Through an **equity** lens

HANDBOOK OF HEALTH EQUITY IN ENVIRONMENTAL PUBLIC HEALTH PRACTICE

Version 1.0, June 2017

Environmental Health Services BC Centre for Disease Control

HEALTH EQUITY HANDBOOK

This Handbook serves as a composite of background information and resources produced by the *Through an Equity Lens* project at the BC Centre for Disease Control. This project was funded by the Provincial Health Services Authority Population and Public Health Prevention Programs (2014–17) to support the integration of a health equity lens into the work of environmental health officers in British Columbia.

The Handbook may be updated and expanded as new resources become available.

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PART I:
INTRODUCTION

PART I: INTRODUCTION

Health equity means that everyone has a fair opportunity to meet their health potential. Health inequities, then, are differences in health status that are modifiable and unjust. Health inequities result from social, economic, or environmental disadvantage, and therefore are closely related to the social determinants of health. These social determinants affect individuals' behaviours in ways that affect their health. Moreover, exposure to healthy and unhealthy environments is also influenced by social, economic, geographic, and other factors.

Refer to the NCCDH Glossary of Essential Health Equity Terms for more information[1] >>

The environmental public health system can promote equity in three ways:

1. Identify environmental health inequities, highlighting populations with higher exposures to harmful substances or who lack exposure to health-supporting environments;
2. Work toward solutions that promote equity, such as healthier built environments or the use of health impact assessments; and
3. Advocate for services that help vulnerable communities address their inequities by addressing their determinants of health.

BC's Guiding Framework for Public Health[2] includes equity as a cross-cutting issue that relates to every facet of public health. This framework calls on the public health system to identify community health needs, address barriers, and consider access to services in the development and implementation of policies and programs. Equity is increasingly present in policy documents such as this, but the extent of translation into practice at the regional health authority or personal practice levels is not well documented.

PROJECT DETAILS

*To better understand and support the intersections between environmental public health practice and health equity, the BC Centre for Disease Control began the **Through an Equity Lens: A New Look at Environmental Health** project. This work was funded by a 2014-17 PHSA Population and Public Health Primordial/Primary Prevention Project grant and administered through Environmental Health Services at the BCCDC.*

PROJECT GOALS

***Through an Equity Lens: A New Look at Environmental Health** aims to:*

1. Increase knowledge of health inequities related to the natural and built environment and improve understanding of how these inequities impact environmental health practice.

2. Assess the capacity of BC's environmental public health workforce to support health equity and define what that support might look like.

3. Develop resources to help incorporate equity into environmental health practice.

4. Better equip vulnerable populations to take action to address their own health inequities.

5. Identify options to integrate environmental health equity considerations into health system policies in BC.

COLLABORATORS

BCCDC has been working with agencies and organizations across British Columbia and Canada to build and share knowledge about integrating equity into environmental public health practice.

National Collaborating Centre for Environmental Health

The National Collaborating Centre for Environmental Health (NCCEH)[3] is one of six National Collaborating Centres created to foster linkages within the public health community. All centres are funded by the Public Health Agency of Canada (PHAC) through the National Collaborating Centres for Public Health (NCCPH)[4] program. The NCCEH aims to synthesize, translate, and exchange knowledge for environmental health practitioners and policy-makers; identify gaps in research and practice knowledge; and build capacity through networks of practitioners, policy-makers and researchers. The NCCEH, which is affiliated with Environmental Health Services at BCCDC, facilitates engagement with environmental health practitioners from across Canada, allowing British Columbia and other provinces and territories to learn from each other and share challenges, best practices, and innovative approaches to supporting health equity.

Population and Public Health

Health equity[5] is a priority area for the BCCDC Population and Public Health Program (PPH)[6], which funds this work through a 3-year Primordial/Primary Prevention Project grant. Food security[7] is a PPH key focus area and an example of where social determinants of health intersect with environmental public health practice. Population and Public Health and Environmental Health have been working together to support collaboration between the food safety and food security sectors in BC.

National Collaborating Centre for Determinants of Health

The National Collaborating Centre for Determinants of Health (NCCDH)[8] is another of the six centres that make up the NCCPH program. Based at St. Francis Xavier University in Nova Scotia, NCCDH aims to provide the Canadian public health community with knowledge and resources to take action on the social determinants of health, to close the gap between those who are most and least healthy. They work with the public health field to move knowledge into action—in practice, in policy and in decision making—to achieve societal improvements that result in health for all. NCCDH has been working closely with NCCEH and BCCDC to examine how environmental public health practitioners and policy makers can take action on the social determinants of health by incorporating a health equity lens.

Health Authorities

Each of the regional health authorities (Fraser Health Authority[9], Vancouver Coastal Health[10], Island Health[11], Interior Health[12], Northern Health[13], and First Nations Health Authority[14]) participated in the needs assessment and scoping phases of this project. Focus groups with environmental health officers in each health authority were instrumental to identifying how and where health equity relates to environmental public health practice. The health authorities are involved to varying degrees throughout the 3-year project for consultation, input on future directions, and to assist with piloting the development of new resources.

EQUITY AND EPH CONSULTATION

Methods

This project is based on an iterative approach to knowledge building. The primary goal for the first year (2014-15) was to increase knowledge of health inequities related to the natural and built environment and to improve understanding of how these inequities impact environmental public health practice in BC. We built partnerships and assessed needs in order to guide the development of tools and resources in the following years.

We conducted an exploratory focus group with environmental health officers (EHOs) in each of BC's five regional health authorities and in the First Nations Health Authority. Fraser Health Authority served as a pilot site in March 2014; the remaining focus groups were held in March 2015.

Focus groups lasted between one and two hours each. Each focus group included 5 to 13 field and supervisory staff; managers were not included in order to encourage participants to speak freely and to share their thoughts and ideas. EHO participants were recruited with the help of managers from each health authority, but their participation was voluntary and dependent on their ability to attend in person at the designated time and location. Each focus group included EHOs with a range of experience levels, who worked across a variety of service areas (e.g., food, drinking water, built environment, personal services, air quality, general practice, etc.), and who served communities of different sizes.

The loosely structured focus group discussions were designed to help us learn how EHOs view barriers that vulnerable groups may face in complying with environmental health regulations, how EHOs respond to those barriers, and what gaps exist for EHOs when working with populations affected by barriers. These discussions were audio-recorded, transcribed, and analysed using QSR NVivo 10 or ATLAS.ti 7 qualitative data analysis software. Transcripts were first reviewed to identify themes based on the project objectives. Additional themes arose as the analysis progressed and transcripts were re-reviewed.

This needs assessment provided the information needed to start articulating a vision of an equity-integrated EPH practice. The focus groups identified:

- the major social determinants of health—or barriers to compliance—that EHOs encounter through their practice
- a variety of strategies EHOs use to respond when barriers are present
- how inequities intersect with different EPH service areas
- opportunities to remove systemic barriers that might contribute to inequities and to better support EHOs to respond barriers related to the social determinants of health

Approach

Consultations with environmental public health practitioners in BC and across Canada indicate that there are multiple ways of viewing how health inequities and the social determinants of health relate to practice, and there are different approaches to responding to inequities (Fig. 1).

	PERSON-CENTRED APPROACH TO EPH	SYSTEMS APPROACH TO EPH
Practice model	**A. Traditional** Focus on regulation and health protection, using education as a tool.	**C. Emergent** Focus on health promotion and creating supportive environments.
Response to health inequities	**B. Individual** Respond to socioeconomic barriers when they arise. Incorporate equity into practice by providing tools for practitioners to help them work with individuals who face socioeconomic barriers.	**D. Population** Remove barriers to health in society. Integrate equity into the EPH mandate with policy and collaborative mechanisms across all areas of practice.

Figure 1: The Equity Quad: Moving toward an equity-oriented EPH practice. The top row describes typical EPH practice, which has been gradually shifting from a regulatory compliance approach to one that incorporates health promotion and healthy environments as tools to both improve health and improve compliance. The bottom row indicates how an equity lens could be applied to either the Traditional or Emerging approaches to EPH practice.

Health protection and environmental public health have traditionally operated within a regulatory framework, with activities centred on inspection, education, and enforcement. Many regions have begun relying more on health promotion and other population health based activities and less on regulatory activities. Such approaches aim to protect people from environmental health hazards and prevent chronic diseases by creating healthy, supportive environments.

During traditional inspection and licensing activities, the social determinants of health may present as barriers to compliance related to language, education, geographic location, culture, or income, all of which can influence the interaction between a practitioner and individual. Responses to these barriers (Figures 1 & 2) might involve actions to mitigate or work around existing barriers rather than a punitive response to non-compliance. Incorporating an equity lens to traditional practices is considered a *transactional change*[15]— it relies on tools and resources that practitioners can use to work more effectively to mitigate the effects of equity-related barriers. Although the explicit recognition of equity may be recent, many approaches that can mitigate health inequities are already used by individual EHOs as tools to better protect the public's health.[16]

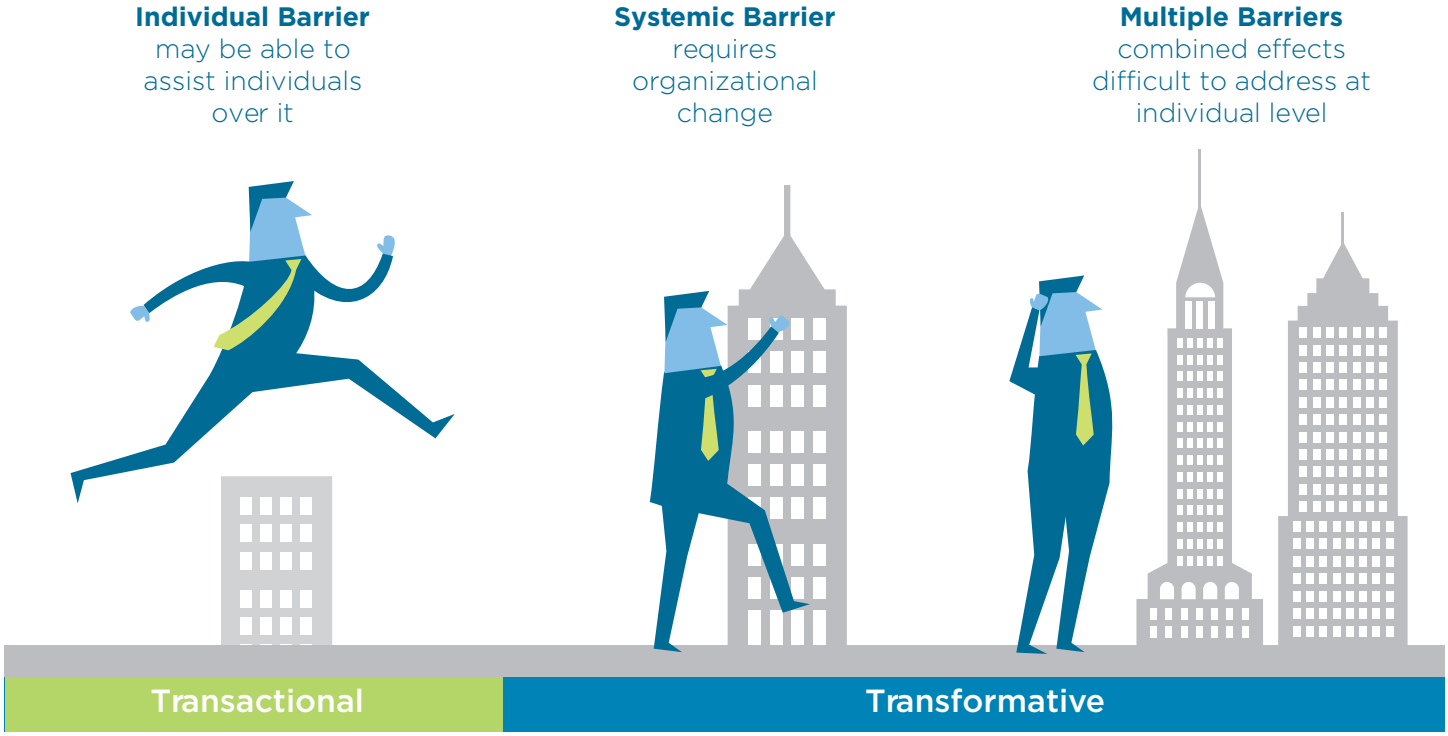

Figure 2: Addressing barriers with an equity lens. Individual barriers may be manageable, particularly if they exist in isolation, while systemic barriers tend to create challenges that are more difficult to surmount. However, when multiple barriers of any kind are present, their combined challenges are complex and more difficult to address. (Adapted from Dr. B. Nummer.)

It is essential that population health activities focus on advocating for or creating environments that are more supportive of health.[17] This can help address systemic factors (or hurdles; *see Fig. 2*) that prevent people from living in healthy circumstances, accessing services, or meeting their full health potential. Systemic factors may also hinder a practitioner's ability to provide service to a broad spectrum of the population in a way that meets regulatory requirements or to address underlying factors that affect compliance. Creating more health-supporting environments requires a higher level of *transformative* organizational change[15] that can lead to better outcomes overall.

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PART II: EQUITY AND ENVIRONMENTAL PUBLIC HEALTH HANDBOOK

This handbook provides a collection of resources and tools created as part of the *Through an Equity Lens* project at the BC Centre for Disease Control.

All the resources here are available to download from
http://www.bccdc.ca/health-professionals/professional-resources/health-equity-environmental-health

For more resources, please see Key resources for environmental public health practitioners to address health equity: A curated list, published in collaboration with the National Collaborating Centres for Environmental Health (NCCEH) and Determinants of Health (NCCDH) and available to download from

http://nccdh.ca/resources/entry/advocacy-health-equity-curated-list

http://www.ncceh.ca/documents/guide/key-resources-environmental-public-health-practitioners-address-health-equity

SECTION 1: HEALTH EQUITY IN THE CONTEXT OF ENVIRONMENTAL PUBLIC HEALTH

This section includes information about the meaning of health equity in the context of environmental public health practice.

1.1 PRIMERS ON HEALTH EQUITY AND ENVIRONMENTAL PUBLIC HEALTH PRACTICE

This three-part Primer on Equity and Environmental Public Health (EPH) Practice was written to provide background about health equity and environmental health specifically for practitioners, managers, and program directors.

Primer 1, ***Five Things to Know About Equity in EPH***, highlights the ways that equity intersects with EPH practice and illustrates how an equity lens might be used.

Primer 2, ***Areas of EPH Practice Impacted by the Social Determinants of Health***, illustrates how equity issues impact different areas of EPH practice.

Primer 3, ***Equity in EPH Practice***, discusses ways to integrate an equity lens into practice.

PRIMER 1

PRIMER 1

Five Things To Know About Equity In Environmental Public Health

by Karen Rideout, PhD

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This Primer provides an overview of health equity and how it relates to environmental public health (EPH) practice in BC. It is written for practitioners, managers, and program directors. It aims to highlight the ways that equity intersects with practice and illustrate how an equity lens might be used. It is the first of three **Primers on Health Equity and Environmental Public Health** produced as part of a consultation with field staff. The second Primer, **Areas of EPH Practice Impacted by the Social Determinants of Health**, illustrates how equity issues impact different areas of EPH practice, and the third Primer, **Equity in EPH Practice**, discusses ways to integrate an equity lens into practice.

This information is based on a series of focus groups with environmental health officers (EHOs) in each of BC's regional health authorities and the First Nations Health Authority in March 2015. The purpose of the focus groups was to identify how barriers related to the social determinants of health impacts EPH practice in BC, how EHOs respond, and how to help EHOs apply an equity lens to practice.

The illustrative examples are based on stories told during these focus groups. Some have been altered slightly to illustrate specific aspects of equity in practice, while others are a composite of several stories that were shared during the focus groups.

Five Things To Know About Equity In Environmental Public Health

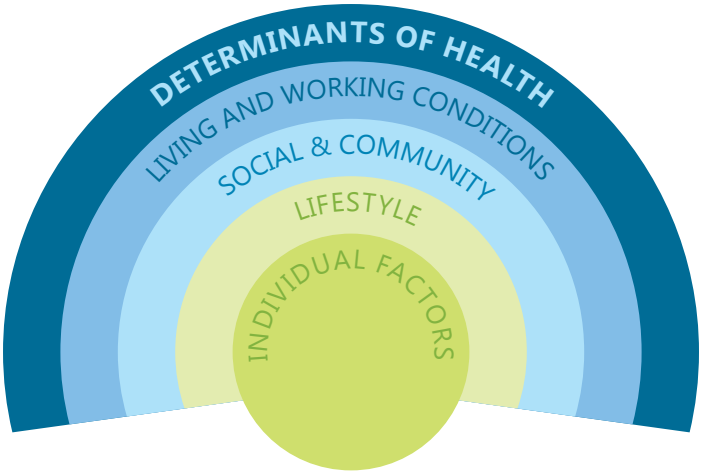
1 What is health equity?

Health equity exists when everyone has a fair opportunity to reach their full health potential without disadvantages caused by their social, economic, or environmental circumstances. Health inequities, then, are differences in health status that are considered to be modifiable and unjust. They are associated with social, geographic, political, or economic determinants of health. Inequities in these determinants of health affect environmental health in four ways:[1]

1. They may be associated with undue exposure to unhealthy environments.
2. They affect individuals' behaviours in ways that affect their exposure and health status.
3. They can increase vulnerability to environmental factors that negatively impact health and well-being.
4. They may be associated with decreased access to services that could address the impacts of unhealthy environmental exposures.

Health inequities are illustrated by a strong social gradient in health status; lower socioeconomic status is associated with shorter life expectancy, higher infant mortality, and higher rates of disability and disease. Such inequities exist between and within rich and poor countries, including in BC.[2]

The following related terms are often used in discussions about health equity:[3]



Social determinants of health (SDH): interrelated social, political and economic factors that create the conditions in which people live, learn, work and play

Health inequalities/disparities: measureable differences in health between individuals, groups or communities

2 Why is health equity important for EPH practitioners?

Health equity is a lens that is increasingly applied across a range of health systems and policies in Canada and elsewhere. **BC's Guiding Framework for Public Health** includes equity as a cross-cutting issue that relates to every facet of public health and calls on the public health system to identify community health needs, address barriers, and consider access to services in the development and implementation of policies and programs.[4] This means that health equity fits into the role of all public health professionals, including environmental health officers (EHOs) and other EPH practitioners.

EHOs are front line public health practitioners who deal with a cross-section of the population through their regulatory and educational activities. SDH and related inequities can create barriers that impact people's ability to follow health advice or comply with public health regulations. The manner in which EHOs interact with individuals who have SDH-related barriers could potentially minimize or intensify the negative impacts of those barriers. It is important that EPH practitioners such as EHOs are able to recognize and respond appropriately to SDH-related barriers—even though they may not be able to remove those barriers. Practitioners thus need to feel equipped to recognize barriers and respond appropriately.

3 Who is affected by the social determinants of health and health inequities?

Anyone may experience health inequities. Through consultations with EHOs in British Columbia, we have identified five main ways that SDH arise in practice and that could be linked to health inequities.

Socioeconomic status: Business owners or facilities operators may have financial or cash flow restrictions that impact their ability to follow protocols or maintain equipment. Employees, particularly those who are precariously employed, may be unable to afford to pay fees, lose wages, or miss shifts to attend training (e.g., FOODSAFE) or even to stay away from work when ill.

During a routine inspection of a small restaurant, the EHO notices a food handler sneezing and coughing while preparing food. When asked if she is sick, the food handler insists it is an allergy and not a cold or flu. After some discussion, the EHO learns that the handler is unable to afford to miss a paid shift, so comes to work despite the risk of spreading illness.

At another restaurant, the EHO overhears the manager on the phone with an employee, insisting that he come to work if he wants to keep his job. The employee soon arrives and exhibits symptoms of gastrointestinal illness, which prohibits food handling.

Cultural differences: People from different cultural backgrounds, such as recent immigrants, may lack understanding of accepted procedures or may be working in a new industry without specific training. They may also be hesitant to trust an EHO who is trying to offer support, particularly if they have worked in a country where health inspectors have a regulatory role but no educational role or where there are less stringent public health standards.

A restaurant owner has recently immigrated to Canada from a country with a more authoritarian approach to health inspection. He is obviously struggling with how to properly set up the kitchen and storage area, sanitize dishes and equipment, and complete a food safety plan. When the EHO offers guidance, the operator insists that everything is under control and the site will be fully compliant soon. After several months of repeated infractions and instructions about how to correct them, the owner starts to feel more comfortable with the EHO and admits the he doesn't understand how to prepare the food safety plan. His daughter tells the EHO that he was afraid to admit this because health inspectors in their home country will shut down a business or demand large fines at the first sign of infraction.

Language, literacy, and education challenges: Without fluency in a shared language (spoken and written), it is difficult for EHOs to effectively educate and work with clients to achieve compliance and support healthy behaviour change. Translated materials or visual aids are helpful for illustrating what should be done. Multilingual staff or family members can also assist with translation when such resources are not available. However, it is challenging to explain the rationale behind a guideline or describe in detail how to approach a situation without shared language. Low literacy or education levels can also make it difficult for individuals to understand complex documentation requirements such as food safety plans or to participate in certification and professional development opportunities. Language and education barriers may co-exist, creating additional challenges for effective education and communication.

A couple who were operating a small drinking water system took the required Small Water Systems Training Course three times and failed the exam each time, even though they appeared to understand the concepts during the classroom-based course. Before the next exam, they came to the EHO and said they were not very good at reading. When the EHO read the multiple choice questions out loud and let them pick which option was correct, they both passed the exam.

Psychosocial factors: Mental health and personal stress can distract people from focusing on public health. They may also intensify the effects of other barriers, such as language or finances, as people try to cope. Without specific training, practitioners can't be sure whether mental health is influencing behaviour. However, mental health issues may be suspected when a normally compliant and cooperative operator suddenly seems unable or unwilling to follow protocol.

An EHO responds to a complaint from a public health nurse about conditions in a private home. The single resident is living without electricity in a mouldy house with leaking pipes, holes in the wall, and an increasing amount of debris. Because the situation is becoming a hazard to the public, the EHO may have jurisdiction to take action, which would render the resident homeless. After speaking with the nurse, the EHO learns that the resident has experienced several kinds of personal tragedy in the past few years and has not been able to maintain the home or stay employed. The EHO and nurse discuss ways to reach out to mental health and social support providers and work together to better serve this resident.

Geographic location: Geographic isolation affects the way people do business. In small or remote communities, access to equipment, parts, and expertise can be prohibitively expensive and slow, making timely equipment repairs or infrastructure upgrades challenging. Geographic isolation may also impact community health needs, particularly in relation to food. People may rely on wild game or other local sources for food that do not come from approved or inspected sources, creating food security as well as food safety concerns. Geography can also affect sampling protocols, making it difficult or even impossible to get samples from an isolated community to a certified lab within a required time frame.

A resort in an isolated community has a dishwasher that can no longer provide an adequate sanitizer step, so the EHO tells them the dishwasher needs to be replaced immediately. The next available delivery for a replacement dishwasher is 3 weeks away, but the resort is about to open for the season. The EHO works with the kitchen manager to set up a temporary process that uses the dishwasher to clean and rinse the dishes and the two available sinks for sanitizing.

4 What can EPH practitioners do in response to health inequities?

Inequities in the social determinants of health can impact any area of EPH practice, including food premises and personal services inspections, oversight of drinking water and sewage treatment operations, land use planning and built environments, and response to housing complaints. The ways that equity issues impact these practices are described in the second Primer, **Areas of EPH Practice Impacted by the Social Determinants of Health.**

A common question about the relationship between equity and EPH practice—or any area of public health—is that inequities result from social, economic, and other factors that are beyond the scope of practice. While EHOs and other public health professionals may not be able to address the root causes of inequities, they can apply an equity lens to:

- observe what barriers people might face (see box A in the figure below)
- empathize with how barriers might impact people's actions
- identify ways to help people work around those barriers (see box B in the figure below)
- consider how the public health system could better serve certain segments of the population by removing barriers (see box C in the figure below)
- raise awareness about where barriers persist and how they impact public health
- discuss with management and contribute to conversations about how to make policies and programs more equitable
- identify partners who can help respond to inequities

Support individuals and remove barriers to promote health.

These three boys are trying to watch a ball game from outside the fence, but they don't all have the same opportunity to see what is happening.

A. EQUALITY WITHOUT EQUITY

Each boy has a box to stand on, but the smallest boy still cannot see over the fence.

B. EQUITY (BUT NOT EQUALITY)

The boxes are redistributed so each boy has the same opportunity to see over the fence.

C. SYSTEMIC BARRIERS REMOVED

The transparent fence does not affect anyone's opportunity to participate in watching the ball game.

5 How can practitioners get more information about health equity?

Information and resources developed as part of the *Through an Equity Lens* project are available on the **Health Equity & Environmental Health** section of the BCCDC website at **www.bccdc.ca/health-professionals/professional-resources/health-equity-environmental-health**

The Provincial Health Services Authority (PHSA) provides **Indigenous Cultural Competency** training for health staff that work with Indigenous people.

BC Mental Health & Substance Use Services provides **Mental Health Literacy** resources to support staff that work with people affected by mental health issues.

The **National Collaborating Centre for Determinants of Health** (NCCDH) works to advance health equity through public health practice.

The **National Collaborating Centre for Environmental Health** (NCCEH) provides a wide range of evidence-based resources (including health equity) for environmental health practitioners and policy makers across Canada.

Five Things To Know About Equity In Environmental Public Health

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PRIMER 2

PRIMER 2

Areas of EPH practice impacted by the social determinants of health

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The social determinants of health can impact almost any area of environmental public health (EPH) practice. Determinants such as geographic isolation, socioeconomic status, education and literacy, mental health, language, and culture, can create barriers to compliance and lead to health inequities. This Primer illustrates how barriers related to equity and the social determinants of health arise in different practice areas where environmental health officers (EHOs) work. It is the second of three **Primers on Health Equity and Environmental Public Health** produced as part of a consultation with field staff by BCCDC's *Through an Equity Lens* project. The first primer, **Five Things to Know About Equity in EPH**, provides background about the concept of health equity and how inequities and the social determinants of health (SDH) arise in EPH practice. The third primer, **Equity in EPH Practice**, discusses ways to integrate an equity lens into practice.

The quotes included in this primer are from a series of focus groups with environmental health officers (EHOs) held in March 2015 in each of BC's regional health authorities and the First Nations Health Authority. The purpose of the focus groups was to identify how barriers related to the social determinants of health impacts EPH practice in BC, how EHOs respond, and what supports would help EHOs use an equity lens in practice.

Areas of EPH practice impacted by the social determinants of health

1 Food premises

Both operators and employees of food premises can face barriers that impact their ability to engage in healthy behaviours and follow food safety guidelines or regulations.

Cash flow and other economic issues can affect business owners' ability or willingness to maintain and repair equipment and infrastructure, or to assist employees with food safety or other training. Low-wage or precariously employed food handlers may find it difficult to pay training fees for courses such as FOODSAFE, possibly limiting their work opportunities in the food industry. Those without paid sick leave may hesitate to call in sick, even when symptoms or test results (e.g., gastrointestinal, Hepatitis A) should preclude them from handling food.

The rents are insane, and you've got huge competition…You've got these larger corporations pushing out little family establishments, so there's certainly a lot of pressure to pay the bills…

I think with a lot of sanitation issues in restaurants, the owner is the one staying late, and they're tired because they're staying late each day and they don't have enough money to pay a cleaning company. And the minimum wage is going up, and they have to try to compensate for that.

In **small or isolated communities**, access to equipment, parts, and service may be limited, slow, and costly. For example, what might be a minor refrigerator repair in an urban area could be delayed for weeks while waiting for a part to be delivered to a northern community. Service providers may charge fees for travel time, and delivery costs for new or replacement equipment may be prohibitive. Food premises operating in such communities often need to work with their EHO to find alternative ways of operating safely without optimal equipment setups.

Access to professionals, equipment…at a reasonable cost. Just to get a dishwasher fixed in a restaurant in a remote area is expensive. Usually you have to wait until they're out there for other reasons or they're on their pass-through. It could take a long time getting a certified plumber in to fix plumbing issues in a restaurant. …And some of them do gouge. It's difficult because there's very little competition, very little service provided for some of these [places].

Areas of EPH practice impacted by the social determinants of health

Geography can also create challenges related to food security or access to culturally appropriate or traditional foods. In isolated communities where approved sources of food are limited (due to weather, transit costs, low demand, etc.), residents and food service operators may rely on locally produced or wild foods to meet dietary needs. Businesses and institutions that serve Aboriginal people may wish to offer traditional foods, which generally come from wild or unapproved sources. To support public health in these circumstances, EHOs prioritize risks, focusing on critical risks and educating people to do things in the safest possible way.

If they were cooking with meat that they shouldn't be cooking with … because they caught it, and in a lot of those communities, that's what they lived on and they couldn't get access to any other kind of protein. So what I would do is I would make it the safest possible for them, instead of saying, no, you can't have it at all.

Education affects people's ability to read, understand, and follow food safety or other public health guidelines. While professional chefs and food handlers may have industry-specific training that provides them with technical understanding of equipment and processes, some operators and employees have only grade school education. Without adequate training and education, it is difficult to complete certification tests, follow maintenance instructions, or create complex food safety plans. EHOs have pointed out how the complexity of food safety plans in particular requires them to spend time working with and educating food premises operators.

One thing is the requirement for food safety plans—a written document. Often the information that we give to them is WAY too overloaded—it just looks confusing. So, sitting down at the beginning and even walking through a recipe with the person really helps. So, it's just spending the time. We're meant to be educators—that's number one.

Some language that we're using might make sense to some of the chefs who have gone to culinary school, but for the ones who have maybe grade 10 or grade 9 or grade 8 level education, it can be really challenging for them to fit some of those pieces together.

Areas of EPH practice impacted by the social determinants of health

For people with limited or no English **language** skills, the barriers to understanding and completing written food safety documentation are magnified. Although some guidelines and training programs are available in different languages, the language in the translated versions may be overly complex for some people. To support public health in these circumstances, EHOs prioritize risks, focusing on critical risks and educating people to do things in the safest possible way.

And it's easier to communicate or to educate a person to get compliance when you're speaking the same language. But when you have a language barrier on top of a cultural barrier…

Something like storing rice at room temperature, people have said to me, "My family's been doing this for hundreds of years. Nobody's gotten sick. What are you talking about?"

Cultural differences—often co-existing with language barriers—can create different types of barriers. Language affects the words that people say, but culture affects communication style and interactions between food handlers or business owners and EHOs. In some cases, this comes up in the way that some people perceive the role of the EHO. Health inspectors in some countries play an enforcement role without engaging in education or health promotion in the way that EHOs do in BC. People who view health inspectors in this way are less likely to be open about their challenges or to ask for assistance, making it more difficult for the EHO to play a support role.

We are definitely not the first responder. They wouldn't call us and say "We have some issue here." They think that when there are issues, we only go in and shut the place down. But they don't see that we can actually work together.

Areas of EPH practice impacted by the social determinants of health

People from other cultures may also be accustomed to different standards or processes for food preparation. Traditional food preparation practices from other countries may not be approved here or may not follow current local guidelines or regulations. Those practices may or may not be safe, but the lack of familiarity by either party can challenge the interactions between food premise operators and EHOs. These issues can be even more difficult to navigate when there is also a language barrier.

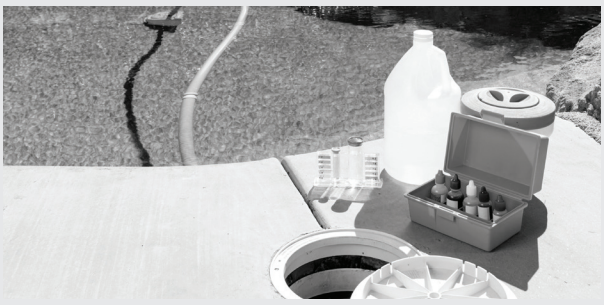
I think a lot of people that immigrate … are not able to carry on with their professions, their trained skills that they acquired in their homeland. So, they come here and they open restaurants because everybody can cook, right? Everyone can run a restaurant. I think they bring with them some of their previous cultural practices or norms and they set up shop, not realizing that there are perhaps differing standards here, differing ways of doing things, different expectations to what they've always known.

2 Personal services

As in food premises, **language** is one of the most common equity-related barriers that arises in personal services establishments (PSEs). EHOs find it difficult to communicate how and why to do things with people who do not speak English or who have limited English language skills. In the presence of a language barrier, explaining acceptable forms of sterilization, proper sanitizing procedures, and proper use of single-use items becomes very challenging. EHOs rely heavily on multilingual posters and guidance documents, but often find it difficult to explain the rationale behind recommended practices in a way that leads to sustained behaviour change and compliance.

Finances are important in any industry. Similar to the way some food handlers find it difficult to obtain FOODSAFE certification, pool or water system operators can have difficulty taking the time away from work for professional development training.

I find that a lot of people are very reluctant to want to take time off. …We require our pool operators to be properly trained, and so we offer this course. It's a full-day course but a lot of the people … say, "I can't take the time. I can't take a whole day, because if I'm not here nobody's here."



3 Drinking water and sewage treatment

Geographic isolation presents similar challenges for water systems operators as it does in food premises. Access to parts, equipment, and expertise can be difficult to obtain and expensive. In BC, drinking water operators may live several days travel from a larger centre, making it difficult to upgrade skills or attend professional development training. Even routine sampling schedules may be difficult or impossible to meet for operators in some remote locations. Weather disruptions and the need to rely on a variety of transportation connections (e.g., ferry, float plane, bush plane) can make it impossible to get samples to a testing laboratory within the prescribed time limit, regardless of how vigilant the operator may be.

Even though the operator did everything they could, it's still past [the limit of] 30 hours.

There are weather delays that can happen where the samples will get done and the whole transportation chain of coming down by float planes, to get transferred at another airport to come here, for us to get a courier. That transportation chain will fall apart at certain points. It gets frustrating for the operators to keep sending samples down and they just keep going bad.

Boil water advisories are often implemented when sampling schedules have not been met, even though there may not be a problem with the water supply. In order to avoid unnecessary boil water advisories, EHOs may encourage labs to analyse late samples or search for other assurances of water quality. This can create an ethical challenge for the EHO, who is responsible for overseeing sampling compliance and assessing water quality risk but does not want to impose unnecessary boil water advisories on a community. Guidelines that do not take into account the realities of **local context** make it difficult for EHOs to support equitable access to safe drinking water in such communities. Some EHOs have also noted that other policies (e.g., for design of septic systems) can be inappropriate or even ineffective under the geologic conditions in some communities.

Some operators of drinking water systems also struggle to pay for testing, maintenance, and upgrades of facilities. Some also face **education** and **literacy** challenges that make it difficult to follow guidelines or complete their certification exams. Because people often try to hide their literacy challenges, EHOs may be unaware that this is an issue. When they become aware of it, some work closely and discreetly with operators to explain and work through written materials verbally.

Maybe they've done it so long they KIND of know what to do, but if you write a report that's somewhat technical they don't necessarily know how to follow and read that.

Areas of EPH practice impacted by the social determinants of health

4 Built environment

The built environment is a relatively new area of practice for EPH practitioners. The emergence of healthy built environment teams within BC health authorities provides an opportunity for practitioners to apply an equity lens when commenting on development applications or rezoning permits, or when participating in local government planning processes. EHOs that are part of healthy built environment teams have been gaining specialized knowledge about how to improve health for all people through the built environment and planning. The collaborative nature of these teams facilitates **cross-sector collaboration** and provides an **opportunity for EPH input** on issues that fall outside the traditional jurisdiction.

We're starting to get mental health to come on board. They don't have the resources. But for a big development that could be impacted because of addiction, and maybe they're going to put a ... liquor house on a corner of downtown but there's a residential neighbourhood around it. We can start putting those kind of comments and official community plan comments to mental health, and they're starting to get the idea that they could make comments to do with how that could affect the social structure of that particular neighbourhood, where we never had that before.

5 Housing

Housing presents particular challenges to an equity-integrated EPH practice: many of the vulnerabilities that can lead to health inequities are visible in housing situations. Because EHOs lack clear **jurisdiction** over housing related issues, they struggle to improve the quality of housing environments. In some municipalities (e.g., New Westminster), EHOs are authorized to enforce city bylaws or respond to housing complaints. Similarly, provincial legislation (e.g., Alberta Minimum Housing and Health Standards) can authorize public health inspectors to enforce housing standards, and collaborative initiatives such as RentSafe may facilitate cross-sector service delivery.

Regardless of jurisdiction or the presence of applicable legislation, health protection units receive complaints from vulnerable individuals (e.g., single mothers, the elderly, low income renters, and people with disabilities) who report health concerns related to water supply, heating, mould or other air quality issues, bed bugs, or general safety and repairs in rental units. The EHO is often the **first line of contact**, regardless of authority to act. Response varies across BC: some health regions defer response due to lack of authority and others try to **refer** individuals to services. Other agencies, such as the Landlord Tenancy Board or mental health and social service agencies, are also limited in what they can do, leading some EHOs try to intervene even though it is outside their formal mandate. Leadership support for this kind of action varies.

Areas of EPH practice impacted by the social determinants of health

Housing is an interesting situation, because I think it's pretty clear that it's not us. We all get sucked into playing the game because we're compassionate people and we want to help, and I think I feel supported in doing that on an occasional basis as I see it's warranted. [Health authority] has a culture of relationships…

If we followed the rules and they followed the rules, we couldn't get this done. But because we've built these relationships, [we help each other]. Sometimes it's under the radar because I'm not sure our managers would be that happy … But in the long term, you get the cooperation that's going to move you forward.

Regardless of local response, housing quality has been identified as a gap in BC's public health system.

So, unless the province decides that they're going to make it our mandate, it keeps falling off the plate of everybody.

Summary

Inequities in the distribution of the social determinants of health can create barriers for people in any area of practice in which EHOs work. Operators of food premises and personal services settings are frequently impacted by language, cultural, and economic barriers. Small water systems and food premises in rural or remote communities face are impacted by travel restrictions, high costs for equipment and service, and limited options for parts and service. Operators may also have literacy challenges. Housing is particularly complex: although EHOs' jurisdiction is limited, many witness people with mental health, social, and economic barriers living in unhealthy housing. The built environment, an emerging area of practice, is providing new opportunities for EHOs to play a role to support built environments (including housing) that are healthier for everyone.

The next Primer in this three-part series addresses some emerging practices used by EHOs in British Columbia to respond to perceived inequities, and identifies some options to support the use of an equity lens in EPH practice.

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PRIMER 3

PRIMER 3

Equity in EPH Practice

by Karen Rideout, PhD

Environmental Health Services
BC Centre for Disease Control

This is the third of three **Primers on Health Equity and Environmental Public Health** produced as part of a consultation with field staff by BCCDC's Through an Equity Len project. The first primer, **Five Things to Know About Equity in EPH**, provides background about the concept of health equity and how it relates to environmental public health (EPH) practice. The second Primer, **Areas of EPH Practice Impacted by the Social Determinants of Health**, illustrates how equity issues impact different areas of EPH practice. This document highlights emerging approaches for responding to inequities through EPH practice, and identifies options to support further integration of an equity lens for EHOs.

This information was gathered through a series of focus groups with environmental health officers (EHOs) held in March 2015 in each of BC's regional health authorities and the First Nations Health Authority, and through subsequent consultations with EHOs and public health inspectors at conferences and online.

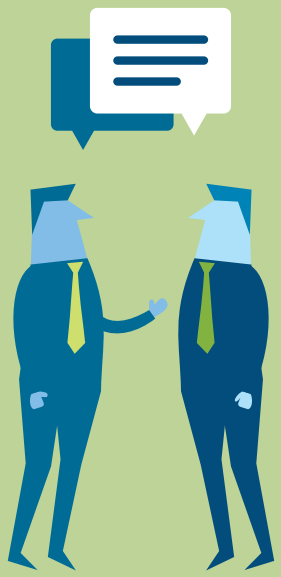
1 Emerging practices

Equity strategies for EHOs have not been formalized in policy or guidelines, but individual practitioners report using a variety of ad hoc approaches to support people perceived to be facing barriers.

ONE-ON-ONE

Supportive relationships

Adaptive communication



RISK MANAGEMENT

Prioritize critical risks

Contextualize

COLLABORATION

Borrow tools and resources

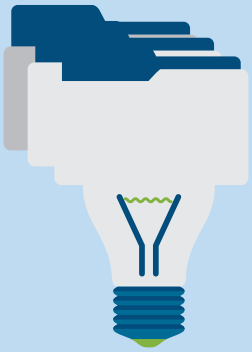
Mutual Support

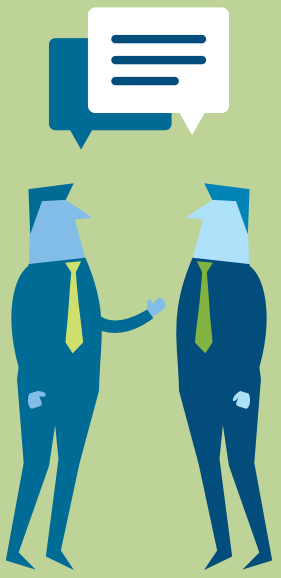
Networking and referral

DOCUMENTATION

Acknowledge and educate

Flag system gaps





ONE-ON-ONE APPROACH

In many cases, EHOs described adjusting their approach to working with individuals in an inspection or consultation scenario. They often tried to find ways to work around people's barriers, applying an equity lens in order to help mitigate the inequities created by people's circumstances.

Supportive relationships

One commonly reported tool to apply an equity lens at the individual level is a focus on **relationships**. When people come to know and trust their EHO, they become more open about their challenges and barriers and allow the EHO to support them. EHOs have pointed out that this takes time and openness. They are careful to lay out all the relevant information and try to discuss it in that person's terms. One focus group participant described a situation in which a restaurant owner needed to do a lot of upgrade and repair work to be in compliance. This EHO decided to prioritize that work so it would be more manageable for the cash-strapped operator, rather than overwhelming him with more than he was able to do at one time. In such scenarios, the EHO recommends to "give them a list and let them know… I'm not going to throw you under the bus … I will work with you to get it done."

Relationships are particularly important when working in First Nations communities, where EHOs offer guidance but do not have regulatory authority. In these communities, EHOs rely heavily on building trust and relationships, a process that can take years to develop.

Adaptive communication

A frequently used strategy for working with individuals that have language or literacy barriers is to adapt the communication style to the individual's abilities.

When language barriers are present, **demonstrations and visual aids** are used to explain procedures (but are not useful for communicating complex public health rationales). Family or employees, or even online tools such as Google Translate, are used in lieu of official interpreters.

To work around literacy barriers, some EHOs **verbally** walk through education materials or exams to help people who have difficulty understanding written material.

When recent immigrants used to more authoritarian inspectors try to hide challenges because they are fearful of immediate shutdown, EHOs have found that explaining the education role of inspectors in Canada, **building trust**, and letting the operator know that they will support them through the upgrade process can improve the working relationship with many food premise or personal services operators.

RISK MANAGEMENT APPROACH

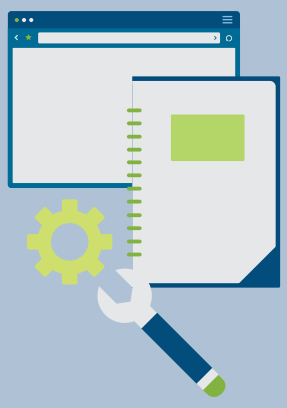
Risk prioritization, a common tool in EPH practice, is also used to respond to equity-related barriers. It is particularly common when multiple hazards or barriers are present, making it difficult for an operator to address everything at once. It is also used in cases where addressing one public health hazard or regulatory infraction might lead to the creation of another hazard (e.g., requiring system upgrades that would bankrupt a small water system and leave residents with no potable water, or destroying carefully handled meat from an unapproved source in a community with limited access to fresh food).

Prioritize critical risks

EHOs who participated in these consultations expressed a clear preference for education over enforcement. In the presence of inequities, progressive enforcement techniques are used, with a particular focus on **prioritizing critical risks** to avoid overwhelming vulnerable operators with too many seemingly insurmountable problems. This requires a delicate balance between protecting public health while continuing to build the kind of trusting relationship with a struggling operator that could have long term benefits. This might be interpreted as prioritizing the intent over the letter of written guidelines. Such a balance requires a significant level of confidence—as well as managerial support—in an EHO's ability to exercise appropriate discretion.

Contextualize

Similarly, EHOs often take the **local context** into account when prioritizing risks. They may focus on maximizing available resources (human, financial, or technical) for the biggest public health impact. For example, providing guidance on how to safely source and prepare wild game might be seen as preferable to prohibiting uninspected meat in a community with limited access to outside food sources or that prefers traditional foods. Context may also be taken into account (e.g., by accepting verbal test results from labs) when working with small water system operators in remote locations that are unable to meet standardized testing protocols due to their location.



COLLABORATION APPROACH

Informal collaboration occurs between health protection/environmental health colleagues, between different professions within public health, and across sectors outside the health system. Many EHOs rely on colleagues to share approaches and resources to support their work with clients and operators that experience barriers.

Borrow tools and resources

Communication **tools may be borrowed** or adapted from other areas when not available within a particular health authority. EHOs reported searching for multilingual documents and visual aids online or asking colleagues in other regions and using them in their own work as needed.

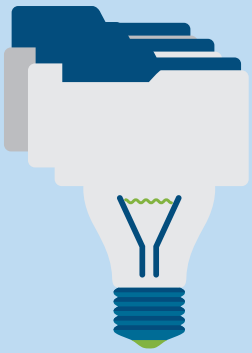
Mutual support

EHOs rely on their **colleagues** for support and information when they encounter complex or unfamiliar issues for which there may be no standardized response. Those new to the field in particular use their senior colleagues for information about how to help people who are marginalized or who face social, economic, or geographic barriers.

Networking and referral

EHOs engage in **networking** and refer to other professionals or sectors when they encounter situations that are outside their expertise or scope of practice. This is generally *ad hoc* or informal and depends on personal contacts. Some people make a point to get to know who else is working in related support roles, and to let those people know who they are, so that they can refer people elsewhere to support them through their challenges. Junior staff rely on senior staff to extend their networks, as EHOs consistently report that formal opportunities for referral are limited at best.

Despite the lack of official channels, **informal referrals** are frequently used in the context of housing, though they also occur to help people access funding or education opportunities, and may involve mental health services, literacy services, grant opportunities, nursing or social work, police and fire department, landlord tenancy services, or physicians. In some cases, privacy legislation can make informal referrals difficult due to restrictions on sharing personal information.



DOCUMENTATION APPROACH

Documentation fills an important gap in the absence of formal structures to respond to inequities.

Acknowledge and educate

At an individual level, documenting hazards or infractions—and the reasons for them (including equity-related barriers)—in inspection reports can be a valuable tool for working with operators. These reports can be referenced for educational purposes, but also serve as **acknowledgement that barriers exist** and show that the EHO recognizes that the individual operator is doing everything he or she can within the confines of their circumstances.

Flag system gaps

Most health authority inspection reports do not require a narrative documentation of hazards, EHO response, and barriers. However, such reporting can benefit the EHO and the public health system. EHOs may feel it is important to document processes to show they are doing the best job possible in the face of unmitigated barriers, and can **flag issues** that may warrant additional attention or resources. As one EHO noted:

The first thing I try to do is document as much as we can. So we can show that we have been doing our due diligence to get things to a certain way, and there are reasons why it hasn't happened. I think that's a really important thing to express.... "Well, these are the reasons why we're at where we're at. Yes, they're not in compliance, but we've had these issues and it's really not been the fault of either party why things have happened the way they have." And [show] what we've done to try and alleviate or correct that, and show that we've been doing our part and they've been doing their part as much as they can.

Such documentation could be an early step toward transformative health system change (see next section).

These emerging practices were identified from focus group discussions with approximately 45 EHOs in British Columbia, and supplemented with conversations and input from EHOs and public health inspectors from across Canada. Although this was not a representative sample, their professional experience and focus varied widely. Similar approaches and strategies were reported across regions, but there were some differences between health authorities. Relationship building was particularly important in the First Nations Health Authority due to the advisory, rather than legislated, role of EHOs. EHOs in rural regions appear to have a greater degree of flexibility to take creative approach to "use the tools you've got" to get the job done. The health authorities also varied in terms of perceived managerial support for the integration of an equity lens to EPH practice, although this is an emerging area of practice and further investigation is needed to examine how the different health authorities are introducing health equity into environmental public health.

Despite the variety of EHO responses to equity-related barriers, it is important to recognize that these are emerging practices that still need to be evaluated for their impact on both inequities and public health. All of them rely on individual EHO time, discretion, motivation, knowledge, and personal networks. In many cases, they were described simply as strategies to do the job and not as equity tools per se. In others, individual EHOs reported extending their involvement beyond the requirements of their role and sometimes using personal time to support individuals facing barriers.

Moving toward an equity-oriented EPH practice

These emerging practices suggest that some EHOs are beginning to bring an equity lens to typical inspection activities. (It should be noted that the strategies described here in the context of health equity are viewed by many practitioners as simply the way they serve the public, and they may not conceptualize what they do as applying an "equity lens.") Others are taking a broad population health view of health protection and environmental public health (Figure 1). The one-on-one tactics, i.e., changing the way they work in typical inspection scenarios, could be described as transactional change (Quadrants A and B). These strategies are valuable to help individuals overcome or work around their barriers (Figure 2). Broader, systemic strategies will be needed to better serve individuals with multiple or complex barriers, and to help remove some of the larger barriers (or hurdles) that result from in the way health services are structured. Risk management strategies begin to move in this direction by considering population-wide outcomes within a traditional inspection model (Figure 1: Quadrants A and D). Collaboration strategies take a health promotion approach while still working with individual practitioners or situations (Figure 1: Quadrants B and C). The practice of documentation, as well as formalized structures for collaboration and referral, could help move toward system change to support wider population health impacts (Figure 1: Quadrants C and D).

	PERSON-CENTRED APPROACH TO EPH	SYSTEMS APPROACH TO EPH
Practice model	**A. Traditional** Focus on regulation and health protection, using education as a tool.	**C. Emergent** Focus on health promotion and creating supportive environments.
Response to health inequities	**B. Individual** Respond to socioeconomic barriers when they arise. Incorporate equity into practice by providing tools for practitioners to help them work with individuals who face socio-economic barriers.	**D. Population** Remove barriers to health in society. Integrate equity into the EPH mandate with policy and collaborative mechanisms across all areas of practice.

Figure 1. The Equity Quad: Moving toward an equity-oriented EPH practice. The top row describes typical EPH practice, which has been gradually shifting from a regulatory compliance approach to one that incorporates health promotion and healthy environments as tools to both improve health and improve compliance. The bottom row indicates how an equity lens could be applied to either the Traditional or Emerging approaches to EPH practice.

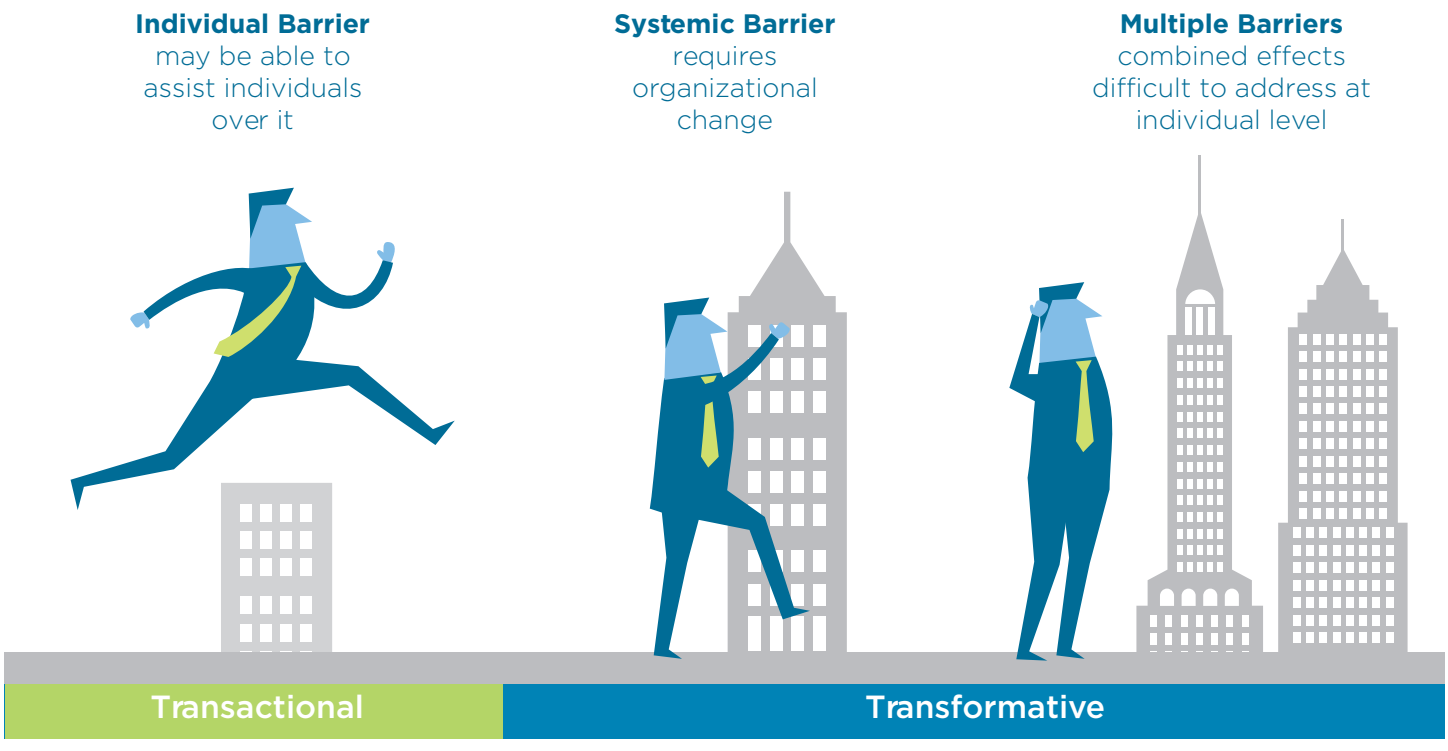
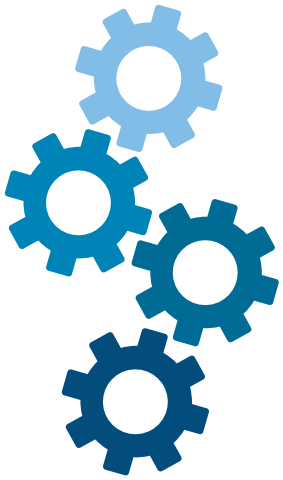


Figure 2. Addressing barriers with an equity lens. Individual barriers may be manageable, particularly if they exist in isolation, while systemic barriers tend to create challenges that are more difficult to surmount. However, when multiple barriers of any kind are present, their combined challenges are complex and more difficult to address. (Adapted from Dr. B. Nummer.)

2 Supporting further action

The intersection of the social determinants of health and health inequities with EPH practice described in the first and second Primers in this series, along with the emerging practices described above, indicate opportunities to integrate an equity lens into EPH practice.



Tools and training

Language, literacy, cultural, and mental health barriers are common challenges in British Columbia.

Where tools exist, e.g., multilingual signage, visual aids, or translated documents, they could be **shared and adapted** for use across regions. There may be value in creating additional tools to fill remaining gaps at the provincial level.

Training in cross-cultural communication, cultural sensitivity, and mental health literacy could support practitioners who interact with individuals facing such barriers. Even if practitioners cannot remove the barrier, they could become better equipped to recognize and respond in a more effective manner.

In-service **professional development** opportunities such as webinars, workshops, or focused staff meetings would raise overall knowledge and awareness with respect to health equity, its relationship to EPH practice, and a role for practitioners.

Collaboration

The concept of an equity lens recognizes that although the root causes of health inequities may be outside the mandate of EPH, all sectors can play a role in minimizing inequities. **Referrals and consultations** with other sectors inside and outside the health system could be a way to respond to equity-related issues that are witnessed by EHOs as frontline public health professionals but that may be beyond their scope of practice.

Networking with colleagues both inside and outside the public health system requires **time and opportunity**. More face to face interactions with a wider range of practitioners could facilitate networks of professional support.

Processes

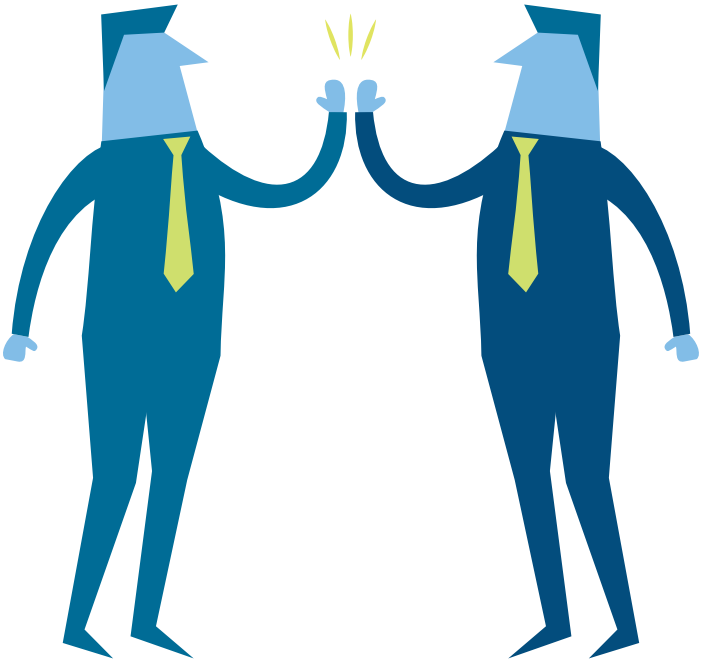
Referrals are currently done primarily through personal or opportunistic networks. More **formal structures for referrals**—including clear guidance about the roles and responsibilities of different professions, agencies, and departments as well as specific contacts within those agencies and departments—could lead to a more efficient and effective referral process.

Where direct action by EPH practitioners is not possible, there is value in **documenting** the challenges faced and efforts made by both EHOs and their clients in order to inform future decision-making. Such documentation can validate those efforts and highlight gaps in the system where actions can be taken to improve health equity.

Leadership support

Many of the strategies described in this report are time-consuming. EHOs are often restricted by daily or weekly inspection quotas that make it difficult to give attention to or build trusting relationships with individuals with barriers. If an equity lens is to be applied at the organizational level, **performance evaluation may need to be restructured** to incorporate the time spent supporting vulnerable or marginalized people.

Discretion is frequently used in response to inequities, but some practitioners report a lack of clarity about where or how to apply discretion. Clarification of the EHO role in such circumstances, leadership support for those who exercise discretion, and clarification of others' roles could increase consistency and support practitioners to apply an equity lens.



Evaluation to assess outcomes associated with different strategies would be helpful to measure long terms outcomes with respect to compliance, health hazards, and inequities.

An equity-integrated EPH practice will require **clear support from all levels** (e.g., local managers, regional directors, and health authority leadership).

Equity in EPH practice

Conversations about equity in the context of EPH practice have begun in health authorities across Canada. An equity lens is an approach to practice rather than a specific skill or set of actions, and as such will take time to integrate into current processes. There will be opportunities for sharing knowledge, experiences, and lessons learned as different regions explore what equity means in the context of what they do. Early adopters and health equity champions—those practitioners who have already started exploring equity in the context of their role—should be celebrated and supported for helping define what it means to practice environmental health with an equity lens.

The role of EHOs in BC is shifting to incorporate broad population health approaches such as health promotion and healthy built environments. Such approaches provide opportunities for the kind of inter-sectoral collaboration that can also support the integration of equity into practice. Joint efforts between EHOs in health protection and dietitians in health promotion to support food safety and food security are one example of how a collaborative approach can support equity and wider population health goals. Though systemic change can be slow, much can be learned through the process.

> *It is integral to your growth as an organization, as a field, because otherwise we constantly would be stagnating, whereas other people are constantly evolving and changing. I don't see how that's any different for what an inspector would do, to what a doctor would do, to what a chef would do, for example. They are constantly finding new information. So, that should be part of this job, this growth and this understanding, and this learning throughout.*

These three Primers have begun to frame the concept of health equity within the context of environmental public health practice in BC. Tools and resources to support practitioners who apply and equity lens will be valuable. However, strong leadership from health authorities and established processes for inter-sectoral collaboration are essential for transformation toward a more equitable health system.

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Funding for the *Through an Equity Lens* project is provided by the Provincial Health Services Authority Population and Public Health Prevention Programs.

1.2 CONCEPTUAL FRAMEWORKS FOR EQUITY IN EPH PRACTICE

This short summary provides an overview of conceptual frameworks and tools for applying them to environmental public health practice. It is designed to assist managers and directors to incorporate a health equity lens into organizational programming.

SECTION 2: FACILITATING HEALTH EQUITY IN ENVIRONMENTAL PUBLIC HEALTH PRACTICE

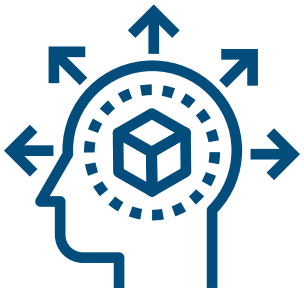
This section identifies factors that facilitate the inclusion of health equity into environmental public health practice and policy.

Equity-Integrated Environmental Public Health: From Concept to Practice

Authors: Karen Rideout, Catherine Mah, and Brian Cook

Environmental Health Services
BC Centre for Disease Control

This summary of conceptual frameworks and their potential application to environmental public health practice aims to guide managers and directors wishing to incorporate a health equity lens into their organizational programming, and provides a theoretical basis to different approaches to health equity action. It introduces the major conceptual frameworks that can guide policy and program development, and outlines some tools that can be used to put those concepts to practice.

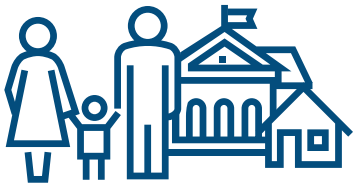


Conceptual frameworks to guide equity-integrated EPH

Although more theoretical than practice-oriented, conceptual frameworks can help inform areas for potential intervention and may be used to guide strategic planning processes, high-level policies, and organizational service plans.

Environmental justice is a rights-based framework that responds to disproportionate exposure to environmental risks among vulnerable populations or in geographic areas, as well as on equal rights to environmental protection.[1] Although more frequently used in the United States to address race and socioeconomic injustices, the concept can apply to any environmental health equity scenario.

Environmental justice can be operationalized through **high level policy change** that addresses systematic disparities and empowers vulnerable populations[2], particularly where policies may have unintentionally led to systematic marginalization or where there are barriers to accessing healthy environmental amenities.[3] **Participatory research** approaches that engage local communities can help identify, analyse, and report on environmental health issues.[3]



Healthy public policy is a health promotion framework aimed at creating supportive environments that enable all people to make healthy choices. Healthy public policy recognizes that the choices made by individuals, as well as public, private, and commercial entities, are influenced by public policy. The main goal of healthy public policy is to create conditions that support individuals and corporations to make healthier choices, i.e., to make healthy choices easy and damaging choices more difficult.[4-6]

One way to implement healthy public policy is through a **Health in All Policies (HiAP)** approach. Recognizing that all sectors – not just health – influence health status and health-related behaviours, HiAP applies a health lens to all public policy, regardless of the sector or portfolio from which it emerges.[7] HiAP uses a whole-of-government approach to reduce health inequities. Based on the assumption that healthy populations are productive and prosperous, HiAP advocates for intersectoral action between government departments as a key strategy to consider the health impacts of a diverse set of portfolios.[8]

Healthy places frameworks consider the natural and built environments in which people live, work, learn, and play as important determinants of health.[9] The Healthy Communities approach emerged during the creation of the Ottawa Charter for Health Promotion in the 1980s. It focuses on the broad determinants of health and incorporates equity within its core values.[10]

The **Healthy Communities** (www.bchealthycommunities.ca) movement is active in BC and has guided actions of local governments and health authorities to support health equity. This approach can be used by healthy built environment teams operating at the health authority level as they encourage more health-supportive environments within their local communities.

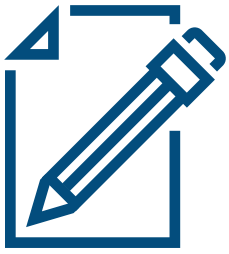
Ecological frameworks recognize the complexity of health inequities by incorporating a range of environmental factors that influence health into a single model. Ecological frameworks use systems thinking to consider complex interactions between organisms and their environments. The related concept of sustainable development suggests that economic, environmental, and social policies need to be integrated in all development processes.

There are many frameworks that examine how interactions between the health of humans, animals, society, and the built and natural physical environments. **Human ecology,** for example, explores the relationships between humans and their environments, including how social and physical environments influence health.[11] **OneHealth** considers the interactions between human health and animal health.[12] **Ecosystem approaches to health,** or "eco-health", focus on the complex connections between human health, ecosystem sustainability, social determinants, and environmental health.[13] **Ecological public health** promotes consideration of the complex and interconnected biological, social, and cultural aspects of both human and ecosystem health.[14] **Sustainable Development Goals**, which advocate for economic, environmental, and social balance, are being used in healthy community planning.[15]

TOOLS TO MOVE FROM CONCEPT TO PRACTICE

Below is a selection of specific tools that may help to operationalize the equity-related concepts discussed above. These can be used alone or in combination.

1



Health Impact Assessment (HIA) is a method used to assess the population health consequences of programs, policies, or other initiatives. It includes equity as a core value to examine the distribution of impacts within a population. HIA incorporates social, economic, environmental, and physical health impacts.[16-18]

In general, HIA is based on five main steps:

(1) screening of potential positive or negative effects
(2) scoping of methods to measure health impacts
(3) appraisal and assessment of impacts
(4) reporting of HIA findings
(5) monitoring of actual impacts[17,19,20]

Environmental health practitioners can identify appropriate environmental health indicators, which form an essential component of effective HIA.[21]

*When used to support policy development, HIA can contribute to **healthy public policy** or **HiAP** approaches. For example, practitioners can contribute environmental health expertise to social housing strategies and housing developments or identify health-related indicators to measure health impacts of environmental change.*

2

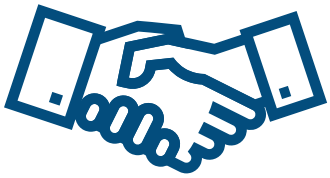
Geographic and spatial analysis borrows from the fields of geography and community planning to offer methods that can document and analyse health equity considerations such as spatial disparities or access to health-supportive services and environments.

Geographic Information Systems (GIS) analyses, mapping, and other spatial tools can be used to highlight disproportionate distribution of environmental hazards and amenities[22-24], as well as to identify vulnerable populations.[25] Healthy built environment (HBE) approaches are used by BC health authorities to assess and advocate for healthier spaces and communities (e.g., spatial access to healthy food, green space, or active transportation networks).[26]

*Geographic and spatial tools can play a key role in healthy places or **healthy communities** approaches. For example, practitioners can collaborate with local governments and planners to highlight health risks and benefits and promote healthier, more equitable communities.*

3

Participatory approaches offer a way to democratize research, consultation, or governance processes by directly engaging communities and collaborating to build and use knowledge that can support environmental health equity.



Community-based research, local knowledge, and consideration of local context can be valuable to identifying and responding to health inequities related to the environment.[24,27-30]

*Participatory approaches may be particularly useful for **HBE** or **HIA** work. Frontline staff's regular interactions with community members might be leveraged to identify inequities and potential solutions.*

4

Public health champions are "charismatic advocate[s] of a belief, practice, program, policy and/or technology".[31] These individual practitioners can drive innovation by supporting the spread of new ideas and the implementation of innovative practices.[31,32]

Public health champions express enthusiasm, are persistent in the face of barriers, and involve the right people to succeed in taking action on new ideas.

Practitioner champions *can engage management to consider new ideas and help motivate colleagues to take action related to new concepts such as health equity.*[31,32] ***Executive champions*** *who push major changes in program and policy direction are valuable facilitators to organizational change related to environmental health equity.*[33] *These champions can spread awareness of and enthusiasm for the benefits of integrating an equity lens to environmental public health practice.*

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2.1 FACILITATORS AND BARRIERS TO EQUITY-INTEGRATED EPH PRACTICE

This report, based on interviews with practitioners in BC and across Canada, highlights ways that equity has been integrated with environmental public health practice in different places. It includes a series of vignettes to illustrate how health equity can be integrated with practice, and provides an overview of both individual and systemic facilitators and barriers to equity-integrated practice.

Through an **equity** lens

EQUITY-INTEGRATED ENVIRONMENTAL HEALTH PRACTICE

FACILITATORS AND BARRIERS

June 2016
Diana Daghofer, Wellspring Strategies

Equity-integrated environmental health practice: Facilitators and barriers

Executive Summary

The BC Centre for Disease Control (BCCDC) is putting a focus on the social determinants of health through a project called Through an equity lens: a new look at environmental health. This report builds on previous work and collaboration between BCCDC and the National Collaborating Centres for Environmental Health (NCCEH) and Determinants of Health (NCCDH) to summarize barriers and facilitators to equity-integrated environmental public health (EPH) practice and showcase the success stories of environmental health practitioners who have applied an equity lens in their practices.

This project aims to support environmental health officers (EHOs), as well as managers and senior leadership, by illustrating the use of an equity lens in practice. It aims to (1) increase understanding of what equity-integrated EPH practice could look like; (2) highlight promising approaches for health authorities wishing to integrate health equity into EPH practice; and (3) provide practitioners who are already applying an equity lens with the language to describe it.

Environmental health practitioners are in a good position to respond to number of health inequities: differences in health status that are considered to be modifiable and unjust. Inequities relate to the determinants of health, which include social, economic, and environmental circumstances. Some of these can be improved through the enforcement of environmental regulations, while others require advocacy and health promotion efforts to support healthier environmental conditions.

In the context of an EHO, facilitators and barriers to applying an equity lens can be identified as either systemic or individual.

Systemic facilitators include (1) legislative power and policy; (2) organizational support/leadership; (3) organizational structure; (4) intra- and inter-agency collaboration; (5) external partnerships;

(6) equity tools and strategies; (7) training/capacity building; and (8) communication.

Individual-level facilitators are (1) discretionary powers; (2) personal values/principles/shared vision of health promotion; (3) strong personal networks; and (4) personal capacity (training and experience).

Systemic barriers identified in the literature and in practice are (1) incomplete, unclear or inflexible legislation; (2) the policy process; and (3) lack of resources.

Individual-level barriers include (1) knowledge gaps; (2) tension between health promotion and enforcement; and (3) lack of guidance in health promotion.

Recommendations are made at the end of this report to implement facilitators and remove barriers. The targeted and more systemic interventions profiled in this report show the potent role EHOs can play to reduce the health disparities that can arise from inequitable distribution of the social determinants of health.

Contents

1.0 Introduction and background

Environmental public health (EPH) practice is generally considered to address, "Those aspects of human health, disease, and injury that are determined or influenced by factors in the environment."[1] It is increasingly clear, however, that EPH practice should include the broad physical and social environment along with the usual chemical, physical, and biological agents. In fact, B.C.'s Guiding Framework for Public Health[2] includes equity as a cross-cutting issue that must be addressed by identifying community health needs, mitigating barriers, and considering access to services in the development and implementation of policies and programs.

This report is part of a BC Centre for Disease Control (BCCDC) project called Through an equity lens: a new look at environmental health, and builds on collaborative work between BCCDC and the National Collaborating Centres for Environmental Health (NCCEH) and Determinants of Health (NCCDH).[3,4] It summarizes barriers and facilitators to equity-integrated environmental health practice and showcases the success stories of individuals who have applied an equity lens in their practices as environmental health officers (EHOs) or public health inspectors (PHIs) (as they are referred to in many jurisdictions).*

Three Primers on Health Equity and Environmental Public Health[5] are available that provide background to this issue, including the results of consultations with EHOs in B.C.

- Five things to know about equity in environmental public health (EHP) which provides an overview of health equity and how it relates to EPH practice in B.C.
- Areas of EPH Practice Impacted by the Social Determinants of Health, which illustrates how equity issues impact different areas of EPH practice
- Equity in EPH Practice, which discusses ways to integrate an equity lens into practice

1.1 Project aims

These materials are written for EHOs or PHIs as well as managers and senior leadership in public health. While written with B.C. in mind, they are applicable across Canada. The reports aim to highlight the ways that equity intersects with practice and illustrate how an equity lens might be used to:

- increase understanding of what an equity-integrated EPH practice could look like;
- highlight promising approaches for health authorities wishing to integrate health equity into EPH practice; and
- provide those practitioners who are already applying an equity lens to their practice with the language to describe it.

* Certificate in Public Health Inspection (Canada), CPHI(C), is the professional designation of public health inspectors in Canada. In British Columbia, they are known as Environmental Health Officers (EHOs).

1.2 Methodology

This report draws on examples from across Canada to inform policy, planning, and practice in B.C. and elsewhere. It used the following approach:

- Identified stories of practitioners across Canada who have applied an equity lens to their work through outreach to professional organizations of EHOs and PHIs, PHI training programs, social media (listservs, websites, blogs, Twitter) reaching public health professionals, like-minded organizations and personal contacts, and other examples known to BCCDC
- Reviewed multiple emails and written stories to determine applicability
- Interviewed 12 practitioners to gain further insight into their stories
- Reviewed the academic and grey literature on the subject of integrating equity into the practice of PHIs and EHOs
- Provided draft report for review by interviewees and BCCDC staff

2.0 The role of environmental health officers

As described in Five things to know about equity in environmental public health,[5] "health inequities are differences in health status that are considered to be modifiable and unjust." They include social, economic, and environmental circumstances, defined by the World Health Organization (WHO) as (1) structural determinants, including income and social status, education, employment and working conditions, gender, race or ethnicity, and culture; (2) material circumstances, including housing, food security, and the physical environment, and (3) psycho-social circumstances, which include the social environment, social support, personal health practices and coping skills, and healthy child development.[6]

There are a number of key areas where socio-economic status (SES) correlates with environmental disadvantage, including transportation, green space, pollution, food security, housing, community participation, and social isolation.[7] The Marmot Review Team found that over 70% of the UK population living in the least deprived areas experience no unfavourable environmental conditions, compared to less than 30% in the most deprived areas.[7]

Rates of illnesses due to asthma, cancer, and chemical poisoning show environmentally relevant disparities.[8] This may result from inequities in the SDH, with lower SES people affected in the following ways:

1. Undue exposure to unhealthy environments, including toxicants arising from air pollution and lead, and employment in potentially dangerous occupations[9,10]
2. Individuals' behaviours, such as poor diet, that may affect their exposure and health status or compromise their ability to comply with health regimes[11]
3. Increased vulnerability to environmental factors
4. Decreased access to services to address the impacts of unhealthy environmental exposures

Some researchers postulate that the impacts of toxic exposure are compounded by the psychosocial stress that low-income residents experience as a result of concerns regarding income, housing, food security, and other issues.[9] Stress can impact people's ability to fight illness and adopt healthier behaviours.

Environmental health practitioners are in a good position to address a number of health determinants, as noted in Areas of EPH Practice Impacted by the Social Determinants of Health.[4] Structural determinants include neighborhood physical conditions and land use patterns that can be improved through a focus on healthy built environments. Housing, food security and food premises, and drinking water systems can be improved through the enforcement of environmental regulations, but also through advocacy and health promotion efforts to support healthier environmental conditions for all people. Responsiveness to community complaints and advocacy for improved regulations and approaches to address inequities can have far-reaching effects on the health of individuals and populations.[9,12]

The targeted and more systemic interventions profiled in this report show the influential role EHOs can play to reduce the health disparities that come with social stratification.

2.1 Acting as individuals within a system, influenced by the external environment

Both the academic literature and examples from across the country point to two distinct but complementary ways that EHOs promote equity in their work, described in Equity in EPH Practice[4] as "person-centred" or "systems" approaches.

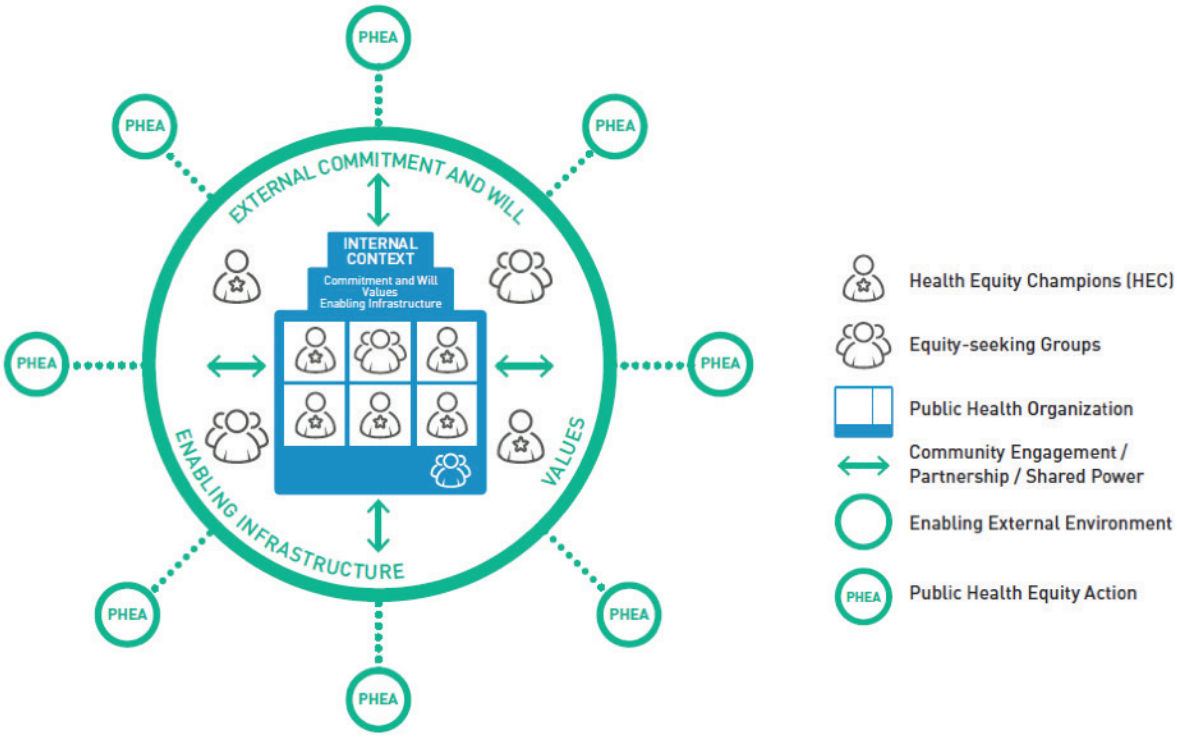
A number of stories related by practitioners portrayed the deep empathy that EHOs feel for their clients, following a long-standing tradition where EHOs work with people in a supportive and educational role, using a flexible approach to helping facilitate their compliance with health regulations. This approach can best be attributed to individual characteristics and incident-specific behaviours.

Increasingly, though, public health systems promote a health equity approach. For example, the B.C. Guiding Framework for Public Health,[2] the 2008 Ontario Public Health Standards,[13] and Nova Scotia's Health Equity Protocol[14] make explicit reference to equity as an integral part of public health. Systemic measures that embed health equity in practice, as described in this report, go far to infuse SDH-oriented practice throughout the public health system.

2.2 The OC-PHEA Framework

The conceptual framework of Organizational Capacity for Public Health Equity Action (OC-OPHEA) is a tool designed to help guide research and action to build public health capacity to achieve equity goals. It depicts two key domains that shape an organization's capability to act: its internal and external environments. These domains influence each other, ideally through community engagement, cross-sectoral partnerships, and shared power. They are also shaped by shared values, demonstrated commitment and will, and a supportive infrastructure.

Figure 1: *Organizational Capacity for Public Health Equity Action (OC-PHEA).*[15,16] *(Used with permission.)*



The examples relayed in the rest of this paper describe how facilitators—including shared values, demonstrated commitment and will, and a supportive infrastructure—help EHOs promote equity in their work. It also reviews barriers that practitioners encounter in their efforts.

3.0 Facilitators to equity-integrated environmental health practice

The literature has identified a number of factors that support a health promoting environment, including organizational commitment, supportive structures and systems, appropriate resources and modeling of community development processes within health organizations.[17] In the context of an EHO, factors can be identified as either systemic or individual.

SYSTEMIC FACILITATORS:

- Legislative power and policy
- Organizational support/leadership
- Organizational structure
- Intra- and inter-agency collaboration
- External partnerships
- Equity tools and strategies
- Training/capacity building
- Communication

INDIVIDUAL-LEVEL FACILITATORS:

- Discretionary powers
- Personal values/principles/shared vision of health promotion
- Strong personal networks
- Personal capacity (training and experience)

3.1 Systemic facilitators

Each of the facilitators identified is reviewed below, with examples of their influence in the field provided in the text, or in one of the more detailed vignettes in this report.

Legislative power and policy – Environmental legislation and regulations differ across Canada, between provinces, regions and municipalities. Practitioners have a provincially legislated mandate to protect the public's health in each province. In B.C., EHOs have the authority to enforce a range of public health regulations such as the Health Hazards Regulation, Food Premises Regulation, Drinking Water Protection Regulation, and Pool Regulation. The NCCEH website[18] has a complete list of legislation by province and Keefe (2016)[19] provides a detailed analysis of how legislation and policy influences how an equity lens is operationalized in environmental health practice.

Additional legislation can further support the use of an equity lens. *For example, the Alberta Public Health Act provides clear guidance for healthy housing through Housing Regulations, Minimum Housing and Health Standards, and Nuisance and General Sanitation Regulation. These regulations ensure minimum rental housing conditions, addressing emergency egress, heat and other utilities, weatherproofing, pests and plumbing issues, among others. Manitoba has similar regulations, but in other provinces, this type of regulation is often left up to individual municipalities or is addressed in a patchwork of legislation, regulations and by-laws that may be subject to interpretation.*

Organizational support/leadership – From a shared vision of health promotion to operational requirements and concrete tools, support from the highest levels plays an important role in promoting health equity in all aspects of public health practice.[21]

UK'S HOUSING HEALTH AND SAFETY RATING SYSTEM

In the UK, the Public Health Outcomes Framework provided the basis for changes to its Housing Act (2004), introducing the Housing Health and Safety Rating System (HHSRS), which focuses on the effects of housing defects on health and safety.[20] Beyond addressing safety issues, the HHSRS recognises that healthy housing should provide an environment conducive to a healthy lifestyle and well-being. The UK's Audit Commission reported that housing support is cost-efficient, such that every £1 spent on housing support for vulnerable people nets savings of nearly £2 in reduced costs for health, crime, and other services.

Food service regulations: Addressing unintended consequences

Food service regulations and training programs are in place to protect the health of the public from infectious diseases and foodborne illness. These regulations can have unintended consequences, though, for low-income or disadvantaged populations. Perceptive public health inspectors (PHIs), some armed with Health Equity Impact Assessment (HEIA)[25] tools, are working to mitigate the inadvertent negative impact of food regulations.

Even if not required, food safety certification is beneficial to employees in food service and ensures that they have the skills to maintain clean and safe food preparation and service environments. However, personal circumstances such as cost, language, cultural background, or education and literacy levels sometimes exclude people from taking advantage of training opportunities.

Applying the "targeted universalism" strategy identified as one of Sudbury District Health Unit's "10 Promising Practices"[38] to reduce social inequities in health, many public health authorities are offering food safety certification at a reduced cost or in revised formats to overcome a range of learning barriers.

Working with employees in the field, PHI Heidi Pitfield, manager of the Communicable Diseases Team at the Simcoe Muskoka District Health Unit, used a HEIA process to review the impact of mandatory exclusion periods required for food handlers. Food service workers are often low-income, part-time workers. Many don't have paid sick leave or drug plans to cover the cost of required medications. When an infectious disease requires that they stay home from work, their response is often, "I have to work to pay rent and put food on the table."

Heidi and her co-workers began negotiations, arranging for employees with lower-risk diseases to work in areas that don't put the public's health at risk. The health unit also created a vulnerable population budget line to pay for required medications for people who couldn't pay so that they could return to work.

Legislation still limits what PHIs can do, but where possible, they are using creativity and positive relationships with employers to support workers as best they can. "At the end of the day, we are here to protect the public," says Heidi, "but we want to avoid making a low-wage worker suffer because of that protection."

Ontario's North Bay Parry Sound District Health Unit will waive the course fee and reduce the class size, even providing individual support, for those with mental, emotional, or academic needs. In the Regional Municipality of York, PHIs worked with nurses in the Health Equity Program, using the HEIA tool to identify changes needed in its Food Handler Certification Program to accommodate people with intellectual disabilities. The full-day, six-hour course was broken down to six one-hour sessions, using oral and pictorial formats rather than the usual lecture and presentation-based approach.

In addition to providing opportunity for employment in the food industry, thus addressing socioeconomic status (a key determinant of health), the revised course offers participants the chance to build social ties with their peers and enhance their independence, contributing to improved overall health.

In B.C., the Health Officers Council has raised the profile of health equity with discussion papers.[22,23] In Ontario, the following legislative and operational tools are in place, creating an environment where health determinants are part of the way "we do business" for an increasing number of public health units:

- Excellent Care for All Act (2010)[24] requires health care providers to include equity indicators in their annual quality improvement plans.
- Public Health Standards include a focus on the determinants of health, which is operationalized through SDH public health nurses positioned in all 36 Local Health Integration Networks[13].
- Health Equity Impact Assessments[25] are being increasingly implemented for the development of health programs, and are mandatory in some organizations.
- Health Equity Committees and/or Priority Populations Networks are in place in many public health units.

Other provinces are increasingly adopting organization-wide social equity goals and practices:

- B.C.'s Guiding Framework for Public Health includes equity as a cross-cutting issue.[2]
- Quebec's Public Health Act specifies that Ministry of Health actions should focus on health determinants.[26]
- Poverty reduction strategies are in place in provinces across Canada (with the exception of B.C.) and increasingly in cities and towns.

Organizational structure – Public health departments can be structured, both physically and administratively, to support equity goals.

When the Winnipeg Regional Health Authority moved its corporate offices, they located in the inner city, ensuring that staff had daily, clear reminders of a population they serve that has significant equity issues.[27]

Ontario's Grey Bruce Health Unit consolidated its staff into one building in 2008, so its Medical Officer of Health took the opportunity to physically break down barriers between health staff by seating people from various disciplines beside each other and creating multi-disciplinary community teams. Community team meetings, training, and reviews of local health data were also initiated to strengthen employees' ties with each other and the geographically defined communities they serve.

Clear roles, expectations, and accountability as they relate to equity—for practitioners as well as all levels of management—are also required to support equity-integrated practice.[28] This is particularly true in the complex area of housing[29] and the emerging practice of healthy built environment (HBE), where the roles tend to be new to practitioners and the organizations they work for.

Decision trees put focus on SDH in rabies and mould control

Like all public health units in Ontario, Niagara Region Public Health is mandated by the Ontario Public Health Standards to address the social determinants of health (SDH) in program decision-making.[13] In 2013, Public Health Inspectors (PHIs) Gillian Dilts and Tina Welsh started working on a method to track and document how the SDH are considered in the delivery of environmental health programs. Rabies was chosen as the first program, partly because a policy was already in place to issue vouchers to people who could not afford veterinarians to access cost-reduced rabies vaccination.

The team was led by PHIs, acting as mentors to environmental health summer students, and included health promoters, an epidemiologist, and a GIS analyst. They began the process by assessing why vouchers were being provided, reviewing past rabies investigations, and interviewing PHIs. The Ontario Public Health Standards were used to guide the questions.

With good data in hand, the team was able to review key factors in deciding whether a voucher would be distributed. Three dominant determinants emerged: 1) income, 2) physical environment, and 3) education/knowledge. The data was analyzed using the Ontario Marginalization Index (ON-Marg) to consider differences in measures of socioeconomics, population groups, and geographical areas. There was a clear match between areas of deprivation and areas where the rabies vouchers were being distributed. The research results were then used to create a decision tree for PHIs, helping to formalize the process of determining the need for vouchers.

In discussion with the Public Health Priority Populations Network, a forum that focuses on programs and services targeting priority populations, the decision was made to create a similar algorithm for mould complaints. Guided by a version of Ontario's Health Equity Assessment Tool adapted to Niagara Region, the social and economic determinants of heath that potentially relate to mould complaints were identified from indicators of income, education, employment, safe and affordable housing, and personal health practices. The ON-Marg index was again applied, showing that a higher proportion of mould complaints were found in areas of higher deprivation and instability.

The decision-trees have resulted in increased awareness of the SDH and helped to formalize consideration of equity issues among PHIs, a practice many said they already did. It has not translated into changes in education or program delivery with the rabies program. However, finding that mould complaints were coming from areas of higher deprivation has changed the process of service delivery to more effectively respond to the needs of priority populations.

Intra- and inter-agency collaboration – EHOs regularly work with other public health professionals as well as other health service organizations, as is highlighted in the story *Housing: The tip of the iceberg*. Their personal and professional networks are critical avenues to connecting clients with required services. Effective collaboration requires good analytic skills to identify root problems, knowledge of the skills and services available, and engagement techniques to enlist key partners in mobilizing action.[12]

External partnerships – Addressing the increasingly persistent problem of health inequalities requires the efforts of multiple sectors, including those outside of health. The World Health Organization notes that environmental inequalities make a major contribution to health inequalities, and that required preventive health actions must be carried out collaboratively with other sectors.[30] This rationale points to the important role EHOs can play in promoting a common health-in-all policies approach.

Based on the belief that the environment and culture can be nurtured to support people to make healthier choices, B.C.'s Northern Health works in partnership with local governments on a Healthy Communities Approach. Local committees are usually co-chaired by senior municipal leaders and health service administrators, and include community members from various sectors, EHOs, and other public health staff. The local communities determine health priorities and the committee works to address upstream risk factors and collaboratively develop local action strategies to make real and sustained improvements in the health of residents. When first introduced, the approach challenged EHOs with a new way of working and a steep learning curve in terms of identifying community and health resources they could call upon. According to one EHO, the approach has gone far to break down barriers between sectors and even within the health unit. There are still challenges in finding relevant, local health data, but looking for the underlying healthy equity issues has now become an integral part of how they work.

BREASTFEEDING FRIENDLY NEW BRUNSWICK

New Brunswick's PHIs were engaged by their public health colleagues to promote equity for breastfeeding women. Despite women's right to breastfeed in public, as supported by both the Canadian Charter of Rights and Freedoms and the United Nations Convention on the Rights of the Child, women were being asked not to breastfeed in restaurants and other public places. Since PHIs had ongoing relationships with restauranteurs, they were a natural point of contact. Information about NB's Breastfeeding Friendly campaign was included with annual license renewal packages. The vast majority of restaurants support the program, and participants are recognized as being "Breastfeeding Friendly" with a window sticker and a listing on the Ministry of Health website. This collaboration helps support healthy child development, an important aspect of health equity across the life course.

Housing: The tip of the equity iceberg

When Public Health Inspectors (PHIs) go into a person's home, they are getting an open and honest a view of that person's life. As Patricia Vernon, a PHI with Alberta Health Services put it: "Housing is the glue that holds a person's world together." When that house is falling apart, whether due to a landlord's neglect, a mental health issue, habits such as hoarding, or a simple lack of resources, it shows the tip of an equity problem most PHIs cannot walk away from.

PHIs use a wide range of tools, skills, and knowledge to address clients' housing issues:

Legislation can provide a good basis for action, but it varies from province to province and even between municipalities. While legislation usually supports action in tenant-occupied homes, PHIs are limited in what they can address in an owner-occupied home, unless the resident's personal safety or the safety of the community are at risk.

Building trust is a personal skill required in all situations. Whether the PHI is working with the home-owner, tenant, or landlord, they must be assured that the PHI is there to help improve the situation to the best of their ability.

Jamie Moore, a PHI in Winnipeg, wrote a respectful letter to initiate communications with an isolated home-owner.

An officer with the Calgary Safety Response Unit connected PHI Patricia Vernon with an incommunicative home-owner, by approaching him at his local transit station. By slowly gaining each man's trust, including enlisting family and friends, the officials built relationships that allowed them to do their jobs and support the individuals through transitions to better living conditions.

A team approach is often necessary when addressing multiple issues. The relationships that PHIs build with allied services (e.g., police and fire, mental health, and employment services) and across sectors (with providers of heat and electricity) are vital to identify and address housing issues. Personal connections, in addition to those built through professional networks, become powerful facilitators to action.

In many cases, PHIs can work through issues with tenants, landlords, and home-owners, beginning with discussion and education, and moving through various compliance tools.

Julie Scarpino, a Winnipeg-based PHI, used a health hazard order delivered by an intersectoral response team to ensure housing was maintained for adults with mental health issues in a residential care home.

If a PHI does need to resort to an order to vacate the premises, other accommodations can be arranged for the residents, usually in conjunction with additional services.

Rebecca Johnson, a PHI in Edmonton who serves as the Vulnerable Populations Coordinator, aims for "vacate" days to coincide with times that residents will receive social assistance cheques.

Beyond using their personal skills and networks, some PHIs are engaging in organized advocacy work to improve the situation for groups of clients.

The Calgary Community Hoarding Coalition includes front-line workers from various health and mental health, housing, and social service agencies. In 2015, they prepared a report on hoarding and the health issues that result for people afflicted with the disorder. They are advocating for an integrated response to hoarding, including a centralized hoarding response team for Calgary.

Equity tools and strategies – Aside from supportive workplaces and shared values, EHOs require the right tools and approaches to address equity.

Ontario's Health Equity Impact Assessment (HEIA)[25] tool helps users make program or policy decisions with a clear understanding of how it will impact population groups in different ways. For example, "universal" programs are actually taken up far less often by people in low SES neighbourhoods, putting them at risk of falling further behind the rest of the population. Targeting vulnerable groups with universal programs, or "targeting with universalism" is one of 10 Promising Practices identified as a practice to reduce social inequities in health.[31]

Fraser Health's Health Equity Assessment Toolkit supports program managers and planners apply a health equity lens to their program planning and service delivery.[32] Thirty-five other health equity tools are summarized in the Equity Lens in Public Health inventory of Health Equity Tools.[32]

Training/capacity building – Health equity training for EHOs varies, with more senior officers relying on experience and personal values, while younger practitioners tend to have more formal education. Schools of environmental health have recently introduced equity-related concepts into curricula. EHOs interviewed for this report had mixed views as to whether additional training in equity was needed, although they also had varying levels of knowledge, training, and experience about health equity. While the concepts of health equity seem clear to most people, their application in the field may be *ad hoc*. Training on specific tools or implementation approaches is supported by studies of EHOs in practice.[28,29]

HEIA is supported by Public Health Ontario with training and a toolkit to take practitioners through the application of this useful tool.[33]

Communication – The opportunity to share equity-related insights and practices was deemed important by many of those interviewed for this project. Formal opportunities such as working groups (e.g., Health Equity Committees, Priority Population Working Groups), conference presentations, and posters provide higher-profile communication venues, but informal opportunities were also welcomed.

For one EHO with a role in HBE, being embedded in a health promotion team ensured that she heard about equity issues on a regular basis.

On the other hand, EHOs who work solely within health protection environments may have few opportunities to discuss equity issues with colleagues.

Community buy-in seals support against tobacco sales to minors

By the late 1990s, the disparity in tobacco use between First Nations and non-First Nations communities in B.C. was recognized as large and growing. Public health practitioners and First Nations groups collaborated on the development of the *Aboriginal Tobacco Strategy: Honouring our Health*. As a newly minted EHO for Northern Health, Colin Merz had responsibility for compliance with the strategy from 2002 to 2008.

The province-wide "sales to minors" (STM) compliance monitoring program used young persons, ages 15 to 17, as Minor Test Shoppers (MTS) who attempted to buy tobacco from provincially-registered retailers. Retailer STM compliance rates grew rapidly, from about 60% in the mid-1990s, to greater than 90% by the early-2000s. The program was not being consistently implemented in most First Nations communities, though, because of ambiguous jurisdictional authority and concerns about asserting enforcement authority in First Nations communities.

Nevertheless, Colin expanded the Tobacco Enforcement Program (TEP) to include northwestern First Nations communities. He began forging connections with the communities, meeting with the First Nations Community Health Representatives (CHRs), and asking for their recommendations for appropriate youth to hire for the MTS program. These carefully nurtured relationships proved valuable in Colin's future efforts.

Colin systematically implemented the TEP in all northwestern communities, including among Exempt Sale Retail Dealers (ESRD), who can legally only sell tobacco on reserves. They sold the majority of tobacco, but had largely been left alone by inspectors to this point. Colin's contacts among the CHRs helped him work around procedural and jurisdictional concerns, and he began visiting on-reserve tobacco retailers. Focusing on education about the public health basis of the tobacco legislation, Colin also made sure the retailers knew that he was beginning routine inspection and monitoring of their compliance with the Tobacco Sales Act.

In 2006, the Regional Tobacco Reduction Coordinator, a Tsimshian woman, asked Colin to help her create a series of culturally appropriate tobacco education materials. *The Ripple Effect: the effect of tobacco on family, community and culture*, was launched at an official event of the World Health Organization "World No Tobacco Day". *The Ripple Effect* continues to be a popular educational resource in First Nations communities.

Colin's increased monitoring of the ESRD retailers quickly produced STM violations. Warning letters were issued, including offers of support to help retailers comply, but violations continued. Mostly, Colin exercised discretion and, rather than issue a violation ticket and fine to the registered tobacco dealer, he hand-delivered second warning letters, again offering assistance to prevent future violations.

Unfortunately, further compliance checks produced a third consecutive STM violation by one on-reserve ESRD dealer. The retailer chose to dispute the ticket on the grounds of "no jurisdiction" and the matter was heard by a Judicial Justice of the Peace (JJP) in early 2008. The defendant did not dispute the charge of selling tobacco to a minor, but did contest the Tobacco Enforcement Officer's jurisdiction. The JJP did not accept this argument, found the defendant guilty of the offence, and ordered him to pay the fine.

At any point in time, Colin's assertion of provincial Tobacco Enforcement Officer (TEO) authority in these First Nations communities could have produced a politically-charged controversy. Even after the conviction, though, none occurred. Having built strong ties with the community, Colin interprets the absence of public complaint as evidence of the community's support for actions that would ultimately benefit the health of First Nations residents. His focus on process illustrates how community relationships can lead to effective health promotion efforts, even without clear legislative authority.

3.2 Individual-level facilitators

Whether health equity is a formal part of the job or comes into stark focus during field visits, all EHOs require well-honed personal skills to do their jobs. Since they often work independently, EHOs don't always have a colleague to consult and must rely on their personal experiences, values and principles, and powers of creativity to resolve issues with the publics they serve.

Discretionary powers – Since legislation and regulations cannot be written with all the circumstances of clients in mind, EHOs are often put in the position of interpreting the application of regulations. They may be able to adapt timelines, draw in unlikely partners, or engage in "unconventional negotiations" to resolve issues.[34] Such discretionary power can be a valuable tool or a barrier, depending on the situation and the views of other team members. For example, while one practitioner may want to use a health promotion approach and allow as much latitude as possible while moving toward compliance, another may bring more of an enforcement philosophy to the role.

Personal values/principles/shared vision of health promotion – Stories of EHOs going "above and beyond"[35] the call of duty are rife, in both the literature and in personal accounts.[29] A commitment to resolving clients' issues seems a common trait. When these personal values match those of the organization and are supported in regulations or policy, EHOs can create lasting changes in people's lives. When they differ, a great deal of frustration may emerge over the lack of capacity to act.[29]

Strong personal networks – As noted elsewhere in this report and in the literature, personal networks are potent sources of support and referrals for EHOs and the public.[3,34] These networks are often established by colleagues or superiors at work, but must be nurtured on an individual level to reach their full strength.

Personal capacity (training and experience) – Examples abound of the problem-solving skills developed through experience as an EHO. Training in health promotion is common among recent graduates in public health inspection, but as noted previously, is not ubiquitous. Some EHOs seek out additional in-service training opportunities on topics such as health equity, SDH, or health promotion.

4.0 Barriers to equity-integrated environmental health practice

As would be expected, the absence of the facilitators to equity-integrated EPH practice noted above pose barriers to practitioners. Several of these are addressed below.

SYSTEMIC BARRIERS:

- Legislation – incomplete, unclear, or inflexible
- The policy process
- Lack of resources

INDIVIDUAL-LEVEL BARRIERS:

- Tension between health promotion and enforcement
- Knowledge gap
- Lack of guidance in health promotion

4.1 Systemic barriers

Legislation – Incomplete, unclear, or inflexible legislation, regulations or policy can pose significant barriers to action on health equity issues. Since equity and social issues can be complex, they are rarely clear cut or well defined.[4] Some practitioners in B.C. noted that newer outcomes based legislation is less prescriptive than older legislation, giving them more latitude in its application. On the other hand, EHOs are under legal obligations and must, at times, go beyond the scope of health promotion and take more direct action to enforce legislation.[28]

The policy process – The number and varying levels of regulations and policies that govern various aspects of environmental health make for a very complex working environment. Because their role includes enforcement, it can be difficult to act in areas where they do not have legislated authority, as is often the case in housing. In the case of HBE, practitioners often find themselves in the middle of policy and plan development without any real power to influence it. They must rely on the relationships they have built, supportive data they may be able to access, and community support to promote healthy options. The "politics" of decision-makers attempting to please constituents can also influence practice in ways that may not be based in evidence.

Lack of resources – Dealing with complex issues often requires time, skilled people, and funds to carry out programming. Any or all of these three elements may be missing in tight budgetary environments, making for a difficult and at times frustrating work experience.[4,34] Advocacy work, for example, takes more time and personal relationship-building than enforcement or education activities.

4.2 Individual-level barriers

Knowledge gap – Equity presents a wide range of multifaceted issues to be addressed, including economic stability, access to educational opportunities, safe and affordable housing, food security, culture, gender, and more. EHOs come across these issues with regularity, so face major hurdles in staying up-to-date with them all. Even something as limited in scope as ethnic foods presents a range of issues for EHOs, from lack of familiarity with the food, to language barriers, to suitability of existing information on safe processes for preparing specialty foods.[36,37] Moreover, there is no standard equity curriculum for EHOs, and training varies across degree training programs.

A greater focus on equity issues – Equity-focused staff discussions, training opportunities, and tools are beginning to fill some of the knowledge gaps, according to those interviewed for this report.

Tension between health promotion and enforcement – While there is some mention of conflict between the roles of health promotion and enforcement of environmental regulations in the literature,[28,34] those interviewed for this report referred very positively to using a progressive enforcement approach towards compliance, with enforcement used only after all other avenues have been explored. This tension may exist more in cases where the EHO has a history of, or is perceived as, an enforcer of regulations.[28]

Lack of guidance in health promotion – Some evidence suggests that the "enforcer" role within environmental health is more clearly defined than that of the health promoter.[28,34] Researchers have also identified a lack of guidance in health promotion.[4,28] With equity quickly emerging as a priority among health authorities, this may be changing. As noted throughout this report, an increasing number of jurisdictions have formally recognized the importance of health equity, and a considerable number of training programs, tools, and other means of support have emerged of late.

Healthy built environment, through an equity lens

Environmental Health Officers (EHOs) working in Healthy Built Environment (HBE) teams have their most vital impact on community planning and development. They provide health input to community and neighbourhood plans, development/re-development proposals and transportation plans, among others.

Alex Kwan, an EHO with the Fraser Health HBE program, has helped develop housing affordability and poverty reduction strategies. In all planning opportunities, Alex dons an equity lens and advocates for policies that address social exclusion, food insecurity, housing affordability, access to public transportation, and age-friendly environments.

Among her responsibilities at the Vancouver Coastal Health, Laura Chow addresses Active Transportation (AT), ensuring that health considerations and the need for safe AT routes are heard in planning for new transit projects, such as the George Massey Tunnel Replacement Project. She has also provided input to the BC Climate Leadership Plan to advocate for greater consideration of health in provincial climate action strategies.

While HBE work often involves long-term planning, urgent or emergent health issues come into play as well. Jade Yehia, Regional Built Environment Consultant with Island Health, has recently found herself supporting the health needs of people in a tent city on Victoria's courthouse grounds. Long-term solutions are most certainly needed for Victoria's homeless population, but they have immediate health needs that must be addressed while they live in the tent city. Along with a public health nurse and often police, Jade periodically visits the area to deliver items like hand sanitizer, clean plastic sheets for food preparation, towels, and bleach to help residents maintain a healthier environment. She also attends informal safety committee meetings with the campers and representatives from police and fire services to voice environmental health concerns and provide recommendations.

All three EHOs point to the lack of legislation, regulation, or even the lack of history of EHOs working with city planners as barriers to their work. Whether working with community members on a walkabout to seek safe walking routes to school, or homeless campers in a tent city, they rely on their experience, skills, and personal values to build trust with residents and forge strong working relationships with community partners.

EHOs need strong sales skills, as they often work with sectors that have not considered health or health equity in their decision-making. Government staff are not required to accept public health's HBE advice. However, EHOs sometimes engage their Medical Health Officers, who can be powerful influencers as a trusted "face of public health" to other leaders and the community. Finding champions in municipal government to take the health message upstream from the inside is also a useful strategy. Working with like-minded partners and bringing strong data to the planning table lends credibility to health arguments. Effective engagement of the community and stakeholders also facilitates HBE work.

Dealing with a culture that is oriented around vehicles, EHOs working in HBE are also challenged by the silos that separate health and planning departments, including different language and policy processes. Budgets and timing can also pose barriers. Early in the planning process, EHOs have the greatest opportunity to introduce health considerations, so staying on top of new developments is an important part of the job.

5.0 Recommendations

The examples of equity-integrated EPH practice illustrated in this report mirror the literature on the subject, reinforcing the importance of implementing facilitators and removing barriers to allow EPH practitioners to play a potent role in health equity.

The following recommendations are suggested:

- Embed health equity as a focus in foundational public health documents, including legislation, standards, and mandates.
- Articulate a clear vision for health equity. Provide clear direction and support for health equity from all levels of management.
- Provide structures for inter- and intra-agency collaboration, including equity-focused networks, working groups, and other avenues.
- Support inter-sectoral collaboration through community partnerships and coalitions.
- Provide in-service training opportunities about SDH and equity, including the role of EHOs in addressing inequities, to ensure all EHOs have a good grounding in health equity.
- Provide access to, and training in, health equity tools such as HEIAs.
- Collect (and share) data to evaluate outcomes of new approaches—share lessons learned as well as success stories.
- Translate information about equity and SDH into the context of EPH practice.
- Explore opportunities to embed health equity through existing structures such as accreditation and professional standards.
- Support individuals' initiatives to apply an equity lens in EPH practice.

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List of acronyms

AT – Active Transportation
BCCDC – BC Centre for Disease Control
CHR – Community Health Representatives
EHO – Environmental Health Officers
EPH – Environmental Public Health
ESRD – Exempt Sale Retail Dealers
HBE – Healthy Built Environment
HEIA – Health Equity Impact Assessment
HHSRS – Housing Health and Safety Rating System
JJP – Judicial Justice of the Peace
MTS – Minor Test Shoppers
NCCDH – National Collaborating Centre for Determinants of Health
NCCEH – National Collaborating Centre for Environmental Health
OC-PHEA – Organizational Capacity for Public Health Equity Action
ON-Marg – Ontario Marginalization Index
PHI – Public Health Inspectors
SDH – Social Determinants of Health
STM – Sales to Minors
TEP – Tobacco Enforcement Program
TEO – Tobacco Enforcement Officer
WHO – World Health Organization

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Funding for the *Through an Equity Lens* project is provided by the Provincial Health Services Authority Population and Public Health Prevention Programs.

2.2 POLICY LEVERS FOR EQUITY-INTEGRATED ENVIRONMENTAL PUBLIC HEALTH PRACTICE: EXECUTIVE SUMMARY

This report, based on a pan-Canadian environmental scan and interviews with practitioners and policymakers in BC and across Canada, provides a detailed overview of environmental public health legislation and downstream policy instruments that implicitly or explicitly refer to health equity. It offers an analysis of how policy instruments can or have been used to support the integration of health equity into environmental public health practice. The report identifies some policy-related barriers and facilitators, as well as opportunities and recommendations, for integrating an equity lens within an environmental public health context.

The Executive Summary is included here. Download the full report from ***http://www.bccdc.ca/health-professionals/professional-resources/health-equity-environmental-health/equity-and-eph-handbook***

Environmental scan of policy levers for equity-integrated environmental public health practice in BC

Executive Summary

Anya Keefe | August 2016

This report summarizes the findings of a pan-Canadian environmental scan that was undertaken to examine environmental public health (EPH) policy levers through an equity lens. The project entailed:

- a high-level environmental scan of public health legislation and downstream policy instruments to identify those that explicitly mention the social determinants of health or health equity/inequity
- a more detailed examination of key instruments, accompanied by key informant interviews, to determine how and where they have been used

The aim of the project is to clarify the mandate for an equity-integrated EPH practice. It builds on the findings of consultations with EPH practitioners in British Columbia (BC) and across Canada in 2015 about how to integrate equity into their work at the regional or local level. This work is part of a 3-year project at the BC Centre for Disease Control (BCCDC) called *Through an Equity Lens: a new look at environmental health*.

Through an Equity Lens is funded by the Provincial Health Services Authority (PHSA) as a Population and Public Health Prevention Project.

Equity in Environmental Health Policy Levers

The key insights that emerged from this environmental scan are:

- **Policy Instruments:** There is considerable variation across the country in whether, and the degree to which, equity is referenced in the public health legislation and subordinate regulations. Because the legislation and regulations tend to be more prescriptive than outcomes-based (i.e., they limit opportunities for EHOs to exercise discretionary power), they are often perceived as a barrier to incorporating equity in environmental health practice.
- **Policy Drivers:** There is considerable variation across the country in the degree to which equity is embedded into the culture of organizations with responsibility for delivering public health services. In organizations where equity is identified as a core value or is listed as a strategic priority, the corresponding outcomes and indicators tend to be focused on the delivery of health care services, as opposed to public health service delivery. Where equity outcomes or indicators are focused on public health, they tend to be primarily in other sectors (e.g., public health nurses or health promoters).
- **Barriers:** Many facets of environmental health are constrained by the policy instruments that govern not only what services are delivered, but also how they are delivered. Barriers include, for example, the "one-off" nature of inspections, the need for regulatory compliance, and the relatively limited discretion that inspectors have to measure and enforce compliance. Public and environmental health is traditionally organized by content or service area, creating silos that can lead to duplication of effort and present barriers to cross-cutting initiatives like equity.
- **Facilitators:** The biggest facilitators to embedding equity within an organization or within a particular initiative are: health equity champions at the managerial and/or executive level, the sharing of knowledge, collaboration and partnerships between units across an organization or with external agencies. Flexibility in the policy instruments governing practice, which gives inspectors the opportunity to exercise discretionary power, is also a key facilitator.

The report concludes with a summary of the gaps and opportunities and a series of recommendations designed to facilitate the integration of equity into environmental health practice (see Summary). Recommendations are organized according to the three areas influencing environmental health practice: (1) governing instruments (e.g., legislation and regulations), (2) policy drivers (e.g., Ministry goals and targets), and (3) efforts to embed equity organizationally or into particular service areas.

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Funding for the *Through an Equity Lens* project is provided by the Provincial Health Services Authority Population and Public Health Prevention Programs.

SECTION 3: TAKING ACTION ON HEALTH EQUITY IN ENVIRONMENTAL PUBLIC HEALTH PRACTICE

This section provides practical tools to integrate an equity lens into practice for environmental health officers (and public health inspectors), as well as tools to support program and policy changes to facilitate an equity-oriented practice.

3.1 TAKING ACTION ON HEALTH EQUITY IN ENVIRONMENTAL PUBLIC HEALTH: FIVE STRATEGIES FOR ORGANIZATIONAL CHANGE

The following short document outlines five ways to begin integrating an equity lens into environmental public health practice.

Taking Action on Health Equity in Environmental Public Health: Five Strategies for Organizational Change

Environmental Health Services
BC Centre for Disease Control

Equity-integrated environmental health practice requires both organizational capacity and practitioner skills. Environmental health officers (EHOs) have an important role in addressing health inequities as part of their consultation, enforcement, and educational activities. Taking action on health inequities also requires priority-setting at the organizational level, with clear support for action on health equity from all levels, including local managers, regional directors, and health authority leadership.

This resource for managers and directors provides suggestions and ideas for integrating an equity lens into environmental public health practice at the organizational level.

Health equity *exists when everyone has a fair opportunity to reach their full health potential without disadvantages caused by their social, economic, or environmental circumstances.*

Health determinants *such as geographic isolation, socioeconomic status, education and literacy, mental health, language, and culture, can create barriers to compliance and lead to health inequities across all areas of environmental health practice.*

Five Strategies for Organizational Change

1 Apply an equity lens within a health protection mandate

EHOs are in a good position to directly address a number of equity issues. Housing, food, and drinking water quality can be improved through the enactment and enforcement of public health regulations, but also through advocacy and health promotion efforts. Responsiveness to community complaints, advocacy for improved regulations, and approaches to address inequities can have far-reaching effects on the health of individuals and populations.

An equity lens is a values-based approach to practice rather than a specific skill or set of actions. Equity-integrated environmental public health practices are beginning to emerge. At an organizational level, managers and senior leadership can support these initiatives in the following ways:

- ✔ Incorporate health equity training in schools of environmental health, professional development programs, and inservice education.
- ✔ Provide EHOs with clear roles and expectations so they know how to factor equity considerations into discretionary decision-making.
- ✔ Support the use and development of tools (visual aids, translated documents) to address common barriers in areas such as food premises.
- ✔ Encourage EHOs to collaborate inside and outside public health to bring an environmental health perspective to issues such as housing or healthy built environments. Recognize these efforts.

2 Build individual and organizational capacity

Equity presents a wide range of issues—economic stability, education, safe and affordable housing, food security, culture, gender, and more. For example, ethnic food premises inspections may involve language barriers or unfamiliar foods and preparation processes. As well, there is no standard equity curriculum in EHO training, and individual skills vary widely.

In addition to filling gaps in knowledge, EHOs require tools to address health equity. Managers and senior leadership can ensure that equity issues are consistently considered:

- ✔ Assess demand and interest for inservice training, webinars, and informal information sharing on specific tools or implementation approaches.
- ✔ Identify tools and resources, such as Ontario's Health Equity Impact Assessment (HEIA) tool, to increase individual and organizational capacity to address healthy equity.
- ✔ Articulate a clear mandate for equity-oriented practices in environmental health programs based upon provincial and regional health frameworks, strategic plans, and service plans that highlight equity as a priority area.

3 Recognize the complexity of health equity and social issues

EHOs don't always have a colleague to consult and must rely on their personal experiences, values, and powers of creativity to resolve client issues. EHOs may adapt timelines, draw in unlikely partners, or engage in "unconventional negotiations" to resolve issues. Incomplete, unclear, or inflexible legislation, regulation, or policy (i.e., that which does not provide opportunities for discretion) can be a significant barrier to action on health equity issues. Dealing with complex issues often requires time, skilled people, and funds to carry out programming and any or all of these three elements may be missing in tight budgetary environments.

Managers and senior leadership can recognize the efforts of EHOs going "above and beyond" to problem-solve and address individual barriers and challenges:

- ✔ Consider restructuring performance evaluations to incorporate time spent supporting or advocating for vulnerable or marginalized people or addressing unique problems or situations.
- ✔ Learn from the frontline perspective by encouraging EHOs to document the challenges they face, the efforts they take to address individual and systemic barriers, and the equity-related challenges they witness. Use this data for decision-making and planning.
- ✔ Look for ways to change policies and regulations that act as systemic barriers, e.g., areas where EHOs may lack the ability to act due to lack of legislated authority, while still ensuring protection of public health.

These kinds of changes may require a shift in priorities as well as assessment of implementation capacity.

4 Foster collaboration and leadership

EHOs' personal and professional networks are critical avenues to connect clients with required services. Effective collaboration requires good analytic skills to identify root problems, knowledge of the skills and services available, and strategies to mobilize key partners.

Managers and senior leadership can develop structures for inter-agency and intra-agency collaboration—including equity-focused networks and working groups—in several ways:

- ✔ Designate environmental health staff as "field ambassadors" for health equity and identify staff from other divisions as "go-to" resources for EHOs.
- ✔ Coordinate opportunities for collaboration with different public health professionals, such as dietitians, social workers, and health promoters.
- ✔ Take on the role of an "executive equity champion" to help embed equity into the organization's strategic direction.

Five Strategies for Organizational Change

5 Integrate Equity into Evaluation and Reporting

Equity-oriented practices in the field of environmental public health are emergent. Evaluation to assess outcomes associated with different strategies will help to identify best practices and measure long-term outcomes with respect to compliance, health hazards, and inequities.

The opportunity to share insights and practices is important for EHOs. Organizations can support communication about equity issues in several ways:

- ✔ Integrate the concept of health equity into program plans, inspection quotas, organizational strategies, and divisional reports.
- ✔ Provide opportunities for EHOs to share their experiences and knowledge with others (e.g., at staff meetings) and recognize the work of individual EHOs to promote equity.
- ✔ Encourage opportunities for sharing equity practices in formal working groups, conferences, and regional and national organizations.

LEARN MORE

Primers on equity and environmental public health practice, written for practitioners, managers, and program directors. Available from: http://www.bccdc.ca/health-professionals/professional-resources/health-equity-environmental-health/equity-and-eph-handbook

1. **Five things to know about equity in EPH**, highlights the ways that equity intersects with EPH practice and illustrates how an equity lens might be used.
2. **Areas of EPH Practice Impacted by the Social Determinants of Health** illustrates how equity issues impact different areas of EPH practice.
3. **Equity in EPH Practice** discusses ways to integrate an equity lens into practice.
4. **Health Equity Tools** (2013) is an inventory of 35 tools to support program managers and planners apply a health equity lens to service delivery. Available from Equity Lens in Public Health: http://www.uvic.ca/research/projects/elph/assets/docs/Health%20Equity%20Tools%20Inventory%202.0.pdf

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3.2 TAKING ACTION ON HEALTH EQUITY: POLICY LEVERS IN ENVIRONMENTAL PUBLIC HEALTH PRACTICE

This short summary, based on the report *Policy Levers for Equity-Integrated EPH Practice*, highlights how two types of policy levers (governing instruments and policy drivers) affect the implementation of an equity lens. It highlights five key ways that policy can support leaders and decision makers to take further action.

Taking Action on Health Equity: Policy Levers in Environmental Public Health Practice

Environmental Health Services
BC Centre for Disease Control

Equity is a lens that is being increasingly applied across a range of health systems and policies in Canada and elsewhere. The broad suite of regulations and policies that govern environmental health make for a complex working environment. There are a range of existing policies that help to clarify a mandate for integrating an equity approach to environmental health practice. This resource for managers, directors, and policy makers provides an overview of key policy levers for equity in British Columbia.

Health equity *exists when everyone has a fair opportunity to reach their full health potential without disadvantages caused by their social, economic, or environmental circumstances.*

Health determinants *such as geographic isolation, socioeconomic status, education and literacy, mental health, language, and culture, can create barriers to compliance and lead to health inequities in all areas of environmental health practice.*

Policy levers *are the tools that government and its agencies have at their disposal to direct, manage, and shape changes in public services. This includes laws and regulations, government goals, strategic plans, by-laws, and frameworks.*

Legislation and Regulations (Governing instruments)

Governing instruments are those policy levers that only the government can make (legislation and regulations) and that are enforceable.

The Public Health Act in British Columbia provides a legislative foundation for considering equity in practice. Section 3(1) sets out the discretionary authority of the Minister to make public health plans with respect to a specific issue or geographic area. Section 61 mandates what the minister must do with respect to health promotion and health protection, including addressing variations in population health status.

Practitioners perceive some governing instruments as a barrier to integrating equity into environmental public health practice, particularly when they consider those instruments to be prescriptive and inflexible (e.g., where they set a standard as well as the method by which it must be met).

However, many of the regulations in BC made pursuant to the Public Health Act (e.g., in the areas of food premises, communicable diseases, health hazards, recreational water, and personal services) are outcomes- or performance-based and more flexible (e.g., they set a standard but allow the individual(s) or organization(s) being regulated to choose how they will meet the standard).

Outcomes-based governing instruments give environmental health officers (EHOs) greater opportunity to use their discretionary powers to address equity concerns.

Frameworks, Strategic Plans, and Service Plans (Policy drivers)

Policy drivers are policy levers such as health authority service plans and strategies, provincial public health frameworks, and standards and protocols developed by public health agencies.

Policy drivers are more flexible than governing instruments and can be leveraged individually or in combination to integrate an equity lens into environmental health practice.

- B.C.'s Guiding Framework for Public Health includes equity as a cross-cutting issue (see Box at right).
- The Ministry of Health Service Plan 2015/16 – 2017/18 incorporates equity into the Ministry's strategic objectives and strategies with reference to considering social determinants of health, creating healthy lifestyles, and creating healthy environments (Goals 1 and 2).
- Several regional health authorities, including Provincial Health Services Authority, Interior Health, Island Health, and Vancouver Coastal Health, have aligned their service plans with the Ministry's goals.
- Other health authorities, including the First Nations Health Authority, Fraser Health, and Northern Health, explicitly include equity in their strategic goals.

Policy drivers help establish a clear mandate for incorporating an equity lens into organizational culture (e.g., within health authorities for protection divisions) and into specific service areas.

BC's Guiding Framework for Public Health

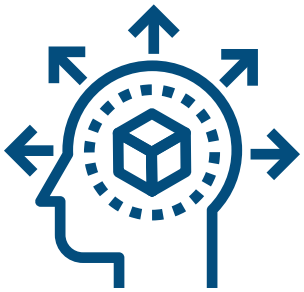
"Public health has the following roles with respect to reducing health inequities:

- Monitoring and reporting on health inequities.
- Ensuring that public health interventions are designed to support equitable health outcomes across population groups.
- Working actively with others in the health system to ensure that all health services are designed and delivered in a way that reduces health inequity.
- Working with other sectors to formulate policies and programs that will reduce health inequities.
- Collaborating with others beyond the health system to address the inequities among the broader environmental, social, economic and other determinants of health."

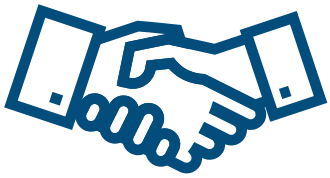
BC Ministry of Health. Promote, Protect, Prevent: Our Health Begins Here: BC's Guiding Framework for Public Health. Victoria, BC: Province of British Columbia; 2013 (p 10)

TAKING ACTION

Managers, program directors, and senior leadership can use existing policy to promote equity-integrated environmental health practice. Policy levers can guide practice change in a number of areas, including food premises, personal services, drinking water and sewage treatment, and housing. Policy can support you to:



1. **Articulate a clear vision for health equity in your programs and services.**
   - An organizational vision for health equity supports upstream and downstream action at all levels within the organization.
   - *Ensure all staff know that health equity is a priority, provide opportunities for them to share knowledge and experiences, and support their efforts to collaborate or take action in their day-to-day practice.*



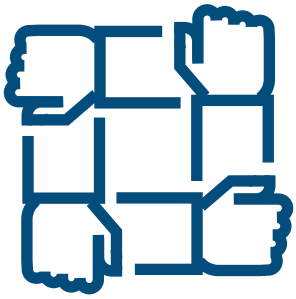
2. **Explore and develop opportunities to collaborate for health equity.**
   - Upstream issues fall within the mandate of multiple agencies and departments.
   - *Provide informal opportunities for interaction between public health professionals and develop structures to support networking, referrals, and collaboration across sectors.*

3. **Identify ways that specific regulations provide EHOs with flexibility in meeting their legislative mandates.**

   - Because regulations cannot be written with all the circumstances of clients in mind, EHOs need to consider equity and use their discretionary powers in their application of regulations.
   - *In the absence of regulations in areas of practice such as housing, help EHOs find solutions that meet the goals of policy levers that include an equity focus.*

4. **Become a health equity champion as a senior leader.**

   - Policy levers can act as an impetus for change in your region.
   - *Identify key policy levers and demonstrate how an equity lens can improve compliance with health regulations, facilitate sustained behaviour change, and lead to reduced health disparities at the population level.*
   - *Identify gaps and resolve inconsistencies in existing policies to reduce barriers to addressing equity issues.*



5. **Integrate equity into the overall environmental health mandate.**

   - Broader movements within public health are shifting focus to health promotion and creating supportive environments and to reduce barriers to health.
   - *Think at a systems level. Rather than being an "add-on" or specific initiative, equity cuts across all practice areas and requires system-level change, e.g., how can you strategically realign resources for lasting change?*
   - *Build environmental health capacity at the organizational and individual level (e.g., training on equity and social determinants of health; use and/or adapt health equity assessment and planning tools, such as the Fraser Health HEAT tool or Ontario's Health Equity Impact Assessment) when conducting program planning exercises.*

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3.3 SUCCESS FACTORS FOR EQUITY-INTEGRATED EPH PRACTICE: A DISCUSSION GUIDE

This action-oriented document summarizes the key facilitators to integrating an equity lens and uses three case studies to illustrate different ways these facilitators have been implemented.

It can be used to guide individual self-learning or as a tool for strategic planning or in workshops and meetings to support staff training and development.

Success Factors for Equity-Integrated Environmental Health Practice: A Discussion Guide

Environmental Health Services
BC Centre for Disease Control

Conversations about equity in the context of environmental public health have begun in health authorities across Canada. An equity lens is a values-based approach to practice rather than a specific skill set. Many practitioners are already integrating a focus on equity into their daily activities and promising strategies and approaches are emerging across practice areas.

Environmental public health practitioners have an important role in addressing health equity related issues (such as access to services or ability to comply with regulations) that are part of their consultation, enforcement, and educational activities. Taking action on health inequities also requires changes at the organizational level with clear support from all levels of practice, including local managers, regional directors, and health authority leadership.

Health equity *exists when everyone has a fair opportunity to reach their full health potential without disadvantages caused by their social, economic, or environmental circumstances.*

Health determinants *such as geographic isolation, socioeconomic status, education and literacy, mental health, language, and culture, can create barriers to compliance and lead to health inequities in all areas of environmental health practice.*

This discussion guide was developed to support environmental health officers (EHOs), public health inspectors, managers, and senior leadership to reflect on their current practice, policies, and procedures and to identify opportunities to take action toward health equity.

Success Factors for Equity-Integrated Environmental Health

From a shared vision of health promotion to operational requirements and concrete tools, support from all levels within an organization plays an important role in promoting health equity in environmental health practice.

Here are key facilitators:

UPSTREAM APPROACH

Managers and senior leadership recognize the importance of approaches that consider equity such as health promotion and healthy built environments

HEALTH EQUITY CHAMPIONS

Managers and senior leadership develop a clear vision and champion health equity in all programs and services

OUTCOMES-BASED REGULATIONS

Flexible policies and procedures allow environmental health officers to apply discretionary powers to meet desired public health outcomes and address equity concerns

EQUITY TOOLS

Inspection forms and checklists incorporate an equity lens
General health equity assessment and reporting tools are adapted to for health protection use

COLLABORATION

Knowledge sharing through inter- and intra-agency collaboration, including equity-focused networks and working groups

SHARING DATA

Monitoring and reporting on health inequities
Sharing data for use in health equity assessment
Evaluating and sharing outcomes of new approaches

Case Studies

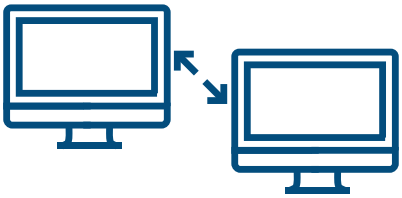
The following examples are from stories of environmental health practitioners across Canada who have applied an equity lens to their work. They highlight some of the critical success factors, tools (e.g., health equity impact assessment [HEIA]) and strategies (e.g., adapting training/processes/tools for inclusivity) that are being used to integrate equity into environmental health practice.

PRACTICE EXAMPLE 1:

Decision trees for rabies and mould control (Niagara Region Public Health)

In 2013, two public health inspectors (PHIs) began a project to review a policy on rabies vouchers, with a focus on equity and social determinants of health. Existing policy provided vouchers to people who could not afford veterinarians to access cost-reduced rabies vaccination. Using the Ontario Public Health Standards as a guide, they began assessing why vouchers were being provided, reviewing past rabies investigations, and interviewing PHIs. They analyzed this data using the Ontario Marginalization (ON-Marg) Index to consider differences in measures of socio-economics, population groups, and geographical areas. There was a clear match between areas of deprivation and areas where rabies vouchers were being distributed.

The research results were used to create a decision tree for PHIs, helping to formalize the process of determining the need for the vouchers. The decision was then made to create a similar algorithm for mould complaints by examining indicators of income, education, employment, safe and affordable housing, and personal health practices. The finding that mould complaints were coming from higher areas of deprivation has changed the process of service delivery to respond to the needs of priority populations.



Existing data from provincial population health status reports and indices such as ON-Marg can be used to identify and address inequities.

Success Factors for Equity-Integrated Environmental Health Practice

Some of the critical success factors that supported this initiative are:

- ✔ Support from the public health unit to address social determinants of health and equity concerns, backed by a mandate from the Ontario Public Health Standards
- ✔ Intra-agency support and collaboration—the project team included public health inspectors (acting as mentors to environmental health summer students), health promoters, an epidemiologist, and a GIS analyst.
- ✔ Available equity tools and strategies, e.g., an existing voucher policy, data from the Ontario Marginalization Index

Discussion Questions:

1. Health status and socio-demographic data were key in identifying and responding to existing inequities. What is known about health inequities in your community or region?

2. Are there existing programs (such as vouchers) to support vulnerable populations? Could these decision trees be adapted for any programs in your region?

3. How can more be learned about vulnerable populations and the role of various determinants of health in creating barriers to compliance in your context (e.g., income, geographical location)?

PRACTICE EXAMPLE 2:

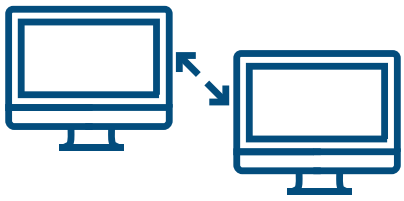
Healthy Communities (Northern Health)

The concept of an equity lens recognizes that, although the root causes of health inequities may be outside the mandate of environmental public health practice, external partnerships and collaboration with other sectors may be required. Based on the belief that the environment and culture can be nurtured to support people to make healthier choices, Northern Health works in partnership with local governments on a Healthy Communities Approach. Local committees are usually co-chaired by senior municipal leaders and health service administrators, and include community members from various sectors, environmental health officers (EHOs), and other public health staff. The local communities determine health priorities and the committee works to address upstream risk factors and collaboratively develop local action strategies to make real and sustained improvements in the health of residents.

When first introduced, the approach challenged EHOs with a new way of working and a steep learning curve in terms of identifying community and health resources they could call upon. According to one EHO, the approach has gone far to break down barriers between sectors and even within the health unit. There are still challenges in finding relevant, local health data, but looking for the underlying healthy equity issues has now become an integral part of how they work.

Some of the critical success factors for incorporating equity into environmental health practice in this context includes:

- ✔ Executive support and championship at the senior leadership level for an upstream approach to environmental health services
- ✔ Recognition that the most powerful interventions come from empowerment (i.e., public health doesn't have all the answers)
- ✔ Effective strategies to engage the community solving problems collaboratively



The Healthy Communities approach is one way to look "upstream" and create an organizational vision for health equity.

Discussion Questions:

1. Do you see tensions between "upstream" approaches that focus on equity and social determinants of health and a traditional focus on inspections and enforcement in the field of environmental health? Does recognizing operators/clients as members of the same public you are working to protect and serve help to re-frame the discussion?

2. What barriers and opportunities exist for the participation of environmental health officers on cross-sectoral committees? Are there other ways that EHOs can build stronger community relationships? How can managers and senior leadership support relationship-building and collaboration?

3. What existing partnerships could be strengthened or what opportunities are available for EHOs to work with other health professionals or agencies outside the health system to take a more upstream approach to health protection and promotion?

PRACTICE EXAMPLE 3:

Health Equity Impact Assessment for food safety training and certification (Ontario)

Ontario's Health Equity Impact Assessment (HEIA) tool helps users make program or policy decisions with a clear understanding of how it will impact population groups in different ways. For example, "universal" programs are actually taken up far less often by people in low socio-economic status neighbourhoods, risking that they may fall further behind the rest of the population. Applying the strategy of "targeted universalism", many public health authorities are offering food safety certification at a reduced cost or in revised formats to overcome a range of learning barriers. For example:

- Ontario's North Bay Parry Sound District Health Unit will waive the course fee and reduce the class size, even providing individual support, for those with mental, emotional, or academic needs.
- In the Regional Municipality of York, PHIs worked with nurses in the Health Equity Program, using the HEIA tool to identify changes needed in its Food Handler Certification Program to accommodate people with intellectual disabilities. The full-day, 6-hour course was broken down to six 1-hour sessions, using oral and pictoral formats rather than the usual lecture and presentation-based approach.
- In the Sudbury and District Health Unit, *A Guide to Accommodating People with Disabilities* was developed in 2015 to help program instructors in food handler training to be aware of and accommodate physical or learning disabilities. The *Guide* is now being used in training programs across the health unit and the training program is being delivered every two months.

Health equity impact assessments are valuable and flexible tool to target and adapt programs to better meet the needs of your population.

Critical success factors influencing the success of these initiatives varied across regions, but included:

- Partnerships and collaboration were central to the development and delivery of the programs (e.g., involvement of health equity nurses and health educators).
- Provincial (reportable) standards raised the profile of equity as part of health unit mandates. As equity was already defined as an organizational goal, getting support and buy-in for the initiative was not as difficult.
- An active Health Equity Committee provided support and consultation. In addition to the manager of the health protection division being on the committee, members also provided training on how to use the HEIA tool and how to find data and information about vulnerable populations.
- Policy support in the form of new provincial guidelines on food handler training programs (requiring programs to address culture, gender, and disability) led to a program evaluation.
- A new by-law requiring all high and moderate-risk food premises in the region to have a certified food handler on site during operations created the opportunity to apply the HEIA tool.
- Outcomes-based regulations provided EHOs with discretionary powers in meeting their mandates, i.e., EHOs had flexibility to decide how to deliver food safety training.

Discussion Questions:

1. Other regions, such as Fraser Health in British Columbia, are developing a Health Equity Assessment Tool (HEAT) to assess the needs of vulnerable populations in their communities. Are there similar tools in use or in development in your area of work? Are there other tools that could be adapted to your area of practice to address equity concerns?

2. In the area of food safety training, are there current initiatives to meet the needs of specific populations? How might health equity assessment improve those initiatives?

3. Are EHOs using other less formal strategies to address equity concerns, e.g., reading exam questions aloud to students with literacy challenges? How could these ad hoc strategies be implemented more systematically to help break down inequitable structural barriers?

Success Factors for Equity-Integrated Environmental Health Practice

LEARN MORE

Primers on equity and environmental public health practice, written for practitioners, managers, and program directors. Available from http://www.bccdc.ca/health-professionals/professional-resources/health-equity-environmental-health/equity-and-eph-handbook

1. **Five things to know about equity in EPH**, highlights the ways that equity intersects with EPH practice and illustrates how an equity lens might be used.
2. **Areas of EPH Practice Impacted by the Social Determinants of Health** illustrates how equity issues impact different areas of EPH practice.
3. **Equity in EPH Practice** discusses ways to integrate an equity lens into practice.

NCCDH has collected stories from environmental public health practitioners who are pioneering the use of an equity lens in different ways.

DOWNLOAD THIS RESOURCE FROM:
www.bccdc.ca/health-professionals/professional-resources/health-equity-environmental-health/equity-and-eph-handbook

Please cite this document as: BC Centre for Disease Control. (2016). Success Factors for Equity-Integrated Environmental Health Practice: A Discussion Guide Vancouver, BC: BC Centre for Disease Control.

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Province-wide solutions. Better health.

This resource was prepared by Tasnim Nathoo, based on two reports: *Equity integrated environmental health practice: Facilitators and barriers* (Diana Daghofer) and *Policy levers for equity-integrated environmental health practice in BC* (Anya Keefe), as part of the *Through an Equity Lens* project. Funding for the *Through an Equity Lens* project is provided by the Provincial Health Services Authority Population and Public Health Prevention Programs.

NOTES

3.4 TOWARD HEALTH EQUITY: PRACTICAL ACTIONS FOR PUBLIC HEALTH INSPECTORS

BCCDC collaborated with the National Collaborating Centres for Environmental Health (NCCEH) and Determinants of Health (NCCDH) to produce a ***Framework for action on the social determinants of health and health equity***, as well as an accompanying ***User guide*** to help environmental public health practitioners identify potential actions on the social determinants of health and health equity.

The ***Framework*** outlines 10 considerations to help practitioners identify how equity work relates to their role and how they can begin to take action. It can be used by staff with any degree of knowledge or experience related to health equity.

The ***User guide*** highlights potential points of influence for frontline staff, managers, and educators.

Practitioners can use these two tools to reflect on their current practice and identify practical actions for use in their day-to-day work or broader program planning.

National Collaborating Centre for Environmental Health
Centre de collaboration nationale en santé environnementale

Through an equity lens

BC Centre for Disease Control
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National Collaborating Centre for Determinants of Health
Centre de collaboration nationale des déterminants de la santé

TOWARD HEALTH EQUITY: PRACTICAL ACTIONS FOR PUBLIC HEALTH INSPECTORS

Framework for action on the social determinants of health and health equity

USER GUIDE

Public health inspectors (PHIs) and environmental health officers (EHOs) have a role to play when it comes to addressing the social determinants of health (SDH) and working toward health equity. This framework is intended for use by environmental public health field staff (i.e., EHOs and PHIs), as well as other public health agencies or departments that deal with environmental health issues.

The purpose of this framework is to stimulate thinking about how health equity and the social determinants of health relate to practice.

This framework was developed from feedback received from practitioners at all levels of environmental public health practice. It has been revised based on pilot testing and further feedback on usability.

Through a series of questions, this framework will help practitioners:

- Apply the broader concepts of SDH and health equity to their practice
- Understand how health equity work fits into their own region or organization
- Work with others to support health equity

This framework is intended for three main audiences, who can use the tool in a number of ways depending on the scope and responsibilities of their position.

1 Frontline PHIs and EHOs can use the framework to:

- Guide self-reflection, ideally followed by group discussion, on how the SDH and health equity intersect with environmental public health practice
- Recognize operators as members of the same public you are working to protect and serve
- Start a conversation about how your workplace could address the SDH and health equity through day-to-day work activities
- Identify ways to be involved in your community to learn about which SDH have the greatest influence on health status and health equity patterns
- Plan continuing education activities to build knowledge of the SDH and health equity
- Contribute knowledge and practice stories of your own to support your colleagues
- Support training and mentoring for new and existing staff as well as student placements
- Consider how the concepts of the SDH and health equity can be addressed within the mandate of your regulated profession
- Recognise partnership opportunities within your agency as well as with organizations in the community
- Consider how your own experiences with disadvantage or privilege influence the way you approach inspection scenarios, and how your position of authority as a PHI influences how clients perceive you

2 **Managers & directors** can use the framework to:

- Incorporate skills and knowledge into job descriptions and training so that staff are competent in the areas of SDH and health equity
- Have purposeful and regular discussions at team meetings about the SDH, health equity, and how these concepts intersect with environmental public health practice
- Incorporate self-reflection activities around the SDH and health equity into individuals' work plans
- Frame the concepts of SDH and health equity with examples from various areas of practice (e.g., food premises inspection, built environment, air quality, housing, environmental exposures, personal services)
- Integrate the concepts of SDH and health equity into program plans, inspection quotas, organizational strategies, and divisional reports
- Designate environmental health staff as "field ambassadors" for SDH and health equity, and identify staff from other divisions as go-to resources for EHOs/PHIs
- Incorporate knowledge and skills around the SDH and health equity into performance appraisals and quality improvement initiatives
- Coordinate opportunities for collaboration with different public health professionals, such as dietitians, social workers, health promoters, and dental hygienists

3 **Educational & professional development organizations (e.g., degree-granting programs and the Canadian Institute for Public Health Inspectors (CIPHI))** can use the framework to:

- Consider how to integrate SDH and health equity into course curriculum requirements
- Develop practicum experiences with public health staff who have a focus on SDH and health equity as a way to promote cross-sectoral collaboration
- Develop questions for Board of Certification (BOC) exams related to SDH and health equity
- Integrate the concepts of SDH and health equity into competencies for environmental health practice
- Create resources and opportunities for EHOs/PHIs to access knowledge on SDH and health equity, e.g., webinars, provincial/regional meetings with an equity focus, conference themes related to SDH and health equity, incorporating an equity lens into all training events

Please cite this resource as: Rideout, K. and National Collaborating Centre for Determinants of Health (2016). *Toward health equity: Practical actions for public health inspectors – Framework for action on the social determinants of health and health equity. User Guide.* Vancouver, BC: National Collaborating Centre for Environmental Health, British Columbia Centre for Disease Control; Antigonish, NS: National Collaborating Centre for Determinants of Health, St. Francis Xavier University.

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This document is available in its entirety in electronic format (PDF) on the National Collaborating Centre for Determinants of Health website at www.nccdh.ca, the National Collaborating Centre for Environmental Health website at www.ncceh.ca and the BC Centre for Disease Control website at http://www.bccdc.ca/health-professionals/professional-resources/health-equity-environmental-health.

La version française est également disponible au www.ccnds.ca et au www.ccnse.ca sous le titre *Vers l'équité en santé : mesures concrètes pour les inspecteurs en santé publique – Cadre d'action en matière de déterminants sociaux de la santé et d'équité en santé. Mode d'emploi.*

National Collaborating Centre for Environmental Health
Centre de collaboration nationale en santé environnementale

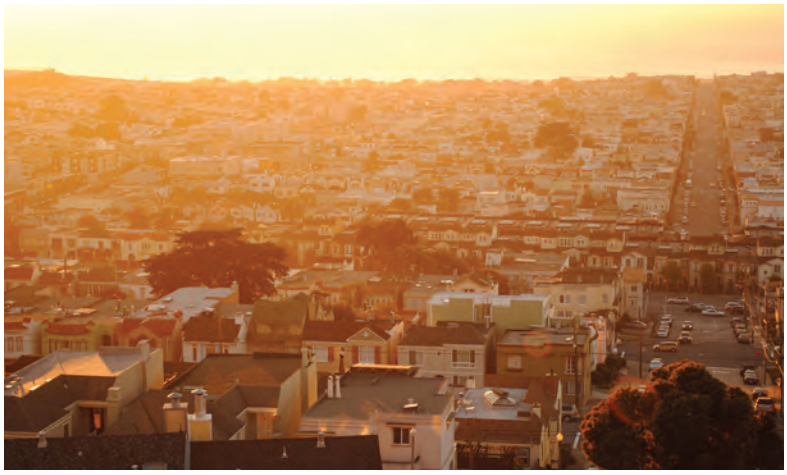
Through an equity lens

BC Centre for Disease Control
An agency of the Provincial Health Services Authority

National Collaborating Centre for Determinants of Health
Centre de collaboration nationale des déterminants de la santé

TOWARD HEALTH EQUITY: PRACTICAL ACTIONS FOR PUBLIC HEALTH INSPECTORS

Framework for action on the social determinants of health and health equity



Whether inspecting a food premises, responding to an indoor air quality complaint, promoting actions to reduce exposures to climate change health risks, or advocating for healthy built environment policies, public health inspectors (PHIs) and environmental health officers (EHOs) have a role to play to address the social determinants of health (SDH) and contribute to health equity.

Use the Framework to think about how health equity and the social determinants of health relate to your practice. It is not expected that any individual will be able to address all these points—they are intended to stimulate ideas and conversations about health equity and the social determinants of health. You may wish to read it through quickly and revisit it later, or work through individual points in detail. This framework can be used by staff with any level of knowledge or experience related to health equity.

1 Learn more about health equity and the social determinants of health

Review the NCCDH *Glossary of Essential Health Terms*[1] for definitions of key terms.

Review the BCCDC *Primer on Equity in Equity and Environmental Health Practice*.[2]

2 Reflect on your practice to identify where equity and the social determinants of health impact—or are impacted by—your work

Ask yourself some questions to guide your thinking about how the SDH might influence an operator's or client's ability to reach compliance or make the changes being asked of them.

- Could any of the following factors have an effect on your relationship with the operator/client, or on their understanding of what needs to be done: culture, education, finances, geographic location (urban, rural, isolated community), language, literacy?
- What barriers (e.g., employment conditions, housing conditions, individual/family stress, personal or business income, personal health, transportation issues) might operators or clients be facing that would impact their ability or willingness to comply with regulations and guidelines?

How might your interactions with clients unintentionally aggravate existing barriers?

How might your interactions with clients help alleviate the effects of existing barriers?

How flexible are you when alternative ways of reaching compliance might be appropriate or achievable in a particular situation (e.g., finding alternatives to a standard hand washing setup, and options for sanitizing dishes with only two sinks)?

3 Identify how you can enhance your understanding of health equity

Find out who the key contacts are and how they can support your work.

- Who can you talk to you to for information, resources, etc.?
- Is there a lead or "point person" for SDH/health equity work in your agency?
- Are there cross-program opportunities to link with employees from outside your department who could support your understanding of health equity?

What professional development opportunities are available to you to learn more about SDH and health equity?

4 Identify barriers that prevent you from taking action

Identify situations in which you feel frustrated or "stuck" in terms of responding in a manner that you feel is helpful (e.g., you respond to a housing complaint and find a single mother living in unhealthy housing, but there are no clear violations on which you can require the landlord to take action).

- What prevents you from responding in the way you would prefer (i.e., lack of authority, information, resources, support, understanding of which agencies or people can help, etc.)?
- How would you prefer to see these situations play out? What can you do to facilitate this result?

5 Determine what you can do in the short, medium, and long term to take action toward health equity as an EHO or PHI

Start with actions that can be taken quickly and easily, where you already have contacts, or with something that is clearly within your current role.

- What are the ways that you might apply an "equity lens" in your day-to-day work?
- What can you change in your own thinking or approach?
- Has your manager or agency expressed interest in these issues? How can you leverage that?
- What resources and information exist elsewhere that you can access?
- Where can you suggest alternative approaches for working with operators or clients who face barriers?
- How can you advocate for people who need services to support their health and achieve compliance?
- What individuals and agencies can you contact within your current referral network?

6 Engage your environmental health colleagues

Find out what is being done by PHIs or EHOs in your region or in other regions/provinces.

- Can you use these approaches in your own practice?
- Can you share ideas, contacts, and experiences of your own or others with colleagues or supervisors to encourage similar action in your region?

7 Reflect on how health equity fits into the structure of your workplace

Consider how those you work with can support your work on health equity.

- What is needed from your direct supervisor or manager? From public health leadership? From government?
- What opportunities exist to integrate health equity considerations into organizational mandates, health status reports, and department or program work plans?

8 Consider collaborations outside your own department

Recognize issues that may be addressed by other professions. Introduce yourself, ask questions, and let them know what you do.

- What other professions within or outside public health (e.g., building inspectors, dietitians, epidemiologists, health educators, licensing officers, nurses, social housing providers, social workers, etc.) might have a valuable perspective on the issues faced by your clients? Can you use some of their approaches in your own practice?
- How can agencies or divisions outside health protection or environmental health (e.g., emergency response, population health, local government, social services) contribute?

9 Consider how other organizations can support health equity capacity for you and your colleagues

Think about increasing the knowledge and skills of PHIs and EHOs.

- What can degree-granting institutions (e.g., PHI training programs) do?
- How can your agency provide student placement opportunities that explore social determinants of health, health equity, and cross-discipline collaboration?
- What might the Canadian Institute of Public Health Inspectors (CIPHI), the Canadian Public Health Association, or your provincial public health organization do?
- What can environmental health or environmental justice organizations do?

10 Self-check

Set some personal goals with a reasonable timeline.

- Read our *Pilot Study Report*,[3] the *Primer on Equity and Environmental Public Health*,[2] and the *Glossary of Health Equity Terms*.[1]
- Build one small action into your practice.
- Attend a webinar on health equity.
- Share an idea with your manager or director.

Create a calendar or email reminder to revisit your goals in 3, 6, or 12 months.

Join *Health Equity Clicks*. This is an online community where members can engage with other public health practitioners on how they address the social determinants of health and health equity in their practice. Join it by visiting the NCCDH website at **http://nccdh.ca/connect/community-new**.

References

1. National Collaborating Centre for Determinants of Health. (2014). *Glossary of essential health equity terms*. Antigonish, NS: National Collaborating Centre for Determinants of Health, St. Francis Xavier University. Available: http://nccdh.ca/resources/glossary/.
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Are you working on these issues in your own practice or in your region?
Share your stories so that we can learn from you and pass it on to others.
Let us know what BCCDC, NCCEH & NCCDH can do to help.

www.bccdc.ca	www.ncceh.ca	www.nccdh.ca
equitylens@bccdc.ca	contact@ncceh.ca	nccdh@stfx.ca

This Framework and accompanying User Guide was prepared by Karen Rideout (NCCEH, BCCDC) & Dianne Oickle (NCCDH).

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SECTION 4: WORKING WITH LOCAL GOVERNMENTS TO SUPPORT HEALTH EQUITY THROUGH THE BUILT ENVIRONMENT

Health is influenced by the way that communities are planned and built, as well as by the services and resources available within them. Health equity requires that all community members—including low income residents, children, seniors, newcomers, Indigenous people, and people with physical and mental health issues—have access to those features of the built environment that support health and wellness.

This section offers an evidence-based approach to support health equity through planning and interventions in the built environment.

4.1 WORKING WITH LOCAL GOVERNMENTS TO SUPPORT HEALTH EQUITY THROUGH THE BUILT ENVIRONMENT: A SCOPING REVIEW

This evidence review examines how health equity is influenced by the built environment, and how built environment interventions can support or undermine health equity. The evidence is organized according to the five physical features of the built environment as outlined in the ***Healthy Built Environment Linkages Toolkit***. The evidence shows that low socioeconomic status is associated with increased environmental health risks from air pollution, excessive heat, lack of access to green space, as well as a lack of access to safe transportation options and other public amenities. However, features of the built environment that increase access to green space, public services and amenities, and support social cohesion can positively influence health independent of socioeconomic status.

The Executive Summary is included here. Download the ***full report*** from ***http://www.bccdc.ca/health-professionals/professional-resources/health-equity-environmental-health/equity-and-eph-handbook***

Download the ***Healthy Built Environment Linkages Toolkit*** from **http://planh.ca/resources/action-guides/healthy-built-environment-linkages-toolkit**

Working with local governments to support health through the built environment: A scoping review

Executive Summary

Tara Zupancic and Claire Westmacott
Habitus Research | June 2016

The way communities are planned and built, and the services and resources provided within them, directly influence people's physical, mental, and social health. A commitment to health equity means planning communities to support the health of all community members including low income families, children, older adults, newcomers, Indigenous groups, and people living with physical or mental health challenges.

This report examines peer-reviewed empirical research on health equity and the built environment published since 2010. The aim of the report is to identify opportunities for public health staff and local governments to apply a health equity lens in support of healthy communities. The scope of the review corresponds with the five physical features of the built environment as outlined in the BC *Healthy Built Environment Linkages Toolkit*.

The evidence demonstrates that neighbourhood deprivation is a significant predictor of fair/poor health in all geographic regions in Canada, and is significantly associated with increased chronic health conditions, depression, anxiety and body mass index, as well as decreased general health and physical activity. In particular, there is growing consensus that differences in health outcomes may be influenced by variations in neighbourhood density, availability of public spaces and facilities, and the integration of different functions within the same neighbourhood (i.e., complete communities).

Emerging evidence in Canada shows residents of deprived neighbourhoods are often anchored in a setting of social disadvantage with little neighbourhood change over time. Research also documents a social gradient of health related to air pollution exposure, heat-related illness, and green

space access. Socio-economic status, especially low income, is strongly and significantly associated with household crowding, increased exposure to environmental risks at home and poor residential quality. Low income children are particularly vulnerable and are more likely to suffer from multiple and cumulative exposures to biological and chemical hazards, insufficient sanitation and derelict public spaces. They are also more likely to be exposed to unsafe environments, including traffic, because they are typically more dependent on active transportation.

The evidence shows that the built environment can positively contribute to health, independent of a person's socioeconomic position. Neighbourhoods with greater resources, informal social control and cohesion are significantly associated with less depression, anxiety, lower body mass index and better general health. Integrated action to provide community-based resources is essential to advancing health equity. For example, evidence shows that affordable housing may have the greatest influence on food security for low income families. Other key factors include access to affordable healthy food, affordable child-care, safe and connected transportation routes, nearby and linked greenspaces, safe and welcoming community spaces, and adequate sanitation services.

More inclusive community-based research is needed to further identify the specific needs of priority groups. While the scientific evidence examined in this review identifies key priority areas for improving health equity in the built environment, it says less about what should be done. There is a need for inter-sectoral approaches to knowledge translation to link scientific evidence with relevant policy and planning contexts used by local governments, as well as a need for natural experiments and evaluations of interventions to support healthy communities for all.

DOWNLOAD THIS RESOURCE FROM:
www.bccdc.ca/health-professionals/professional-resources/health-equity-environmental-health/equity-and-eph-handbook

BC Centre for Disease Control
An agency of the Provincial Health Services Authority

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4.2 FACT SHEET: SUPPORTING HEALTH EQUITY THROUGH THE BUILT ENVIRONMENT

This fact sheet offers evidence-informed principals to support health equity through interventions in the built environment. It is designed to be a companion to the ***Healthy Built Environment Linkages Toolkit*** and provides concrete actions that local governments can take to support health equity through the built environment. It may be used by health professionals who work with local governments, or by planners and local government officials looking for ways to build healthier, more equitable communities.

Download the ***Healthy Built Environment Linkages Toolkit*** from
http://planh.ca/resources/action-guides/healthy-built-environment-linkages-toolkit

FACT SHEET: Supporting Health Equity Through the Built Environment

Environmental Health Services
BC Centre for Disease Control

This document was produced under the guidance of the Healthy Built Environment Linkages Toolkit Working Group.

INTRODUCTION

This Fact Sheet offers evidence-informed principles to support health equity through interventions in the built environment. It is based on a scoping review titled Working with local governments to support health equity through the built environment,[1] which examines 16 review articles and 37 Canadian empirical studies published on health equity and the built environment since 2010, and is supplemented with additional literature related to local government intervention options. Much of the research cited here explores health equity through measures of socioeconomic deprivation—there is limited research on the specific built environment needs of priority populations such as older adults, low-income children, Indigenous populations, newcomers to Canada, people living with physical disabilities or chronic illness, and homeless populations. These population groups are known to be at greater risk for poor health, largely due to inequities in the distribution of the ***social determinants of health***.

*This is one of a series of **Fact Sheets** on broader concepts which relate to all five features of healthy built environments described in the HBE Linkages Toolkit. Like the Toolkit, information provided here is evidence based and derived through literature review and expert opinion.*

Icons indicate that more info is available in a corresponding Fact Sheet:

= ***Economic co-benefits***

= ***Health equity***

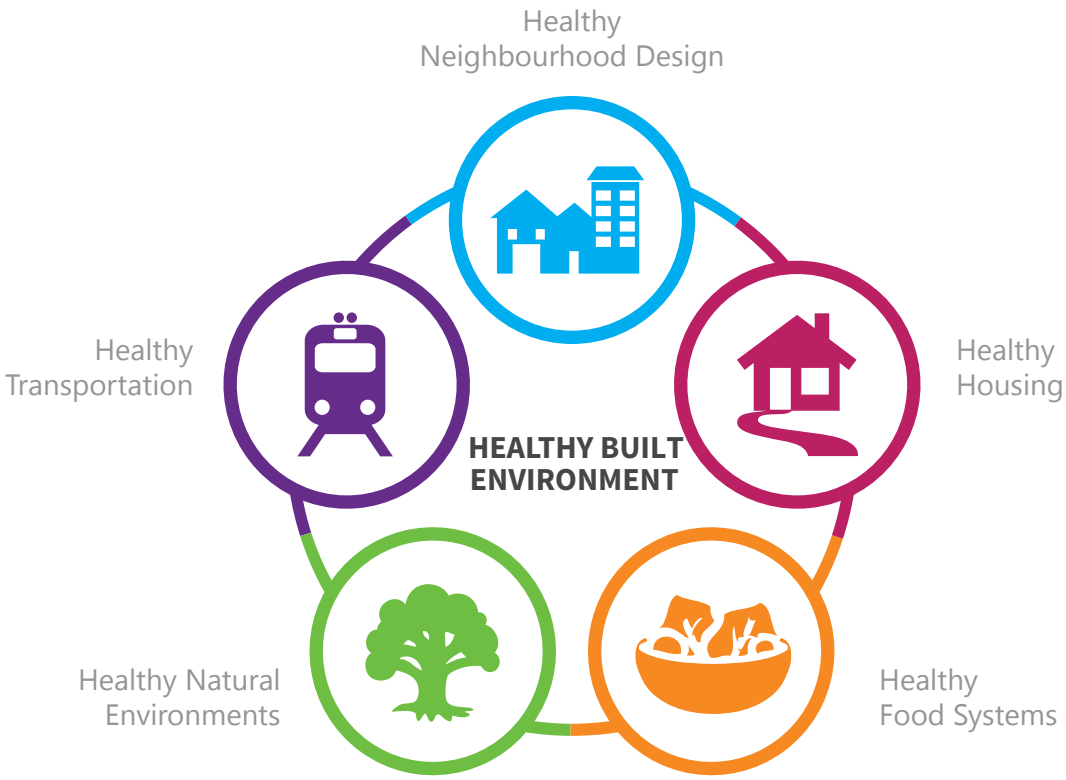
= ***Social well-being***

= ***Small communities***

VISION FOR HEALTHY, EQUITABLE BUILT ENVIRONMENTS

Safe, attractive, and complete neighbourhoods that support equitable opportunities for social connections and food security, access to protected natural environments, as well as accessible options for public and active transportation and housing.

There are two overarching planning principles that can provide an equity lens to any built environment planning process. Additional planning principles are organized according to the five physical features of the built environment outlined in the Healthy Built Environment Linkages Toolkit.[2] This Fact Sheet is intended to build on and complement the Linkages Toolkit and its companion documents.



Five physical features of the built environment.

OVERARCHING PLANNING PRINCIPLES TO SUPPORT HEALTH EQUITY THROUGH THE BUILT ENVIRONMENT:

1

Create opportunities for vulnerable or priority populations to participate in planning and decision-making processes. Design those opportunities so that priority populations are able to participate and fully engage in the process.

- Community involvement is particularly important for identification of structural barriers to the social determinants of health.[3]
- Community-based case studies suggest that community members in low-income and disadvantaged neighbourhoods are uniquely equipped to identify potential sources of inequity and actions needed to address them.[4-7]
- Collaborative assessments or integrated planning processes could involve planners, local and regional governments, developers, health authorities, local organizations, and other relevant groups.

2

Consider the unique needs of vulnerable populations (e.g., low socioeconomic status (SES), elderly, homeless, those with disabilities or chronic health conditions) when planning interventions to the built environment.

- Interventions that are not responsive to the unique needs and barriers of vulnerable groups may exacerbate ***health inequities***.
- Consider doing health equity impact assessments as part of neighbourhood planning processes.[8,9] Due to the lack of research and data on health impacts among sub-populations, it is important to engage in a health equity assessment process to uncover potential health inequities in neighbourhood renewal strategies or other planning processes.

HEALTHY NEIGHBOURHOOD DESIGN

Summary

Variations in neighbourhood density, availability of public spaces and facilities, and community-level services all influence health through their impact on physical and social contexts and on individual behaviours.[10] **These effects may be unequally distributed, leading to disproportionate health burdens among socioeconomically disadvantaged individuals.** Neighbourhood SES is a significant predictor of fair/poor health in all geographic regions in Canada[11]: neighbourhoods with greater community resources and informal social control or cohesion are significantly associated with less depression, anxiety, lower body mass index, and better general health.[12] However, neighbourhood SES alone is not a good proxy for measuring the health of neighbourhoods.[11-13]

There is a lack of direct evidence for how interventions related to neighbourhood design impact health inequities due to confounding factors, diversity in study design, and difficulty generalizing evidence that is rooted in local contexts.[10] **Efforts toward neighbourhood renewal may result in unintended health inequities if the local context and needs of vulnerable populations are not considered in planning processes.** Public and accessible amenities should be prioritized to avoid increasing inequities.

HOW CAN WE ENSURE MORE EQUITABLE ACCESS TO HEALTHY NEIGHBOURHOODS?

Planning Principles:

1

Prioritize enhancement of low-SES neighbourhoods. Preserve, enhance, and renew neighbourhoods with a balance of public and private spaces, infrastructure, and services accessible to all residents, without displacing people.

- Disadvantaged neighbourhoods may be affected by stigma that perpetuates neglect, restricted access and use of public spaces, and a sense of isolation from other neighbourhoods. Such neighbourhoods may need more tailored and intensive investments through an integrated range of service and amenities to ensure equitable opportunities for health afforded by the built environment.[4,10]
- Neighbourhood-level investments in green space and other local amenities may instigate neighbourhood gentrification. Renewal strategies without integrated commitments to affordable housing, transportation, and food, can lead to further marginalization of low-income residents who can no longer afford to live in the very neighbourhoods designed to support them.[14]

- Key factors for supporting health equity in neighbourhoods include affordable housing, access to affordable healthy food, affordable child care and transportation, nearby and connected green spaces with trees, safe and welcoming community spaces, and adequate sanitation services that consider the unique conditions of each neighbourhood.[4,15] Community and neighbourhood grants are a tool that could support community reclamation of restricted use, neglected, or poorly maintained public spaces for community-driven activities, improved safety and aesthetics, or community programs.

2 Balance neighbourhood density targets with provisions for sufficient, safe, connected, accessible, and nearby natural green spaces and play areas for children and youth.

- While the impact of housing density on children's play is unclear, some evidence suggests that increased density may constrain opportunities for play because the lack of indoor and outdoor space limits children's ability to play. Increased green space is significantly associated with increased play, physical activity, and cognitive and motor development in children.[15]

3 Support community-based collaborative land use and planning processes that support health equity and public health.

- Community members can identify priority criteria, which can be used to map a neighbourhood's combined provision of assets such as affordable housing, healthy food, child care, green spaces, public transportation corridors, and safety, and identify where services or infrastructure are needed.[16] This type of "community asset mapping" can highlight potential within a community and inform planning to further develop those assets.

HEALTHY TRANSPORTATION NETWORKS

SUMMARY

Healthy transportation networks prioritize safe and accessible transportation systems for all ages and abilities and incorporate a diversity of transportation modes (e.g., cycling, walking, transit). Health benefits such as reduced pedestrian and cyclist injury, increased physical activity, decreased obesity, and increased social connectivity are associated with safe, attractive and accessible transportation systems that prioritize active transportation.[2]

Equity in transit planning involves considering the needs of different "publics," each of whom may have different identities, transportation needs, visions, and priorities (e.g., people may identify primarily as transit riders, cyclists, pedestrians, car drivers, business people, taxpayers, progressives, etc.).[17] **Access to public transportation is particularly important for people with low incomes or mobility challenges, who may depend on it to get to work, shops, school, and other necessities.** Population sub-groups, such as females, older adults, people of lower socioeconomic status, and people who are overweight or obese are likely to experience greater barriers to walking, primarily related to safety, poor health status and physical disabilities.[18]

HOW CAN WE MAKE HEALTHY TRANSPORTATION NETWORKS MORE EQUITIABLE?

Planning Principles:

1. **Prioritize safety and enjoyment of public and active transportation in low-SES neighbourhoods.** Interventions may include safe street crossings, traffic calming techniques, and enforcement measures such as speed limit reductions; development of linear parks, multi-use trails, greenways and sidewalks, and organization of walking groups.

    - Longitudinal research indicates that young children in low-SES neighbourhoods are more likely to use active transportation to get to school, and are more likely to be exposed to environmental hazards such as dangerous traffic or unsafe neighbourhoods.[19]

2. **Ensure that locations and schedules for public and active transportation options support the daily activity flows of people who depend on them.** Public and active transportation links should connect the places where people live, work, shop for necessities, go to school, and play.

    - Miss-matched transit and work schedules, infrequent transit routes, and poor route connections cost the people who depend on them in terms of time and stress.[20]
    - Consider the risks of increased housing or living costs when new transit developments—positive features that might lead to gentrification—are introduced to a neighbourhood.[17]

HEALTHY NATURAL ENVIRONMENTS

SUMMARY

The built environment can influence the distribution of environmental benefits such as green space, as well as of environmental burdens such as air pollution. There is evidence that socioeconomically disadvantaged people and groups tend to live in more deprived areas with greater environmental burdens, have poorer access to health-supportive environmental amenities, and have less resilience to environmental hazards. **There is consistent evidence that green space provides greater health benefits to lower SES individuals and groups than to the general population.**

HOW CAN WE PROTECT EQUITABLE ACCESS TO HEALTHY NATURAL ENVIRONMENTS WITHIN OUR COMMUNITIES?

Planning Principles:

1

Expand and improve diverse forms of accessible and connected green spaces in underserved and disadvantaged areas to support physical and mental health. This includes the revitalization of parks, especially those that improve travel links and connectedness through the community.

- Multiple studies of green space exposure found stronger positive associations between green space and healthy birth outcomes among mothers of lower SES. Green space may decrease the effect of income deprivation on all-cause and cardiovascular mortality (overall deaths due to any cause or due to cardiovascular disease specifically). The largest benefit from green space exposure, in terms of chronic obstructive pulmonary disease, was observed among lower SES individuals. Associations between green space and reduced mortality are strongest in socioeconomically deprived neighbourhoods, and cannot be explained by increased physical activity.[21,22]
- Evidence from Montreal indicates that areas with recent immigrants have fewer street trees, while evidence from Montreal, Vancouver, and Toronto indicates that lower income areas have less vegetation.[23-25]

2 **Integrate strategies to address poor air quality, extreme heat vulnerability, safety concerns, and chemical and biological hazards that tend to co-exist in disadvantaged neighbourhoods.** Multi-pronged strategies include: zoning and planning to minimize household exposures, installing green barriers between roadways and child-centered settings, training for child health professionals to recognize and respond to environmental risks to children, and policies aimed at reducing children's susceptibility to environmental risk factors through healthy food and physical activity programs.

- Lower SES is associated with increased exposure to air pollution and extreme heat, as well as decreased exposure to green space.[10,24–29] Thus, communities with greater health risks from heat and air pollution exposure may also lack the protective benefits of green space that filters the air, reduces temperatures, and provides shaded and sheltered areas. People with low SES, lack of access to green spaces or air conditioning, pre-existing chronic disease, and those who are elderly or socially isolated are more vulnerable to health impacts during extreme hot weather.[30] In addition to temporary heating or cooling shelters during extreme weather events, consider developing more permanent amenities such as "parklets" with shade and water features in areas that lack access to green space.
- Although socioeconomically disadvantaged groups are not always more exposed to greater levels of air pollution, they often experience greater harmful effects. For example, there is evidence of stronger pollution–mortality associations for people of low SES, even after adjusting for behavioural and occupational risk factors.[10,26] Low-income children are typically more susceptible to the negative health impacts of environmental exposures due to a lack of access to healthy foods, health care, and other resources needed to protect their health.[31]
- There is fragmented but consistent evidence that low-income children are more likely to suffer from multiple and cumulative environmental exposures in and near their home. This includes exposure to biological and chemical hazards, poor air quality, insufficient sanitation, and derelict or unsafe public spaces and play areas.[31]

HEALTHY FOOD SYSTEMS

SUMMARY

People experience ***food insecurity*** when they are unable to access sufficient appropriate, healthy foods, usually due to inability to purchase sufficient quality food. Housing costs are the main expense that takes priority over food for low-income families.[32,33] **People often struggle to balance food expenditures with the cost of housing, transportation, and other necessities.**

HOW DO WE MAKE HEALTHY FOOD SYSTEMS MORE EQUITABLE?

Planning Principles:

1 **Maximize healthy, accessible, and affordable food options near affordable housing and public transit connections.**

- Low-income families can direct more of their money to healthy food if they have access to affordable child care, flexible employment opportunities close to home,[5,34] convenient public transportation links to grocery stores, as well as kitchen storage and cooking facilities.[33]
- Lower income neighbourhoods and those with higher percentages of Indigenous residents may have disproportionately high exposure to unhealthy food outlets.[10,35]

2 **Support a range of food programs that support community self-reliance and social justice for diverse populations.**

- Emerging evidence suggests programs such as community kitchens and gardens can deliver a great range of health benefits, including social cohesion and opportunities to address specific ethno-cultural imbalances of traditionally marginalized groups such as newcomers to Canada and Indigenous populations.[36]
- Vegetable gardens can contribute to the presence of more food in the house, even if they do not mitigate the problem of food insecurity.[33]
- There is limited but consistent evidence of low participation in community food programs among food insecure families, largely because programs are not accessibly located; people lack knowledge of how to participate; or programs are not suited to busy schedules, interests, or needs of families.[37,38] However, community food programs can provide a link between vulnerable community members, program organizers, and local governments.[38] The involvement of vulnerable sub-groups in food program planning may help to develop more relevant programs that address stigma and other barriers to access.

3

Prioritize the unique food system needs of rural and Indigenous communities. Strategies include reducing travel distances to food sources, supporting cultural food preferences, and strengthening partnerships with local food producers and distributers.

- Unique challenges in rural settings include long distances that increase food costs and limit availability of fresh foods, poor responsiveness to cultural food preferences, and difficulties establishing local partnerships to develop community food strategies. The challenges are particularly prevalent among Indigenous communities in the north.
- Indigenous children report high availability of processed and convenience foods and low presence of fruits, vegetables, and traditional foods, even where the latter are enjoyed or considered healthy.[39]
- Indigenous-led food programs may contribute to increased capacity related to cooking and growing food and may support stronger social networks among long-term participants.[36]

4

Develop amenities to minimize food waste. Waste reduction, as well as reclamation and redistribution of quality food can contribute to healthier, more affordable food systems with less environmental impact.

- Food waste can impact global food supply and distribution as well as household access to food.[40] Food waste is a significant contributor to greenhouse gas emissions, both from resources used in the production of wasted food, as well as methane emissions from post-consumer food waste in landfills.[40,41] Local governments can provide options for diverting non-preventable food waste from landfill.
- Waste of spoiled food and uneaten leftovers contributes is responsible for over 25% of household waste in British Columbia.[42] Local governments can support businesses and residents to minimize food waste.

HEALTHY HOUSING

SUMMARY

Healthy housing is affordable, accessible for all, and free of hazards. **Low SES is associated with poorer quality housing characteristics both within and around the home, as well as with crowding and increased exposure to environmental risks both inside (e.g., dampness, mould, chemical contamination, noise, temperature problems, and poor sanitation) and near (e.g., traffic, traffic-related pollution, and industrial pollution) the home.[43]**

Local governments can support access to affordable healthy housing through tools such as provision of diverse housing forms and tenure types; ensuring good housing quality that includes proper housing structure, heating, insulation, and ventilation in all new homes; policies and programs that prioritize the housing needs of the homeless, older adults, low-income groups, and people living with disabilities; and siting and zoning that minimizes exposure to environmental hazards.[2]

HOW CAN WE SUPPORT MORE EQUITABLE ACCESS TO HEALTHY HOUSING?

Planning Principles:

1

Ensure neighbourhood renewal strategies are planned in tandem with affordable housing and access to services to ensure low-income renters are protected from displacement effects of gentrification.

- Housing mobility (support for residents to move from low-income neighbourhoods to higher income neighbourhoods) can improve overall health and mental health, but may also lead to greater health inequalities for those "left behind" or "pushed out" by neighbourhood development.[44]
- There is some evidence that interventions to improve infrastructure and amenities (e.g., affordable child care, well-maintained green spaces, public transportation, access to healthy foods) in low-income neighbourhoods may be more cost-effective and inclusive and have similar impacts as moving individuals to lower poverty areas. Mechanisms include bylaw protection for renters when neighbourhoods are undergoing renewal or redevelopment.

2 **Ensure affordable housing is also quality housing by investing in maintenance and retrofits that prioritize air and water quality, safety, climate control, and accessibility.** Efforts to improve and ensure quality of affordable housing units, such as healthy housing regulations, bylaws, and building codes can ensure a minimum standard for vulnerable people (e.g., low-income, insecure tenure, or physical or mental disabilities) who are unable or less likely to advocate or make improvements for themselves.[45,46]

- Inappropriate housing conditions among Indigenous people, such as overcrowding, homes in need of significant repairs, lack of smoke detectors and extinguishers, and lack of appropriate supports for people with physical disabilities, are associated with greater risks of unintentional injuries, respiratory and infectious diseases, psychosocial challenges, and domestic violence.[47,48]
- Housing conditions of lower SES groups may make them more susceptible to heat-related health risks.[49]
- Improvements in warmth and energy efficiency result in positive health impacts to low income groups, particularly older adults or those living with a pre-existing health condition. Housing that is affordable to heat is linked to improved general health, respiratory health, and mental health and may also promote improved social relationships and reduce absenteeism from school or work due to illness.[44,50]
- The location of housing relative to radon deposits impacts the level of indoor exposure to radon gas. Where radon levels are high, mitigation measures should be used to vent radon and lower indoor concentrations to safe levels. Low-income renters are particularly vulnerable to radon because they are more likely to live in basement suites and have less ability to relocate to higher quality housing. Insecure tenancy may be a barrier to requesting testing and mitigation. Mechanisms should be put in place to require testing and mitigation of ground level and basement rental suites in high radon areas.[51]

GLOSSARY

Food insecurity – Lack of dignified access to sufficient safe and nutritious food to meet dietary needs and food preferences.[52]

Health inequities – Differences in health status that are linked to social disadvantage, and that are considered to be modifiable and thus unfair. Health equity exists when all people have opportunity to meet their full health potential without barriers related to the social determinants of health.[53]

Priority populations – Those at higher risk for poor health, usually related to the social determinants of health, who have restricted access to public health services, or for whom public health interventions are likely to have increased potential for benefit. Examples of priority populations include: older adults, Indigenous groups, newcomers, people with insecure housing, people with food insecurity, and people living with physical and/or mental health barriers.[54]

Social determinants of health – The "interrelated social, political and economic factors that create the conditions in which people live, learn, work and play."[53]

Vulnerable populations – Those at a higher risk for poor health outcomes because of barriers to accessing social, economic, political, and environmental resources, as well as because of existing illness or disability.[53]

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