METRO VANCOUVER MUNICIPAL HEALTH EVALUATION CAPACITY STUDY

by

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EXECUTIVE SUMMARY

Planning and land use decisions have public health consequences. Community health is affected by development plans and projects, and there is no global framework to evaluate these health impacts. There are several assessment methods that are being developed and used in recent decades. One method is health impact assessment (HIA). HIAs evaluate health determinants, such as housing affordability and walkability, and the potential positive and negative health outcomes associated with changes in these health determinants. The output of an HIA is analysis is the net impact of a plan and mitigation recommendations.

This report was undertaken with support from Metro Vancouver planning staff to provide further research on the topic of HIAs and how they are being undertaken in the region. The research consists of a literature review on health assessment frameworks, a case study of seven North American HIAs, and an HIA questionnaire to local government staff in the Metro Vancouver region.

This report addresses the state of health assessment in Metro Vancouver. It answers the following questions:

- What are the driving forces and barriers behind undertaking HIAs?
- To what extent are HIAs being conducted in Metro Vancouver?
- What can be changed to increase implementation of HIAs?

Summary of Questionnaire Findings

There are limited examples of HIAs in Metro Vancouver to evaluate impacts from proposed projects, plans and policies. However, most local governments prioritize health and the assessment of community health. This was determined through both the municipal questionnaire and a review of OCP regional context statements. There is expressed interest in learning more about how to conduct HIAs. Many barriers to conducting HIAs were identified including lack of knowledge, funding, and time restraints. Training of local government staff on the topic of conducting HIAs is the key recommendation from this report.
Through a combination of case study and questionnaire analysis, the following recommendations were developed:

**Recommendations for local governments**

1. Train local government staff to further the understanding of what HIAs are and how they are conducted;
2. Conduct HIAs for municipal projects, plans and policies that may adversely impact community health;
3. Use local health assessment frameworks, such as the *Metro Vancouver Health Impact Assessment of Transportation and Land Use Planning Activities Guidebook* and/or the *BC Healthy Built Environment Linkages Toolkit*;
4. Consider integrating HIAs when Environmental Impact Assessments (EIA) are conducted for major projects; and
5. Require HIAs from applicants for projects where development is likely to adversely affect community health.

**Recommendations for Metro Vancouver**

6. Along with stakeholders from health authorities, local governments, and community groups, create threshold criteria to more explicitly determine when health impact assessments would be recommended;
7. Collaborate with health professionals to create workshops and training programs on HIA; and
8. Continue to provide technical advice using existing guiding documentation for local governments wishing to conduct HIAs;

**Recommendations for provincial and federal governments**

9. Consider a mandatory requirement for HIA (either stand alone or integrated with EIA) for projects that exceed a determined threshold;

**Recommendations for community groups**

10. Lobby for HIAs to be conducted for proposed projects and plans that may have negative impacts on community health.
Planning and land use decisions have public health consequences. Climate change, personal health issues such as obesity, and community health issues such as safety are all linked to the built environment. Community groups, non-profit organizations, and government agencies all work to address these challenges in order to maximize community health and to minimize impacts. Health costs continue to rise in North America while population health declines (Jackson, 2003). There is growing recognition that preventative measures, rather than cures, are needed. Healthy community policies addressing walkability, community connection and pollution are aspects of a new approach to preventative health.

The definition of health has expanded beyond primary health care and planners are now beginning to understand their role in building healthy communities. There are many different assessment frameworks for determining community impacts from a planned project. Health Impact Assessment (HIA) is a method used by policy makers and planners to determine the community health impact of a proposed project.

HIAs have been increasing in popularity, particularly in Europe and Australia. There is increasing evidence that HIAs are an effective tool for evaluating population health and for recommending changes to plans, policies and projects to enhance positive benefits and mitigate negative impacts (Ross, Orenstein, & Botchwey, 2014). There is limited use of HIAs in North America, and particularly in Canada.

A health lens is typically not required nor applied for development planning; very few communities require a health evaluation. HIAs are perceived as unnecessary financial and temporal restraints.

Low uptake of HIAs is also a challenge in Metro Vancouver (formally the Greater Vancouver Regional District), a region with a population projection of over one million people by 2041. This growth will require effective planning to ensure negative impacts are mitigated. Local government knowledge and use of HIAs in Metro Vancouver is limited. Metro Vancouver recently (May, 2015) released a toolkit and guidebook for supporting municipalities in undertaking health assessments. The guidebook has been referred by only one HIA that will be described in this report.
This report will provide a background on health assessments, summarize case study findings, and outline the state of health assessments in Metro Vancouver. There are several barriers to implementing health assessments in Metro Vancouver that will be responded to in this report:

- What are the driving forces and barriers behind undertaking HIAs?
- To what extent are HIAs being conducted in Metro Vancouver?
- What can be changed to increase implementation of HIAs?

**Methodology**

This report undertakes the following research:

- Health assessment literature review;
- Health impact assessment case study review; and
- Metro Vancouver municipal health assessment questionnaire.

The health assessment literature review was undertaken primarily through review of online articles and reports under the topics of public policy, health planning, and public health. Seven HIA case studies were selected by the author and Metro Vancouver planning staff. North American HIAs that focused on land use planning were selected. HIAs were reviewed at regional, city and neighborhood scales.

Questionnaire participants were identified with support from Metro Vancouver planning staff. Participants were municipal staff in the Metro Vancouver region with an interest in planning and health. The online anonymous questionnaire was distributed for the month of March, 2016.

**Health Assessment Background**

This section describes what HIAs are, who undertakes them, and why they are undertaken. A brief history of health assessments will be explained, providing a national context of how health has been evaluated in Canada and to what extent government agencies work together on this topic. Traditional steps, values and concepts that anchor the health impact assessment framework will be summarized. This section will finish by relating HIAs to other impact assessment frameworks and explaining some limitations of the assessment technique.
**What is a Health Impact Assessment?**

An HIA is defined as “a combination of procedures, methods and tools which a policy, program or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population” (European Centre for Health Policy, 1999). This definition was originally agreed upon in the Gothenburg consensus paper in 1999 and continues to be the definition used by most organizations when framing HIA.

**Why Undertake a Health Impact Assessment?**

HIAs are a structured process for evaluating health. They identify positive and negative health impacts for proposals and recommend approaches to mitigate negative impacts while maximizing benefits. Recommendations from HIAs can be used to help decision makers address the public health impacts for proposed projects, plans and policies. These impacts will allow organizations to invest and mitigate strategically as well as highlight proposals that are likely to have adverse health impacts (Ross, Orenstein, & Botchwey, 2014).

**Who Undertakes a Health Impact Assessment?**

HIAs are generally led by approving agencies, mainly government entities. Project applicants, non-profit organizations and other agencies also have the ability to undertake HIAs. There is limited regulation in North America that requires a health impact assessment to be undertaken. The question of who conducts an HIA is primarily based on social demand. This type of assessment spans many fields, so frequently a broad stakeholder group or steering committee is formed to ensure appropriate topics are scoped for HIAs. This can include public health professionals, government staff and officials, private-sector groups, and community organizations (Ross, Orenstein, & Botchwey, 2014).

**History of Health Assessments**

In the late 20th century, health impacts from projects and policies started to become a global priority. The first International Conference on Health Promotion was held in Ottawa in 1986. It was declared that the “systematic assessment of the health impact of a rapidly changing
environment – particularly in areas of technology, work, energy production and urbanization – is essential and must be followed by action to ensure positive benefit to the health of the public” (Winkler et al., 2013). Building healthy public policy was a key component of the Ottawa Charter for Health Promotion (Lock, 2000) and opened the discussion of health beyond the health care system (Lock, 2000; World Health Organization, 1999).

At the fourth International Conference on Health Promotion in Jakarta, in 1997, HIAs continued to be emphasized. The Jakarta declaration on Leading Health Promotion into the 21st Century recommended that “public and private sector policy development should incorporate equity-focused health impact assessment” (World Health Organization, 1999; Mindell et al., 2008). This priority, along with several others, was adapted from the Ottawa Charter for Health Promotion. Expansion of partnerships, increased community awareness and increased investments in health development were other strategies highlighted.

The Gothenburg Consensus Paper, written in 1999 by the World Health Organization, was the first to describe HIAs in detail (European Centre for Health Policy, 1999; Bhatia et al., 2014). The paper describes why HIAs are important, the values of an HIA and the basic approach. The Gothenburg approach laid the foundation for the more recent applications of HIAs.

In 2005, the Bangkok Charter for Health Promotion in a Globalized World was adopted. Again, the Charter builds on the strategies set forth in the Ottawa Charter for Health Promotion. The Charter highlights HIA as “a key decision-making tool in development planning” (World Health Organization, 1999; Bos, 2006).

These notable dates increase recognition of HIAs, resulting in more implementation and research. Despite the slow uptake, there are now a number of case studies in North America (Dannenberg et al., 2008).

HEALTH ASSESSMENTS IN CANADA

There has been limited implementation of HIAs in Canada. The government of Canada recognizes that health is largely determined by factors and actions that occur outside of the health care system. The Senate Subcommittee on Population Health provided a list of recommendations to the Prime Minister in 2009 outlining the importance of “developing and implementing a
population health policy at the federal level” (Keon & Pepin, 2009). This subcommittee also emphasized the importance of inter-sectoral collaboration to address determinants that influence health. Local and regional government often have better capacity to address health that is specific to an area, as opposed to federal level intervention. The report outlines the primary factors that impact health. Only 25% of health outcomes are related to the health care system, 25% are attributable to biological conditions, and 50% of health outcomes can be explained by urban design and socio-economic factors. These findings can be used to direct health policy.

Federal health assessment policy has been prioritized since the Ottawa Charter for Health Promotion in 1986. There has also been movement in policy creation at a provincial level and uptake of assessment frameworks at the regional and local level. However, there has been limited multi-level government collaboration, which is necessary for addressing health.

In Quebec, in 2002, the Ministère de la Santé et des Services Sociaux (MSSS) adopted section 54 of the Public Health Act, to undertake health impact assessments for projects with negative impacts on the community as well as furthering research in this field. Section 54 requires HIAs for provincially led projects but does not impose this requirement on external organizations. The screening threshold is a number of indicators that allow the government to make objective decisions on whether negative impacts may occur (Ministère de la Santé et des Services Sociaux, 2006).

Other provinces are not as progressive in pursuing the HIA framework. The British Columbia Public Health Act Section 61 states that the Minister of Health must evaluate actions that may impact health (D’Amour et al., 2009). Although there is policy for health evaluation in BC, there is a lack of implementation. The lack of concrete HIA direction in Canadian policies highlights the need to establish a clearer HIA framework.

The British Columbia Provincial Health Services Authority recently released the Healthy Built Environment Linkages Toolkit (2014). The toolkit was created for use by BC communities to analyse changes to the built environment through a health lens. The toolkit breaks down the built environment into five physical features: 1) housing, 2) food systems, 3) natural environments, 4) transportation networks, and 5) neighborhood design. Each of these features contains a vision, planning principles and fact sheet that is designed help communities to make informed decisions.
when proposed plans or projects are reviewed. The toolkit provides examples of how planning principles impact health. The toolkit is not an assessment framework, but does outline a variety of best practices in planning for health. It is valuable on its own or can be effective when combined with a framework like an HIA.

At a regional level, Metro Vancouver recently released the *Health Impact Assessment of Transportation and Land Use Planning Activities Toolkit and Guidebook* (2015). This material provides background information on HIAs and a step-by-step planning process for undertaking different levels of HIAs. It is intended for a variety of stakeholders working in the field of planning and health. There is recognition that limited HIAs have been undertaken in the region. The guidebook and toolkit are meant to be flexible and accessible in order to fit into and complement existing work being undertaken.

**INTER-SECTORAL AND MULTI-LEVEL GOVERNANCE**

There are several opinions about which level of government should have jurisdiction over HIAs. There are examples of nation-wide approaches, and of community or neighborhood level assessments.

Mittelmark (2001) argues that policy making for health is best addressed at the local level for three reasons:

1. Policy making at higher levels may not be in tune with local conditions that affect health.
2. Health related planning, policy and action originate at a community level. Municipal bureaucracies are less complex than that of national and provincial levels. There is a higher likelihood of inter-sectoral collaboration in smaller governments.
3. Community health development process can adjust residents' approach to how programs and policies could strengthen or weaken the health of a community.

National policies with great intentions may still fail to have the impact intended at a local level due to the misunderstanding of local conditions. Young (2013) agrees with this assertion, and compliments the argument, saying that “municipal governments have extensive linkages with organized interests at a local level” and goes on to outline that municipalities have a “comparative advantage at a local level” when compared to national or provincial/state levels of government.
Despite these suggestions, local governments have limited impact in executing health policy. Municipalities may not have jurisdiction to implement health assessment legislation, and even if this were to occur, local boundaries would limit the effectiveness of the policy when compared to the scale of a province or the nation. Senior government may be able to create broader legislation to encourage or require health assessments for projects, despite the potential disconnection at a local level as stated above. Vertical government collaboration is a direction that could be effective for health assessment planning in the future.

**Health Assessment Elements**

The framework of an HIA is different for each assessment. Determinants of health are dependent on the scope and location of an HIA. Most HIAs follow the traditional steps and values outlined in the Gothenburg consensus paper (European Centre for Health Policy, 1999).

**Determinants of Health**

Community health is determined by social, economic and environmental factors. These determinants are outlined in the *Metro Vancouver Health Impact Assessment of Transportation and Land Use Planning Activities Toolkit* (2015).

1. Natural environment factors: air quality, water quality, other physical hazards;
2. Built environment factors: buildings, public space, roads, sidewalks, bike lanes;
3. Livelihood factors: income, employment;
4. Social and community factors: social support, family structure, access to services; and
5. Lifestyle factors: diet, exercise, alcohol and tobacco use.

Health determinants are connected to long term health outcomes. Improving determinants improves population health. By assessing how health determinants are impacted and looking at potential health related outcomes, recommendations can be brought forward to decision makers.
**Traditional Steps**

Traditional steps of an HIA have been refined since the concept and framework was introduced in the Gothenburg consensus paper (European Centre for Health Policy, 1999). There is now a North American HIA Practice Standards Working group that establishes best practices and minimum requirements for HIAs undertaken in the continent. The generally agreed upon HIA steps are:

1. **Screening**: Describes the proposed policy, project or plan and determines whether an HIA is warranted or not.
2. **Scoping**: Determination of health effects to be addressed and to what extent. Defines the research questions, data sources and data gaps.
3. **Assessment**: Creation of baseline health assessment and summarizes adverse health effects of the proposal and alternatives.
4. Recommendations: Describes alternatives to the proposal that could be taken to avoid or minimize adverse health effects and to optimize beneficial ones.

5. Reporting: Provides documentation and results of the proposal analysed, population affected, stakeholder engagement, data and methods used, and recommendations.

6. Monitoring and Evaluation: Tracks changes in health indicators from HIA recommendations, and evaluates whether the proposal takes HIA suggestions under consideration and if implementation changed health indicator outcomes. (National Research Council Committee on Health Impact Assessment, 2011).

**Traditional Values**

Four values are outlined in the Gothenburg Consensus Paper (European Centre for Health Policy, 1999) that are important for maximizing the health of a population.

1. Democracy: Emphasis on the right for people to participate in the creation, implementation and evaluation of policies that affect their lives, both directly and through elected politicians.
2. Equity: An equity lens will look at social determinants with particular emphasis directed towards policy and plan impacts on aggregate population health and distribution of impact on more vulnerable groups.
3. Sustainable development: Short and long term impacts must be assessed along with less direct impacts.
4. Ethical use of evidence: The use of quantitative and qualitative evidence must be rigorous to ensure a comprehensive assessment of possible impacts.

**Complexity of HIAs**

There are three general levels of complexity: desktop/rapid, intermediate and comprehensive. A desktop/rapid HIA takes less than a week and can be done individually or with a small group of stakeholders. Intermediate HIAs generally have more public consultation and data gathering, and are undertaken over a matter of months. A comprehensive HIA will usually take months to years to complete with extensive stakeholder engagement (Ross, Orenstein, & Botchwey, 2014).
OTHER IMPACT ASSESSMENT FRAMEWORKS

Impact assessments are designed to identify positive and negative impacts of a proposed action or policy. Impact assessments attempt to make predictions about future effects, as opposed to evaluating effects of an already implemented plan or policy. Frequently, proposed projects and policies will use a combination of impact assessments, depending on the context, in order to effectively evaluate the project. Environmental impact assessments (EIA), social impact assessments (SIA) and human health risk assessments (HHRA) are commonly used when evaluating impacts of proposed projects.

Integration of multiple impact assessment frameworks is also occasionally done. This can be strategic as an EIA is a legally mandated evaluation framework that is more codified, rigid and litigious. Integrated EIA and HIA is seen as an “underutilized mechanism” to addressing health in public policy (Bhatia & Wernham, 2008). The benefit of integrating an HIA and an EIA is that time and money is saved. However, there is also an argument that integration would diminish the importance and relevance of health issues and could also lead to legal challenges as the health component of an EIA would not be legislated (Salkin & Ko, 2001).

ENVIRONMENTAL IMPACT ASSESSMENT

Figure 2: Impact Assessment Types and Overlap (Ross, Orenstein, & Botchwey, 2014)
EIAs are perhaps the most widely known assessment framework for assessment of policies and projects. EIAs examine effects on the biophysical environment. EIAs were legislated in the United States under the National Environmental Policy Act in 1969. The EIA template has been used for subsequent assessment frameworks, like HIA and SIA, since its adoption (Ross, Orenstein, & Botchwey, 2014).

**Social Impact Assessment**

SIA examines social and economic impacts. It generally applies the same framework as an EIA or HIA. Again, this assessment technique is primarily used in conjunction with another impact assessment in the United States. However, SIAs can be used as a stand-alone process with equal weight to an EIA (Ross, Orenstein, & Botchwey, 2014).

A local SIA example is one recently completed by City of Vancouver for the Downtown Eastside (DTES). The SIA was undertaken to examine the social impacts of development. Issues assessed included housing, well-being, child vulnerability and safety (City of Vancouver, 2014). Many of these indicators are also measured in HIAs, and this will become apparent in the case study section of this report.

**Human Health Risk Assessment**

HHRA evaluates the impact of contaminant exposure on a population. Examples of contaminants are particulate matter, heavy metals or sulfur oxides. An HHRA is generally conducted prior to a project. HHRA only assesses chemical contaminants, as opposed to the full range of health effects examined in an HIA (Ross, Orenstein, & Botchwey, 2014).

**Health Economic Assessment Tool**

HEAT was developed by the World Health Organization for the purpose of evaluating the economic value of proposed projects, specifically for walking and cycling. HEAT can be an effective tool for valuing reduced mortality from cycling and walking (Kahlmeier et al., 2010).
LIMITATIONS OF HIA

- Third party validity: There is no standardized third party review to determine the accuracy and thoroughness of an HIA, which could impact the findings (Forsyth, Slotterback, & Krizek, 2009). There are limited examples of third party validation in the HIA case studies reviewed.

- Translatable data for assessment methods: There is no single accessible resource for HIA information that guides methods and indicators. An open database of HIA case studies has been suggested as an option for increasing accessibility (Dannenberg et al., 2006).

- Legislation: HIAs are not legally binding in most parts of the world. Unlike an EIA, there is usually no requirement for a proposal to undertake an HIA. If a project or policy includes an HIA, there is no requirement to act on the findings or recommendations. Wismar et al. (2007) categorized the results of HIAs as follows:
  - Results directly affect the decision being made
  - Results do not affect the decision but raise awareness of health issues
  - Results have little impact because the decision was already favorable to health
  - Results are ignored or dismissed by decision makers

- The definition of health and health determinants: Since there is no standard framework of determinants for an HIA, the outcomes vary depending on what is measured.

CASE STUDIES

HIA CASE OVERVIEW

Seven HIA case studies were selected by the author in consultation with Metro Vancouver’s Regional Planning staff. The HIAs selected were North American HIAs that focused on land use. At the time of writing this report, there are only a limited number of HIAs that exemplify these criteria. HIAs for regional, city and neighborhood scales were selected.

The HIA case studies were evaluated against the steps and values outlined in the Gothenburg Consensus Paper, which was the first report to outline a comprehensive HIA framework (European Centre for Health Policy, 1999). Figure 3 displays the locations of the HIA case studies. Table 1 summarizes basic metrics for each case study including population of study
area, health indicator categories, and comprehensiveness. Table 3 and 4 summarize which steps and values were included. Step and value evaluation tables are also summarized in more detail in Appendix 1.

Two types of HIAs were reviewed: three comprehensive HIAs, and four rapid HIAs. HIAs can vary in complexity, from desktop/rapid HIAs, which take as little as a week to complete with limited staff, to comprehensive HIAs, which take place over several months or years with stakeholder groups and steering committees.

Cases are summarized in chronological order within their levels of complexity.

**Comprehensive HIAs:**
3. Atlanta, GA: HIA of Atlanta Regional Plan 2040 (2012)

**Desktop/rapid HIAs:**
5. Spokane, WA: Pedestrian/Bicycle Bridge HIA (2011)

**Case Standardization**

It is important to clarify that each case uses different vocabulary to describe similar components. For instance, the words “categories”, “elements”, and “critical issues” are all used to group impacts by theme. The words “indicators”, “determinants” and “factors” are all used to define measurable aspects in each HIA. For readability of this section, the terms “categories” and “indicators” will be used.
Figure 3: Locations of HIA Case Studies

1. San Francisco, CA
2. Humboldt, CA
3. Atlanta, GA
4. Long Beach, CA
5. Spokane, WA
6. Albany, GA
7. Vancouver, BC
<table>
<thead>
<tr>
<th>Complexity</th>
<th>Date</th>
<th>Health Indicator Categories</th>
<th>Population</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensive</td>
<td>2012</td>
<td>Comprehensive (1) Physical Safety, (2) Environmental Stewardship, (3) Public Infrastructure, (4) Public Health, (5) Public Safety, (6) Housing, (7) Transportation</td>
<td>523,000,000</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: HIA Case Study Overview

Introduction

The Eastern Neighborhoods Community Health Impact Assessment (ENCHIA) was facilitated by San Francisco Department of Public Health (SFDPH). The 18-month process started in 2004 and was guided by a community council of diverse organizations who were affected by the neighborhood development that was occurring. There was concern that an Environmental Impact Assessment would not value health and socio-economic community priorities, so the community advocated for an HIA to be undertaken. The Eastern Neighborhoods study area comprised of the Mission, Showplace Square, Potrero Hill and South of Market which is approximately 11% of the population of San Francisco.

The ENCHIA process had five objectives:

1. Identify and analyze the likely impacts of land use plans and zoning controls on health indicators, including housing, jobs, and public infrastructure;
2. Provide recommendations for land use policies and zoning controls that promote community priorities;
3. Demonstrate the feasibility of health impact assessment methods;
4. Promote meaningful public involvement in land use policy-making by making explicit competing interests and facilitating consensus; and
5. Develop capacity for inter-agency working relationships.

Approach

Seven categories were selected for evaluation: 1) environmental stewardship, 2) sustainable and safe transportation, 3) public safety, 4) public infrastructure, 5) adequate and healthy housing, 6) healthy economy, and 7) community participation. Twenty-seven community health indicators were developed and measured. Policy briefs were written for each indicator, which included supporting information on how each indicator related to health.

The Community Council then devised the healthy development measurement tool (HDMT) methodology to evaluate the twenty-seven policy briefs in order to determine which ones should be prioritized. The tool is a systematic approach to assessing social, environmental, economic
and equity priorities through a health lens. It provided metrics for stakeholders to assess which proposed projects, plans and policies would impact public health. The Council then charged SFDPH to further create, implement and disseminate the HDMT framework and its findings publicly.

Outcome

The ENCHIA process concluded with the creation of the HDMT, which was used for evaluating policies, plans, and projects in the Eastern Neighborhood Communities. The HDMT was also disseminated for use by other groups wishing to conduct a similar assessment.

The most important recommendations from the ENCHIA was for the adoption of the HDMT and for SFDPH to disseminate the methodology for other groups to use. The HDMT was the first measurable HIA framework created and disseminated in North America and has been adapted and used by several HIAs including the next case study, the Humboldt County General Plan Update, evaluated in this report.

**Humboldt, CA: Humboldt County General Plan Update HIA (2008)**

Introduction

The Humboldt County General Plan Update (GPU) HIA was undertaken in 2008 by Humboldt County Public Health Branch in collaboration with Humboldt Partnership for Active Living and consultants Human Impact Partners. The GPU has not been adopted at the time of this report. The HIA reviewed how land use and development scenarios proposed in the GPU would affect health.

The HIA evaluated three plan alternatives (A, B, and C). Plan alternative A proposes focused growth, all within areas already supported by public sewage and utilities. Plan alternative B is a compromise between infill development and greenfield development. Plan alternative C allows for the most unrestricted growth with no growth boundary. The HIA was conducted as part of an ongoing effort to ensure that land use decisions are made through a public health lens. Humboldt County is a mix of urban and rural territory with 70% of people living in urban areas and 30% living in rural areas. As described in the previous case study, the San Francisco Department of Public Health disseminated the HDMT as a tool for evaluating land use planning
and development impacts on human health. The GPU HIA was based on the HDMT with modifications to include rural considerations. The adapted rural HDMT has over 60 health and land use related indicators, 35 of which were studied in this HIA.

Approach

Indicators were divided into six categories: 1) housing, 2) transportation, 3) public infrastructure, 4) economy, 5) public safety and 6) environmental stewardship. Plan alternatives were further broken down into positive, neutral and negative health outcomes. Each category provided a list of indicators, examples of who is affected, existing conditions in Humboldt County, and a summary of findings for each plan alternative.

Table 2: Humboldt Categories, Indicators, Recommendations and Rationale

<table>
<thead>
<tr>
<th>Category</th>
<th>Indicators</th>
<th>Best Option</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Housing</td>
<td>Homeless population, proportion of housing production to housing need by income category, and proportion of households paying greater than 30% and 50% of their income on housing.</td>
<td>Plan alternative A</td>
<td>Development of multifamily housing and affordable housing units could be maximized best under plan alternative A.</td>
</tr>
<tr>
<td>2) Transportation</td>
<td>Transportation included average vehicle miles, number and rate of bicycle/pedestrian injury collisions, and ratio of miles of bike lanes/pedestrian facilities to road miles.</td>
<td>Plan alternative A</td>
<td>Growth in urban areas, where residents have better access to jobs, goods and services without reliance on cars improves health</td>
</tr>
<tr>
<td>3) Public Infrastructure</td>
<td>Residential density, proportion of zipcodes without childcare facilities, access to grocery stores carrying produce, and the percentage of population within two miles of a medical center.</td>
<td>Plan alternative A</td>
<td>There is a reduction to negative health impacts if residents live closer to important goods and services.</td>
</tr>
<tr>
<td>4) Economy</td>
<td>Proportion of jobs paying a livable wage, proportion of jobs that provide health insurance, and number of jobs available with appropriate educational requirements.</td>
<td>Plan alternatives A, B, &amp; C</td>
<td>Each plan alternative was found to have public health strengths and weaknesses.</td>
</tr>
<tr>
<td>5) Public Safety</td>
<td>Rates of driving under the influence, emergency preparedness training for citizens, and an isolation index. The isolation index includes multiple measures such as substance abuse treatment, crime, civic engagement, suicide, and mental health treatment.</td>
<td>Plan alternative A</td>
<td>Residents will have better access to emergency services and higher social connectedness in urban areas.</td>
</tr>
<tr>
<td>6) Environmental Stewardship</td>
<td>Residential electricity use per capita, acres of public open space per 1000 residents in urban areas, percent of food consumed from local sources and total impervious area in the county.</td>
<td>Plan alternative A</td>
<td>The best health outcomes would occur by accommodating growth in areas that are already developed, protecting undeveloped lands.</td>
</tr>
</tbody>
</table>
Outcome

As summarized above, the HIA concludes by suggesting that GPU plan alternative A will have the most positive health impacts and the fewest negative health impacts for future growth and development in Humboldt County.

Atlanta, GA: HIA of Atlanta Regional Plan 2040 (2012)

Introduction

Plan 2040 is a long-term comprehensive plan for the Atlanta region prepared by the Atlanta Regional Commission (ARC). The plan addresses land use and transportation policies. The HIA for Plan 2040 was conducted by the Center for Quality Growth and Regional Development (CQGRD) and was one of the first HIAs for a major U.S. metropolitan area comprehensive plan. The HIA was undertaken during the review of Plan 2040, prior to adoption.

A goal of the HIA was to show how health can be effectively integrated into the objectives and goals of Plan 2040. CQGRD concluded that there were major health impacts, both positive and negative, associated with the comprehensive plan. Atlanta has many health challenges compared to national benchmarks in areas such as obesity, pollution, and socio-economic disparities. With the integration of HIA recommendations, Plan 2040’s land use and transportation actions aim to improve health in Atlanta.

Approach

When developing this HIA, engagement included stakeholder meetings and an online survey. The HIA identified five categories related to regional planning activities that were likely to affect health: 1) safety and security, 2) access, equity and economy, 3) active living, 4) ecology and environmental quality, and 5) civic life and social connections. Health impacts were measured through the following indicators:

1. Safety and security indicators included death rate in motor vehicle crashes, percentage of workers with average commute time longer than 45 minutes (one-way), property crime rate, violent crime rate, and distribution of ER visits.
2. Access, equity and economy indicators included employment density, carless households, affordable housing, and transportation and housing affordability for vulnerable communities.
3. Active living indicators included percentage of commuters using a form of active transportation, walkable blocks, areas within walking distance of school, and obstructive heart disease death rates.

4. Ecology, energy, and environmental quality indicators included asthma ER visits, roadway emission zones, and health risk and locally unwanted land uses (such as landfills, transfer stations and airports).

5. Civic life and social connection indicators included drug overdoses, suicide death rates, STD prevalence rates, and commute duration.

Outcome

Recommendations were assigned to different agencies, including federal and state governments, ARC staff, developers, and neighborhood groups. Recommendations were categorized into 1) design and development, 2) planning methods, and 3) programs and implementation.

1. Design and development recommendations included diversifying mode share, increasing connectivity and increasing centeredness to conserve land outside of centers.

2. Planning method recommendations included standardizing project rankings, collaborating with organizations that represent health interests and establishing priorities around health.

3. Programs and implementation recommendations included ensuring the program goals are fully represented in plans and projects.

LONG BEACH, CA: LONG BEACH DOWNTOWN PLAN HIA (2011)

Introduction

A desktop/rapid HIA for the Long Beach Downtown Plan was undertaken by Human Impact Partners, in collaboration with community groups East Yard Communities for Environmental Justice and Californians for Justice. The HIA was undertaken because there was concern that the Environmental Impact Report for the Long Beach Downtown Plan failed to address important health related impacts to the existing Downtown Long Beach community.

Over one quarter of Downtown Long Beach residents live below the poverty line. Asthma, obesity and heart disease rates are significantly higher in Long Beach than in Los Angeles County.
Rental stock is inadequate relative to the existing population. Unemployment rates match state trends; however, the type of employment is changing and the new jobs pay less on average.

**Approach**

The goal for the HIA was to determine whether the proposed plan adequately accounted for the housing and employment needs of low income and vulnerable populations, and to ensure appropriate actions were undertaken to maximize positive impacts and mitigate negative impacts.

This desktop/rapid HIA assessed existing conditions in Downtown Long Beach, the potential impacts of the proposed Downtown Plan, and the potential impacts of the recommended community benefits. Based on preliminary impact assessment, housing and employment were selected as the categories by the consultants undertaking the report. Indicators for these categories were analysed through a literature review.

Housing affordability indicators included proportion of renter and owner occupied housing, housing wage as a percent of minimum wage, and proportion of households paying more than 30% of their income on housing. Employment indicators included unemployment by race and ethnicity, and jobs paying greater than or equal to the self-sufficiency wage.

**Outcome**

The HIA found that the Downtown Long Beach Plan did not address the needs of low income residents. The plan did not include strategies for developing affordable housing units, nor did it propose any measures for limiting displacement of existing low income residents. The HIA recommended for the plan to be amended to include community benefit strategies related to housing and employment. Housing recommendations included preservation of the existing stock of affordable housing and construction of new affordable housing units, requiring that a percentage of new rental and market units be designated as affordable housing, and implementing a commercial linkage fee for affordable housing units. It is not clear whether any of these recommendations were considered or implemented as the Long Beach Downtown Plan was already adopted prior to the HIA.
Introduction

The City of Spokane and the Spokane Regional Health District conducted an HIA to inform decision makers of the potential health impacts from the creation of a pedestrian/bicycle bridge in the Spokane University District. Although the study area is sparsely populated, with census data outlining only 99 people living there, future residential development near the bridge is anticipated. The demographic of the study area is primarily middle-age and low income residents.

Approach

Six categories were reviewed: 1) physical safety, 2) physical activity, 3) perceived safety, 4) social capital, 5) economic development, and 6) air quality. Indicators were measured for each of these potential impacts. A combination of primary and secondary data were researched to validate health impacts and to suggest recommendations to make the study area a healthier place should construction of the pedestrian/bicycle bridge proceed. Primary data included surveying local residents and businesses, observations of vandalism and a window count as a measure for “eyes on the street”, influenced by Jane Jacobs (1992).

Outcome

Recommendations were listed for each of the six health categories. Key recommendations included reducing the availability of vehicle parking near the bridge to encourage alternative forms of transportation, zoning to allow for mixed-use development, and ensuring there is bicycle lane connectivity on and off the bridge.

The report concluded that the construction of the pedestrian/bicycle bridge would contribute positively to the health of those who live, work or travel through the study area. A process and impact evaluation took place after the HIA was conducted to determine what, if any, project changes resulted from the completion of the HIA. No evaluation results have been published at the time of this report.
Introduction

The Center for Quality Growth and Regional Development (CQGRD), in partnership with the Georgia Department of Public Health, undertook a rapid-intermediate HIA on Albany Housing Authority’s (AHA) Transformation Plan for the Choice Neighborhood Initiative in West Central Albany. The AHA Choice Neighborhood Initiative was about halfway through the planning process when this HIA was initiated in 2012.

The HIA focused on the proposed redevelopment of McIntosh Homes, a low income housing complex, to mixed-income housing. The area is low income and has low educational achievement, with high rates of crime and chronic disease when compared to national benchmarks. The neighborhood is 97% occupied and demolition of the area for future development will result in the displacement of several hundred residents.

Approach

The HIA included stakeholder input and public health literature review. Residents voiced health concerns through surveys and interviews. Diet, physical activity, and weight related chronic diseases were identified as the primary issues residents would like addressed. The health of children was another area of concern, with residents saying that most children in the neighborhood do not achieve adequate physical activity. A lack of safety and security prevented children from playing outside. The cost of living on a fixed income and access to healthy food were concerns raised by older residents.

Categories assessed were: 1) vulnerable populations and associated health issues, 2) health effects of housing redevelopment, 3) community facilities, 4) safety and security, and 5) transportation. Evidence for indicators was provided through literature review.

1. Vulnerable populations and associated health issue indicators included income and poverty, minority status, access to employment, access to healthcare, diabetes, asthma, low birth weight infants, affordable housing, and gentrification and displacement.

2. Health effects of housing redevelopment indicators included social capital, property values, and design elements influencing housing health.
3. Community facility indicators included parks and greenspace, trail access, access to healthy food, urban agriculture, and walking to school.

4. A safety and security indicator reviewed was intentional injury.

5. Transportation indicators included neighborhood impacts of one-way streets and pedestrian facilities.

Outcome

Positive and negative impacts were identified and compiled as evidence-based recommendations to inform decision makers about the health-related issues associated with this project. The main recommendations included converting underutilized space to parkland, improving access to multi-use trails adjacent to the study area. An additional recommendation was that there should be clear communication plans during construction to reduce stress, and to take care in undertaking demolition as to limit impact on respiratory health. It was not stated whether these recommendations were implemented at the time of this report.


Introduction

The City of Vancouver hired the consultants Golder Associates Ltd. to prepare a desktop/rapid HIA for the deconstruction of the Georgia and Dunsmuir viaducts that connect downtown Vancouver with East Vancouver. The study was undertaken in the summer of 2015, and council approved the removal of the viaducts in the Fall of 2015. The objective of the report was to identify any health impacts that may occur from the proposed deconstruction.

The removal of the viaducts is anticipated to improve connectivity for pedestrians and cyclists, and to deliver community benefits through affordable and market housing projects and a new 13-acre park. Minimal traffic impacts are expected and more resilient infrastructure will be in place in case of floods or earthquakes.

Approach

The Metro Vancouver Health Impact Assessment of Transportation and Land Use Planning Activities Toolkit (2015) guided the HIA. The desktop/rapid HIA assessed the following select categories from the HIA toolkit: 1) natural environment, 2) built environment, 3) livelihood
factors, 4) social and community factors, and 5) lifestyle factors.

1. Natural environment indicators included air quality, noise and water quality.

2. Built environment indicators included transportation and traffic flow, access to green space and community services, and mixed use developments.

3. Livelihood indicators included education, employment and income.

4. Social and community indicators included exclusion, gentrification, affordable housing, safety and healthy child development.

5. Lifestyle indicators included diet and exercise, substance abuse and risky behaviour.

Several indicators in the above categories were not undertaken as part of this HIA. These include water quality, education, employment and income, sense of community, gentrification and displacement, homelessness, culture, childhood development, diet, substance abuse and risky behavior.

Since this was a desktop/rapid HIA, no surveys or interviews were conducted. The HIA found that there were no negative impacts. Noise was the only determinant that had a predicted neutral outcome. Proposed mitigation for noise included avoiding construction at night and monitoring noise.

Outcome

Golder Associates Ltd. acknowledged that many indicators were not assessed as part of the project that could have community health impacts. The property development that will result from the viaduct removal was not included in the HIA. The desktop/rapid HIA was limited to using existing city datasets; no new primary data was acquired. If an intermediate or comprehensive HIA were undertaken for this project, additional impacts could have been captured through stakeholder involvement.

Recommendations were limited to implementing sound insulation in the study area while construction is undertaken. The City of Vancouver has not acknowledged whether this recommendation will be undertaken during construction. The remainder of recommendations addressed city policy, such as encouraging active transportation and implementing affordable housing. Community involvement was listed as an important consideration for assessing change in traffic flow in the neighborhood.
### Table 3: Summary of Inclusion of Values

<table>
<thead>
<tr>
<th>Democracy:</th>
<th>Ethical Use of Evidence:</th>
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**Legend for Inclusion of Traditional Steps and Values:**
- ✔️: Complete information on the step or value
- ✗: No information on the step or value
- –: Partial information on the step or value
<table>
<thead>
<tr>
<th></th>
<th>Step 1: Scoping</th>
<th>Step 2: Assessment</th>
<th>Step 3: Implementation</th>
<th>Step 4: Evaluation</th>
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Table 4: Summary of Inclusion of Steps
Case Studies - Discussion and Analysis

Levels of Complexity

HIAs can vary in complexity depending on resources. The seven cases reviewed above have varying levels of complexity. There were three comprehensive HIAs (Humboldt, San Francisco, and Atlanta), and four were desktop/rapid HIAs (Long Beach, Spokane, Albany, and Vancouver). As expected, the degree of complexity was more in-depth for comprehensive HIAs than rapid HIAs. However, degrees of complexity ranged within each of these levels.

The report methodology was different for each of the three comprehensive HIAs. The traditional HIA steps were defined and followed for both Atlanta and San Francisco. San Francisco created another framework (the Healthy Development Measurement Tool) which was then adapted by Humboldt. The Humboldt County General Plan Update HIA used this adapted framework, the rural Health Development Measurement Tool.

Of the case studies reviewed, the comprehensive HIAs provided more evidence of potential health impacts, usually with both quantitative and qualitative components. These in-depth assessments led to evidence-based recommendations. Desktop/rapid HIAs provided limited evidence that rarely included primary data collection. Recommendations from these HIAs were less influential.

More cases would need to be reviewed to make an informed decision, but with the case studies analysed, it appears that scope of rapid HIA is a limiting aspect that Golder Associates Ltd. referred to frequently. They raise this as a limitation for the Vancouver viaducts HIA, suggesting that an intermediate or comprehensive HIA would have been more effective. This raises the question of whether rapid HIAs were less influential because of lack of evidence, or because of the lack of resources invested in the HIA. A lack of resources from the beginning of an HIA indicates that the process may not have been valued, leading to a lack of value placed on the results.

Adherence to Steps and Values

The Gothenburg Consensus Paper recommends following the steps and values regardless of the HIA complexity being undertaken (European Centre for Health Policy, 1999). The steps and values are more standardized in recent HIAs (Bhatia et. al, 2014).
All HIAs reviewed adhered to some combination of traditional steps and values, some more so than others. There was a consistent lack of inclusion when it came to evaluation and monitoring. Some HIAs also skipped the screening step (refer to Table 4 for more detail).

One HIA was significantly more thorough compared to the other case studies. The San Francisco ENCHIA was guided by a Community Council with representation from small businesses, non-profit organizations, private developers, bicycle advocates and environmental justice groups. The comprehensive HIA was undertaken over 18 months. Beyond using the traditional steps and values previously outlined, ENCHIA also developed the Health Development Measurement Tool (HDMT) to evaluate plans in the Eastern Neighborhood Communities. This tool has since been referred to and used by others undertaking HIAs (including Humboldt County General Plan Update which is also analysed in this report).

**PROJECT SCREENING FOR INDICATORS AND THRESHOLDS**

Half of the cases studied undertook project screening to determine if an HIA was warranted or not. There is no legislation requiring HIAs to take place in North America and as such, HIAs are done voluntarily. Of the cases analysed, the scale of study areas ranged from the Atlanta 2040 HIA with 4.3 million people to the Spokane Bicycle/Pedestrian Bridge HIA with 99 people. With such a range in scope and scale, it appears that HIAs are adaptable to numerous plans and projects. Unfortunately, such vagueness in the threshold of a HIA can be a liability for future uptake. Communities and governments would likely benefit from more explicit thresholds for when an HIA is warranted.

Each HIA used a different set of health indicators to establish baseline data and to predict impacts from the proposed project, policy or plan. It may not make sense to standardize indicators for all HIAs undertaken, as each study area has unique challenges, but the ability to compare HIAs more effectively is an important aspect to consider.

There are many different ways to measure impact for a category, such as housing, and different indicators may create different outcomes. Without standard requirements, HIAs are able to skew outcomes and recommendations. For example, the HIA for Vancouver viaducts did not find any negative impacts; however, property development was not considered during assessment.
Property development, displacement, and affordability will impact the study area. This exclusion is an oversight and this could be considered an unethical use of evidence. Increased indicator and scope standardization would decrease the chance of HIAs excluding non-favourable indicators.

ENCHIA defines what adequate and healthy housing means in their Healthy City Vision and objectives. However, it does not define how indicators are measured and then linked to housing objectives. “Objective HH.3: Increase opportunities for home ownership” does not actually have associated indicators in the ENCHIA. Despite there being over 100 measurable indicators listed as outcomes, the ENCHIA does not describe any of these indicators in the report.

Similar indicators can be used for different purposes. The Humboldt GPU HIA has the topic of housing as a category. Their plan alternatives were evaluated against the following indicators: proportion of housing production to housing need by income category, proportion of households paying greater than 30% and 50% of their income on their homes, and number of homeless people. The HIA evaluated which plan alternative would be most effective at minimizing the impact on these indicators. The Downtown Long Beach HIA also used housing as a category. Examples of the indicators are proportion of households spending more than 30% of their income on housing, proportion of renter and owner occupied housing, and housing wage as a percent of minimum wage. This HIA provided further calculations and recommendations to lessen the affordability gap through suggested development fees.

There are many ways to measure the same topic and changing indicators may yield different results. A direction to strive for in future HIAs is to standardize how indicators are measured and what they are.

**Common Barriers**

Several HIAs described barriers that were encountered during the process. The report for the ENCHIA was particularly verbose in recounting each limitation that occurred. Continued stakeholder participation was the main issue that was encountered. This was not listed as an issue for any other HIA reviewed. However, only half involved stakeholders, and no HIAs reviewed had stakeholder participation for 18 months like the ENCHIA did. The ENCHIA Community Council suggested that a new process may be required for HIA stakeholder participation over extended
periods of time.

The Vancouver viaducts HIA listed the scope of HIA as a limitation, mentioning several aspects in the HIA that could have taken place if it was contracted as an intermediate or comprehensive HIA.

Time and money were listed as limitations for the Spokane University District Pedestrian/Bicycle Bridge HIA. This limited the amount of qualitative data collected from nearby residents and businesses.

**Evaluation and Monitoring**

Evaluation and monitoring of HIAs is an important final step of the HIA process (Kemm, 2012). Evaluation can advance the evidence base and effectiveness for future HIAs. It is also a demonstration of accountability for HIA findings (Taylor, Gowman, & Quigley, 2003). Most HIAs reviewed in this report have limited information about attempts to monitor outcomes, recommendations or plan impacts. Most HIAs listed finances as the limiting factor to undertake evaluation or monitoring. Some HIAs were undertaken prior to adoption or approval of the project, plan or policy (e.g. the Humboldt Country General Plan Update).

Three types of evaluation are effective for HIAs. Process evaluation focuses on the procedural events of the HIA including how the HIA was designed and undertaken. This contains research, reporting, participation and follow-up. Impact evaluation assesses what, if any, impact the HIA had on decision makers. The extent of recommendations achieved is reported in impact evaluation to improve success of future HIA recommendations. Outcome evaluation assesses the predictions from an HIA and whether changes resulted from a project, plan or policy. This is known to be the most difficult evaluation to properly initiate as human health is affected by many indicators, some of which may not have been covered in the original HIA, or new factors may have been introduced after the HIA was undertaken (Taylor, Gowman, & Quigley, 2003).

Process evaluation was only undertaken for ENCHIA. No cases reviewed undertook an impact evaluation or outcome evaluation. There is no legislation in Canada or the United States requiring HIAs, there are also none that require recommendations to be monitored.
Case Study Learnings for Metro Vancouver

The Vancouver viaducts HIA was the first HIA undertaken in Metro Vancouver by a municipality. It was a desktop/rapid HIA that focused on baseline health and potential community health impacts if the viaduct deconstruction were to take place. The viaducts HIA was published in September, 2015, making it the most recent HIA conducted. As such, there was substantial literature to draw upon globally for the creation of this desktop/rapid HIA. HIAs have been occurring for over twenty years, making Vancouver a late adopter of this framework, yet still one of the first in British Columbia. Other examples in the province are for resource extraction; there are no known HIA examples for urban development.

The report provides a data-driven look at the demographics and socio-economic status of likely affected neighborhoods from the proposed deconstruction. There was no stakeholder participation or outreach and recommendations were primarily for further research in the form of an intermediate or comprehensive HIA. This HIA was written in a neutral style, allowing data to inform health impacts. Some of the other HIAs reviewed were led by community organizations (e.g. Downtown Long Beach HIA), providing a less impartial assessment of impacts with limited emphasis on primary data. The impartial writing style by Golder Associates gives the report some credibility.

Approach is needed for a project or plan. Since one of the key recommendations in the viaducts HIA was to undertake an intermediate or comprehensive HIA, this should be considered when scoping future projects in the region.

Of the case studies analyzed, the Vancouver viaducts HIA was the only one conducted without referencing a plan, policy, or project. Although HIA research acknowledges it is important to start an HIA early in the planning process, the lack of specifics makes evaluation a challenge. Although the lack of surveys was acknowledged as a limitation in the Vancouver viaducts HIA, this was also the only HIA conducted that relied heavily on the terminology of desktop/rapid HIA as a rationale for limiting primary research. Several other desktop/rapid HIAs reviewed undertook small surveys and interviews to better understand the study areas.
A questionnaire was sent to municipal planners in the Metro Vancouver region who have an interest in community health. The questionnaire consisted of multiple choice and open ended questions that asked about municipal priorities and health assessment uptake. The questionnaire was completed during March, 2016. There was a 56% participation rate (18 of 32 municipal planners). Appendix 2 has a full list of questions and responses.

**Community Health as a Priority in Metro Vancouver**

Figure 4: Health Prioritization from Municipalities in Metro Vancouver

1. Is health a priority for your municipality?

![Pie chart showing 15 out of 18 responses affirming health as a priority, with 3 responses indicating it is not.]

Health is generally a priority for municipalities in Metro Vancouver, as shown in Figure 4 with 83% of planner responses affirming this. Several participants indicated that their municipality prioritizes health in their Official Community Plan (OCP) while others indicated that health priorities were reflected through specific municipal plans and projects. Some of these priorities are described below.

The City of North Vancouver OCP has a chapter on community well being. The chapter addresses vulnerable parts of the population and how the City plans to tackle these vulnerabilities. Particularly vulnerable populations are senior citizens and families. Seniors account for 14% of the population and is this proportion is expected to increase. Access to housing and transportation is an area the City of North Vancouver is planning for so that senior citizens can age well in the City.
The District of North Vancouver prioritizes health through a Memorandum of Understanding (MOU) with Vancouver Coastal Health. Mental and physical health are key issues in the OCP, and community health is highlighted in two different goals that inform policy, strategies and targets in the OCP. Under the goal of developing complete communities, strategy 4.2.4f is “to assess health implications in planning”. This strategy, along with the above mentioned MOU, provides a basis to consider HIAs when undertaking projects in the District.

The City of Surrey addresses health in two sections of their OCP: Healthy Neighborhoods and Healthy Living. Healthy neighborhood policies and programs emphasize developing complete, accessible and walkable neighborhoods that are planned and designed to be safe and socially-cohesive. Healthy living policies and programs focus on providing access to green space and promoting active lifestyles. Surrey works with the local health authority to provide necessary programming for active living.

The City of Richmond’s 2041 OCP vision prioritizes community and ecosystem health. Population growth and aging are noted as key issues to address in future plans. The OCP has a chapter on connected neighborhoods with special places, which describes the promotion of healthy neighborhoods.

**Health Assessment in Metro Vancouver**

Municipalities in Metro Vancouver have many health related plans and policies. Questionnaire responses refer to strategies and policies around homelessness, mental health, alcohol, active transportation, food systems, and wellness that are developed to improve community health. When asked if municipalities used an assessment tool (such as an HIA) for projects, plans or policies in the last few years, only 16% of responses (3 of 18) were yes. When asked if municipalities were intent on implementing an HIA in the next year, only 16% of responses (3 of 18) were yes, again.

The Metro Vancouver 2040 Regional Growth Strategy (RGS) was adopted in 2011. Municipalities were required to rewrite their Regional Context Statements (RCS) to align with the RGS. One of the goals in the RGS is to develop complete communities. Objective 4.2 is to “develop healthy and complete communities with access to a range of services and amenities”. The role of municipalities
in action 4.2.4f is to “assess overall health implications of proposed new communities, infrastructure and transportation services, including air quality and noise, with input from public health authorities”.

Table 5 is a list of municipal context statements for action 4.2.4f and a summary of how health implications are assessed. Several municipalities such as White Rock and Pitt Meadows say no action has been taken for this strategy as there is no new development occurring. Other municipalities, such as the District of North Vancouver and the City of Richmond, mention cooperation with local health authorities for OCP planning initiatives. Most municipalities provided examples of prioritization of health in their respective OCP’s; however, no municipalities provided examples of assessing health implications, which the RGS action recommends. It is possible that a lack of knowledge of health assessment options is part of the reason that this is largely overlooked in Metro Vancouver.

It is important to note that unlike other sections of the RGS, objective 4.2 does not require municipalities to adopt regional context statements that will include specific policies or strategies. Instead, the wording is “Include policies within municipal plans or strategies, that may be referenced in the Regional Context Statements...” Objective 4.2 is not as binding unlike the rest of the Regional Growth Strategy.
Table 5: Summary of Health Policy in Metro Vancouver RGS 4.2.4f and RCS

<table>
<thead>
<tr>
<th>Region</th>
<th>Policies and Programs</th>
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<tr>
<td>Burnaby</td>
<td>Chapter 10.1 Area Planning, policy 10.3.</td>
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<tr>
<td></td>
<td>Chapter 7.2 Transportation, policies 7.1 and 7.4.</td>
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<tr>
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<td>Chapter 5.2 Air Quality, policies 5.39 through 5.42.</td>
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<tr>
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<td>Chapter 3.1 Residential, Section 3.1.2 Community Character and Sense of Place, policy 3.5.</td>
</tr>
<tr>
<td></td>
<td>Chapter 7.2 Growth Management, Section 7.2.1 A Compact and Unique Community, policy 7.2.5.</td>
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</tbody>
</table>

New Westminster has policies intended to address the health-related implications of new development.

- Chapter 10.1 Area Planning, policy 10.3.
- Chapter 7.2 Transportation, policies 7.1 and 7.4.
- Chapter 5.2 Air Quality, policies 5.39 through 5.42.
- Chapter 3.1 Residential, Section 3.1.2 Community Character and Sense of Place, policy 3.5.
- Chapter 2.1 Growth Management, Section 2.1.2 A Compact and Unique Community, policy 2.1.5.

Maple Ridge

Not specified

Langley (Township)

By case basis as required.

- Major infrastructure projects and transportation services will be evaluated from a public health perspective on a case-by-case basis.

Langley (City)

- Public health underlies the fundamental objectives of the OCP (see 2.1.1 Livability and the Sustainability Framework).
- Area Plan update considers planning for health communities.
- OCP policies encourage sustainable and accessible land use and built environments (Section 2.1 Climate Change, policies 2.1.9 through 2.1.19).
- OCP policies encourage the improvement in air quality and reduction of greenhouse gas emissions (Section 2.1.11). Climate Change, policies 2.1.9 and 2.1.10).
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- OCP policies encourage the improvement in air quality and reduction of greenhouse gas emissions (Section 2.1.11).
- OCP policies encourage the improvement in air quality and reduction of greenhouse gas emissions (Section 2.1.11).

Delta

- OCP policies encourage sustainable and accessible land use and built environments.
- OCP policies focus on providing accessible and open spaces that enhance health benefits and improved quality of life.
- OCP policies focus on providing accessible and open spaces that enhance health benefits and improved quality of life.
- OCP policies focus on providing accessible and open spaces that enhance health benefits and improved quality of life.

Coquitlam

- Transportation and expansion of greenbelt (Citywide OCP Sections 3.2, 3.3, 3.5, 6.4, 6.5). The OCP encourages sustainable community designs and public transportation services.
- The OCP encourages sustainable community designs and public transportation services.
- The OCP encourages sustainable community designs and public transportation services.
- The OCP encourages sustainable community designs and public transportation services.

Burnaby

The OCP provides an environmental framework in the form of a charter, which includes air quality and global warming.

- Transportation services, including air quality and noise, will help public health authorities.
- 4.2.4(f) assess overall health implications of proposed new communities, infrastructure, and

Regional Growth Strategy

Metro Vancouver
Policy 8, Section 7, Community, Policies for Public Health and Safety: contains a policy direction to and work in

<table>
<thead>
<tr>
<th>North Vancouver (City)</th>
<th>No new communities are planned.</th>
</tr>
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<tbody>
<tr>
<td>Port Coquitlam</td>
<td></td>
</tr>
<tr>
<td>Pitt Meadows (District)</td>
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<tr>
<td>North Vancouver (City)</td>
<td></td>
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<tr>
<td>Pit Meadows (District)</td>
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</table>

**North Vancouver (City)**

- Parks, physical recreation, and open space goal 5: Support, enhance, and maintain recreation as a vital aspect of a healthy community.
- Natural environment energy and climate goal 4: Measure, maintain, and improve the long-term health of natural ecosystems and native species.
- Community well-being goal 3: Increase access to nutritious, safe, healthy, local food and opportunities for residents and businesses.
- Land use goal 1.2: Develop a compact, complete community that meets the needs of its diverse residents and neighborhoods and access to recreation are also a key building block in a healthy environment for many reasons, including networks and access to recreation are also a key building block in a healthy environment for many reasons, including

<table>
<thead>
<tr>
<th>Infrastructure Investment</th>
<th>Clean fuel, and anti-idling initiatives (Section 9.5)</th>
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</table>
|                           | Air quality improvements promoted through regional directives, and use and transportation planning, promotion of a network of pedestrian and cycle friendly centres has positive health implications (Chapter 2 and 5). OCP urban structure of a OCP planning process and content development (introduction, acknowledgements section), OCP urban structure of a Memorandum of understanding signed between District and local health authority to integrate health perspectives into a

<table>
<thead>
<tr>
<th>Pitt Meadows (District)</th>
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<tr>
<td></td>
<td>North Vancouver (City)</td>
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<tr>
<td>Location</td>
<td>Context</td>
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<td>-------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>White Rock</td>
<td>The OCP enables such assessments (see Community Well-Being, Sustainable Resource Use and Climate Change Response).</td>
</tr>
<tr>
<td>West Vancouver</td>
<td>New development that provides healthy and high quality living environments. Policy B.2 promotes sustainable practices, including the introduction of programs to ensure public health by:</td>
</tr>
<tr>
<td></td>
<td>1. Policy Section 4 “Built Form and Neighbourhood Character” policy B.4 promotes support for pedestrian and cycling environments. Policy B.4 promotes sustainable design in new development that provides healthy and high quality living environments. Policy B.2 promotes sustainable practices, including the introduction of programs to ensure public health by:</td>
</tr>
<tr>
<td>Vancouver</td>
<td>The City of Vancouver is working with our key partner, Vancouver Coastal Health, to develop a formal commitment to:</td>
</tr>
<tr>
<td>Surrey</td>
<td>Surrey is increasingly considering the health impacts of development in terms of its location and access to active transportation options or if physical design can reduce some of the noise and air quality issues that can be associated:</td>
</tr>
<tr>
<td>Richmond</td>
<td>As an example, Policy BF A.1 promotes superior environmental design in new development that provides healthy and high quality living environments. Policy BF A.2 promotes sustainability practices, including the introduction of programs to ensure public health by:</td>
</tr>
<tr>
<td>Port Moody</td>
<td>The OCP enables such assessments (see Community Well-Being, Sustainable Resource Use and Climate Change Response).</td>
</tr>
</tbody>
</table>

### Policies

- Policy B.4 promotes sustainable practices, including the introduction of programs to ensure public health by:
  - Outlining a plan based on pedestrian, cycling, and transit networks in urban settings.
  - Continuing to cooperate with Richmond Health Services, promoting healthy lifestyles and wellness programs.
  - Providing safe infrastructure (e.g., roads, trails, transit, green spaces).
  - Consulting with Metro Vancouver to improve air quality.
Participants were asked to identify barriers to undertaking an HIA. Responses are displayed above in Figure 5. Training on HIAs is the most common barrier, with 72% of people agreeing. 55% of participants identified that additional staff or time resources, and 50% of participants identified that funding were barriers to undertaking an HIA. A change in legislation or municipal policy was not identified as a common barrier, with less than 50% participant support.

HIA training has been limited in Vancouver and BC. Support has been offered through guidebooks such as the *Metro Vancouver Health Impact Assessment of Transportation and Land Use Planning Activities Guidebook*, and the *BC Healthy Built Environment Linkages Toolkit*. Training local government staff to better understand what HIAs are and how to conduct HIAs is essential for furthering their uptake in the region.

Additional staff time, resources and funding are always difficult to achieve in any local government setting. There is less opportunity to create change with these restrictions due to budgeting constraints, but there is always the ability for staff to bring forward the idea of HIAs for project or plans early in the process. Again, this ties to knowledge and training on HIAs as a primary requirement.
Change in municipal or provincial health assessment policy was not seen as a mechanism to overcome barriers to undertaking an HIA. Change in legislation can be difficult to achieve, particularly when there is a lack of understanding of how HIAs work and why they are important. However, as previously outlined in background information on this topic, the province of Quebec does require health assessments for certain projects, so it is not unheard of to have this type of legislation at a provincial level. One could argue that British Columbia Public Health Act already has similar legislation that would readily allow HIAs to be undertaken in Section 61 which states that the Minister must evaluate actions that may impact health (D’Amour et al., 2009).

**Recommendations**

Health impact assessment does not have a clear place in any level of government. Recommendations are direct at local government, regional government, federal government and community groups. There is opportunity for each entity to further the use and education of health assessments in Metro Vancouver.
Recommendations for local governments

1. Train local government staff to further the understanding of what HIAs are and how they are conducted;
2. Conduct HIAs for municipal projects, plans and policies that may adversely impact community health;
3. Use local health assessment frameworks, such as the *Metro Vancouver Health Impact Assessment of Transportation and Land Use Planning Activities Guidebook* and/or the *BC Healthy Built Environment Linkages Toolkit*;
4. Consider integrating HIAs when Environmental Impact Assessments (EIA) are conducted for major projects; and
5. Require HIAs from applicants for projects where development is likely to adversely affect community health.

Recommendations for Metro Vancouver

6. Along with stakeholders from health authorities, local governments, and community groups, create threshold criteria to more explicitly determine when health impact assessments would be recommended;
7. Collaborate with health professionals to create workshops and training programs on HIA; and
8. Continue to provide technical advice using existing guiding documentation for local governments wishing to conduct HIAs;

Recommendations for provincial and federal governments

9. Consider a mandatory requirement for HIA (either stand alone or integrated with EIA) for projects that exceed a determined threshold;

Recommendations for community groups

10. Lobby for HIAs to be conducted for proposed projects and plans that may have negative impacts on community health.
Conclusion

Preventative health measures are becoming decision making considerations when altering the built environment. There is increased emphasis on walkability of neighborhoods, access to foods and amenities, and limiting community exposure to contaminants and pollutants. This type of health planning has brought together groups of professionals from many occupations to make decisions with communities. Background research on health assessments shows limited exposure, use, and knowledge of HIAs in North America, particularly in Canada.

A limited number of land use plans and projects have been subjected to HIAs in North America. Of these, seven were identified for further analysis in this report. Common barriers and limitations were time and money, which were also identified as constraints in the Metro Vancouver municipal questionnaire. Knowledge and understanding of HIAs was listed as a barrier in Metro Vancouver that needs to be addressed before more HIAs can be undertaken.

The Metro Vancouver region is rapidly changing, with a growth estimate of over one million people by 2041. The amount of development required house and employ this growth must be well planned to improve community health. Most municipalities in Metro Vancouver have identified health as a priority and are implementing policy to enforce this priority. There is limited evidence in the region to suggest that health impact assessments are currently, or going to become, a popular tool for evaluating community health. It is possible that with guiding documentation, training and increased understanding, local governments and/or project applicants may begin to voluntarily undertake health impact assessments for project and plan review. There is a public interest in furthering the use of HIAs, but without provincial or federal requirements for health assessments, it is unlikely that current frequency of assessing health impacts will change.
References


APPENDIX 1 - CASE EVALUATIONS

This appendix evaluates each HIA and their adherence to the traditional steps and values discussed in this report. It is not a complete evaluation of how robust each HIA. Limitations for instance are not evaluated. Each HIA had different available information, based on approach and methodology. This appendix evaluates step and value adherence as effectively as possible based on the information provided in each assessment.

<table>
<thead>
<tr>
<th>Legend for inclusion of traditional steps and values</th>
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<tbody>
<tr>
<td>✔️</td>
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<td>➖</td>
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</table>
### ENCHIA Community HIA (2007)

#### Step/Value

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<tr>
<th>Step/Value</th>
<th>Inclusion</th>
<th>Description</th>
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<tbody>
<tr>
<td>Step: Screening</td>
<td>✔️</td>
<td>Stakeholders were concerned that community values would not be priorities in the environmental impact report of Eastern Neighborhoods rezoning. They proposed that San Francisco use the California Environmental Quality Act to consider socio-economic impacts of the proposed rezoning.</td>
</tr>
<tr>
<td>Step: Scoping</td>
<td>✔️</td>
<td>Six categories were assessed: 1) environmental stewardship, 2) safety and security, 3) public infrastructure, 4) access to goods and services, 5) adequate and healthy housing, and 6) healthy economy.</td>
</tr>
<tr>
<td>Step: Assessment</td>
<td>✔️</td>
<td>Over 100 measurable community health indicators were developed and assessed. ENCHIA already completed qualitative research on how development impacted population subgroups underrepresented by the Community Council.</td>
</tr>
<tr>
<td>Step: Recommendations</td>
<td>✔️</td>
<td>The Community Council turned assessed indicators into recommendations through policy briefs. These policy briefs were then evaluated using the Healthy Development Measurement Tool (HDMT) to determine which recommendations would have the greatest impact on health.</td>
</tr>
<tr>
<td>Step: Reporting</td>
<td>✔️</td>
<td>On top of a comprehensive HIA report, ENCHIA Community Council drafted 27 policy/strategy briefs in order to realize aspects of the vision and objectives.</td>
</tr>
<tr>
<td>Step: Monitoring &amp; Evaluation</td>
<td></td>
<td>ENCHIA Community Council tasked San Francisco Department of Public Health to implement and disseminate the HDMT that was created to reflect a systematic approach to assessing social, environmental, economic, and equity priorities through the lens of health. Part of the HDMT was an evaluation tool used for determining most effective recommendations.</td>
</tr>
<tr>
<td>Value: Democracy</td>
<td>✔️</td>
<td>ENCHIA Community Council consisted of 25 organizational and individual participants. One goal of the ENCHIA process was to promote meaningful public involvement in land use policy making.</td>
</tr>
<tr>
<td>Value: Equity</td>
<td>✔️</td>
<td>Equity was an overarching goal. Indicators included race/ethnicity, income and geography.</td>
</tr>
<tr>
<td>Value: Sustainable Development</td>
<td></td>
<td>Several key elements and underlying objectives focused on sustainable development and health including sustainable transportation and housing.</td>
</tr>
<tr>
<td>Value: Ethical Use of Evidence</td>
<td></td>
<td>It appears that evidence was collected and reported on in an ethical way with rigorous assessment of possible impacts.</td>
</tr>
</tbody>
</table>
### 2. Humboldt County General Plan Update HIA (2008)

<table>
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<tr>
<th>Step/Value</th>
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<th>Description</th>
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<tbody>
<tr>
<td>Step: Screening</td>
<td>✔️</td>
<td>Humboldt County is considering three development plans to accommodate future population growth. An HIA of the General Plan Update (GPU) was considered appropriate to help identify and analyze potential health impacts associated with each development plan.</td>
</tr>
<tr>
<td>Step: Scoping</td>
<td>✔️</td>
<td>Six categories were examined: 1) Housing, 2) Transportation, 3) Public Infrastructure, 4) Economy, 5) Public Safety, and 6) Environmental Stewardship. From this, 35 indicators were chosen to be assessed, based off an adaptation of the HDMT outlined above. The project team analysed and compared the three Plan Alternatives for each of these indicators.</td>
</tr>
<tr>
<td>Step: Assessment</td>
<td>✔️</td>
<td>Indicators were assessed for each Plan Alternative. Plan Alternative A provides is infill only. Plan Alternative B is a compromise of infill development and new development. Plan Alternative C allows for the most unrestricted growth.</td>
</tr>
<tr>
<td>Step: Recommendations</td>
<td>✔️</td>
<td>Indicators were measured for each Plan Alternative. Generally, Plan Alternative A was found to have the most health benefits and the least health costs.</td>
</tr>
<tr>
<td>Step: Reporting</td>
<td>✔️</td>
<td>Recommendations were finalized in a report and submitted to decision makers considering the Humboldt County General Plan Update.</td>
</tr>
<tr>
<td>Step: Monitoring &amp; Evaluation</td>
<td>✖️</td>
<td>The 2012 Draft General Plan is still being reviewed in 2016. No monitoring has yet occurred to determine if the HIA had an impact on decisions of the GPU.</td>
</tr>
<tr>
<td>Value: Democracy</td>
<td>-</td>
<td>Residents were engaged from community-based organizations to provide input about the GPU and health. This public input helped determine the 35 indicators that were measured for the GPU.</td>
</tr>
<tr>
<td>Value: Equity</td>
<td>✔️</td>
<td>Many indicators had an emphasis on equity (e.g.: living wage percentage, public infrastructure availability &amp; isolation index), but equity was not directly acknowledged in the HIA.</td>
</tr>
<tr>
<td>Value: Sustainable Development</td>
<td>✔️</td>
<td>The emphasis of sustainable development versus unrestricted growth was laid out in the General Plan Update, and the HIA focused on this for all indicators assessed.</td>
</tr>
<tr>
<td>Value: Ethical Use of Evidence</td>
<td>✔️</td>
<td>Substantial data and literature review existed for most indicators which was backed up with surveys and interviews. Evidence appeared to be used in an appropriate manner.</td>
</tr>
</tbody>
</table>
### 3. HIA of Atlanta Regional Plan 2040 (2012)

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<th>Step/Value</th>
<th>Inclusion</th>
<th>Description</th>
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<tr>
<td><strong>Step: Screening</strong></td>
<td>—</td>
<td>There was no screening process or documentation demonstrating why an HIA was warranted for Plan 2040.</td>
</tr>
<tr>
<td><strong>Step: Scoping</strong></td>
<td>✔️</td>
<td>The HIA identified five regional planning activities that were likely to impact health: 1) safety and security, 2) access, equity and economy, 3) active living, 4) ecology and environmental quality, and 5) civic life, social connections.</td>
</tr>
<tr>
<td><strong>Step: Assessment</strong></td>
<td>✔️</td>
<td>Each indicator was primarily assessed through quantitative data, statistics, and mapping. There was also a literature review for most indicators. Survey responses and expert opinion were examples of qualitative data being used sparingly for additional information.</td>
</tr>
<tr>
<td><strong>Step: Recommendations</strong></td>
<td>✔️</td>
<td>The HIA cross-listed recommendations for various roles from federal and state agencies, to city elected officials &amp; to business associations.</td>
</tr>
<tr>
<td><strong>Step: Reporting</strong></td>
<td>✔️</td>
<td>The HIA includes documentation of the results of the proposal analysed, population affected, stakeholder engagement processes, data and methods used, and recommendations.</td>
</tr>
<tr>
<td><strong>Step: Monitoring &amp; Evaluation</strong></td>
<td>—</td>
<td>The team who created the HIA suggests that stakeholders should observe how the HIA information is used to inform decisions going forward, but there isn’t a clear representative group that is held accountable for evaluation or monitoring outcomes from this HIA report.</td>
</tr>
<tr>
<td><strong>Value: Democracy</strong></td>
<td>✔️</td>
<td>Generally, only professionals were consulted. A small community survey was distributed with 103 responses. Stakeholder feedback went into the initial scoping of the HIA. There was larger public involvement in the Plan 2040 process undertaken by the Atlanta Regional Commission than the HIA that ensued.</td>
</tr>
<tr>
<td><strong>Value: Equity</strong></td>
<td>✔️</td>
<td>A main indicator that was looked at was titled Access, Equity and Economy. Several assessed measures under this topic addressed equity, and looked at how the Comprehensive Plan would work for different ages, races, gender and socio-economic status.</td>
</tr>
<tr>
<td><strong>Value: Sustainable Development</strong></td>
<td>✔️</td>
<td>The HIA has segments on sustainable development, particularly focusing on density and the linkage to health and wellbeing. In general, there is more focus in this HIA on people than on land use.</td>
</tr>
<tr>
<td><strong>Value: Ethical Use of Evidence</strong></td>
<td>✔️</td>
<td>The use of quantitative data is comprehensive and outlines possible and expected impacts from the regional plan. There is no reason to question the validity of data presented.</td>
</tr>
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## 4. Long Beach Downtown Plan HIA (2011)

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<tr>
<td>Step: Screening</td>
<td>✔️</td>
<td>Community members of Long Beach were concerned that the Environmental Impact Report may have failed to address some potential impacts from the Downtown Plan.</td>
</tr>
<tr>
<td>Step: Scoping</td>
<td>—</td>
<td>This HIA looked at how the Long Beach Downtown Plan would impact health using housing and employment indicators. It was scoped as a rapid HIA, meaning that secondary data and literature was used to support findings.</td>
</tr>
<tr>
<td>Step: Assessment</td>
<td>—</td>
<td>The HIA provides an in-depth assessment of baseline health conditions in Downtown Long Beach and a comparison to Los Angeles County. The HIA lists several negative findings but does not provide any solutions.</td>
</tr>
<tr>
<td>Step: Recommendations</td>
<td>✔️</td>
<td>HIA recommendations were narrow in scope. The recommendations given were to adopt an Affordable Housing Community Benefits plan, and a Local Hiring Community Benefits plan and Project Labor Agreements.</td>
</tr>
<tr>
<td>Step: Reporting</td>
<td>—</td>
<td>This rapid HIA included documentation of the results of the proposal analysed, population affected, data and methods used, and recommendations. Stakeholder engagement processes were limited, as were recommendations.</td>
</tr>
<tr>
<td>Step: Monitoring &amp; Evaluation</td>
<td>✗</td>
<td>There was no monitoring or evaluation section in the Long Beach Downtown Plan HIA.</td>
</tr>
<tr>
<td>Value: Democracy</td>
<td>—</td>
<td>Little to no community consultation was undertaken, albeit this was a rapid HIA. Some stakeholder opinions were taken into account from the Downtown Plan itself, but not as part of the HIA directly.</td>
</tr>
<tr>
<td>Value: Equity</td>
<td>✔️</td>
<td>Equity was part of both housing and employment indicators. It could be argued that this impact assessment was more of a social impact assessment. Regardless, it had a strong focus on equity.</td>
</tr>
<tr>
<td>Value: Sustainable Development</td>
<td>—</td>
<td>Sustainable development was not a focus of this HIA. However, growing the downtown area in a sustainable manner was emphasized through some recommendations.</td>
</tr>
<tr>
<td>Value: Ethical Use of Evidence</td>
<td>—</td>
<td>Quantitative data was primarily used in the report. Additional categories could have been looked at for the Long Beach Downtown Plan; more than two indicators may be seen as being more comprehensive.</td>
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</table>
### 5. Spokane University Pedestrian/Bicycle Bridge HIA (2011)

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<th>Step/Value</th>
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<tr>
<td>Step: Screening</td>
<td>—</td>
<td>This HIA was developed to inform decision makers on potential health impacts from the construction of a pedestrian/bicycle bridge.</td>
</tr>
<tr>
<td>Step: Scoping</td>
<td>—</td>
<td>Six categories were chosen for analysis: 1) physical safety, 2) physical activity, 3) perceived safety, 4) social capital, 5) economic development, and 6) air quality.</td>
</tr>
<tr>
<td>Step: Assessment</td>
<td>✔️</td>
<td>Assessment was a combination of literature review, spatial data analysis and survey data evaluation. The survey area was small, with approximately 99 residents and 120 businesses. Response rate was 24.8%. Observations of vandalism incidence and window density counts (for eyes on the street) occurred as well.</td>
</tr>
<tr>
<td>Step: Recommendations</td>
<td>—</td>
<td>The HIA found that the pedestrian/bicycle bridge will contribute positively to the health of the area. Recommendations were to reduce parking availability, provide mixed-use zoning next to the bridge for residential/retail/office, build bike lanes and bus service adjacent to the bridge, and implement traffic calming strategies.</td>
</tr>
<tr>
<td>Step: Reporting</td>
<td>✔️</td>
<td>The Pedestrian/Bicycle Bridge HIA report covered the problem, baseline and future outcome assessment, and recommendations towards potential solutions.</td>
</tr>
<tr>
<td>Step: Monitoring &amp; Evaluation</td>
<td>✗</td>
<td>Evaluation and monitoring were only mentioned in an appendix of this report. It is not clear in the report if this step was taken or if it is as aspect to follow up on.</td>
</tr>
<tr>
<td>Value: Democracy</td>
<td>✗</td>
<td>Surveys to local households and businesses helped inform the study. Responses from the survey were used towards recommendations and gaining a better understanding of local preferences.</td>
</tr>
<tr>
<td>Value: Equity</td>
<td>—</td>
<td>Equity was not a focus of this HIA. The study area was predominantly low socio-economic status. The report did not go into further information.</td>
</tr>
<tr>
<td>Value: Sustainable Development</td>
<td>✔️</td>
<td>Sustainable development was emphasized through sustainable transportation modes. The bridge is for bicyclists and pedestrians.</td>
</tr>
<tr>
<td>Value: Ethical Use of Evidence</td>
<td>✔️</td>
<td>Limited amounts of primary data were gathered and secondary literature was used to bolster recommendations. This was due to time and financial constraints. The evidence is used in an ethical way.</td>
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</table>
### 6. Albany Choice Neighborhood Initiative HIA (2012)

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<tr>
<td>Step: Screening</td>
<td>✔️</td>
<td>The project team reviewed multiple projects located in Georgia and determined this was the most appropriate candidate to perform an HIA on. This was also the only case with an actual screening step clearly explained.</td>
</tr>
<tr>
<td>Step: Scoping</td>
<td>✔️</td>
<td>The following issues were looked at: 1) vulnerable populations, 2) health effects of housing redevelopment, 3) community facilities, 4) safety and security, and 5) transportation.</td>
</tr>
<tr>
<td>Step: Assessment</td>
<td>✔️</td>
<td>Analysis of existing conditions, stakeholder input, and evidence from public health literature were used to assess study area health. A survey of local conditions was used to fill in gaps.</td>
</tr>
<tr>
<td>Step: Recommendations</td>
<td>✔️</td>
<td>The HIA delivered recommendations which were broken down by each indicator. These were alternative suggestions to the Choice Neighborhood Initiative Plan that could be used to improve the plan from a health lens.</td>
</tr>
<tr>
<td>Step: Reporting</td>
<td>✔️</td>
<td>The HIA provided health impact results for the plan analysed. The population and study area were clearly indicated. Stakeholder engagement was well thought out and documented. Data, methods and recommendations were clearly laid out. Assessed indicators were linked to recommendations.</td>
</tr>
<tr>
<td>Step: Monitoring &amp; Evaluation</td>
<td>✗</td>
<td>Monitoring is briefly mentioned at the end of the report, and only says that the AHA will be applying for an implementation grant to further the goals that were developed in the HIA.</td>
</tr>
<tr>
<td>Value: Democracy</td>
<td>✔️</td>
<td>Substantial stakeholder input was gathered. This informed the study area and vulnerable populations for further research. Local stakeholders were included in HIA training sessions. Government agencies, health districts, religious organizations and hospitals were all contacted for collaboration.</td>
</tr>
<tr>
<td>Value: Equity</td>
<td>✔️</td>
<td>Determinants looked at access to goods, services and healthcare, unemployment and education rates, as well as the social support systems in Albany.</td>
</tr>
<tr>
<td>Value: Sustainable Development</td>
<td>—</td>
<td>Redevelopment was looked at, primarily from a social justice lens. Sustainable development was also emphasized.</td>
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<th>Step/Value</th>
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<tbody>
<tr>
<td>Step: Screening</td>
<td>-</td>
<td>No direct rationale was stated for the purpose of this HIA nor was there an explanation if any screening took place.</td>
</tr>
<tr>
<td>Step: Scoping</td>
<td>✔️</td>
<td>The following determinants of health were assessed: 1) natural environment, 2) built environment, 3) livelihood factors, 4) social and community factors, and 5) lifestyle factors</td>
</tr>
<tr>
<td>Step: Assessment</td>
<td>✔️</td>
<td>Indicator assessments were comprehensive. Background context information was provided for each indicator and likely health outcomes were established.</td>
</tr>
<tr>
<td>Step: Recommendations</td>
<td>-</td>
<td>Recommendations were that deconstruction of the viaducts would generally have a net positive health impact on the neighboring community.</td>
</tr>
<tr>
<td>Step: Reporting</td>
<td>-</td>
<td>Reporting of baseline and assessed indicators were descriptive. The financial &amp; temporal restriction limited the effectiveness of the final report.</td>
</tr>
<tr>
<td>Step: Monitoring &amp; Evaluation</td>
<td>✗️</td>
<td>No monitoring plan was mentioned in this HIA. The report outlines that intermediate and comprehensive HIAs include monitoring and evaluation processes but since this is a desktop/rapid HIA, no monitoring or evaluation techniques would be included.</td>
</tr>
<tr>
<td>Value: Democracy</td>
<td>✗️</td>
<td>The methodology did not include any community engagement and relied on secondary data. There was acknowledgement that for certain indicators primary information would be valuable but this would need to be undertaken in an intermediate or comprehensive HIA.</td>
</tr>
<tr>
<td>Value: Equity</td>
<td>✗️</td>
<td>Baseline reporting highlighted access to amenities, socio-economic situation, and age of neighboring communities. Socio-demographic differences were consolidated for health impacts for each assessed indicator.</td>
</tr>
<tr>
<td>Value: Sustainable Development</td>
<td>-</td>
<td>There was limited focus on sustainable development. Mixed use development was mentioned and encouraged if deconstruction of the viaducts is to take place.</td>
</tr>
<tr>
<td>Value: Ethical Use of Evidence</td>
<td>-</td>
<td>The use of evidence was meant to inform decision makers of the possible positive and negative health outcomes from the proposed project. This study provides evidence in an ethical way.</td>
</tr>
</tbody>
</table>
Appendix 2 - Questionnaire and Results

Metro Vancouver Municipal Health Assessment Questionnaire

1. Is health a priority for your municipality? (Y/N)
   If yes, please briefly elaborate:

2. Has your municipality formally adopted any health related plans or policies? (Y/N)
   If yes, please briefly elaborate:

3. Has your municipality used any health assessment tools, such as a health impact assessment (HIA), for projects, plans or policies within the last few years? (Y/N)
   If yes, please briefly elaborate:

4. Does your municipality intend to implement an HIA for a project or strategic plan in the next calendar year? (Y/N)
   If yes, please briefly elaborate:

5. Are you familiar with the Metro Vancouver HIA Guidebook and Toolkit? (Y/N)

6. What do you think are the biggest barriers to undertaking an HIA for a project, plan or policy?

7. Which (if any) of the following would help overcome those barriers? (mark all that apply)
   a. Training on HIA
   b. Funding
   c. Additional resources (staff or time)
   d. New legislation requiring HIA for large projects
   e. New municipal policy
   f. Other:
1. Is health a priority for your municipality?

- Yes
- No

If yes, please briefly elaborate:

- The City of North Vancouver signed a MOU with Vancouver Coastal Health heading into the last OCP revision process. Accordingly, the OCP was developed with a “health lens” that will come into play throughout implementation. Mayor & Council consult with the Medical Health Officer for Vancouver Coastal Health in the development of policy on a regular basis. Finally, Lions Gate Hospital is located in the City of North Vancouver. The hospital, and the surrounding medical community, make health care services a key feature of the local economy.

- We take a comprehensive view of health and well-being, and our Healthy City Strategy acts as a social sustainability plan to guide the City’s work in this area.

- Healthy Communities Partnership Agreement with Vancouver Coastal Health Official Community Plan, Social Policy Section - includes policies that support health and wellness

- Health is a priority for the municipality of Maple Ridge. Community and individual health continue to be key focus areas for our Social Policy Advisory Committee. A number of municipal departments including Community Services, Recreation and Planning work within frameworks developed by the Healthy Communities Partnership including Healthy Built Environments and
Healthy Living.

- Mayor and Council have put the biggest capital investment into recreation infrastructure. It is a large part of the vision for Surrey - thriving, green and inclusive.

- District is a signatory to the Healthy Communities Partnership Agreement with Vancouver Coastal Health Authority.

- During the current OCP review, goals are being developed that centre on health and quality of life.

- Please see the City of Richmond’s 2041 OCP which contains a range of health objectives and policies and was prepared with the input of Richmond Health Services.

- As indicated in the city of Richmond’s 2041 OCP.

- The City of New Westminster and the Fraser Health Authority established a New Westminster Healthier Community Partnership Committee. The City is also incorporating health as a guiding principle as part of its new Official Community Plan. Additionally, the City is working on an Economic Health Care Cluster, which will capitalize on the three phase expansion to the Royal Columbian Hospital.

- Healthy communities are strong and resilient communities

- The City of Burnaby’s Social Sustainability Strategy promotes the health and well-being of residents through a focus on the social determinants of health. In 2014, the City established a Healthier Community Partnership with the Burnaby School District, Fraser Health and the Burnaby Division of Family Practice.
• Construction of sidewalks, Neighbourhood road improvements and bike paths.

• We have a signed Memorandum of understanding with VCH on the implementation of our Official Community Plan.

2. Has your municipality formally adopted any health related plans or policies?

![Pie chart showing 10 responses: 4 Yes, 4 No, 2 No Response]

If yes, please briefly elaborate:

• See previous answer. If one defines “health-related” in broad terms there are many related plans and policies.

• Many plans - overarching health and wellbeing plan is the Healthy City Strategy, but we also have various topic-specific plans related to health such as Transportation 2040, Vancouver Food Strategy, Housing & Homelessness Strategy, Mayor’s Task Force on Mental Health and Addictions, Community plans, Age-friendly Action Plan, Culture Plan, and more

• Official Community Plan, Social Policy Section - includes policies that support health and wellness

• We had embarked on a Municipal Alcohol Policy, however, it failed to be fully adopted.

• The City has a Healthier Communities Council led Committee. The City partners with Fraser
Health on many different projects and initiatives. Parks, Recreation and Culture has a Healthy Communities Section and Manager. The Parks, Recreation and Culture Service Delivery Plan has a strategic result area with initiatives embedded in it, called Healthy Communities.

- For example, Municipal Alcohol Policy as a direct policy. Also indirectly, Strategic Transportation Plan and other municipal plans speak to health through encouragement of active transportation.

- Various City Plans include health-related polices (e.g. OCP, Strategic Transportation Plan, Climate Action Plan, etc.).

- This OCP Update is guided by the following Vision of a Sustainable Richmond: “A sustainable and healthy island city that meets the needs of the present without compromising the ability of future generations to meet their own needs. It is a place where people live, work, and prosper in a welcoming, connected, accessible and vibrant community. In Richmond, the health of the people and the health of the eco-system are sustained through community participation and long-term economic, social and environmental well-being.”

- The City of New Westminster has developed a Healthier Community Action Plan and is working towards its implementation. The City is also incorporating health as a principle as part of its new Official Community Plan. Regarding this plan, health will be highlighted as part of two sections - i.e., Community and Individual Wellbeing and Food Systems.

- Health related aspects are incorporated into our Official Community Plan, as well as master plans (e.g. Parks and Recreation Master Plan, Transportation Master Plan) under the OCP

- Richmond Wellness Strategy

- The City adopted the Terms of Reference for a Healthier Community Partnership in 2014 (see previous response)
3. Has your municipality used any health assessment tools, such as a health impact assessment (HIA), for projects, plans or policies within the last few years?

- Yes
- No
- No Response

If yes, please briefly elaborate:

- *I think HIA was used to help look at Georgia St. viaducts removal, but I was not directly involved in this.*

- *Yes. For this response an HIA includes, for example, the following considerations: air quality, water quality, food/soil quality, noise, infrasound, electromagnetic radiation, healthy living, visual/aesthetic impact, housing, injuries, emergency services, occupational health, social assessment, economic assessment. Yes Richmond conducts a variety of HIAs which are usually incorporated into policies and requirements for example, when OCP and zoning bylaw amendment policies which include the OCP Aircraft Noise Sensitive Development (ANSD) policies and the ESA policies.*

- *We have recently used the healthy linkages toolkit to do work through a couple of planning processes.*
4. Does your municipality intend to implement an HIA for a project or strategic plan in the next calendar year?

If yes, please briefly elaborate.

- Again, I'm not totally sure but I know there is some discussion of using HIA as part of new St. Paul's hospital in false creek flats. Not sure of timeline of when this would be undertaken if it does go ahead.

- Consideration has been given to using a basic/desktop HIA to evaluate upcoming plans/projects.

5. Are you familiar with the Metro Vancouver HIA Guidebook and Toolkit?
6. What do you think are the biggest barriers to undertaking an HIA for a project, plan or policy?

- Potential benefits are either unclear, or are of low priority to decision-makers. Potential resource commitment and perceived time delays are other barriers.

- Additional time/effort/cost

- Training, lack of resources

- Realization of a health component related to projects; health not a direct jurisdictional responsibility of local government

- Staffing and time

- Not incorporating HIA into corporate and OCP policies.

- Just not a community priority right now

- Adds another layer with regard to the review of policies, plans and developments. Should be incorporated within existing review processes, possibly under sustainability.

- Understanding and knowledge, which should be easily addressed. Then, time and resources.

- Knowledge

- Time and staffing- no one staff person is directly responsible for health

- Funding and Implementation of projects is a challenge. There is always more to do
• Time! I think it’s an added step that planners don’t have time to take. I don’t think there is any issue with the overall sense that it’s a great tool and very useful, but staff are so busy that if they don’t have to do it, they won’t.

7. Which (if any) of the following would help overcome those barriers?
(mark all that apply)

- Training on HIA: 13
- Funding: 9
- Additional resources (staff or time): 10
- New legislation requiring HIA for large projects: 8
- New municipal policy: 7

Other Answers:

• More information about the assessment.

• Uncertain. The first three might help. I don’t believe HIA could or should be legislatively required. HIA opportunities are limited in smaller municipalities and probably wouldn’t warrant the development of a specific policy.