Indigenous Health Research Knowledge Transfer/Translation Network IHRKTN

Knowledge Transfer/Translation Project Summary Report

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Forward

The Indigenous Health Research Development Program (IHRDP) aims to develop a cadre of researchers interested in Indigenous health in Ontario. Our program attempts to recognize the diversity of Indigenous cultures and peoples in Ontario, both on and off reserve. We are interested in fostering the development of Inuit, Métis, Aboriginal and non-Aboriginal students in Ontario who are engaged in Aboriginal research.

The IHRDP was established in April 2003 and is a jointly awarded project between McMaster University and the University of Toronto. The IHRDP is one of eight Aboriginal Capacity and Development Research Environments (ACADRE) centres in Canada. The Canadian Institutes of Health Research (CIHR) has committed $12 million to fund ACADRE centre projects that assist Aboriginal communities to focus on causes of Aboriginal health problems.

Like other ACADRE sites we have developed several initiatives in the area of Aboriginal health, including reports on ethical research practices for Aboriginal health research. This summary report outlines recent initiatives we have taken in the emerging field of Knowledge Transfer or Translation (KT). These terms are often used interchangeably; but in the Aboriginal context, the latter term, knowledge translation, better describes the process whereby mainstream health information is translated across cultural boundaries or is made culturally relevant to local contexts. Likewise we can speak of knowledge translation when Aboriginal health knowledge is translated for the benefit of mainstream practitioners. Currently, Knowledge Transfer is more common than Knowledge Translation. The overall goal of this initiative is to build on the recommendations made on behalf of ACADRE sites concerning Indigenous expectations and approaches to KT. In addition, we have developed a network of Aboriginal and non-Aboriginal researchers and health practitioners who are interested in KT. To this end, we have created a KT website (http://socserv.socsci.mcmaster.ca/ihrktn/) that will help us sustain the network and expand it in future. We refer to this initiative as the creation of an Indigenous Health Research Knowledge Translation Network (IHRKTN).

Acknowledgements

The Knowledge Transfer Project of the Indigenous Health Research Development Program would like to acknowledge the Institute of Aboriginal Peoples' Health for their support of the project. We would further extend this thank you to the Canadian Institutes of Health Research for their funding of our ACADRE centre.

We would like to acknowledge the numerous researchers, scholars, organizations, government agencies, community health boards, community members and all other participants of the KT query and survey. Your response to our project has been overwhelming and extremely useful in determining the barriers that exist in the knowledge transfer process for Aboriginal health research.

Thanks to Leigh Hayden for identifying many of the sources that are cited in the report. We also extend our thanks to G. Bierling for the creation of the online KT needs assessment survey and for his assistance with our Indigenous Health Research Knowledge Transfer Network website.

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The Ontario Context

Knowledge Transfer (KT) is commonly thought to include the transfer of Western biomedical knowledge to various audiences. This view of KT is narrow when Indigenous knowledge is considered. From the perspective of an ACADRE -KT network, it is important to recall that Aboriginal peoples have been excluded from mainstream health policy making and that Indigenous knowledge continues to be de-valued, if not denigrated, by many biomedical practitioners. As Wein (2004) states, "implicit in the idea of creating meaning together is the need to create a common ground of mutual respect, an environment where a mutually respectful dialogue can take place." Part of this dialogue has to include the awareness that in sharing Indigenous knowledge, there must be concern that "confidential and sacred knowledge may be shared and subsequently misused."(AHWS 2001:8). The Indigenous Health Research Development Program (IHRDP) is well positioned to educate non-Aboriginal health researchers and policy-makers about Aboriginal health research and to act as a vehicle for conveying mainstream research for use by Aboriginal communities.

Ontario represents particular challenges for KT. Ontario is home to more status Indians (157, 062) than any other province, but Aboriginal people represent a small proportion of the total provincial population (under 2 percent) (Canada 2001). There are 126 First Nations which include remote fly-in communities in the far north, remote rural First Nations and small and large urban reserves such as New Credit and Six Nations in southern Ontario. Large Aboriginal populations are also found in Sudbury, Thunder Bay, Hamilton Toronto and Ottawa. Ontario is culturally and geographically diverse, with Cree, Oji-Cree, Anishnabek, Haudenosaunee, and Métis cultures. Due to its sheer size and population, the research community is diverse with 17 universities, and an emerging system of Local Integrated Health Networks which, to date, remain disconnected from Aboriginal health planning authorities. In Ontario there are multiple Aboriginal health organizations funded by the Aboriginal Healing and Wellness Strategy which have the capacity for research, policy analysis and for the engagement of KT activities. These include seven Aboriginal Health Authorities which, in some instances, can be thought of as 'health branches' of major political or treaty organizations or as regional planning authorities. The Noojimawin Health Authority, based in Toronto, conducts research on urban and rural Aboriginal health issues. In addition, there are 10 Aboriginal Health Access Centres, several of which have research programs and which also engage in the development of culturally appropriate health interventions.

CIHR defines knowledge translation as "the exchange, synthesis and ethically sound application of knowledge – within a complex system of interactions among researchers and users" (CIHR, 2004). Smylie *et al* (2003) point out that, increasingly, health policy makers are found within Indigenous communities, thus adding further to the complexity of worldviews involved in knowledge translation. In Ontario, the creation of an on-going dialogue and development of KT strategies must take place with respect for this diverse, organizational and cultural environment. The IHRDP's KT strategy aims to a) improve the two-way flow of relevant and respectful information between Aboriginal health organizations and researchers, b) to evaluate best practices over time and to c) enhance the training and awareness of future researchers about appropriate KT practices.

Key Issues

This section highlights key issues that arose as a result of the KT survey (see below for detailed results), from literature reviews and from our recent experiences with KT in the Aboriginal context. We do not wish to reinvent the wheel or duplicate the findings of other ACADRE Centres. Rather, we have tried to identify key issues that will inform the IHRDP's future strategies for KT in Ontario.

Research and discussion of knowledge transfer is not new to the social sciences. The recent health science focus on KT can be reflected back to earlier debates in the social sciences with respect to the nature of applied versus basic research, the role of social science in policy making and critical methods of participatory or emancipatory practice (see for example, Brant-Castellano 2004; Clark et al 1998; Ervin 2004; O'Neil et al 1998; Reasons et al 2001) In other words, this process refers to the *use* of knowledge to inform local practice and the inclusion of local knowledge in Western explanatory models. The essential challenge of KT is how research can inform health policy and practice and, in the Aboriginal context, how Indigenous knowledge and understandings of health care, prevention and promotion can be used to inform mainstream health care delivery. In the Aboriginal context discussions of KT must also be placed within the framework of community ownership, control, access to and possession of information and research findings (OCAP) (Schnarch 2004). A number of different knowledge transfer models have been, identified (Johnson 1998; Havelock 1973). Many of these highlight differences in various styles of research, for example, evaluation research, user or problem-driven research and basic research leading to slow diffusion and utilization of research findings. Research transfer is now a research topic itself, with studies of research transfer emerging in social science, behavioural science, business, and health services research literatures, using synonyms such as knowledge transfer, technology transfer, knowledge utilization, research utilization, and knowledge exchange (Jacobson, Butterill, & Goering 2004; Lomas 1994; 2000).

One of the essential characteristics and challenges of knowledge transfer is summarized in the 'two communities' theory (Caplan 1979). This perspective stresses the geographic, institutional and epistemological separation of knowledge producers and knowledge users. The challenges of translating knowledge and needs across cultural boundaries are particularly significant in the Aboriginal context. As Lomas notes "cultural difference not only impedes research utilization, but can also promote finger pointing and general disharmony" (Lomas 2000). A major cultural difference is the notion of meaningful evidence; researchers often limit evidence to research evidence, and users often advocate for a broader definition of evidence to include public attitudes and expert opinion (Clements 2004). The appeal to different evidence bases, knowledge systems, and community standards are, of course, critical challenges to research into the re-emergence and sustaining of Indigenous medicine. There is a clear need to inform mainstream researchers of the nature of Indigenous science, and the significance of the expert opinions of Elders, traditional persons and healers.

These challenges speak to the need for concerted, active and planned exchange between the knowledge producers and users, whether they are within Aboriginal cultural communities, or a part of different health and research organizations. Individuals from our IHRDP-KT network

who completed our survey echo a similar sentiment. We feel there is the need for 1) dedicated funding envelopes from major agencies such as SSHRC and CIHR/IAPH for the design, implementation and evaluation of Aboriginal KT strategies; 2) funding and recognition for community based KT strategies such as community presentations within standard research grants; 3) increasing attention to Indigenous health knowledge, standards and ethics of research and; 4) specific research and discussion of how OCAP principles influence KT strategies.

The Indigenous Peoples' Health Research Centre (IPHRC) notes that KT is a priority for many agencies including the Canadian Strategy for Cancer Control, the Canadian Tobacco Control Research Initiative, and the Canadian Cardiovascular Society. These are examples of what might be called applied research organizations (Lavis et al., 2003) which invest knowledge, energy and funds to ensure knowledge transfer impacts on health policy making and organizational and community practice. In Ontario, the Aboriginal Unit of Cancer Care Ontario has made knowledge *translation* a priority and has developed specific community-based tobacco strategies and general education campaigns concerning Aboriginal perspectives on cancer. Under the direction of Carmen Jones, they created the Aboriginal Relationship and Development Training initiative (Jones et al 2006). This initiative was founded upon a province-wide needs assessment, and was developed after consultation with Aboriginal and non-Aboriginal service providers, patients, family members and Indigenous healers. From inception to implementation the process took approximately five years to complete. The training occurred at 10 Cancer Care sites and was aimed at conveying Aboriginal history, culture, illness perceptions and patient experiences to Cancer Care personal. Local Aboriginal resource people facilitated the training at each location. While the evaluation of this training is on-going, this initiative has led to changes in clinical practice patterns, hospital environments, and to new linkages between Aboriginal and non-Aboriginal health organizations. This example demonstrates that effective and culturally appropriate knowledge translation can take years to design and implement. Our survey findings confirm this view, as knowledge translation often requires highly specific strategies aimed at selected populations. This understanding suggests the need for direct funding for knowledge translation efforts, and support for sector-by-sector policy and knowledge translation efforts.

Following Wein (2004) and the IPHRC, we take it for granted that Indigenous KT must acknowledge the differences in knowledge production and dissemination between Indigenous and Western knowledge systems and that appropriate KT practices will only occur when respectful and meaningful collaborative environments for dialogue and discussion are created. To achieve our goals we are in the process of building on existing partnerships and situating the IHRDP at the centre of an Ontario network for Aboriginal health knowledge transfer. The Network's long term goal is to create web-based and actual environments for dialogue on health research, action and policy between Indigenous scholars and practitioners and mainstream researchers.

Training Students in Knowledge Transfer/Translation

The IHRDP is concerned with training the next generation of Aboriginal health researchers in appropriate methods to disseminate their research to diverse Aboriginal and non-Aboriginal audiences. The IHRDP, as part of its regular programming, holds annual summer institutes for the graduate students it supports, and for other Ontario graduate students and community members interested in Aboriginal health research. Given the current focus on knowledge transfer/translation at the national level, we developed a KT Summer Institute in August. Valerie O'Brien, the IHRDP Coordinator, organized the KT Institute and Alex McComber of the *Kahnawake Schools Diabetes Prevention Project* was hired as the facilitator for this event. Eighteen participants from across Ontario (Hamilton, London, Kingston, Manitoulin Island, Ohsweken, Sudbury, and Toronto) attended. Thirteen participants were graduate students/post-docs while the remaining five were from the community (i.e., employees of Aboriginal organizations involved in research or in health delivery). A short report on the workshop was prepared and distributed to student participants. (See appendix B for summary statistics.)

The IHRDP is taking additional steps to train health researchers, as we will support student placements and internships in health care agencies for periods of three to six months. The IHRKTN intends to solidify our partnerships with various organizations and researchers and develop a practicum for Aboriginal health research students that is reflective of our mandate and community requirements. We intend to train students to translate research 'up' to policy makers, as well as 'out' to members of First Nations and urban communities. As part of our mandate to train students we employed a McMaster University undergraduate for a summer Research Assistantship with IHRDP's KT project.

Developing the KT Network

Given the size and diversity of both the Aboriginal and research communities in Ontario, we have pursued the development of a web-based network of individuals interested in Aboriginal health knowledge transfer. Prior to this effort being made, we were unaware of the number of researchers with a demonstrated interest in Aboriginal health, KT or a combination of the two. One of our first objectives was to identify Aboriginal health researchers working in Ontario. Once identified, we began contacting these researchers and community representatives and asked them if they would be interested in joining the KT network. Researchers were able to register for this network using an on-line form. They were asked to provide their positions, email address, research interests, and publications and were invited to become part of the KT list serve. Since early December, approximately 50 individuals representing over 20 organizations have joined the network. The network continues to grow. We are currently conducting outreach to increase the number of Aboriginal organizations, health managers and policy makers affiliated with the network.

This network is a work in progress. We intend to continue adding individual and organizational contacts in 2006. To date, our work has been focused on developing a website and web-based survey of KT activities and attitudes. The website currently includes a list of members, resources, links and publications related to topics such as Indigenous knowledge, knowledge

transfer, research ethics, building partnerships and Indigenous health research. Future plans include developing a list of Aboriginal health managers and supervisors, language speakers, as well as summaries of on-going research projects and successful knowledge transfer strategies. We envision the network as representing an effective tool for researchers and community members to circulate information, pose questions to researchers, identify resources, and to disseminate their research to key Aboriginal organizations and other researchers.

Our continuing efforts include liaison activities to establish relationships with colleagues. Currently, we are updating our website to provide an on-line forum where discussions of various issues related to KT and Aboriginal Health research in Ontario can take place. We aim to create an environment for community feedback on an inclusive and respectful means of transferring knowledge within the context of Aboriginal communities.

Interviews with Health Directors and Frontline workers

In an effort to both corroborate the information received from our online survey and to extract additional information, we conducted 18 phone interviews with individuals who work either directly or indirectly within the health sector in Aboriginal communities. Those interviewed included health directors, nurse practitioners, CHRs, executive directors and program coordinators from a cross section of urban and rural health care settings. Given the fact that these individuals often carry heavy workloads, these interviews were kept brief (lasting no more than 15 minutes). Interviewees were asked a total of nine questions which focused on their understanding of the term knowledge transfer (KT), facilitators and barriers to the successful transmission of research results, and potential solutions to overcoming any existing challenges in this process. Interviewees were asked to reflect on this process as it applied to the bi-directional transmission of knowledge from researchers to Aboriginal communities and from communities to researchers and policy makers.

Many of those interviewed were unfamiliar with the term 'knowledge transfer.' But when a definition was provided, most interviewees stated that this process was intertwined or integrated with their occupational responsibilities. However, they had not articulated or conceptualized these activities as being part of a definable process. For those who understood the term, the transfer of health information was solely perceived to move in the direction from researcher to community. Significantly, the knowledge transfer process was not observed to move from community to researcher/policy maker.

Interviewees identified community presentations or meetings (particularly when they involved health professionals and frontline workers) as the most effective way of communicating research results to Aboriginal community members. This is consistent with the findings of the on-line survey outlined below. Community presentations or meetings in the format of talking/sharing circles, workshops, community town hall meetings or one-on-one meetings were the most commonly mentioned as effective. Several interviewees emphasized that the effective knowledge translation did not involve the researchers talking to community members, but, rather, *interacting with community members to engage them in a mutual dialogue*.

Interviewees noted that this process should not begin once the 'results are in' but rather should be initiated at the onset of the research and involve community members in the design of KT strategies. That is, KT strategies and plans should be 'built in' to the research design and revisited in an on-going dialogue with community members. Interviewees suggested any KT strategy or plan should be community-specific and determined by the specific needs and culture of a particular community. Generic or blanket approaches which do not take community characteristics into consideration were not considered effective. Similarly, different KT approaches are required for different age or professional groups within the community. It was suggested that Elders, for example, are more receptive to face-to-face encounters, often in their indigenous language. Captivating and maintaining the attention of youth was acknowledged as requiring specific approaches. Interviewees with experience in dealing with youth suggested that this group can be more effectively reached if the information is specific to them and communicated in an interesting and interactive manner.

Language, lack of trust in researchers, remoteness of communities and a lack of financial/human resources were all identified as barriers to effective KT, as they were on the on-line survey. Several interviewees indicated that community members are overexposed to research, researchers and research results. They have, in effect, almost become not only distrustful of the research but desensitized to research messages. There is no mechanism in place to either identify 'good' researchers or procedures for accessing them. Researchers were viewed only to be available when they presented themselves. Some interviewees indicated that there is no desire on the part of communities to communicate or engage in relationships with researchers due to past research practices and transgressions.

Interviewees also voiced the concern that they lacked the technology, skills, research tools or necessary knowledge to demonstrate to either policy makers or researchers that a specific community health issue requires attention. One example given was the need to have prescription drug abuse investigated. Despite the community being aware that this is a pressing health issue, they do not have the technology or resources necessary to track this information. Therefore, they cannot arm themselves with the statistical data necessary to demonstrate to researchers/policy makers that this issue is a community health need.

Solutions to these barriers include fostering positive research partnerships between communities and researchers, educating researchers on the protocols/processes around doing research with Aboriginal people, educating service providers on how to advocate for their community, increasing funding to build up a community's knowledge/technology resource base, and increasing face-to-face time between researchers/communities, and developing a network where communities can access researchers.

Knowledge Transfer Survey Analysis

We developed a web-based survey in order to elicit opinions/attitudes about knowledge transfer from community members, researchers, policy makers, health providers and administrators. The survey is accessible through the IHRKTN Website (http://socserv.mcmaster.ca/ihrktn) and respondents were able to complete and submit the survey directly on-line. Twenty-seven questions were used to gauge respondent's general understanding and attitude with respect to the following topic areas: mandate/goals of the Indigenous Health Research Development Program, definition of knowledge transfer, knowledge transfer strategies, barriers and success indicators, approaches to Aboriginal health research, and knowledge transfer vis á vis research goals, professionalization, partnerships and Indigenous knowledge. Several demographic questions concluded the survey.

In total, 30 respondents completed this survey over the course of three months (November 2005 – January 2006). The low response rate among people who had already committed to joining a KT network may indicate problems with the survey itself (lack of clarity on questions etc.). However, it may also indicate a general lack of interest in KT as an issue in Aboriginal health research. The fact remains that, for numerous reasons including lack of time and funding, an orientation toward peer reviewed publication, and the academic as opposed to applied nature of much research, innovation in KT efforts remains an afterthought for many researchers.

While not a large sample, we feel there is a good representative sample present. Of the 30 who completed the survey, 36.7% reported being Aboriginal (status & non-status), 56.7% non-Aboriginal, 3.3% Métis, 3.3% Inuit. Professors represented the largest professional group at 30%, followed by researchers 20%, Health Administrators 10%, Health Practitioners 6.7%. Other respondents included Consultants, graduate and post graduate students, Community Representatives and Policy Analysts and 'others'. Over half the respondents indicated that they were very interested (56.7%) and 30% that they were "interested" in improving knowledge transfer. Only 10% responded that they "somewhat interested" and 3.3% were "not very interested" in knowledge transfer.

Knowledge and Usage of Knowledge Transfer

A large portion of respondents reported that they were aware of both the current discussions surrounding knowledge transfer (66.7%) and had created specific KT strategies in their work (70%). It is interesting to note that our respondents acknowledged the ineffectiveness of KT strategies. People reported using many common dissemination techniques: the top four strategies used were presentations to community members [83.3%], professional conference presentations [80.0%], presentations to health professionals [76.7%], and presentations to other frontline workers [70.0%]. But only two of these strategies were identified as being effective: presentation to health professionals [53.3%] and presentations to other frontline workers [46.7%]. Our respondents suggested that presentations to health professionals [53.3%] and partnership fostering expertise [50.0%] were the most effective KT strategies identified. Dramatized plays [90%] and policy briefs [86.7%] were judged to be the least effective KT strategies (See Appendix A, Question 6 for an assessment of the full range of techniques). These

findings are interesting because, based on the experience of an admittedly small sample of people, they suggest that a number of key academic and government approaches to KT are regarded as largely ineffective means of knowledge translation. We can also note that those strategies that seem to be effective – presentations to frontline workers, health care providers (and to a lesser extent Chief and Council and other community members), are often not supported through direct travel and other funds, or are not generally given recognition or credit by the academic community.

Barriers to Knowledge Transfer

Respondent's opinions regarding the barriers to knowledge transfer were solicited in an open ended format. Qualitative responses were coded into nine categories. *Lack of adequate resources (both financial and material) was identified as the leading barrier to knowledge transfer.* Issues related to language and literacy represented the second most frequently cited barrier. This category included comments about the importance of Native languages, the fact that plain language was not used, and the existence of conceptual differences between researchers and research users. A perceived lack of mutual understanding/respect between the academic and Aboriginal community was the third most cited barrier. Other categories of barriers included:

- **Community-level barriers** such as lack of interest/poor education at the community level, turn-over of policy makers at community level and lack of research capacity at the community level;
- **Time** to engage in knowledge transfer activities or build academic-community partnerships;
- **Institutional/structural** barriers such as Research Ethics Boards, faculty who don't understand KT or who are unwilling to engage in KT activities due to a perceived lack of return;
- **Lack of trust** which exists at the community level with respect to researcher's intentions, motivation for engaging in research, outcome and benefit of research to the community;
- **Aboriginal health issues not recognized as important/relevant**;
- **Cultural & geographic** barriers due to the diversity of Aboriginal cultures and the remoteness of many Aboriginal communities.

These barriers applied to the transfer of knowledge not only from researcher to research user, but from research user/community to researchers and the Canadian population-at-large.
Changing current practices was recognized as the strongest indicator of success in knowledge transfer. This indicator was followed closely by efforts that improved quality of life or led to long-term effects such as influencing policy and building community capacity. Web hits/information requests and scope of research were viewed as the weakest indicators of knowledge transfer.

OCAP and Aboriginal Health Research

When asked whether or not they were aware of the principles of Ownership, Control, Access and Possession (OCAP), over three quarters (76.7%) of respondents replied that they were aware. Of these respondents, there was an equal division (23%) when further probed as to whether they felt that OCAP hindered or helped the KT process. However, slightly over half (54%) elected to not answer the question. Several respondents did provide qualification in the open-ended section which followed. The general sentiment was that OCAP in principle is a positive step in respectful Aboriginal research; however, the acronym and its meaning/intention are not felt to be well understood. Further work needs to be done to flush out answers to some very pragmatic research questions in each of the four OCAP components (such as who has ownership and possession, who decides about the ownership?). OCAP needs to be further explored and the principles which guide it need to be revisited with specific reference to KT.

When questioned about the approaches used in Aboriginal health research, respondents indicated that community based (93.3%) and participatory action (80%) approaches were the most common. In order to gauge who was most likely to benefit from KT, the responses to the categories 'most likely' and 'likely' were combined. Aboriginal communities (93.3%) and front line prevention personnel (90%) were seen to be the strongest beneficiaries of KT efforts. Western political institutions, Indigenous knowledge carriers, the federal health care system and Western health organizations were the least likely to benefit from KT activities.

Research Goals

We also asked respondent's opinions regarding the goal of Aboriginal health research. The vast majority of our respondents (90%) thought that the goal of research was to improve health programs, inform further research and improve practice patterns. Creating human capacity and creating accountability, while still being seen as important goals of research, were listed as less important.

Professionalization

In a section labelled "professionalization," we asked respondents about the relationship between research, health professions and policy making, and the broader community. For clarity, respondent's replies for 'strongly agree' and 'agree' were paired, as were 'disagree' and 'strongly disagree'. When asked whether research findings were conceptually accessible to a) government policy makers and to b) Aboriginal policy makers, responses were equally split. Forty-six percent agreed/strongly agreed that this was the case with government policy makers and 43.3% disagreed/strongly disagreed. Similar results were expressed with this statement as it applied to Aboriginal policy makers (43.3% agreed/strongly agreed, 40% disagreed/strongly disagreed).

A clear consensus was reached with respect to whether health research findings are conceptually accessible to Aboriginal community members. The vast majority of our respondents (83.4%) believed research findings are <u>not</u> accessible to the Aboriginal community. A similar consensus

was reached with the statement that health professionals have to assist in the (mentoring &) training of Aboriginal community members. Ninety-three percent agreed/strongly agreed with this statement. Opinions regarding whether researchers should co-author all publications with community representatives were not as definitive, as 60% agreed/strongly agreed and 36.7% disagreed/strongly disagreed with the principle of co-authorship. Divided opinions were also evident when we asked whether Aboriginal community representatives participating in the study should have final say on whether research is published. Forty-three percent agreed/strongly agreed that this should be the case while 40% disagreed/strongly disagreed.

Partnerships

Respondents were in strong agreement that there is a close relationship between KT and the establishment of partnerships between communities and researchers. Peoples agreed strongly with the following statements: community organizations and researchers must develop partnerships for KT to occur successfully (96.6 % agree/strongly agree); professional knowledge and community knowledge must be integrated (86.7%); conference participation must be reflective of both academic and community interest (76.7%) and understanding Indigenous knowledge is necessary for collaboration to occur (76.7%).

Knowledge Transfer Outcomes

Conformity was present when respondents were asked to indicate their opinions (strongly agree → strongly disagree → undecided) regarding the outcome of research and knowledge transfer strategies. Respondents agreed that health research projects should empower communities (93.3%), should employ Aboriginal people (90%) and that research must be easily disseminated at a community level (93.3%). Successful knowledge transfer depends on the ways in which knowledge is acquired by it recipients (90%), is more likely to occur if health professionals increase the value placed on community knowledge (86.7%) and if user-friendly materials are used (100%). The only minor anomaly which appeared in this section of the survey occurred when respondents were provided with the statement 'health research knowledge should produce change in behaviour.' Twenty percent of respondents strongly agreed and 20% disagreed with this statement, while 53.3 % agreed.

Indigenous Knowledge and Knowledge Transfer

The majority of respondents (70%) reported a working knowledge of Indigenous knowledge (IK); 16.7% expressed no knowledge and 13.7% did not answer the question. Those with a working understanding were asked whether they were able to integrate concepts of IK into their research practice. Sixty percent indicated that they were able to integrate IK concepts, 13.3% were not and 26.7% did not answer. Only five respondents indicated that they did not have an understanding of IK and, of those, three reported being able to access IK holders for assistance. When asked to rank the cultural relevancy of current practices relating to KT, respondents indicated that methods of communication (76.7%), cultural protocols and ethics (66.7%) and language barriers (53.3%) were the most important factors influencing effective KT.

With respect to integrating Indigenous & Western knowledge systems, just over half (53.3%) of respondents viewed themselves as Innovators, 16.7% as Minor Integrators, 13.3% as Major Integrators and 6.7% as Non-Integrators. This is not surprising given that the sample consisted of individuals with a professed interest in knowledge translation.

Summary:

The opinions that emerged from this limited survey help sketch the current climate of knowledge transfer as it exists in the context of Aboriginal communities. Several key themes can be drawn from the results of this survey, the foremost being that engaging in knowledge transfer activities is essential to any research plan and to the mobilization of research results. Successful knowledge transfer strategies, particularly as they relate to the Aboriginal community, need to be further defined and explored and there is the belief that funding and recognition of KT activities needs to be enhanced. Focus should not be restricted to determining effective KT strategies, but should also include expanding the number of possible research beneficiaries and determining how to communicate research findings in a respectful and meaningful manner. Part of determining a culturally relevant KT process is recognizing and respecting the different ways of knowing and of knowledge development, whether Western or Indigenous. Understanding and dissecting the barriers to effective KT is an appropriate starting point in this process. The final theme which came across in the survey is the need to open lines of communication between academics/communities, between/within communities, communities/policy makers and to continue with the exercise of building partnerships.

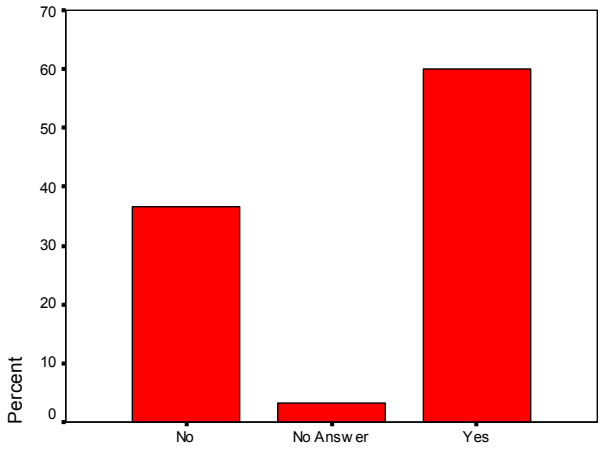
Knowledge transfer and translation fits well with the broad mandate of the ACADRE centres, which are well placed to promote linkages between university researchers and Aboriginal communities and to train the next generation of Aboriginal health researchers in KT techniques and strategies that are appropriate in the Indigenous context. Given the size and diversity of Ontario Aboriginal communities and health organizations, the IHRDP has chosen to concentrate on creating a virtual network of researchers, policy makers and community organizations. We hope to use the KT website in future to inform the network of best practices in KT, and to provide information of KT research. Future plans include the creation of plain language summaries on Aboriginal Health Research within the website for access by the public.

Many funders now require knowledge utilization strategies for all research projects (Crosswaite and Curtice 1994). Some researchers (Lavis et al 2003; Waddell 2002) even argue that funders ought to increase incentives and direction for research dissemination and uptake. We advocate the IAPH *sustain* funding envelopes for Indigenous KT through its ACADRE centres for the near future and that they introduce a specific funding envelope for research into and Indigenous Knowledge transfer and knowledge utilization.

Appendix A: Knowledge Transfer Survey Results

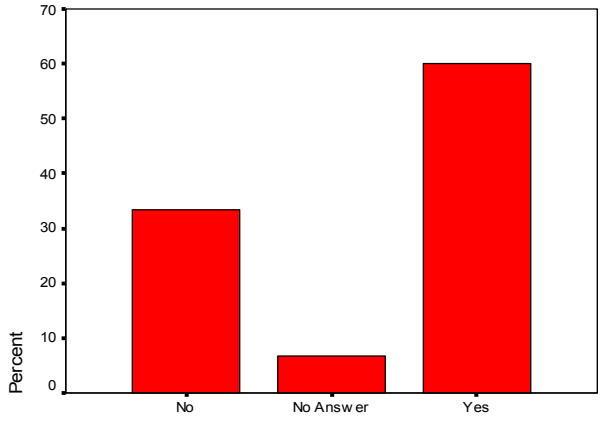
Responses from this on-line survey were received over the course of three months (November 2005 – January 2006). In total, 30 people completed the survey.

Q1: Had you heard of the IHRDP before we contacted you?



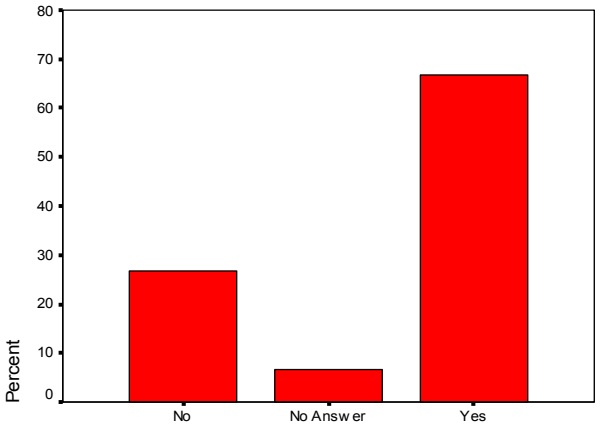
Q1

Q2: Are you aware of what we do as an organization?



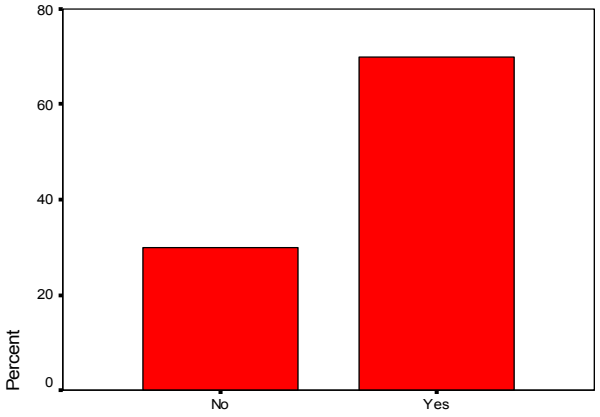
Q2

Q3: Are you aware of current discussions surrounding knowledge transfer?



Q3

Q4: Have you created specific KT strategies in your work?



Q4

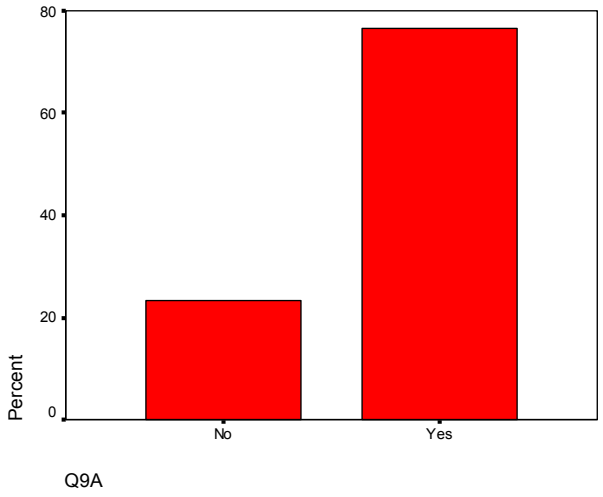
Q6: KT Strategies Used and Most Effective (expressed as a percentage)

	Strategy Has Been Used		Strategy is Most Effective	
	Yes	**No**	**Yes**	**No**
Presentations to the academic public	70.0	26.7	20.0	76.7
Peer reviewed scholarly publications	50.0	46.7	16.7	80.0
Professional conference presentations	80.0	16.7	36.7	60.0
Other scholarly presentations	46.7	50.0	26.7	70.0
Presentations to health professionals	76.7	20.0	53.3	43.3
Presentations to Chief and Council	53.3	43.3	40.0	56.7
Presentations to community members	83.3	13.3	33.3	63.3
Presentations to other frontline workers	70.0	26.7	46.7	50.0
Policy Briefs	26.7	70.0	10.0	86.7
Website Publications	33.3	63.3	16.7	80.0
Videos	26.7	70.0	20.0	76.7
Media Interviews	43.3	53.3	16.7	80.0
Local media reports	46.7	50.0	26.7	70.0
Newsletters	56.7	40.0	16.7	80.0
Story telling	20.0	76.7	20.0	76.7
Plays	6.7	90.0	3.3	93.3
Producing strategic reports	43.3	53.3	16.7	80.0
Producing research briefs	33.3	63.3	13.3	83.3
Native language used in KT	26.7	70.0	20.0	76.7
Plain language used in KT	50.0	46.7	46.7	50.0
Multi-dimensional team building	53.3	43.3	36.7	60.0
Partnerships fostering expertise	60.0	36.7	50.0	46.7
Bridging research, application & practice	43.3	53.3	36.7	60.0

Q8: What is the strongest indicator of KT – (1) strongest (5) weakest

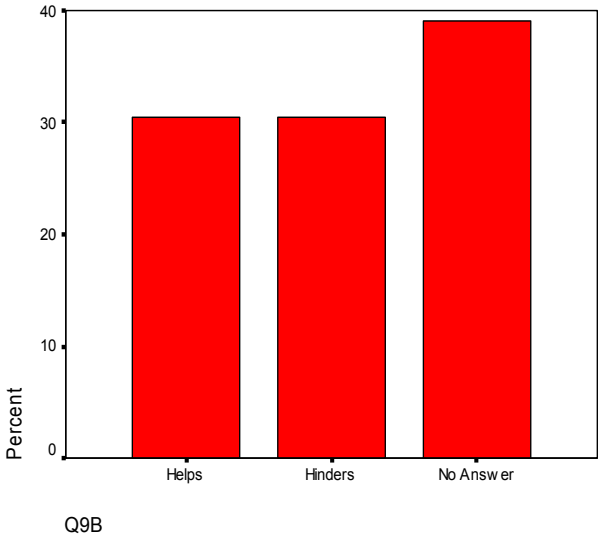
	1	2	3	4	5	No Answer
Influencing Policy	46.7	30.0	6.7		10.0	6.7
Transfer of programming	20.0	16.7	26.7	3.3	10.0	23.3
Changing current practices	53.3	13.3	16.7	3.3	3.3	10.0
Sustain changed practices	36.7	16.7	13.3		10.0	23.3
Scope of research	6.7	13.3	36.7	10.0	3.3	30.0
Mentorship & training	13.3	36.7	26.7		3.3	20.0
Bridging organization & individual	20.0	33.3	16.7	6.7		20.0
Building community capacity	43.3	23.3	20.0		3.3	10.0
Improved quality of life	46.7	23.3	13.3		6.7	10.0
Long-term effects	46.7	16.7	20.0		6.7	10.0
Prevention	43.3	33.3	10.0		6.7	6.7
Media/public awareness	16.7	36.7	20.0	13.3	3.3	10.0
Future research	26.7	16.7	26.7	10.0	6.7	13.3
Web hits/information request	3.3	13.3	40.0	3.3	16.7	23.3

Q9a: Are your aware of the principles of Ownership, Control, Access and Possession (OCAP)?

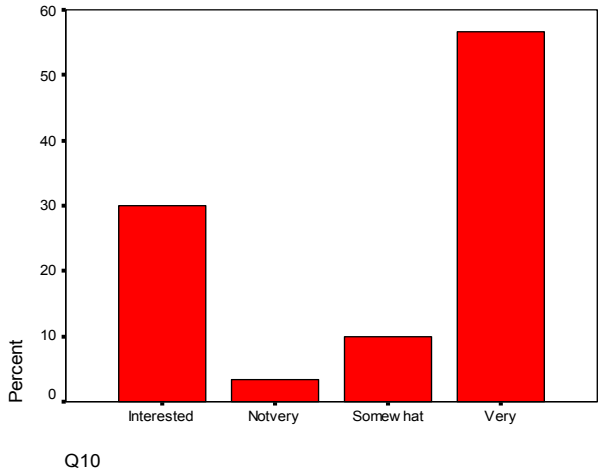


Q9A

Q9b: If yes, do you feel OCAP hinders or helps the KT process? (n=17)



Q10: To what degree are you interested in improving Knowledge Transfer?



Q11: Which type of approach do you use in Aboriginal health research?

	Use Approach	Don't Use Approach
Historical	46.7	53.3
Rational	6.7	93.3
Organizational	30.0	70.0
Indigenous Knowledge	53.3	46.7
Community based	93.3	6.7
Participatory action	80.0	20.0
Ethnographic	30.0	70.0
Survey	43.3	56.7
Multi-cultural/comparative	30.0	70.0
Policy & programs	43.3	56.7
Political	10.0	90.0

Q12: Who is the most likely to benefit from KT?

	Most Likely	Likely	Least Likely	No Benefit	No Answer
Front line prevention personnel	60.0	30.0	3.3		6.7
Prevention researchers	33.3	43.3	6.7		16.7
Policy makers	40.0	33.3	13.3		13.3
Aboriginal communities	60.0	33.3			6.7
Individual Aboriginal persons	43.3	30.0	16.7		10.0
Academic institutions	13.3	43.3	16.7		20.0
Political institutions (Western)	6.7	33.3	20.0		36.7
Political institutions (Community)	26.7	40.0	13.3	3.3	20.0
Indigenous knowledge carriers	36.7	23.3	20.0		20.0
First Nation	43.3	33.3	6.7		16.7
PTOs	10.0	36.7	10.0	3.3	40.0
Health organizations (Western)	30.0	23.3	20.0	3.3	23.3
Health organizations (community	46.7	23.3	13.3	10.0	16.7
Federal health care system	20.0	30.0	20.0	10.0	20.0
Provincial health care system	16.7	33.3	23.3		16.7
Interest groups	23.3	36.7	10.0		30.0

Q13: Research Goals - How strongly do you agree or disagree with the following:

The goal of research is to…	Strongly Agree	Agree	Disagree	Strongly Disagree	Undecided
Improve health programs	63.3	26.7	6.7	3.3	
Create policy	43.3	33.3	13.3	3.3	6.7
Inform further research	46.7	43.3		3.3	6.7
Improve practice patterns	63.3	26.7	3.3	3.3	3.3
Create community capacity	46.7	40.0	10.0	3.3	
Create human capital	30.0	36.7	6.7	10.0	16.7
Create accountability	26.7	43.3	13.3	10.0	6.7

Q14: Professionalization - How strongly do you agree or disagree with the following statements?

	Strongly Agree	Agree	Disagree	Strongly Disagree	Undecided
Health research findings are conceptually accessible to government policy makers	10.0	36.7	30.0	13.3	10.0
Health research findings are conceptually accessible to Aboriginal policy makers	3.3	36.7	26.7	23.3	10.0
Heath research findings are conceptually accessible to Aboriginal 46.7communitymembers		13.3	46.7	36.7	3.3
Health professionals have to assist in the (mentoring &) training of Aboriginal community members	46.7	46.7	6.7		
Researchers should co-author all publications with community representatives	23.3	36.7	30.0	6.7	3.3
Aboriginal community representatives should have final say on whether research is published	13.3	30.0	33.3	6.7	16.7

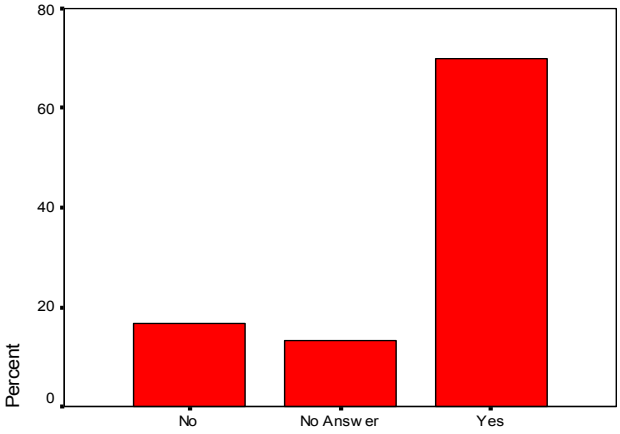
Q15: Partnerships - How strongly do you agree or disagree with the following statements?

	Strongly Agree	Agree	Disagree	Strongly Disagree	Undecided
Community organizations and researchers must develop partnerships for KT to occur successfully	73.3	23.3	3.3		3.3
Professional knowledge and community knowledge must be integrated	70.0	16.7	3.3	3.3	6.7
Conference participation must be reflective of both academic and community interest	40.0	36.7	13.3		10.0
Understanding Indigenous knowledge is necessary for collaboration to occur	36.7	40.0	6.7	6.7	10.0

Q16: Knowledge Transfer Outcomes – How strongly do you agree or disagree with the following statements?

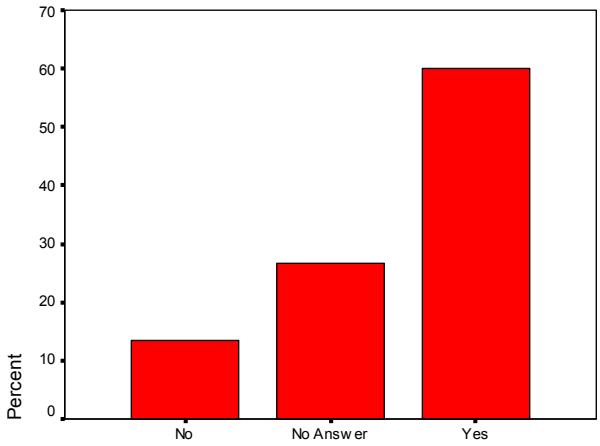
	Strongly Agree	Agree	Disagree	Strongly Disagree	Undecided
Health research knowledge should produce change in behaviour	20.0	53.3	20.0		6.7
Health research projects should empower communities	53.3	40.0			6.7
Health research projects should employ Aboriginal people	50.0	40.0	3.3		6.7
Research must be easily disseminated at a community level	73.3	20.0	3.3		3.3
Successful knowledge transfer depends on the ways in which knowledge is acquired by its recipients	46.7	43.3	10.0		6.7
KT is more likely to occur if health professionals increase the value placed on community knowledge	76.7	10.0	6.7		6.7
KT is more successful when user-friendly materials are implemented	73.3	26.7			
Successful KT relates directly to the credibility of the presenter	26.7	56.7		3.3	13.3

Q17: Do you have a working knowledge/understanding of Indigenous Knowledge?



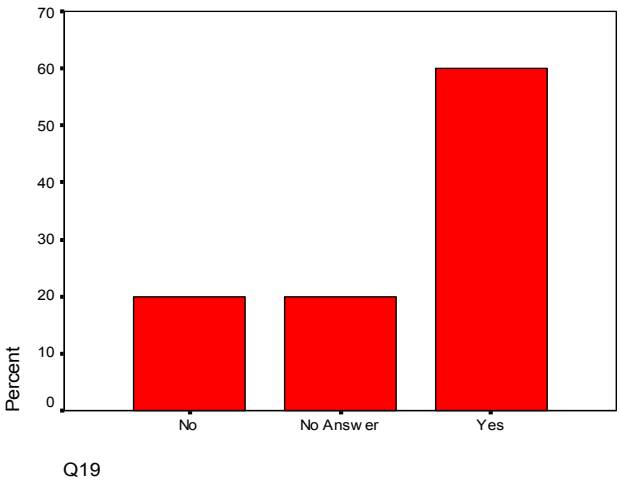
Q17

Q18: Are you able to integrate/utilize concepts of IK in your research practice?



Q18

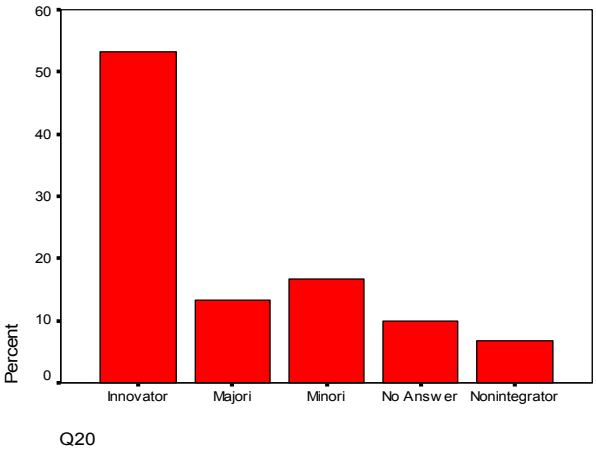
Q19: If you do not have an understanding of IK, are you able to access IK holders for assistance? (Respondents = 5)



Q19b: If no, would you like to be able to access a list of IK consultants in your area?

Only one respondent indicated 'no' – therefore, insufficient data to create graph.

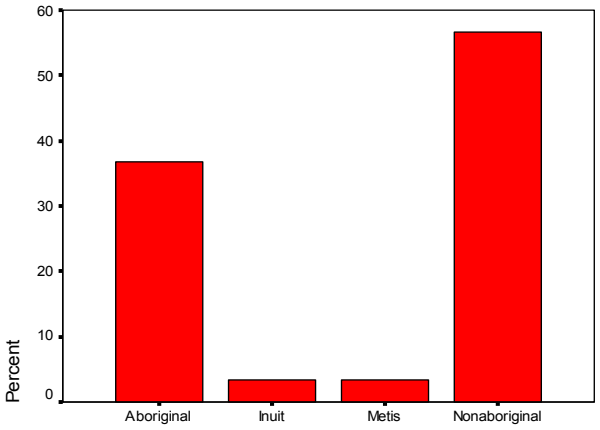
Q20: In regards to integrating Indigenous and Western knowledge systems, do you see yourself as someone who is an:



Q21: In order to gauge the cultural relevancy of current practices relating to KT, please rank the following by level of importance: (1) most important (2) least important

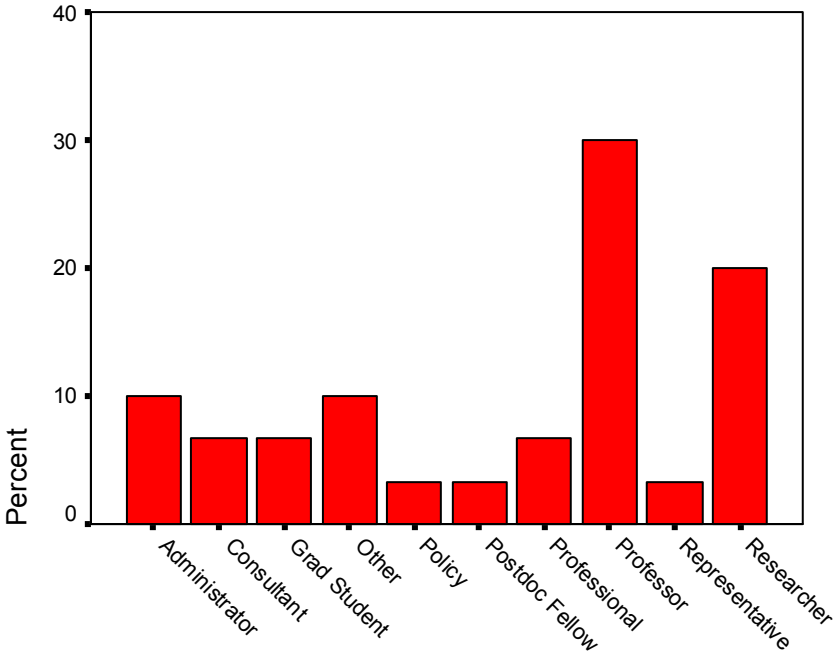
	1	2	3	4	5	No Answer
Methods of communication	76.7	16.7	3.3			3.3
Language barriers	53.3	30.0	10.0			6.7
Interpretation of material	53.3	26.7	13.3			6.7
Objectives & ideology	33.3	36.7	20.0	3.3	3.3	3.3
Representative population sample	20.0	36.7	26.7	3.3	3.3	10.0
Evaluation methods	16.7	43.3	30.0		3.3	6.7
Acceptance of localized experiences	46.7	36.7	10.0		3.3	3.3
Acceptance of IK	46.7	40.0	10.0			3.3
Cultural protocols & ethics	66.7	23.3	6.7			3.3

Q25: About you



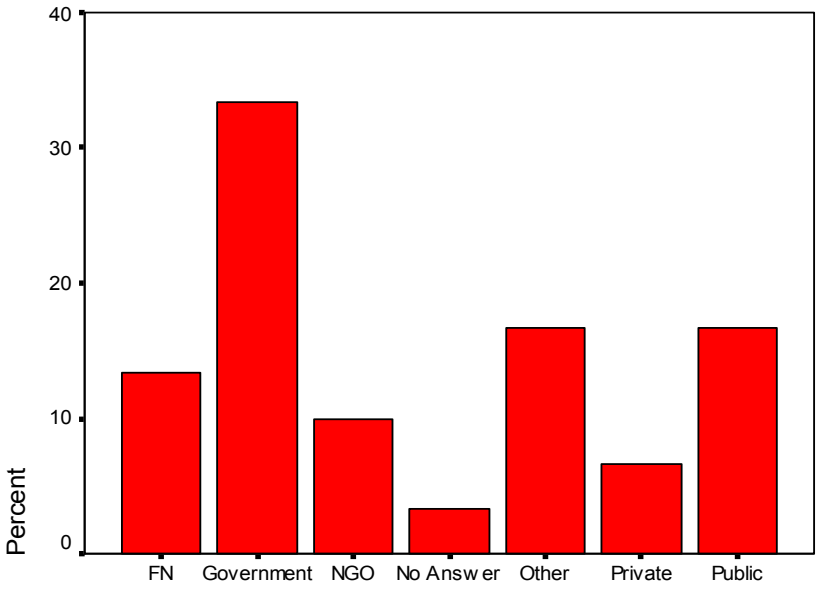
Q25

Q26: Profession



Q26

Q27: Organization



Q27

Appendix B: KT Summer Institute Report

Indigenous Health Research Development Program
Knowledge Transfer/Translation Summer Institute

Six Nations Polytechnic
August 11 & 12, 2005

Evaluation Summary

Eighteen participants from across Ontario (Manitoulin Island, Sudbury, London, Hamilton, Ohsweken, Toronto, Kingston), attended the Knowledge Transfer/Translation Summer Institute. Thirteen were graduate students/post-docs and the rest were from the community – i.e., employees of Aboriginal organizations involved in research or in health delivery.

How did you hear about the IHRDP summer institute?

Responses:

"Email from IHRDP"
"website & email"
"through a friend"
"other attendee"
"email"
"Valerie & Danielle"
"word of mouth"
"IHRDP"
"From Amanda & Valerie"
"Valerie O'Brien"
"email"
"through work"
"IHRDP Program & Research Coordinators"

What motivated you to attend this program?

Responses:

"I wanted to learn about KT because it is a mandate for CIHR"
"Valued opportunity"
"previous one"
"The information to be presented regarding KT"
"I am involved in Aboriginal research, especially in the future"
"Enjoy hanging out with other Aboriginal students. Like the location & accommodations"
"KT is a very important and often overlooked part of Aboriginal Research"
"The topic was of great interest to me"
"The ability to learn about KT"
"Curiosity"
"I was told to come"
"Very interested in Aboriginal health issues and working with Aboriginal communities."
"The topic of KT."

Please rate the following:

Poor	Fair	Average	Good	Excellent	
○	○	○	○	○	Handouts and audiovisual
	1	1	3	8	

Comments:
"more resources would have been helpful.e.g.. Articles or resources for us to look at for further reference"
"very few handouts & resources to walk away with"

Poor	Fair	Average	Good	Excellent	
○	○	○	○	○	Organization of topics
			5	8	

Comments:
"circles, paper board was good for this type of topic"
"had a lot of space for everyone's input. It was very well thought out"
"followed process of graduate work & tackled tons of stumbling blocks along the way"

Poor	Fair	Average	Good	Excellent	
○	○	○	○	○	Relevance of discussions
			4	9	

Comments:
"Good discussion, but would have been nice to take some of it to a more detailed level"
"Very real"
"Excellent facilitator"
"On topic. Great going!"

Poor	Fair	Average	Good	Excellent	
○	○	○	○	○	Overall level of satisfaction with workshop
		1	4	8	

Comments:
"I learned a lot with open dialogue"
"Thank you very much for inviting me to this excellent workshop!"
"Not what I was expecting but walked away with more than I expected"

Poor	Fair	Average	Good	Excellent	
○	○	○	○	○	Personal objectives were met
			6	7	

Comments:
"I leave with more than I came with"
"Yes"
"I learned a lot more than I contributed"
"A lot of information gathered"

Poor	Fair	Average	Good	Excellent	
○	○	○	○	○	Catering, breaks, facility
				13	

Comments:
"Excellent food. Excellent accommodations! Overall fantastic."
"All was great"
"Great food"
"Great! Good food"
"Excellent food. Thank you for taking care of our physical needs!"
"Food was amazing, Alex has very good facilitating skills!"
"Amazing food services. Thank you so much."
"Beautiful facility! Amazing food! Breaks – good gauge to participants' levels"

<u>Facilitators:</u>

Please provide our facilitators with feedback on their session:

Comments:
"The sessions were geared towards those to begin work or are engaged in projects, but I would have liked to have see the discussions more to a higher level in that it can discuss further where do you go after you have done a project and what to do more…"
"Thank you for your guidance. You showed us the path, but did not walk it for us."
"Catching enthusiasm, brought out personal needs and was conscious of them throughout."
"Alex is very outgoing and provides many articulate examples that related to Knowledge Transfer/Translation"
"Very good!"
"Motivating and funny speaker (down to earth)"
"Good to know we are on the same page. I would really like to learn more about other peoples' successes & failures related to KT."

"Alex was an excellent facilitator. Very dynamic. Added in just enough personal experience and knowledge and allowed for participants to share with each other."
"Alex, you were an excellent facilitator! Your enthusiasm for the topic made us all want to learn more about KT, and your wisdom & mentorship was very inspiring. Thanks for a great two days!"
"I didn't come with expectations but feel really "full" and aware of how to enhance my research with KT and how to protect communities using KT."
"Alex is a very charismatic facilitator, a very good listener capable of responding to the input from participants."
"What a wonderful experience! Perfect amount of discussion – enjoyed large group discussions and smaller sharing circles as well."
"Great way to involve everyone. Good facilitation of discussion. Sharing of your experiences was very insightful."

General Comments/suggestions:

"More theory about KT as well as the practical info that was covered very adequately. Some definitions from the literature as an intro – where the lit says we are as an intro to the workshop"
"I had a great time and learned a lot. Thank you."
"Thank the organizers & Elder for all their work in putting this together".
"Include small healing ceremony, e.g. Smudging. More contact with Elders if possible. More Aboriginal students!!!"
"Include a small healing ceremony, e.g. Smudging."
"The conference was an excellent learning experience. It was a great opportunity to learn about KT and way to meet other researchers. Great job!"
"I like this location for learning."
"Very educational & useful experience, must have again."
"A lot of discussion – built ideas – would like to see KT into comprehensive notes from workshop relayed to participants!"

What topics would you like addressed at future summer institutes?

"access to communities, building partnerships as an outsider"
"I liked learning about the grad student journeys – some time to hear more of how students are experiencing their graduate studies."
"Aboriginal ethics – re: Tri-council, also community examples of ethical guidelines"
"Good idea to go into more detail regarding Aboriginal ethics. Could start with the Six Nations ethics in order to think from an Aboriginal perspective. Building our own strengths! Dealing with stress & timelines in research. Cultural workshops regarding some of the protocols and teachings of Aboriginal people in Ontario, Canada, etc.
"Session on what works, what doesn't for related to KT."
"Dealing with stress and timelines. Building on the strengths in the Aboriginal community."
"More on ethics and proposals."
"Community-based research"

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