community health workers. Community organizations served as recruitment sites, as members of the steering committee, and as advisors for the curricula and its cultural adaptation, while community health leaders served in assisting the whole project. 	<p>levels decreased by 17% (from 71% at the start of the program to 54% after 6 months) as measured by A1c values greater than 7. In addition, the proportion of persons with high blood pressure decreased by nearly 12% (from 56% to 44%).” (CDC, 2007) p.7</p> <ul style="list-style-type: none"> On average, participants’ knowledge of healthy eating and exercise, in relation to blood sugar control, increased significantly from pre-intervention to post-intervention surveys, although with some differences between African Americans and Latinos. On average, there were significant changes in self-reported dietary behaviours, such as increased vegetable consumption, pouring fat off meat after cooking, eating whole grain bread, and a greater number of days following a healthy eating plan. There was a statistically significant decrease in consumption of regular soda and fruit-flavoured beverages in all subgroups, but not in consumption of fried or sweet foods. (Two Feathers et al, 2005). There were no changes in levels of physical activity, diabetes-specific quality of life, cholesterol, blood pressure, or weight. Predictors of outcomes in multivariate logistics and linear regression models include ethnicity for some behaviours and knowledge, and dietary knowledge was a predictor of increased vegetable consumption. Being a male participant and increased self-monitoring of blood glucose were statistically significantly associated with a decrease in A1C, but neither improved dietary knowledge nor following a healthy eating plan were associated with decreased A1c. (Two Feathers et al, 2005)
REACH Nashville	<ul style="list-style-type: none"> Awareness of higher rates of diabetes and cardiovascular complications for the local African American population, as compared to local Caucasians and even African Americans in other part of the US. Also, awareness of issues of violence, crime, poor housing, low literacy, and lack of educational opportunities or opportunities in general. 	<ul style="list-style-type: none"> The initiative was spearheaded by: the Metropolitan Public Health Department; the Meharry Medical College; the Vanderbilt Diabetes Center; and the Matthew Walker Comprehensive Health Center. It also evolved to involve a local university, the main state hospital, the state health department, the Nashville branch of the National Association for the Advancement of Colored People (NAACP), ministers and faith-based organizations, many grassroots organizations, and concerned citizens. Community members were recruited to provide leadership and oversight of the action plan. They formed a decision-making committee, with four strategy teams reporting to it and working on the following topics: tobacco, obesity/wellness, CVD and diabetes screening, and access to healthcare. Each group met weekly for 10 weeks to develop the plan based on root causes, scientific approaches, and ways to monitor and evaluate the coalition efforts. Furthermore, each plan included promotion of community readiness to change, the development of behavioural support systems, and the reduction of environmental barriers to healthy lifestyles and medical care. The tobacco strategy was described by Larson et al. (2010) as a five-year-long intervention including: “(a) community level strategies to increase awareness and knowledge about the effects of smoking; (b) individual level strategies to enlist and train 	<ul style="list-style-type: none"> Larson et al. (2010) describe that REACH Nashville led to a statistically significant, linear, decreasing trend in everyday smoking as well as an increased number of those who never smoked in the study area compared with those across the state, based on the REACH CDC surveys over the study period. This is illustrated by Larson et al.’s finding that “In 2004, which was year 4 of our initiative, the rate of daily smoking among residents in our target area had dropped to be significantly lower than both white and African American Tennesseans. Men were approximately 50% less likely to smoke in year 4 compared to year one.” However, the trend of an increased number of former smokers found in the state overall was not found in the study area. The conclusion indicates that the multi-level intervention seemed effective in helping those who had never smoked to continue to not smoke, and in helping smokers decrease their frequency of smoking, more so than in areas where there was no intervention at all. It also indicated that it was not necessarily enough to help those in the target area to quit as often as those in other areas of Tennessee, who had higher SES and were already smoking less at the start of the study.

Project	Context	Mechanisms	Outcomes
		community members to become advocates, lead smoking cessation classes and encourage current smokers in quit attempts; and (c) strategies directed to changing policy through education and partnership building.” p.311.	<ul style="list-style-type: none"> • REACH Nashville also targeted other cardiovascular risk factors and demonstrated increases in screening and detection of those affected by those risk factors, such as hypertension, diabetes, and high cholesterol (Patel et al., 2010). The efforts to support those with diabetes in self-management (by increased support for physicians care and advice, by community organizations providing education sessions, and by the community health centre organizing screening/self management events) seemed to have resulted in improved quality of care, as indicated by (Greene et al., 2006): “there is some indication that the program’s presence in the health center may have affected health outcomes. Hemoglobin A1c is a measure of blood glucose control and an indication of the risk of developing diabetes complications. Poor control is evidenced at Hb A1c > 8.0%, whereas excellent control could be considered Hb A1c < 6.5%. Clinic records of the diabetic population at the program’s inception indicated HbA1c values to be an average of 9.1% ($n = 669$) compared to 7.9% ($n = 768$) 12 months later. At program inception, clinic records indicated that 4.3% of the diabetic population had received foot examinations compared to 25.7% at 12 months. Similarly, at 12 months, 2.3% of the diabetic population had received retinal examinations and 4% had received dental examinations compared to 0% at the program’s inception.” p.164-5. • Despite admission by the REACH 2010 Nashville team that some of the community strategies did not end up working as planned, they also recognized that they implemented other strategies that did work, but were not part of the initial planning, such as: “changes in infrastructure such as expanded clinic hours for the working poor; changes in personal health behaviors including eating and physical activity; early identification of CVD and diabetes; and expanded efforts to decrease smoking. Other products include a diabetes support group to help affected individuals manage their disease better (Greene et al., 2006); a manual for community health screening (Schlundt et al., 2006), a community guide to healthcare resources, and a community developed cookbook; service-learning initiatives engaging college students; a faith and health course at a local seminary (Pichert et al., 2006); and many others.” McClellan and Schlundt (2006), p.109
REACH Charlotte	<ul style="list-style-type: none"> • Awareness of increased death rates from heart diseases and stroke in African American people living in the area, which has 	<ul style="list-style-type: none"> • The Carolinas Health Care System coordinated the coalition efforts, and created a community primary care center with a mandate to address broader health issues in the community. This project included an initial local health needs assessment. The healthcare system used the contacts and experience of the local health department and other community providers to ensure community involvement. An advisory committee was 	<ul style="list-style-type: none"> • The Behavioral Risk Factor Surveillance System survey was used to compare African Americans from the community with results from the statewide survey. As explained by Plescia, Herrick and Chavis (2008): “All 3 health behaviors improved in the study population. Improvements were statistically significant for physical activity ($P=.02$) and smoking

Project	Context	Mechanisms	Outcomes
	a very high proportion of African American residents, and a high level of poverty	<p>created and decisions were made by consensus, with an external consultant mediating conflicts and assisting in improving collaboration among coalition members. Over time, the coalition grew, despite turn-over in membership, and members of grassroots community groups became very engaged, partnering with neighbourhood associations.</p> <ul style="list-style-type: none"> One of the main projects of the coalition was a lay health advisor (LHA) program. The LHAs received 80 hours of training (unpaid) and then were contracted for a maximum of 10h/week at 12\$/h, for 7 years, with monthly meetings including structured discussions of best practice for community change and promotion of the role of LHAs as change agents. In total, 26 LHAs were trained, with an active cohort of 15 to 18 during the project. They were supervised by a full-time coordinator and supported by a registered dietician, a registered nurse, a smoking cessation health educator, and a fitness specialist. They provided training and technical assistance in helping to develop programs in the community such as exercise classes, walking groups, smoking cessation classes, and religion-based nutrition programs. 	<p>(P=.03) among women and for physical activity among middle-aged adults (P=.01). Lower baseline physical activity rates improved to levels comparable to those of African Americans statewide (2001, P<.001; 2005, P=.38), and comparable fruit and vegetable consumption rates became significantly higher (2001, P=.68; 2005, P<.001)." (Plescia, Herrick, & Chavis, 2008b) p.1678.</p> <ul style="list-style-type: none"> Another outcome of the projects relates to the evolution of the role of the lay health workers: "The evidence of increased community capacity has led the project to expand the role of LHAs and shift the emphasis of the project from individual behavior change to focus more on institutions and policies. Specific attention has been focused on developing LHA interventions in the faith community and advocacy activities at the local and state level." (Plescia et al., 2008a), p. 439.
REACH Bronx	<ul style="list-style-type: none"> Funded by REACH 2010 and the New York State Department of Health's Office of Minority Health, as well as several local funders Awareness of health disparities, with African Americans and Latinos experiencing a higher disease burden in relation to diabetes and obesity 	<ul style="list-style-type: none"> A coalition of nearly 40 community groups is involved in community-based research and interventions to address the high rates of diabetes and cardiovascular diseases in the South Bronx, through methods including social services, housing development corporations, after school programs, faith based institutions, universities and colleges, healthcare providers' organizations, public health organizations, and legal and civil right institutions The initial task of the coalition included a comprehensive review of health disparities, which was presented to community groups. Focus groups enabled the collection and analysis of the root causes of those disparities from a community perspective. Community leaders reviewed the focus group findings to ensure correct interpretation and understanding. It led to the creation of a very articulate advocacy plan covering seven priorities areas: "universal health insurance, an end to segregation in health facilities based on insurance status, accountability for state uncompensated care funds, culturally competent care for all, greater health workforce diversity, an expansion of public health education, and environmental justice". The result of the investigation and the priority areas were presented to the state legislatures as well as the various institutions involved in the provision of what was deemed discriminatory care. The article by Calman (2005) outlines in detail the insight that was gained, including that existing legislations were not enacted to protect minority people from discriminatory treatment, that media messages about on-going disparities contributed to distrust from African Americans toward the healthcare system, that the plan to increase the number of trained African Americans in healthcare professions had not reached its goals, and so on. The local public health department was an important funder, a participant in the coalition, and was of major assistance with the original health disparity assessment. Academic public health professionals were also part of the coalition. The Institute for Urban Family Health coordinated the coalition and was headed by a 	<ul style="list-style-type: none"> As explained by Calman (2005), the large coalition of organizations successfully increased knowledge related to root causes of disparities in health, including issues faced by healthcare providers, and disseminated that knowledge to the scientific community, community members themselves, decision makers, leaders, and politicians One outcome important in the sustainability of the initiative was the success of the coalition in obtaining complementary funding from several other sources, including the New York State Department of Health and many local funders Other outcomes included: wide engagement of faith based organizations and churches, including a program called Fine, Fit, and Fabulous, healthy messages in sermons, and city school and local restaurant making changes to their menus.

Project	Context	Mechanisms	Outcomes
		family physician, who wrote the main published article describing the REACH Bronx (Calman, 2005). The coalition also reached out to healthcare organizations.	
PNG	<ul style="list-style-type: none"> The project was initiated partly in response to a situational analysis done in 1995 by an international consultant in collaboration with senior government officials, which revealed serious issues with women's and children's health. There was high maternal and infant mortality and a high incidence of malnutrition, as well as increasing prevalence of many diseases. The project was funded by international health funds from Australia 	<ul style="list-style-type: none"> The project original design was based on a small number of successful initiatives, with centralized planning and no evidence of consultation with those who would directly be delivering or receiving the services Mid-way through the project, after realization of the issues with the original design, objectives, and outputs, it was redesigned and re-scoped. Originally, only the national level in primary care planning was involved in the program planning. However, with its redesign, a lot more local and district level consultation and support occurred, resulting in better local implementation and primary care ownership. In relation to those with public health training or in public health roles, originally there was only one health planner at the national level that was involved. With the project re-scoped, many more were involved, since community health program implementers at the provincial and district levels were identified as the target audiences for the re-scoped intervention to increase awareness and capacity for the improvement of community-level maternal and child health services. This was achieved in part through the development of a Guide and Tool Kit, and the training of more than 1100 individuals in its use. The program was integrated with another intervention for the village health volunteers in the "healthy village" settings. Capacity building for the managers of the village health volunteers (VHV) included program management training and train-the-trainer approaches, plus other training materials and resources. The partnership between the village health volunteer program and the Department of Health increased with the regular technical advisory meetings. Furthermore, a system to monitor the VHV activities from community to national level was developed. The technical advisors from Australia were involved throughout the project, and the number of technical advisors even increased during the project, as there was a realization that the staff in the intervention country needed a lot more support in capacity building to monitor, manage, and support the project locally. Some advisors had health promotion and community health expertise, as well as some project management skills. It is unsure, but likely, that the private contractors also had some public health background. 	<ul style="list-style-type: none"> The general outcomes reported in the article and ascertained through review of evaluation documents include: increased community mobilization; several projects at the community level; increased use of health services; increased technical capacity; several rounds of evaluation and re-adjustment; and increased satisfaction with care and perception of care. There remain worries about the capacity of the intervention country to support the program without the donor aid funding and technical advisors' support, as there remains a recognition of a lack of human resources to sustain the project, and likely shifts in priorities and approaches away from women's and children's health and from village health volunteers. The evaluation documents reviewed by the authors noted the lack of outcome data, difficulties in the national statistics system, with lack of local statistics and no baseline data.
NY ACT	<ul style="list-style-type: none"> Initiated by public health professionals at the state level and funded by the state department of health 	<ul style="list-style-type: none"> Public health staff in the field of youth health sought to engage other organizations in changing practice, based on evidence in relation to using a strength-based approach, and in mobilizing the community at large to support youth health, education, and engagement in civic and other societal structures The leaders sought help and support from academic and state-level expert organizations, as well as advice from youth-involved community organizations and health professionals to build a coherent framework and request for proposals to fund community organizations with this asset-based approach. They offered support to the community organizations to help them build programs that followed that approach. 	<ul style="list-style-type: none"> The main outcome of the project was the inclusion of youth in several community institutions and partnerships, providing them opportunities for learning and positive involvement in society, and improving the partnerships' projects based on youth inputs. Examples of community development partnerships (CDP) based on a youth asset model include some of the following, which were only some highlights of the 2000-2005 phase: "CDP A formed a coalition of youth from partnership organizations. Worked with the Borough President's Office to organize youth "speak outs" to inform violence prevention strategies. Through this CDP's

Project	Context	Mechanisms	Outcomes
		<ul style="list-style-type: none"> • The initiative paid particular attention to building: a common vision and language for all those involved; trusting relationships; and involvement of the partners from the beginning, to facilitate partnerships and synergise the activities. From the beginning, special dedicated efforts have been invested in ensuring good communication between the stakeholders. • The model to roll out the initiative included principles of shared leaderships and building of common goals • The initiative benefited from sustained high-level commitment for more than 8 years at the time the main articles describing this initiative were published • They established a network of organizations from various sectors that saw the relevance of the approach, and were interested and able to exchange lessons learned and challenges in changing the way they were interacting with youth • The organizations involved are numerous, and included organizations from: the justice system; the child protection system; private partners such as the nurses' association; the United Way; and many others, including mental health and addiction service providers' networks. Their role in the project was to change the way they operated to promote a strength-based approach to youth development, within their organizations and in partnerships with other. • The project logic model details what the New York Youth Development team do and who they reach: they assess; plan; seek input; meet; train; develop products and tools; create local partnerships; fund programs; provide technical assistance; and promote youth development. They reach: partners; service providers; decision makers; youth workers; youth; advocates; and citizens. 	<p>efforts, a new charter High School for Youth & Community Development was established.</p> <p>CDP B developed a broad CDP, bridging sectors and traditional interagency barriers. Composed of four distinct, but interrelated rural committees, this CDP addressed each community's specific needs. Extensive community education efforts increased engagement, youth employment opportunities, mentoring, and after-school programming. CDP C collaborated with the school district to establish an alternative middle school with more than 90% retention rate for students returning to the traditional school. Well-established links provide ongoing opportunities for young people.</p> <p>CDP D formed seven youth councils to create leadership opportunities, resulting in the creation, funding, and operation of a rural youth center. Significant organizational change was achieved when the County Probation Department, a CDP member, began to utilize a strength-based approach to probation plans, addressing the individual assets and needs of each youth.</p> <p>CDP E completed a comprehensive Risk and Resource Assessment, including two teen surveys in the 12 school districts that incorporated the principles of America's Promise.¹⁹ Through a mini grant fund, summer activities developed and led by young people provided an opportunity for youth philanthropy.</p> <p>Youth adult partnerships executed the grant application and selection process.</p> <p>CDP F Provided training and support to county government programs, increasing youth involvement in planning and decision making for youth programs and services. ...Mini grants were provided to community-based agencies to incorporate youth opportunities." (Riser et al., 2006) p.S44.</p> <ul style="list-style-type: none"> • An independent evaluation of ACT, based on the logic model of the initiative, concluded that ACT did reach their goals of: creating a shared vision and common language; undertaking strategic collaboration; providing adequate incentive for other organizations to include an asset-based approach in their programs; and measuring outcomes through adding strength-based measures (through evidence-based and community-based proposed indicators) to complement the state youth survey and database, making indicators of youth development based on assets available to funders, policy makers, and all other partners. That evaluation concluded that the project is delivering the output and outcomes link to families, schools and community's partners being able to support the

Project	Context	Mechanisms	Outcomes
			<p>development of healthy, caring and capable youth.</p> <ul style="list-style-type: none"> Other outcomes include the appetite it created in other US states to use a similar approach, and the diffusion of the lessons learned and evaluation results in the scientific literature as well as in meetings with agencies in other states
Iron-folic supplement	<ul style="list-style-type: none"> Changes in the evidence base in relation to iron and folic acid supplementation from considering it a curative approach to considering it a preventive intervention This occurred in a context of lack of evidence of how to successfully implement such preventive supplementation in an area of the world where SES and cultural issues contribute to a high burden of anemia and lack of folic acid The WHO Regional Office for the Western Pacific identified social marketing as a promising approach, and designed a program to pilot in three countries interested in such an initiative: "...a significant number of stakeholders in the three developing countries were interested in improving women's health using a positive outlook, since they knew that disease-oriented approaches adopted previously had not been effective. Therefore, they were open to new practical ideas." (Smitasiri) 	<ul style="list-style-type: none"> Use of a well-planned, well-supported, locally adapted social marketing approach looking at the 5Ps of marketing: public relation and collaboration; product; price; place; and promotion. This included assessing local barriers to use (culturally or otherwise), as well as careful selection of culturally appropriate and appealing messages related to the supplements. This was inspired by another successful program with similar attention to intersectoral involvement in vitamin D supplementation from the national to the community level. The public health involvement included the WHO's technical support and funding, as well as support from the local public health system, which were part of the stakeholders consulted and involved in the social marketing approach Substantial engagement of stakeholders at the global, national, and community levels in all elements of the social marketing approach, including raising awareness of those stakeholders to ensure buy-in. Stakeholders included decision makers, consumers, and community organizations (unions, women's groups, businesses, and workplaces), as well as the public health and primary care stakeholders. Physicians and other primary healthcare providers, decision makers, and specialists, as well as the Ministry of Health, were seen as key partners to target with public relation activities, to ensure buy-in and to assist in the promotion, placement, and distribution of the supplement 	<ul style="list-style-type: none"> It led to the successful implementation of iron and folic acid supplementation with increased use in various countries, despite unsuccessful prior attempts, and changed the acceptability in those countries of iron and other nutritional supplementation through a preventive approach, rather than a curative one It provided free, evidence-based supplementation for pregnant women and sold at low prices for other women Mechanisms to promote and sell the supplement became institutionalized through stable social organizations, with a network system of collaboration between the organizations involved It led the regional WHO office to gain and disseminate lessons learned in terms of the challenges of implementing such an approach and the need for intensive long term commitment in order to develop a successful intersectoral approach in changing the target population pattern of preventive supplementation use in a country

Project	Context	Mechanisms	Outcomes
	<p>& Solon, 2005) p. S85</p> <ul style="list-style-type: none"> Those three countries had very different contexts in terms of health systems (one country had a large private health sector and had attempted similar programs in the past with sub-optimal results; one country had a strong public health system with prior success in promotion of other supplements, and the third country was in a challenging circumstance of a recent civil war) 		
Rx for Health overall	<ul style="list-style-type: none"> Created by the RWJ, with support from the Agency for Healthcare Research and Quality, as a \$9 million, 5-year program to identify, test, and evaluate practical, evidence-based tools, cues, and techniques to improve the delivery and effectiveness of health behaviour change strategies in routine primary care practice It focuses on four leading health risk behaviours associated with premature death: smoking tobacco, risky drinking, unhealthy diet, and physical inactivity The first phase reported here is the first set of 17 funded initiatives, which aimed to assess the feasibility of innovative ways to address 	<ul style="list-style-type: none"> Recognition and promotion to the grantees of the use of the chronic care model as a relevant model in which to situate issues of risky behaviours in primary care within the broader community, barriers, and life circumstances faced by patients when attempting to change behaviours (Cifuentes et al., 2005) Requirement to address behaviours through a practice network approach. The round one selection started with pre-identified networks that had expertise and interest in the area and resulted in the selection of 17 exploratory, community-practice partnership projects from July 2003 to October 2004, 2 years after the start of the large initiative (Cifuentes et al., 2005) RWJF organized a conference with the potential participants and leading researchers in health behaviour changes, chronic diseases, and practice change, with practicing clinicians and community partners to inform the design of the research initiatives and the need to reconcile idealized models of health promotion with the reality of most clinical practices (Cifuentes et al., 2005) "RWJF funded an independent analysis team (A-Team) to analyze project proposals, field notes of site visits, program meeting notes, project interviews, and network entries posted to online diaries to identify characteristics that support successful implementation and adherence to behavior change interventions in the primary care setting."(Cifuentes et al., 2005) "The information gathered as part of the evaluation was fed back to the program's participants for their use in their work to improve health behavior counseling. The evaluation team and the PBRNs could look at the data quickly. The investigators (in the PBRNs) used these data as they implemented and evaluated their interventions. The program management analyzed and shared the data among PBRNs and practices, to 	<ul style="list-style-type: none"> "Despite logistical barriers, all 17 networks succeeded in implementing the proposed strategies in different locations in the practice and in the community..., verifying that it is challenging but possible to install these types of strategies in busy primary care practices to improve health behavior counseling." (Cifuentes et al., 2005) Several practice-based networks obtained supplemental funds from their home institutions or local organizations to support additional costs of the projects Most, but not all, clinics maintained the intervention after the end of the funded study period (numbers not available) The chronic care model and the 5As (ask, advise, agree, assist, and arrange) were recognized as useful models to help organize or re-organize the practices and how they link with the community organizations. They also recognized the need to adapt and contextualize those models to their local context, so no two 5As looked the same in the different practices, with various personnel performing various parts of the 5As. The research on those initiatives concluded that integrated systems of care addressing both behaviour changes and chronic diseases are not only feasible, but create efficiencies, and that the model also suggested that the dimension of what can be provided in an examination room, the rest of the clinical practice setting, and in the community, can overlap significantly and be synergised differently in different practice contexts The researchers that performed the evaluation concluded that co-evolution, in which collaboration is not forced, but allowed to flourish and evolve to

Project	Context	Mechanisms	Outcomes
	<p>at least two of the four risky behaviours mentioned above, with 125,000\$ during 16 months</p> <ul style="list-style-type: none"> This included other research as part of Rx for Health that identified that patient populations that have lower SES or worse health statuses are cared for differently and in different settings than other types of patients (Hung et al., 2008; Hung et al., 2006). 	<p>support collaboration and learning.” (Garrett et al., 2013) p. 9.</p> <ul style="list-style-type: none"> The RWJ Foundation used teleconferencing and videoconferencing to provide regular reinforcement, training and assistance to the 17 practices The primary care providers played the role of leaders in driving the lifestyle interventions and in liaising with the community organizations. They engaged community opinion leaders, attended community meetings, and actively sought opportunities to create linkages with community organizations. They designed reminder systems that worked in their settings: flags, prescription pads, posters, and electronic reminders to use the available community resources; they targeted time and recruitment strategies that did not interfere with clinic flow and volume; and they capitalized on seasonal requests for health services. They also used strategies to cope with the increased workload, such as use of front desk personnel, medical assistants, and nurses to help with the health risk assessment, and in some instances, the counselling. They also restructured the configuration of the physical infrastructure in the clinic, such as waiting areas and check-in counter, to facilitate the innovation and the research. Many community organizations were funded in part by various levels of the US public health system: quit lines, health education sessions by nurses and others, directories of community services, behaviour change counselling programs, walking clubs, online resources and lifestyle coaches 	<p>capture new opportunities and end non-productive ones, is a relevant model to describe what happened in those networks</p>
BP	<ul style="list-style-type: none"> A group of researchers (aware of the effectiveness of lay health worker interventions in maternal child health in Pakistan, as well as the lack of training of GPs in managing hypertension) created a study to assess whether either of those two types of practitioners receiving education could provide better management of hypertension, compared to practitioners who received no intervention at all They sought funding from a research award, obtained from a UK foundation (the Wellcome Trust) 	<ul style="list-style-type: none"> The academic community and researchers in public health and medicine from Pakistan, the UK, and in the US initiated the project. They created a cluster randomized control trial in six communities Over a period of 6 weeks, the research team trained typical lay health workers from Pakistan to assess, advise, and assist people with hypertension and their families, in relation to hypertension control and management, as well as behaviour change, family context, and when to seek care. The lay health workers visited the families every 3 months, first for 90 minutes and then 30 minutes. The researchers also trained the GPs, but with only a one-day training The lay health workers in Pakistan are part of the public health workforce 	<ul style="list-style-type: none"> “Among 1341 patients living in 12 communities in Pakistan that were randomly assigned to general practitioner education, home health visits by trained lay workers, both, or neither, patients in communities assigned to both interventions had the greatest improvements in systolic blood pressure (10.8 mm Hg) after 2 years. Improvements were similar in all other groups (about 5 mm Hg).” (Jafar et al., 2009) p. 594

Table 39 Projects part of the small initiative CMO configurations

Project	Context	Mechanisms	Outcomes
Senior care	<ul style="list-style-type: none">• Hospital/academic nurse practitioner seeing needs for primary care for seniors• Existing community organizations related to senior issues	<ul style="list-style-type: none">• Primary care provider (a nurse practitioner) with academic and hospital ties acting as the main leader and bridging organizations• Community needs assessment performed, involving the consultation of community organizations, a senior centre, a community centre, academics, local government health structure and policy makers, and hospital• Funding from the local hospital as well as provision of space and human resources• Funding from the local university to train nurses	<ul style="list-style-type: none">• Creation of a hospital-based primary care clinic for seniors that charges neither the uninsured nor co-payment for those with partial insurance coverage• Provision of health promotion, disease prevention and self-management training in clinics and community venues• Provision of transportation to those for whom it is a barrier to accessing care
Breast health	<ul style="list-style-type: none">• Awareness in Ohio of African American women having lower rates of screening mammograms and several barriers to care with increased mortality and morbidity. Local data guided the development of the intervention.• Existing training for community health advisors (CHA) for other health issues at a local center for healthy communities funded by a community college, a university, and more than 100 community organizations	<ul style="list-style-type: none">• The project was led by a nursing professor in a local university who was able to raise \$150,000 from a local foundation, partnering with a local college to train community health advisors in delivering a breast health intervention and evaluate its impact• Two CHA received an extra 15 hours of training in relation to breast health, and were funded to work 20hr per week (at 9\$/hr.) for a year to deliver the intervention and perform associated research project activities. The training built on the skills already covered in the Center for Healthy Community training. Among other things, it covered factors associated with screening rates, breast health and breast cancer, confidentiality, file keeping, data entry, safety and communication. The CHA received extensive peer and researcher support through weekly information sessions, which covered topics such as how to develop partnerships and how to and collect accurate data.• Incentives were given to women who participated (10 gift certificates and local bus tickets to attend screenings)• The media, a college, a university, community leaders, adult meal provision sites, housing units, and a job center all participated in the recruitment, publicity, and delivery of the intervention	<ul style="list-style-type: none">• 68 of the 90 recruited and eligible women (those who were > 49yrs old, who had not received screening in the last 2 years, and were living in poverty in the area covered by the program) completed the mammography screening, a higher proportion than self-reported prior rates of completion of mammography screening. Breast health post-interventions knowledge scores were improved compared to pre-interventions tests scores, and women's overall experience of the intervention was reported as very positive, although some reported that 6 weeks between the initial contact and the screening was too long. The intervention had a spin-off effect, with women in the community and community organizations contacting the authors with an interest in getting mammography screening or the educational intervention.
Assistant bf	<ul style="list-style-type: none">• Following increased funding for vulnerable women and the provision of more services, local public health and community organizations sought to do a pilot project to evaluate whether liaisons between organizations related to breastfeeding and basic support for breastfeeding women could help. The area targeted was characterized	<ul style="list-style-type: none">• A Sure Start project with a multitude of services for this vulnerable population was being established as part of a public health strategy to address health disparities in early childhood. Following consideration of the low rates of breastfeeding in the population, the staff of the Sure Start project realized there was still a need to further support breastfeeding, while acknowledging the variety of services already being provided and the involvement of many care providers and community organizations. Therefore, the idea of a lay health worker to support breastfeeding emerged to supplement the more intensive support services and identify and liaise the women in need of more services with the appropriate ones.• The Sure Start program sought funding for evaluation from the health department and in collaboration with the maternal and child healthcare providers• Sure Start staff and other local community services for breastfeeding trained the lay health workers	<ul style="list-style-type: none">• Difficulties arose in receiving referrals from the primary maternal and child healthcare provider; the assistant therefore found the women by going into the care facilities. This was a success, as this was something that had not been done effectively before.• The clients, organizations, healthcare providers, and lay health workers involved all reported that they appreciated the service and reviewed it positively. They also reported improved collaboration between midwives and the Sure Start program, based on focus group and other qualitative data.• Report suggests that the number of women who breastfed seems improved, but without statistical analysis.

Project	Context	Mechanisms	Outcomes
	by low SES, a high number of refugees, a high level of temporary accommodation, and low levels of literacy and numeracy, the rate of breastfeeding in vulnerable women was low.	<ul style="list-style-type: none"> The project was overseen by a working group including representatives of the Sure Start program, as well as midwives and other practitioners providing maternity and child health services, community organizations, and nurse home visitors. 	
Pregnant teen	<ul style="list-style-type: none"> Started by the local public health department due to concerns about the high proportion of teen pregnancy and the worst health outcomes for those who do not have prenatal care The local health unit sought funding from the national level health department for a pilot program and its evaluation 	<ul style="list-style-type: none"> A local public health unit initiated a pilot to test whether home visitation by public health nurses and a social worker would affect birth outcomes and other indicators, compared to other pregnant teens not receiving the service. They sought an independent public health and nursing researcher to evaluate the program before it started. They designed a quasi-experimental intervention research design, with electronically identified controls from birth records. Public health staff (social worker and public health nurse) liaised with the community organizations and primary care providers providing services to vulnerable pregnant teens They also liaised with and involved those community organizations and primary care organizations in recruiting the cases and the controls for this study The intervention was inspired by models of nurses' home visitations for new mothers and babies and by a theoretical model related to vulnerable populations 	<ul style="list-style-type: none"> The program did improve: the proportion of teens with a prenatal care provider; the proportion of teens who made and kept appointments; the proportion of teens who received nutritional supplements and enrolled into Medicaid at three months; and the number of prenatal care visits, compared to the control group There were statistically significant differences in the intervention group, compared to the control group, in factors associated with birth outcomes. In total, there were no differences between the comparison group and the intervention group in terms of the number of low birth weight infants. However, many teens were lost to follow-up. There is no information on sustainability of the project after the pilot evaluation
Mobile safety	<ul style="list-style-type: none"> A need assessment conducted by various groups involved in child injury prevention revealed that community clinics and organizations in a large urban area wanted a safety centre similar to the one at the hospital, but did not have the funding or space to host such a centre Funding for assessing the impact of the mobile safety centre was obtained from the US CDC 	<ul style="list-style-type: none"> A group of healthcare, public health, and community organizations involved in child injury prevention sought funding from various public and private donors to create a mobile safety centre and to assess its use Those organizations included: a public health injury research centre; a fire department; private businesses; schools; paediatricians; and community health providers. The group of organizations included the Johns Hopkins Center for Injury Research and Policy, which sought funding from the CDC to do the evaluation and developed the information material, as well as led the creation of the mobile centre 	<ul style="list-style-type: none"> A total of 6,086 visitors came to the mobile safety centre. They distributed more than 500 safety products, and close to 8,000 services (referrals, helmet fittings, car seat installations, and provision of educational handouts). There were no differences in socio-economic status or injury related characteristics when those who visited the community health centre were compared to those who did not visit it The operational expenses of the centre were institutionalized into the fire department budget, and complementary funding, donations, and other support was obtained as well
Pharmacist-led	<ul style="list-style-type: none"> A pharmacist working for a primary care trust realized there were issues around ethnic population 	<ul style="list-style-type: none"> A pharmacy team, with the support of the primary care trust community health development adviser, led a group of the area's multi-ethnic pharmacists to liaise with ethnic community organizations to deliver and adapt brief presentations and discussions in various languages for community members. Those presentations covered topics related to 	<ul style="list-style-type: none"> A team of three to eight pharmacist gave six presentations followed by discussion of health issues of concern by the attendees, reaching 125 individuals. Only 43 participants filled out the user forms meant to evaluate the

Project	Context	Mechanisms	Outcomes
	<p>medication and general health knowledge in an area in the UK with a high proportion of ethnic community members</p> <ul style="list-style-type: none"> • He sought and obtained funds from the primary care trust to organize information sessions in community organizations of those ethnic communities 	<p>medication, adherence, lifestyles, and cultural practices, and answered attendees' much broader questions on health in general. The attendees were also offered individual hypertension measurement and individual medication review.</p> <ul style="list-style-type: none"> • Evaluation was done through participants being asked to fill out user forms, as well as requests for verbal feedback by the organizers and presenters. • In the UK, primary care trust carry out some of the functions typically carried out by public health services in other parts of the world, such as immunization, new baby visits, breastfeeding support, and some local population and healthcare surveillance. Although it is not clear how primary care trusts are staffed to carry functions such as surveillance, or whether they carry out functions such as health protection, environmental health, and sanitation. Other institutions carry broader population health surveillance. 	<p>reception of the intervention by the participants. Authors suspected language barriers were responsible for the low return rate of filled out forms. The authors further report that the participants were satisfied by the sessions, based on the verbal feedback they received at those sessions.</p> <ul style="list-style-type: none"> • 70 participants used the medication review service, with 61% of those resulting in a pharmacist intervention or advice in relation to medication, compliance and side effects, diabetes complications, and identification of serious condition such as atrial fibrillation • 20 participants were identified with BP>150/90mmHg
Weight	<ul style="list-style-type: none"> • A commercial weight management program worked with a local public health department to study the feasibility of primary care referral to a commercial weight management program. The study was funded by the local health department and the commercial weight management program. • There was awareness of: the effectiveness in US-based RCTs of similar commercial weight management programs; the lack of accessibility in the UK of weight management services; the high burden of diseases related to obesity; and concerns that services to lose weight were not affordable for those with low SES even if they are suffering from a higher burden of diseases. • There was a prior national evidence review and an 	<ul style="list-style-type: none"> • The public health department and the weight management program designed the intervention and the study • The primary care trust was approached to select patients for participation, respecting the study criteria. They chose an inner city and a suburban practice. Primary care providers received information to ensure they understood the weight management program to be offered to patients. Patients were recruited either by the research nurse or the primary care practitioners. • Notably, there is no mention of involvement of an academic institution in this partnership • Free participation in the first 12 weeks of the program and paid participation for those who wanted to continue 	<ul style="list-style-type: none"> • The project demonstrated the feasibility of such a program, with all partners involved, and the cost for patients, even if they had to pay it, seemed less than the cost of medication for obesity. The referral to a commercial program appeared less expensive than providing the services in the primary care trust. • Free participation for the first 12 weeks of the program does seem to have promoted attendance and weight loss, but this financial availability did not overcome other SES difficulties. Success of participants in the first 12 weeks also influenced their continued participation in the program. Other factors (unadjusted) associated with enrolment into the program include age (with older patients enrolling more often) and perceived importance of weight loss. Factors associated with attendance (unadjusted) at 12 weeks included age, ethnicity, and financial worries, while those associated with 24 weeks completion included increased attendance by those in the suburban area versus the inner city, household income, and weight loss in the first 12 weeks. • Participants in the 12-week program did lose weight, and those who also continued for the full 24 weeks lost more weight on average. • The statistical analysis was not very elaborated and did not adjust for confounding, interaction, or combined effects. There was no intention to treat analysis, and no control group.

Project	Context	Mechanisms	Outcomes
	upcoming policy that would mandate primary care trusts to offer evidence-based obesity services as part of the services they offer to their registered patients.		
Stroke	<ul style="list-style-type: none"> A social worker aware of the burden of disease due to stroke in the elderly seized the opportunity to use a screening guide with associated support tools to screen for stroke. He sought and received funding from a small local foundation for risk factor screening and a three-month follow-up survey. The screening was carried in a senior center serving a low-income area 	<ul style="list-style-type: none"> A social worker aware of recommendations for screening and primary and secondary prevention of stroke, as well as the challenges faced by physicians in terms of offering preventive services and monitoring compliance with behaviour change, initiated a project following a national guideline on how to plan a stroke prevention screening event in partnership with community organizations. The manual provided instructions on recruiting and training personnel to conduct the screen, as well as how to obtain equipment and how to set up the screening stations and information material. Partners included community and healthcare organizations as well as a community college, which provided materials and human resources to host the screening event The social worker had an academic appointment and created the follow-up questionnaire to assess whether participants perceived that the screening resulted in changes in behaviour or care. The public health involvement in this project consisted of creating the screening guide and support tools with other agencies. These tools were used to guide the screening and what to do with the screening results. 	<ul style="list-style-type: none"> The screening event lasted two days, and 287 seniors participated; 15% of these were from an ethnic community A large proportion of those screened (more than 45%) had hypertension, were overweight or obese, or were physically inactive. The other risk factors were present in less than 15% of the participants. 270 participants answered a telephone interview at three months follow-up, and the responses were as follows: “Ninety-seven (35.9%) reported discussing their results with a physician, followed by discussing with family (12.6%), and discussing with friends (4.8%). On the health behavior side, 41.9% indicated that they wanted to change, but their reports on actual positive change were not as promising. In responding to the health behavior change questions, 19.6% reported exercising more, 28.5% reported less dietary fat and 24.4% less dietary salt. Of the 29 smokers contacted at follow-up, 7 (24.1%) reported they were smoking less than at the time of the screening. The participants were asked a series of questions about whether or not they wanted to exercise more, quit smoking, or reduce dietary fat or salt. One-hundred and thirteen (41.9%) answered yes to one or more of those positive behavior change questions.” (Mjelde-Mossey, 2005) p. 66
Wellness AA	<ul style="list-style-type: none"> The project was initiated by an African American women’s civic organization concerned about chronic diseases and disengagement of the African American population with the health system The project was supported in part by a grant from a national foundation 	<ul style="list-style-type: none"> The community organization engaged local healthcare and public health organizations in creating a community forum on health issues, and the local public health academic community in evaluating the project as part of an advisory committee. The program was also supported by advice from a national branch of the women’s civic organization. Churches and other community organizations acted as sponsors, providing human resources and facilitating recruitment for the day of the forum, which is also referred to as an intergenerational seminar Presenters included dietitians, a physician, a pharmacist, and a mental health specialist Some healthcare services were also offered, including blood glucose testing, bone density testing, breast exam demonstration, chiropractic screening, dental screening, HIV testing, massage therapy, mental health screening, and sickle cell screening 	<ul style="list-style-type: none"> The seminar became a yearly occurrence, running for 6 years at the time the article was written. It had reached 480 African Americans in its first 5 years (about 80 to 110 participants per year). Participating organizations increased from 8 to 51 in those 5 years Only 106 participants over the 5 years provided satisfaction data, with an average satisfaction of 4.5 to 5 (on a scale of 5, where 5 means excellent) for program sessions and 4 to 4.9 for all aspects of the forum (sessions, services, exhibits, facilities, and refreshments) For the small pilot evaluation, 19 of the 33 surveys were returned. Respondents indicated that they had increased awareness of health issues in black families, and 67% reported that the forum was likely

Project	Context	Mechanisms	Outcomes
		<ul style="list-style-type: none"> Exhibit included booths of a business selling books, a pharmaceutical company, community agencies, and educational institutions The evaluation included a satisfaction form for participants in the yearly seminar and a small pilot with a subset of adults from one organization affiliated with the forum over a long period. A survey instrument was developed to assess differences in stages of changes, and was reviewed for validity and usability by experts before being distributed to 33 users. 	to help them change their health behaviors. From the level of change assessment, about half the participants reported being in the action stage, and a majority of participants reported thinking that attendance at the forum helped move them along the continuum of readiness for change, regardless of which stage they reported being at. An analysis looking at those who attended the forum 4 or more times, versus those who attended it 1 to 3 times, revealed that a higher proportion of high attenders appeared to be in the action stage, compared to the low attenders.
Smoking	<ul style="list-style-type: none"> This project was initiated by a community partnership for urban revitalisation in a low-income area of a large city. The health sub-group of that partnership approached the local public health department to address high smoking rates. Funding was provided by the local health board 	<ul style="list-style-type: none"> The project was managed by a partnership of community organizations and the health board, and had a full time project co-ordinator The project was created based on a community development model of shared participatory decision making and local activities driven by the local community, with leadership provided by community members. The project included: a phase of mapping existing community activities; a planning phase consisting of dissemination of the mapping phase findings with the community organizations who jointly developed the intervention; and an implementation phase. The activities were delivered in community agencies, schools and other youth settings, primary care organizations, and workplaces. The activities included training of health workers, information of young people with video, community health fair, a variety of profile raising activities including newspaper features. The community organizations were responsible for disseminating information and raising the profile of the project, as well as providing smoking cessation support in the community and training community health workers in smoking cessation support The primary care organizations were responsible for operational and strategic input in the smoking cessation planning activities, in training their health professionals in brief and in-depth intervention, and in providing some smoking cessation support and nicotine replacement therapy Schools and youth organizations were responsible for producing an educational package for teaching in high school, including posters, videos, website, and activity group. The school and youth organizations involved the youth in designing a leaflet and promoting the no smoking policy in the school. Workplaces were expected to be open to a health audit and support in relation to smoking policy and cessation from the local agencies involved 	<p>A qualitative process evaluation of the program revealed that the program:</p> <ul style="list-style-type: none"> Experienced difficulties with staff changes and maintaining the technical capacity as well as staff understanding of the evidence-based and community development models Funding uncertainty was a major factor in staff turnover, and funding changes occurred in the partner organizations (both the health board and the community organizations), leading to decreased funding for the project and to re-organization The re-organization at the health board level significantly affected the technical capacity of the project, with decreased staff and technical support from the health board, as well as changes in managerial level staff who then also lacked technical understanding of the project, while having decision-making power over staff who might have retained some of that expertise. Those managerial changes occurred in both the health board and the community partnership organizations during the time of the project. The changes resulted in a decreased sense of control and ownership of the project among staff and local organizations, and a perception that the project was coming principally from the health board Those changes led to a loss of momentum in many activities, and unclear direction – the project was felt to be not always consistent with the original design Those changes also led to the loss of a common vision
Healthy Hearts	<ul style="list-style-type: none"> A local health board concerned about high burdens of disease in an area with low SES decided to test an intervention to reach 	<ul style="list-style-type: none"> A local health board wanting to test an intervention sought help from the academic community and connected with GP offices and community organizations to create and test a program where invitation cards were sent to men and women between 45 and 64 years of age, without pre-existing coronary heart disease, to invite them to a cardiovascular risk assessment. The card contained self-screening items, such as determining whether the rope 	<ul style="list-style-type: none"> 596 of the 2031 individuals invited with the screening card attended the assessment, and 313 attended the re-assessment. There was a decrease in the Framingham risk score of 6.7%, with some measures that worsened (weight, BMI and waist circumference) while others improved statistically significantly (pulse, systolic BP, total

Project	Context	Mechanisms	Outcomes
	those who might be at risk, while minimizing the need for GP human resources	<p>included with the card fir around one’s waist, and inviting those with the risk factor to call for screening. At the screening, a printout and advice were provided to each individual, with referrals made to a GP, dietician, an exercise program, or a smoking cessation program if appropriate. One year later, the participants received another letter inviting them for re-assessment.</p> <ul style="list-style-type: none"> GP offices were involved in selecting the potential participants and providing follow-up to referrals from the screening 	<p>cholesterol, HDL, and glucose profiles, as well as improvements in fruit and vegetable consumption), even accounting for the multiple statistical comparisons undertaken. Some other indicators improved, but did not reach statistical significance: decreases in smoking and alcohol consumption and increased physical activities.</p> <ul style="list-style-type: none"> There is no indication that the intervention was repeated or sustained by the health board
PA senior	<ul style="list-style-type: none"> This was initiated from the health promotion research centre of a local university, which was funded by the US CDC as a prevention research centre. The project targeted a multiethnic and low SES area of a large US city. 	<ul style="list-style-type: none"> The project was initiated as a community-based research project. The research centre sought to establish partnerships with local community organizations involved with seniors, such as parks and recreation, senior centres, and senior housing, as well as other organizations such as ethnic community organizations, businesses, schools, and healthcare providers. The researchers had partnership goals in terms of the program (to create a program for physical activities) and the coalition (to make broader changes in policy and infrastructure), as well as to support the continuation of the project at the end of the 5-year research funds. 	<ul style="list-style-type: none"> This articles only covers the first 18 months of the 5-year project. It concludes that the project is making good progress in terms of its stated process and goals: "A combined total of 200 primarily low-income seniors are regular participants in the new PA programs...More than 320 contacts were made with 75 organizations across the nine sectors in the first year and a half of the program... Related to the coalition-building goal, a new community health coalition has been formed with senior PA as a major area of focus... Activities to date include a healthy restaurant initiative, educational supermarket “shop-arounds”; a tour of PA opportunities in SE Seattle; and a grant to a local non-profit health club to provide window shades to increase the number of women, particularly those from immigrant communities, exercising at the club."(Cheadle et al., 2010) p. 100-101. Lessons learned included that a large number of contacts was needed to yield activities and partnerships. This was especially thought to be due to the fact that the researchers were not offering any funding to the community organizations to participate or create activities. Those who partnered saw the value for their members or clients, or for society at large, of promoting physical activities for seniors and saw how they could play a role. Furthermore, it was learned that personal relationships were key to the success of the program, which also makes the program foundation shaky, because organizational relationships are dependent on existing staff remaining with the organization.
PA under-served	<ul style="list-style-type: none"> Within a larger health organization with (in part) a goal to serve the uninsured, physiotherapists and other rehabilitation professionals facing challenges in serving uninsured populations established a link with an 	<ul style="list-style-type: none"> The academic institution was key in providing a faculty position that sought to develop the partnerships to create those centres, staff them, and place students in them. A religious healthcare institution was key in offering resources and funding to create a fitness and rehabilitation centre, supplemented by grants from the local department of health and a primary care division of the US Department of Health and Human Services, as well as many other forms of support from local community organizations. Some of the academic members of the project held public health degrees and positions, while others held medical or rehabilitation degrees and positions 	<ul style="list-style-type: none"> The centre became part of a multi-organization coalition, which has been key in securing funding and supporting expansion Access to fitness and rehabilitation services, as well as general wellness services, has increased in the area: “The expanded Mercy Eastwick fitness center programming produced 16,126 visits during the first full year (2003). By 2006, annual visits for fitness services to the two sites in Philadelphia increased by 197% to 47,906.” (Choitz et al., 2010) p. 223. Attrition appeared slightly higher than for other

Project	Context	Mechanisms	Outcomes
	academic institution that provided funding for a faculty position, with a mandate to develop training in the community and city health-related institutions. This led to the creation of three fitness, wellness, and rehabilitation centres from healthcare and multiple other sources of funding.	<ul style="list-style-type: none"> The centre removed barriers to access, such as cost (access was provided at low cost) and the absence of fitness facilities, as well as providing a physical environment that facilitated access for those with disabilities and a safe and welcoming social environment for members of this low-income ethnic neighbourhood. This article reports on the development of those centres and the program information available in relation to participation 	fitness centres (more than 80% versus 35% of attrition at one year), however, 41% of the new members were still following an exercise plan after one year, even if not at the facility.
Native Hawaiian	<ul style="list-style-type: none"> Community members of a small island approached the Native Hawaiian healthcare system, asking them to offer a weight-loss program with community driven components and a sustainable structure. Other such programs had come from commercial entities in the past, but had not been sustained, and there was awareness of a high burden of obesity in that Hawaiian community. 	<ul style="list-style-type: none"> The community members' request was made to an employee of the health system that was performing health screening and monitoring blood glucose and hypertension among community members The staff person recruited off-island consultants, including an epidemiologist, a dietitian, a lifestyle interventionist, a medical director, and a psychologist, as well as 2 registered nurses and 5 community health workers. They jointly developed the program and the evaluation, with community members' involvement. That included at least two people with an MPH who worked for the local health system. The program followed what had been identified as key elements of evidence-based lifestyle interventions: social support, group support, and community involvement. They also based the program on a previous study of what factors were important in moving local native Hawaiians from pre-action to action stages for diet and exercise. The program was pilot-tested on local, native Hawaiian healthcare system staff from a variety of SES, meant to be representative of the community members. For 12 weeks, the participants met for a 1-hour support group for nutrition and education. The pilot participants recommended adding other areas of preventive health education and weekly cooking demonstrations. The project then recruited a first cohort of 74 participants, followed by the health system staff for several clinical measures. 	<p>Outcomes included the creation of a program that was acceptable, appreciated, and sustainable with the resources of the community, which revealed some impact on health outcomes measured on the first cohort of participants:</p> <ul style="list-style-type: none"> "Comparisons of clinical measures (Table 2) at intake and at the end of 12 weeks showed statistically significant improvements for weight ($\Delta = -7.4$ lbs; $P < .001$), systolic blood pressure ($\Delta = -3.8$ mm Hg; $P = .027$), diastolic blood pressure ($\Delta = -4.6$ mm Hg; $P < .001$), total cholesterol ($\Delta = -9.7$ mg/dL; $P < .001$), and low-density lipoprotein ($\Delta = -11.1$ mg/dL; $P < .001$). For each measured variable, the majority of participants showed clinical improvements at the post intervention assessment. We observed decreases in diastolic blood pressure (55% of participants), systolic blood pressure (57%), blood glucose (57%), triglycerides (58%), total cholesterol (62%), low-density lipoprotein (75%), and body weight (90%). High-density lipoprotein increased in 53% of participants."(Gellert et al., 2010) p. 780 The health system was planning to expend it to other sites, as well as to continue to improve the program based on participants' feedback