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KNOWLEDGE, CAPACITY, AND READINESS: TRANSLATING SUCCESSFUL EXPERIENCES IN COMMUNITY-BASED PARTICIPATORY RESEARCH FOR HEALTH PROMOTION

Jon Salsberg, MA

*Kahnawake Schools Diabetes Prevention Project (KSDPP)
Participatory Research at McGill (PRAM), Department of Family Medicine,
McGill University*

Stanley Louttit, MA

Moose Factory, Ontario

Alex M. McComber, MEd

Kahnawake Schools Diabetes Prevention Project (KSDPP)

Roderick Fiddler

Sandy Lake Health and Diabetes Project (SLHDP)

Mariam Naqshbandi, MSc

*Sandy Lake Health and Diabetes Project (SLHDP)
Centre for Studies in Family Medicine,
University of Western Ontario*

Olivier Receveur, PhD MPH

*Kahnawake Schools Diabetes Prevention Project (KSDPP)
Department of Nutrition, Faculty of Medicine
Université de Montréal*

Stewart B. Harris MD MPH

*Sandy Lake Health and Diabetes Project (SLHDP)
Centre for Studies in Family Medicine
University of Western Ontario*

Ann C. Macaulay, CM MD

*Kahnawake Schools Diabetes Prevention Project (KSDPP)
Participatory Research at McGill (PRAM)
Department of Family Medicine,
McGill University*

ABSTRACT

Capacity building is a guiding principle of community-based participatory research (CBPR). This paper explores the interrelationship between capacity building and the concepts of readiness and intercommunity knowledge translation. A five-year study examined two long-standing projects for the primary prevention of type 2 diabetes in Aboriginal communities, to translate the lessons learned from those experiences into capacity for diabetes prevention in a third Aboriginal community. Reviewing external factors with the PRECEDE-PROCEED model of health promotion reveals that readiness for change requires both intra- and extra-community enabling factors including expertise from other communities, national and international organizations, federal health service funding, available research and intervention funding, and availability of external partners. These resources do not address the community health issue directly, but rather build capacity, objective and environmental, for the community to address the issue itself. It was found that a community that is internally ready, and situated within an external enabling environment rich in appropriate resources, can translate the knowledge from other successful community experiences to develop the capacity to initiate community health promotion for diabetes prevention.

INTRODUCTION

Community-based participatory research (CBPR) has, over the past decade, become a valid and increasingly accepted approach to academic research within communities (Fletcher, 2003; Israel et al., 1998; Macaulay et al., 1999; Minkler, 2000). CBPR enhances the relevance of the research to community and other end-users by including all stakeholders in the research process from formulating the research question through final interpretation and dissemination of results. One of the principal characteristics of CBPR in health research is the iterative and reciprocal capacity building of community and academics through the partnership process (Giachello et al., 2003; Hawe et al., 1997; Israel et al., 1998; Pegler et al., 2003; Reading and Nowgesic, 2002; Stokols et al., 2003). Academics gain an understanding of the community's epistemology of wellness — how they understand health and illness fitting within their social, cultural, and physical environments — and learn how their own skills and knowledge can best serve the community's particular interests and needs. The community develops a new understanding of the health issue in question, and its research and professional capacities to deal

with this and other health concerns. Increased capacity means greater community control over the research process, which leads to more informed decisions, more meaningful information, a sense of ownership and, ultimately, improved health and well-being (National Aboriginal Health Organization [NAHO] 2007). Communities and their members imbue the process with local knowledge and wisdom, greatly increasing the potential success and sustainability of a project (Bracht, 1994; Cargo et al., 2003; Pegler et al., 2003).

Capacity has *objective* and *environmental* components. Building *objective capacity* provides community members the tools, skills, and knowledge (i.e., *objects*) to tackle current and future health and social issues. Building *environmental capacity* fosters and maintains infrastructures and environments in which these objects can manifest. Both objective and environmental aspects of capacity are necessary to fully realize and sustain a community's ability to address current and future health issues (Stokols et al., 2003).

There is a strong focus on *community readiness* in health promotion. In most cases, however, this describes predisposing factors *within* the community (World Bank Group, 2002; Chambers, 1992; Peiro et al., 2002; Thurman et al., 2003), particularly its means of assessment (World Bank Group, 2002; Chambers, 1992; Peiro et al., 2002) or degree of community mobilization (Thurman et al., 2003). Some authors have considered issues outside the community, such as availability of funding (Israel et al., 2006) or external partnerships (Lantz et al., 2001), but few come to terms with the full range of factors in the extra-community environment. These factors, or *external readiness*, form the antecedent conditions to *enable* success in organized health promotion efforts within the community itself. This gap in understanding is significant as external readiness can be key in supporting community readiness.

The frequently cited (Green, 2007) PRECEDE-PROCEED Model of Health Program Planning and Evaluation (Green et al., 2005) guided our understanding of the existing internal and external readiness factors. PRECEDE-PROCEED recommends an initial formative evaluation of pre-existing conditions in the community's internal and external environments. This assesses the educational and ecological factors, gathering information on the predisposing, reinforcing, and enabling factors present *internally* and *externally*. Predisposing factors, internal by nature, include knowledge, attitude, beliefs, cultural values, and perceptions of the community. Reinforcing factors, also internal, include attitudes and behaviours of health and other personnel. Enabling factors are the availability of resources, accessibility, and skills in-

ternal *and* external to the community. Therefore, *external readiness* maps the *external factors enabling community capacity* within the PRECEDE-PROCEED model. This descriptive paper outlines the educational and ecological factors of internal and external readiness, the process of translating knowledge from community to community, and the lessons learned.

TRANSLATING COMMUNITY-BASED EXPERIENCES

This study offered and translated knowledge developed, and lessons learned, from two CBPR projects in diabetes prevention to a third community. Rather than directly providing resources, planning, or implementation for diabetes prevention within the third community, knowledge translation activities build capacity *enabling* the community to plan and implement their own diabetes prevention strategy and program. This strategy promotes community ownership of the process, enhancing the relevance of diabetes prevention and chance for success (National Aboriginal Health Organization [NAHO], 2007). The first stage of the study (Macaulay, et al., 2003) compared Canada's two longest standing CBPR projects for the primary prevention of type 2 diabetes in Aboriginal communities, outlining their histories, intervention and evaluation designs, commonalities, differences, and best practices. These two projects then collaborated to build capacity for health promotion in a third Aboriginal community. This process included sharing experience through knowledge translation (KT) activities, "the exchange, synthesis, and ethically sound application of knowledge – within a complex set of interactions among researchers and users – to accelerate the capture of the benefits of research" (Canadian Institutes of Health Research [CIHR], 2003). KT encourages dialogue between knowledge producers and consumers, interchanging their roles, creating exchange of knowledge and knowledge feedback. KT should facilitate health promotion by providing community members with crucial knowledge resources, and researchers and health professionals with new insights into the realities and context of the community health environment. For Aboriginal peoples, "knowledge translation is Indigenously led sharing of culturally relevant and useful health information and practices to improve health status, policy, services and programs" (Indigenous Peoples' Health Research Centre, 2005). In addition, "the spread of information occurs through family and community networks, influence of community structure on information flow, and value of community leadership and participation" (Indigenous Peoples' Health Research Centre, 2005). KT increases when the

knowledge is meaningful and accessible to its recipients, delivered by a credible source, and succeeds when community members come to consensus about an agreed concern (Barnes, 2000; Bero et al., 1998; Bisset et al., 2004; Grimshaw et al., 2001; Smith, 1999; Smylie et al., 2004b). Knowledge sharing between organizations or “communities of practice” is enhanced with common knowledge and practice; some common or overlapping values; and a sense of shared collective identity. A shared sense of identity and social relationships develops trust, which is key; trust must be developed before effective knowledge sharing can occur. Much knowledge is tacit and better transferred through social interaction; successful knowledge sharing requires the development of positive social interactions (Hislop, 2004). For this study, some significant KT events were:

- o Culturally acceptable messengers (Alex McComber [AMMc], Roderick Fiddler [RF], Stanley Louttit [SL], and Kahnawake Schools Diabetes Prevention Project [KSDPP] Community Advisory Board member Amelia McGregor) facilitate “a sense of shared collective identity” to develop trust.
- o Researchers learn from community (Jon Salsberg [JS] participated in training; met with Moose Cree First Nation Health Services committee; collaborated with SL, Olivier Receveur [OR], and graduate students, through focus groups, interactions with Moose Cree First Nation Health Services committee and SL).
- o Workshop-style delivery of knowledge from other CBPR experiences during the training program.
- o Moose Factory community members participated in collecting data (community researchers), reviewed results (Moose Cree First Nation Health Services reviewed graduate students’ results prior to dissemination), and the crafting and delivering of community and academic dissemination (SL).
- o Ongoing dialogue among all parties via the iterative authorship and review of this article for external dissemination (academic researchers from KSDPP and Sandy Lake Health and Diabetes Project [SLHDP]; community researchers from all three communities; community reviewers from all three communities).

PARTNER COMMUNITIES

ORIGINAL COMMUNITIES

The two existing CBPR projects are the Kahnawake Schools Diabetes Prevention Project (KSDPP) and the Sandy Lake Health and Diabetes Project (SLHDP). Kahnawake is a Kanien'kehá:ka (Mohawk) community of 7,300 (in 2005), situated 15 km from downtown Montreal, Quebec. KSDPP started in 1994, delivering elementary school-based and community-wide interventions, guided by the KSDPP Code of Research Ethics (Macaulay et al., 1998; <http://www.ksdpp.org/code.html/>). It has been continuously evaluated at all levels (Adams et al., 2005; Jimenez et al., 2003; Macaulay et al., 2003; Macaulay et al., 1997; Paradis et al., 2005; Potvin et al., 1999; Trifonopoulos et al., 1998). Sandy Lake (Ne gaaw saga'igan), Ontario, is located about 2,000 km northwest of Toronto. Approximately 2,050 Oji-Cree live in this community (2004), which is accessible only by air for over 10 months of the year. The Sandy Lake Health and Diabetes Project (SLHDP) began in 1992, delivering elementary school-based and community-wide interventions for the prevention of type 2 diabetes, has also been continuously evaluated (Hanley et al., 2001; Hanley et al., 2002; Hanley et al., 2000; Hanley et al., 1995; Harris et al., 2002; Harris et al., 1996; Saksvig et al., 2005). Both projects have worked together for many years, both promote increased physical activity and healthy eating, and both are committed to CBPR, with community and academic researchers working in partnership at each stage of the research. For KSDPP, the community is represented through the KSDPP Community Advisory Board (Macaulay et al., 1997); for SLHDP, the community is represented through the Chief and Council (Macaulay et al., 2003), who also review and give approval for the research undertaken by SLHDP. The project coordinator (JS) for this study was based with KSDPP in Kahnawake.

THIRD COMMUNITY

Potential participant communities were identified through participants in the KSDPP Training Program in Diabetes Prevention, a week-long professional training course attracting community health workers from Aboriginal communities across Canada (KSDPP, 2005), and contacts from the National Aboriginal Diabetes Association (NADA) (National Aboriginal Diabetes Association [NADA], 2006). Moose Factory, Ontario, located in the James Bay region of northeastern Ontario, was chosen for their identification of diabetes as a pressing community issue, their leadership's readiness as a communi-

ty to address it, and interest in joining this study. In 2004, Moose Factory had a population of 2,500 Cree (majority) and non-Cree (minority) residents. The community is represented in this study by Moose Cree First Nation (MCFN) Health Services; however, non-Cree community members also participated in both the study and the KSDPP training.¹ Moose Factory's involvement began when the diabetes nurse educator from the community attended a KSDPP workshop at the 2nd National Conference on Diabetes and Aboriginal Peoples, organized by the National Aboriginal Diabetes Association, in the fall of 2002. Upon her return to Moose Factory Hospital, she urged the nutritionist to invite KSDPP to conduct a workshop during their annual community gathering in August 2003. During that visit, the KSDPP Training Coordinator proposed to the First Nation's leadership that they request and sponsor diabetes prevention training sessions. They agreed and MCFN Health Services provided the funds. Once the leadership was on board for training, the research project coordinator (JS) travelled there to propose MCFN add this research component to their relationship with KSDPP. This was welcomed by MCFN Health Services; diabetes prevention was high on their agenda and they were very interested in conducting baseline research to guide their intervention efforts.

For this study, the primary means of KT in Moose Factory were:

- a. the KSDPP Training Program with the participation of the SLHDP Program Coordinator,
- b. interaction with team members from KSDPP and SLHDP,
- c. two research projects in Moose Factory for baseline data collection and analysis.

The latter provided an opportunity to train community researchers, while giving leaders vital information about their health environment. The KSDPP Training Program, a week-long course developed from KSDPP's experience with community mobilization for diabetes prevention, disseminates the KSDPP model to other Aboriginal communities across Canada. During the

1. Moose Factory is an island on the Moose River, about 15 km from the base of James Bay. The island is divided into two principal regions: Moose Cree First Nation Territory and non-reserve provincial land. Moose Factory residents can be members of the *Moose Cree First Nation* (which owns the First Nation land) or *MoCreebec*, or be non-Cree members of the community. When we refer to the *Community of Moose Factory*, we are including all people who live on the island, regardless of region or affiliation. We will refer to Moose Cree First Nation (MCFN) specifically when discussing aspects of project or partnership governance, as MCFN and its leadership were the principal signatories to the Interdisciplinary Health Research Teams (IHRT) project agreement.

initial week of training, the KSDPP Training Coordinator (AMMc) and the SLHDP Program Coordinator (RF), delivered and discussed the intervention experiences from both KSDPP and SLHDP. The training was attended by 10 Moose Factory community members, including nurses; community health representatives; other health workers; as well as community members-at-large interested in being involved in the diabetes prevention efforts. The KSDPP and SLHDP team members were community trainers and researchers, academic researchers, and graduate students. The Moose Factory baseline research collected data on the environment supporting physical activity and community food systems – both traditional and commercial.

READINESS: INTERNAL AND EXTERNAL

Improvement of public health issues relies heavily on all the necessary pieces falling into place at the right time. Communities must be ready to commit time, energy, and scarce resources towards public health issues (World Bank Group, 2002; Chambers, 1992; Giachello et al., 2003; Kane, 1997; Kuipers et al., 2001; Kuipers et al., 2003; Mahmood et al., 2002; Pretty and Vodouhem, 2002; Szymanski et al., 2002; Thurman et al., 2003). Many aspects of internal readiness *predispose* a community towards health promotion programming, but *external* resources for communities are also available. Of course, communities can successfully address issues from within, but there are myriad tools and resources which may be drawn upon that are not within the community itself. The PRECEDE-PROCEED model recognizes that many of the factors *enabling* health promotion programming are found outside the community. For Moose Factory, these included sources of intervention funding; research funding; experience and expertise from other communities which had addressed similar issues; national and international community-based organizations which pooled and supplied knowledge and expertise; university-based human resources (researchers and graduate students who were willing to work within a partnership framework); model research agreements; and national policy makers. We will examine the predisposing and enabling factors internal to Moose Factory – in accordance with the PRECEDE PROCEED model – before enumerating the enabling aspects of the external environment that come to bear on the community as well (see Figure 1).

Figure 1. Factors Supporting Knowledge Translation for Capacity Building



*Predisposing and enabling factors adapted from L.W. Green and M.W. Kreuter.

COMMUNITY READINESS — PREDISPOSING AND ENABLING ASPECTS OF THE COMMUNITY ENVIRONMENT

A community's readiness may be defined in terms of the degree of community mobilization and extant capacity, environmental and objective, to address a public health issue.

COMMUNITY CAPACITY

Environmental capacity includes: individual community member experiences with the issue; community-as-a-whole identification of the public health problem; leadership's political will to address it; available community members to work towards health promotion; available community-based health professionals with the appropriate technical skills; available appropriate physical infrastructure; and, significantly, the ability to manage other issues which might siphon off community resources and will to address the issue at hand. Objective capacity includes: appropriate tools and knowledge and the commitment of funds and other resources to address the public health issue. In Moose Factory, the community exhibited its readiness to address diabetes prevention at both the political/administrative and grassroots levels. Once identified as a serious problem, diabetes rose up the political agenda; MCFN Health Services was ready and willing to commit resources towards overcoming it. MCFN made a financial commitment, through Health Services, to a three-year agreement with KSDPP for the initial one-week training and biannual follow-up services, and an administrative commitment to join the IHRT research project. At the grassroots level, ten individuals enrolled in the KSDPP training program, forming the Moose Factory Diabetes Prevention Team; several community members joined the research project as community researchers. The KSDPP training program provided extensive planning opportunities. Participants created a community vision; developed a plan for community consultation to collect feedback — which they then implemented; conducted an environmental scan — both intra- and extra-community; planned a calendar of activities to elicit community feedback on the vision statement, promote diabetes prevention, and build community support for diabetes prevention; and created a list of local organizations and key stakeholders within MCFN and Moose Factory at large. The KSDPP trainer returned for one follow-up after the initial training; further visits were prevented by the end of the IHRT funding and another research grant, which was a partial source of the trainers' salary. At that point, the training program was not fully self-supporting.

HEALTH CARE INFRASTRUCTURE

Moose Factory had the appropriate infrastructure to address diabetes prevention, with a mature and well-developed health services system, including an in-community regional hospital and a local health centre. The community had a longstanding service, training, and research relationship with Queen's

University teaching hospital in Kingston, Ontario. Moose Factory had practicing health professionals available to take on this issue, including nurses, nutritionists, and health educators. Several of these enrolled in the KSDPP training. Other community members had the skills required to carry out baseline data collection alongside university-based researchers and graduate students.

COMMUNITY RESEARCHERS

The study was particularly able to draw upon the knowledge and abilities of a community researcher (SL), who was then completing a master's degree in anthropology, focussing on diabetes in another James Bay Cree population. Hired as the primary community researcher, funded through IHRT, he was pivotal in traversing the boundaries and translating meaning and intentions between the community and academic researchers (Louttit, 2006). For him, being situated at the community level, yet in contact with and representing the IHRT, was a continual challenge of "switching gears" between the language of academics and understanding the everyday lived experience and communication styles of Moose Factory community members (Louttit, 2006). The research experience was a challenge in understanding, translating, and interpreting different research perspectives/objectives to each group's members and stakeholders. In this respect, it was difficult to operate as a Cree researcher who could be perceived as taking the "outsider" position on a specific point or issue (Louttit, 2006). Other community members became community researchers by helping to collect and interpret the baseline data and return results to the community.

EXTERNAL READINESS — ENABLING FACTORS SITUATED OUTSIDE THE COMMUNITY

Many factors and opportunities external to the community itself may support the successful redress of community health issues. These can include: expertise and role-modelling from other communities with similar experiences; government health resources; funding for both intervention and research; university-based researchers and graduate students; national and international community-based organizations; and ethical guidelines for CBPR. Each of these factors came into play at one stage or another in both the KSDPP and SLHDP experiences, and each played a role in implementing diabetes prevention in Moose Factory.

COMMUNITY TO COMMUNITY KNOWLEDGE TRANSLATION

Both KSDPP and SLHDP accessed a wide network of health promotion expertise through team members' and academic researchers' involvement in other projects. Through the IHRT project, Moose Factory benefited from this same experience, with the addition of benefiting directly from the first-hand experience of community members, project staff, and researchers from both KSDPP and SLHDP. All three communities benefited from the experiences of myriad other communities, especially Aboriginal communities, through national conferences, meetings, and other networking opportunities. At the interpersonal level, individuals from one community can have an impact on progress in another community. In addition to the KSDPP trainer and SLHDP intervention coordinator there was a Kahnawake Elder, with research experience as a longstanding KSDPP Community Advisory Board (CAB) member. The Elder accompanied the first IHRT graduate student on her initial trip to Moose Factory, introducing her to the community and legitimizing her presence and involvement in the project. Without such an ambassador in a milieu that has historically been exploited by outside researchers, it would have been much more difficult for a non-Aboriginal student researcher to gain access and trust (Brown and Tandon, 1983; Pyett, 2002).

INTERVENTION FUNDING

The Canadian federal government recognizes the significance of the diabetes epidemic in Aboriginal communities in Canada. In 2000, Health Canada developed the ongoing Aboriginal Diabetes Initiative (ADI) with a mandate to support diabetes community-based primary prevention, screening, and care programs (Health Canada, 2000). ADI has funded intervention for KSDPP and SLHDP since 2001. Moose Factory has also been able to benefit from this initiative, as ADI funding indirectly supported the Moose Factory community members who participated in the KSDPP training, and helped fund the three-year contract with KSDPP for follow-up and support. ADI also funds the National Aboriginal Diabetes Association (see below).

RESEARCH FUNDING

Under current funding mechanisms in Canada, there appears to be more funding for primary prevention of diabetes in Aboriginal peoples through research and evaluation (CIHR, 2007) than intervention service and programming. The dual consequences of this are that evaluators are forced to assess underresourced interventions, and interventions are often initiated and

supported as demonstration projects through research grants. This was the case for both KSDPP and SLHDP. Both projects successfully obtained research funding from various federal granting agencies and organizations (Medical Research Council/National Health and Research and Development Program [MRC-NHRDP] — which became Canadian Institutes of Health Research [CIHR], Social Sciences and Humanities Research Council [SSHRC], and Canadian Diabetes Association [CDA]). SLHDP also secured funding from the US National Institutes of Health. In both projects, research funding developed the early intervention and educational tools, and hired internal and external project staff to carry out intervention activities, baseline research, and follow-up evaluations. Both projects have continued to successfully renew research funding to support ongoing activities and lighten the potential burden on community resources. IHRT funded all travel for this study. The KSDPP training coordinator was partially funded through another research grant which tracked the dissemination of research, intervention, results, and knowledge translation delivered nationally through the Training Program.

ACADEMIC RESEARCHERS

Crucial to the success of both KSDPP and SLHDP was the timely availability of university-based researchers, from a diverse range of academic fields, who were supportive of CBPR and able to write successful grant applications to national granting agencies. The KSDPP research team includes physicians, epidemiologists, nutritionists, and public health researchers. SLHDP assembled a team consisting of physicians, epidemiologists, geneticists, public health researchers, and an anthropologist. Through the IHRT, Moose Factory benefited indirectly from these same research teams for the duration of the study, particularly one of the KSDPP academic researchers who travelled twice to Moose Factory to support his graduate student projects.

GRADUATE STUDENTS

Graduate students, funded through national research granting agencies or individual research projects, are an excellent source of expertise for undertaking research. During the course of the IHRT partnership, Moose Factory benefited directly from two Masters students with the expertise and human resources to do baseline research identified as crucial by the community. This entailed physical activity environment (Kirby et al., 2007; Kirby, 2005) and food system (Pagé, 2005) scans. Graduate students with personalities compatible with the work and milieu, and willing to work within CBPR part-

nerships, have been key elements to success in both the KSDPP and SLHDP. Within KSDPP, graduate student thesis projects were responsible for much of the project's nutritional and physical activity analysis, especially three 24 hour dietary recall analyses at four-year intervals (Jimenez et al., 2003; Salmon, 2004; Trifonopoulos et al., 1998). Similarly, SLHDP benefited from graduate thesis projects in several areas, most prominently in the conception, design, and pre/post testing of the elementary school diabetes education curriculum (Saksvig et al., 2005). It was, therefore, crucial to the successful implementation in Moose Factory that IHRT identify similarly appropriate candidates. Using research grants to fund masters scholarships in diabetes prevention research, this study was able to attract two excellent candidates, one in nutrition from Université de Montréal and one in Physical and Health Education from Queen's University.

NATIONAL ABORIGINAL ORGANIZATIONS

Moose Factory benefited from the existence of the National Aboriginal Diabetes Association (NADA) (National Aboriginal Diabetes Association [NADA], 2006), which has received funding from ADI since 2001. NADA is a co-investigator on the IHRT study, and the primary outlet for dissemination of all IHRT findings to Aboriginal communities and health practitioners. In fact, this paper was first delivered at the 2005 NADA Conference in Winnipeg, to a national audience of Aboriginal health researchers, service providers, and community members, including a sizable contingent from Moose Factory. NADA did not exist when KSDPP and SLHDP were starting up in the early 1990s. NADA offers good networking opportunities through conferences that attract Aboriginal community members, as well as community and academic researchers. It lobbies the federal government, on behalf of its membership, to increase funding for the amelioration of the diabetes epidemic among Aboriginal peoples.

The National Aboriginal Health Organization (NAHO) has affected research with Aboriginal communities by publishing principles for undertaking research with Aboriginal communities (National Aboriginal Health Organization [NAHO], 2007).

OTHER NATIONAL ORGANIZATIONS

The Canadian Diabetes Association (CDA) includes an Aboriginal component. Their annual conferences offer good opportunities to network and

exchange information about experiences in Aboriginal communities, and between community members and researchers.

INTERNATIONAL ORGANIZATIONS

International organizations provide wide-ranging knowledge and tools to support local health promotion causes. For this study, Moose Factory and KSDPP benefited from the World Health Organization's guidelines for research with Indigenous Peoples (World Health Organization, 2005), which includes a template that IHRT used to guide development of this study's multisite research agreement

DISCUSSION AND LESSONS LEARNED

We suggest that when both intra-community and extra-community conditions are favourable, knowledge can be successfully translated from community to community, building local capacity to address the issue at hand. The focal point of knowledge translation can be found in the personnel responsible for creating and disseminating knowledge. In this study, these were primarily the community researchers who included the KSDPP trainer and CAB member, the intervention coordinator from SLHDP, and the participating community members from Moose Factory. All developed personal relationships that were key to transferring knowledge (Hislop, 2004), such as the personal and working relationships between the project coordinator (JS), the Sandy Lake project coordinator (RF), and the lead Moose Factory community researcher (SL). Non-Aboriginal team members (JS, OR, and two graduate students) were likely well accepted because they were existing members of Aboriginal-governed CBPR projects. The lead Moose Factory community researcher (SL) understood that all stakeholders — academic researchers, graduate students, and community members — must realize that different cultural groups have particular communication styles and ways of communicating and understanding within their respective environments. He admitted that as a relative newcomer to community research, he was still exploring and discovering new ways of interpreting his local Cree culture to “outsiders,” and research ideas to “insiders” (Louttit, 2006).

Building partnerships through community-based participatory research with Aboriginal communities allows universities, central governments, health agencies, and research granting agencies to promote self-determination for the community and its leaders as they become major stakeholders in the solution to health issues (Aboriginal Healing and Wellness Strategy [AHWS])

Secretariat, 1994; Canadian Institutes of Health Research, 2005; Hylton, 1999; Israel et al., 2005; Macaulay et al., 2006; Macaulay et al., 1999; Minkler, 2000; O'Neil et al., 2005; Postl, 1997; Smylie, 2001; Smylie et al., 2004a). Most Aboriginal communities argue for autonomy in health, education, and resource development. Literature on the diversity of Aboriginal cultures in Canada shows that one "blanket" health policy cannot meet or focus on the specific needs of diverse communities (Ellerby et al., 2000; MacKinnon, 2005; Reading and Nowgesic, 2002; Ten Fingers, 2005; Waldram et al., 1995). Each community or cultural area needs its own research design(s) to accommodate its own history, way of dealing with health, and understanding disease. Although the goal of this IHRT study was to offer the lessons learned from the Kahnawake and Sandy Lake experiences, our direction was guided at every stage by the needs and wishes of Moose Factory. Rather than acting as a research and service *contractor*, carrying out these activities itself or imposing programs developed externally, the IHRT project and team adopted a *consulting* role, providing knowledge and resources for the third community and its members to build their capacity to address diabetes prevention themselves. Baseline research, conducted through a collaboration of community and academic researchers, focussed solely on environmental scans of nutrition and physical activity systems in place. Results provided the community and its leadership with the knowledge to determine where they would place their resources in planning interventions for diabetes prevention. In keeping with the principles of CBPR, the strongest voices deciding the topics of this baseline data collection were from within the community, the MCFN Health Services Committee, and its director. At the beginning of the study, MCFN looked to KSDPP CAB members for their expertise in reviewing the proposed study. Later, a dual community review process was adopted where the KSDPP CAB first reviewed the graduate students' proposed research, followed by review from the MCFN Health Services Director and a community researcher (SL). With approval from two communities, application was then made for university Institutional Review Board (IRB) approval. Throughout this project, the McGill Faculty of Medicine IRB has shown tremendous support and respect for the CBPR process and the communities involved, consistently deferring to community judgement for ethical approval.

A community that is ready to address a public health issue, and is situated within a greater health promoting environment to support the community effort, has good potential for success. In this study, external support included two communities role-modelling successful community-based participatory

research projects, individuals with expertise developed through their own research, federal funding for interventions, research funding, academic expertise working within a CBPR model, graduate students interested in working with a northern community, national organizations providing networking opportunities, and an international organization offering a template for the multisite research agreement. Internal, community-based readiness included a well-developed health delivery system, community researchers, leadership aware of diabetes as a pressing health issue and interested in developing a diabetes prevention program. Pre-existing readiness can be further developed through the capacity building process. This capacity may be translated successfully from the experiences of other communities who have addressed similar problems. For this study, individual members of KSDPP and SLHDP travelled to Moose Factory and made personal connections in addition to providing an intervention and research framework which outlined the key components in developing diabetes prevention programs.

Many lessons can be learned from the ways various academic, organizational, and community resources came together over the three-and-a-half years from initial contact to delivery of the baseline research results back to the community. Challenges during this period included coordinating the timing and funding of all those travelling to Moose Factory to fit the timetable within the community; multisite research requiring review and approval by two communities and one university; and the termination of KSDPP's two five-year research grants, which severely limited KSDPP's ability to follow through on late-stage training services. Follow-up training was not provided, leaving Moose Factory without the complete set of skills they expected to gain through this relationship. The Health Director had also expected the research component to yield more far-reaching tools to manage the fight against diabetes, pointing to a misunderstanding between stakeholders — researchers and community leaders — about the extent to which this was a capacity-building project. The lesson to be learned is that clarity of partnership outcomes, among all stakeholders, is required from the outset.

The challenge now facing Moose Factory is acquiring sufficient funds to continue the interventions. Options include federally funded programs such as ADI or, as has been the case for KSDPP and SLHDP, partnering with academic researchers with research funds to support the intervention framework, community researchers, and more graduate students. The Moose Factory Diabetes Prevention Team will be able to focus and centrally plan how funds are spent in the community to address the needs described by

the IHRT baseline research results. Success in Moose Factory will be credited to their flexibility and ingenuity in adapting the provided framework to their own unique community needs and resources. For example, KSDPP and SLHDP each have their own distinct form of project governance, community consultation, and oversight. KSDPP is governed by an Executive Committee of its Community Advisory Board, which also serves as liaison with the various community organizations from which its membership stems. SLHDP, on the other hand, is “officially” governed directly by Sandy Lake’s Chief and Council, but also indirectly by the community at large through direct participation in decision-making via the weekly phone-in diabetes radio show. These local styles of governance stem directly from local differences in the way each community’s members relates to power and decision-making within their respective communities. It is yet to be seen how things will turn out for Moose Factory.

This study has described how a community’s readiness and existing external support and opportunity combined to allow a community to translate knowledge gained through other CBPR experiences, build capacity, and mobilize local resources to address an acknowledged public health issue. Moose Factory, ready to address type 2 diabetes prevention and acknowledging its need for further capacity to effectively do so, was able to translate the knowledge generated through KSDPP’s and SLHDP’s experiences. A good deal of momentum has been generated through Moose Factory’s relationship with this study. Continued popular community commitment and external support and resources will allow community leadership and the Moose Factory Diabetes Prevention Team to implement their own intervention program.

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For further information please visit websites for KSDPP (<http://www.ksdpp.org/>) and SLHDP (<http://sandyakediabetes.com/>).

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