ABSTRACT

OBJECTIVES: The main objective of the Healthy Canada by Design CLASP Initiative in British Columbia (BC) was to develop, implement and evaluate a capacity-building project for health authorities. The desired outcomes of the project were as follows: 1) increased capacity of the participating health authorities to productively engage in land use and transportation planning processes; 2) new and sustained relationships or collaborations among the participating health authorities and among health authorities, local governments and other built environment stakeholders; and 3) indication of health authority influence and/or application of health evidence and tools in land use and transportation plans and policies.

PARTICIPANTS: This project was designed to enhance the capacity of three regional health authorities, namely Fraser Health, Island Health and Vancouver Coastal Health, and their staff. These were considered the project’s participants.

SETTINGS: The BC regions served by the three health authorities cover the urban, suburban and rural spectrum across relatively large and diverse geographic areas. The populations have broad ranges in socio-economic status, demographic profiles and cultural and political backgrounds.

INTERVENTION: The Initiative provided the three health authorities with a consultant who had several years of experience working on land use and transportation planning. The consultant conducted situational assessments to understand the baseline knowledge and skill gaps, assets and objectives for built environment work for each of the participating health authorities. On the basis of this information, the consultant developed customized capacity-building work plans for each of the health authorities and assisted them with implementation. Capacity-building activities were as follows: researching health and built environment strategies, policies and evidence; transferring health evidence and promising policies and practices from other jurisdictions to local planning contexts; providing training and support with regard to health and the built environment to health authority staff; bringing together public health staff with local planners for networking; and participating in land use planning processes.

OUTCOMES: The project helped to expand the capacity of participating health authorities to influence land use and transportation planning decisions by increasing the content and process expertise of public health staff. The project informed structural changes within health authorities, such as staffing reallocations to advance built environment work after the project. Health authorities also forged new relationships within and across sectors, which facilitated knowledge exchange and access of the public health sector to opportunities to influence built environment decisions. By the end of the project, there was emerging evidence of a health presence in land use policy documents.

CONCLUSIONS: The project helped to prioritize, accelerate and formalize the participating health authorities’ involvement in land use and transportation planning processes. In the long term, this is expected to lead to health policies and programs that consider the built environment, and to built environment policies and practices that integrate population health goals, thereby reducing the risk of chronic diseases.

KEY WORDS: Environment and public health; inter-institutional relations; environment design; chronic disease

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A n

large body of research has identified significant associations between the built environment, which is the physical layout and infrastructure of a community, and health variables, such as physical activity, food choices, traffic-related injuries and mental health. Accordingly, several health organizations have identified the built environment as an important determinant of health.

A community’s built environment is the result of multiple decisions regarding land use and transportation planning and policy, operationalized over the course of many years at various levels of government. Community planning policies and decisions can be influenced by a complex and sizeable array of stakeholders outside of public health, including developers, local residents and businesses, non-governmental organizations (NGOs) and community organizations. Accordingly, as with many other social determinants of health, aligning built
In BC, as elsewhere, the health sector has had only sporadic involvement in land use and transportation planning for issues beyond sewer, air and water. This began to change in 2005 in BC with the resurgence of the Healthy Communities approach and the publication of a Ministry of Health framework describing the core public health functions for the province. This document recognized that “the physical and social structures of our communities and neighbourhoods affect our health in many ways, and public health needs to be involved in the creation of healthy neighbourhoods.” It also called for public health officials to provide input into land use and environmental planning.

Momentum for healthy built environments continued to grow. The Provincial Health Services Authority published a webpage and resources on the topic of “health and planning” and, in 2008, helped to establish the BC Healthy Built Environment Alliance to foster intersectoral networks, and coordination of knowledge exchange and key activities around health and the built environment. In 2009, representatives of all five regional health authorities received training by the Provincial Health Services Authority on the fundamentals of community planning.

Some health authorities started to consider how they might mobilize their staff to influence land use and transportation planning decisions. The following key questions arose: “How can BC health authorities most effectively mobilize their staff to influence land use and transportation planning decisions? How can they help create environments that encourage healthy living through their involvement in community planning processes? How can health authorities collaborate to adopt a consistent approach to their healthy built environment work and recommendations?”

In the summer of 2009, the opportunity arose for Fraser Health, Island Health (formerly Vancouver Island Health Authority) and Vancouver Coastal Health to join forces with the Urban Public Health Network, three urban health authorities in Quebec and Ontario, and several national NGOs to apply for a Coalition Linking Action and Science for Prevention (CLASP) grant offered by the Canadian Partnership Against Cancer to launch the Healthy Canada by Design CLASP Initiative. This was seen as an opportunity to accelerate the health authorities’ progress in defining and formalizing their role in shaping the built environment, and to develop networks for knowledge exchange and coordination across health authorities.

The successful CLASP funding application marked the beginning of the Healthy Canada by Design CLASP Initiative described in an accompanying paper in this volume. In addition to providing funding for a capacity-building project at the local level in BC, participation in CLASP gave health authorities access to the following:

1) A national backdrop for built environment work;
2) Learning and knowledge exchange opportunities with like-minded health bodies in other provinces; and
3) Networking prospects with researchers, policy-makers and practitioners from across Canada to advance the field locally in British Columbia.

This paper describes the capacity-building project that was developed and delivered in BC under the Healthy Canada by Design CLASP Initiative. The long-term goal of the Initiative was
to create a) a built environment policy environment that fully integrates population health goals; and b) a health policy environment that fully integrates built environment considerations, in order to reduce risk factors for chronic disease and to improve population health.

There were three desired outcomes of the Healthy Canada by Design CLASP project in BC:

1) Increased capacity of the three health authorities to productively participate in land use and transportation planning processes;
2) New and sustained relationships or collaborations among the three health authorities, as well as among the three health authorities, local governments and other built environment stakeholders; and
3) Indication of health authority influence and/or application of health evidence and tools in land use and transportation plans and policies.

PARTICIPANTS

Target population
This project was designed to enhance the capacity of three regional health authorities, namely Fraser Health, Island Health and Vancouver Coastal Health, and their staff. These were considered the project’s participants (11 staff members who were directly involved in this project and were invited to participate in the project’s evaluation surveys).

Fraser Health and Vancouver Coastal Health had a total of four staff each who participated for the entire duration of the project. Four of these were medical health officers, one was an Environmental Health Officer, and three were population health staff at the coordinator and manager levels.

Vancouver Island Health Authority had one staff member who participated for the entire duration of the project (a Medical Health Officer). Additionally, two population health staff at the coordinator level participated for half of the project each, because of staffing transitions.

The three health authorities collaborated with local government staff from the communities in which the projects unfolded (n=14 planners in total across the three health authorities) and/or with planners from local transportation authorities (n=1), university academics (n=2), a provincial government official (n=1) and a provincial health authority official (n=1). These were considered project collaborators and totaled 19 individuals from 14 different organizations.

Project collaborators were involved in a variety of ways. Planners, for example, identified specific land use or transportation planning processes that could benefit from health authorities’ input; made suggestions of how health professionals could be most productively involved; helped to establish formal mechanisms for health authorities’ ongoing participation in planning processes; helped to organize knowledge exchange and networking events across sectors; set up strategic meetings between local government stakeholders and the health authorities; and facilitated opportunities for the health authorities to make presentations to key committees and decision-makers. All collaborators provided input into draft reports, “health and built environment” briefs and other stakeholder outreach materials produced by the health authorities.

SETTING
The three health authorities altogether serve a population of 3.4 million (BC total=4.6 million), residing in urban, suburban and rural settings across south-western BC. The populations have broad ranges of socio-economic status, demographic profiles and cultural and political backgrounds. For this project, the participants worked with collaborators in a variety of settings:

- Suburban and urban settings (City of Richmond, City of Surrey, District of North Vancouver, City of North Vancouver, Greater Victoria and Metro Vancouver regions as a whole); and
- Rural communities at the edge of large metropolitan regions (City of Powell River, Sunshine Coast Regional District’s Area D-Roberts Creek, Resort Municipality of Whistler, City of Chilliwack, Sunshine Coast Regional District and Fraser Valley Regional District as a whole).

INTERVENTION

Public health intervention
The project work occurred in two phases, aligned with phases of funding. The first phase of funding, from October 2009 through December 2010, was provided by the Canadian Partnership Against Cancer’s CLASP program. The second phase, from January 2011 through September 2012, was funded by the Canadian Partnership Against Cancer’s CLASP program, the Heart and Stroke Foundation of Canada (BC & Yukon), the Real Estate Foundation of BC and the Bullitt Foundation.

Leadership and responsibility for the project came from different programs within each of the three health authorities: Population Health (Vancouver Coastal Health), Healthier Community Partnerships (Fraser Health) and the Office of the Medical Health Officer (Island Health and Fraser Health). Medical health officers, environmental health officers and other health authority staff provided leadership and participated in or contributed to the project on either an ongoing or an ad hoc basis as appropriate to the role and task.

The Heart and Stroke Foundation, acting as the lead agency and administrator for the Healthy Canada by Design CLASP Initiative, sought a Planning Consultant (hereinafter, “consultant”) with several years of local municipal planning experience. The selected consultant was a professional and registered Community and Regional Planner with 10 years of experience working in local governments on policy and development planning in BC. She had also demonstrated understanding of the land use policies and programs that BC local governments can adopt to promote healthy living.

The consultant reported to the Project Manager for the Healthy Canada by Design CLASP Initiative and worked with the health authorities from January 2010 until January 2012. She worked a total of 1,500 hours and devoted about 85% to 90% of this time assisting the three health authorities in reaching out to potential project collaborators; developing work plans to guide their participation in the project; and facilitating implementation of the work plans. Each health authority received just under one third of a full-time equivalent in support. The remaining 10% to
15% of time was devoted to overall project administration, facilitating knowledge exchange among the three health authorities and reporting to external stakeholders such as project funders.

The consultant’s work was carried out through phone and e-mail communication, in-person work sessions, and meetings with each health authority and with local planning and community stakeholders. The consultant divided her time equally across the three health authorities and worked with them concurrently, in order to increase the potential for diffusion of ideas and promising practices across health authorities.

For each health authority there were several specific actions:

1) Conducting a situational assessment (two months)
   - The consultant:
     i. Met with lead staff for each of the health authorities to assess their baseline capacity, knowledge and tools for built environment work;
     ii. Gathered the health authorities’ preliminary ideas for built environment projects to pursue with local governments and relationships to build with community planning stakeholders through this initiative; and
     iii. Informally contacted planners in local governments to identify potential opportunities for productive involvement of the health sector in forthcoming planning processes.

2) Developing a “capacity-building” work plan for each health authority (one month)
   - Using the information gathered through the situational assessment and working in close collaboration with the Project Manager, the project teams and the consultant drafted a nine-month work plan for each health authority.
   - The work plans were designed to
     i. Increase the capacity of health authorities to productively participate in land use and transportation planning processes, particularly through increased content and process expertise;
     ii. Create new and sustained relationships or collaboration mechanisms with other health authorities, with local governments and with other built environment stakeholders; and
     iii. Show evidence of health authority’s influence in land use and transportation plans and policies.
   - For each capacity-building project selected by the health authorities, the work plans contained the following sections:
     1) brief description of the project and objectives;
     2) tasks/activities; 3) outputs; 4) description of how this project would increase the capacity of the health authority to work on built environment issues; 5) human resources, and roles of the planning consultant and health authority staff; and 6) timelines and milestones.
   - The three health authorities met for one day to exchange their draft work plans and refine them according to mutual feedback.
   - Upon completion of the first set of work plans, additional project funding was secured, and the planning consultant and project participants developed another set of work plans for the second year of the initiative.

3) Implementation of the work plans
   Depending on the specific needs, opportunities and context of each health authority, the planning consultant worked with the project participants on a variety of outputs and tasks:
   - Development of resources, such as “healthy built environment” briefs and template PowerPoint presentations, to assist health authority staff in participating in land use and transportation planning processes.
   - Production of reports, such as a case study of how a local neighbourhood association engaged with the health authority to address a land use concern.
   - Facilitating cross-sector knowledge exchange by, among other means, bringing together planners, researchers and health professionals to hear about the latest evidence linking health and the built environment and identify collaboration opportunities at the local level.
   - Reviewing and commenting on draft land use policy documents, such as official community plans and regional growth strategies.

Evaluation
The evaluation for this project was integrated into the overall evaluation for the Healthy Canada by Design CLASP Initiative. A PhD-level research and evaluation firm supported the health authorities in developing an evaluation framework outlining the intended outputs and outcomes of their project; preparing an evaluation plan and tools; and evaluating projects at specified intervals and upon completion.

In this paper, we report on evaluation data generated by two online surveys administered to project participants in December 2010 and November 2011; for BC, n=6 and response rate=60%, with respondents from all three health authorities, for both years. These surveys included both Likert scales and open-ended questions. We also include data collected through end-of-project interviews conducted by the National Collaborating Centre for Healthy Public Policy (NCCHPP) in 2012 (n=5 project participants from three health authorities).

Evaluation data collected from the project collaborators 19 months and 27 months into the project are also provided. These data were generated through a) an anonymous online survey administered to the project collaborators in May 2011 (n=6 collaborators of Fraser Health and Vancouver Coastal Health Authority, response rate=60%); b) an anonymous online survey administered to the project collaborators in January 2012 (n=5 collaborators of Fraser Health Authority and Vancouver Island Health Authority, response rate=31%); and c) a non-anonymous focus group held with health authority staff participants and planning staff collaborators on October 17, 2011, to reflect on their partnership to date (n=2 planning staff, who were collaborators of Vancouver Coastal Health, participation rate=50% of four invited to the focus group).

OUTCOMES
A total of 11 health authority staff from three health authorities worked with the consultant to develop and deliver three capacity-building work plans. Nine of the 11 participants from three health authorities were involved throughout the entire duration of the project. In an anonymous, online survey
administered to project participants in November 2011 (n=6 and response rate=60%), two respondents reported devoting between 41% and 79% of their time in a typical month to this project, and four respondents reported devoting less than 40% of their time to the project in a typical month. Tables 1-4 list the main outputs that were generated through this project.

**Intended outcome one: Increased capacity of health authorities to productively participate in land use and transportation planning processes**

The annual surveys completed by project participants in 2010 and 2011 suggest that the project increased the capacity of some of the project participants to engage in community planning processes, in part by enhancing their content and process expertise. The surveys’ results can be summarized as follows:

- In 2010, all but one survey respondent reported having increased their knowledge of healthy built environments as a result of this project. In 2011, all survey respondents reported having increased their understanding. In the open-ended section of the survey, one respondent commented, “I have increased my awareness of the research base regarding health and the built environment.”

- In 2010, four out of six survey respondents indicated that they had gained new or enhanced skills as a result of this project. In 2011, all survey respondents indicated this. A survey respondent provided an example: “We have developed some expertise in working with our local governments and understanding their needs.”

- In 2011, all respondents somewhat agreed, agreed or strongly agreed that they had increased their awareness of other organizations working in the area. This had ranked noticeably lower in the 2010 survey responses. Comments from the NCCHPP interviews about the project's impacts reflect the results above:

> CLASP has helped [health authority] to develop and hone the tools and approaches that are most effective in our work. For example, we have developed and adapted a Memorandum of Understanding agreement for defining and solidifying partnerships. We have also developed tools and resources that help us to proactively connect and work with the various audiences that are involved in land use planning processes; elected officials, community and stakeholders, and community/residents.

We [health authority] have developed a modest foundation of resources pertaining to HBE [Healthy Built Environments] (library, information sheets, community engagement precedents, etc.) that will help the HBE “leads” within our organization start involving others as we move forward. We have developed more concrete ideas about what HBE means within our context, and we have a much greater overall literacy and confidence in the issue than when we began CLASP a couple of years ago.

The project might have also helped to expand the capacity of the participating health authorities to engage in land use and transportation planning processes by facilitating changes to the health authorities’ strategies, programs, human resource allocations or practices. In 2010, half of the survey respondents stated with conviction that their organizations were developing a new program or changing an existing program as a result of this project, for example:

- [We have a new] community engagement strategy;
- Province has prioritized HBE [Healthy Built Environment], each Health Authority [is] now developing programming to fit with this;
- Hopefully the report on healthy facilities will be used to inform future planning and development of health facilities in [health authority];
- The built environment is now included in our overall strategic planning; and
- Likely a greater involvement of staff in official community planning at the local or regional government level.

Through this project, the consultant directly trained and supported between three and four staff in each health authority. These staff, in turn, leveraged the experience and knowledge gained through this project to help inform the organizational structures and practices for built environment work within each health authority. Supporting evidence of this can be found in the NCCHPP interviews:

> Internally (within [health authority]) through the CLASP Initiative, we have been able to incrementally develop a model of how to work on HBE [Healthy Built Environments] that works for [health authority]. There are many staff and departments within [health authority] that are part of HBE subject matter (Health Protection, Population Health, MHO [Medical Health Officer], Aboriginal Planning, Housing, and more), and we have been able to work with these groups to gradually build up awareness, buy-in, commitment and practice at doing this work together. We have learned – through practice and reflection – how to form our [health authority] teams at a local level and allocate [health authority] staff's roles in order to support communities most effectively. This approach of including [health authority] staff from various groups has provided us with a range of perspectives and angles about what is included in HBE work.

 [...] [health authority] is developing the capacity for HBE [Healthy Built Environments] work within our organization. The CLASP projects that we chose have allowed us to experiment with which departments and which staff need to be involved in municipal planning initiatives and what roles they can play. For example: in 2010 Healthier Community Partnerships, Health Protection and medical health officers teamed up to analyze land use options that were being considered for a neighbourhood plan. We combined our expertise and knowledge to provide the municipality with a health lens on the various land use options. We are looking at what is a sustainable model within [health authority] for our HBE work across the broad region that we serve.

**Intended outcome two: New and sustained relationships or collaboration mechanisms with other health authorities, local governments and other built environment stakeholders**

By 2011, all project participants who completed the evaluation surveys reported that the project enabled them to forge new relationships or collaborations with colleagues in other health authorities, local governments or other sectors with a stake in built environment decisions. On the other hand, improvements or changes in the way health authorities reported working with other organizations in the same field were not as strong. One of
Description of activities and products

Healthy built environment information briefs
• Researched, wrote and produced a series of briefs designed to inform municipal planning policy, and to highlight issues of mutual health and municipal importance.
• Topics were healthy housing; complete, compact and connected communities; equitable access and opportunity; healthy eating and food security; transportation; and environmental hazards. Each brief outlines health relevance, supporting evidence, and recommendations for built environment policies and practices.
• Engaged municipal partners and various health authority staff in framing, reviewing and producing the briefs.

Workshop for health authority staff
• Designed and implemented a day-long, built environment workshop for environmental health officers and community health promotion staff (n=31).
• Two local planners gave presentations on their current work and policy directions.
• The Medical Health Officer participating in this project presented key “health and built environment” principles and evidence.
• Workshop participants analyzed a sample municipal plan and discussed a) whether it contributed, or not, to a healthier built environment, b) some of the barriers and competing interests that could arise in developing a land use plan and c) strategies that health officials could use to provide feedback to a proposed plan and offer support to planners.
• Project participants from this health authority also presented parallel and complementary projects through which the health authority is engaging local municipalities.

Participating in planning processes and building relationships with planners
• Reviewed and commented on the City of Surrey’s draft Official Community Plan, the District of Mission draft Official Community Plan, and a draft Neighbourhood Plan for the City of Surrey.
• The purpose of this exercise was to develop relationships with municipal planning staff, learn more about how to be effectively involved, and help strengthen the health promotion potential of the plans under development.
• Organized a “lunch and learn” event for health authority staff and City of Surrey planning staff to foster networking, knowledge exchange and sharing of one another’s experience, perspectives and priorities with respect to the built environment.

Official Community Plan (OCP) Workbook
• Based on info sheets (above), proposed elements included template PowerPoint presentations and other resources, and an algorithm to help staff at the health authority and at the local government’s planning department find the appropriate contacts in each other’s organizations.
• Received input from local, regional and provincial governments in the development of the workbook.

Putting health into health facilities planning
• Consulted with non-profit community organizations, health authority staff from various departments, municipal planners, and design professionals from private consulting firms to produce a report that explored questions such as: How do health facilities fit into a “healthy built environment” framework? How can health facilities contribute to the health of various “user groups” – patients, staff, visitors, neighbourhood residents? And how can they be planned to contribute to active transportation choices and other key elements of a healthier built environment?
• Researched examples of health care facilities’ master plans that aligned with healthy built environment principles and practices.
• Reviewed a local example in Victoria, BC, namely a new patient care centre and long-term master plan for a health care facility campus.

Air quality – working group and forum
• Led the revival of the Capital Regional District Air Quality Working Group and expanded its mandate to include links with sustainability planning and health.
• Explored opportunities for the Air Quality Working Group to collaborate more closely with local government partners and health professionals within a land use framework.
• Co-hosted a learning forum about regional air quality issues and local action. The Forum was attended by federal, provincial, regional, local, academic and non-profit organization representatives.

Learning from the James Bay Neighbourhood Association
• Partnered with the James Bay Neighbourhood Association (Victoria, BC) to document and share the processes, successes and challenges of this community group in identifying local health issues associated with land use and in mobilizing resources to try addressing those impacts.
• The main purpose of this report was to inform the health authority on how it can best work with neighbourhood associations to address community health concerns.

This was also somewhat supported by the results of the online surveys administered to the project collaborators in May 2011 and January 2012 (n=6, participation rate=60%, and n=5, participation rate=31% respectively). Collaborators were asked: To what extent do you agree or disagree that, in this project, knowledge, technical advice, expertise or recommendations received from Health Authority/Healthy Canada by Design CLASP have helped the health and planning sectors in my region work more closely together? Here, 67% of respondents in 2011 and 60% of respondents in 2012 stated that they agreed or totally agreed. On the other hand, 0% in 2011 and 20% in 2012 stated that they disagreed, and 33% in 2011 and 20% in 2012 did not answer. Similarly, to the statement, My organization has applied knowledge, technical advice, expertise or recommendations it gained from Health Authority/Healthy Canada by Design CLASP, 60% of respondents to the January 2012 survey said “yes”, 20% said “no”, and 20% did not answer. When asked to describe how their organization had applied knowledge, technical advice, expertise or recommendations it gained from Health/Healthy Canada by Design CLASP, survey respondents wrote:
• In developing the new Official Community Plan, as well as secondary plans such as neighbourhood plans, greenways & walking plans etc., the partnership has enhanced the consideration of the health consequences of alternative policies.
• [health authority] provided feedback on our regional plan. They provided a “health lens” and provided policy advice on how to strengthen the plan from a health perspective.

Additional examples of impacts that were provided by the online survey respondents (n=5; 31% response rate) and by
Table 3. Activities and products delivered by Vancouver Coastal Health as part of its involvement in the Healthy Canada by Design CLASP project in BC (2009-2012)

Description of activities and products

Participating in municipal planning processes (urban communities)
- Participated extensively in the District of North Vancouver Official Community Plan review, the City of North Vancouver Official Community Plan review and the City of Richmond Official Community Plan review.
- This involved reviewing and commenting on draft plans, making presentations to stakeholders (Mayor, council, residents and local community agencies) and preparing printed materials, such as issue papers and posters, for public consultations.
- For the District of North Vancouver and the City of North Vancouver, this also involved writing and signing a Memorandum of Understanding between the local governments (planning departments) and the health authority to set parameters for collaboration and to define each entity’s roles.
- Participated in the review of municipal development guidelines and a municipal transportation plan.

Participating in municipal planning processes (rural communities)
- Compiled community health profiles relevant to community planning for the Sunshine Coast Region and its municipalities, then conducted a focus group with planners and community organization representatives to obtain their feedback.
- Reviewed and commented on the draft Sunshine Coast Regional Sustainability Strategy, the draft Roberts Creek Official Community Plan, the draft Powell River Electoral Area Official Community Plan and the draft Official Community Plan for the Resort Municipality of Whistler.
- Developed a digital binder of resources to support health authority staff’s involvement in rural planning processes in rural and small communities.

Table 4. Activities and products delivered in partnership by Fraser Health and Vancouver Coastal Health as part of their involvement in the Healthy Canada by Design CLASP project in BC (2009-2012)

Description of activities and products

Metro Vancouver Healthy Community Design Collaborative
- Partnered with the regional government, the local transportation authority and university researchers to convene planners, health professionals and researchers for knowledge exchange and identification of collaboration opportunities. These partnerships built on discussions and input during the Regional Growth Strategy process in which the two health authorities participated.
- Planned and implemented two regional workshops with over 100 participants each, including planners and health professionals from throughout the region.

Metro Vancouver – regional planning
- The two health authorities met several times with regional planners and made a presentation to the Regional Planning Advisory Committee (formerly Technical Advisory Committee), comprising planning directors or chief administrative officers from Metro Vancouver’s 21 municipalities and two local entities.

planners who participated in a focus group to help evaluate the project (n=2, response rate=50%) were as follows:
- The issue of health and planning has been brought to the forefront for planners, in part due to [health authority] and the CLASP Initiative.
- Used the resources around the table to work on a common issue. This couldn’t have happened in a siloed approach.
- [Health authority] did provide input that led to content shifts and policy change; e.g., food security – [health authority] helped to strengthen policies around food security/urban agriculture.
- [Health authority] as a significant partner in the OCP [Official Community Plan] lent some political weight in terms of Council’s endorsement of the OCP.

The Healthy Canada by Design CLASP Initiative likely also stimulated increases in networking, coordination and cooperation among BC health authorities and organizations that participated in the Healthy Canada by Design CLASP project in provinces across Canada. This was shown by the annual surveys, in which BC project participants were asked to classify their interactions with organizations in Ontario, Quebec and nationally, before and after their involvement in this project (Figure 1).

Stories related to project impact on collaboration also emerged from the NCCHPP interviews. For example:
- CLASP also helped [health authority] to step up and take a proactive role with interagency partnerships […] Throughout CLASP we have also had increased contact with other partners (municipal planners, etc.) and established some newer connections that will help our future work. For example, we consulted with planners at the outset of our CLASP projects and could re-establish contact with this group.25

**Intended outcome three: Influence land use and transportation plans and policies**

By the end of the project, there was modest evidence of public health influence on one land use plan. The District of North Vancouver Official Community Plan, adopted in 2011, explicitly mentions Vancouver Coastal Health as a participant involved in crafting the document.26

**Areas of improvement**

When asked open-ended questions to understand what would be needed to improve or facilitate the Healthy Canada by Design CLASP project or to accelerate changes to the built environment, health authority staff who responded to the online surveys provided several examples and ideas:
1) More time and resources;
2) More defined roles and partnerships, and clearer understanding of health’s specific role and potential contribution to the planning process;
3) Greater collaboration across projects or health authorities; and
4) Support of upper management, involvement of a more diversified contingent of staff/departments and greater integration of this work with the organization’s existing plans and strategies.

Project collaborators who completed the online survey also identified areas of improvement. When asked, How could knowledge, technical advice, expertise or recommendations received from Health Authority/Healthy Canada by Design CLASP be improved? survey respondents noted:

- The growing research base linking community design with health outcomes is positive, but this research needs to be more specific and nuanced to be of greater use as an evidence-based component of planning decision-making.
- When appropriate (e.g., if scale of project is large, if there are significant health impacts), it would be beneficial to have [health authority’s] input on the health impacts of major projects or developments proposed in the [region]. It would be helpful to better understand the types of measures that can be used to assess healthy communities.
- Need to work more with communities, general public and politicians. Planners and public health professionals are already very closely aligned and “singing off the same song sheet”. Where we run into challenges is with the public and decision-makers. Hospital boards should also be the target for further education.
- There is an opportunity for [health authority] and the District to better get the information (on issues, solutions and successes) “out there” (to community members).
- The implementation of the OCP [Official Community Plan] is key, and the District needs [health authority] to be involved in that.

Moreover, when asked, How could meetings or events organized by [XX] Health Authority/Healthy Canada by Design CLASP be improved? the project collaborators who took the survey gave the following feedback:

- These meetings could be more targeted to developers and development consultants, who often resist the implications of a healthier community and neighbourhood design, since it is perceived to limit their development options or add costs onto projects.
- Include decision-makers, members of the public, hospital board members. Perhaps also some of the other disciplines like municipal engineers…but again, my feeling is that we have common ambitions and approaches. Challenge is with general mind set about car usage, lifestyle choices, built environment.
- The work they do should continue. Meetings, events, networking, relationship building should continue at the regional and municipal levels. Advocacy by [health authority] continues to be important. [Health authority] can be clearer on the types of actions municipalities and regions can take to make healthy communities.

CONCLUSIONS

The project described in this paper was novel. It provided health authorities with a professional planner as consultant to help them influence land use and transportation planning decisions. Traditionally, health authorities’ involvement in planning processes in BC had been largely limited to water, sewer and air quality issues. This project brought together health professionals and community planners to boost the health authorities’ capacity to help shape land use and transportation plans, and align them with health-promotion objectives.

The evaluation data reported in this paper suggest that the project increased the built environment expertise of the health authorities involved. Tables 1-4 list the many resources and outputs that were generated by the consultant with the health authorities. Following the CLASP project, the BC Provincial Health Services Authority used some of these resources to inform the development of the Healthy Built Environment Linkages Toolkit, which provides common healthy built environment principles for all BC health authorities. On the basis of this and the survey data summarized in the Outcomes section, we speculate that the project might have helped to accelerate the rate at which regional health authorities across BC are working collaboratively to develop more consistent messages and approaches to built environment work.

The NCCHP evaluation interviews indicated that some of the project participants gained new insights as to how human resources within health authorities could be reallocated to support engagement in land use and transportation planning. Two years after the project’s completion, beyond the time frame of the project’s evaluation reported in this paper, one can see evidence of changes to the health authorities’ structures to facilitate engagement in planning processes. For example, some health authorities added built environment topic areas to the job descriptions of community health staff and environmental health officers; two health authorities went as far as creating a new team of environmental health officers (3.5 and 2.5 full-time equivalent employees per health authority) who are dedicated to working with local governments and other stakeholders on the built environment and related policies. While these structural changes cannot be solely attributed to the Healthy Canada by Design CLASP project, health authority representatives who are co-authoring this paper concur that this project helped to inform these changes.

This project also laid a foundation for cross-sector and cross-organizational partnerships. An international review of the literature has found that these kinds of alliances, at the local and national levels, are an important facilitator affecting the integration of health considerations into land use decisions. Similar observations were brought forward anecdotally in Colorado (US). Here, based on their experience working on land use planning issues, health professionals recommended that the first step by which environmental health officers can influence the built environment is to build relationships with planners and municipal decision-makers. Nationally, the Healthy Canada by Design CLASP project fostered networking, knowledge exchange and collaboration between BC health authorities and peer agencies in other provinces. Locally, in BC, this initiative gave public health professionals an opportunity to start learning how to work with colleagues in the land use and transportation planning sector on issues that go beyond sewer, air quality and water.

By the end of the project in 2012, there was emerging evidence of health sector influence in land use and transportation planning policies and documents. Between October 2012 and spring 2014, several additional planning policy documents included a strong health presence. Some examples of these include the City of Richmond Official Community Plan, adopted in November 2012; the latest draft of the City of Surrey Official Community Plan, and the Province of BC’s Climate Action Plan.
Community Plan (currently under review);\textsuperscript{31} the draft City of Chilliwack draft Official Community Plan (currently under review);\textsuperscript{32} and the draft Capital Regional District Sustainability Strategy (currently under development).\textsuperscript{33} The next challenge for the health sector in BC will be to ensure that these high-level planning documents are actually implemented, which is likely to take several decades.

Lessons learned
Some of the key insights gained through this project include the following:

1) **Time to deliver outcomes.** The process of change required to fully and productively integrate a new and complex area of work, such as the built environment, into the health authorities’ *modus operandi* takes time and a broader vision for health. Moreover, most community planning processes extend over several months, if not years, and can be further delayed by political or other factors outside the control of the health sector. This made it very difficult to deliver policy outcomes within the project’s timelines. Future interventions of this kind should consider extending implementation timelines.

2) **Need for defined roles and a clear understanding of health’s specific role and potential contribution to the planning process.** The cross-sectoral and pioneering nature of integrating health stakeholders and evidence into land use and transportation planning added an additional level of challenge to this project. It took almost the full two years of project implementation for participants to start having a sense of “who should do what and when”. However, answers to this role definition exercise could only be established through an experiential process of sending a small team of early adopter staff into the field. This “learn by doing” approach was challenging but gave the health authorities important insights as to how they can most effectively influence built environment decisions. These included gaining more clarity on the roles that various health authority staff can play in influencing built environment decisions, human resource requirements, evidence gaps and the challenges of translating the available evidence on health and the built environment into policy and practice recommendations for a diversity of contexts across the urban, suburban and rural spectrum.

3) **Erratic support for this area of work by upper management.** One health authority struggled to be fully involved in this project because of lack of support for population health projects, such as this one, by top executives who were prioritizing acute care initiatives.

4) **Time required to foster broad buy-in for this novel area of work within the health authorities.** For all health authorities, it took several years to cultivate buy-in and in-house capacity for this work among other departments and staff. Given the early stage of the built environment portfolio within health authorities and the relatively small number of staff with advanced expertise in the field at this juncture, the capacity of these organizations to effectively engage in land use and transportation planning is particularly vulnerable to staffing transitions.

Limitations of the project’s evaluation reported in this paper
Participation rates in the annual self-assessment surveys were somewhat low (60%). This is most likely because almost 50% of project participants were medical health officers, who have very heavy workloads. Nonetheless, those who participated in the surveys contributed thorough, detailed answers to the surveys’ open-ended questions, which provided a valuable glimpse into the impacts of the Healthy Canada by Design CLASP project in BC.

Representatives from all three regional health authorities completed the online evaluation surveys and participated in evaluation interviews conducted by the National Collaborating Centre for Healthy Public Policy. However, what is presented in this paper may not be generalizable given the small number of project participants.

Another limitation was the absence of detailed logs of participants’ hours on this project (“in-person work”). In the November 2011 online evaluation survey, project participants were asked, *On average, what percentage of your work time have you spent in a typical month on CLASP activities?* Here, survey respondents were given the following answer choices: a) less than 40% of my time; b) between 41% and 79% of my time, and c) over 80% of my time. This approach does not allow us to explore any potential associations between the amount of time health authority staff participants spent on this project and the success of the initiative.

We were also limited by the low response rate of project collaborators in the online evaluation surveys. For the most part, collaborators were planning staff in local governments served by the health authorities that participated in this project. While we had no problems engaging local government planners in meetings or dialogues focused on planning policy development directly relevant to their communities and day-to-day job descriptions, we found it very difficult to have them make time for the evaluation survey. Moreover, one of the health authorities held a two-hour evaluation focus group with key collaborators in October 2011, which might have used up the planners’ maximum capacity or willingness to take part in further evaluation activities, such as the online survey. Future evaluation efforts for similar types of projects should focus on understanding how the project and role of the health authorities in planning processes could be improved from the perspective of planners in local governments or other key collaborators, such as health NGOs.

Overall, this project benefitted greatly from being part of a Pan-Canadian initiative. In the words of one project participant:

*The CLASP project has been effective [for our health authority] because it has allowed [us] to link up to a national movement, and internally (within [our health authority]) through the CLASP Initiative we have been able to incrementally develop a model of how to work on HBE that works[...]. CLASP has really raised the profile of HBE [Healthy Built Environment] work, by demonstrating that our HBE work is part of a groundswell of progressive practice that is happening across the country.*

Future research should further take advantage of a national perspective by examining how the structure of public health in various Canadian provinces, e.g., source of funding, relationship
to local governments, affiliation with acute care or provincial health budget allocations, is facilitating or impeding the effective involvement of health authorities in land use and transportation planning. The resulting information would help in understanding how the structure of public health in BC could be improved to further support the integration of health evidence into built environment decisions and, ultimately, to promote healthy lifestyles and reduce the risk of chronic disease.

REFERENCES


CANADIAN JOURNAL OF PUBLIC HEALTH • SUPPLEMENT 1 (2015) eS49