Community-based Strategies for Healthy Weight Promotion in Children and Youth

By: Yun (Annie) Peng, HC Link

Introduction

Every child deserves to grow up happy, healthy and strong. However, poor nutrition and sedentary lifestyle severely impede a child's overall health as well as place extraordinary burden on both the individual and society. The current situation in Ontario, where almost one in three children is overweight or obese, testifies to this growing problem. Children who are at an unhealthy weight experience increased risk for diabetes, high blood pressure, heart disease and arthritis. They are also more likely to be ostracized and bullied at school, and suffer from low self-esteem as a result. In 2009, direct and indirect costs relating to obesity totaled $4.5 billion in Canada. There is growing recognition that the key to addressing childhood obesity is to focus more on health and less on weight. That is, a child who is slightly overweight but physically active and eats "right" is healthier than a child who is within "normal" weight range but is inactive and/or eats poorly. Regardless of body size, all children can benefit from developing lifelong patterns of healthy behaviour.

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*a This figure is produced through WHO's BMI-for-age-cut-offs in children and youth by age group and sex. BMI is a measure of an individual's height to weight ratio. A BMI of 25 is classified as overweight while a BMI of 30 is classified as obese. However, for the purpose of this report, the term "obesity" and "overweight" is used interchangeably to denote, in general, children who are at an unhealthy weight.
This issue of @ a glance presents a summary of community-based intervention strategies recommended to address childhood obesity. Sources of evidence include academic and grey literature from Canadian, US and European contexts. The volume of information available on this topic is vast, and can be overwhelming to navigate. Therefore, this resource is intended as an overview of prevention/intervention strategies to support readers in their own work. There are four main strategies in all, and under each strategy section is a review of the quality of evidence supporting its use. This “Review of Evidence” draws primarily from a 2012 report by Wilson, Quindon, Baskerville & Gauvin from McMaster University, in which systematic reviews on each set of strategies were rated based on the quality of the review’s methodology. A high-quality review implies that the information is collected well and its findings have high validity.

Contextual Influences

Before exploring the various interventions addressing childhood obesity/unhealthy weights, it is important to keep sight of the bigger picture and spend some time considering the theoretical framework behind our work in this area. What we see depends on what lens we are using.

Ecological perspective: There is no single cause for the rise of obesity in children. As such, an ecological perspective provides a useful lens to take into account the relevant contributing factors from all levels. At the individual level, a child’s genetic, physical and psychosocial attributes play a role. At the interpersonal level, we need to look at factors embedded in the family environment, peer relationships and household economic status. At the community level, neighbourhood setting and access to recreational facilities are key areas for investigation. At a societal level, we need to consider food policies, retail/marketing culture and broader level community design.

Figure 1: Ecological perspective on childhood obesity

Embracing complexity: While we can consider each factor at the various ecological levels separately, we must remember that all these influences act together in a larger system. They are interconnected through multiple pathways, as shown in the Obesity System Map depicted here. For example, economic hardship at a macro level is one of the myriad factors contributing to food insecurity at the home level. And family food insecurity is one reason out of many that causes poor nutrition in the child. The problem of childhood obesity is highly complex.

Using an equity lens: There is a clear and consistent relationship between socioeconomic status (i.e. income, education, employment) and obesity.4 Living in a lower socioeconomic status is associated with limited access to resources for health maintenance and less control over one’s environment. Unequal health outcomes between populations are more than the sum of individual lifestyle choices, but rather are largely due to deeper systemic causes.

Given the nature of the problem, more than ever, we need interventions that are comprehensive and integrated. To adequately counter troubling obesity trends, efforts must address all levels of the issue and involve diverse sectors and professions working together in coordinated approaches.

Recommended Strategies

1. SCHOOL-BASED INTERVENTIONS

Schools are considered the ideal place to address childhood obesity because it is where the majority of children spend a sizable portion of their everyday.5,6,7 School-based strategies usually take the following forms:

- Promoting a healthy diet that involves higher consumption of fruits and vegetables, and lower consumption of sugar, sodium and fat. This can occur through the provision of breakfast and lunch programs, modifying the menu in school cafeterias and daycares; and restricting the availability of junk foods by removing vending machines or restocking them with healthier choices.
There are several medium- to high-quality reviews that found positive effects produced by school-based interventions, although most seem to suggest that interventions using multiple strategies are more likely to be successful compared to those relying on a single strategy. One medium-quality review highlighted the importance of tailoring information to children at different fitness levels and including computer-based interventions in the design (See Wilson et al. report pp.17-23, 46-47). Another medium-quality review found interventions that involve children’s parents and friends are more likely to be effective. A medium-quality review found some evidence of educational campaigns changing participant’s knowledge and eating behaviours, while one low-quality review found only small increases in healthy eating patterns after such campaigns (see Wilson et al. report pp.17-19).

2. COMMUNITY DESIGN AND ACTIVE TRANSPORTATION

Consideration of the design of urban spaces and neighbourhoods is critical in tackling childhood obesity at a population level. Neighbourhood walkability, availability and quality of parks and green space, distance to school and connectivity of streets all impact how much children play outdoors and how much active transport families undertake in their daily routine. The issues related to the built environment are highly-correlated to income inequity and are a particular challenge for high poverty neighbourhoods, as well as rural and remote areas. Below are some specific strategies:

- Working with municipalities and urban planners to enhance and/or preserve the built environment to support active transportation. This includes building parks and green spaces, connecting large and small streets, providing sidewalks and biking lanes, as well as traffic calming devices on residential roads.
- Building more local schools so that they are close enough for resident children to walk to. In addition, implementing organized walking programs that encourage parents to walk their kids to school, or establishing supervised community walking routes.
- Adopting an equity lens and working collaboratively with
disadvantaged groups (i.e. urban neighbourhoods, remote regions) to find context-specific solutions.

**Evidence Review**

One medium-quality literature review that examined 169 studies found overwhelming evidence of a beneficial association between the built environment and levels of physical activity or obesity rates. Three reviews specifically report that the presence of infrastructure for safe physical activity and active transportation is linked to increase in activity levels. For more information, see pages 22, 77-78 in Wilson, et al.’s report.

3. **INDUSTRY AND FOOD SYSTEM**

The introduction of new policy at a local or provincial level often leads to profound changes in the health of the population. Presented below are several policy recommendations and community responses that have potential to effectively counter the rise in childhood obesity. They are options for community groups and concerned citizens to rally around and advocate for government action.

**Restricting advertising to children**

- Research shows that companies manufacturing sugary or fatty foods often direct their advertising toward children using media such as TV, internet, billboards, posters and product endorsements. Quebec provides a leading example in its prohibition of all commercial marketing and advertising to children during kids’ TV shows. The Quebec Coalition on Weight-Related Problems has called for an amendment to the *Food and Drugs Act* and *Competition Act*, to more comprehensively prohibit advertising junk food to children.

**Regulating food production, retail and services**

- Government can require restaurants and other food outlets to label all their menu items with caloric and nutritional information. It can also require that unhealthy food products marketed toward children (such as sugary cereal or chips) carry warning labels addressing parents.
- Price and tax measures can be used to make unhealthy children’s foods more expensive than more nutritious options. Alternatively, a ban can be placed altogether on such foods.
- Municipalities can provide tax incentives and subsidies to grocery stores, encouraging them to open in impoverished neighbourhoods and/or ‘food deserts’, in order to increase community access to healthier food choices.

**Community Food Security Strategies**

- Communities that mobilize around food security can foster new ways to address hunger and poor nutrition in its citizens. These present an alternative to relying on charity programs or mainstream food production/distribution channels. Organizing farmers’ markets and promoting the sale/use of local produce in grocery stores and restaurants is one way to help residents eat healthier while supporting their community.
• Measures like community gardens and community kitchens provide a source of low-cost fruits and vegetables to families. They also provide opportunities for physical exercise and teach valuable practical skills in food growing and handling, composting, canning, cooking and baking. In addition, studies have shown that children are more likely to eat foods that they have helped to grow or prepare.11

Evidence Review

Two high-quality reviews found strong evidence suggesting that commercial advertisement influences children’s food preferences and purchase requests. Several high- to medium-quality reviews found evidence that financial incentives, price and tax measures are especially effective in changing consumer’s purchasing behaviour, as well as body weight and incidence of disease. Most reviews have found the use of nutrition labels to be consistently linked to healthier diets; however, results differ greatly between subgroups and context studied (see Wilson et al. report pp.18-19). Regarding community food security measures, there does not appear to be any publication available that comprehensively synthesizes studies conducted on this area. A review of community kitchens,12 and a survey of 25 community gardens in New York13 found that both strategies promoted community empowerment and built capacity in participants. While evidence for these strategies’ direct impact on obesity rates is limited, scholars agree that food security responses implemented at a community level holds great potential for healthy weights promotion.

4. PROMOTE BREASTFEEDING

Getting children started on the path to health often begins with their parents and caregivers. Parents have a unique role in being the first and most vital contact in a child’s life. When a mother receives adequate prenatal care, when parents or caregivers model healthy lifestyle choices, and when they create an emotionally nurturing home environment, they can decrease a child’s risk for becoming overweight or obese later in life. One factor that is particularly pertinent to any discussion around childhood obesity prevention is breastfeeding. Studies have consistently found that breastfed babies are less likely to become obese later in life.6 As a result, public health has taken a number of initiatives promoting breastfeeding. Specifically, these initiatives focus on:

• Addressing institutional barriers to breastfeeding by making public spaces and work sites breastfeeding friendly.
• Addressing social norms and knowledge by promoting the message that breastfeeding is normal, natural and good for the baby.

Evidence Review

One systematic review of 59 studies found that delivering small, informal, group education classes to pregnant women can be effective in increasing the duration of breastfeeding. Institutional changes in hospitals, where a majority of women give birth, can
also have a strong impact. The Baby-Friendly Hospital Initiative is one such case where staff take active measures to educate and support women to exclusively breastfeed for the first six months of their infant’s life.14 See page 23 in the Wilson et al. report for more information.

**Conclusion**

This resource can serve as a starting point for service providers and advocates to learn more about this topic and to share other successful strategies. Readers can further explore the academic and grey literature provided here to help inform the development of local strategies. In order for an intervention to be successful in the community setting, a multi-pronged approach is recommended. Those involved in improving the health of our children, must take stock of the complex, interacting factors affecting children’s health at all levels. A healthy future for the next generation is in our hands today.

**References**


HC Link works with community groups, organizations, and partnerships to build healthy, vibrant communities across Ontario. We offer consultations, learning and networking events, and resources in both English and French. Our services are funded by the Government of Ontario and are provided free of charge where possible.

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