Examining Aspects of the Built Environment: An Evaluation of a Community Walking Map Project

Candace I.J. Nykiforuk, PhD,[1] Laura M. Nieuwendyk, MSc,[1] Shaesta Mitha, MPH,[2] Ian Hosler[3]

ABSTRACT

Objective: Interventions that address the built environment present an opportunity to affect behaviours such as physical activity. The purpose of this study was to evaluate a community walking map developed for eight neighbourhoods in the City of Edmonton (COE).

Method: A walking map developed in partnership with the COE's Walkable Initiative was distributed to 11,994 households across eight neighbourhoods in July 2010. In total, 149 respondents completed an online follow-up survey that assessed the effectiveness of the walking maps in influencing physical activity.

Results: Of the 149 respondents, 89 (59.7%) reported that they had received a copy of the map, and 60 (40.2%) reported that they had not. Of those who had a copy, 76.4% (n=68) indicated that the routes and destinations on the map encouraged them to walk more in the community, 64.0% (n=57) stated they would walk more often to get to destinations, and 55.1% (n=49) indicated they would walk more often for physical activity or exercise as a result of having a copy of the map. Finally, 91.0% (n=81) stated that they found the map to be useful, as it provided walking routes (60/81, 74.1%,) and places to go in the community (57/81, 70.4%). Of those who did not receive a copy, 95.0% (n=57) indicated that they would use a community walking map.

Conclusion: This evaluation demonstrated that a community walking map was a valuable tool for not only encouraging walking for physical activity but also motivating individuals to explore their communities and visit local community destinations.

Key words: Built environment; walking; physical activity; health promotion; urban health

La traduction du résumé se trouve à la fin de l'article.

Can J Public Health 2012;103(Suppl. 3):S67-S72.

Concern about obesity rates in Canada has resulted in various community-based health promotion interventions to increase physical activity.[1-3] Despite growing evidence of the benefits of physical activity in preventing and controlling chronic diseases,[3] most Canadian adults are not sufficiently active to reap the health benefits of a physically active lifestyle.[4,5]

Walking is the most frequent and preferred form of physical activity across both sexes and different ages and income levels.[6,7] Walking is accessible, as it requires no special skills or equipment, is affordable and can be made easily routine, particularly if done for active transportation.[8] Thus, the quality of walking routes and the presence, type and convenience of destinations in a community affect how much people walk.[6] Clearly, identification of safe and convenient walking routes that enable residents to reach destinations is crucial to promote walking for physical activity.

Community-based interventions that target walking for recreation or active transportation support increased physical activity.[9] They engage stakeholders and are tailored to consider community characteristics and needs with the goal of reducing the population's risk of disease.[10] Walking trails are useful community-based physical activity interventions, but despite the apparent beneficial effects, may be under-used once implemented.[11]

In the current project, community consultation revealed that development of a map of local walking routes was more viable and economically feasible than developing walking trails. This paper will discuss the evaluation of a walking map developed for one geographic community in the City of Edmonton (COE), Alberta. The evaluation sought to identify whether the map encouraged walking among residents and to assess its value as a tool for informing them about community assets and destinations.

METHODS

Background

Researchers collaborated with the COE's Walkable Edmonton initiative for the evaluation. Community walking maps provide routes throughout the designated area while guiding residents to specific destinations or points of interest. The maps produced as part of the "Communities on Foot" Walking Map Series (http://www.edmonton.ca/community-walking-maps.aspx) aim to: 1) encourage citizens of all ages to partake in active transportation, particularly walking; 2) encourage community members to walk and explore their neigh-

Author Affiliations

1. Centre for Health Promotion Studies, School of Public Health, University of Alberta, Edmonton, AB
2. Health Facility Planning, Regional Municipality of Peel, Mississauga, ON
3. Walkable Edmonton, City of Edmonton Community Services, Edmonton, AB

Correspondence: Candace I.J. Nykiforuk, Asst. Professor, Centre for Health Promotion Studies, School of Public Health, University of Alberta, 3-258 ECHA, 11405-87 Ave., Edmonton, AB T6G 1C9, Tel: 780-492-4109, Fax: 780-492-0364, E-mail: candace.nykiforuk@ualberta.ca

Acknowledgements: Funding for this project was provided by the Heart and Stroke Foundation of Canada in partnership with the Canadian Institutes of Health Research. I. Hosler is a community partner who was employed by the walking map initiative.

Conflict of Interest: None to declare.

Table 1. Categorized Questions

Focus Area for Evaluation	Purpose
Awareness • Did respondents have a copy of the walking map? • Were respondents aware that a map had been developed for their neighbourhood?	To determine the number of individuals who had a copy of the map and whether they were aware that the map had been produced.
Map distribution • How did people get their copy of the map? • How would they like to get a copy of the map in the future?	To determine what tactics were effective in the dissemination of the map and how residents would like to receive it.
Short-term change • Did the map influence behaviour in the short term? • Did respondents walk more to local destinations or for recreation? • Did the map actually get respondents walking (distinction between exercise and purposeful walking)?	To compare the amount of time the respondents had the map with the number of routes they tried and to determine whether people actually walked the routes.
Long-term change • Did the map influence behaviour change in the long term?	To determine the long-term behaviour change produced by the map.
Personal impact • Did respondents find this product a useful resource?	To determine whether respondents found the map to be a useful tool in identifying safe walking routes in their community.
Community impact • Is this a worthwhile project or resource for the community? • What other benefits for the community were associated with doing this project? • Have respondents visited local destinations highlighted in the map?	To determine the value respondents placed on the map and whether they had visited local destinations shown on the map.
Map perception • What aspects of the map did the respondents like or dislike?	To determine what aspects of the map were viewed as valuable by the respondents and what they did not like.
Map improvement • How could this be a more useful tool/resource?	A list of potential map improvements was provided to respondents to check all that apply in terms of the types of change that would make the map a more useful tool.
Demographic information • Demographic information	General demographic data were necessary to obtain information on the types of individual who responded.

Table 2. Profile of Survey Respondents

Respondent Characteristics		Total n (%)	Walking Map (YES) n (%)	Walking Map (NO) n (%)
	Male	43 (28.9)	31 (34.8)	12 (20.0)
	Female	103 (69.1)	57 (64.0)	46 (76.7)
	Prefer not to answer	3 (2.0)	1 (1.1)	2 (3.3)
	Total	149 (100.0)	89 (100.0)	60 (100.0)
Age	18-34	34 (22.8)	22 (24.7)	12 (20.0)
	35-54	75 (50.3)	48 (53.9)	27 (45.0)
	55+	36 (24.2)	18 (20.2)	18 (30.0)
	Prefer not to answer	4 (2.7)	1 (1.1)	3 (5.0)
	Total	149 (100.0)	89 (100.0)	60 (100.0)
Household income (N=149)	Less than $23,000	14 (9.4)	7 (7.9)	7 (11.7)
	$24,000-$60,000	51 (34.2)	34 (38.2)	17 (28.3)
	More than $60,000	51 (34.2)	28 (31.5)	23 (38.3)
	Don't know	1 (0.7)	1 (1.1)	–
	Prefer not to answer	31 (20.8)	18 (20.2)	13 (21.7)
	Missing	1 (0.7)	1 (1.1)	–
	Total	149 (100.0)	89 (100.0)	60 (100.0)
Neighbourhood (N=149)	From walk map area	99 (66.4)	68 (76.3)	31 (51.6)
	Outside walk map area	37 (24.8)	18 (20.2)	19 (31.6)
	Don't know	4 (2.7)	1 (1.1)	3 (5.0)
	Missing	9 (6.0)	2 (2.2)	7 (11.7)
	Total	149 (100.0)	89 (100.0)	60 (100.0)

bourhoods, parks, trails and business districts; and 3) foster community engagement in building a walkable city.[12] The walking maps are created by residents for residents: residents are recruited to participate in map production and are given the task of identifying key walking routes and destinations within their community.

Setting

The evaluation focused on a walking map recently prepared for a community comprising eight contiguous neighbourhoods in inner-city Edmonton. This community is proximal to the downtown core and contains some of the city's oldest neighbourhoods. The area includes a range of housing styles, from small bungalows to larger two-storey homes, and a variety of business districts. This community has a diverse population with average incomes significantly lower (by about 35%) than the total average income of the municipality.[13] The community walking map depicts 10 sample walking routes ranging in length from 1.4 to 5.0 km with at least one route through each neighbourhood. Historical information about each neighbourhood is provided, and key community locations and amenities are indicated, including community centres, schools, health centres, libraries, bus and light rail transit stations and stops, grocery stores, bakeries, hotels and recreational facilities. All information is superimposed onto an aerial photograph of the area, which also shows building footprints and road layouts (map can be viewed at http://www.edmonton.ca/transportation/AvenueCommunitiesWalkingMap.pdf).

Table 3. Summary of Survey Responses From Those Respondents Who Had a Map

Question	Total n (%)
How did you get your copy of your community walking map?	
In the mail	54 (60.7)
From a friend or family member	5 (5.6)
From a place in my community (e.g., library)	16 (18.0)
Other (e.g., internet)	10 (11.2)
Missing	4 (4.5)
Total	89 (100.0)
Have you tried any of the walking routes identified?	
Yes	43 (48.3)
No	46 (51.7)
Total	89 (100.0)
How many of the routes have you used in the maps?	
1	15 (34.9)
2	10 (23.3)
3	12 (27.9)
4	1 (2.3)
5	3 (7.0)
Don't know	2 (4.7)
Total	43 (100.0)
Have you used the maps to discover new places to visit in your community (e.g., the library, parks or coffee shops)?	
Yes	39 (43.8)
No	50 (56.2)
Total	89 (100.0)
How many of the community destinations have you visited since getting the map?	
1 to 2 locations	22 (56.4)
3 to 4 locations	10 (25.6)
5 to 6 locations	3 (7.7)
6 to 10 locations	2 (5.1)
Don't know	2 (5.1)
Total	39 (100.0)
Have the routes and destinations on the map encouraged you to walk more in your community?	
Yes	68 (76.4)
No	21 (23.6)
Total	89 (100.0)
How have the maps encouraged you to walk more? (check all that apply)	
To visit places in my community (e.g., library or coffee shop)	34 (50.0)
To get more exercise	45 (66.2)
To get out and enjoy my community	40 (58.8)
To learn about the history of my community	22 (32.4)
To become familiarized with my community	45 (66.2)
To get to know other members in my community	9 (13.2)
Other	5 (7.4)
Do you think that you will walk more often to get to destinations because you have the map?	
Yes	57 (64.0)
No	31 (34.8)
Missing	1 (1.1)
Total	89 (100)
Do you think you will walk more often for physical activity or exercise because you have the map?	
Yes	49 (55.1)
No	39 (43.8)
Missing	1 (1.1)
Total	89 (100)
Do you find this map useful?	
Yes	81 (91.0)
No	8 (9.0)
Total	89 (100)
Yes	
Provides places to go in the community	57 (70.4)
Provides walking routes	60 (74.1)
Other (e.g., length of route is provided, useful for visitors/new community members, good for exploring community, used for cycling routes, and crosswalk locations provided)	15 (18.5)
No	
Does not provide places I want to go in the community	1 (12.5)
Does not provide me with appropriate walking routes	2 (25.0)
Other (e.g., unsafe areas to walk, lived in the area for a while – don't need a map to walk)	6 (75.0)

Design

In July 2010, the Canada Post Unaddressed Admail System, which delivers mail through generic postal codes, was used to distribute 11,994 walking maps to all households (houses and apartments) in the mapped area. After this mail-out, a cross-sectional, post-test-only survey was used to collect information on the effectiveness of the maps in encouraging walking in the community. The 10-minute survey was available online through a link from the COE website. A variety of methods were used to recruit the area's adult population while retaining opportunities for minority or harder-to-reach populations to participate.

Recruitment methods included a hot-link button on the COE website, manned poster displays at key locations and distribution of two separate reminder postcards (including information about the map, survey and locations with free internet access) to all households. To gather feedback from residents who did not receive a copy of the map, student volunteers were present at key locations in the community (e.g., library, grocery store, ethnic centre) during the month of October 2010 to hand out maps and postcards to encourage survey participation. Given the low-income status of the neighbourhood, internet access to complete the survey was of significant concern. A toll-free number was established so that those without internet access could complete the survey over the telephone with a member of the research team. Discussion with community partners revealed that incentives should be provided to encourage residents to complete the survey. To meet this need, an early bird draw prize ($100 gift certificate to a local grocery store) and grand prize (mountain bike and helmet valued at $500) were provided.

Ethical clearance for the project was received from the Health Research Ethics Board (Panel B), University of Alberta.

Sample

Respondents were recruited from the eight contiguous neighbourhoods represented on the map and from surrounding neighbourhoods. A total of 155 people, aged 18 years or older, participated (i.e., 1% of households in the map area).

Measures

Survey questions were developed in collaboration with Walkable Edmonton and other community partners involved in the map production to ensure that the findings would be relevant for program providers. New questions were developed to meet community needs, as a literature review revealed no previous indicators reported from similar evaluations. Survey questions were simply stated and attempted to measure awareness of the map, participation in map development, short-term behaviour change, community impact and suggestions for map improvements. A separate set of questions was developed for respondents who did not receive a copy of the map. Table 1 summarizes the survey questions.

Respondents were asked to identify which neighbourhood they resided in and whether they had a copy of the map. While the maps were delivered to every household in the community, respondents might not have received one or might have discarded it. Respondents who did not have a copy of the map were directed to a shorter version of the survey that asked whether they would find the map useful, had ideas on the best way to share it with the community, and would like to receive a copy of it; those who did were directed to Walkable Edmonton. Respondent demographic information (age, household income and number of individuals residing in the household) was collected in both versions to facilitate characterization of respondents and groups not reached through the evaluation design.

Table 4. Summary of Survey Responses From Those Respondents Who Did Not Have a Map

Question	Total n (%)
Were you aware that a community walking map was created for your community with routes and key destinations?	
Yes	26 (43.3)
No	34 (56.7)
Total	60 (100.0)
Would you like to have a map of your community with walking routes and interesting destinations (e.g., coffee shops and parks) identified?	
Yes	34 (56.7)
What would be the best way for us to get the community walking maps to people in the community? (check all that apply)	
Through the mail	24 (70.6)
Have it available at community locations (e.g., coffee shop, library or grocery store)	25 (73.5)
E-mail	11 (32.4)
Online	18 (52.9)
Other	7 (20.6)
Would you use a community map?	
Yes	57 (95.0)
No	3 (5.0)
Total	60 (100.0)
Please tell us why you would not use a community map with walking routes and destinations?	
Not interested in my community	1 (33.3)
Other	1 (33.3)
Missing	1 (33.3)
Total	3 (100.0)

Analysis

Survey data were analyzed using SPSS v.18.0. Descriptive statistics and frequencies were calculated.

RESULTS

Of the 155 respondents, 57.4% had a copy of the walking map, 38.7% did not, and 3.9% opted not to complete the survey past the first question and were excluded from further analysis. Of the resulting 149 respondents, there were more females (69.1%) than males (28.9%), and a range of income brackets was represented. The majority of respondents (66.4%) lived in the map area, and 24.8% were from surrounding neighbourhoods. Only four respondents had participated in the development of the map. Table 2 provides the demographic profile of respondents.

Table 3 summarizes survey responses for the 89 respondents who had a walking map. Most of those respondents (60.7%) received their maps through the mail, and 18.0% obtained a copy from community destinations. In total, 48.3% had tried a walking route identified on the map, with variation in the number of routes tried. Of the 43.8% of respondents who used the maps to discover new places in the community, 56.4% visited one to two locations, and 38.4% visited multiple locations.

The majority of respondents (76.4%) agreed that the routes and destinations on the map encouraged them to walk more in the community, their rationales including the desire to: get more exercise (66.0%); become familiarized with the community (66.2%); get out and enjoy the community (58.8%); visit places in the community (e.g., library or coffee shop) (50.0%); and learn about the community's history (32.4%) (Table 3). Overall, respondents stated that, as a result of having the map, they would walk more often to get to destinations (64.0%) and for physical activity or exercise (55.1%). Finally, 91.0% stated that they found the map useful as it identified walking routes (74.1%) and places to go in the community (70.4%).

Table 4 summarizes survey data for respondents who did not have a map, of whom 56.7% were not aware that a walking map had been created for their community. All of these respondents expressed interest in obtaining the map. Respondents suggested sharing the map through community locations (e.g., coffee shop, library or grocery store) (73.5%); postal mail (70.6%); online (52.9%); and E-mail (32.4%). Overall, 95% of these respondents stated that they would use a community walking map.

DISCUSSION

This community-research partnership was an ideal opportunity to better understand residents' perceptions of a community walking map. The evaluation assessed whether the map's routes and destinations adequately met residents' needs and whether the map was being utilized as intended. Further, the survey provided insight on the reach of the map: the results describe perceptions from respondents in eligible households who did and did not receive the map. While findings were specific to this community, a general understanding of perceptions about walking maps can help researchers and community stakeholders develop future walking map initiatives.

Evaluation findings indicated that the postal mail-out was the most preferred means to distribute the maps, despite initial partner concerns that maps would be discarded (and despite the low response rates we experienced with this approach). This finding is congruent with similar programs, in which direct communication was respondents' preferred method of contact.[14] Yet, as a significant proportion of respondents did not have the map, concerted efforts are needed to ensure that the map is prominent among the plethora of advertisements received in the mail. The map also reached people from outside the map area, likely because of its availability at various community destinations and online. Thus, a walking map highlighting routes, destinations and interesting community information may be a useful way to attract visitors to the community.

Approximately half of respondents who had the map attempted one or more walking routes. Thus, short-term behaviour change was fostered, especially among those who reported that the map's routes and destinations encouraged them to walk more. While the evaluation did not assess previous walking behaviours, respondents expressed an inclination to walk more because they now had the map. This is consistent with previous studies' findings that individuals given maps of walking routes were twice as likely as controls to walk to work during a six-month follow-up.[15] One study has even indicated that short-term behaviour change related to increased walking was consistent with results at 10-year follow-up.[16] Given this potential, future research should explore the impact of walking interventions on long-term behaviour change.[17]

The participatory nature of this evaluation helped foster resident engagement and promote community development through stake-

holder involvement in the process. The exploration of residents' perceptions of the map revealed that community activity was enhanced in these neighbourhoods. This walking map demonstrated the potential to encourage residents to come out into the community, thereby creating opportunities for increased interaction. Respondents became more aware of walking for physical activity and of safe walking routes. Thus, the map was a powerful tool that helped respondents recognize existing opportunities by familiarizing them with their community and facilitating interaction with other community members.[18]

The majority of respondents indicated that the map was useful because of the walking routes, but only half had attempted walking a route. Respondents had received the map a few weeks before the survey, so may not yet have had time to try the routes. Although a small percentage found the map not useful, their responses to open-ended survey questions indicated that this was because of their perceptions of the community rather than of the map itself (e.g., respondents noted that it was unsafe to walk in the community, did not want to visit places in the community). Some of the walking routes did intersect with undesirable areas of this inner-city community, however, mobilizing residents to walk through these areas could increase street presence and informal monitoring. Pedestrian design enhancements (e.g., pedestrian-activated crossing signals) could also make walking the routes a more pleasant and a safer form of recreation or transportation.[19]

Respondents with a map provided feedback on whether the map was of interest/use to community members. Yet, about one third of respondents did not receive the map, and more than half of these respondents were not aware the map existed. Examination of map dissemination strategies offered insight into how to address this situation. Respondents indicated that postal mail was the best way to distribute the maps, followed by having them available at community locations and online. Thus, a combination of dissemination methods should be considered as viable means to provide access to the walking map, including use of alternative methods (e.g., posters or signs, community board postings) to increase the visibility of and community resonance with the initiative.[14]

Respondents' high level of interest in obtaining and using the walking map suggests that they are open to walking. Survey findings demonstrate that residents perceive the walking map to be a valuable information tool about options available in the community, and the depiction of various walking routes to be appealing. Communities should be enabled to develop walking maps as a means to foster community engagement, increase physical activity and encourage active transportation.

Strengths and limitations

Use of a community-university partnership approach strengthened this evaluation. Collaboration with key stakeholders was crucial to obtain project acceptance and facilitate evidence-gathering that would be meaningful for community action.[14,20] Here, evaluation findings were used by community partners in planning future initiatives.

The examination of perceptions of respondents with and without a copy of the map was advantageous as it allowed the team to gain a broader understanding of the overall value placed on the map by residents. Both groups valued the map as a tool to increase their knowledge of walking routes and local community destinations. Ultimately, this information is useful for public health practitioners, community leaders and government officials when forming physical activity, active transportation or community development initiatives.

While designed to reach as many potential respondents as possible with limited resources, this evaluation was limited by its cross-sectional, post-test-only survey design. The resultant data provided only a small snapshot of information. The survey relied on self-reported data and, to fit within the grant funding period, was available online for only a limited time (3.5 months), which began immediately after the map had been distributed. This may not have been an adequate amount of time to assess the impacts of the map on residents. Limited time and passive recruitment through postal mail along with the low socio-economic status of the area were likely the primary contributors to the very low response rate to the survey. It may be that those who responded did so because of a special interest in walking, walking maps or their neighbourhood.

Survey participation was limited to adults aged 18 and older, but the walking map was available to people of all ages. Consequently, a small sample and large proportion of female respondents limited the representativeness and generalizability of the findings. Given the short funding period for this program, a more extensive evaluation was not possible to discover resident perceptions and detect long-term behaviour change. Despite the shortcomings of the survey design, the approach was necessary to generate feedback on resident perceptions of the map in order to inform other COE map developments planned for the immediate future.

Future implications for research, practice and policy

Locally, future evaluation should consider the entire series of COE walking maps available to better understand the impacts of walking maps in different communities within the municipality over time. The ability to undertake such a wide-scale evaluation would require additional resources and support from government officials. More broadly, walking map evaluations should follow a pre-post survey design with multiple follow-ups to assess utilization as well as short- and long-term behaviour change. Gathering data on measured physical activity levels could enhance the proposed links between walking maps and behaviour. Future research would benefit from multiple recruitment strategies as well as integration of qualitative methods (e.g., focus groups) to explore utilization issues in greater detail.

There is little research examining walking maps as an intervention tool to promote physical activity and increase community awareness. Findings from this evaluation suggest that, when developing interventions to promote walking, practitioners should design a tool that: provides residents with a tangible item outlining safe walking routes; identifies pedestrian supports (e.g., crosswalk availability); demarcates key community destinations; and considers specific community needs and characteristics (e.g., multicultural destinations). This evaluation provides preliminary evidence that walking maps are valued by residents and are perceived as an effective means to increase local walking.

Community-based initiatives like walking maps must be supported by healthy public policy. For example, future health promotion interventions should consider urban planning or transportation policies as a means to support the development of walking-friendly environments. Finally, collaboration with profes-

sionals from various disciplines and involvement of key community partners (including residents) are also essential to map development and successful walking initiatives.

CONCLUSION

Walking is a form of physical activity accessible to individuals of all ages and in all types of built environments. Community walking maps are a valuable intervention to foster change in walking behaviours by informing individuals about walking route options and motivating them to explore their communities. By recognizing the potential of community walking maps, policy-makers and practitioners can work towards implementing this intervention to enhance citizen engagement and promote walking for recreation and transportation in their communities.

REFERENCES

1. Burke NM, Chomitz VR, Rioles NA, Winslow SP, Brukilacchio LB, Baker JC. The path to active living: Physical activity through community design in Somerville, Massachusetts. *Am J Prev Med* 2009;37(6 Suppl 2):S386-94.
2. van Sluijs EM, McMinn AM, Griffin SJ. Effectiveness of interventions to promote physical activity in children and adolescents: Systematic review of controlled trials. *BMJ* 2007;335(7622):703.
3. Warburton DE, Nicol CW, Bredin SS. Health benefits of physical activity: The evidence. *CMAJ* 2006;174(6):801-9.
4. Vanasse A, Demers M, Hemiari A, Courteau J. Obesity in Canada: Where and how many? *Int J Obes (Lond)* 2006;30(4):677-83.
5. Katzmarzyk PT, Gledhill N, Shephard RJ. The economic burden of physical inactivity in Canada. *CMAJ* 2000;163(11):1435-40.
6. Moudon AV, Lee C, Cheadle AD, Garvin C, Rd DB, Schmid TL, Weathers RD. Attributes of environments supporting walking. *Am J Health Promot* 2007;21(5):448-59.
7. Hooker SP, Cirill LA, Wicks L. Walkable neighbourhoods for seniors: The Alameda County experience. *J Appl Gerontol* 2006;26(2):157-81.
8. Dannenberg AL, Cramer TW, Gibson CJ. Assessing the walkability of the workplace: A new audit tool. *Am J Health Promot* 2005;20(1):39-44.
9. Moudon AV, Lee C. Walking and bicycling: An evaluation of environmental audit instruments. *Am J Health Promot* 2003;18(1):21-37.
10. McLeroy KR, Norton BL, Kegler MC, Burdine JN, Sumaya CV. Community-based interventions. *Am J Public Health* 2003;93(4):529-33.
11. Brownson RC, Baker EA, Boyd RL, Caito NM, Duggan K, Housemann RA, et al. A community-based approach to promoting walking in rural areas. *Am J Prev Med* 2004;27(1):28-34.
12. Walkable Edmonton. First Steps: Walkable Edmonton Committee 2008 Annual Report, 2008. Available at: http://www.edmonton.ca/for_residents/WalkableEdmontonAnnualReport2008.pdf (Accessed October 8, 2010).
13. City of Edmonton. Neighbourhood Profiles, 2010. Available at: http://www.edmonton.ca/for_residents/neighbourhoods/ (Accessed October 25, 2010).
14. Cooper C. Successfully changing individual travel behavior: Applying community-based social marketing to travel choice. *J Transportation Research Board* 2007;2021(11):89-99.
15. Mutrie N, Carney C, Blamey A, Crawford F, Aitchison T, Whitelaw A. "Walk in to work out": A randomised controlled trial of a self help intervention to promote active commuting. *J Epidemiol Community Health* 2002;56(6):407-12.
16. Pereira MA, Kriska AM, Day RD, Cauley JA, LaPorte RE, Kuller LH. A randomized walking trail in postmenopausal women: Effects on physical activity and health 10 years later. *Arch Intern Med* 1998;158:1695-701.
17. Williams DM, Matthews CE, Rutt C, Napolitano MA, Marcus BH. Interventions to increase walking behavior. *Med Sci Sports Exerc* 2008;40(7 Suppl):S567-73.
18. Miller EK, Scofield JL. Slavic Village: Incorporating active living into community development through partnerships. *Am J Prev Med* 2009;37(6 Suppl 2):S377-85.
19. Pucher J, Dijkstra L. Promoting safe walking and cycling to improve public health: Lessons from the Netherlands and Germany. *Am J Public Health* 2003;93(9):1509-16.
20. Horowitz CR, Robinson M, Seifer S. Community-based participatory research: From the margin to the mainstream. *Circulation* 2009;119:2633-42.

RÉSUMÉ

Objectif : Les interventions sur le milieu bâti sont des occasions d'influencer les comportements comme l'activité physique. Notre étude visait à évaluer une carte de marche dans la communauté élaborée pour huit quartiers de la ville d'Edmonton.

Méthode : Une carte de marche, élaborée en partenariat avec le projet Walkable Initiative d'Edmonton, a été envoyée à 11 994 ménages de huit quartiers en juillet 2010. En tout, 149 répondants ont rempli un questionnaire de suivi en ligne évaluant l'influence de ces cartes sur leur niveau d'activité physique.

Résultats : Sur les 149 répondants, 89 (59,7 %) ont dit avoir reçu un exemplaire de la carte, et 60 (40,2 %) ont dit ne pas en avoir reçu. De ceux qui en avaient un exemplaire, 76,4 % (n=68) ont indiqué que les trajets et les points d'intérêt sur la carte les incitaient à marcher davantage dans la communauté, 64 % (n=57) ont dit qu'ils se rendaient plus souvent à leurs destinations à pied, et 55,1 % (n=49) ont indiqué qu'ils marchaient plus souvent pour faire de l'activité physique ou de l'exercice depuis qu'ils avaient la carte. Enfin, 91 % (n=81) ont dit avoir trouvé la carte utile, car elle propose des trajets (60/81, 74,1 %) et des endroits à visiter dans la communauté (57/81, 70,4 %). De ceux qui n'avaient pas reçu la carte, 95 % (n=57) ont indiqué qu'ils se serviraient d'une carte de marche dans la communauté.

Conclusion : Cette évaluation montre qu'une carte de marche dans la communauté est un outil précieux non seulement pour encourager la marche en tant qu'activité physique mais pour inciter les gens à explorer leur communauté et à visiter des points d'intérêt locaux.

Mots clés : milieu bâti; marche; activité physique; promotion de la santé; santé en zone urbaine