Canada on the Move
A Novel Effort to Increase Physical Activity Among Canadians

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This issue of the Canadian Journal of Public Health contains several articles related to a novel public-private collaboration to increase physical activity among Canadians. Because physical activity plays a critical role in the reduction of chronic diseases, assessment of the impact of unique efforts such as this campaign to change physical activity levels provides important information that can be incorporated into future interventions.

In December 2003, Kellogg Canada initiated a series of media messages to walk more and use step counters (pedometers), and in January 2004, began distributing 2 million pedometers in specially marked cereal boxes of Special K* and Special K* Red Berries. Also in December, the Canadian Institutes of Health Research (CIHR) in collaboration with Kellogg Canada and several other partners initiated a Canada on the Move (COTM) website (www.canadaonthemove.ca) that was used to collect data to assess the impact of the pedometer distribution and to promote walking. Use of the website was encouraged on Kellogg’s* cereal boxes, and separate press releases from CIHR and Kellogg Canada publicized the project and the importance of increased walking. The articles included in this issue represent some of the research supported by the Institute of Nutrition, Metabolism, and Diabetes of CIHR, and examine the campaign from a variety of perspectives, using several different and complementary sources of data.

Despite the wide distribution of pedometers through a variety of programs, the uptake, duration and health effects of pedometer use have not been extensively studied. In theory, the use of a self-monitoring measure like a pedometer should reinforce walking behaviour and its health benefits. Whether pedometers successfully facilitate this outcome depends on whether the target audience for the initiative is reached and perceives a benefit in walking, whether pedometer use reinforces the behaviour, and whether the use of a pedometer with complementary messages that promote its use sustain walking sufficient to create a health benefit. Although the studies included here do not address all of these questions, they provide some useful insights into this problem.

One of the first concerns is whether the pedometers distributed accurately captured the level of physical activity of those who used them. The article by Tudor-Locke et al. (in this issue) provides a useful comparison of the pedometer distributed by Kellogg Canada with another pedometer, as well as walking measured by an accelerometer. Unfortunately, the pedometer distributed by Kellogg Canada was 45% less accurate than the accelerometer, compared to 19% for the alternative pedometer, and detected more non-steps than the comparison pedometer. Because reduced accuracy will be counterbalanced by increased recording of movements that are not due to steps, these errors may have partially cancelled each other when pedometers are used under day-to-day circumstances. The extent to which cancellation occurred was not examined. Furthermore, the effects of the pedometer errors on the physical activity of those who used them remain uncertain. Lower recorded pedometer steps might increase walking if a user had set total number of steps as a goal. However, it is equally possible that pedometer inaccuracy might prompt some individuals to become discouraged if they made a substantial effort to increase physical activity and the pedometer did not accurately reflect their efforts.

Among the most innovative aspects of the COTM initiative was the use of the COTM website to collect data regarding the initiative’s effect on factors affecting walking among those who came to the website, and the impact of campaign awareness on pedometer use. Websites have rarely been used to recruit and characterize groups targeted for intervention. Therefore, comparisons of those who came to the COTM website with the general population are essential to determine how these respondents compared to the Canadian population. Overweight, middle-aged women were over-represented among respondents who came to the COTM website. This group was not representative of the general population, but it apparently was the target market for these cereal products and may have more accurately reflected the consumers who purchased the cereals that contained the pedometers. Although the 3,000 individuals who provided data on the web page were a small fraction of the people who received pedometers in cereal boxes, and therefore must be considered a convenience sample, the data provided suggest several important testable hypotheses to improve the walkability of neighbourhoods. Among the women who responded to the survey, neighbourhood aesthetics and walking destinations such as shops significantly increased the likelihood of walking sufficient to achieve a beneficial health effect. No significant association of walking with environmental variables was observed among men. These observations suggest that sidewalks to support physical transit may not by themselves increase rates of walking unless the sidewalks and bicycle trails have attractive destinations. Physical activity that can be integrated into other daily activities may increase the likelihood of the behaviour and its consequent health benefits more than exercise performed only for its health benefits.

Data regarding the impact of the publicity surrounding the campaign on pedometer use were collected from an ongoing representative survey that monitors physical activity in the Canadian population. Despite the limited national publicity that accompanied the campaign, a 6% increase

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in those who had heard about Canada on the Move occurred after the campaign’s initiation, and recall of the more specific message of “add 2,000 steps” increased three-fold. Awareness of pedometers increased from approximately 40% before the campaign to a maximum of almost 65% over the course of the campaign, and pedometer ownership increased by almost three-fold, both because of pedometer purchase and cereal box distribution. Although the recognition of the campaign and its associated messages was still low, these data may provide a preliminary estimate of the passive effects of a cereal box message on the recognition of a health message and the upper limit of the behaviour change that can be expected from it if awareness is tightly linked to behaviour.

Did Canada on the Move succeed? Like other pedometer campaigns, we have virtually no information on the use, duration and health impact of the COTM initiative. However, given the limited resources available to CIHR, such outcome data were beyond the scope of the project. The increases in pedometer ownership, awareness of the pedometers and their use, and the factors that influence walking in Canada are substantial results, particularly in view of the largely passive nature of the media campaign used to increase physical activity. Use of the Internet to collect data is only as useful as those who come to the site. In federal systems, concerns about privacy and reporting burden may limit the utility of this approach.

Perhaps the most important outcome for Canada is the experience acquired from the public-private partnership that was developed to implement Canada on the Move. As was the case with nutritional deficiency diseases, food companies must become collaborators to address the epidemic of obesity. Obesity results from an imbalance between energy intake and expenditure. Although a focus solely on energy expenditure is unlikely to resolve the epidemic, increased physical activity will reduce many of the morbid complications of obesity. Resolution of the epidemic will likely require more than increased physical activity. It seems likely that modification of the food supply or food consumption will also be required. The food industry is clearly better qualified than public health authorities to identify and implement these changes. However, public-private partnerships with the food industry may help move industry to modify the food supply in ways to reduce caloric intake, and may support and promote the changes that industry makes. The CIHR-Kellogg Canada collaboration represents a good first step.

REFERENCES