Community Capacity Building: An Aboriginal Exploratory Case Study

Fay Fletcher, PhD
School of Public Health
Faculty of Extension
University of Alberta

Daniel McKennitt, BSc
Faculty of Medicine and Dentistry
University of Alberta

Lola Baydala,[1] MD, MSc
Faculty of Medicine and Dentistry
University of Alberta

Abstract

Aboriginal people often experience poorer health than non-Aboriginal people in Canada because of inequities in socioeconomic circumstances and fewer available health promotion interventions. Community-based participatory research (CBPR) effectively addresses these inequities, providing opportunities for the evaluation and implementation of culturally appropriate prevention programs. In response to the need for measures to document progress and success in CBPR projects, the Public Health Agency of Canada (PHAC, 2005) developed the Community Capacity Building Tool (CCBT). The CCBT documents capacity building in collaborative and community-based research projects. Although recent field tests of the CCBT have been published, its effectiveness in Aboriginal communities and as a longitudinal measure of capacity has not been tested or documented. This research utilizes the CCBT to document the capacity-building achievement of a CBPR project with an Aboriginal community. All nine features on the CCBT showed increased measures of capacity over the study period. Capacity building over the first two years of a First Nations-based participatory research project is documented and challenges in the implementation of the CCBT within a First Nation community are discussed.

Introduction

Despite the improved health status of Aboriginal[2] people since the beginning of the 20th century, health disparities between Aboriginal and non-Aboriginal people still exist (Health Canada, 2003; Canadian Institute for Health Information [CIHI], 2004). Many interventions and strategies to reverse the trend of poor health amongst Aboriginal people have been implemented, but few of them have had a significantly positive impact (Daniel et al., 1999; Heffernan et al., 2000; Macaulay et al., 1997; Majumdar, Chambers, and Roberts, 2004; Paradis et al., 2005; Potvin et al., 2003; Reading et al., 2005; Tobe et al., 2006). Interventions using community-based participatory research (CBPR) more successfully improved the immediate health measures of Aboriginal people, increased the sustainability of these measures, and built community capacity (Heffernan et al., 1999; Macaulay et al., 1997; Majumdar et al., 2004; Tobe et al., 2006). Interventions involving Aboriginal community members as active collaborative partners produced better results than interventions that involved community members only as consultants. These results were significant for sustainability, capacity building, and positive health outcomes.

---

2.   Aboriginal refers to First Nations, Métis, and Inuit peoples of Canada

Recently published *Guidelines for Research Involving Aboriginal People* (Canadian Institutes of Health research [CIHR], 2007) reflect a growing recognition for CBPR and the associated capacity building of researchers in Aboriginal health. The guidelines state that, "communities must be given the option of a participatory research approach" (p. 19). For many years, Aboriginal communities have had no say in research taking place in their communities but have been expected to rely solely on academic institutions for better health status (CIHR, 2007). Acknowledging that this approach has not decreased the gap between the health status of Aboriginal and non-Aboriginal people, Aboriginal peoples' voices and knowledge systems have been increasingly incorporated into CBPR projects.

CBPR is a collaborative approach to research that equitably involves a diversity of individuals and groups (e.g., academic researchers, health professionals, community members) in all stages of the research process (Israel et al., 1998). All partners share ownership, control, influence, and decision making, and contribute their expertise according to each individual's knowledge and skills (Israel et al., 1998). Community participation is encouraged throughout the research process, creating a shared understanding of the roles and responsibilities of each research team member, research ethics, protocols, and processes. The overall goal of CBPR is to honour the community members' knowledge and understanding of their own strengths and challenges, recognizing their ability to develop research questions that will improve health outcomes and build community capacity (Buchannan, Miller, and Wallerstein, 2007).

Community capacity includes attributes that empower a community to effect social change. It is a proxy measure of community health and an important step towards self-determination, especially in minority and marginalized populations (Smith et al., 2003). Changes in health outcomes may not be measurable for several years after the implementation of a community intervention (Paradis et al., 2005), but growth in community capacity can be documented longitudinally throughout a CBPR project (Smith et al., 2003). Suitable measures of growth in community capacity became available in 2005, when the Public Health Agency of Canada (PHAC) made available, online, a working document of the Community Capacity Building Tool (CCBT) for measuring community capacity building in CBPR projects (http://www.phac-aspc.gc.ca/canada/regions/ab-nwt/pdf/ccbt_english.pdf).[3] The develop-

---

3.   The most recent version of the Public Health Agency's Community Capacity Building Tool is available at: http://www.phac-aspc.gc.ca/canada/regions/ab-nwt/documents/CCBT_English_web_000.pdf.

ment of the tool included a systematic review of the definition and measurement of community capacity building. Based on this review, the research team identified nine domains (the foundational work for the "features" of the CCBT) and multiple indicators (or key elements of the CCBT). These domains and indicators were reviewed and revised by a national think tank in January 2003, resulting in the draft CCBT with the features and key elements listed in Table 1 (below). The design and subsequent evaluation of the CCBT

Table 1: PHAC – CCBT Features, Definitions and Key Elements

Feature	Definition	Key Elements
Participation	The active involvement of people in improving their own and their community's health and well-being. Participating in a project means the target population, community members, and other stakeholders are involved in project activities, such as making decisions and evaluation.	• community organizations • target population • overcoming barriers • communication methods
Leadership	Developing and nurturing both formal and informal local leaders during a project. Effective leaders support, direct, deal with conflict, acknowledge and encourage community members' voices, share leadership, and facilitate networks to build on community resources. Leaders bring people with diverse skill sets together and may have both interpersonal and technical skills. Finally, an effective leader has a strategic vision for the future.	• roles and responsibilities • reporting guidelines • informal leaders
Community structures	Smaller or less formal community groups and committees that foster belonging and give the community a chance to express views and exchange information. Examples of community structures include church groups, youth groups, and self-help groups.	• pre-existing links • improved community structure • new community structures
External supports	Government departments, foundations, and regional health authorities can link communities and external resources. At the beginning of a project, early external support may nurture community momentum.	• project-related information • technical expertise • financial supports • policies
Asking why	A community process that uncovers the root cause of community health issues and promotes solutions. The community comes together to critically assess the social, political, and economic influences that result in differing health standards and conditions. Exploration through "asking why" helps refine a project to reflect the community needs.	• causes • target population • solutions
Obtaining resources	Finding time, money (other than from funding bodies), leadership, volunteers, information and facilities both from inside and outside the community	• internal resources • external resources
Skills, knowledge and learning	Qualities in the project team, the target population, and the community that the project team uses and develops.	• developing skills and knowledge • providing learning opportunities
Linking with others	Linking a project with individuals and organizations. These project links help the community deal with its issues. Examples include creating partnerships or linking with networks or coalitions.	• networking • providing information • receiving information • community actions
Sense of community	Community, within the context of a project, is fostered through building trust with others. Community projects can strengthen a sense of community when people come together to work on shared community problems. Collaborations give community members confidence to act and courage to feel hopeful about change.	• sense of community

is documented in detail by Maclellan-Wright et al. (2007). Our objective was to use the CCBT to document changes in community capacity over a two-year period of a CBPR project that involved Aboriginal community members.

The Community and the Research

In early 2005, the Alexis Nakota Sioux nation invited researchers from the University of Alberta to collaborate on a project addressing the increasing prevalence of FASD in their community. In keeping with the *Guidelines for Health Research Involving Aboriginal People* (CIHR, 2007) and the principles of CBPR (Israel et al., 2003), a letter from Chief Roderick Alexis, dated December 5, 2005, approved the work on behalf of the community. A working committee was established which included representation from the community and academic researchers from the University of Alberta. The working committee began by reviewing the scientific literature and choosing an evidence-based drug and alcohol prevention program that could be delivered as a part of the school curriculum. Between September 2005 and August 2007, the working committee adapted and piloted the prevention program to ensure that it incorporated the language, visual images, and cultural teachings of the community. Recognizing the need to show the university and funding agencies short-term success in CBPR projects, the research team documented growth in community capacity using the CCBT.

Methodology

One full year after the initial establishment of the working committee, the community representatives were asked by academic members to participate in a series of focus groups to document growth in community capacity during the adaptation and pilot of the drug and alcohol prevention program. All five community representatives agreed to participate and signed an informed consent prior to beginning the study. We believed their willingness to be the result of the established trusting relationship between the community representatives and academic members of the working committee, all of whom were committed to improving the health of future generations in this First Nations community.

Focus groups were held on two separate occasions: in October 2006, with reflective data from July 2005, and in July 2007. At least three of the five community members participated in each of the focus groups. The CCBT was used to facilitate and record discussion on community-capacity building amongst the community representatives from the working committee. Final map-

ping points ("just started," "on the road," "nearly there," "we're there") were achieved by consensus. The Education, Extension, Augustana Research Ethics Board at the University of Alberta granted ethical approval.

Data Analysis

Focus groups were transcribed and preliminary analysis was completed through an independent review by three members of the research team. These independent analyses were then collectively reviewed to elicit common themes and interpretations. This process was facilitated with various tools such as charts, matrices, and memos (Miles and Huberman, 1994). Emerging themes within and across years were studied to identify trends, relationships, consistencies, and inconsistencies.

Each of the key elements within each of the nine features was mapped, based on consensus, as "just started," "on the road," "nearly there," or "we're there." Graphs show the percentage of the key elements attained at each mapping point for each year. For example, feature number one, *participation*, has 4 key elements and is mapped on the graph as 50 percent "on the road," which means that consensus among the participants was that 50 percent, or two of the four key elements, had been achieved at that mapping point for that year.

Results

All nine features of community capacity building measured with the CCBT show increased community capacity over the study period (Figures 1–9). Consensus results from the focus groups are presented below. Each of the nine features is defined, followed by a graphic representation of the progress made in capacity building and a summary of the participants' responses to the CCBT guiding questions.

Participation

Participation is the active involvement of people in improving their own and their community's health and well-being. Participating in a project means the target population, community members, and other stakeholders are involved in project activities, such as making decisions and evaluation. (PHAC, 2005:3)

In 2005, participation in the CBPR drug and alcohol prevention project was limited to leaders within the health and education departments who could approve and support funding applications as well as human and fiscal resources. The priority in building participation was the establishment of a

Figure 1: Changes in Percentage of Key Elements of Participation at each Mapping Point for 2005, 2006, and 2007
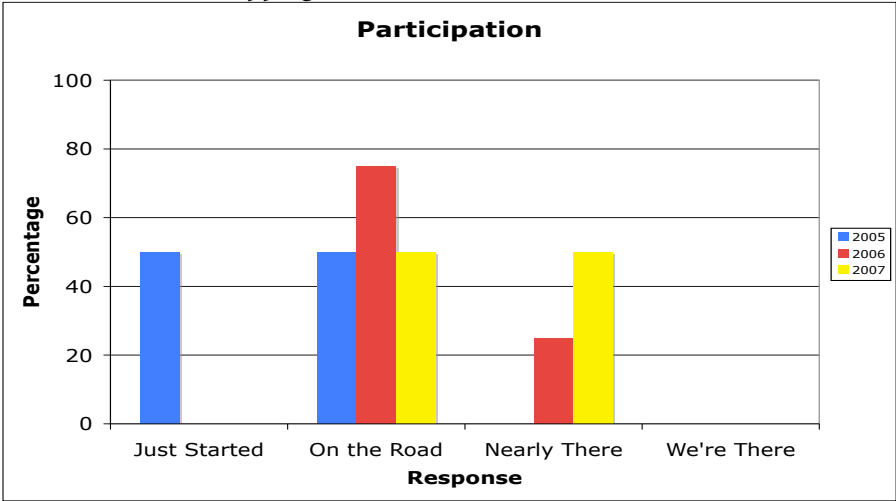
core working committee, meeting regularly, to move aspects of the project forward. "Funding" and "program adaptation" subcommittees were subsequently established. The funding subcommittee consisted primarily of working committee members from the University of Alberta; their task was to identify and secure sources of project funding. The adaptation subcommittee included working committee members from the community; they were responsible for cultural adaptations to the program. Interagency meetings increased awareness of the project within the community, although formal links were not yet established. The working committee recommended making a presentation to formal leaders (chief and council) as a first step in building broader participation within the community.

In 2006, regular meetings of the working committee and its newly formed subcommittees were in progress and timelines for completing the work were identified. Continued and increased participation was sought through a second presentation to chief and council. Communication and information sharing with other community members about the project were improved and, in 2007, all service agencies were aware of the project. One of the team said:

> I wanted the social service department, the counseling department, crime prevention: and all of those people … [to] … be aware.… It gave the community an opportunity to provide input. It made them understand the process more and that it *was* going to be implemented. (Focus Group)

By 2007, the majority of the Nation's family clans were represented in a newly developed Elder Advisory Circle. Elder participation evolved beyond initial expectations, leading to unanticipated community benefits including stronger leadership and the fostering of a sense of community. Parents, grandparents, Elders, leaders, school staff, and students worked together toward a common goal. Greater community participation in the project meant that more time was required for community consensus. These extended timelines, although a necessary, at times frustrating, part of the process, as seen below, have provided opportunities to reflect on the quality of the project and, in particular, potential outcomes.

> Because of the method we used last year [Elders as consultants only], things *apparently* went smoother and so we *felt* that we were nearly there. And now that we are doing it in, maybe, *the way that it should be done*, it is more frustrating.… Now, with so many more people to have input, it becomes, *was*, very frustrating. (Focus Group)

LEADERSHIP

Leadership includes developing and nurturing both formal and informal local leaders during a project. Effective leaders support, direct, deal with conflict, acknowledge and encourage community members' voices, share leadership, and facilitate networks to build on community resources. Leaders bring people with diverse skill sets together and may have both interpersonal and technical skills. Finally, an effective leader has a strategic vision for the future. (PHAC, 2005:3)

Figure 2: Changes in Percentage of Key Elements of Leadership at each Mapping Point for 2005, 2006, and 2007
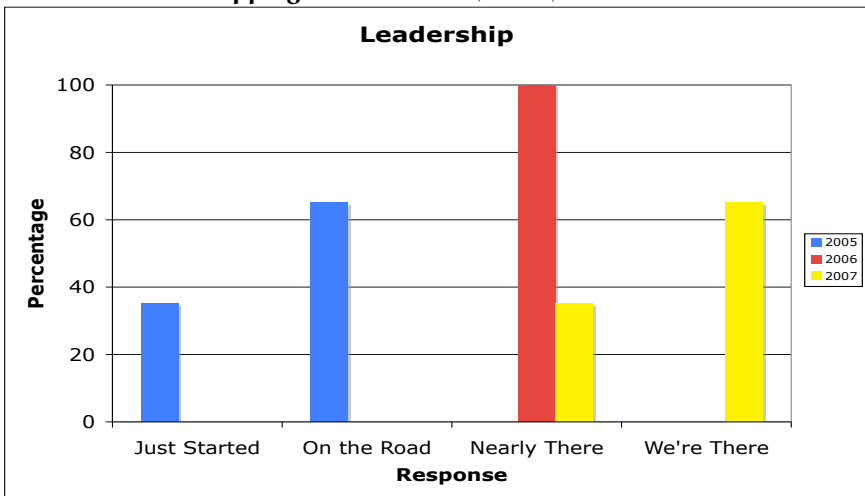
The working committee was established in 2005, but lacked specific roles and responsibilities. The need for both was recognized and terms of reference were drafted. At this stage, relationships were being built among participants from the community, the University of Alberta, and the Alberta Mental Health Board. As the project began to evolve, individuals' skills and knowledge were matched with the immediate goals of the working committee, resulting in the leadership development witnessed in 2006 and 2007. Terms of reference and a Band Council Resolution were finalized and informal leaders began to emerge.

By 2007, team members understood their roles and responsibilities. Informal leaders continued to be supported and mentored through public presentations at scientific conferences. This maximized participation, knowledge translation, and increased the profile of the community's skills and capacity. Leadership was summed up well by one study participant:

> At the beginning of the project we were not sure who was going to be doing what. But as time has gone on I think we realize we are all leaders in our own right and that makes our team that much stronger. (Focus Group)

COMMUNITY STRUCTURES

Community structures refer to smaller or less formal community groups and committees that foster belonging and give the community a chance to express views and exchange information. Examples of community structures include church groups, youth groups, and self-help groups. (PHAC, 2005:4)

Figure 3: Changes in Percentage of Key Elements of Leadership Community Structures at each Mapping Point for 2005, 2006, and 2007
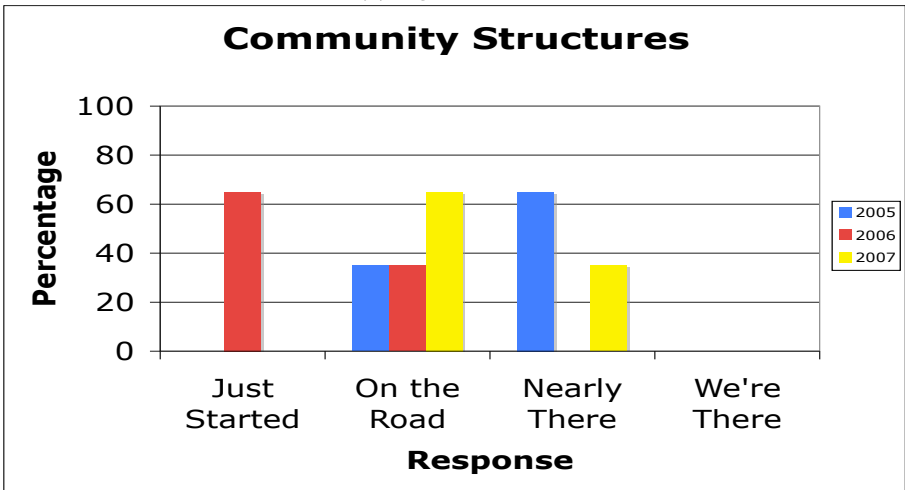
In 2005, the health and education departments of the community were strongly partnered and agreed to participate collaboratively as members of a working committee to adapt and deliver the drug and alcohol prevention program, as part of their school health curriculum. By 2006, the need for additional manpower and community expertise was recognized. The Elder Advisory Circle was established, and by 2007 was a permanent community structure that developed as a result of the project. The Elder Advisory Circle is an informal gathering of community Elders who represent all families within the community. Their work has advised, directed, and supported the work of the adaptation subcommittee. While completing the CCBT, one of the community representatives reflected on a previous focus group held with the Elders during the adaptation process:

> In the focus groups, the Elders said, this thing is good for us because we didn't get to see each other very often before, we didn't go out and visit as much as we used to, and it is very good for us to get out and to be together and to laugh and to work on something that is important. They had relationships before but it is something that is healthy for them as Elders, they are contributing, they are enjoying themselves most of the time. (Focus Group)

EXTERNAL SUPPORTS: FUNDING BODIES

> External supports [funding bodies] such as government departments, foundations and regional health authorities can link communities and external resources. At the beginning of a project, early external support may nurture community momentum. (PHAC, 2005:5)

In the beginning, community members identified FASD as a serious problem within their community and hoped to establish a drug and alcohol prevention program as part of their school curriculum. Discussions between community members and clinician/researchers who had been providing services to FASD children within the community developed. In the fall of 2005, individuals internal and external to the community began regular meetings to identify potential interventions and enlist a variety of individuals with strengths, skills, and expertise. Because the team was strong, the only external support required at this time was funding. Potential sources of funding had been identified and a grant application had been written and submitted.

The work of the funding and adaptation subcommittees continued to move forward throughout the following year. Funding had been secured for the adaptation phase of the project and was now being sought for the de-

Figure 4: Changes in Percentage of Key Elements of External Supports: Funding Bodies at each Mapping Point for 2005, 2006, and 2007
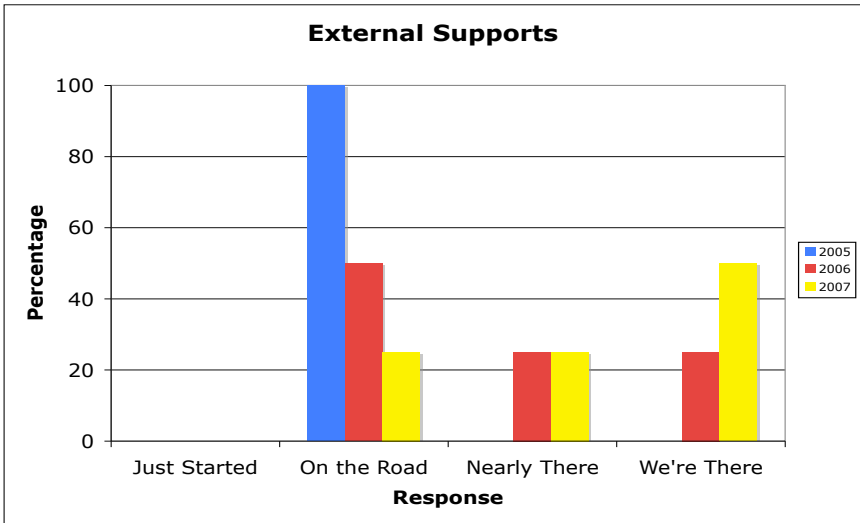
livery and evaluation phases. During this time, the working committee ben-efited from policies developed in support of research with Aboriginal peoples including those of the Alberta Mental Health Board (2006) and the Canadian Institutes of Health Research (2007).

By 2007, the first level of the adapted program was delivered and evaluated and adaptations to the next two levels of the program were in progress. The funding subcommittee began work on a national grant proposal to incorporate the results from the adaptation and delivery of the first level of the program and fund the project for the next three years. The community's perceptions of access to external funding were mixed. Community members felt heavily drawn upon and were frustrated with the funding subcommittee's uncertainty of securing long-term funding for the project despite a very successful partner-ship and a prevention program with potential for positive long-term impacts.

Asking Why

Asking why refers to a community process that uncovers the root cause of com-munity health issues and promotes solutions. The community comes together to critically assess the social, political, and economic influences that result in dif-fering health standards and conditions. Exploration through "asking why" helps refine a project to reflect the community needs. (PHAC, 2005:7)

From the start, high rates of FASD and substance abuse, well-known health issues in the community, were understood as symptoms of residential

Figure 5: Changes in Percentage of Key Elements of Asking Why at each Mapping Point for 2005, 2006, and 2007
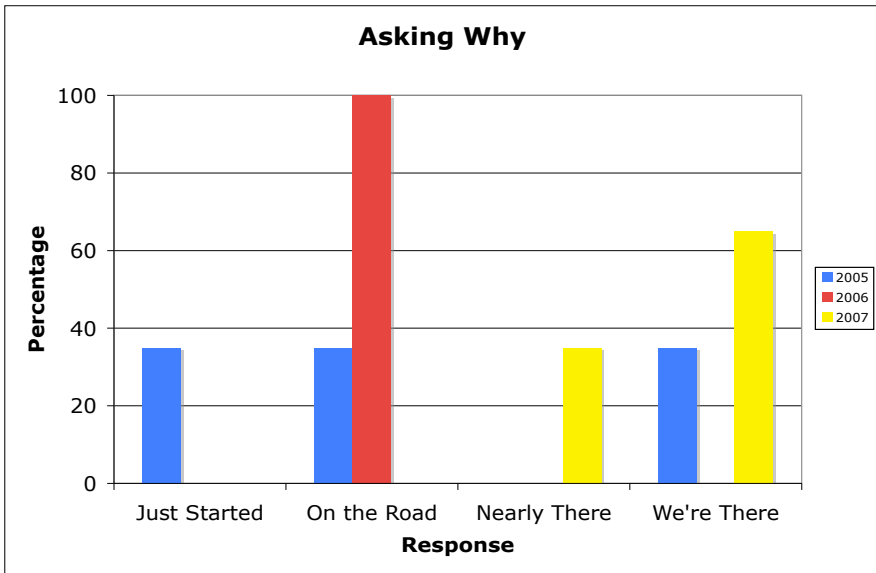
schooling and colonization. These problems were acknowledged and discussed openly by the working committee.

> When we started the process, even before this funding, we talked about some of the issues we are having at school, all the attendance problems, what the children told us coming from these backgrounds; and then from the parent conference, all the issues that they face because of their parenting skills. Over time, before this project even started, there were the health issues.… I think the community is aware of a lot of these things. They are trying to find tools or things to stay strong — this is one of them. (Focus Group)

Mutual respect among members of the working committee encouraged honest and open discussion of community problems and potential solutions. The working committee noted that some of the most difficult discussions, most recently encountered in completing the CCBT for 2007, were only possible because of the safety that had been created within the committee. One of the participants remarked on the optimism growing within the prevention project:

> I have been in informal discussions with the chief and council and they really believe this project can be a starting ground for exploring more of the underlying issues such as housing and water that many of our members face. (Focus Group)

Several participants said that the project had broadened their understanding of root causes. Beyond historical impacts and the intergenerational effects of residential schooling, there was an increasing awareness throughout the community of the importance of creating supportive environments within which to make change.

> It broadened the awareness of the child. Choices are not the only things that affect the child. The child can make the choice, but other people that make choices around them affect the child. It broadened that for a lot of us, I think. (Focus Group)

> In the Elder focus group, they pretty much all agreed that we are focusing on the children, but there is this group of people that we never worked with and that is the people who are 20s and 30s, the parents of the children. We just let them be. Now we need to try to bring these parents in and work with them to give them the same program. That is what they all want to see happen — that we have a program for adults as well. (Focus Group)

Obtaining Resources

Obtaining resources includes finding time, money (other than from funding bodies), leadership, volunteers, information and facilities both from inside and outside the community. (PHAC, 2005:8)

Figure 6: Changes in Percentage of Key Elements of Obtaining Resources at each Mapping Point for 2005, 2006, and 2007
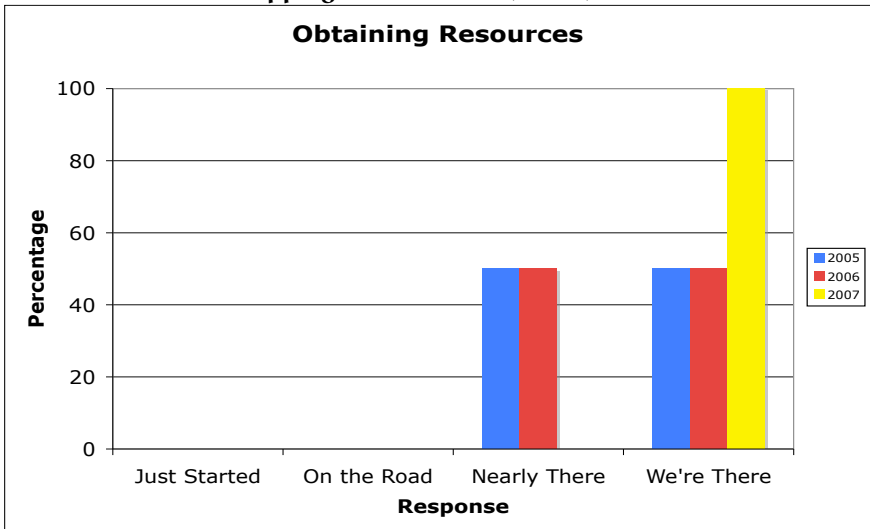
The drug and alcohol prevention project was spearheaded by community members with knowledge of community politics and the need for transparency. These community members were instrumental in keeping lines of communication open, and were able to secure human and physical resources to support the project during its initial phases. By 2006, with the project well under way, the working committee was feeling the effects of large demands on a small cohort of people. The time required for adaptations and the stress and conflict created by the community consensus process were difficult to manage. Despite these demands, the working committee continued to move forward, in large part due to the strong support from the Elder Advisory Circle and the working committee's commitment to improving the future of the children in their community. So far, there had been very little utilization of resources external to the existing working committee and the broader community.

Discussions in 2007 reflected both the benefits and drawbacks of success. As a result of the early success in adapting and delivering the prevention program, working committee members, and a greater number of community members, were committed to the future of the program. Higher expectations were set, primarily around the quality of the cultural adaptations that were being made. This success resulted from extraordinary contributions of time and energy by a small percentage of the community, placing multiple demands on a small number of individuals. In the summer of 2007, a summer research student joined the team to alleviate some of these demands. The need for additional internal and external resources was identified and included in subsequent funding proposals.

Skills, Knowledge, and Learning

> Skills, knowledge, and learning are qualities in the project team, the target population, and the community that the project team uses and develops. (PHAC, 2005:9)

Early in the research project, there was little attention to formal capacity-building activities: the focus was on building relationships and identifying strategies to adapt and deliver a drug and alcohol prevention program. This said, there was a lot of informal capacity building as academic and community members of the working committee began to understand the protocols of each other's environments.

In 2006, two key areas of skill development were identified: first, the training required for community members to deliver the drug and alcohol

Figure 7: Change in Percentages of Key Elements of Skills, Knowledge, and Learning at each Mapping Point for 2005. 2006, and 2007
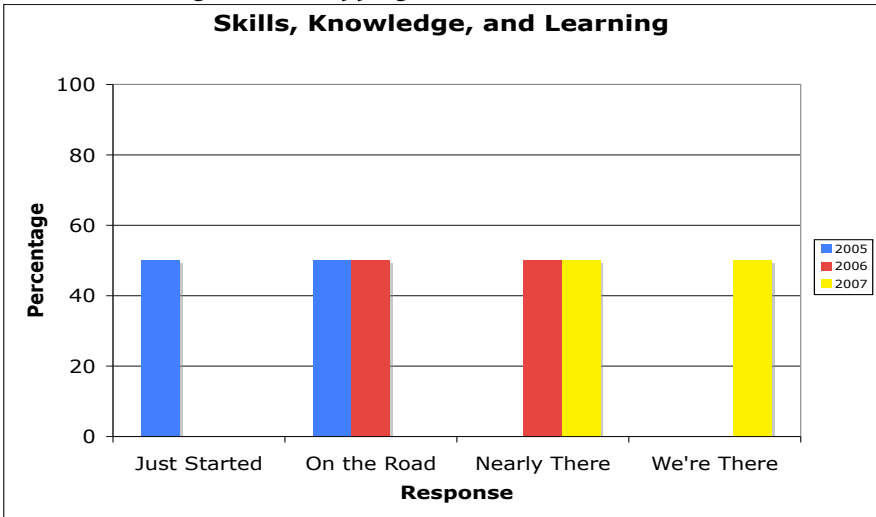
prevention program; second, the development or enhancement of skills and resources for community representatives to attend and present at local, national, and international conferences. Again, the capacity of all members of the working committee was being built as they explored, together, the most effective content and style of presentation to translate the work being done.

In 2007, local, national, and international presentations were given by community members. The working committee recognized the opportunity for additional community members to build the necessary skills for similar presentations and have encouraged other community members to present at future meetings. In a discussion of skills, knowledge, and learning, one of the participants shared this reflection:

> I am having an opportunity to present; that develops my skills. I also got invited [to another workshop]. I asked if I could participate in the training — who knew? I want to learn about this stuff so someday we can do it ourselves.… Three years ago I would not have believed I would be going to Chicago next week to give a keynote address and have given two presentations to doctors. (Focus Group)

Linking with Others

Linking with others refers to linking your project with individuals and organizations. These project links help the community deal with its issues. Examples include creating partnerships or linking with networks or coalitions. (PHAC, 2005:10)

Figure 8: Changes in Percentage of Key Elements of Linking with Others at each Mapping Point for 2005, 2006, and 2007
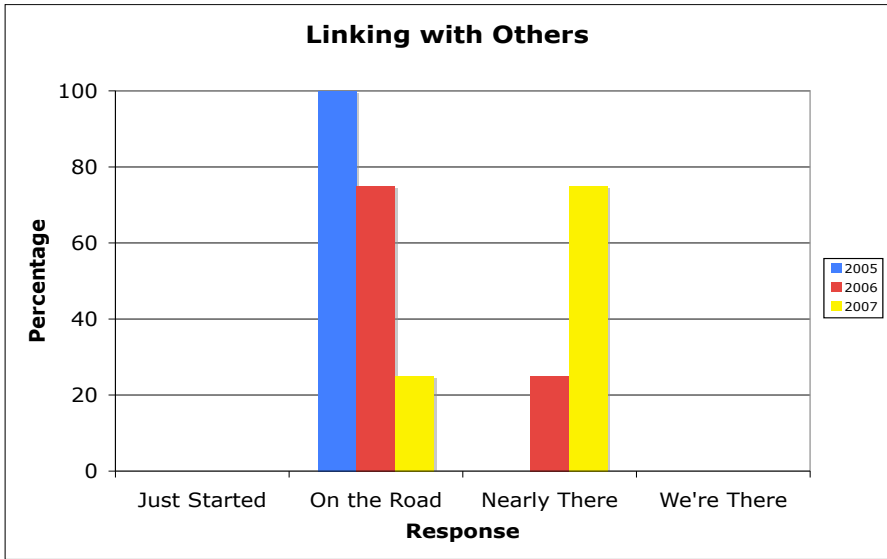
In 2005, the working committee was just beginning to focus on linking with others, receiving information, and taking community action. The key areas of concern were linking with chief and council and securing funds through provincial and national granting agencies.

The next year, 2006, marked a turning point. Approximately twenty community members, as well as the working committee, attended an information session to inform the community about the school-based drug and alcohol prevention program and explain why and how adaptations to the program were being made. This gathering resulted in a broader understanding of the project, strengthened pre-existing links between interagency members, and increased the broader community's awareness of the working committee's commitment to the project.

In 2007, the working committee began to discuss and explore additional opportunities to share information with the community about the progress and future of the drug and alcohol prevention program. Academic and community members of the working committee have remained strong in their commitment to the program and continue to bring diverse skills, expertise, knowledge, and experience to the project.

Sense of Community

Sense of community, within the context of a project, is fostered through building trust with others. Community projects can strengthen a sense of commu-

nity when people come together to work on shared community problems. Collaborations give community members confidence to act and courage to feel hopeful about change. (PHAC, 2005:12)

Figure 9: Changes in Sense of Community at each Mapping Point for 2005, 2006, and 2007
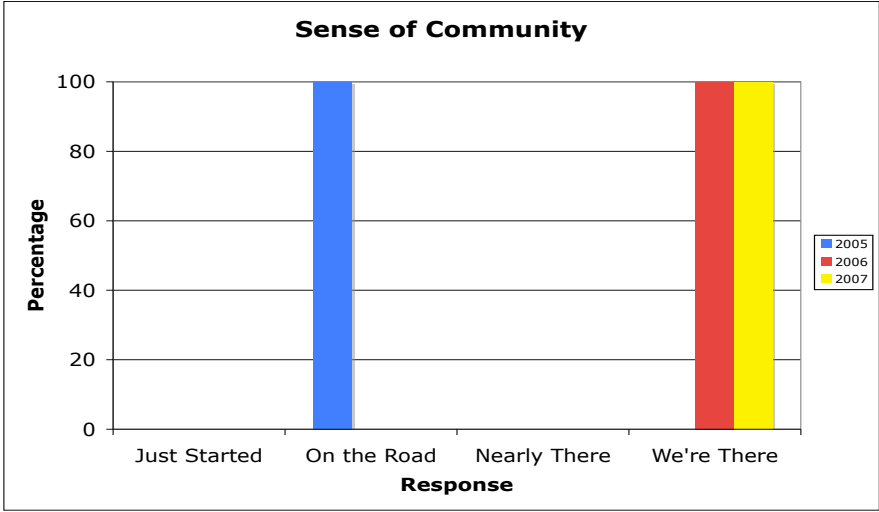
The drug and alcohol prevention project began from a strong sense of community and a commitment by community members to address the high prevalence of FASD in their community. Community members and academic researchers from the University of Alberta agreed from the beginning that the community would maintain ownership of the project and that the Elders would be important participants from start to finish, although initially their role in the project was unclear.

In 2006, cultural adaptations to the prevention program began. At first, Elders played a consultative role, providing feedback and recommendations particularly with regard to translation into the Stoney language. However, the working committee felt that the Elders' wisdom and life experiences could be providing more to the project and, in 2006, the role of the Elder Advisory Circle began to evolve. The Elders have expressed great interest in the project and have held regular weekly meetings to advise the work of the adaptations subcommittee.

The community's sense of ownership of the program expanded throughout 2007, primarily as a result of the Elders' increased involvement and commitment to the project. The project has provided opportunities for the Elders to meet, revisit and document their Stoney language, and to have pride in

their contributions to the community. The language variations in clans represented by the Elders made it difficult to achieve consensus on appropriate adaptations to the prevention program. Confrontations and discussions concerning these differences have sometimes been uncomfortable for everyone involved. However, the trust and sense of hope established throughout the project has allowed members of the working committee, the subcommittees and the Elder Advisory Circle to work together toward common solutions. The initiation of the project by the community and the evolving role of Elders provided a strong sense of community throughout the project.

Discussion

This study is the first of its kind to use the CCBT to measure growth in community capacity over the two-year period of a CBPR project involving a collaborative partnership between academic researchers and Aboriginal community members. It is also one of the few to complete the tool through facilitated discussion. Maclellan-Wright et al. (2007:302), in the first pilot test of the tool, note that "[A]lthough the instrument was considered to be valuable for use in a project group setting, most of the instruments returned for analysis were filled out by only one person." All nine features measured on the CCBT showed increased capacity over the study period. Three of these features, "leadership," "skills, knowledge, and learning," and "sense of community" were especially informative and critical to the success of the project.

Effective leadership promoting participatory decision-making may be the most important characteristic of a community's capacity to promote participation (Minkler and Wallerstein, 2003). A growing understanding of how leadership was perceived and supported by the community contributed significantly to the completion of the working committee goals. Members of the working committee, community members, and Elders assumed and relinquished leadership roles according to their knowledge, skills, areas of expertise, and what they believed they were best able to contribute to the project. For some, it was facilitating consensus on difficult negotiations or decisions that needed to be made; for some, it was understanding the research process; and for some it was understanding and sharing community protocols and ethics. This movement in and out of leadership roles was encouraged and supported by all members of the working committee.

The CCBT measure of skills, knowledge, and learning documented the many ways in which the project has supported and provided opportunities for individuals to discover and develop confidence in their skills and areas

of expertise as well as develop new skills and capacities. In many instances, individuals had opportunities to push themselves in ways that contributed to their own self esteem and confidence. For example, as each community member made public presentations, the next community member was successfully mentored through the same process. In doing so, trust was established and opportunities for building capacity in skills, knowledge, and learning emerged.

This study reflects previous work showing that a sense of community is a particularly robust predictor of involvement in neighbourhood and community action (Chavis and Wandersman, 1990). Sense of community was rated very high throughout the two-year study period and contributed to the success of the project. Stalker, Abhyankar, and Iyer (2001) noted that committee effectiveness is especially positive when institutional transparency and accountability, access to information, and participation emerge as important aspects of a community project. Within this study, institutional transparency and accountability, access to information, and participation were areas that improved over the two-year study period.

Despite the overall positive progress in community capacity, the community members and Elders who played a key role in adapting the prevention program often found themselves overwhelmed. Contributing to the prevention project and building their own capacity as community researchers often conflicted with prior commitments and community responsibilities. All members of the working committee and subcommittees were committed to the project and understood its potential for improving the health and well-being of children in the community. The practicalities of everyday responsibilities meant that community capacity building, including attendance at research workshops and scientific presentations and meetings, was often incompatible with everyday community responsibilities.

In retrospect, the working committee underestimated the complexity of the adaptation process. Increased access to external funding would provide better opportunities to hire technical support for the project to alleviate the stress and demands placed on a small number of community members. These needs have been recognized and incorporated into future funding proposals.

Overall, the CCBT was felt to be a good measure of the capacity building in a CBPR project in this community. However, two limitations of the CCBT were noted: the time required to complete the tool and limited opportunities to document the importance of culture as one aspect of community capac-

ity building. Time demands limited the extent of participation in the CCBT. Although the focus group prompted valuable discussion that would otherwise not have taken place, the need for consensus demanded a significant amount of time from an already overstretched working committee. Maclellan-Wright et al.'s (2007) pilot study participants also indicated that it was difficult to dedicate the time required to complete the tool.

All of the study participants emphasized the role that different components of culture played in helping the working committee achieve their goals. A strong sense of culture — and understanding of one's culture — is an important resource for Aboriginal people when dealing with health issues (Wardman and Quantz, 2005) and may also be an important component of community capacity building. However, the CCBT did not include a feature that documented growth in the community's understanding and sense of culture other than its reference to building a "sense of community." Maclellan-Wright et al. (2007) also noted the need to develop indicators for "sense of community." Aspects of culture, one social determinant of health (http://www.phac-aspc.gc.ca/ph-sp/phdd/determinants/index.html#key_determinants), could be explored and measured as indicators of the "sense of community" feature.

Finally, two features, external supports and leadership, caused some confusion among study participants. According to the CCBT, access and use of external supports is a positive indicator of capacity building. Expertise beyond the working committee was not sought early in the project, because the needs of the project were being met by the expertise within the working committee. This may have been in part because the working committee was unaware of additional available resources.

The concept of leadership also prompted a fair bit of discussion. First Nations people do not typically self-identify as "leaders" and, as a result, were not comfortable with identifying leadership or their roles in leading the project. Instead, the discussion focused on the flexible role of each individual and the contribution of expertise at the right time. In other words, individuals took the "lead" based on the ability to do what was required to advance the work of the working committee.

Conclusion

Our study was the first of its kind to field test the CCBT over a two-year period during a CBPR project that involved a collaborative partnership between academic researchers and Aboriginal community members. The CCBT effectively documented positive growth in community capacity in all nine

features of the research tool. Two gaps were identified in the application of the CCBT in this First Nations context. These included the significant time commitment required to complete the tool and absence of a feature that documented growth in the community's understanding and recognition of culture. Additional research to evaluates the effectiveness of the CCBT in other Aboriginal communities is required.

References

Alberta Mental Health Board

2006 *Aboriginal Research Protocols: Healthy Aboriginal People in Health Communities.* Alberta Mental Health Board

Buchannan, D., F. Miller, and N. Wallerstein

2007 "Ethical issues in community-based participatory research: Balancing rigourous research with community participation in community intervention studies." *Progress in Community Health Partnerships: Research, Education and Action* 1(2):153–160.

Canadian Institute for Health Information (CIHI)

2004 *Improving the Health of Canadians – Summary Report.* Ottawa, ON: The Canadian Institute for Health Information.

Canadian Institutes of Health Research (CIHR)

2007 *CIHR Guidelines for Health Research Involving Aboriginal Peoples.* Ottawa, ON: The Canadian Institute for Health Research, Division of Ethics.

Chavis, D. and A. Wandersman

1990 "A sense of community in the urban environment: a catalyst for participation and community development." *American Journal of Community Psychology* 18(1):55–81.

Daniel, M., L.W. Green, S.A. Marion, D. Gamble, C.P. Herbert, C. Hertzman, and S.B. Sheps

1999 "Effectiveness of community-directed diabetes prevention and control in a rural Aboriginal population in British Columbia, Canada." *Social Science and Medicine* 48:815–832.

Health Canada

2003 *A Statistical Profile on the Health of First Nations in Canada.* Ottawa, ON: Health Canada, First Nations and Inuit Health Branch, Health Information and Analysis Division.

Heffernan, C., C. Herbert, G.D. Grams, S. Grzybowski, M.A. Wilson, B. Calam, and D. Brown
1999 "The Haida Gwaii diabetes project: Planned response activity outcomes." *Health and Social Care in the Community* 7(6):379–386.

Israel, B., A. Schulz, E. Parker, and A. Becker
1998 "Review of community-based research: Assessing partnership approaches to improve public health." *Annual Review of Public Health* 19:173–202.

Israel, B., A. Schulz, E. Parker, A. Becker, A. Allen, and J. Guzman
2003 "Critical issues in developing and following community-based participatory research principles." In M. Minkler and N. Wallerstein, eds., *Community-Based Participatory Research for Health.* San Francisco, CA: Jossey-Bass Press.

Macaulay, A.C., G. Paradis, L. Potvin, E.J. Cross, C. Saad-Haddad, A. McComber, S. Desrosiers, R. Kirby, L.T. Montour, D.L. Lamping, N. Leduc, and M. Rivard
1997 "The Kahnawake Schools Diabetes Prevention Project: Intervention, evaluation, and baseline results of a diabetes primary prevention program with Native community in Canada." *Preventive Medicine* 26:779–790.

Maclellan-Wright, M., D. Anderson, S. Barber, H. Smith, B. Cantin, R. Felix, and K. Raine
2007 "The development of measures of community capacity for community-based funding programs in Canada." *Health Promotion International* 22(4):299–306.

Miles, M. and A. Huberman
1994 *An Expanded Sourcebook: Qualitative Data Analysis.* Thousand Oaks, CA: Sage Publications.

Minkler, M. and N. Wallerstein, eds.
2003 *Community Based Participatory Research for Health.* San Francisco, CA: Jossey-Bass Press.

Paradis, G., L. Lévesque, A.C, Macaulay, M. Cargo, A. McComber, R. Kirby, O. Receveur, N. Kishchuk, and L. Potvin
2005 "Impact of a diabetes prevention program on body size, physical activity, and diet Among Kanien'keha:ka (Mohawk) children 6 to 11 years old: 8-year results from the Kahnawake Schools Diabetes Prevention Project." *Pediatrics* 115(2):333–339.

Potvin, L., M. Cargo, A. McComber, T. Delormier, and A. Macaulay
2003 "Implementing participatory intervention and research in communities: Lessons from the Kahnawake Schools Diabetes Prevention Project." *Social Science and Medicine* 56:1295–1305.

Public Health Agency of Canada (PHAC)

2005   *Community Capacity Building Tool.* Working Document, September 2005. Retrieved October 22, 2007 from http://www.phac-aspc.gc.ca/canada/regions/ab-nwt/pdf/ccbt_english.pdf.

Reading, J., A. Ritchie, J. Victor, and E. Wilson

2005   "Implementing empowering health promotion programmes for Aboriginal youth in two distinct communities in British Columbia, Canada." *Promotion and Education* 12(2):62–65.

Smith, N., L. Baugh Littlejohns, and D. Roy

2003   *Measuring Community Capacity: State of the Field Review and Recommendations for Future Research.* Health Policy Research Program Project no. 6795-15-1001/1440001, Final Report Alberta: David Thompson Health Region, Red Deer.
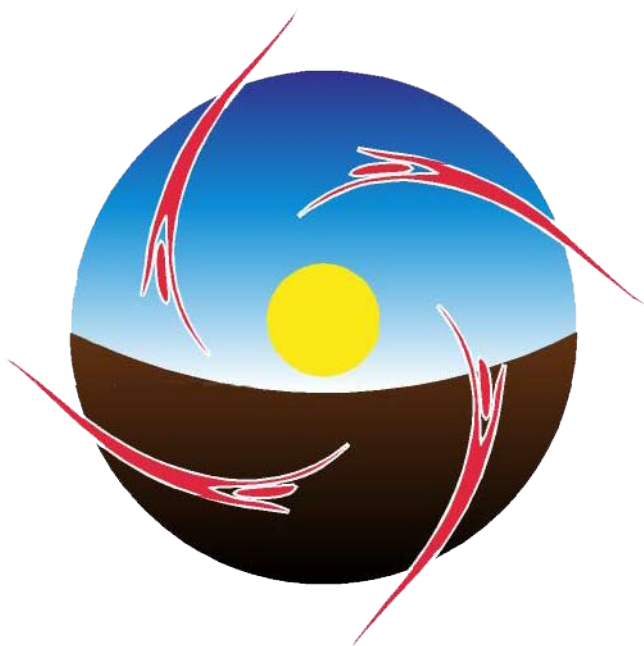
Stalker, L., G. Abhyankar, and P. Iyer

2001   *Why some Village Water and Sanitation Committees are Better than Others: A Study of Karnataka and Uttar Pradesh (India).* New Delhi: Water and Sanitation Program — South Asia, 1–12.

Tobe, S., G. Pylypchuk, J. Wentworth, A. Kiss, J. Szalai, N. Perkins, et al.

2006   "Effect of nurse-directed hypertension treatment among First Nations people with existing hypertension and diabetes mellitus: The Diabetes Risk Evaluation and Microalbuminuria (DREAM 3) randomized controlled trial." *Canadian Medical Association Journal* 174(9):1267–1271.

Wardman, D. and M. Quantz

2005   "An exploratory study of binge drinking in the Aboriginal population." *Journal of the National Center of American Indian and Alaska Native Mental Health Research* 12(1):49–61.