

Creating Protective Environments: Restricting Access to Unhealthy Foods around Schools

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Issue:

Preventing chronic disease requires more than simply promoting the benefits of making healthy choices regarding food, tobacco, alcohol, and physical activity. The built environment, which is the physical environment where we live, work, and play, including buildings, parks, schools, road systems, and other infrastructure, can both support and create barriers to making healthy choices in our communities (1). The way a community is planned and designed can impact the risk of developing chronic diseases (1).

In Alberta, convenience stores and fast food restaurants are part of the community landscape and many are located within walking distance to schools. These establishments typically offer foods that are low-cost but have little nutritional value (e.g. packaged foods including candy, chips, and pop), with fewer fresh food options (2). Purchases made at convenience stores and fast food restaurants can have a considerable impact on children's purchasing and consumption habits and the total number of daily calories consumed (3-7). For little over a dollar, children can purchase high calorie unhealthy foods and beverages (8). This easy access to unhealthy foods may also undermine student-purchasing patterns within schools (e.g. cafeterias, vending machines, hot lunch programs), which may have taken steps to offer more healthy options.

Neighbourhoods surrounding community schools can influence what children eat and drink before, during, and after the school day. When convenience stores or fast food restaurants are located near schools, the consumption of high-calorie, low-nutrition foods increases (3, 4, 7). A 2014 study from Saskatoon, Saskatchewan found that unhealthy food sources tend to be located closer to schools and places of residence compared to healthier sources (9). Additionally, a 2012 international study showed that there was at least one fast food restaurant or convenience store located within a one kilometre radius of half of the 320 Canadian schools studied (10). Research has shown that increased access to food outlets near school increases students' likelihood of eating lunch outside of school (7, 10).

In Canada, nearly a third of children and youth have overweight or obesity (11). Childhood obesity is associated with an increased risk for obesity, disability, and premature death in adulthood (12). Obesity is also associated with an increased risk for developing cardiovascular disease, some types of cancer, and type 2 diabetes (12). Prevention efforts focusing on children and youth are critical to reducing rates of chronic disease (13, 14). Currently, public and private healthy eating initiatives are underway within Alberta schools, such as the School Nutrition Program, which provides daily meals to students in select Alberta school districts (15). However, to be effective, efforts must also expand beyond the borders of a school and into the surrounding community. Community-based initiatives are now widely regarded as a promising approach to make a substantial contribution to the promotion of healthy lifestyles and obesity prevention (1). Policy can be used to create protective physical environments for children in and around Alberta schools to support healthy eating.

Local governments are well positioned to influence and promote the health of citizens (1, 16). Zoning bylaws can be used by municipalities to reduce the development of food swamps, areas with many unhealthy food options (1, 17, 18) that are associated with increased obesity rates (19), by restricting where fast food restaurants and convenience stores can be built (1, 20). Zoning bylaws that ban fast food drive-through services have been passed in nearly 30 Canadian municipalities (21). These and other restrictions protect student health by limiting the availability and accessibility of unhealthy foods and beverages in areas surrounding schools (10, 22). Zoning laws and incentives can attract new healthy food retailers by offering reduced cost business licenses, expediting application reviews, or waiving certain development requirements (23). This can create "healthy food zones" by increasing the availability of affordable and nutritious food choices for consumers (1, 20, 24).

Benefits to Taking Action:

- Choosing healthy foods will become an “easy choice” for children. Healthy foods will become increasingly accessible in the communities surrounding schools. Increased access, combined with other policy and programming efforts already underway in schools, will enhance the return of government investments and contribute to normalizing the purchase and consumption of healthy foods.
- In Canada, the economic burden of obesity in Canada is between \$4.6 and \$7.1 billion annually (2011 estimate) (25). The cost of obesity in Alberta is over \$1.27 billion annually (2010 estimate) (26). Restricting access to unhealthy foods near schools can help to prevent obesity and other chronic diseases and reduce associated healthcare and loss of productivity costs.
- Engaging locally owned convenience stores and other businesses to promote healthy foods by increasing availability, enhancing visibility, and offering price incentives in areas surrounding schools could be a win-win situation for business, families, and public health stakeholders.
 - Incentive programs can support current small food store owners near schools to provide and promote healthier food items through interventions such as: grants, loans, or rebates to encourage purchases of equipment to store, stock and promote healthier foods; providing subsidized publicity and free access to healthy food marketing materials; providing food handler training; offering reduced business license fees; or providing expedited reviews of license renewal applications (16, 23, 27, 28).
 - Most parents want to provide healthy foods for their children. Families will have more options for providing healthy foods for their children for school lunches and may expand their household purchasing patterns to be more inclusive of local businesses. This could expand the consumer base and profits for local businesses.
 - Local businesses can also increase business by voluntarily taking action to support healthy eating. For example, in 2010 Booster Juice took action to align their products to meet BC school nutritional guidelines and the Alberta Nutrition Guidelines for Children and Youth to ensure their products can be offered to Alberta students on campus (29). This type of action can facilitate healthy eating off-campus when healthy quick-service restaurants are located in close proximity to schools.

Considerations:

Promoting healthy eating by regulating where restaurants and other food stores can be located may not be a role previously considered by municipalities. However, there is public and policy-influencer support for action in this area. According to a 2016 survey administered to 174 policy-influencers and 1,200 members of the general public in Alberta, the majority of both policy-influencers (70%) and public respondents (69%) support zoning to restrict the supply of junk food near schools (30).

Commercial development is generally viewed by local governments as a positive activity. However, the impact of the businesses and products on the health of a community’s citizens may not be critically considered. Efforts to engage local government must include opportunities to increase the capacity of those managing and producing the built environment to better understand the complex health implications for citizens (31).

Local businesses need to be actively supported to define and identify healthy products. It is not enough to provide copies of nutritional guidelines to owners and expect action. Supportive environments must be created to ensure that businesses have resources to offer and promote healthy foods.

APCCP Priorities for Action:

- Support municipal zoning restrictions that limit the proximity of fast food outlets and convenience stores in areas with new schools.
- Support businesses in areas around schools to promote foods consistent with Alberta Nutrition Guidelines for Children and Youth (ANGCY).
- Promote the adoption of the Alberta Nutrition Guidelines for Children and Youth (ANGCY) in recreation facilities, which are frequently located near schools.

References:

1. Tam T. The Chief Public Health Officer's report on the state of public health in Canada 2017: Designing healthy living. Ottawa ON: Public Health Agency of Canada 2017.
2. Crawford F, Mackison D, Mooney JD, Ellaway A. Observation and assessment of the nutritional quality of 'out of school' foods popular with secondary school pupils at lunchtime. *BMC Public Health*. 2017;17(1):887.
3. He M, Tucker P, Gilliland J, Irwin JD, Larsen K, Hess P. The influence of local food environments on adolescents' food purchasing behaviors. *International Journal of Environmental Research and Public Health*. 2012;9(4):1458-71.
4. Sadler RC, Clark AF, Wilk P, O'Connor C, Gilliland JA. Using GPS and activity tracking to reveal the influence of adolescents' food environment exposure on junk food purchasing. *Can J Public Health*. 2016 Jan;107(1):eS14-eS20.
5. Van Hulst A, Barnett TA, Gauvin L, Daniel M, Kestens Y, Bird M, et al. Associations between children's diets and features of their residential and school neighbourhood food environments. *Can J Public Health*. 2012 Jul 26;103(9 Suppl 3):eS48-54.
6. He M, Tucker P, Irwin JD, Gilliland J, Larsen K, Hess P. Obesogenic neighbourhoods: the impact of neighbourhood restaurants and convenience stores on adolescents' food consumption behaviours. *Public Health Nutr*. 2012 Dec;15(12):2331-9.
7. Cutumisu N, Traoré I, Paquette M, Cazale L, Camirand H, Lalonde B, et al. Association between junk food consumption and fast-food outlet access near school among Quebec secondary-school children: findings from the Quebec Health Survey of High School Students (QHSSES) 2010-11. *Public Health Nutrition*. 2017;20(5):927-37.
8. Borradaile KE, Sherman S, Vander Veur SS, McCoy T, Sandoval B, Nachmani J, et al. Snacking in children: the role of urban corner stores. *Pediatrics*. 2009;124(5):1293-8.
9. Engler-Stringer R, Shah T, Bell S, Muhajarine N. Geographic access to healthy and unhealthy food sources for children in neighbourhoods and from elementary schools in a mid-sized Canadian city. *Spatial and spatio-temporal epidemiology*. 2014;11:23-32.
10. Heroux M, Iannotti RJ, Currie D, Pickett W, Janssen I. The food retail environment in school neighborhoods and its relation to lunchtime eating behaviors in youth from three countries. *Health Place*. 2012 Nov;18(6):1240-7.
11. Public Health Agency of Canada. Tackling obesity in Canada: Childhood obesity and excess weight rates in Canada. 2017 [cited 2019 April 17]; Available from: <https://www.canada.ca/en/public-health/services/publications/healthy-living/obesity-excess-weight-rates-canadian-children.html>.
12. World Health Organization. Obesity and overweight. 2018 [cited 2019 April 15]; Available from: <https://www.who.int/en/news-room/fact-sheets/detail/obesity-and-overweight>.
13. Frieden TR, Dietz W, Collins J. Reducing childhood obesity through policy change: acting now to prevent obesity. *Health Affairs*. 2010 Mar-Apr;29(3):357-63.
14. Khan LK, Sobush K, Keener D, Goodman K, Lowry A, Kakietek J, et al. Recommended community strategies and measurements to prevent obesity in the United States. *Morbidity And Mortality Weekly Report Recommendations And Reports / Centers For Disease Control*. 2009;58(RR-7):1-26.
15. Government of Alberta. School nutrition program. 2019 [cited April 15 2019]; Available from: <https://www.alberta.ca/school-nutrition-program.aspx>.
16. Institute of Medicine of the National Academies. Local government actions to prevent childhood obesity. Washington, DC 2009 September.
17. Minaker LM. Retail food environments in Canada: Maximizing the impact of research, policy and practice. *Canadian Journal of Public Health*. [journal article]. 2016 January 01;107(1):eS1-eS3.
18. Minaker LM, Shuh A, Olstad DL, Engler-Stringer R, Black JL, Mah CL. Retail food environments research in Canada: A scoping review. *Canadian Journal of Public Health*. [journal article]. 2016 January 01;107(1):eS4-eS13.
19. Cooksey-Stowers K, Schwartz MB, Brownell KD. Food Swamps Predict Obesity Rates Better Than Food Deserts in the United States. *Int J Environ Res Public Health*. 2017 Nov 14;14(11).
20. Centers for Disease Control and Prevention. Zoning to encourage healthy eating. 2012 [cited 2012 August 15]; Available from: http://www.cdc.gov/phlp/winnable/zoning_obesity.html.
21. Nykiforuk CIJ, Campbell EJ, Macridis S, McKennitt D, Atkey K, Raine KD. Adoption and diffusion of zoning bylaws banning fast food drive-through services across Canadian municipalities. *BMC Public Health*. 2018;18(1):137.
22. Daniel M, Kestens Y, Paquet C. Demographic and urban form correlates of healthful and unhealthful food availability in Montreal, Canada. *Canadian Journal of Public Health*. 2009;100(3):189-93.

23. Wooten H, McLaughlin I, Chen L, Fry C, Mongeon C, Graf S. Zoning and licensing to regulate the retail environment and achieve public health goals. *Duke Forum for Law & Social Change*. 2013;5(65):65-96.
24. Mayo ML, Pitts SB, Chriqui JF. Associations between county and municipality zoning ordinances and access to fruit and vegetable outlets in rural North Carolina, 2012. *Prev Chronic Dis*. 2013 Dec 5;10:E203.
25. Public Health Agency of Canada. Obesity in Canada 2011. Report No.: 978-1-100-18133-2.
26. Alberta Health Services. Childhood overweight and obesity: Summary of evidence from the Cost of Obesity in Alberta report 2010.
27. Ashe M, Graff S, Spector C. Changing places: policies to make a healthy choice the easy choice. *Public Health*. 2011 Dec;125(12):889-95.
28. Mah CL, Minaker LM, Jameson K, Rappaport L, Taylor K, Graham M, et al. An introduction to the healthy corner store intervention model in Canada. *Canadian Journal of Public Health*. [journal article]. 2017 May 01;108(3):e320-e4.
29. Varem-Sanders C. Booster Juice and BC nutritional guidelines. In: Reed S, editor. email ed 2010.
30. Kongats K, McGetrick JA, Raine KD, Voyer C, Nykiforuk CI. Assessing general public and policy influencer support for healthy public policies to promote healthy eating at the population level in two Canadian provinces. *Public Health Nutr*. 2019 Jun;22(8):1492-502.
31. Grant JH, MacKay KC, Manuel PM, McHugh TF. Barriers to optimizing investments in the built environment to reduce youth obesity: policy-maker perspectives. *Canadian Journal of Public Health*. 2010;101(3):237-41.