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Food Environments: An Introduction for Public Health Practice

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Introduction

This document was written for environmental public health practitioners (environmental health officers and public health inspectors), as well as other public health professionals whose work relates to healthy environments (e.g., medical health officers, public health dietitians, health promotion professionals). It introduces the concept of food environments, highlights some key evidence for the relationship between food environments and health, and identifies some ways environmental public health practitioners can influence food environments.

What are food environments?

Food environments are created by the human-built and social environments. They are the physical, social, economic, cultural, and political factors that impact the accessibility, availability, and adequacy of food within a community or region.

Food environments may be defined in terms of geographic access to food in a community or neighbourhood, consumer experiences inside food outlets, services and infrastructure in institutional settings, or the information available about food.^{1,2} Community food environments most closely fit within the area of environmental health practice known as “health and the built environment.”³

Healthy food environments provide equitable access to healthy foods. Fresh fruits and vegetables and whole foods are available in a variety of retail and food service outlets, and healthier options are available for prepared and pre-packaged foods. Healthy food environments also provide opportunities for food production and food distribution networks, as well as community programs and infrastructure to support healthy eating.³

Community food environments are measured by people’s proximity to different kinds of food outlets or the density or variety of different types of food outlets within a specific geographic area.

Consumer food environments are characterized by the availability, variety, price, and quality of foods, and of consumer information such as promotional signs, as well as relative prominence of healthier versus less healthy food options.

Organizational food environments are shaped by features such as food preparation, retailing, or food growing facilities in institutional settings.

Food information may be in the form of advertising, labelling, or educational curricula.

Obesogenic environments are those that do not enable healthy dietary choices. These environments make it difficult—or impossible—to buy or eat whole foods and healthier prepared and prepackaged options. Obesogenic environments are associated with high rates of overweight and obesity.⁴⁻⁶

Food deserts are predominantly low-income areas where nutritious foods are not readily available.⁷ Food deserts are common in the United States, but not in Canada.⁸ **Food swamps** are low-income areas where there is disproportionately high access to convenience stores, fast food outlets, and other sources of unhealthy foods. Food swamps are considered to be a predominant form of unhealthy food environment in Canada.⁸

How do food environments impact health?

Food environments can affect people's food purchasing and eating choices, the quality of their diets, and diet-related health outcomes. However, the evidence is mixed on how specific food environment features affect specific outcomes, possibly because of variations in research methodologies used to assess food environments (see box). The paucity of strong evidence for the specific influences of food environment characteristics on health should be interpreted with caution, as the limited evidence in this area does not necessarily indicate lack of a strong effect.

There is evidence for a positive relationship between increased availability of healthy foods in retail or food service outlets and better quality diets (i.e., consumption of fresh fruits and vegetables) in urban environments.^{3,11-13} Similarly, grocery stores that sell a variety of affordable, fresh, whole foods are associated with healthier weights,^{11,14} while an abundance of convenience stores selling less healthy packaged food products are associated with higher rates of overweight and obesity.^{12,15}

Policies and programs that support healthy food environments also impact healthy eating. There is growing evidence to indicate that participation in programs such as community kitchens or school gardens can help people to learn about healthy foods, develop food skills, and shift their preferences toward healthier foods.⁹ These programs also provide social supports to participants.¹⁶⁻¹⁸



Research gaps

*Neighbourhood food access may be measured by indicators such as distance, travel time, ratio of healthy to unhealthy food outlets, density of different types of outlets, or others. Such **methodological variability** makes it challenging to synthesize the literature.*

*It is difficult to separate the **relative influence of “healthy” and “unhealthy” features of food environments.***

*There is a major gap in evidence about **rural and remote food environments.***

*Research is needed to **evaluate specific interventions that aim to improve some aspect of the food environment, and to assess whether those interventions are associated with health outcomes.***

*Research on **agriculture as a feature of healthy food environments** is lacking, but many experts consider food production, processing, and distribution—at a variety of scales—to be essential components of a healthy food environment.³ There is evidence that growing food is associated with healthier diets.^{9,10}*

What can public health do to create healthier food environments?

Multiple policies and programs have been implemented in efforts to improve the health of food environments. Evidence to evaluate the outcomes of these interventions is limited, but suggests that some types of policies and programs may be effective.

There is evidence to suggest that **retail interventions** to eliminate food swamps can improve diet and health outcomes.²¹ Pairing in-store health promotion strategies with interventions to create “healthy corner stores”²² that improve availability, prominence, and affordability of fresh, healthy foods may be particularly effective.^{21,23}

Labelling or highlighting healthier options on menus may also have a significant impact on consumer food choices.²⁴ Health-based menu labelling is voluntary in BC through the Informed Dining Program²⁵ and will be mandatory for larger food establishments following the 2015 *Making Healthier Choices Act* in Ontario.

Many large organizations, including health and educational institutions, are adopting healthy food **procurement policies** to increase availability and/or affordability of healthier foods within the organization.²⁶ Public schools in British Columbia follow health-based guidelines for food and beverage sales.²⁷

Some governments use **taxation** policies to limit the affordability of less healthy options such as sugar-sweetened beverages. Berkeley, California, was the first jurisdiction to use this approach.²

*A regional health authority in eastern Newfoundland is working with researchers and a community-based food organization on a pilot project to increase healthy food options in convenience stores. They plan to implement a **healthy corner stores** program in several communities—including those without a nearby supermarket—and evaluate the impacts on healthy food access.¹⁹*

*In New York City, a simplified permit process was put in place to introduce **Green Carts** that sell fresh produce in underserved neighbourhoods.²⁰*



Community and school gardens are being used to increase fruit and vegetable consumption, improve food skills, knowledge, and attitudes, as well as contribute to mental and social health and well-being.^{9,17} Toronto Public Health has worked with local organizations to support school gardens in the city.²⁸

Zoning and bylaws are being explored as tools to ensure availability of healthy food options in new developments or to limit access to fast food in specific communities or around schools.³¹

Access to fresh and healthy foods is not just a factor of availability and affordability. **Transportation** to and from grocery stores can be a barrier to transit-dependent individuals or those with limited mobility or low income.³²

Why should food environments be considered in public health practice?

Environmental public health practitioners have a long history of protecting the public's access to safe foods. They are increasingly involved in promoting healthier built environments through participation in local government planning processes and land use decisions.^{33,34} Support for healthier food environments brings these two roles together.

A focus on ensuring health equity is part of the core vision of most provincial and national public health frameworks.³⁵ Public health practitioners can advocate for and promote health equity through food environments that make safe and healthy food choices more available and accessible to everyone.

Many public health agencies are expanding their focus on health protection to incorporate health promotion and chronic disease prevention activities. Healthier food environments—those that are more supportive of healthy eating behaviours—are one population health tool to prevent chronic diseases.



How can public health practitioners support healthier food environments?

Public health professionals can be an enabling force for food systems change, particularly by collaborating inside and outside the health sector.³⁶ Although community design, land use, food programs, infrastructure, and bylaws are the territory of local governments and planners, health professionals can influence decisions that affect food environments.

Environmental public health practitioners can **work with planners and local government officials** to educate them about the impact of built environments, including food environments, on public health. Many features of healthy built environments are desirable from a planning perspective, and making the case for health can help win approval for healthy design features. Public health practitioners regularly provide input on development application permits, zoning and subdivisions, or community and regional planning processes.

Public health practitioners can provide **expertise and guidance** during implementation of healthy food environment interventions such as the introduction of perishable foods in convenience stores. Similarly, they can **support existing policy initiatives**, such as menu labelling or procurement policies, through education, inspection, and permitting processes.

Public health practitioners can also **advocate for healthy public policies** such as institutional food procurement, taxation of unhealthy foods, zoning and bylaws to support food availability and limit food swamps, and health-based menu labelling.

*Legislation outside the health portfolio can influence food environments. Qualicum Beach, BC, prohibits “drive-thrus” and fast food outlets through their **Land Use and Subdivision Bylaw**. The bylaw defines restaurants according to the town’s cultural and aesthetic direction, which does not include fast food.²⁹*

*Comox, BC, uses **idling bylaws** to prohibit new drive-thrus.³⁰*

This report is based in part on a contracted review: *Policy Options for Healthier Food Environments in City-Regions: A Discussion Paper* by Catherine L. Mah, Leia Minaker, and Brian Cook, December 2014. A PDF file of the full evidence review (English only) can be obtained by emailing contact@ncceh.ca.

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