

Health Policy Research Program Summary of Research Results

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| Title: | Are Integrated Approaches Working to Promote Healthy Weights and Prevent Obesity and Chronic Disease? |
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| Project Completion Date: | March 2004 |
| Research Category: | Synthesis |
| Institution: | University of Calgary |
| Project Number: | 6795-15-2002/5440003 |

Summary

Chronic non-infectious illnesses, such as cardiovascular disease, type 2 diabetes, and cancer, are the **leading cause of death and disability in Canada** and worldwide. One risk factor common to these health problems is excess body weight, often described as obesity. The **proportion of Canadians who are overweight or obese has increased markedly** in recent decades, making this an important contemporary public health problem in Canada. Various studies show that:

- the prevalence of obesity among Canadian **adults** increased from **9.7% in the 1970s** to nearly **15% in 1998**;
- among Canadian **children**, the prevalence of obesity increased from **2% in 1981** to nearly **10% in 1996**;
- the **direct cost** of treating and managing obesity in Canada has been estimated at **\$1.8 billion** (1997 dollars), representing **2.4% of total health care expenditures in Canada**.

While the bulk of existing research has envisioned excess weight as a characteristic of individuals, it is more appropriately viewed as a **problem of populations**. This is because the primary contributors to excess body weight – physical activity and diet – are not behaviours that are chosen by individuals in isolation. Rather, they are behaviours whose nature and frequency are nested within and constrained by various circumstances. These include: **social** (e.g., social norms), **economic** (e.g., the distribution of income across a population), **cultural** (e.g., cultural practices around food and the body), **political** (e.g., agricultural and taxation policies), and **physical** (e.g., nearby facilities and resources) **circumstances**.

As a result of such circumstances, **entire populations have become heavier over time**, and the causes of these trends are best understood as population-wide, rather than as characteristics of individual persons. Further, because of the multi-faceted, multi-level, multi-sector, and population-wide nature of “risk factors” for excess body weight and related chronic diseases, these health outcomes **lend themselves to an *integrated approach*** to research and intervention.

To examine whether existing integrated approaches among populations are effective in this context, we **conducted an extensive review of the literature on integrated approaches to the prevention of excess weight and chronic diseases among populations**. In other words, we reviewed the literature on integrated strategies to promote healthy body weights, and thus prevent obesity and related chronic diseases, in entire populations (including schools, worksites, and whole communities).

What we found

- *Discussion of “integration” in the literature was mainly conceptual or theoretical*, as opposed to taking the form of a specific action plan. This makes it difficult to understand the feasibility of implementing an integrated strategy, and to understand its impact.
- *“Integration” took different forms in the literature*, including vertical integration (i.e., a focus on a number of different levels of influence – such as individual-level knowledge or attitudes, and the physical environment); and horizontal integration (i.e., integration across organizations, or sectors, designed to increase capacity, maximize resources, and minimize duplication of effort).
- *The majority of interventions detected in our literature review were of the vertical integration sort*, and took place in discrete settings such as schools, worksites, or communities. Interventions involving horizontal integration were infrequently encountered, and when they were encountered, they were unlikely to have included an outcome evaluation.
- *Evaluation of integrated interventions can be tricky*. Many integrated interventions do not lend themselves to a randomized control trial (RCT) design (considered a powerful design for gathering evidence), and even when a control group is included, it is difficult to discern an intervention effect. While we should not abandon the RCT format, we need to remain aware of this issue.
- *There is a large amount of evidence available on vertical integration*. This evidence is mixed, and overall there is no consistent, compelling portrait in favour of vertical integration. In contrast, we found evidence that some single-component (non-integrated) interventions can be quite effective.
- *It is not possible to draw a conclusion about the impact or effectiveness of horizontal integration*, since evidence on this type of integration is limited. However, the available evidence suggests that achievement of partnerships and collaboration alone has not halted continued weight gain among populations. We need to go beyond creating organizational capacity, to conduct and evaluate

- sufficiently resourced interventions (which themselves may or may not be vertically integrated).
- *“Upstream” factors (i.e., social, economic, political, cultural circumstances) are rarely incorporated into intervention strategies, and interventions that target these influences are virtually absent in the health literature. Strong evidence of the importance of these factors is found in correlational research, and there is an emerging consensus that incorporation of these factors will be crucial to improving our current health profile.*
 - *Overall, it must be noted that our collective efforts to promote healthy weights are not working, given the significant trend towards a heavier Canadian population.*

Recommendations for research and funding:

- *An investigation into the “non-health” literatures, to understand the impact on health of policies and practices in other sectors. Social policy interventions (e.g., housing, child care, income supplement) and private sector practices (e.g., marketing, management) are unlikely to be found in the traditional published health literatures; in order to engage these public and private sectors, we need evidence of their impact – which is likely to be found outside of the health literatures.*
- *An investigation into economic incentives for diet and physical activity, including food taxation policies; subsidized facilities, services, and equipment; and disincentives for driving such as congestion charges and higher parking fees. This investigation should consider the feasibility of implementing and maintaining such initiatives, and potential consequences.*
- *Sufficient funding to ensure proper evaluation of health promotion interventions. While evaluation should be considered for all health promotion interventions, the evaluation scope needs to be tailored to what the outstanding questions are (e.g., distribution of effects, unintended consequences of intervention, cause and effect). Depending on the nature of the project, this may require a long term commitment of funds. The necessity of accommodating long term evaluation funding is consistent with the life course perspective, which emphasizes the influence of factors in early life upon health in adulthood.*
- *Evaluation of social policy interventions. Along with the need to evaluate interventions conducted by practitioners in the health sector, we need to monitor the health impact of actions in the “non-health” sector such as those mentioned above: social policy interventions (e.g., housing, child care, income supplement) and private sector practices (e.g., marketing, management).*
- *A requirement that evaluation includes an assessment of distribution of impact. A desirable aim for population health interventions is to yield an equitable impact, as opposed to an effect that is concentrated in particular population subgroups (usually those of higher social status). At present, we don’t know whether this is the case, as most interventions do not report this information.*
- *Continued funding for synthesis research, but with greater clarity and communication regarding the dissemination strategy. In the early stages of research, the researchers and potential end-users should work together in a*

- formalized, resourced manner such as a teleconference, to identify the intended audience of the work, and the appropriate dissemination strategy; for example, alignment with national and/or provincial chronic disease prevention alliances.
- *Establishment and maintenance of continuous, long-term population-level surveillance for key variables at the individual and environmental level.* This surveillance is essential to the accumulation of evidence on macro- and micro-level factors and their impact on changes in population health. Various sources of data should be exploited, including agriculture and transport sectors, and findings should be communicated to the public. Key priorities for surveillance include:
 - *Individual self-report data on physical activity and, particularly, dietary intake* (the latter is extremely infrequent in Canada), including information on car ownership, driving time, frequency of restaurant patronage, frequency of walking/cycling to work and school, and details of home food preparation.
 - *Macro-level trends and policies that have implications for food and nutrition*, including the actions of the food industry (e.g., food product content, portion size, advertizing strategies, restaurant/outlet proliferation), and agricultural sector policies.
 - *Macro-level trends and policies that have implications for physical activity*, including transport, urban design, and land development.
 - *Funding for research-policy placements* such as policymaker participation in the research process and vice versa, as a means of improving understanding of the different cultures, and reducing the intimidation that may be felt by working outside one's area of expertise and comfort. As a template for this interchange, one might draw from Health Canada's voluntary sector policy internship (http://www.hc-sc.gc.ca/hppb/voluntarysector/policy_internships.html) or the Canadian Health Services Research Foundation's researcher – decision maker partnership (http://www.chsrf.ca/cadre/index_e.php).
 - *An investigation into how to facilitate intersectoral integration in government.* This could take place in the context of the research-policy placements, or it could be an opportunity available to students or trainees interested in the politics of health. This investigation could begin by looking at case studies of governments (regional, provincial, national) in which an incentive system to encourage cross-sector engagement has already been attempted (if any exist).

Recommendations for policy:

- ***Action, with a commitment to evaluate.*** We have selected the following recommendations on the basis of two considerations: first, on the basis of *consistent correlational or causal evidence* from etiological or intervention research; and second, on the basis of their potential to have an *impact that is equitable across the population* rather than concentrated among groups of higher social status. *Thorough evaluation* of the impact of these initiatives is essential and needs to be fully resourced. Because the following recommendations are

based on different types of evidence (a defining characteristic of the literature), we assign an equal weight to each in terms of priority.

- **Regulation of advertizing and promotion of foods to children.**

There is strong evidence in favour of an association between time spent watching television and excess body weight among children, and research suggests that the most compelling mechanism for this association relates to exposure to the promotion of nutritionally poor food items. Both excess body weight and time spent watching television are higher among children from lower income families, and efforts to reduce television consumption need to take this socioeconomic gradient into account. Advertisements during children's television programs predominantly feature highly processed, non-nutritious foods; these foods are in turn highly desired and over-consumed. Thus, we assert that targeting food advertisements may have a large and equitable impact, as opposed to admonishments to watch less television, which are likely to disproportionately reach families of higher socioeconomic means.
- **Improvement of the “walkability” of neighbourhoods.**

A growing body of research supports an association between the “walkability” of neighbourhoods (e.g., presence of sidewalks, pedestrian/car separation, safety, aesthetic dimensions such as trees, variety of destinations, amenities such as benches) and both higher levels of walking, and lower body mass index. We assert that it is time to act on the basis of these associations, to make our neighbourhoods safer and more pleasant for walking (and other exercise), playing, and socializing. One suggestion is to devise and conduct a health impact assessment of major planning proposals, to ensure their attention to this issue.
- **Fiscal policies to facilitate healthy lifestyle.**

There is evidence showing that price has important implications for food purchasing behaviour, and research suggests that, on a calorie per cost basis, less nutritious foods are cheaper. Suggestions for fiscal policies include subsidization of healthier foods (e.g., fruits and vegetables, whole grains, low fat milk) as well as recreation or sporting opportunities; and taxation of less healthy foods (e.g., highly processed food items, foods containing trans fatty acids) as ways of facilitating a healthier diet, equitably across the population.
- **Whole school interventions to facilitate health.**

Schools represent a means of accessing nearly every child, and therefore are ideal venues for shaping healthy development. Interventions should focus on “whole school” efforts, including policies to ensure nutritious, affordable, and appealing food in cafeterias and vending machines (examples: mandate availability of fruit and vegetables; restrict availability of foods containing trans fatty acids or high levels of saturated

fat; consider issuing school food service contracts to local growers); ensuring regular physical activity and education around food preparation and time management skills; and providing opportunities for student involvement and engagement both in the classroom and in after-school activities so that students feel connected to each other and their environment. As a suggestion for monitoring, progress towards improvement in nutrition, physical activity, and social environment could be incorporated into school inspection criteria.

- **Whole worksite interventions to facilitate health.**
Worksites similarly represent a means of accessing a large proportion of the adult population. Interventions should be of a “workplace-wide” nature, including policies to enable flexible work hours, provision of child care facilities, provision of exercise and shower facilities, improvement in cafeteria food quality and price, and opportunities for employee involvement and engagement. An incentive system may need to be created, whereby worksites of all kinds are rewarded (e.g., with positive publicity) and compensated financially, for adoption of such structural changes.
- **Incentives for intersectoral integration in government.**
There is plenty of evidence in support of an association (correlation) between non-health sector factors (e.g., education, housing and employment conditions) and health, and the policy recommendations above will require intersectoral integration to occur. Currently, working outside of one’s mandate is discouraged, and efforts to reverse this tendency are necessary. One suggestion is to implement a reward system for cross-sectoral engagement (e.g., agricultural sector is rewarded for aligning policies with public health goals); another suggestion, in line with recommendations in the UK, is to appoint a specific public health committee to monitor health targets (related to obesity and chronic disease) across all relevant government sectors.

**The views expressed herein do not
necessarily represent the views of Health Canada**

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- The print version of the full report can be obtained in the language of submission from the Health Canada Library through inter-library loan.

- An electronic version of the report in the language of submission is available upon request from Health Canada by e-mailing rmddinfo@hc-sc.gc.ca.

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