

COMMUNITY DENTAL CLINICS IN BRITISH COLUMBIA

by

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Abstract

Objectives: Oral health inequities are prevalent but little is known on how to respond. In British Columbia (B.C.) there has been a rapid expansion of local responses to the inequities as communities and dental professionals cooperate to operate community dental clinics (CDCs). The purpose of this research has been to explore how the clinics evolved and how they operate from the perspective of participants in B.C.

Methods: Three studies were conducted: #1 to understand the problems of access to dentistry using a case study that included 60 interviews with low-income people (N=41), dentists (N=6), and other healthcare or social service-providers (N=13); #2 to investigate the expansion of CDCs in B.C. by interviewing 63 people who helped to establish or operate the clinics; and #3 to study five clinics through aggregated data from treatment, procedural, and financial data combined with explanatory information from interviews with eight staff members.

Results: I identified two models of CDCs emerging in B.C.: volunteer-charitable (VC) clinics offering free services primarily to relieve pain; and, not-for-profit (NFP) clinics operating mostly full-time within community health centres employing paid staff to provide a wide range of basic dental treatments. Not all clinics are providing equitable standards of care to underserved populations, and they all operate with major concerns about financial sustainability. The NFP model seems to improve access to underserved populations by integrating primary or basic dental services with other health care and community social services.

Conclusions: Expansion of CDCs in B.C. has been rapid to meet a growing societal concern. They all operate with some success on the principles of health-equity but with concerns for the

limits of charity, the sustainability of NFP operations, and their overall limited capacity to address the level of unmet needs. However, the NFP model within the context of CDCs seems to be most effective.

Preface

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contributed to specific aspects of the study's analysis and presentation. Ethical approval for this

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List of Abbreviations

BC British Columbia, Canada

BCDA British Columbia Dental Association

CDC Community Dental Clinic

CHC Community Health Centre

ID Interpretive Description

NFP Not-for-profit Clinic

SDOH Social Determinants of Health

UBC University of British Columbia

VC Volunteer Charitable Clinic

VIHA Vancouver Island Health Authority

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1. Introduction

1.1 Introduction and objectives

British Columbia¹ is Canada's third largest province, nearly four times the size of Great Britain and larger than any American state except Alaska. The province's population of 4.5 million is mostly urban (85%) and nearly 5% of the population identifies as Aboriginal. While Canada has a national Medicare plan, the provincial Ministry of Health, along with six health authorities, manage and deliver most publicly-funded health services in the province. Dental care is almost wholly outside of the provincial Medical Services Plan and the public dental health services provided by the health authorities are generally limited to monitoring and prevention, with a focus on the dental health of children. There are over 3,000 practicing dentists, 3,200 dental hygienists, and 6,000 Certified Dental Assistants practicing in BC according to each professional association.

Since 2000, there has been a proliferation of community dental clinics throughout the province of British Columbia (BC). Before 2000, there were three long-standing dental clinics operating within non-governmental organizations (NGOs). In the decade that followed, at least one new clinic a year was established. By 2012 the number had reached 18, with clinics in all five health regions of the province, in both urban and rural communities, and even more clinics in planning and development stages (BCDA, 2011). Some clinics focus on children or families, others serve inner-city areas defined by homelessness, while others provide treatment to a diversity of people with low-incomes.

¹ www.bcstats.gov.bc.ca for information on the Province of British Columbia.

The purpose of my research has been to learn from BC communities that are developing or are operating local treatment alternatives in response to oral health inequities. To this end I made three inquiries:

1. Explore access to dental care from the perspectives of low-income people, dentists, and other health and social service-providers to low-income communities in BC;
2. Investigate the recent expansion of community dental clinics to address oral health inequities in the province;
3. Describe how not-for-profit dental clinics provide services and sustain operations with paid staff who provide dental services beyond pain relief.

I begin with a brief introduction to health equity as a framework and then focus specifically on oral health disparities and oral healthcare outside of Canada's Medicare. I will then present a more recent history of how government, the dental profession, academia, and community advocates have responded to oral health inequity and local access to care.

1.2 Health equity

Health inequities are recognized as a significant concern internationally, nationally, and locally in BC. According to the World Health Organization (WHO, 2010), one of the most effective ways to close the health equity gap within a population is to address the health and healthcare needs of disadvantaged communities. Butler-Jones (2008), as Canada's Chief Public Health Officer, reiterated this approach by identifying structural inequality, the social determinants of health, and access to healthcare as fundamental to health. His report specifically acknowledged financial cost as a significant barrier to non-insured health services, such as dental care, in Canada.

In B.C., a report on health inequities from the Health Officers Council of B.C. (2008) brings these discussions even closer to home. The report describes a “B.C. Paradox” where despite having the best overall health outcomes in Canada, B.C. also has some of the highest rates of socioeconomic disadvantage in the country. The paradox illustrates the limitations of overall population health measures which do not reveal inequities (such as population life expectancy) and the utility of reporting on inequities to better report on potential health disparities between sub-populations. The report promotes equal access to health services and reducing financial and other barriers to care. The B.C. Progress Board is an independent panel that produced comprehensive annual reports on how B.C. ranks compared to other provinces on key economic, social and health indicators. They have also confirmed a discrepancy between B.C. ranking first in overall population health outcomes, but ninth (out of ten) on measures of social conditions and economic inequality, when compared to other provinces (B.C. Progress Board, 2011).

Income inequality is growing, and Canada has more income inequality than most Organization for Economic Co-operation and Development (OECD) nations (OECD, 2011). According to the OECD, and based on data from 2008, Canada is ranked 26th out of 34 countries as measured by the Gini coefficient of income inequality. The report suggests a significant contributing factor to income inequality in Canada is the continued cut-backs and reforms to spending on income assistance programs such as Federal Employment Insurance and provincial welfare programs.

Both poverty and income inequality are higher in B.C. than in the rest of Canada. Statistics Canada reports that, among the provinces, B.C. had the largest income gap between communities in 2009 (BC Stats, 2012). It also had the highest poverty rate, and for almost a decade now has had the highest child poverty rate in the country (BC Campaign 2000, 2010). Using Statistics

Canada's Low-Income Cut-Offs – After Tax (LICO-AT), over half a million British Columbians — 12% of the population — lived in poverty in 2009 (Statistics Canada, 2011). Over these same years, changes to income assistance and social programs were introduced in B.C. to limit eligibility and benefits with an objective of reducing overall costs to government (Klein et al., 2008; Klein, Pulkingham et al., 2008; Reitsma-Street & Wallace, 2004; Wallace et al., 2006). B.C., unlike most other Canadian provinces, does not have performance measures to reduce poverty (Klein et al., 2008).

Links between socio-economic status and health show that poor health is related to poverty, and that health inequities are on a gradient and can affect everyone (Butler-Jones, 2008). While the relationship between poverty and poor health may be clear, the factors and pathways involved are complex and vary between groups and individuals. Furthermore, there is much less evidence on the effectiveness of interventions to reduce health inequities.

1.3 Oral health inequities

The 2010 Canadian Health Measures Survey (CHMS) report on oral health presents clinical and subjective evidence on the oral health status of Canadians (Health Canada, 2010). Findings indicate that the current model of private dental practices appears to meet the needs of the majority of the population; however, it found inequities in oral health and access to care for low income Canadians.

Dental care is almost entirely outside of Canada's Medicare system, and most Canadians have to finance their dental care either directly out-of-pocket or indirectly through dental insurance plans. Less than six percent of all dental expenditures in Canada are publicly financed, and

dentistry is the only health service in Canada financed in large part by private insurance (Hurley & Guindon, 2008). Only about one-third of people with low incomes have private insurance, in contrast with over three-quarters (78%) of the population with the highest incomes (Table 1-1)² (Health Canada, 2010, p.27).

Table 1-1 Distribution of dental insurance by income in Canada			
<i>Income</i>	<i>Insurance</i>		
	<i>Private</i>	<i>Public</i>	<i>None</i>
Low	32.5%	17.7%	49.8%
Medium	60.3%	3.2%	36.5%
High	78.2%	2.0%	19.8%
Any	62.6%	5.5%	31.9%
Adapted from Health Canada, 2010 pg 70			

Findings from the CHMS indicate that persons with low incomes or public dental insurance are more than twice as likely to report fair or poor oral health when compared to those with higher incomes or private insurance. Those with higher incomes and private insurance are more likely to have accessed dental care in the past year when compared to those with lower incomes or without dental benefits. Overall, the CHMS reports how accessing dental care is greatly influenced by income and insurance, as those with low incomes or no insurance are three to four more times more likely than those with higher incomes to report cost as a barrier to visiting a dentist or accessing recommended treatment.

² The CHMS report uses three income categories, the middle group consists of families with incomes of \$30,000 to \$59,999 for 1 or 2 persons in the household, \$40,000 to \$79,999 for 3 or 4 persons, and \$60,000 to \$79,999 for 5 or more persons in the household. Families earning less than these amounts are low income and families making more are higher income.

<i>Oral health measure</i>	<i>All</i>	<i>Lower income</i>	<i>Middle income</i>	<i>Higher income</i>	<i>Not insured</i>	<i>Publicly insured</i>	<i>Privately insured</i>
% of persons reporting fair or poor oral health (all ages)	15.5%	24.6%	16.5%	10.9%	18.6%	26.3%	12.9%
% of persons reporting having visited a dental professional within last year for any reason (all ages)	74.5%	60.0%	9.3%	83.8%	59.3%	70.9%	82.3%
% of persons reporting usually visiting at least once per year for check-ups or treatment (all ages)	74.3%	58.0%	70.8%	84.5%	56.0%	70.5%	84.1%
% of persons avoiding visiting a dental professional within the last year because of costs	17.3%	34.5%	19.5%	8.8%	35.9%	8.9%	8.6%

Adapted from Health Canada, 2010 pgs:71-80

The CHMS found that approximately half of adults with low incomes or with public insurance had unmet treatment needs, which is about twice the frequency of those with higher incomes. Overall, the report suggests that those with lower incomes are almost twice as likely to experience worse outcomes than higher income Canadians as measured by edentulism: the frequency of missing teeth due to extractions, untreated caries, and occurrences of gingivitis.

<i>Oral health measure</i>	<i>All</i>	<i>Lower income</i>	<i>Middle income</i>	<i>Higher income</i>	<i>Not insured</i>	<i>Publicly insured</i>	<i>Privately insured</i>
% of individuals with no treatment needed	65.8%	53.4%	61.0%	74.4%	53.7%	46.6%	72.9%
% edentulous (adults)	6.4%	10.9%	8.5%	3.2%	11.4%	13.3%	3.0%
% of decayed teeth treated by extractions (MT/DMFT%) (dentate adults)	20.1%	28.2%	21.6%	15.3%	27.0%	27.4%	15.5%
% with 1 or more untreated root caries (dentate adults)	6.8%	11.5%	7.3%	4.7%	9.9%	17.6%	4.4%
% with 1 or more untreated coronal caries (dentate adults)	19.7%	29.8%	21.9%	13.5%	25.0%	35.8%	15.9%
% of RDF teeth that are decayed (dentate adults)	28.9%	38.2%	36.2%	17.5%	39.1%	44.2%	16.9%
% of dentate adults with signs of gingivitis (highest score)	32.3%	47.7%	32.9%	25.1%	39.7%	50.6%	27.2%

Adapted from Health Canada, 2010 pgs:93 - 111

1.4 Medicare and dental care

While Medicare is somewhat of a defining icon for Canadians, dental care delivery resembles the American dental and medical services with private, for-profit practitioners (Lawrence & Leake, 2001). The history of dental care's omission from universal healthcare in Canada includes the dental profession's frequent fear of government intervention, and the reluctance of governments to increase public health spending by including general oral health treatments. During the decades of significant government expansion in funding for healthcare, the dental profession lobbied/argued for limited public involvement in private practice dentistry. In more recent decades, by contrast, a context where fiscal austerity defines public priorities has seen the

profession seeking a renewed public role in oral health. Dental care, outside of universal healthcare has fallen victim to public spending cuts as it primarily functions as a targeted program within various social programs. In more recent years, it appears that a government role in dentistry is increasingly desired by the profession (Quiñonez et al., 2009), but what that role should be remains undefined and of less interest to governments' aversion to increasing roles, responsibilities and spending.

When Medicare emerged in the postwar period of increased public responsibility and programming, the dental profession, like the medical profession in Canada, sought to exclude themselves from these policies and programs (Quiñonez, 2009). Similarly, in the 1970s, when the province of Saskatchewan was the first province to introduce a targeted program of dental care, the proposal was “resisted strenuously by private-practice dentists” (Marchildon, 2011, p.21). Similar opposition by dentists continued in the termination of children’s dental programs using dental therapists in Manitoba, and in resistance to the expansion of school-based clinics in Toronto (CAPHD, 2001). A review of primary source material by Carlos Quiñonez (Quiñonez, 2009) provides some insights into shared values of the dental profession and government that supported the exclusion of dental care from universal Medicare. These include: (1) individual responsibility and behavioral change over social rights; (2) private business over public programming; and, (3) special needs over human rights.

With the dental profession seeking the exclusion of dental care from Medicare (Medical Care Insurance Act of 1967), the public role for dental programming would be developed as a targeted social service rather than a universal health benefit and delivered through the Canada Assistance Plan (CAP). With CAP, and later the Canadian Health and Social Transfer (CHST) in 1996,

Medicare would be transferred to provincial health coffers and public dental benefits generally transferred to provincial social assistance programs. By 2004, the separation would be made even more transparent as the CHST was split into the Canada Health Transfer (CHT) and the Canada Social Transfer (CST), with dental care a supplementary health benefit in the social transfer programs. With reduced federal transfers, the trend in Canada was towards models of private healthcare and marketplace solutions over increased taxation for public healthcare expansion.

The dental profession's requests to omit dentistry from public programming (Leake & Birch, 2008) were easily accommodated by governments focused on fiscal restraint (Bryant, et al., 2010). Now, as a targeted social service, public dental insurance programs have been at the margins of social and health policy, and an easy target for the fiscal restraint policies of the last three decades (Leake & Birch, 2008; Quiñonez, Figueiredo, & Locker, 2009). With the majority of public spending on dental care within provincial social assistance portfolios, the welfare reforms of recent decades would see public dental benefits as a non-essential expense that could be easily reduced, and unlike healthcare, these dental insurance programs are neither comprehensive nor universal (CAPHD, 2001).

The exclusion of dental health from healthcare policies would continue beyond the Canada Health Act to future public health and health equity initiatives. For example, in the 1980s, public health became more aware and attentive to the social determinants of health, as promoted in the Epp Report (*Achieving Health for All: A Framework for Health Promotion*). This federal initiative supported enabling people to increase control over their health but advocated public

policy changes addressing income-related health inequities over interventions aimed at individual actions or personal choice:

The first challenge we face is to find ways of reducing the inequities in the health of low- versus high –income groups in Canada. There is disturbing evidence that shows that despite Canada’s superior health services system, people’s health remains directly related to their economic status. (Epp, 1986)

At the same time, Canada would play a key role in the movement for health equity, hosting the first International Conference on Health Promotion, and resulting in the landmark *Ottawa Charter for Health Promotion* (WHO, 1986). Decades later, The Romanow report on the Future of Health Care in Canada would provide a renewed vision of Canada’s national health care policies without mention of dental healthcare (Romanow, 2002). For Dr. Leake, this omission indicated a clear need for an oral health policy in Canada. As Leake observed:

The dental care delivery system has, in many ways, ceased to be considered health care and, in spite of Canadian values and the profession’s social contract, appears to be continuing toward a market-driven service available to those who can afford it. (Leake, 2006, p. 317i)

Currently, there is increasing awareness that Canada’s present-day model of financing and delivering dental care is costly and serves primarily the needs of the majority whilst excluding economically vulnerable Canadians (Birch & Anderson, 2005; Leake & Birch, 2008). Canada’s privately financed dental services do not address income-related inequities in oral healthcare (Grignon, et al., 2010). There are ongoing calls to reassess how dental resources are organized

and how dental policy is implemented in Canada (Birch & Anderson, 2005; Leake, 2006; Quiñonez, et al., 2010; Yalnizyan & Aslanyan, 2011). The establishment of the Office of the Chief Dental Officer in 2004 and the completion of the Canada Health Measures Oral Health Survey in 2010 provide some of the necessary foundations for what has been named “a time of public dental health renewal” (Quiñonez, et al., 2007a, p. 15).

The Canadian Dental Association advocates against the inclusion of dental health entirely within Medicare, arguing instead that the federal government establish a dental safety net to provide oral care services to economically disadvantaged Canadians (CDA, 2001). The CDA’s position is that “it is time to recognize that oral health care is an essential component of overall health care” (CDA, 2001). A proposed Canadian Oral Health Strategy (Federal Provincial Territorial Dental Directors, 2005) notes that, despite several submissions to the Commission on the Future of Health Care in Canada, oral health and oral healthcare were not even mentioned in the final report. As noted in this report, this omission suggests that oral health is still considered outside of the health care system, and that more work is needed to demonstrate the links between oral and general health. In 2008, acknowledging the UN International Day for the Eradication of Poverty, Christophe Bedos and Martine Lévesque proposed a challenge to oral health professions and their members to engage in poverty reduction movements in Canada. Specifically, they highlighted the need to:

- 1) improve relationships with underserved members of society
- 2) develop strategies for positive and effective interactions
- 3) improve access to dental services for poor populations. (Bedos & Lévesque, 2008, p. 694)

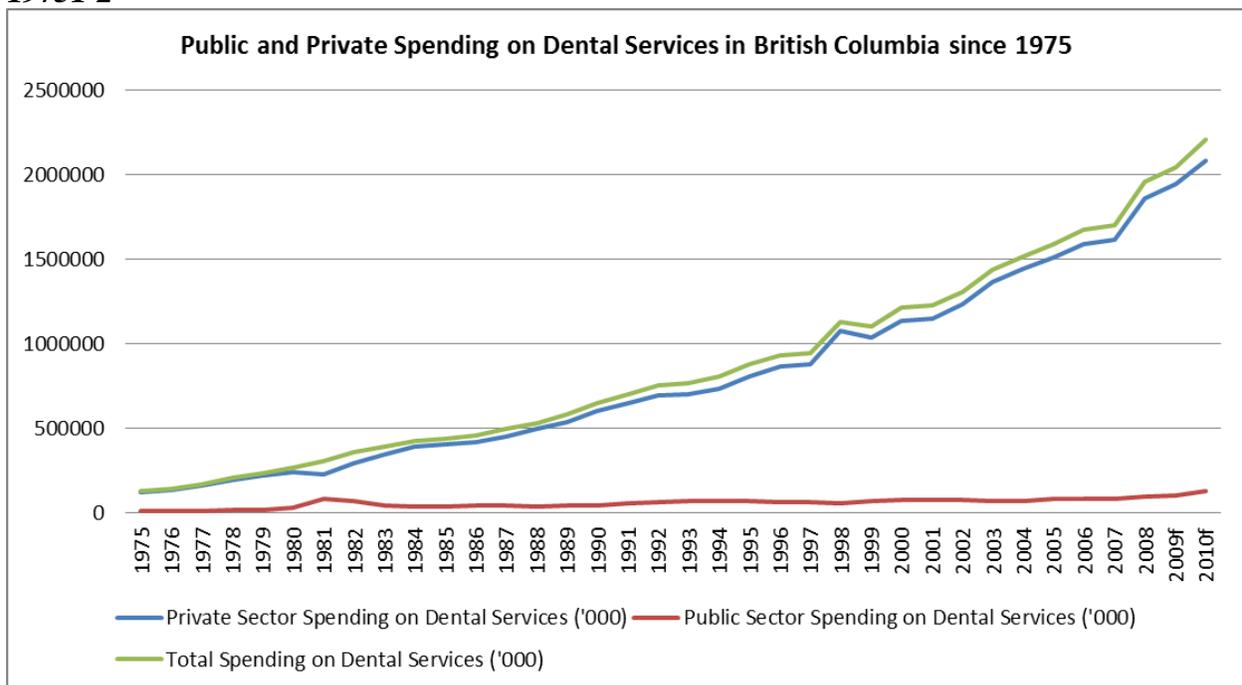
Beyond the statements from organized dentistry, Canadian researchers have investigated the opinions of dentists on publicly financed dental care and social responsibility. A qualitative study of dentists in Canada and the U.S. (Dharamsi, Pratt, & MacEntee, 2007) found tensions between social and fiscal responsibilities and providing dentistry as a public good within the current market-oriented health care system. The study questions the feasibility of the current delivery system to deliver social goods (such as meeting the needs of vulnerable populations), and raises questions as to who is socially responsible for ensuring equitable access to care – individual dentists, the dental profession, or society as a whole. A survey of Canadian dentists (Quiñonez et al., 2009) found most respondents (81%) believe that governments should have a role in dental care, and most respondents (74%) do not think governments are doing all they can to improve the oral health of Canadians. However, when asked what the role of governments should be, the least favoured response was direct treatment programs. Rather, there was a preference for prevention programs such as water fluoridation and public education. These opinions appear to reflect the professional activities of respondents, as the researchers found that relatively few dentists were treating significant numbers of patients with public insurance, and expressed dentists' dissatisfaction with public financing of dental treatment.

1.5 Provincial context

This section provides the provincial context in which the expansion of community dental clinics is occurring in BC. Private spending on dental services has been steadily increasing over the last few decades in BC, as in the rest of Canada, while public spending has not increased

significantly when controlled for inflation and population growth (Figure 1-1³). In 2010, almost \$460 per person was spent on private dentistry in BC compared to only \$28 per person on public dental spending. The British Columbia Dental Association (BCDA) surveys of patients who attend private dental practices in BC demonstrate similar discrepancies between private and public spending on dentistry over the last two decades (BCDA, 2008). There have been continual increases in the proportion of adult patients with private dental insurance, from 62% in 1986 to 70% in 2006, while patients lacking insurance decreased from 32% in 1986 to 24% in 2006.

Figure 1-1. Public and private spending on dental services in British Columbia since 1975-2



³ Data Source: Canadian Institute for Health Information (CIHI), National Health Expenditure Database 2010 (NHEX). http://secure.cihi.ca/cihiweb/products/nhex_trends_report_2011_en.pdf. As presented in Yalnizyan A, Aslanyan G. Putting our money where our mouth is: The future of dental care in Canada. Ottawa: Canadian Centre for Policy Alternatives; 2011. www.policyalternatives.ca/sites/default/files/uploads/publications/National%20Office/2011/04/Putting%20our%20money%20where%20our%20mouth%20is.pdf

1.5.1 The British Columbia Dental Association (BCDA)

The BCDA has consistently supported charitable dentistry as one way for the profession to respond to inequities of access issues. Charitable dentistry in the province has included the BCDA's Community Dental Day, which facilitated access to free dental care one day a year starting in 2003, and the Save a Smile Charity, established by the BCDA in 1990 to fund urgent dental care for low-income children. A BCDA survey in 2007 found that 78% of dentists in the province reported free treatment to patients and estimated the annual average amount of free treatment per dentist to be about \$2,500.

In 2007, the Board of Directors of the BCDA listed "Access to Care for All BC'ers" as one of their top strategic issues for the dental profession, and they pledged to continue their leading role in finding solutions for those who are unable to access dental care in the province (BCDA, 2007). In 2011, they expanded their support of community dental clinics in the province by funding workshops to support cooperation between the 18 not-for-profit dental clinics across the province.

In 2011, they produced the fact sheet "Investing in BC's Most Vulnerable: Improving access to care" (BCDA, 2011), which was used to lobby the provincial government. They presented the argument that "current economic conditions have increased the access to care challenge for vulnerable populations in British Columbia... [and] access to care is limited for those with public dental benefits as "[m]any [dentists] charge Ministry clients additional fees to cover [treatment] costs, or alternatively limit the number of clients they have as regular patients to minimize the economic impact [on dentists] ."

1.5.2 The provincial government

In 2005, the Province initiated a Framework for 21 core functions in public health to support the delivery of effective public health services including dentistry. Dental public health in the province includes three major activities: health promotion; prevention of dental diseases; and surveillance, assessment and evaluation of dental status and programs (Ministry of Health, 2006). Treatment is not considered a core function of dental public health, although the Ministry recognizes that “health authorities may decide to assist people to access dental care” and that “advocacy for access to dental treatment for vulnerable populations is recognized as a best practice” (p. 5-6). The Interior Health Authority, for example, encourages public dental staff to help people get access to dental treatment, and supports the establishment of community dental clinics (Interior Health, 2008).

Over the last decade, the Province’s reforms to social assistance programs included ongoing enhancements and reductions to public dental programming (Quiñonez, et al., 2007a). In 2001, the government of BC advanced over \$1 million to open the Portland dental clinic to serve the Vancouver’s Downtown Eastside (an urban neighbourhood often referred to as “Canada’s poorest postal code”), arguing dental care is important for people seeking work (Government of BC, 2001). The government also extended the BC Healthy Kids Program, which provides basic dental services for children in low and moderate income families. However, later that same year (2001) a new government would be elected with an agenda to decrease social spending, reducing financial support for public dental programs for adults and redirecting support toward core need clients and emergency need. A month after the redirection of funds, the local newspaper published a front page article entitled, “*Blenders replace dentures for some BC poor.*” Here, a

government spokesperson was quoted as saying that recipients of dental benefits could apply for money to buy a blender to process their food whilst on a two-year waiting-list for new dentures (Fong, 2002). The following day, the Minister responsible for administering dental benefits from the government rescinded some of the restrictions on access to dentists and denturists for clients requiring new dentures (Lavoie, 2002).

Investments in dentistry continued in 2005 when the government announced initiatives at an estimated cost of \$47 million over three years to enhance better access to dental care for low-income families (Government of BC, 2005). Most of the funding (\$36.6 million) went to increase the payments for private dental services, from 63% to 80% of the dentists' fee guide. The British Columbia Dental Association produces an annual suggested fee guide for dentists in BC and insurance plans base coverage percentages on this guide. The public dental plan from the province pays less than the BCDA fee guide, which can deter dentists from accepting patients with public benefits or result in extra expenses charged to economically disadvantaged patients. In recent years, the Ministry rates have been approximately 60% to 70% of the BCDA fee guide. The dental association maintains that, with an expense to gross ratio of 65% for the average dental office, many dental practices charge Ministry clients additional fees to cover costs or to limit the number of patients they will accept with public benefits (BCDA, 2011).

The 2005 initiative also included \$1.5 million to expand the role of community dental services as a way to enhance access to dental care for people on low-incomes. Over the upcoming years (2005-2007), the provincial government offered financial support for community dental clinics to communities throughout the province with limited access to dentistry. Consequently, community clinics were opened in Vancouver, Victoria, Prince George, Kelowna, Kamloops, Vernon,

Salmon Arm, and Dawson Creek. When announcing a \$7,000 grant to the New Life Mission dental clinic in Kamloops, the Minister responsible for social assistance explained that “[c]ommunity dental clinics provide a valuable service to some of our most barriered citizens. By assisting this dental clinic to purchase urgently needed equipment, we’re helping to make a difference in people’s lives” (Government of BC, 2006). Mr. George Abbot, the provincial Minister for Health in 2007, offered further support for community dental clinics at his opening speech for the Salmon Arm clinic, highlighting the key role of community dental clinics in promoting accessible services:

Community dental clinics are specifically designed to meet the unique dental needs of the most vulnerable citizens and provide them with a comfortable, familiar and convenient setting to access the services they require.... Our Government has committed itself to providing the best system of support for British Columbians in need. By partnering with community dental clinics like this one, we’re not only making that commitment a reality, we’re helping to ensure that all British Columbians have access to the services they need to lead healthy and meaningful lives. (Abbott, 2007)

In 2010, investments were again scaled back as the provincial government announced cuts to public dental benefits for anticipated savings of about \$3 million over two years. This was part of a broader cost-cutting initiative to reduce \$25 million in income assistance costs to low-income people in the province (Fowlie, 2010; Government of BC, 2010).

1.5.3 University of British Columbia, Faculty of Dentistry

Throughout B.C. there are numerous community colleges and dental programs that provide service learning opportunities for students and access to treatment for low-income communities. This section focuses on the University of British Columbia's (UBC) Faculty of Dentistry to highlight some of their research and programs that relate to CDCs as they emphasize community involvement, access to care, and service-learning. On the Vancouver campus, the Faculty operates a comprehensive dental clinic providing reduced-fee dental treatment, attended by a large population of low-income patients from various parts of Vancouver and beyond. The Children's Dental Program at UBC has been operating for over 30 years providing free dentistry to low-income children in the Vancouver area. It is estimated that about 350 children access free, basic treatment annually through this program (MacEntee & Harrison, 2011). UBC also offers a course spanning all 4 years of the DMD curriculum entitled *Professionalism and Community Service* (PACS) to link theory with community-based dental services. In addition, the Faculty has a 1-year General Practice Residency Program for recent graduates to gain additional clinical experiences in various community-based dental clinics throughout the province. This program sends dental and dental hygiene students to work with dentists who volunteer their services in dental clinics including clinics at Vancouver's Native Health Society and Abbotsford's food bank, and clinics in First Nations rural areas such as Kuper Island (Zed, 2011).

An extensive literature review supporting a 2001 report (MacEntee, Harrison, & Wyatt, 2001) at the Faculty of Dentistry highlighted the need for dental services to better fit the needs of low-income and Aboriginal peoples in BC. The authors identified community dental clinics operating only in the Lower Mainland of BC as a core problem and recommended that each Health

Authority in the province support the infrastructure and staffing of at least one public dental clinic.

In 2008, a research team at UBC obtained a grant from the Canadian Institutes of Health Research (CIHR) to develop an oral health disparity reduction agenda in BC under the title “*Seeking Equity in Oral Healthcare for Disadvantaged Populations*”⁴. One outcome of the grant was a symposium to develop a research agenda that would contribute to a reduction in oral health disparities of British Columbians. The recommendations from the symposium advocate research on oral health that is informed by principles of health equity, with specific inquiries focused on how dental needs are defined and addressed by different populations, on the benefits and limitations of various treatment alternatives, and on how to distinguish between responses to oral health inequities that could provide a safety net and those that risk being a safety valve to inequitable policies (MacEntee & Harrison, 2011).

1.5.4 Advocates

Over a similar time period (since about 2005), there have been several examples of community health initiatives focused on access to dental care in the province. Evidence from this sector indicates that oral health inequities and access to care are issues of concern in many parts of the province, and are issues that impact a range of vulnerable populations. However, with little known outcomes from these initiatives, these efforts indicate significant challenge to effecting change in this sector.

⁴ CIHR Operating Grant - 2010-09-15

In the Kootenay-Boundary area, for example, a project called “*Healthy Teeth for Healthy Eating*” undertook a comprehensive, multi-year (2006/2007) community development project to improve access to dental care in the region (Kootenay Boundary Community Services Co-op, 2007). In Terrace, the 2008 event “*Dental Health Forum: A Community Discussion on Dental Access*” brought together dental professionals, low-income people and their supporting agencies, Aboriginal groups, and others to seek local solutions (Lee, 2008). The *North Okanagan Dental Access Program* in Vernon has a community health promotion project that provided over \$27,000 emergency dental treatment to low-income residents in one year at no direct cost to the recipients.

In 2007, the Mayor of Revelstoke made a resolution to the 2007 Union of BC Municipalities (UBCM) annual meeting to petition the provincial government for dental care under the Medical Services Plan of BC. At the 2008 UBCM meeting the Terrace Town Council petitioned the provincial government to “take immediate steps to remove access barriers to dental health care, allocate more funding for basic dental care insurance for low income individuals and families in the province and work with the BC Dental Association to resolve the discrepancy between the BC Dental Fee Guide and the actual fees charged by dentists” (UBCM, 2008). There are no known direct outcomes from this action. The provincial government’s official response was to highlight how it is already responding to such demands, including providing public dental

benefits to vulnerable populations, providing \$1.2 million in funding for community dental clinics, and maintaining a positive relationship with the BCDA⁵.

The Provincial Health Officer's (PHO) 1999 annual report recommended the government "[i]mprove access to dental health education and regular dental care, through universal access programs or through specific support to groups without insurance" (BC Provincial Health Officer, 2000, p. 92). In 2002, the PHO again made a recommendation for the province and health authorities to "[i]mprove access to dental health education and regular dental care, through universal access programs or through specific support to groups without insurance" (BC Provincial Health Officer, 2003, p. 108). In 2007, the Public Health Association of BC passed a formal resolution to request the PHO address the relationship between dental health and chronic disease, and the issue of dental health inequity and equitable access to dental care services, in a future PHO's report (Public Health Association of BC, 2007).

A 2008 review of the adequacy of income assistance in BC recommended that employable welfare recipients who are required to seek employment receive the same extended dental benefits as clients with disabilities. The authors argued that "not providing coverage for items such as dental care can create barriers for clients seeking employment" (Klein, Pulkingham et al., 2008, p. 12). Further, a proposed Poverty Reduction Plan for the province in 2008 recommended the expansion of the public health care system and, specifically, improving and expanding the

⁵<http://www.civicnet.bc.ca/assets/Resolutions~and~Policy/Resolutions/ProvincialResponsesto2008UBCMResolutions.pdf>. Accessed on April 22, 2012.

current dental benefits provided through the welfare and Healthy Kids to include low-wage workers and seniors living on low incomes and without benefits (Klein, et al., 2008).

In 2007, the BC Association for Community Living (BCACL) presented the brief “*Nothing to Smile About*” (BCAL, 2007) to the provincial government. The BCACL requested action to address barriers against accessing dental care for people with developmental disabilities, specifically by increasing dental benefits to “resolve the critical issue of access to dental care by upgrading the fee schedule [for dentists] and addressing bureaucratic obstacles that affect dentists and their patients.”

The 2008 and 2009 Child Poverty Report Cards by BC Campaign 2000 recommended that “[a]ll British Columbians need coverage for prescription drugs and dental care. While some workers already have access to extended medical and dental benefits through their work, universal public plans would be even better and also less expensive” as “universal public plans would expand and stabilize coverage for all and reduce costs through economies of scale” (First Call BC, 2008; First Call BC, 2009).

1.6 Summary

In B.C. during a time of increasing income inequality and poverty there has been a rapid expansion of community dental clinics throughout the province. These local responses to oral health inequities in B.C. indicate some awareness of the problem of access and demonstrate a momentum to respond. This momentum has been augmented by collaboration with government, the dental professions, academia and the largely futile efforts of advocates. While commendable, are these local responses adequate or appropriate and ultimate effective reactions to oral health

inequities? There appears to be limited evidence to inform policy and practice. What can we learn from these clinics and the people who are developing and operating them? Could this momentum in B.C. provide a framework for further responses? Health equity theory provides a useful lens to reflect on the CDC phenomena in B.C. to explore why and how these responses are developed and operate and their capacity to build socially health communities and effectively respond to oral health inequities.

2. Methods

2.1 Methodological approach: Interpretive description

My program of research is based on the principles of “interpretive description” (ID), generating knowledge of interest to practice-based disciplines (Thorne, Kirkham, & O’Flynn-Magee, 2004). This approach to qualitative inquiry provides a framework for researchers engaged in inquiries with implications for health policy and clinical practice. ID emerged to create ways of understanding clinical phenomena that can generate theories with direct contextual implications for improving the health of real people and populations. It evolved from the realization that locating clinical research entirely within the theoretical traditions of sociology is less practical for healthcare providers and policy makers (Thorne, 2008). Thorne and others sought ways and means to do both. While other attempts resulted in what has been called “method slurring” (Baker, Wuest, & Stern, 1992), the developers of ID proposed credible applied research methods to serve clinical disciplines, such as nursing.

My affinity to ID is based on my past and current approaches to research. This dissertation builds on my community-based health research initiated in Victoria, British Columbia. This research began over a decade ago, and was instrumental in developing a community dental clinic in that city. My experience as a researcher has predominantly involved conducting applied research, which at different times has been identified as community-based research (CBR), participatory action research (PAR), and simply action research. As a doctoral student I entered a setting where research demands a much more robust theoretical approach than I have applied in the past and where research can sometimes be less responsive to clinical practice but valued rather more

for the theory it generates. Whilst I struggle with the demands of practice and theory, I have discovered that they need not be dichotomized or conflicting, but that they can be complementary. ID provides a framework to bridge the gaps between my ongoing interest in applied research and my current engagement in theory. Thorne identified a “tension between theoretical integrity and utility” (Thorne, 2008, p. 340). She and others developed ID for applied research by clinicians seeking to meet immediate client needs within a logical structure and philosophical rationale that is credible and defensible.

My research agenda has been guided by an interest in discovering what we can learn from individuals and groups interested in oral health inequities and local treatment alternatives. My objective has been to investigate this phenomenon in B.C. to inform policy and practice surrounding this social phenomenon. However, I also seek to conduct these inquiries in a manner that can be potentially applicable to dental public health policy, a process that Thorne advises requires academic processes beyond simply collecting and reporting data (Thorne, 2008).

The progression from my previous field-work to my more theoretical doctoral research includes a less descriptive and more interpretive approach. Thorne and colleagues challenge applied researchers to pose interpretive questions that go beyond the self-evident to demand more than generic qualitative descriptions: e.g. *what is happening here?*; *how are phenomena similar or different from one another?*; and *what patterns exist?* (Thorne, et al., 2004; Thorne, 2008).

The research questions originate from the field of service providers – in this case, community-based dental providers and advocates. As someone who respects the tenets of participatory and community-based research, I begin in these settings and develop collaborations first from this

shared knowledge-base. As part of ID's theoretical scaffolding process, these initial inquiries are moved further into the formation of researchable problems by immersing myself in the literature. From there, I was able to focus my research. This process moved my initial clinical question into a more elaborate and specific research question that extends beyond 'what' to 'why' and 'how' questions. Specifically, I am not just interested in knowing what the problems are for what people and what responses are in existence; I want to engage in research that asks why are some people experiencing problems, why and how are some communities responding, and how can evidence from these responses inform policy and clinical practice relevant to dentistry in B.C. and beyond.

2.2 My position and relationship to the inquiry

I approach the issues related to dentistry from the perspective of a social worker who has been, and continues to be, engaged in community-based, non-profit services to vulnerable populations defined by poverty. My background as a social worker influences my research: what I decide to observe in the field; what I see when I observe; and how I interpret observations. Just as Thorne developed ID as a nurse seeking evidence for nursing practice, I use ID to influence dentistry and dental public health policy from the perspective of an advocate and service provider located in community health centres and similar non-governmental agencies working to address a full range of inequities – one of which is the distribution of oral health. As I now move beyond observation to interpretation, I seek to locate it within the theories and literature of dentistry, oral health disparities, and inequities of access to healthcare.

This research also builds on my community-based health research process initiated in Victoria, B.C. over a decade ago, which was instrumental in developing a community-based dental clinic

in that city. I began the process in the Fall of 1999 with a survey of low-income individuals (N = 150) about access to dental care. This provided evidence of the need for dental care in this community and of how cost was the most significant barrier to accessing these services (Wallace, 2000). I released the findings in the media and presented the report to the Vancouver Island Health Authority (VIHA) to support the establishment of a community dental clinic, and to highlight the need for provincial and national policy changes to address the inequities in healthcare. The following year, the Victoria Cool Aid Society's community health centre commissioned me to undertake a feasibility study and create a business plan for a community dental clinic. The study included 11 interviews with dentists in private practice, social service providers, public health representatives, and people who were unable to afford dental treatment. I also toured existing community dental clinics and public dental programs in the Lower Mainland (Wallace, 2001). That study identified barriers to dental care and led to a business-plan for a community dental clinic for downtown Victoria. The health authority (VIHA) established and subsidized operations of the new clinic. I have continued to be involved with the dental clinic and community health centre in Victoria, and continue to collaborate with emerging and established community dental clinics throughout the province.

2.3 Epistemological foundation

Guba and Lincoln (1994) identify positivism, post-positivism, critical theory and constructivism as the predominant paradigms that have defined research. More recently, however, they recognized that these paradigms cannot be treated as a set of universally applicable rules or abstractions (Lincoln & Guba, 2000). Subsequently, other researchers have extended the theoretical approaches to constructivism by adding the participatory/cooperative paradigm

(Charmaz, 2000; Heron & Reason, 1997). Thorne (2008) draws from Lincoln and Guba in identifying constructivism as a foundation of interpretive description influenced by interpretive naturalistic inquiry. Constructivism acknowledges that multiple constructed realities exist and that the researcher provides “constructed truths ... in a manner that transforms raw data into a structure that makes aspects of the phenomenon meaningful in some new and useful way” (Lincoln & Guba, 1995, p. 6). According to Thorne et al. (2004), the key axioms of Lincoln and Guba’s naturalistic inquiry provide the philosophical underpinnings for ID research design by acknowledging the following principles:

- Multiple constructed realities can be studied only holistically since reality is complex, contextual, constructed, and ultimately subjective;
- The inquirer and the “object” of inquiry interact to influence one another; indeed, the knower and known are inseparable;
- No *a priori* theory could possibly encompass the multiple realities that are likely to be encountered, and theory must emerge from the particularities of each reality (i.e. “grounded in the data” (Thorne, et al., 2004, p. 3).

ID relies on inductive reasoning with typically concurrent collection and analysis of information, often incorporating constant comparative methods between existing and emerging information (Thorne, et al., 1997; Thorne et al., 2004). The research process that I undertook is iterative, and includes three primary collection strategies that incorporate knowledge from each step of the process to guide decisions about collecting additional information. The iteration allowed for theoretical sampling in which one stage follows somewhat dependently from another to refine or modify the next research question. This process continued until there is evidence of saturation,

understood as the point at which no new information seems to be emerging. It also includes a follow-up process where I conducted a secondary analysis of findings to build theory from the results of my analyses.

2.4 My theoretical framework: Health equity

My theoretical foundation is underpinned by three features of health inequity, suggesting that it is systematic, produced socially and therefore modifiable, and essentially unfair (Whitehead, 1992). Achieving health equity would see everyone attain their full potential regardless of socially determined factors (Dahlgren & Whitehead, 2006). Equitable healthcare differs from health equity. Equitable healthcare is focused on the policies and practices that address the multiple dimensions of access (geographic, economic and cultural), with the aim of ensuring access to all and ensuring the same quality of care for all (Dahlgren & Whitehead, 2006). A health equity approach to social inequities seeks to “level up” the health of underserved and disadvantaged people to the health of the most advantaged (Whitehead & Dahlgren, 2006). A health equity perspective would focus more typically on the social determinants of health (SDOH) than on individual or biomedical outcomes (Marmot, 2003; Raphael, 2004). I focused my research on local treatment alternatives rather than on individualistic or epidemiological indicators of disparity.

2.5 A qualitative framework: Naturalist inquiry

There has been an increasing interest recently in humanistic or qualitative methods for dental research (MacEntee, 2007; McMillan, 2009; Stewart, et al., 2008). For example, Bedos and others in Montreal used interviews, focus groups (Bedos et al., 2003), and a combination of these methods (Bedos et al., 2005; Bedos et al., 2005) to explore the dental care pathway of welfare

recipients in Quebec. These researchers believe that these studies are possibly the first to describe a dental nosological model of low-income people (Bedos, Levine, & Brodeur, 2009). Researchers in Montreal have also undertaken participatory research to seek knowledge to improve interaction between underprivileged people and dental care providers (Levesque et al., 2009). Blinkhorn (2002) advocates for action research within dental public health to ensure that both qualitative and quantitative research does not get stuck in defining and measuring the problems, but is instead engaged in testing interventions and providing government officials and the public with scientifically validated solutions. Similarly, there are recommendations for the active participation of local communities in the development, planning, and implementation of interventions (Watt, 2002).

2.6 Research design

I conducted three studies as part of my overall inquiry. Study #1 sought to understand the problems of access to dental care from the the perspectives of low-income people, dentists, and related health and social service-providers. Study #2 investigated the expansion of community dental clinics in B.C. from the perspectives of dental professionals and other service-providers who develop and operate these services. Study #3 focused specifically on not for profit dental clinics in B.C. that operate with paid staff who provide dental services beyond pain relief. This study investigates the perspective of dentists and managers on how they provide services and sustain operations. I will discuss the design of each study separately.

Original data collection for studies two and three occurred prior to commencing my graduate studies and I conducted a secondary analysis of the information gathered in this earlier research.

Heaton (2008) defines qualitative secondary analysis as the re-use of pre-existing qualitative data

derived from previous research, with two primary objectives: (1) to investigate *new* or *additional* research questions; or (2) to *verify* the findings of previous research. Her review of such studies found that most qualitative secondary analysis studies are those that utilize “self-collected data,” where researchers re-use their own data in order to investigate new or additional questions or to verify previous findings. Similarly, I conducted a secondary analysis of the qualitative interviews. The focus of the secondary analysis is consistent with the objectives and protocols outlined in the primary research.

2.6.1 Study #1: Access to dental care

The research focused on two proximate B.C. communities where no community dental clinics existed and where anecdotal evidence from regional dental public health indicated interest in responding to perceived barriers to dental treatment. The objective was to explore access to dental care for low-income communities from the perspectives of low-income people, dentists, and related health and social service-providers. The study benefitted from collaborators who provided input in the research design, the revisions of research instruments, and the validation of the findings. The primary collaborating group was comprised of dental public health staff from the region with further consultations with my supervisor and committee members at UBC.

Data collection included 60 interviews from three cohorts: low-income people who sought or perceived that they needed dental care in last two years (N=41), dentists (N=6), and other healthcare or social service-providers (N=13). Participants with low-income were recruited through postings and handbills distributed to social service and healthcare providers in the community, and by newspaper announcements. Dentists were invited by letter from a list of 36 dental offices and 50 dentists maintained by the local health authority, and six of them were

interviewed. Providers of healthcare and social services were identified by the social service agencies and invited by email to participate. The interview with low-income participants began with open-ended questions, allowing respondents to freely relay their experiences and perspectives. At the end of each interview, participants were asked for basic demographic information along with information about how they perceived their oral health status. As interviews progressed, I purposefully sought a diversity of recruits with low incomes, social benefits, and from specific age groups, along with a reasonable balance of men and women, and of individuals with Aboriginal and non-aboriginal status. Population health and economic data were retrieved with the assistance of VIHA's Population Health Observatory. This contextual information on the region provided the research with larger picture data in which to interpret our findings.

Through an iterative process of constant comparison, interviews were reviewed throughout the research to identify emerging themes and gaps in knowledge, and I modified the recruitment and interview guides accordingly for subsequent interviews. All interviews were recorded with a digital voice recorder and transcribed verbatim. NVivo™ software was used to manage the analysis of each transcription using a thematic identification and coding. The demographic information on each participant was collected by questionnaire and used to help explain the context of each interview.

2.6.2 Study #2: Community dental clinics in BC

There is little available research on community dental clinics, especially in a Canadian context. And yet, in B.C., the numbers of clinics was found to be expanding rapidly in response to perceived barriers to dental care for vulnerable populations. The objective of this study was to

investigate this expansion of community dental clinics in B.C. from the perspectives of dental professionals and other service-providers who develop and operate these services.

Data collection sought to include all known community dental clinics and related local initiatives in the province. I sent requests for interviews to the administrative and clinical staff to all clinics in B.C.; totalling seven rural and six urban community dental clinics either operating or developing in the province, and to the public-health dental hygienists in each of the five health authorities. Recruitment successfully included participants from all of the clinics and authorities. The sample included 63 participants (four dentists; eight clinic-staff; nine clinic-managers; 30 dental hygienists; and 12 allied health care or social service workers) for six individual and nine group interviews. One interview guide was developed from existing knowledge on health care inequities to enquire about the need for dentistry in the community, and about the history and operational attributes of each clinic. All of the interviews were audio-taped, transcribed *verbatim*. Each transcript was read several times and compared to preceding interviews by myself. Within NVivo™, texts were coded with help of thematic notes and personal memos to merge concepts, prepare for subsequent interviews, and code the experiences and opinions of the participants.

2.6.3 Study #3: Case study of NFP community dental clinics

The objective of this research was to focus specifically on not for profit dental clinics in B.C. that operate with paid staff who provide dental services beyond pain relief, with the aim of explaining the provision of services and sustaining of operations from the perspective of dentists and managers.

The research design was a descriptive case study design. I selected purposefully and recruited all five of the clinics in the province that met our inclusion criteria, of operating full-time with paid professional staff, and of providing dental services beyond pain-relief. This excluded volunteer charitable clinics, teaching clinics, and any dental services provided by dental public health. The research design included the collaboration of each clinic, and the project began by bringing together staff from all five dental clinics to discuss research objectives and data collection strategies. Following the analysis, this same group was reunited to review and provide feedback, allowing for a process similar to a member check (member validation).

Data collection combined quantitative program data with qualitative interviews with key staff members. To identify financial and clinical activities in the clinics, I collected aggregate patient, procedural, and financial data over one year from all five clinics. These statistical data were entered into Excel to produce program measures for all five clinics. Myself and one other trained interviewer used an interview guide to conduct open-ended interviews with eight staff members (two dentists; three dental managers; and three executive directors). All interviews were audio-recorded, transcribed *verbatim* and entered into NVivo™ to assist in coding and organizing into major themes.

2.7 Analysis

The goal of my qualitative analysis in these three studies was to understand the range of meanings in the transcribed interviews. Transforming data into findings is an inductive approach that includes identifying which data are important, grouping and sorting them into patterns, and considering relationships between the pieces and patterns. The analytic procedures in interpretive description capitalize on such processes as synthesizing, theorizing, and recontextualizing rather

than simply sorting and coding. Specifically, Thorne (2008) advises researchers to take their analysis beyond description to a thematic description and then to go beyond that to interpretive explanations that show or clarify thematic linkages in a new way. The process she describes seeks to take “data from pieces and parts into patterns and relationships and toward more integrated conceptual claims and interpretations” (Thorne, 2008, p. 166). The outcome of such a process can be a thematic summary. In my research, I was guided by the 4-stage process developed by Morse (1994) and recommended by Thorne as a useful conceptual guide analysis:

1. My first step focused on comprehending as I sought to learn everything possible about the situation being studied.
2. Next I focused on synthesizing, as I began to merge data where I see patterns. The goal of this process was to decontextualize the individual quotes and experiences from a particular respondent to discover potential common experiences or views among participants, as well as possible divergent responses and themes. As Morse advocates, at this stage I was trying to generate themes and then test, revise or discard these themes through the synthesizing process.
3. The next step was actual theorizing, where I sought to develop explanations by asking additional questions of the data on the basis of my insights about the research setting, the literature about these emerging themes, and my theoretical framework.
4. Lastly, I looked for opportunities for recontextualizing, which is where I looked for opportunities to bring these theories from the analysis process into practical findings that can be applied to real life settings and possibly generate new knowledge.

In my research, I used a constant comparative analysis to uncover commonalities and patterns across interviews to develop new theories, or refine existing theories, about managing disparities in oral healthcare (Glaser & Strauss, 1967). Working with the assumption that issues such as access to care and oral health inequities are socially constructed, I compared and contrasted different kinds of manifestations of these inequities in the contexts that they occur. My objective was not at the level of words and expressions but more in the realm of themes and ideas. The interpretative emphasis in ID required an effort to look beyond the obvious, and rigorously test out that which is observed to develop potential meanings and, subsequently, to develop meaningful findings for practitioners.

Analysis of the transcripts within NVivo™ began with a conventional content analysis (Hsieh & Shannon, 2005). Initial coding is developed through the review of transcripts, through a process of looking for text that captures key concepts. Memos were made to record my impressions, questions and initial analysis, while good examples of text representing specific categories of information and themes were marked for future use when recontextualizing information and modifying or developing theory. Following this initial coding, I sorted the codes by looking for patterns and connecting related codes into categories. The information within each code (free node) and then within each category (tree node) were compared, contrasted, and revised as I moved towards an overall thematic construct or framework.

2.8 Validity and rigour

A potential limitation of my research is the possible imposition of my own understandings and expectations of oral health inequities, professions, and public policies into the analysis. To enhance the rigour of the project, I addressed this potential limitation in the following ways:

- Carefully attending to the contextual analysis (through the process of recontextualization) to best ensure that coded statements from interviews were interpreted within the context of their full response and their attributes;
- Cross-checking my interpretations against examples of rival theories or competing explanations that could explain the results better;
- Looking for “deviant cases” or alternative theories;
- Triangulating information to validate and identify different and converging evidence and interpretations of the information I gathered, as explained by Yin (2009).
- Including multiple sources of evidence, including quantitative data. These processes are focused on the same phenomenon providing a convergence of evidence that can provide multiple measures of the same phenomena.
- Including opportunities for collaborators (e.g. participatory committees and my supervisor) to help interpret and apply my analyses (Glaser & Strauss, 1967).
- Assessing the pragmatic value of my findings by relating them to information we already have about dental practice in BC and elsewhere (Kvale, 1995).

3. Access to Dental Care for Low-Income Adults:

Perceptions of Affordability, Availability and Acceptability

In Canada, inequities in access to healthcare and dentistry specifically for low-income and vulnerable populations are well documented (Bryant, et al., 2009; Lawrence & Leake, 2001; Locker, 2000; Raphael, 2007). Population data confirms oral health inequities generally (Health Canada, 2010), however, there is limited information about how to address the needs of low-income and vulnerable communities (Loignon, et al., 2010; MacEntee, 2006; MacEntee & Harrison, 2011; Quiñonez et al., 2010).

Access to public benefits does not automatically ensure access to health services (Birch & Anderson, 2005; Bryant, et al., 2009), which suggests that many complex issues determine perceived needs, access and utilization of dental care, and that this complexity should be considered to help develop public policy and clinical practice (Dharamsi et al., 2007). Currently we know little about how people on low incomes and dentists perceive one another (Pegon-Machat et al., 2009)

3.1 Models of access to care

The Behavioral Model of Health Services Use was developed and revised to explain why people, and particularly low-income communities, need and are disposed to use health services, and to identify factors that enable or inhibit access to care (Andersen, 1968; Andersen, 1995). The Behavioral Model for Vulnerable Populations (BMVP) uses the same framework but includes other issues, such as mental health, substance use, competing needs, and victimization (Gelberg, Andersen & Leake, 2000). Further expansion of the BMVP attempted to account for the context

of access to care, along with the social, economic and public policy environments that influence access (Davidson et al., 2004). The BMVP has been used extensively to provide explanatory or predictive analysis to utilization rates (Karikari-Martin, 2011).

Penchansky's Model defines and measures access as a multidimensional phenomenon with five overlapping dimensions: availability; accessibility; accommodation; affordability; and acceptability (Penchansky & Thomas, 1981). It considers the fit or compatibility of the healthcare system and the people who attempt to access it, assuming that satisfaction influences utilization of services. Therefore, access is considered as a multidimensional interaction of events and circumstances (McIntyre, Thiede, & Birch, 2009), which is useful when focused on subjective experiences and perceptions of access rather than on utilization rates (Karikari-Martin, 2011). In its application, the five dimensions are sometimes modified or reduced, for example to: availability; accessibility; and acceptability (Chen & Hou, 2002; McIntyre et al., 2009; Nelson & Park, 2006) whereas others focused solely on a single issue, such as geographic accessibility (McCarthy & Blow, 2004).

Acknowledging that the models of access to care are not static but rather in constant flux, there are recommendations to work towards composite access measures using the various theoretical models (Karikari-Martin, 2011). A prevalent commentary is the need for access models to better incorporate the socio-political context in which people and health services interact (Davidson et al., 2004; McIntyre et al., 2009; Ricketts & Goldsmith, 2005). There is a growing awareness that models based on analyzing population databases alone do not necessarily capture the reality of life in vulnerable communities. However, information about specific communities are essential to effective health policy (Newton & Bower, 2005; Ricketts & Goldsmith, 2005). Indeed, there

has been a call to move beyond behavioral models of access focused on the individual and towards a view of access to care in its broadest sociopolitical context to incorporate conditions that perpetuate inequities such as income, food security, housing, and institutionalized oppression (Pauly, MacKinnon & Varcoe, 2009; Stevens, 1992)..

The two possible approaches to exploring healthcare needs and utilization are “clinical” or “subjective” (Allin, Grignon, & Le Grand, 2010). Population health surveys such as the Canadian Health Measures Survey (Health Canada, 2010) confirmed the prevalence of oral health disparities for economically vulnerable groups who cannot address their needs because of financial reasons. Further exploration with interviews is possible to engage people knowing about the need for and utilization of healthcare in specific communities. This paper reports on a study involving interviews with low-income people and those who provide them with healthcare to explain the interaction of social and political activities that influence access to oral healthcare for vulnerable communities.

3.2 Methods

3.2.1 Interviews

Sixty interviews were conducted among low-income people who sought or perceived that they needed dental care in last 2 years ($N = 41$), dentists ($N = 6$), and other healthcare or social service-providers ($N = 13$). Participants with low-income were recruited through postings and handbills distributed to social service and healthcare providers in the community, and by newspaper announcements. Dentists were invited by letter from a list of 36 dental offices and 50 dentists maintained by the local health authority, and six of them were interviewed. Providers of

healthcare and social services were identified by the social service agencies and invited by email to participate. The interview with low-income participants began with open-ended questions allowing respondents to freely relay their experiences and perspectives. At the end of each interview participants were asked for basic demographic information along with information about how they perceived their oral health status. As interviews progressed, we purposefully sought a diversity of recruits with low incomes, social benefits, and from specific age groups, along with a reasonable balance of men and women, and of Aboriginal and non-aboriginal status. Through an iterative process of constant comparison, interviews were reviewed throughout the process to identify emerging themes and gaps in knowledge, and we modified the recruitment and interview guides accordingly for subsequent interviews.

3.2.2 Textual analysis

All interviews were recorded with a digital voice recorder and transcribed verbatim. NVivo™ software was used to manage the analysis of each transcription using a thematic identification and coding (Charmaz, 2000). We identified in each transcription the categories of information coinciding with the research questions, and searched for themes using an inductive technique that moves from the particular experiences of the participants to general themes (Lincoln & Guba, 1985). As themes emerged, we used an iterative coding process to analyse and refine our understanding of each theme. The demographic information on each participant was collected by questionnaire and used to help explain the context of each interview.

3.3 Results

3.3.1 Social and self-assessed health characteristics of the participants

There was an age range of 21–62 years (mean: 45 years) among the 41 low-income participants, and a similar distribution of men and women (Table 1). Only four participants had paid-employment, and most received social assistance. Fifteen of them rated their oral health as good to excellent, whereas 23 of them experienced dental pain “sometimes” or “often” and 19 used their physician or a hospital emergency department for dental pain. Cost, fear and transport was the most frequent reason identified for not visiting a dentist.

3.3.2 Perceptions of oral healthcare needs

The need for dental treatment was associated with references to toothache, cavities and missing or fractured teeth, typically for longstanding and multiple dental conditions. A young man (24 years) stated quite directly “*as you can see, my teeth are kind of falling out in front here ... just the other day a tooth fell out*”. Overall, we heard that dental problems were addressed only when they became unbearable, as one woman who had a tooth extracted within the past year explained “*my income just won't cover the extras like going to the dentist; it's just not in it. So, the only time I go is when I'm in severe pain.*” Dental needs when identified by a dentist frequently went untreated even when the need seemed extensive, such as “*twelve cavities, an abscess, one abscess, [a] root canal, and ... an extraction*” as we heard from one woman. Preventive care, such as check-ups and dental hygiene, were mentioned usually as desirable, but more as luxuries than as necessities.

The dentists were aware of people on social assistance who had difficulty getting dental treatments because of poverty, homelessness, old age or severe disability, and they were frustrated by the limited treatment covered by public dental benefits, or, as one dentist stated, “*I think the biggest thing that’s missing ... is they have no way to get teeth made if they have to lose all their teeth*”. The allied health and social service workers reported that they frequently encountered people with chronic toothache, and visibly decayed or missing teeth, and one health provider complained how “*you see*” “*a lot of low-income workers... [in] \$8 an hour job places... [with] teeth [that] are disgusting... [because] obviously it’s low on the list of priorities.*” They complained also about how they were unable to help their clients get dentures following extractions, and could do little more than ensure that they had soft food.

3.3.3 Impacts of unmet needs

Low-income participants described how missing or poor teeth disturbed their ability to eat. A woman in her late 50s with no teeth and diabetes complained somewhat defiantly how:

“my digestive system is going all out of whack all because I [cannot] chew my food ... you know there’s going to be problems in the end, and then I’ll probably end up in hospital really ill and it’s going to cost them even more money.”

A soup kitchen employee observed “*lots of people walking around with no teeth because, I don’t know how you access denture services through the Ministry but I know that if it was possible a lot more people would have teeth*”. An edentulous man in his mid-40s with public dental benefits described how “*they say they will pay for... extractions... [of my teeth, but] they’re not even there anymore, you know I’m down to about 108 lbs. from 210... you can’t get fat on soup.*”

Another woman who operates programs for women explained how they had to adapt their food program to *“provide food that people who don’t have teeth can eat, ... We really have to think in terms of what people can actually manage to eat if they’ve got bad teeth.”*

The providers generally felt that unmet dental needs undermined their ability to assist clients in getting shelter, securing employment and improving health. A nurse explained the challenges of treating a patient who is *“doubly affected by the toxins”* from chronic liver disease and rampant caries from an addiction to crystal meth. The consequences of this dental neglect were, as one social service provider explained, a major loss to *“their self-esteem... dignity and... ability to either hold work or find jobs, and [maintain] their health so they can keep up with their daily living activities.”* A recently unemployed man with visible dental decay concurred *“It’s kind of hard to get into a serving job ... because you’ve got bad teeth right? ... [I’ll] go for an interview and try not to smile but whose going to hire a guy that doesn’t want to smile?”*

Walk-in medical clinics, physicians’ offices and hospital emergency department featured in many interviews as a source of dental care for low-income people. A dentist commented that *“the medical clinic is the frontline for dental infections... some people, all they want is relief, they don’t have any hope to deal with the problem fundamentally.”* As one low-income person explained, *“you can get to see a doctor for free but a dentist you have to pay for.”* This behaviour might well address the financial barrier to care, but concerns were raised also about the quality of dental care in emergency departments by physicians who prescribe medications rather than remove the source of pain and infection. The consequence, we heard, is that patients *“get out of trouble for ten days and then they’re back again”*. We heard also that emergency departments do not always welcome people who are homeless or those who use illicit drugs, as one such person

explained “*that’s the first thing that comes up on the computer ... I couldn’t even get a painkiller.*” However, another man told us how he eats “*acetaminophens like candy*”, and yet another complained how welfare paid for weekly prescriptions of Tylenol 3’s but refused to pay for dentistry. It was clear from several sources that the drug dealer provided much temporary relief from toothache.

3.3.4 Barriers to affordability

Low-income participants along with dentists and other healthcare providers identified the cost of dentistry and the inadequacy or inaccessibility of public insurance schemes as major impediments to dental services for low-income people. A man receiving temporary social assistance complained that “[*a*]fter I pay my rent and my hydro and my phone, I’m left with about forty bucks a month to live on.” A woman with children working part-time explained how “*I definitely need dental care but it’s a matter of finances ... my income just won’t cover the extras like going to the dentist ... so the only time I go is when I’m in severe pain ... it’s one of those things that are in the lower list.*” A nurse concurred saying “*It’s just not their priority, their money has to go to other things—food and childcare and transportation—and all of those sorts of things... [and] things like glasses and teeth are luxuries*”.

While dentists agreed with these financial constraints, they also raised the influence of competing values and priorities. One dentist complained about this “*priorities question*” with the opinion that some people who “*say they can’t afford dentistry... suddenly show up in a new car*”. Another complained how “*they think it is too expensive because they don’t value their health enough to say ‘if I give up smoking I can afford to get my teeth fixed’*”.

Low-income people who cannot afford to access a dentist usually blamed a failure in public policy. Dentists also expressed multiple frustrations with public dental plans and the difficulties of operating a dental practice when dealing with government bureaucracies because, as one explained “*dentistry has to run as a business first and healthcare second ... it’s not a benevolent healthcare service*”. Particular concern focused on discrepancies between the fees paid by public dental benefit plans and the fee guide used by the local dental association. Another equated dental practices to most other business and explained that “*the local grocery store doesn’t charge [low income customers] less for their milk or the corner store [charge less] for their cigarettes.*”

Nonetheless, there is some access to public dental benefits for people with low incomes, as we heard from a young Aboriginal woman who explained that “*actually my dental care has been pretty easy for me because whenever I had a problem I’d just go to a dentist and show my Status card and book an appointment*”. Yet, the dentists we interviewed believed that change is required by government and not by the dental profession, because they claim that basic dental care is “*basic healthcare, much like going to the physician... for some disadvantaged people, at least the basics need to be covered, not that it needs to be crowns or bridges or things along those lines, but if the fillings could be covered*”.

3.3.5 Barriers to availability

The availability of healthcare can be viewed from three perspectives: the geographical distribution of services; the fit between services and needs; and the willingness and resourcefulness to service the needs of a particular community. Dentists yearned for a “*good balance*” between demand for care and the dental practices in the region. Others acknowledged the reality of distance in a rural region, but without complaint or concern. There were concerns

from low income participants in particular about ‘balance billing’ whereby dentists expected patients to pay an extra fee to balance or cover the difference between their usual professional fee and the treatment fee paid by the public benefits, and also to pay the total fee in advance of treatment. This was explained by a woman who described how she had “*a really difficult time finding a dentist that actually... bills the government. All of them now want you to pay and then get reimbursed ... they prefer to see patients that have the means and the money to get their teeth fixed so they’re automatically paid*”. This practice was confirmed by a social service provider who remarked that “*there are not many dentists [who] work at income assistance rates... so people on income assistance don’t have easy access to [dentistry]*.” Another participant explained further that in her town “*there’s one dentist [who] agrees to do some work periodically without charging over the fee schedule that welfare will pay. But, of course, he would be inundated if he did it for everybody.*”

This practice of balancing billing leads of course to outstanding debts, as we heard from an edentulous man with only one denture because, as he explained, “*I still owe that denturist \$300 and I need, bottom ones, right? I can’t go back to her or anything till I resolve this payment*”. Similarly, we heard from a woman how “*dentists don’t do payments anymore, “they want the money up front even before they look at you*”.

3.3.6 Barriers to acceptability

The third dimension of access is concerned with the expectations between providers and recipients of dental services. Cognitive and physical disabilities, compounded by substance use and homelessness, can be serious impediments to accessing treatment in the traditional dental practice, as we heard from a social service provider who estimated that “*the majority of my*

clients are not able to follow through with going to an appointment ... I work with mostly addicted people and people with mental health issues, so that says it all right there... [there are] major issues for dentists to try and work with that population". We heard from dentists about difficulties managing patients in wheelchairs or long-term care facilities, or who need sedation. Moreover, according to a social service provider:

“an inability to access dental assistance and the inability to access housing go hand in hand, not exclusively, but certainly there’s a high profile of people in that category who are walking around with infected teeth and getting sick from that.”

Fear of dental treatment and associated anxiety was identified by many low-income participants as reasons for avoiding dentists, even when public dental benefits were available.

Social service workers discussed the challenges in serving clients without phones and those who are couch surfing, inadequately housed or homeless;

“The vast majority of my clients do not have a telephone ... they make appointments with all good intentions but it could be 6 weeks down the road... The whole system is built on assumptions that everyone is the very organized sort of middle class lifestyle where we have phones, and day timers, and palm pilots and things like that.”

Some dentists associate missed appointments by patients on public benefits with a lack of respect, especially, as one dentist complained, when.

“they usually don’t call, they are unreliable, and so yeah, a lot of dental offices won’t treat them because they are giving it away. Basically you are doing it at cost and they don’t even show anyway so it’s completely wasted your time and your space.”

The contrasting view from low-income people is that dentists are greedy and should show more compassion, as a woman on disability benefits pleaded: “*surely there’s got to be a little mercy for people that for one reason or another are on the bottom of the rung with income, you know. It would be nice if there was mercy shown*”. Indeed compassion was identified by several participants as critical to enabling access for this community.

One dentist commented that health and social service-providers in town “*tend to paint the dentists ... like we should be guilty because we are not seeing these people.*” Dentistry is seen by some as largely a business operating outside of the social safety net. A social service worker described how dental offices were unlike other agencies serving people in poverty:

“They’re not very accessible places. They’re worse than doctor’s offices in my own personal experience. They’re stuffier, and you know, everybody from receptionists to everybody’s outfits are perfect... they make a lot of money so they usually look really nice and you send in one of my guys in there—messes up the whole atmosphere.”

Others were even more critical of dentists who they believe are not interested in public health service but “*go into dentistry because it is profitable*”.

Overall, these findings confirm the complex barriers to accessing dental care for low-income communities. Low-income people face considerable barriers to accessing care, while dentists

perceive considerable barriers to providing care within the restrictions of private practice and the limits of public dental benefits.

3.4 Discussion

This study identified the different perceptions held by low-income people, dentists and health and social service-providers about access to dentistry. It confirms some of the concerns identified by others about the cost of dentistry (Millar & Locker, 1999), the use of physicians and hospital services for emergency dental treatments (Chi & Milgrom, 2008; Cohen et al., 2009; Quiñonez et al., 2009) and reports of self-care for toothaches and other serious dental problems (Bedos et al., 2003; Bedos et al., 2005). We heard clearly that dental costs are perceived as a low priority relative to the struggle for food and shelter in low-income communities (Muirhead et al., 2009; Reid et al., 2008) including those experiencing homelessness (Daiski, 2007; De Palma & Nordenram, 2005; Gelberg, Lin, & Rosenberg, 2008). There was a strong belief among many of the participants, whether recipients or providers of care, that financial barriers to dentistry are due largely to a failure of public dental benefits to provide both necessary care for vulnerable communities and necessary reimbursement for dental services (Quiñonez et al., 2010). Current barriers to access were attributed to fiscal restraint programs and successive welfare reforms (Williamson et al., 2006). There were strong opinions also that dentistry as it is usually available in private practices is incompatible with the provision of public health benefits to meet public oral healthcare needs. Moreover, dentists feel imposed upon to provide services at lower costs to some individuals and not to others, while people who are impoverished financially feel that dentists lack compassion and are motivated solely by financial gain.

For vulnerable populations, access to available services is not just a consideration of physical or geographical access, but rather the availability of dentists and other dental professionals willing and able to serve the population. Public dental benefits do not guarantee access to dental treatment because there are many dentists in private practice who refuse to accept patients with the benefits (Birch & Anderson, 2005; Greenberg, Kumar, & Stevenson, 2008; Patrick et al., 2006; Quiñonez et al., 2009). This study found rationing of dental services occurring, where dental offices may refuse certain patients or public benefits, but more often limit, or ration, access to these populations (Pegon-Machat et al., 2009). Dentists can defend rationing as they perceive the needs to far exceed their ability to provide access (Andersen, 1968).

The research uncovered significantly differing beliefs and perceptions that could influence acceptability and ability to provide and receive care (Bedos et al., 2003; Levesque et al., 2009). The perception within the low-income community that dentists are “greedy” compounded by the feelings of dentists that people who are poor and receiving public benefits are bad and disrespectful patients is hardly a mixture for a successful health service. These feelings and perceptions are not likely to help overcome the usual fear and anxiety associated with dental treatments (Bedos et al., 2005; BDA, 2003; Collines & Freeman, 2007). Participants typically related their fear to past experiences, but no doubt their fear was exacerbated by current anxieties and a general sense of vulnerability.

Missed appointments by low-income patients was perceived to be a significant barrier by both patients and providers. A higher rate of missed appointments among vulnerable populations has been documented in other research (Pegon-Machat et al., 2009). While some dentists perceive

the missed appointment to be indicative of disrespect or not valuing one's oral health, others acknowledge how the social determinants of health can affect access (Loignon et al., 2010).

The perceptions expressed by dentists in this study reflected the real challenges inherent in providing care for economically vulnerable patients with complex needs (Dharamsi et al., 2007). People with active substance abuse, mental illnesses, and homelessness or abuse face individual barriers to seeking and accessing care and the service-providers also face real challenges (De Palma & Nordenram, 2005; Frankish, Hwang, & Quantz, 2005; Hwang, 2001; Hwang, 2002; Moore, Gerdtz, & Manias, 2007). There is a growing awareness that dental professionals should overcome this social gap by enhancing their appreciation of the social context in which their patients live (Dharamsi & MacEntee, 2002; Loignon et al, 2010).

3.5 Limitations

This research explored the perceptions of participants, but we did not check the perceptions against the clinical status, health records or other sources that might have helped to explain the psychological and social context of each participant. All of the low-income participants were selected purposefully to reflect a diversity of income sources, Aboriginal status, gender and age; however, the explanations we heard were probably biased by the tendency of our recruitment strategy to attract people with strong opinions based on unpleasant experiences. We recognize that generalizability is limited but the sample size was suitable for achieving our goal of exploring the complexities of access to care from both the provider and patient perspectives. Sampling did not adequately capture the experiences of employed low-income population, often referred to as “the working poor” rather the majority of the sample represents individuals who

have some access to social assistance. Perhaps a telephone survey will help to explore the oral health issues of this population (Muirhead et al., 2009).

3.6 Conclusion

We explored the affordability, availability and acceptability of dental services encountered by low-income communities and their care-providers. Interviews with people on low-incomes, dentists and social service-providers identified clearly the incompatibility of private practice dentistry, public dental benefits and the vulnerabilities of people living in poverty. The major barriers for both dentists and low-income communities seem to be the financial demands of dentistry and the cultural conflicts that occur when people from low income communities attend private dental practices.

Affordability is probably the noticeable barrier to dentistry in these communities where financial barriers are high and dental needs compete with other more pressing everyday needs, such as food and shelter. Moreover, dentists complain that the reimbursements provided by public dental benefits do not cover their business expenses, and they are resentful of demands that they feel are not expected from other businesses or professions. Addressing access to dental care ultimately requires actions that alleviate poverty that puts people in the position of choosing between competing basic needs.

The financial barriers were attributed to health and economic policies that provide public dental benefits that are neither sufficient to meet the needs of the communities nor the resources of dentists. Additional barriers to dental services were associated with mental illnesses, physical disabilities, substance abuse, and other traumas among people living in poverty for which most

dentists in private practice seem ill-equipped to manage. And, finally, there was widespread awareness among all of the participants that many private dental practices are inhospitable to people who are impoverished, disabled and ill-equipped in many ways to keep appointments and pay their debts. Solutions to the concerns raised and barriers identified were not readily available from our analyses; however, it seems reasonable that alternative models of delivering dentistry to low-income and vulnerable communities are needed beyond the model of private clinical practice. Further investigations are underway to study the potential of community-based health clinics or similar integrated care clinics to meet these dental needs.

Characteristic	#	Characteristic	#
<i>Gender</i>		<i>Insurance for dental expenses</i>	
Male	21	Government sponsored	30
Female	20	Employer sponsored	1
<i>Age</i>		No	8
19-24	3	Don't know	2
25-54	28	<i>Dental Visits</i>	
55-64	8	More than once a year (check-ups)	1
<i>Aboriginal Status</i>		About once a year (check-ups)	5
Yes	11	Less than once a year (check-ups)	3
No	30	Only for emergency care	32
<i>Source of income</i>		<i>Reason for not visiting dentist</i>	
Paid-employment	4	Cost	16
Income assistance- temporary	13	Cost & fear or transportation problems	8
Income assistance –disability	20	Fear	4
Employment insurance	1	Have not gotten around to it	5
None	3	Did not think it was necessary	1
<i>Regular physician</i>		Not available in the area	1
Yes	30	Wears dentures	1
No	11	<i>Teeth removed in last 12 months</i>	
<i>Self-rated general health</i>		Yes	10
Excellent	5	No	31
Very good	4	<i>Access dental services elsewhere</i>	
Good	12	No	22
Fair	16	Yes. Emergency department	11
Poor	4	Yes. Doctor	8
<i>Self-rated dental health</i>		<i>Experience dental pain</i>	
Excellent	2	Often	7
Very good	7	Sometimes	16
Good	6	Rarely	8
Fair	13	Never	10
Poor	13		

4. Perspectives on Community Dental Clinics in British Columbia

4.1 Introduction

Income inequality in Canada is significant and increasing at a higher rate than in the U.S.A. since the mid-1990s.⁶ Health inequities are well documented in Canada where people with low compared with high incomes have significantly poorer health, most dramatically among Aboriginal peoples.⁷ Overall, the health of Canadians is robust, yet despite Canadian Medicare accessibility to primary care can be challenging for communities where homelessness, addictions, poverty, and other complex social forces are prevalent (Browne et al., 2011; Hwang et al., 2010; Raphael, 2007).

Responses to inequities in health and health care have included equity-oriented primary health-services such as community health centres (Politzer et al., 2001; Wong et al., 2011). However, surprisingly little is known about how community health centres operate to deliver health services to marginalized groups (Wong et al., 2011).

Dentists in private practice effectively meet the oral health care needs of the majority of the population in Canada, but they are less effective in meeting the needs of people with low

⁶ Conference Board of Canada (2011). How Canada Performs: World Economic Inequality. Downloaded on November 1, 2011 at <http://www.conferenceboard.ca/hcp/hot-topics/worldInequality.aspx>.

⁷ Public Health Agency of Canada. 2008. The Chief Public Health Officer's Report on the State of Public Health in Canada 2008: Addressing Health Inequalities. Ottawa, Canada. Downloaded on November 1, 2011 at <http://www.phac-aspc.gc.ca/cphorsphc-respcacsp/2008/pdf/cpho-report-eng.pdf>

incomes and other social difficulties (Health Canada, 2010; Wallace & MacEntee, 2011).

Inequities in oral health care are associated with income distribution and accessibility to dental health insurance (Birch & Anderson, 2005; Grignon et al., 2010; Health Canada, 2010; Locker, 2000). There is minimal public financing of dentistry in Canada, and public spending to enhance access for vulnerable populations has been decreasing (Quiñonez & Grootendorst, 2011).

Moreover, people with low incomes have many competing financial demands that push aside paying for dentistry (Muirhead et al., 2009; Reid et al., 2008). There are many other less obvious barriers to accessing dental treatment, such as the fear of pain associated with treatments, and the insensitivity of some dentists when addressing the needs of disadvantaged patients (Birch & Anderson, 2005; Edelstein, 2002; Pegon-Machat et al., 2009; Quiñonez, Figueiredo, & Locker, 2009; Wallace & MacEntee, 2011).

Dentists lose income when patients miss appointments or fail to comply with recommended treatments (Pegon-Machat et al., 2009). Conversely, people in poverty who have difficulties keeping appointments feel unjustly judged and easily rejected by the staff in private dental clinics (Bedos et al., 2005; Bedos et al., 2003; Bedos et al., 2009). Moreover, patients who are socially vulnerable can have a heightened fear of people in authority including health care providers, while their past experiences with emergency dental treatment can leave them with a particular fear of dentists (Bedos et al., 2005; Williamson et al., 2006). Consequently, many low-income people in North America tend to seek dental treatment only when there is an acute crisis, with some seeking care at hospital emergency departments (Quiñonez et al., 2009). Indeed, the crisis for some people can be so severe and their access to dentists so difficult that they extract their own teeth (Bedos et al., 2003; Bedos et al., 2005; Cohen et al., 2009).

Governments, dental organizations, and social advocates have suggested policies and practices to improve oral health care for vulnerable populations in Canada (Canadian Dental Association, 2010; Canadian Dental Hygienists Association, 2003; Federal Provincial Territorial Dental Directors, 2005; Leake, 2005), but there is little agreement on how best to improve access to care (Garetto & Yoder, 2006; Mouradian, 2006; Ozar, 2006b; Quiñonez et al., 2009).

Edelstein (2010) describes a safety net of treatment for people in the U.S. who cannot access dentists in private practice. The net includes volunteer charitable (VC) clinics offering some free dentistry, and not-for profit (NFP) clinics operating independently or in dental schools, as well as public dental health programs and hospital emergency departments. The clinics vary greatly in distribution, comprehensiveness, continuity, and quality of care, and have been criticised for the limited services they may offer when compared with private dental clinics (Brennan et al., 2008; Edelstein, 2010). Investigators with the Institute of Medicine (IOM, 2011) have discussed the idea of a dental safety net for vulnerable people, but reported little practical evidence of a coordinated strategy to meet such treatment needs, concluding that more research was needed on how best to enhance the oral health of a population that was as diverse in demographic characteristics as it was disadvantaged.

Equity in oral health will require responses that exceed the capacity of volunteerism or health promotional campaigns (Edelstein, 2002; Mouradian, 2006; Quiñonez et al., 2009; Watt, 2007). It demands not only appropriate access to care for everyone in the population, but also evidence of equitable use of services and levels of care (McIntyre, Thiede, & Birch, 2009; Ricketts & Goldsmith, 2005).

To achieve these objectives, Formicola et al. (2004) in the U.S. recommend three core elements to address oral health disparities: 1) community involvement, 2) integration of dental services within primary health care services, and 3) policies to support the financing and delivery of care.

In summary, very little is known about community dental clinics in Canada or the U.S. beyond some informal evidence that they help vulnerable populations (Byck, Cooksey, & Russinof, 2005; Geller, Taylor, & Scott, 2004). Yet, in British Columbia (B.C.) the number of clinics within non-governmental organizations is growing rapidly, apparently as part of public divestiture of social assistance across Canada (Standing Senate Committee on Social Affairs, Science and Technology, 2009), and in response to the difficulties that the dental professions have meeting the needs of socioeconomically disadvantaged people (Dharamsi, Pratt, & MacEntee, 2007).

This paper will explain the expansion of community dental clinics from the perspectives of dental professionals and other service providers in B.C. who develop and operate these services.

4.2 Methods

We sent requests for interviews to the administrative and clinical staff in seven rural and six urban community dental clinics either operating or developing in the province, and to the public-health dental hygienists in each of the five health authorities.⁸ Recruits were obtained from all of the clinics and authorities providing 63 participants (four dentists; eight clinic-staff; nine clinic-managers; 30 dental hygienists; and 12 allied health care or social service workers) for six

⁸ Health care services are managed and delivered by five health authorities that govern, plan, and coordinate services regionally within 16 health service delivery areas and participate with one Provincial Health Services Authority, which coordinates and/or provides provincial programs and specialized services

(<http://www.health.gov.bc.ca/socsec/about.html>).

individual and nine group interviews. One interview-guide was developed from existing knowledge on health care inequities to enquire about the need for dentistry in the community, and about the history and operational attributes of each clinic. All of the interviews were audio-taped, transcribed verbatim, and analyzed with the help of a software program for textual analysis (NVivo™, QSR International Pty Ltd., Doncaster, Victoria, Australia). The research was approved by the University of British Columbia's Behavioural Ethics Board (Certificate # H09-00038).

We used a process of thematic analysis (Braun & Clarke, 2006) based on principles of interpretive description to conceptualize, orient, sample, construct, analyze, and report our findings (Thorne, 2008). Each transcript was read several times and compared with preceding interviews by one investigator (BW). The texts were coded with help of thematic notes and personal memos to merge concepts, prepare for subsequent interviews, and code the experiences and opinions of the participants (Glaser & Strauss, 1967). Finally, we linked our findings to explanatory theories on health equity and access to health care (Whitehead & Dahlgren, 2006).

4.3 Results

4.3.1 Format

Participants confirmed the existence of 10 community dental clinics operating in the province, plus knowledge of three additional clinics being developed. All but three of them were developed within the previous six years. Participants also identified three programs in not-for-profit organizations that subsidized the cost of dental treatment, one university teaching clinic, and various technical college programs offering dentistry to people with low incomes. The

clinics operated economically as either a volunteer charitable (VC) clinic or a not-for profit (NFP) clinic, each with noticeable strengths and weaknesses (Box 1). Furthermore, we found that two themes dominated the interviews: 1) responses to oral health care needs; and 2) the capacity of these responses.

4.3.2 Response to need

We were told in several interviews that dental problems causing intense pain are common among people with no accessible options for treatment. This concern prompted small groups of caregivers in two of the communities to identify *dental champions* who might bring together the people and resources necessary to establish a VC clinic typically with very little money, information, or coordination but sometimes following a local survey to document the needs of the communities.

A dental hygienist in public service explained how she got “*phone calls all the time [from] people in pain, people without any dental coverage [because] they can’t afford to go and they don’t have any credit, and so they just can’t go to a dental office*”. Other hygienists in public service explained that many dentists were reluctant or refused to accept patients who had insufficient funds for treatment even if they were entitled to public dental benefits.

Consequently, some people sought relief of pain within the medical system, notably from hospital emergency departments and walk-in medical clinics. The use of medical services for relief of dental pain caused particular concern because of the high cost of hospital services compared to dental practices, and because physicians usually prescribed analgesics and antibiotics inappropriately to manage dental pain and infections.

We heard at several clinics how the provincial government and the provincial dental association contributed some financial support to initiate clinics but little or nothing to operate them. There was widespread approval for the community service learning program around the province offered by the provincial dental school to give dental students an exposure to disadvantaged communities and to provide the communities with some dental treatment.

Dentists who volunteered in the VC clinics described how their own profession and government validated the VC clinics as honorable responses by which the profession “*gave back*” to the community. A clinic-manager in one VC believed that governments “*like the volunteer model, where the community comes together,*” while a dentist at another VC clinic remarked how “*the dentists get the most gratifying experience ... it’s a feel good [service]!*”

4.3.3 Capacity of the response

A manager of a fully staffed NFP clinic open five days per week confirmed that the clinic “*is working, but is not meeting the [dental] needs [of the low-income community].*” She described the clinic as “*a good start*” but noted that the large urban area with children, homeless people, and elders “*needs more than one clinic, one response [for] the diverse population.*” Another manager of a VC clinic was worried about “*not meeting the need ... when you turn away 10 people it doesn’t give us a good feeling, this is the downside.*” A dental hygienist in public service complained that clinics such as these are “*just scratching the surface of the actual need ... just chipping at the iceberg.*”

Concerns were heard about the incapacity of community clinics—notably VC clinics—and the limited offering of tooth-extractions to relieve pain without the funds to provide dentures. A

volunteer dentist explained how *“you can get someone out of pain but from an aesthetic [and] self-esteem perspective you are not replacing those teeth with something.”* Another dentist complained that *“just because people don’t have money we give them substandard service and basically dismember people ... we pull out their teeth and send them on their way and haven’t really done them a service.”* Limiting treatment to relief of pain was, according to another volunteer dentist, *“going against all best-practices in dental care.”* Indeed, several participants in a group-interview equated VC clinics with food banks—vital but insufficient.

Some participants who modelled their clinic after others in similar communities acknowledged that they did this knowing well that the effect of the community clinics have never been evaluated formally. A clinic-manager in a NFP clinic complained that “there is not a comprehensive, province-wide approach to making dental care accessible, and that is what we need.” Another described access to low-cost dentistry in the province as “a maze” and “haphazard” and suggested that “government should mandate that every single community has an access point for low-cost accessible dental care.”

We heard cautionary skepticism about growth in the number of community dental clinics, particularly about the appropriateness of care provided. A NFP clinic-manager stated that, “We run a dental clinic because we see the need, not because we agree [with the] clinics... I think every clinic is a Band-Aid... we are forced into having to try to do something.” A volunteer dentist at another VC clinic called it a “stop-gap measure.”

We heard complaints about the growth of VC clinics because they promote “a two-tiered system where, for public health, you get almost cast-off dentistry - the bare minimum.” A VC clinic-

manager complained that the clinic “isolates us even further from the private practice dental community because we can look after the poor folk.” However, not everyone condemned a two-tiered approach to care. There were participants who described this approach as a realistic response to income disparity. One participant explained, “It almost seems that there has to be a two-tiered system, one for the rich and one for the poor.” A dentist providing emergency relief of pain in an inner-city clinic recognized that

“the type of people we are getting are so badly broken, their mouths are such a mess. We are not seeing the average mouth that you see in private practice, these are at the end of the scale.”

He explained why dentists in private practice do not offer services to this population:

“To be honest, they come in so smelly, and so dirty and unlovable, I think it is too much for [the dentists], they just can’t hack it, and that is fair enough, when you look at the fancy offices we have around here and the lifestyle we live, it’s understandable.”

Others portrayed the VC clinics as safety valves that relieve pressure from the dental profession and from government. The dental hygienists in one low-income community believed that dentists in private practice are “so happy to get that marginalized population-base out of their offices.”

The number of referrals of low-income patients from private dental clinics prompted a NFP clinic-manager to wonder whether the community clinic was “increasing access to services or... letting a lot of private dentists off the hook by saying now there’s a dentist for your type [of clinic] over there.”

In general, the participants were proud of their involvement in community dental clinics and the care they provided either as volunteers or as salaried staff; although they placed more emphasis on the limitations of the care provided. Overall, they felt that the clinics eliminate pain for people who cannot afford dental treatment in private clinics, but this prompted them to question the ethics of limited or even substandard care due to inadequate financial support, especially when extracting multiple teeth without the funds needed to replace them with dentures.

4.4 Discussion

The expansion of community dental clinics in the province raises moral questions about social justice and responsibility in a society where access to dental care challenges specific communities (McNally, 2003). Rawls (1971) argued that social justice requires a fair distribution of primary goods, and although he did not identify health care specifically as a primary good (Dharamsi & MacEntee, 2002), we believe that Rawlsian principles of distributive justice and contractarian theory does justify maximal health care for the least advantaged in society.

Moreover, fairness demands that everyone should gain self-respect, and that anything inhibiting self-respect, such as missing teeth, is fundamentally unjust in societies that place a high value on health and personal appearance (Dharamsi & MacEntee, 2002).

Sen (2002) distinguishes between the social injustice of ill-health due to social inequalities, and ill-health due to personal choices, such as smoking or excessive sugar consumption. Health equity, he claims, is not advanced by substituting services that are excellent for a small section of the population with services that are mediocre for everyone in the population. Instead, he advocates social and economic reforms that will improve health services for all. He calls for multiple institutions, such as non-governmental organizations, ministries responsible for public

policy, and market-based health care providers to help vulnerable peoples. Starfield (2006) goes even further by advocating for a strong base of primary care for the vulnerable and underserved. She believes that community health centres clearly facilitate access to care for disadvantaged communities and effectively address health inequities. We heard similar declarations from our participants who questioned the social and health promotional value of the limited services offered by the charitable dental clinics, but expressed a strong enthusiasm for community dental clinics in general.

Mouradian (2006) complained that volunteers do little to reduce the systematic barriers to care in a sustainable way for low-income communities. Others believe that charity promotes iniquitous levels of oral health care in society (Ozar, 2006a) and some claim that it is morally indefensible to provide basic care for some communities whilst excluding it from other communities (Dharamsi & MacEntee, 2002; Veatch, 1991).

The concerns among the participants about the inequity of two-tiered dentistry were tempered by the practicalities of operating community clinics with limited finances. We heard how the challenges of providing comprehensive dentistry by salaried personnel in a community clinic were daunting. Although the investigation was limited to B.C., and limited research funds did not provide opportunities for us to record the opinions of patients who attended the community clinics, our findings are consistent with reviews of safety-net dental clinics operating in the U.S (Byck et al., 2005). It seems that clinics depending on direct payments from patients in low income communities face serious financial problems everywhere (Diringer & Phipps, 2008; Scott, Bingham, & Doherty, 2008).

4.5 Conclusion

The number of community dental clinics is increasing in B.C. to fill a gap in the oral health care of disadvantaged people. They operate as a VC model of care depending on the charity of volunteers, or as a NFP model from professional fees charged by paid dental staff. Volunteer services are limited usually to tooth-extractions, while the NFP services provide more comprehensive dentistry. The care-providers, whether as volunteers or as paid staff, in either model are enthusiastic about attending to the needs of disadvantaged people; however, they are concerned about the financial sustainability of the clinics, and about the moral and ethical principles supporting them. They raise questions indirectly about distributive justice and health care inequity by suggesting that the unmet dental needs of vulnerable people in B.C. require political attention at the community level, and that restricted dentistry for vulnerable communities is both socially and morally unacceptable.

Table 4-1. Opinions of service providers on the strength and weakness of community dental clinics addressing the oral health care needs of disadvantaged communities in B.C.

Economic Model	Operational Format	Strengths	Limitations
Volunteer-charitable (VC) clinics	Volunteers on a restricted or irregular schedule provide free treatment to relieve pain, typically for adults with low-incomes and other medico-social difficulties.	<ul style="list-style-type: none"> • Compassionate response to inequality and despair; • Reflections of good support for volunteer and charitable responses; • Offers benefits to volunteers; • Suitable for smaller communities. 	<ul style="list-style-type: none"> • Restricted mostly to tooth-extractions; • Availability of service; • Associates charity and poverty; • Permits private practices to disregard the plight of the disadvantaged; • Unsustainable.
Not-for-profit (NFP) clinics	Paid-staff on a regular schedule provide a comprehensive dental service sustained by a fee-for-service but not-for-profit basis supported largely by direct fees or public dental benefits.	<ul style="list-style-type: none"> • Comprehensive dentistry; • Operates in the community; • Staff are paid and clinics operate on regular schedules; • Integrates with other health and social services. 	<ul style="list-style-type: none"> • Significant set-up and operating costs; • Sustainability is financially uncertain; • Needs generally exceed capacity causing lengthy delays for treatment; • Service demand some payment of fees; • Fixed location can be challenging for some patients.

5. Community Dental Clinics: Providers' Perspectives

5.1 Introduction

The stated aims of the Medical Care Act (1984) are to ensure 'comprehensive, universal and accessible insured health care services to all Canadians without cost or discrimination based on age, health status or financial situation' (Butler-Jones, 2008). However, these aims are difficult to fulfil for people who are in poverty (Raphael, 2007; Stewart et al., 2005), homeless (Frankish, Hwang, & Quantz, 2005; Hwang, 2001; Hwang et al., 2010), use illicit drugs (Robbins et al., 2010), or for the Aboriginal population (Browne et al., 2011). The cost of dentistry is not covered for most people⁹ by the Medical Care Act. It is provided mostly by independent dental practices with payments from private sources either directly from patients or indirectly through private dental insurance. There is a small allotment (~6% of national expenditures on oral health) of public funds directed mostly towards services for children (Hurley & Guindon, 2008) and at payment levels that are substantially below fees set by the professions and paid by private insurance companies. Payment discrepancies discourage many dentists from accepting patients paying with public funds (Birch & Anderson, 2005; Leake, 2006; Melanson, 2008; Pegon-Machat et al., 2009; Quiñonez, Figueiredo, & Locker, 2009; Wallace & MacEntee, 2011).

⁹ About 94% of payments for dentistry in Canada come either directly from patients or as a privately ensured employment benefit. The Federal government is responsible for the provision of dentistry for Aboriginal peoples, members of the Royal Canadian Mounted Police, Canadian Forces personnel and veterans, and Provincial Ministries of Health and Municipal Public Health or Social Service agencies provide payment for a limited range of service/benefits for low-income (usually welfare/social assistance) populations.

Moreover, people with low incomes visit dentists very infrequently, despite their many dental problems (Health Canada, 2010).

Equity in health services implies equal services for equal needs or enhanced services for greater need (Starfield, 2001). A health equity response seeks to ‘level up’ through socially responsible and humanistic care for underserved communities (Whitehead & Dahlgren, 2006). Indeed, the manner in which dentistry is delivered influences how it is accessed by people with low-incomes (Dharamsi et al., 2010; Dharamsi, Pratt, & MacEntee, 2007; Loignon et al., 2010; Stewart et al., 2005; Williamson et al., 2006). Consequently, in an attempt to comply with the demands of disadvantaged groups and their advocates (Leake, 2005; Leake, 2006; Main, Leake, & Burman, 2006; Melanson, 2008), the Canadian Dental Association has recommended alternative models of care, such as not-for-profit community dental clinics (CDCs) (Canadian Dental Association, 2010). Similar recommendations have been made by the Institute of Medicine (IOM, 2011) and others in the USA and Canada (Canadian Dental Hygienists Association, 2003; Federal Provincial Territorial Dental Directors, 2005; Lasser, Himmelstein, & Woolhandler, 2006; Lawrence & Leake, 2001).

The number of CDCs for low-income and other underserved communities is increasing in the Canadian province of British Columbia (B.C.) and elsewhere; however, there is little practical information on how CDCs operate or on how they are regarded by the administrators, dentists and other staff who work in them (Byck, Cooksey, & Russinof, 2005; Geller, Taylor, & Scott, 2004; Gooch, Griffin, & Malvitz, 2006). Generally, they operate, without specific government support, as not-for-profit (NFP) organizations within a community health center or a public health department, or with mobile equipment to schools and other public locations (Byck et al.,

2005). The clinics range in availability, comprehensiveness, continuity and quality (Edelstein, 2010). Free health clinics offer another service within an expanding array of health-related services for people without health insurance (Darnell, 2010); however, there is similarly very little information about their activities or accomplishments (Geller et al., 2004). Overall, Tomar et al. (2010) describe a general lack of research on local models of oral health care services in the United States despite the many policies and position statements promoting solutions to enhance access to care and oral health equity.

Interviews with dentists, social service-providers, and people on low-incomes in B.C. identified the limitations of private dental practices and public dental insurance for the healthcare needs of people in poverty (Wallace & MacEntee, 2011). Recently, the number of community dental clinics has increased in the province. Some operate as volunteer-charitable (VC) clinics offering a part-time dental service to relieve pain while others are NFP clinics offering a basic dental service usually within community health centres with paid full-time staff. Yet, there is little information on the operations or achievements of either clinic, or indeed for how dentistry is accessible to disadvantaged communities in Canada (MacEntee & Harrison, 2011) and the USA (IOM, 2011). The objective of the case studies reported in this article is to extend our knowledge about NFP-CDCs in B.C. by addressing the question: ‘How do not-for-profit dental clinics enhance access to dentistry for low-income communities in B.C.?’

5.2 Methods

We used a descriptive case-study design that combines quantitative program data with qualitative interviews with senior staff to explore the operations of CDCs that offer full-time dental services by paid staff (Creswell, 2007; Yin, 2009). Ethical approval was provided by the University’s

Behavioural Ethics Board¹⁰. Previous unpublished research by one of the authors (BW) found ten clinics operating in the province, and five of them operated as NFP-CDCs with full-time staff paid to provide basic dentistry. All five clinics were recruited for this case study.

The senior administrator in each clinic identified one or two senior staff who could accurately and comprehensively describe the development and operations of the clinic (Table 5-1). A trained interviewer used an interview guide for the first open-ended interviews developed from our general assumptions about how and why the clinics operated. The interview was audio-recorded with the permission of the participant, transcribed *verbatim*, and analyzed in NVivo™ (QSR International Pty Ltd., Doncaster, Victoria, Australia) by one researcher (BW) to identify, code, and organize major themes systematically with advice from others in the research group (Lincoln & Guba, 1985). Subsequently, the interview guide was modified for the next interview to prompt for clarification of uncertainties and exploration of the new themes that emerged from the preceding interview. This process of constant comparison and modification of the interview-guide directed our purposeful selection of participants to provide a broad and detailed insight into the operations and achievements of the five CDCs (Corbin & Strauss, 1990).

Program data for the 2007-2008 fiscal year were collected which included aggregate patient and procedural data from electronic files along with financial reports for the year. These statistical data were entered in Excel to produce program measures for all five clinics (Table 5-2).

The interviews and analysis followed a process of comprehension and synthesis of information and data until they seemed saturated and we were able to organize themes into plausible

¹⁰ University of British Columbia's Behavioural Ethics Board (Certificate # H09-00038).

explanations of operations and achievements (Mason, 2010; Morse, 1994). This process overall was used to: i) learn from the staff within the clinics; and ii) identify operational commonalities and differences between clinics. Triangulation of program data and interview data contributed to the rigor and trustworthiness of the analysis.

5.3 Results

5.3.1 Overview of clinics

The clinics all operate as programs within non-governmental organizations (NGOs) in inner-city locations to serve low-income communities (Table 5-3). Clinic 1 operates within a downtown community health centre and serves mostly people who are homeless as well as other low-income people. It received an annual subsidy from the local health authority¹¹ to provide dental services at a reduced fee to all patients. Clinic 2 operates out of an inner-city storefront location and also serves a community of homeless people, and is closely integrated with social and supportive housing programs and addiction services. It too received an annual operating grant from the local health authority. Clinic 3 is located within an elementary school to serve a culturally diverse low-income community of children, their families and elders. It is supported mostly by treatment fees paid from public dental insurance and by charitable donations. Clinics 4 and 5 are located within community health centres supported completely by treatment fees paid directly by patients with or without private dental insurance and by charitable donations.

Staff, Services and Finances. The five clinics differed in staffing, services and financial operations (Table5-2). In total, the five CDCs with 21 dental chairs have approximately 36 full-

¹¹ Dental public health in B.C. is managed and delivered by five health-authorities within 16 regions.

time equivalent (FTE) dental staff and receptionists. Together, during the year, the five clinics with a total budget of under four million dollars treated 23,679 patients with 64,216 services, including emergency management of oral diseases (33%), diagnoses (29%), prosthodontics, including dental restorations (19%), management of periodontitis (8%), surgery, including tooth-extractions (8%) and miscellaneous other procedures (3%). Proportionately, more tooth-extractions were made in the clinics serving mostly homeless people (18% of all treatments) when compared to the clinics attended by low-income families (2% of all treatments). Nearly half (43%) of the patients attending the clinics were eligible for the limited, publicly funded services, about one-third (32%) had neither private nor public coverage for services, and the remainder (24%) had private dental insurance. The two subsidized clinics (Clinics 1 & 2) focused on homeless people, most (92% & 94%, respectfully) of whom received public insurance or no financial assistance at all. A smaller proportion of the patients attending the other clinics received public dental insurance - 77% in Clinic 3 (mostly children); 70% in Clinic 4; and 45% in Clinic 5.

All five clinics had a similar distribution of operating expenses with about two-thirds going to salaries, one-fifth to administrative and capital costs (rent, utilities, etc.), and the remainder to clinical supplies and dental laboratory fees. Ethical concerns precluded access to personal information about the salary of each staff-member, which limited our ability to compare the efficiency of the clinics.

Clinics 1 and 2 received about one-quarter of their funding from annual operating grants from local health authorities. Other revenues were principally from fees paid directly by patients or

indirectly by public dental plans¹². Clinic 3 relied on payment of publicly funded treatment fees, mostly for children supplemented by donations and specific project grants from local credit unions and charitable organizations. The other two clinics operated almost totally on treatment fees from patients, either directly or through private insurance and public insurance supplemented by occasional donations and other grants from sources such as charitable foundations.

In summary, the financial and other funding arrangements for the clinics were varied, which caused much common concern among the eight members of staff we interviewed.

5.3.2 Interviews

Integrated Care. Priority was given by the administrators of the clinics to integrate dentistry with other health and social services. There was frequently an “across-the-floor referral system... we will see a patient for dental reasons and they will have a medical concern, and we can take them across the hall, and vice versa” (Admin C4)¹³. Similarly, “there are times when a patient will be seeing one of our doctors with a medical issue, and the doctor realizes there is something going on inside this patient’s mouth, and they can ask the dentist to have a look” (Admin. C1).

¹² Public dental plans include provincial programs supporting limited dental treatments for children, people receiving social assistance, Aboriginal peoples and refugees.

¹³ The source of each quotation relates to the role of the speaker (Admin=Administrator; Dent=Dentist) and the identification of the clinic used in Tables 1&3.

At one of the clinics, the computer-based medical and dental software systems were integrated and also linked to an on-site pharmacy. The director explained how “often the dental clinic has patients [who] have no money for antibiotics, and they need antibiotics before they can receive dental treatment, so we have cooperation with the pharmacy downstairs and the prescription is provided free of charge” (Admin. C1). Another clinic for homeless people integrated dentistry with a range of community and other health services, including programs for addressing mental health and substance use issues as well as shelter and housing services.

Staffing and Sustainability. Managing the clinics was described as a balance between reducing costs to patients, providing quality care, paying competitive salaries to the staff, and managing overhead costs. We were told that the number of dental professionals interested in working in CDCs was small, and that recruitment is an ongoing challenge, although retaining core staff was generally not a problem. One administrator explained that “it’s hard to find somebody who’s really competent because they can’t just be competent in dentistry; they have to be competent in so many other things” (Admin. C3). An administrator at another clinic complained how difficult it is to find “a dentist who really understands the concept of integrated care ... it’s a continual education process because there is nothing in their training” (Admin, C1).

Several participants made the point that the sustainability of their clinic was in the best interest of government because they were more cost-effective “from a primary healthcare point of view, from a dental point of view, and from a financial point of view” (Admin. C1). Further, we were told how “the cost of losing this clinic would be very high [compared to] the cost of making a minor contribution to a clinic like this or other clinics around the province [which] would be

remarkably low” (Admin. C5), and that “the government is benefitting enormously by what we are doing” (Admin. C4).

Enabling Access. Nearly everyone we interviewed complained that treatment-needs exceeded the capacity of the clinics, specifically “when the wait-time for an appointment exceeded three weeks” (Admin. C1). The administrators and staff in all of the clinics emphasised their mandate to enhance access to care for the more vulnerable members of the community so that “as many of our homeless and those at risk of homelessness have access to affordable dental care ... to provide dental care as part of their overall health care” (Admin. C1). This administrator also explained that services were extended to “others living in poverty and those who are working and have no benefits”. The staff at two clinics without government funding described how they “treat anybody and everybody in our district; we have people with welfare benefits, people with comprehensive dental [insurance]plans, working poor - a big range of people” (Admin. C4). At another clinic we heard how “access is the key to what makes us different... we are interested in making excellent dental care accessible to everyone” (Admin. C5).

Reducing Financial Barriers. Financial barriers to dental care were reduced by a variety of strategies. Patients with publicly-funded services received treatment without an additional fee although the fee paid was less than the fee usually received by dentists. We heard also that treatments occasionally exceeded the total financial benefit available annually to patients on social assistance. Nonetheless, there were indications in all of the clinics that treatments were rendered regardless of a patient’s ability to pay, and those patients without any coverage from private or public sources typically received treatment pro bono or at a reduced (10-30%) fee relative to the usual fee charged by private practitioners. A dentist explained how the clinic

would “reduce our fees to match the Ministry fee guide” and for patients with no public coverage “as deemed necessary we will drop down our costs, for example ... for someone who needs job retraining or employment and ... needs a denture, we will drop our fees for those dentures” (Dent. C2).

Location and Language of the Clinic. The importance of locating the clinic where it was accessible to patients in the community was emphasised by the dentists and administrators. Clinics that accommodated children, for example, were located within a school. Emphasis was placed on the need for a safe location, and on the availability of staff who speak the languages of the community. We were told that “being close to where [patients] live, that is the community part, and we treat [patients] in their own language” (Admin. C3).

Managing Wait Times and Missed Appointments. Appointment scheduling was arranged to accommodate the expectation of many missed appointments and demands for emergency care. We heard from a staff member that “every morning when I come to work there are half a dozen people who do not have appointments waiting” (Admin. C1). At another clinic, we were told that, “this is a hard population to schedule, so... easily 50% or more of our patients access us by drop-in... there are ‘no-shows’, but we almost always [replace] them with ‘walk-ins’” (Dent. C2). A staff member at the clinic with the longest waiting-list explained how “no-shows could be an issue, but what we do is advertise that anyone who cannot wait [for a scheduled appointment]... to show-up... and as soon as there is an opening [we accommodate them] so we never have an empty [dental] chair” (Admin. C1).

Treatment Challenges. Services were organized to meet the needs of patients with mental illness, problematic substance-use, homelessness, social exclusion and trauma, although administrators acknowledged that “the expertise... required... to deal with that kind of multiple need in one person is huge” (Admin. C4). A dentist described the implications for his practice in terms of efficiency and cost-effectiveness:

“It’s not like you can take one of these patients, slam-dunk them into a chair, put the freezing in, a dental dam on, work to maximum capacity and speed, and out of the chair and out they go... It’s not like private practice...” (Dent. C4).

Another dentist explained further how:

“We see different needs from the people in detox versus the people in rehab versus people in acute pain. We often get referrals from [the hospital] so we are often treating the addicted, mentally challenged population... we see people who might otherwise slip through the cracks... The challenges of providing dental care for individuals transitioning from drug-use... [are] difficult... and there is often a small window of opportunity to treat these people before they are shipped-off to another facility. And they are very complex people medically because they are dealing with withdrawal, pain issues and drug-use, and then you often have these very severe oral healthcare situations so you have to coordinate their treatment with their physicians” (Dent. C2).

5.4 Discussion

The CDCs we visited treated a different population than those typically attending private dental practices in the province but similar community dental clinics in the USA where 37% of the

patients were covered by public dental insurance, 38% were uninsured, and the remainder had private dental insurance (IOM, 2011). The British Columbia Dental Association (BCDA, 2008) reported that 4% of the patients in private dental clinics in 2006 received publicly funded services while 71% had private dental insurance and 24% had neither private nor public coverage for services. The profile of private dental practices reported by the Institute of Medicine and National Research Council (IOM, 2011) in the USA was very similar with 7% of patients receiving public assistance for dentistry, 63% on private insurance, and 30% without any dental insurance.

People with low-incomes who attend public clinics when compared to those treated in private practices in Australia were more likely to receive tooth extractions (Brennan et al., 2008). In New York City some people refused to seek dental care from community clinics because they feel that the care offered is poor (Schrimshaw et al., 2011). However, the participants indicated that they can offer a range of services from emergency, preventive and diagnostic interventions to moderately complicated endodontic and prosthodontic treatments. They certainly did not limit services to tooth-extractions and relief of pain as can be the case in other not-for profit dental clinics (MacEntee & Harrison, 2011). Moreover, there were noticeable differences between clinics in large part due to the particular needs of each community. Clinics serving homeless people provided more surgery while the school clinic offered more preventive interventions.

It is difficult to assess the quality of care in public-health programs because of uncertainties about what constitutes basic healthcare and how it is measured (Bader, 2009; Edelstein, 2010; Garetto & Yoder, 2006; Pruksapong & MacEntee, 2007). Yet, without this assessment, there is always the risk that the services provided will be inadequate. There is no accepted definition of

basic oral-health care and expectations of care vary between patients and providers as well as between privileged and underprivileged groups (Dharamsi & MacEntee, 2002). Dharamsi and MacEntee argue that without an agreement on basic care it is unlikely that a social contract based on principles of health equity will emerge for dentistry (Dharamsi & MacEntee, 2002). At the policy level, Glassman (2011) recommends oral health measures that conform to the current search for accountability in healthcare-spending. He advocates a shift in oral healthcare from paying for volume to paying for value, and for outcome measures focused on the health of populations rather than individual patients.

The scope of our study precluded a clinical assessment of treatment results, or interviews with patients; therefore, we can draw only from the opinions of the staff, who no doubt are biased. The interviews and data on services suggest the care offered was appropriate and the array of services provided resembled basic services offered in private dental practices in B.C. (BCDA, 2008) and Ontario (Ontario Dental Association, 2008). The staff were clearly aware of the need to extend beyond emergency care for these communities and to integrate dentistry with other primary care services in the adjacent parts of the larger community clinic. Our participants explained convincingly and consistently in most of the interviews that their dentistry was integrated with other programs addressing potential social determinants of health such as housing services along with drug treatments and recovery programs. They explained in detail the practical barriers faced by vulnerable people, and seemed proud of their efforts to provide a more accommodating environment for homeless and low-income patients. They made allowances for missed appointments and the need for drop-in emergency treatment, and above all they projected empathy for their community.

Interventions to reduce health disparities are most effective when they treat individual needs but within the special sociocultural context of the community (Fisher-Owens et al., 2007; Newton & Bower, 2005; Patrick et al., 2006; Watt, 2007). Targeted interventions by CDCs, according to Patrick et al. (2006), can reduce oral health disparities by confronting the complex social determinants of health. Indeed, others have identified direct links between low-income, low dental utilization, and restricted access to preventive dentistry in Canada (Grignon et al., 2010).

Financial uncertainty was a repetitive theme throughout our interviews, as it has been in studies of CDCs in the USA (Christie et al., 2003; Diringer & Phipps, 2008; Scott et al., 2008). We heard how clinics with annual operating budgets subsidized by government (see Table 5-3) were able to reduce the direct cost of care for all patients, while clinics without government subsidy had to rely on patients who could pay for treatment to subsidize treatment of others who could not pay. Currently, public spending in dentistry is focused narrowly on providing limited benefits to targeted populations, mainly children, and is insufficient to enable access to private dentistry (Edelstein, 2010; Greenberg et al., 2008; Ismail & Sohn, 2001; Schrimshaw et al., 2011).

Publically funded dental care, considered as a ‘safety net’ of programs, has been criticised in Canada (Yalnizyan & Aslanyan, 2011) and in the USA as a “a hodgepodge of disparate local, state, and federal programs and policies that seek to address the needs of vulnerable populations” (Edelstein, 2010). In fact, there have been varied responses to iniquitous or unfair distribution of healthcare that has prompted pleas for governmental support to help coordinate and enhance the services and programs (Birch & Anderson, 2005; Edelstein, 2010; IOM, 2011; Wamala, Merlo, & Bostrom, 2006; Watt, 2007). Certainly, when compared to other countries, Canada’s public spending on dentistry is low at 6% of the total dental expenditures (Birch & Anderson, 2005), in

contrast to about 75% of dental expenditures in Japan and Norway (Yalnizyan & Aslanyan, 2011).

Our finding that staffing in the clinics was reasonably stable contrasts with experiences in the USA where recruitment and retention of dentists in CDCs has threatened the expansion of these services (Bolin, Shulman, & Shulman, 2005). Perhaps, compared to Canada, there is a greater demand for clinics in low-income communities in the USA because of the scarcity of publically funded medical care.

We focused our collection of data on the financial and operational aspects of the services provided by the CDCs and our interviews with key staff who work in the clinics without interviewing the patients (Daly et al., 2009; Robbins et al., 2010). Further work is needed to explore how patients see the role of CDCs relative to private dental practice. Similarly, we need information on the clinical outcomes in the communities, and on the economics of operating a CDC in comparison to a private dental practice for homeless and low-income communities before we can conclude with assurance that CDCs offer the most effective dental service for homeless and low-income communities (Bader, 2009). Nonetheless, our study and others (Fisher-Owens et al., 2007; Newton & Bower, 2005; Patrick et al., 2006; Watt, 2007) provide compelling evidence that the social determinants of oral health and the sociocultural barriers presented by private dental practices are formidable for low-income communities and that CDCs help to lower the barriers to accessing dental care. We did not investigate the dental programs offered by acute care hospitals or teaching institutions in the province, nor did we investigate dental services available in the more remote regions of the province where each setting probably offers a unique challenge (Davis et al., 2010).

It is difficult to judge how applicable our findings are to other jurisdictions in Canada and abroad. Healthcare, social services and income supports are usually specific to the needs of each region, even within the 16 regions administered by the five health-authorities in the province (Quiñonez et al., 2007b). We chose an open-ended exploratory approach to the research questions posed during personal interviews rather than a confirmatory approach with a structured survey of the staff working in the five CDCs around the province (MacEntee, 1996). We took this approach because there was little information available about the operations of the clinics. The interview technique and analysis we used directed the selection of participants based on the principles of constant comparison (Strauss & Corbin, 1990) which we continued until the response we received from participants became repetitive. We ‘triangulated’ our approach using operational data from the clinics to check the credibility of claims which we heard in the interviews about clinical and financial productivity. The eight participants described a remarkably unified culture of care and there was little or no dissent from the view that the CDCs were serving their communities well and efficiently. Consequently, after eight interviews with recurrent themes, we decided that our investigation was saturated and that we were unlikely to gain new information from additional interviews in these communities (Mason, 2010). It should be interesting to explore the operations of CDCs in other health jurisdictions using similar qualitative research methods to see how local cultures and geographical boundaries influences the effectiveness of this model of care for disadvantaged communities.

Canada’s ‘Federal, Provincial and Territorial Dental Directors’ recommend the delivery of dentistry for Canadians facing financial as well as social/cultural barriers through community health centres with government providing funds and legislation to support an infrastructure for

the programs (Federal Provincial Territorial Dental Directors, 2005). Some health authorities in Canada provide access to limited dental services through local public health units with public funding and independent of payments from patients (Quiñonez et al., 2007a). Therefore, we expect that the information we obtained in B.C. might help other jurisdictions willing to adopt a NFP model of community dental service.

There were several challenges to evaluating the efficiency and sustainability of community-based health clinics. We established trusting relationships with administrators who gave us access to most financial records and operational records, although ethical concerns about privacy precluded access to personal information about the salary of each staff member. Consequently, we could not compare the competitiveness of salaries, documented elsewhere, but, like Bolin et al. (2005) in the USA, we did hear that several factors other than salary and benefits, such as altruistic motivation and freedom of professional judgement affect the retention of dentists in community service.

Each clinic classified incomes and expenses differently, and clinics used different computer software to manage the financial accounts, which limited our ability to compare data from different clinics. Overall, the methods of collecting data in the clinics were poorly designed for monitoring the quality or efficiency of the clinics. Other reviews of primary healthcare settings have found that current reporting and performance measures are often focused on clinical targets rates and not capturing the complex nature of care when treating vulnerable patients (Wong et al., 2011). More work is recommended to develop performance measures focused on the goal of achieving health equity and that are more aligned with the complex care provided to marginalized populations. A potential evaluation framework for CHCs could utilize a structure-

process-outcome model that includes both quantitative and qualitative evidence, seeks to be participatory and transcends basic effectiveness and efficiency measures to include dimensions of equity (Pruksapong & MacEntee, 2007).

5.5 Conclusions

The models of NFP-CDCs operating in B.C. provide oral healthcare beyond relief of pain to communities of low-income and homeless people. Dental services are integrated with other health and social services, mostly within community health centres. Some of the clinics operate with financial subsidies from regional health authorities whilst others rely on patients with publicly-funded treatments. Most (75%) of the low-income and homeless patients had either publically-sponsored or no dental insurance. There was strong consensus among the staff that the clinics are: (i) limited in their capacity to meet population demands; (ii) sensitive to the special needs and concerns of their communities; (iii) operate with financial responsibility and optimism; (iv) demonstrate that similar services could be extended more widely to other vulnerable communities; but (v) vulnerable because of uncertain financial viability.

Table 5 1. Clinic and the role of the participants interviewed		
<i>Participant</i>	<i>Clinic</i>	<i>Position</i>
1	1	Manager of a dental clinic
2	1	Manager of a community health centre
3	2	Senior Dentist
4	3	Executive director of the community health centre
5	4	Senior Dentist
6	4	Manager of a dental clinic
7	5	Manager of a dental clinic
8	5	Executive director of the community health centre

Table 5 2. Service capacity, staffing and income associated with five community dental clinics

<i>Capacity, staffing and income</i>	<i>Clinic and Funding Model</i>					
	1	2	3	4	5	<i>All Clinics</i>
	<i>Subsidized</i>		<i>Non-Subsidized</i>			
Number of dental chairs	3	3	3	5	7	21
Number of full-time-equivalent:						
• Dentists	1.5	1	1	3	3.5	10
• dental hygienists	0.75	0.5	0	1	3	5.25
• dental assistants	2	1	2	4	4	13
• receptionists	1	1	0	3	3	8
• clinic manager	1	0	1	1	1	1
Annual patient-visits (annual)	3,131	3,036	2,815	7,425	7,272	23,679
Annual treatments	7,129	6,580	10,851	17,687	21,969	64,216
Mean number of services per visit	2.3	2.2	3.9	2.4	3.0	2.7
Annual income (\$CDN) from all sources	\$605,200	\$471,400	\$282,400	\$1,132,500	\$1,277,600	\$3,769,100
Annual expenditures (\$CDN)	\$655,250	\$510,572	\$263,852	\$1,291,586	\$1,291,586	\$3,993,306
Distribution of expenses:						
• wages & benefits for dentists	33%	36%	37%	30%	32%	34%
• wages & benefits for other clinic staff	30%	23%	30%	34%	42%	32%
• clinical supplies	10%	6%	6%	6%	7%	7%
• dental laboratory fees	13%	7%	3%	4%	6%	7%
• administration, rent and overhead	15%	27%	25%	24%	14%	21%
Source of income:						
• patient fees	75%	65%	81%	91%	100%	84%
• government funding	25%	26%	0%	0%	0%	10%
• other (e.g. charitable donations)	0%	9%	19%	9%	0%	6%

Table 5 3. Description of the five clinics

<i>Clinic</i>	<i>Location</i>	<i>Patients</i>	<i>Subsidy</i>
1	Within downtown community health centre	Primarily homeless and low-income adults with public or no dental benefits	✓
2	Inner-city storefront	Primarily homeless and low-income adults with public or no dental benefits	✓
3	Within inner-city elementary school	Primarily low-income children with public dental benefits as well as seniors and culturally diverse families	
4	Within urban community health centre	Low-income and culturally diverse families with public or no dental benefits and patients with private benefits who live in neighbourhood.	
5	Within urban community health centre	Low-income and culturally diverse families with public or no dental benefits and patients with private benefits who live in neighbourhood.	

6. Findings

This section summarizes the findings from three studies, that:

1. Explore access to dental care from the perspectives of low-income people, dentists, and other health and social service-providers in low-income communities in BC;
2. Investigate the expansion of community dental clinics to address oral health inequities in the province;
3. Describe how not-for-profit dental clinics provide services and sustain operations to deliver dental services beyond pain relief.

Interviews with people with low-incomes, dentists in private practice and providers of health and social service identified considerable unmet dental needs among economically vulnerable populations. Typically, they associated the need for dental care with dental pain, visible caries, missing teeth and the lack of dentures following extractions. Preventive care was commonly regarded by low-income respondents as a desirable luxury, not an affordable basic need, and they saw many complex barriers to accessing dental care for low-income communities. The people on low-incomes identified the barriers they encountered, while dentists also faced barriers to providing care within the restrictions of private practice and the limits of public dental benefits. Affordability was the most noticeable barrier identified by almost everyone I interviewed as dentistry competed with other more pressing financial needs, values and priorities. Cultural incompatibilities were noticeable between vulnerable patients with complex needs and dentists in private practice who felt ill-equipped to manage the complexities of treatments compounded by the uncertainties of missed appointments and un-paid bills. Overall, the incompatibility of oral

health needs in low-income communities, the inadequacies of public dental benefits, and the limits of private practice dentistry supports the emergence of culturally sensitive community-based dental clinics as venues for delivering dentistry to low-income and vulnerable communities around the province.

The number of community dental clinics (CDCs) within non-governmental organizations is growing rapidly to fill a gap in the oral health care of disadvantaged people in B.C. Little is known about dentistry operating as part of CDCs in Canada. I identified two models of care emerging from the 10 clinics in which I conducted interviews. One model involved volunteer-charitable (VC) clinics illustrating the significant role that charitable responses play in enabling access to care, usually as a free service offering primarily relief of pain at variable or irregular times. The other model operated not-for-profit (NFP) clinics generally full-time within community health centres employing paid staff providing a wide range of basic dental treatments. The increasing numbers of both care-models suggests that the unmet dental need of vulnerable people has become socially unacceptable in many parts of the province.

Concerns were expressed that CDCs, like food banks responding to poverty, are little better than band-aid responses to a complicated health problem, and that they do not address the systematic barriers to dentistry for people with low incomes. They were associated also with two-tiered healthcare when treatment for low-income communities was limited to pain relief (typically extractions) while the rest of the population had access to a more comprehensive and sophisticated health service. Moreover the financial costs of establishing and operating NFP clinics often necessitated demands for payments, albeit at significantly reduced fees from the usual dental fees charged by dentists in private practice. The staff in most of the clinics appeared

to be struggling with service-needs that far exceeded the capacity of the clinics. The dental professions, along with government and the local Faculty of Dentistry have expressed support for the expansion of CDCs and collaborate with the establishment and operations of the clinics. The situation suggests that the unmet dental needs of vulnerable people requires political attention as the inequity is not socially acceptable and the clinics lack the capacity to ensure access and provide appropriate, equitable care.

The dental profession recognizes that the current private practice model does not facilitate access to dentistry for economically vulnerable populations. The clinics are undoubtedly enabling access and providing much needed treatment; however, not all clinics are providing equitable standards of care to underserved populations. Evidence from clinics that operate full-time providing basic dentistry integrated with other health and social services offered practical insights to their operations and possibilities for bringing equitable oral healthcare to all segments of the population in the province. The NFP clinics demonstrated an ability to provide oral healthcare beyond relief of pain. Furthermore, three-quarters (75%) of the patients treated in CDC had either publically-sponsored or no dental benefits while the remainder had private dental insurance as an employee benefit. Financial subsidies from regional health authorities allowed two of the 10 clinics to treat only people who are economically vulnerable, and provide all services at reduced costs. Clinics without government subsidies used fees paid by some patients to subsidize treatment for others who could not afford treatment. Dentists and administrators in the clinics voiced concerns about the sustainability of the clinics without reliable public revenues to support their services. The findings suggest that with modest financial support community dental clinics can provide much more than relief of pain services to

underserved populations and that similar services could be extended more widely to other vulnerable communities.

7. Discussion

This thesis provides evidence from three related inquiries focused on oral health inequities in B.C. and the emergence of community dental clinics (CDCs) as a response. In this chapter, I discuss the findings of these studies from a health equity perspective. CDCs provide treatment to underserved, vulnerable populations in the province. However, an unintended outcome of the expansion of these dental clinics could be the relief of socio-political pressure to change the underlying causes of the inequitable distribution of oral healthcare resources in the province.

7.1 Community dental clinics: A dental safety net or safety valve?

A consideration in determining the function of CDCs for oral health equity is to clarify their potential as a dental safety net for people disenfranchised from the dominant private delivery system for dentistry in the province (Edelstein, 2010). Maas (2006) believes that community dental clinics in the U.S. serve poorly as a safety net due to their limited capacity to meet the population needs. He questions if they may unintentionally and unknowingly be serving as a pressure release valve in the healthcare system because they divert attention away other potentially more beneficial pressures to change the oral healthcare policies that currently favour private dental practice as the dominant access for dentistry for all of the population.

7.2 Health equity

Social inequities in health and healthcare are widespread in most Western societies (Raphael, 2004) probably because they are systemic, socially produced (and therefore modifiable) and unfair (Dahlgren & Whitehead, 2006), whereas health equity allows everyone to attain their full potential in health. Health equity seeks also to “level up” the health of underserved and

disadvantaged populations to the health of the most advantaged in society (Dalhlgren & Whitehead, 2006). Equitable healthcare, in contrast, focuses on policies and practices to provide an equal amount and quality of care by addressing the geographic, economic and cultural factors that influence access to healthcare in society (Dalhlgren & Whitehead, 2006).

7.3 CDCs: Equity oriented oral health services

While there are limited measures available to gauge whether primary healthcare meets the objectives of health equity (Wong et al., 2011) my research gathered evidence indicating that community dental clinics are accomplishing several objectives of health equity. I draw the following conclusions from my findings:

- ***Enabling access:*** the CDCs are enabling access to underserved populations.
- ***Responsive to social determinants of health:*** While not addressing primary determinants of health such as income, education and housing; the CDCs are examples of how to provide care to complex patients, how to arrange service delivery to accept missed appointments, and how to link dental care to a patient's overall health and social needs.
- ***Community led:*** the development and operations of CDCs in the province are locally-led, community health processes, and located within community non-profit agencies. The clinics are often the results of a dental champion who engaged diverse collaborations to 'do something' in the face of oral health disparities.
- ***Integrated care:*** many of the CDCs provide integrated care, including integration within primary healthcare settings such as community health centres, and integration within other community-based social and housing services.

- ***Appropriate care:*** While there was evidence of diverse levels of care provided, CDCs seek to provide care that is appropriate for a patient’s ability to pay and ability to follow-through with treatment plans, and to provide care that is patient-centered and according to professional standards.

I found several examples in the interviews to indicate that participants were basing their activities in the CDCs on the principles of equitable care. However, I also uncovered several problems that participants feel require further attention if the clinics are to provide an effective safety net to support oral health-equity. The crux of the problems is that access to care does not guarantee health equity. The CDCs enable access to care, for example, but they are not always able to provide appropriate care for everyone.

7.4 Dental charity: Risks of two-tiered dentistry

Charitable dentistry is a considerable component of a dental safety net, and charitable clinics run by volunteers are clearly a significant and expanding response to inequity in B.C. I heard concerns about charitable responses for what some might consider a right to healthcare, and concerns about the justice of limiting charitable care to relief of pain. Charitable responses have been criticized as laudable “band-aid solutions” but quite inadequate for improving access to comprehensive dentistry (Crall, 2006; Mouradian, 2006). Some regard volunteerism and charitable dentistry as important and necessary but insufficient (Garetto & Yoder, 2006) while others conclude that they are impractical and inefficient (Benn, 2003). The American Dental Association (ADA, 2011) takes the position that charity is not a healthcare system and that no one should have to rely on it to achieve good oral health. The British Dental Association (2003) supports a similar position in its strategy to address oral health needs of homeless populations by

stating that charitable dentistry by unpaid volunteers cannot be a substitute for a properly-funded service for homeless people. The British Dental Association also argue that homeless people are entitled just as much as the general population to dental care and should not be forced to rely on charity to get it. The premise that some dental care, even if limited to relief of pain extractions, is better than no care serves to legitimize a two-tiered system of dental care.

7.5 Leveling up: No definition of 'basic care'

An argument for access to dental care needs to clarify exactly what forms of care ought to be readily accessible (Garetto & Yoder, 2006; Ozar, 2006a). Ozar (2006a) attempts to define basic dental care as necessary to normal and appropriate human functioning, and argues that basic dental treatment should include all the elements essential to the proper treatment of oral pain and dysfunction required to meet people's oral health needs. However, he admits this definition in no way identifies the kinds of dental interventions that would be included as basic and those that would not. For Tomar et al., (2010) the ideal oral healthcare system would provide preventive, restorative and rehabilitative oral health services. Dharamsi and MacEntee (2002) propose that equitable oral healthcare be based on the Rawlsian principle that everyone should have equal opportunity to access basic dentistry. However, they recognised that there is little agreement on what constitutes basic care, and they identified a prerequisite need for agreements on what dental services constitute basic care before a social contract can progress to issues such as fair compensation for dental providers and a just allocation of resources.

In an ethical society, a person's basic needs could not go unmet; however, how and who decides what is a basic needs rather than a personal wish? It is a debate not unique to dentistry. In wealthy societies there are people who lack basic food, security or housing, where the usual

response from society is to provide emergency food and temporary shelter. Consequently, debates continue around societal versus personal responsibility; what is basic and who should pay to resolve inequities?

7.6 Needs evaluation and evidence to inform

I found that community dental clinics, overall, were not evaluated and there was minimal evidence to inform or influence policy or practice. Without government funding, there are minimal reporting requirements in most clinics; so there is less priority given to operational and outcome evaluations. Similar concerns exist in other jurisdictions. In the U.S., for example, there have been a few evaluations of alternative oral health delivery models, but usually they are limited to data on services rather than outcomes (Tomar et al., 2010). Furthermore, there is a lack of standardized quality assessment measures within dentistry in general to enable comparisons between providers or models of care (Bader , 2009). Ontario's Chief Medical Health Officer described Ontario's dental safety net as a patchwork of services that is difficult to navigate or improve due to the lack of observations and evaluations of health outcomes and efficiencies (King , 2012).

7.7 Scalability

The World Health Organization advises that health equity should be assessed against a benchmark of scalability to determine if the interventions can be expanded to an effective level (Blas& Kurup, 2010). To test the implementability of interventions the WHO recommends assessing if the interventions can be expanded to the scale required to be meaningful. Reviews of dental safety net providers in the U.S. consistently advise that CDCs cannot realistically meet the demanding levels of unmet need for dental treatment (ADA, 2011; Edelstein, 2010; IOM, 2011;

Loignon et al., 2010; Maas, 2006). Even if significantly expanded, CDCs would lack the capacity to meet the underserved American population (Bailit, 2006). These reviews conclude that due to the limited capacity of the dental safety net increased access to dentists in private practice is necessary. The situation reported to me by the providers and administrators in the CDCs in B.C. suggests that the need for dental treatment currently far exceed the capacity of current CDCs, and that the expansion of these clinics alone would be insufficient to meet the scale of unmet need in low-income communities.

7.8 Responsibility to respond

The dental profession appears to be aware that the current service delivery model does not meet the needs of low-income and vulnerable populations (Mouradian, 2006). CDCs provide limited interventions that do not meet critical benchmarks for services that are equitable, though they do have many equitable features and potential to build on community-led initiatives. Progress, in my opinion, is contingent on identifying the responsibilities of the various players. However, the issue of responsibility mentioned above leaves unanswered a number of difficult questions. Does dentistry have a social, ethical, or professional responsibility to meet public oral health needs? Is it realistic to expect that dentists in private practice can or will respond to the complex barriers of access to care, and to the social determinants of health for those who live with so many unmet needs? If CDCs have a role in a dental safety net, who is responsible to ensure that they are effective in reducing the disparate oral healthcare in the province?

Dentistry as it is currently organized struggles with competing needs, obligations and social responsibilities. For example, tensions can arise as dentists seek to balance the fiscal responsibilities of providing dental care within the marketplace with the social responsibilities of

providing dental care as a social good (Dharamsi et al, 2007). There are a range of opinions on the social responsibility dentists. One dominant view is that dentists should not be expected to donate their services without adequate reimbursement (Crall, 2006); although if adequately paid, they have a professional obligation to treat patients whose treatment is paid by public funds, i.e. Medicaid in the USA or social assistance in B.C.(Schwartz, 2007). This view leads to recommendations for dentists to adopt a more humanistic approach to clinical practice that fosters therapeutic alliances with vulnerable populations (Loignon, et al, 2010). Dharmasi et al. (2007) describe a tension here between balancing the desire for profit with the responsibility to vulnerable populations as the profession can be potentially perceived as more responsive to consumer desire than patient and public needs (Crall, 2006; Ozar, 2006a).

Recognizing this limited responsibility of the profession, the limits of charitable dentistry, the limited capacity of safety net providers such as CDCs, and the limits of public benefits to ensure access, many advocate a societal obligation to meet public needs and call specifically for a government policy to rectify these limitations (Edelstein, 2010). However, the call for government action on oral health disparities is not defended as an abdication of social responsibility for dentistry. Rather, the dental professions have a clear responsibility to lobby government for solutions to the chronic problem of access to dental care for low-income and other disadvantaged communities (Schwartz, 2007).

The American Dental Association (2011) takes the position that necessary improvements to the dental safety net are contingent on society placing greater value on oral health, specifically naming government, media, other health professions, and the public at large as potential agents of change. Interventions relevant to oral health-equity are dependent on public pressure, and the

dental professions have a role in influencing changes to public policy (Edgington, Pimlott, & Cobban, 2009; Ozar, 2006a). At present, it is not clear that the public is ready to demand and pay for expanded public dental programs or if governments have such a mandate from the public (Tomar & Cohen, 2010).

Others have described the need for joint responsibility between the dental profession and government, with government shouldering the economic costs and dentists accepting greater responsibility for access to their services to all segments of the population (Crall, 2006).

Typically, when the dental profession has advocated for policy change, it has sought changes that maintain the dominance of private practice supplemented by public benefits to pay for vulnerable group to access care in private practices (Quiñonez et al., 2010).

7.9 Health equity interventions and integration

As advocated in health equity policy, dentistry has the opportunity for interventions at multiple entry points. Dentists can act at the micro-level with individual patients, at a meso-level with community organizations, and at a macro-level with government (Schwartz, 2007). Similar comments are made by Garetto and Yoder (2006) who break down the responsibilities of dentistry as: 1) accepting patients; 2) recognizing that access to care is problematic and a significant public health issue; and 3) developing the capacity to influence public policy on universal access to care. O'Neil & Ngai (2011) also offer a three point strategy for oral healthcare reform. Firstly, the dental profession must recognize the problem of access to care and recognize that increased public benefits to pay for private practice are not the solution. Secondly, it must provide the necessary leadership to develop and expand alternative dental care models for

underserved populations. Finally, it must integrate more effectively with other primary care providers of healthcare to facilitate the accessibility of basic dental services.

Other researchers have also suggested that dentistry would benefit from being more closely linked with public health (Watt, 2007). Glassman (2011) locates dental care within the realm of accountability in public health spending and perceives a fundamental need to shift from paying for volume to paying for value. In this vision, quality measures in the oral healthcare system will be similar to other population-based measures of public health that strive to influence effectiveness, efficiency, equitability, safety, and timeliness in patient-centered care. Here, innovation is motivated by incentives tied to the measured outcomes that encourage accountability in dental spending and improvements in the oral health of vulnerable populations. For public spending to be allocated to dental treatment for vulnerable populations, evaluation frameworks are required to demonstrate accountability in public health outcomes and to demonstrate effectiveness in enabling equitable access to affordable, appropriate care (Pruksapong & MacEntee, 2011). Performance measures could focus not just on what is delivered but also *how* services are delivered (Wong et al., 2011). For example how dental treatment is integrated within CHC services and how the complex needs of vulnerable patients are addressed.

The dental profession has multiple opportunities to play a stronger role in the public system. For example, it can screen for chronic diseases, such as hypertension, diabetes and cancer, and actively support preventive programs such as smoking cessation and drug abuse (Lamster & Eaves, 2011). It could also delegate some dental services to mid-level providers, such as dental

therapists, who are better positioned to manage the needs of underserved populations (Lamster & Formicola, 2011).

7.10 Integrating CDCs within primary healthcare

Recommendations from within the dental profession for better integration within primary healthcare are relevant to my findings. Health equity interventions are advocated by the WHO (2010) at multiple entry points to healthcare. Healthcare that affects the upstream drivers of ill health and inequities, such as income, employment, income supports, housing, food security, and social exclusion are especially helpful (Raphael, 2007). Indeed, there are calls within the dental profession for a radical shift away from the biomedical/behavioral downstream responses such as narrowly defined lifestyle or behavioural public health interventions to addressing the upstream social determinants of health (MacEntee, 2005; Petersen & Kwan, 2011; Sanders, Spencer, & Slade, 2006; Watt, 2007). Evidence from the field of dentistry supports interventions to increase equitable access to dental care services, as poverty is associated with worsened oral health and, simultaneously, with decreased utilization of dental services (Wamala et al, 2006).

Within the healthcare system, primary healthcare interventions have been identified as key to reducing population health inequities and most effective when they integrate with services that address the social determinants of health (Butler-Jones, 2008; WHO, 2008). At the same time, there are concerns that action at this level will have limited impact on oral health inequities if the responses only treat dental problems without addressing the factors that contribute to poor oral health (Petersen & Kwan, 2011). These differences of opinion point to the need for awareness of how delivery of primary healthcare should have equity as an explicit goal. For example, primary

care must reach the complex needs of high-risk groups and encourage community involvement in the search for solutions (Petersen & Kwan, 2011).

Equity-orientated primary healthcare services are services that are both person and community focused – in contrast to illness focused – and seek to meet the common needs of the population and integrate care with other levels of services (Starfield, 2001). Starfield (2006) specifically identifies community health centres as potentially effective sites for primary healthcare, whilst others have identified CHCs for a similar community-based role (Baum et al., 2009). However, Starfield (2001) qualifies her support for CHCs, stating that such strong services require adequate government policies to be effective. The WHO (2008) and the Public Health Agency of Canada (Butler-Jones, 2008) concur that primary healthcare interventions, as one component of policy changes to improve peoples' social determinants of health, may be the most effective intervention for achieving health-equity.

7.11 How will change occur?

CDCs in B.C. provide a potential for a more robust response to oral healthcare. There is a critical role for the dental profession to advocate for oral health equity and expanding a dental safety net while ensuring communities are central in the development, planning, and implementation of interventions (Watt, 2002). To implement oral health-equity programs, Formicola et al. (2004) recommend three critical elements: community involvement; integration of dental services within primary healthcare services; and policies to support the financing and delivery of care.

Advocates for health-equity recognize the need for a social movement to build popular demand for health-equity policies and spending by governments (Baum et al., 2009). A strong, organized

demand by citizens with healthcare professionals as advocates can get government to respond (Sanders et al., 2011). The process has been described as dual actions: top-down policies from government and bottom-up demands from civil society with health professionals (Baum, 2007). Rasanathan et al. (2011), by contrast, describe the need to move away from top-down solutions, providing instead a space for social action to improve health. The participation of the grassroots agencies, such as community dental clinics, with the advocacy and awareness of health leaders, such as organized dentistry, provide the capacity for a potential shift to implement policies to support oral health-equity.

The rapid expansion of CDCs in B.C. reveals the unmet dental needs within the province's economically vulnerable population and the necessity to respond. However, the findings from my research suggest that while CDCs may be valuable in B.C. as a local level response to oral health inequities these interventions currently do not have the capacity to effectively provide a dental safety net in the province. Acknowledging the limits of private practice, charity, and even targeted public programs to meet public oral health objectives, an explicit health equity approach is needed. The CDCs in BC appear to exemplify some equity objectives but not all and even if expanded would assuredly lack the scale to effectively deliver dental services at a population health level.

Health equity and primary care renewal are currently priorities at the international, national, provincial and regional levels. Dentistry largely remains outside of these discussions and developments. This isolation could permit the lack of equity considerations in the dominant oral health system to continue. The findings from my research validate the ethical imperative to make oral health equity a priority and this goal could be more achievable when dentistry is well

integrated within the larger health equity agendas in B.C.'s and Canada's health sector. The CDCs in BC provide a framework of how community-led interventions can engage the dental professions, governments and academia as partners for change. This momentum for change would be more effective if now engaged in the larger health sectors priorities for change in primary care and health equity policy and practice.

8. Conclusion

Oral health inequities are well recognized. People with low-incomes generally have higher unmet dental needs, worse oral health outcomes and lower rates of visiting a dentist. The dental profession generally recognizes that the current private practice model does not facilitate access to this economically vulnerable population. The barriers to dental care are complex and include cultural incompatibilities. Just as low-income people face considerable barriers to accessing care, dentists also perceive considerable barriers to providing care within the restrictions of private practice and public dental benefits. Inequities are attributed by some to a public policy failure and addressing access to dental care ultimately requires actions that alleviate poverty that puts people in the position of choosing between competing needs.

Little is known on how to respond to these oral health inequities. In the province of British Columbia (B.C.) there has been a rapid expansion of local responses as concerned citizens with dental professionals establish and operate community dental clinics in that province's urban and rural areas. This research documented that growth and identified two service models: volunteer-charitable (VC) clinics operating part-time as a free service offering primarily relief of pain, and not-for-profit (NFP) clinics generally operating full-time within community health centres employing paid staff providing a wide range of basic dental treatments. While the CDCs enable access there are also concerns raised from those involved about the sustainability, capacity and ethics of CDCs.

Not all clinics are providing equitable standards of care to underserved populations. However, the NFP model provides evidence of enabling access to underserved populations, with services

oriented to meet the unique and often complex needs of vulnerable patients, and integrated with primary health care and community social services. When operated without government financial support these clinics are constrained in their capacity to enable access. With relatively modest subsidies from government they are found to be able to provide much more than relief of pain services to more underserved, vulnerable patients.

Recognizing the limited responsibility of the profession, the limits of charitable dentistry, the limited capacity of safety net providers such as CDCs, and the limits of public benefits to ensure access, many advocate a societal obligation to meet public needs, and call specifically for a government policy to ensure oral health equity including support for alternative treatment options such as CDCs.

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