



Through an
equity lens

EQUITY-INTEGRATED ENVIRONMENTAL HEALTH PRACTICE

FACILITATORS AND BARRIERS

A decorative graphic at the bottom of the page features several overlapping, semi-transparent shapes in shades of blue, green, and yellow, resembling a stylized landscape or abstract composition.

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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.

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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 Health² 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 Health⁵ 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 regimes¹¹
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.

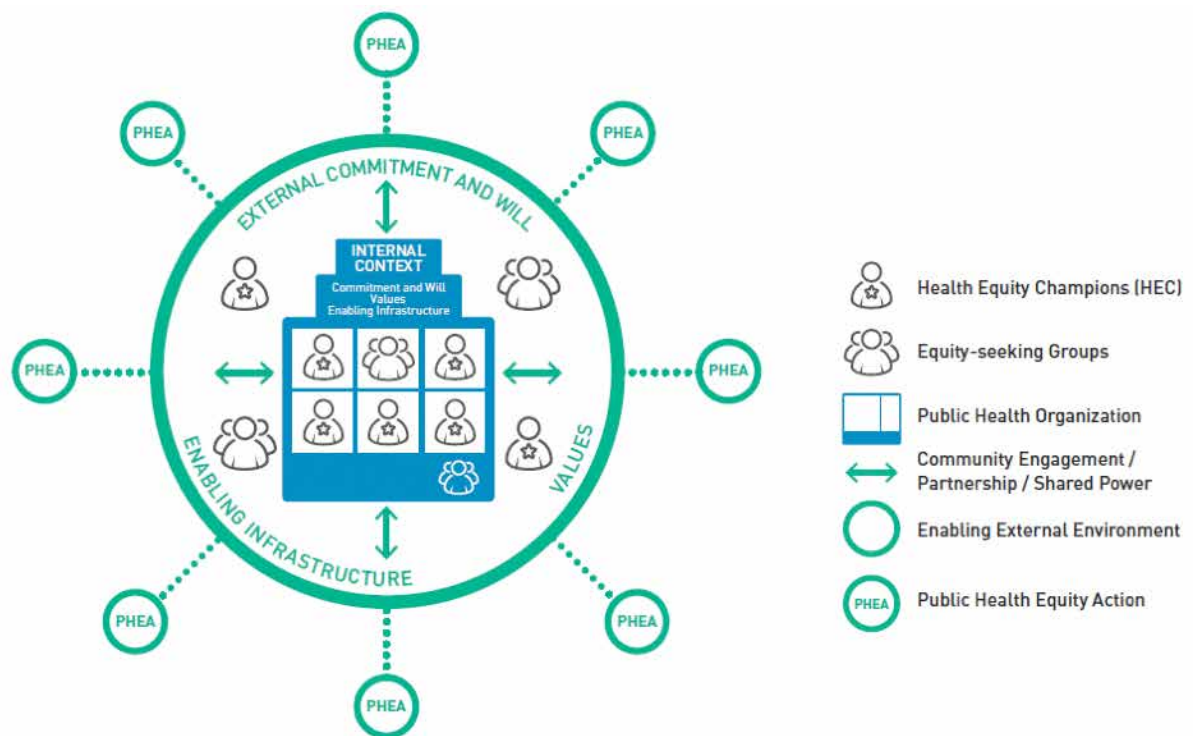
Increasingly, though, public health systems promote a health equity approach. For example, the B.C. Guiding Framework for Public Health,² the 2008 Ontario Public Health Standards,¹³ and Nova Scotia's Health Equity Protocol¹⁴ make explicit reference to equity as an integral part of public health. Systemic 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 Networks¹³.
- Health Equity Impact Assessments²⁵ 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 housing²⁹ 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 socioeconomic, 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 health 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 restaurateurs, 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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