

# **Building Academic Research Capacity among Indigenous Youth: A Participatory Health Research Project with Students at Chief Julius School in Fort McPherson, Northwest Territories, Canada**

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*The CANHelp Working Group has conducted community-driven research in Fort McPherson, Northwest Territories, Canada since 2012. In 2015, the Fort McPherson H. pylori Project Planning Committee requested new research aimed at engaging youth and providing opportunities for capacity building. In response, members of the academic research team proposed a photovoice project aimed at documenting the social impact of H. pylori infection in Fort McPherson that would be carried out with youth in the community. In the Spring of 2016, we commenced this project and delivered a series of in-community workshops aimed at building academic research capacity among the youth. We then organized a weeklong trip for three Fort McPherson youth to visit our project offices at the University of Alberta in the Fall of 2016. In addition to other goals, this visit allowed us to teach these youth about how the CANHelp Working Group research proceeds once the academic researchers have left Fort McPherson. Here, we outline the program of academic research capacity building that we developed and carried out through the Fort McPherson H. pylori Photovoice Project. We then describe the benefits that we noted to have resulted through our approach of integrating capacity building opportunities throughout the research process. We conclude with a discussion that supports the call for new and innovative approaches to integrating opportunities for capacity building into academic research as a means for ensuring that projects generate meaningful and timely benefits for Indigenous communities in general, and Indigenous youth in particular.*

The Institute of Aboriginal Peoples' Health (IAPH) provides funding for scientists leading research in the broad area of Indigenous health and wellness in Canada. In addition to their role in funding research, the IAPH also recently called upon researchers to challenge historic models of research. One way that the IAPH has done this, is by encouraging scholars to develop new

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approaches for addressing health disparities in partnership with Indigenous communities (Institute of Aboriginal Peoples' Health, 2011). This goal has been echoed by the Canadian Institutes of Health Research (of which the IAPH is a part), when they recently issued a revised policy statement that included a chapter dedicated to outlining guidelines intended to support the ethical and meaningful involvement of Indigenous peoples in research that impacts them (Canadian Institutes of Health Research, 2013). Indigenous scholars have also challenged the wider academic research community to consider whose interests research serves, who benefits from research, and what, if anything, research actually achieves (Smith, 1999). Ensuring that academic studies benefit Indigenous communities in practical ways constitutes an important step away from historic instances wherein research agendas were often steeped in colonialist ideologies and Eurocentric values (Castleden et al., 2012, Genuis et al., 2015a, Jardine & Furgal 2010, Smith, 1999). In response to these expectations for guiding contemporary research, academics are increasingly called upon to consider innovative ways of incorporating opportunities for capacity building into research situated within Indigenous communities (Genuis et al., 2015a).

While discourse along these lines has served as a catalyst for significant strides being made in community-based participatory research, community-driven research, and partnered approaches to research carried out with Indigenous peoples (see: Allen et al., 2012; Castleden, 2008; Cheung et al., 2014; Colquhoun et al., 2013a, 2013b; Genuis et al., 2015; Goodman et al., 2008; Jardine & Furgal, 2010; Hastings et al., 2014; Ninomiya & Pollock, 2017), much work remains to be done. It has been nearly a decade since the United Nations (UN) recognized the rights of children to have a voice, to contribute to, and to benefit from research in their communities (Committee on the Rights of the Child, 2009). Yet, the engagement of Indigenous youth in research that affects them remains an underdeveloped area of scholarship (Jacquez et al., 2012). This is striking given that Indigenous youth living in northern Canada are known to experience higher rates of both physical and mental health concerns relative to urban and non-Indigenous youth residing elsewhere in Canada (Ford et al., 2012). At the same time, northern Indigenous youth also find themselves to be on the "forefront" of systemic social, political, economic, and environmental change (Ford et al., 2012: 1). Youth may therefore be recognized as a demographic subgroup that has traditionally had limited opportunities for contributing in meaningful ways to research that impacts them (Ford et al., 2012). It follows then, that the benefits of research that we are increasingly witnessing in the context of Indigenous health have not yet reached northern youth (Castleden et al., 2012). These youth should therefore be targeted, as a group, for engagement in impactful research. Clearly, youth would stand to benefit from opportunities to engage in scientific research capacity building workshops and activities that accompany academic research carried out in their communities. A handful of recent studies have engaged Indigenous youth in Alberta (Genuis et al., 2015a, b, Pigford et al., 2012), Alaska (Allen et al., 2012, Ford et al., 2014), and the Northwest Territories (Jardine and James, 2012). These studies incorporated opportunities for building scientific and academic research capacity among youth; however, there remains a paucity of these kinds of research approaches in the literature and, to our knowledge, none have focused on research with a biomedical component.

Many definitions for 'capacity building' have been offered as the term has evolved since it emerged in academic vernacular over three decades ago (Craig, 2007). Here, we use 'capacity building' in the context of community-based research to describe the provision of activities,

“resources and support that strengthen the skills and abilities of people and community groups to take effective action and leading roles in the development of [research within] their communities” (Adams & Owens, 2015: 131). In the same way that participatory research is not a method per se, but rather “[a] process by which decision-making power and ownership is shared between the researcher and the community involved” (Castleden et al., 2012: 162), activities aimed at building academic research capacity among research participants can be framed as an approach to research that prioritizes ensuring both immediate and long-term benefits to community members. Capacity building also serves as an effective means for integrating community engagement throughout the research process, which is also an underlying principle for conducting ethical research with Indigenous communities (Allen et al., 2012). Thus, rather than being an ‘add-on’ to research, we view capacity building as a pillar of the process of research with Indigenous communities and especially so in the case of research that aims to engage youth. Here, we provide an overview of our approach to implementing academic research capacity building opportunities into a photovoice project that engaged Indigenous youth in research to document their perceptions of the impact of *Helicobacter pylori* infection in Fort McPherson, Northwest Territories, Canada.

### **Project Background and History**

*H. pylori* is a bacterium that infects the stomach lining where it causes inflammation. The onset of the infection may be accompanied by common symptoms of digestive upset; there are no specific signs and symptoms that identify the infection, so the onset typically goes unnoticed. *H. pylori* infection can persist, and when chronic, is usually asymptomatic. Thus, *H. pylori* infection may go undetected and, therefore, untreated for years, or even decades. Chronic *H. pylori* infection may cause serious diseases including peptic ulcers and, more rarely, stomach cancer (Goodman et al., 2008). The infection is probably spread most frequently by contact with digestive fluids from an infected person, and is typically acquired during childhood, although initial infection and reinfection may occur throughout the life course (Goodman, Jacobson, & van Zanten, 2008). Populations with a higher prevalence of *H. pylori* infection generally have higher treatment failure and re-infection rates (Goodman, Jacobson, & van Zanten, 2008). *H. pylori* infection therefore constitutes an important public health concern. Youth, in particular, may benefit from gaining knowledge about this health concern. Such knowledge may, for example, help youth to make informed decisions about their own health as they become adults who may also eventually assume the responsibility for making decisions that impact the health and wellbeing of the wider community.

The Canadian North *Helicobacter pylori* (CANHelp) Working Group is a multidisciplinary team that formed between 2006-2008 to conduct community-driven research in response to concerns about *H. pylori* infection that were articulated by Indigenous community leaders in northern Canada. The CANHelp Working Group links northern communities, health care practitioners, government officials, and academic researchers (including epidemiologists, pathologists, microbiologists, health economists, gastroenterologists, biostatisticians, researchers from the school of public health, and anthropologists), for the purpose of investigating *H. pylori* infection in northern Canada. In each community, a planning committee comprised of local residents guides the research to ensure that it remains centered on locally identified priorities. Based on knowledge of the research that the CANHelp Working Group had been conducting in Aklavik,

Northwest Territories since 2007, Fort McPherson community leaders invited the CANHelp Working Group to launch the Fort McPherson *H. pylori* Project.

Fort McPherson is a small Arctic hamlet located on the Peel River approximately 98 kilometers north of the Arctic Circle in the Northwest Territories, Canada. In the 2015 census, the community had a population of 775, the majority of whom self-identified as Gwich'in Dene (Athabaskan) First Nations (NWT Bureau of Statistics, n.d.). Although Fort McPherson is situated on the Dempster Highway and remains accessible for most of the year by road, the community is considered 'remote' given its relative geographic isolation. In 2012, 59% of participants screened through the Fort McPherson *H. pylori* Project tested positive for *H. pylori* infection (Goodman et al., 2008), a prevalence similar to that reported for other Arctic communities and substantially higher than the prevalence observed in communities located in southern Canada (Goodman et al., 2008).

### Overview of In-Community Activities

In 2015, the Fort McPherson *H. pylori* Project Planning Committee expressed a preference for new research that would engage youth and provide opportunities for capacity building within the community. In response, members of the academic research team proposed the Fort McPherson *H. pylori* Photovoice Project, which would engage youth attending Chief Julius School in a research project aimed at documenting youth's knowledge, views, and perspectives regarding the impact of *H. pylori* infection within their community. Working closely with members of the planning committee and school staff, we developed a program that would offer opportunities for building academic research capacity among project participants. The most significant aspect of this program is that it was specifically intended to extend throughout all stages of the research project including data collection, analysis, and dissemination activities. Capacity building activities took place in-community and also included a weeklong visit to the University of Alberta in Edmonton, Alberta, Canada. Participation in the photovoice project was open to students in grades seven through twelve at Chief Julius School, which is the only school in the community. Participation in the photovoice project was encouraged by offering participants the opportunity to be selected for a trip to the University of Alberta. The three youth ultimately chosen for this trip were the only ones who completed all in-community research activities and capacity building workshops and also returned completed parental/guardian consent forms, which were criteria for eligibility.

In June 2016, during a week-long period of in-community research activities, the lead author and a research assistant held an information session about *H. pylori* infection and the photovoice project for all students at Chief Julius School who had indicated an interest in participating in the photovoice project. This was followed by a series of 1.5- to 3-hour workshops each day that were aimed at building academic research capacity on topics including: developing basic digital photography skills to facilitate image-based research, photo literacy; qualitative photo analysis; principles of ethnographic research; and an introduction to basic tenants of qualitative research including mixed-methods approaches drawn from visual anthropology and ethnography. These workshops took place alongside data collection activities for the photovoice project. The school principal provided the project leaders with classroom space and time to engage youth in these activities during and after regular class time. While the methods and outcomes of data collected

for this project are beyond the scope of this paper, results have been presented elsewhere and are accessible on the CANHelp Working Group's website ([www.canhelpworkinggroup.ca](http://www.canhelpworkinggroup.ca).)

### **Academic Research Capacity Building Carried Out with Youth Who Visited the University of Alberta**

In November 2016, three youth, along with an adult chaperone, traveled more than 1900 km from Fort McPherson to Edmonton to visit the project offices of the CANHelp Working Group located at the University of Alberta (see Figure 1). A primary goal of this trip was to elucidate the processes of academic research for these youth through opportunities to learn about how academic research proceeds once researchers leave the research participants' community. The academic research team arranged several educational experiences during this trip to provide insight into the broad range of expertise of the multidisciplinary academic members of the CANHelp Working Group. The intent of this excursion was echoed by the adult chaperone who said that she hoped that through this experience, the youth would "be able to understand *H. pylori* and answer questions for people in the community." She went on to comment: "I'm so excited for them because this is going to help them in so many ways."

*Figure 1.* Youth from the Fort McPherson *H. pylori* Photovoice Project visit the CANHelp Working Group's Microbiology Laboratory at the University of Alberta.



Photo Credit: Megan Highet

Highet, Colquhoun & Goodman

The timing of this academic research capacity building trip was planned to coincide with two research symposia being held at the University of Alberta that same week. In anticipation of the youth's presence on campus at the time of these events, members of the academic research team prepared abstract proposals for two separate poster presentations that described aspects of the research and capacity building opportunities that they participated in throughout the photovoice project. On the first day of their visit to Edmonton, the youth learned about how researchers disseminate results at academic conferences through conversations with members of the academic research team. They then contributed some of their own perspectives to the posters prepared for presentation. The symposia focused upon two different aspects of the subject area expertise of researchers engaged in the photovoice project. These include the School of Public Health's 'International Forum on Public Health Education', and the Faculty of Extension's 'Engagement for Transformational Change: Research Showcase'. The youth and their chaperone attended the latter, which allowed them to contribute to presenting the poster that they helped to prepare. This was the first academic conference that any of the youth had attended, and so they were also interested to view the posters of other researchers from academic institutions throughout Alberta. This showed them how the research that they had been participating in was situated in relation to other active research projects being conducted by members of the broader academic community.

Other educational activities organized for the youth during this trip included learning about how scientists in the CANHelp Working Group conduct microbiological research at the University of Alberta. Before a visit to our microbiology laboratory, a graduate student in our group provided an educational overview of DNA analysis and various techniques used for our microbiological research. Another graduate student provided a tour of our microbiology laboratory and helped the youth to visualize *H. pylori* bacteria with the aid of a microscope. This experience afforded them a visual perspective on the laboratory component of the *H. pylori* research being carried out in Fort McPherson that few other community members have had. Following this, the CANHelp Working Group Laboratory Sciences Lead instructed the youth through a series of hands-on experiments as they learned to extract DNA from a wheat germ sample and then subjected their samples to gel electrophoresis. These exercises were intended to simulate how researchers carry out genotyping of *H. pylori* strains cultured from biopsies of stomach tissue collected during in-community endoscopy clinics in our partner communities. In doing so, the youth learned that this technique enables CANHelp Working Group researchers to characterize the antibiotic susceptibility of various strains of *H. pylori* that infect people; information needed to make recommendations for improving treatment protocols for better managing *H. pylori* infection.

In addition to learning about the process of research dissemination and developing an understanding of knowledge translations goals (by learning about how laboratory science can inform health care protocols), the youth also observed how physician members of the CANHelp Working Group apply knowledge of *H. pylori* infection and associated digestive diseases to diagnose and treat patients. For this capacity building opportunity, we visited a teaching laboratory at the University of Alberta Hospital that contains an endoscopy simulator normally used by medical residents to hone their skills in performing the procedure upon simulated, robotic patients. After having the equipment and the procedure explained to them, the physician who facilitated this activity explained some of the pathophysiological changes that might be detected during such a procedure. The youth then each had the opportunity to conduct mock

endoscopies using the simulator. The simulation involved reviewing mock patients' histories and guiding the scope using video simulation. The youth proved skillful at navigating the anatomy of the robotic patient and adept learners as they requested increasingly challenging simulations and intently questioned the physician on the implications of their findings.

In discussions following this activity, the youth reported that the experience helped them to better understand why the *CANHelp* Working Group had previously offered a remote endoscopy clinic in Fort McPherson. They also agreed that they were surprised to see how pathological changes to the digestive track actually looked, admitting they had expected signs of stomach cancer to appear as black splotches eating away at the simulated patient's body, rather than the areas of reddened inflammation that they observed in one of the mock patients. Following further discussion, the youth also agreed that their understanding of how their own bodies must look inside and how disease impacts the human body in general, had changed as a result of this activity. Furthermore, they stated that the experience had helped them better understand the disease process associated with *H. pylori* infection. This sentiment is revealed in the reflections of one of the youth who commented: "[the] reason I went on this trip is because I wanted to know what *H. pylori* is...lots of people said that my Auntie had it once, which I didn't know about. I never had a chance to ask her, so I wanted to know and get together and learn about it."

Following this, the youth shadowed a gastroenterologist as he met with patients during his clinic duties and they also had the chance to observe a diagnostic endoscopy being performed on a patient at the University of Alberta Hospital (with the prior consent of the patients). While the University of Alberta Hospital is a teaching hospital and opportunities for trainees to observe medical procedures are not infrequent, they are normally reserved for advanced medical students. It was therefore a rare opportunity for these youth to observe the practice of a gastroenterologist whose expertise in diagnosing and treating *H. pylori* infection comprises an important component of the community-based research activities of the *CANHelp* Working Group. This experience allowed the youth to better understand how stomach tissue samples for microbiological analysis are collected during endoscopy procedures and how physicians arrive at diagnoses for their patients. This experience was reported as being particularly enlightening for one of the youth, who is interested in pursuing a career in the healthcare field.

A final series of activities the youth engaged in during their visit to Edmonton included tours of the local postsecondary campuses and their respective Aboriginal Student Centers. Together, we toured the University of Alberta, MacEwan University, and the Northern Alberta Institute of Technology (N.A.I.T) campuses to learn about programs and services offered by each institution. The motive for offering this opportunity was to build capacity with regard to awareness of educational opportunities and dedicated support available to Indigenous students for achieving their own goals after high school. Upon completing the campus tours, one student remarked: "[w]ithout coming here, I don't think I would have had the opportunity to tour [these places] and [to] see the programs they have." This was echoed by another youth who said: "[i]f not for this [trip] I would have never thought of going to school after high school." In light of these comments, we consider these aspects of the trip to have been especially worthwhile.

While the academic research capacity building activities that took place at the University of

Alberta have concluded, rather than wrapping up, we anticipate continuing to develop our program of capacity building opportunities. Not only have the students carried the new knowledge and experiences gained in Edmonton back with them to Fort McPherson, but they will also have the opportunity to formally share these experiences with their peers at school and with members of the wider community at a knowledge exchange event that will be held at Chief Julius School. At that time, a permanent installation of the photovoice images and the posters that the students helped to prepare for the research symposia will be installed in the school and the students will assist in presenting information about *H. pylori* infection, the photovoice project, and all capacity building activities carried out up until that time for the benefit of fellow students, members of the planning committee, and other community residents who will be invited to attend the presentation.

### **Discussion of Multilateral Benefits of Engaging Youth in Academic Research Capacity Building**

Integrating opportunities for building academic research capacity throughout the process of research with Indigenous youth provides an array of benefits that extend to groups and individuals beyond those directly engaged in the project. When reflecting on the benefits that our approach has yielded, we recognize three areas in which youth have benefited: supporting factual learning; increasing scientific processual capacity; and building networks.

#### **Factual Learning**

There were many occasions wherein youth involved in this project benefited from factual learning opportunities. In Fort McPherson, these included the workshops attended prior to and during the photovoice project that aimed to enhance basic digital photographs skills and to introduce youth to research and analysis concepts including photo literacy, photo analysis, visually based research, and ethnography. While visiting the University of Alberta, there were many more opportunities for students to learn from our interdisciplinary research team, as they had the opportunity to learn about DNA extraction and analysis techniques, to learn more about *H. pylori* infection, to view bacterium through a microscope, to learn about endoscopy procedures, and to observe the clinical practice of a gastroenterologist. They also learned about a wide range of research projects being carried out at postsecondary institutions in Alberta as a result of their participation in the Faculty of Extension's Research Showcase. Finally, the youth who visited Edmonton also learned about postsecondary education in Alberta by touring local campuses, wherein they had opportunities to ask questions about admission criteria, scholarships, academic programs, support for Indigenous students, and student life. These broad educational experiences may benefit these youth as they complete secondary school, in their personal lives throughout adulthood, and particularly, if they decide to pursue an undergraduate degree or career training in the future.

#### **Increasing Scientific Processual Capacity**

In addition to contributing to the research through their engagement in the photovoice project, the youth also participated in analysis of the data that they helped to collect, which provided the opportunity to learn about how academics conduct research from the planning stage through analysis and dissemination. In doing so, they developed their own critical thinking abilities and communication skills. Because these are typically 'behind the scenes' aspects of academic



research that take place outside of community locations where data collection occurs, academic research may be considered, to varying degrees, ‘mysterious’, since those who contribute to research (as informants, subjects, and participants) in ‘the field’ rarely have access to the actions of researchers once they have returned to their laboratories and offices on university campuses located many hundreds of kilometers away. The insight that the youth who participated in this project have gained by working closely with the researchers leading this project and contributing to data dissemination activities constitutes an important step towards elucidating the processes of academic research. Gaining first-hand experience in academic research carried out in university laboratories and offices is also valuable considering how often researchers from diverse backgrounds approach Indigenous communities in northern Canada with requests to conduct a wide range of studies (Carragher, 2013). This experience will help the youth (who will inherit the community and may eventually be in the position to evaluate proposals from researchers wishing to conduct projects within their community) to understand and evaluate academic research, plans, and timelines. Further, the opportunity these youth have had to observe academic research processes ‘from the other side’ will enhance understanding between community members and academic researchers. This sentiment is echoed in the comment of one of the youths who visited Edmonton and reflected: “[b]ringing us people together is important. You guys are here and we are there. [Here we are a]ll learning together and getting closer to each other. Learning about something in a group.”

### **Building Networks**

In 2005, Bowen and Martens suggested that despite best intentions, it is often the case that capacity building efforts result in limited impact or direct benefit, which they suggest may be largely due to the quality and duration of the interactions between academic researchers and members of the community in which research is situated.

Thus, while building capacity through factual and processual learning were important components of the youths’ visit to the University of Alberta, we also prioritized the opportunity that it presented to strengthen relationships and to expand upon existing networks. Examples of these interactions included reinforcing the rapport established with researchers during project activities carried out in Fort McPherson, as well as establishing new networks as youth were able to meet many more of the researchers and staff affiliated with our research group. While the most salient values of these ties will be revealed over time given that it often takes years for the benefits of applied health research to produce measurable benefits within a community (Paradis et al., 2005), the establishment of relationships external to their community may serve as one meaningful way in which the research can prove personally relevant and immediately beneficial to community members (Fletcher et al., 2008).

Bowen and Martens (2005) have further argued that one of the most important outcomes from capacity building activities is the “[d]evelopment of relationships and the building of networks” (207). In addition to this, we also recognize that building academic research capacity may also result in expanding youth’s networks within their community. This might occur, for example, if the experience contributes to enhancing their sense of “self-esteem, empathy and responsibility” (Genuis et al., 2015a: 2), or if it stimulates interest and provides them with the tools needed to become more active and engaged in addressing community concerns. We saw evidence of this

on many occasions throughout the capacity building activities when youth were initially hesitant to contribute to discussions or activities, citing a lack of confidence in their ability to generate meaningful contributions as the reason for their lack of engagement. Yet with encouragement, they soon developed confidence in themselves, in their observations, and in their quality of analytical thinking, which had the effect of demonstrating to them that they did indeed have important contributions to offer. We hold that at least in part, this newfound confidence was achieved through the investment of the researchers in supporting and establishing rapport with these youth. This does, of course, require genuine interest on the part of the academic researchers towards ensuring that benefits from research are multilateral in nature and that they extend to project participants as well as positively impacting the wider community. This sentiment is echoed in a comment made by the principal of Chief Julius School, who noted that: “[h]aving [the] opportunity to be at a university and understand the programs presented and the wealth of knowledge shared through research...[a]lso, just meeting those who have much to share” was a significant benefit for these youth that she associated with the trip.

## Conclusions

With the objective of adhering to and furthering the goals of ethical research conducted with youth in northern Indigenous communities, we developed this academic research capacity building program to take place alongside the photovoice project. This approach is also intended to contribute to furthering the aims espoused by the Tri-Council Agencies and its Institutes, to develop research that is transparent (by elucidating the research processes that occur once the researcher leaves the community) and to ensure that projects contribute to reducing the “structural inequalities that are manifest in the structures of power that exist between researchers and communities” by providing opportunities for community members to develop skills and expertise “that the community [itself] views as tangible and beneficial” (Castleden et al., 2012: 162). Academic research capacity building may therefore be framed as an opportunity for research to “occupy a space that satisfies both academic and community priorities” (Ninomiya & Pollock, 2017: 35).

Through their participation in associated in-community and Edmonton-based capacity building opportunities, youth enhanced their knowledge of *H. pylori* infection, developed new skills and competencies in the areas of academic research, analysis, and results dissemination, strengthened existing relationships, and expanded upon their network of connections. By gaining insight into the process of academic research through all stages, beginning with helping to shape the direction of the research and culminating in dissemination, these youth gained valuable knowledge pertaining to how academic research proceeds behind office and laboratory doors that are not ‘closed’ per se, but are nevertheless usually inaccessible given the distance that separates University of Alberta research spaces from the community of Fort McPherson. While beyond the scope and purpose of this paper, the outcomes, results, and our own reflections on what we have learned from the youth who participated in the research component of this photovoice project have been presented at several international conferences (copies of these presentations are accessible on the CANHelp Working Group website) and will be published separately.

We expect that this experience will benefit the youth who were able to take part in these capacity building opportunities as well as members of their wider community. Not only have the

knowledge and skills gained through these activities been internalized by these youth, but in doing so, they also add to the broad expertise of the community to which all residents contribute. In this way, these youth may now also be considered as “embody[ing] the goals of community partnership” (Genius et al., 2015a: 7). This is because, as Genius and colleagues have observed, youth who participate in (academic research) capacity building opportunities, are ultimately better equipped to “contribute to health and cultural advocacy” in the future, as a result of skills gained through training and by being informed by the outcomes of associated research activities (2015: 7).

We agree with the afore-referenced guidelines that call for innovation in the ways in which academics conduct research with Indigenous peoples and engage youth in projects. We also agree that the onus is upon academic researchers to address the challenge of ensuring that research provides timely and meaningful benefits within communities in which research is carried out. In response, we encourage others to consider repositioning research priorities with the aim of identifying and emphasizing opportunities for (academic research) capacity building within their projects. When ensuring that benefits to community members is the first priority of the research, we take a significant step towards addressing calls for change in the ways in which academic researchers relate to the communities with whom they work.

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## References

- Adams, J., & A. Owens (2015). *Creativity and Democracy in Education: Practices and Politics of Learning Through the Arts*. Routledge.
- Allen, J., G.V. Mohatt, C.A. Markstrom, L. Byers, & D.K. Novins. “Oh No, We are Just Getting to Know You”: The Relationship in Research with Children and Youth in Indigenous Communities. *Child Development Perspectives*. 6(1): 55-60.
- Bowen, S., & P. Martens (2005). Demystifying knowledge translation: learning from the community. *Journal of Health Services Research and Policy*. 10(4): 203-211.
- Canadian Institutes of Health Research. (2013). *CIHR Guidelines for Health Research Involving Aboriginal People (2007-2010)*. Retrieved 13 May 2017 from, <http://www.cihr-irsc.gc.ca/e/29134.html>.

- Carraher, S. (2013). "Never Say DIE!": *An Ethnographic Epidemiology of Helicobacter Pylori Infection and Risk Perceptions in Aklavik, NWT* (Unpublished doctoral dissertation). McMaster University, Hamilton.
- Castleden, H., & T. Garvin (2008). Modifying Photovoice for community-based participatory indigenous research. *Social Science and Medicine*. 66(6): 1393-1405.
- Castleden, H., V.S. Morgan, & C. Lamb (2012). "I spent the first year drinking tea": Exploring Canadian university researchers' perspectives on community-based participatory research involving Indigenous peoples. *The Canadian Geographer*. 56(2): 160-179.
- Cheung, J., K.J. Goodman, S. Girgis, R. Bailey, J. Morse, R.N. Fedorak, J. Geary, K. Fagan-Garcia, S.V. van Zanten & the CANHelp Working Group (2014). Disease manifestations of *Helicobacter pylori* infection in Arctic Canada: using epidemiology to address community concerns. *British Medical Journal Open*, 4(1): e003689-2013-003689. doi:10.1136/bmjopen-2013-003689 [doi].
- Colquhoun, A., J. Geary, & K.J. Goodman (2013a). Challenges in conducting community-driven research created by differing ways of talking and thinking about science: a researcher's perspective. *International Journal of Circumpolar Health*, 72: 10.3402/ijch.v72i0.21232. eCollection 2013. doi:10.3402/ijch.v72i0.21232 [doi].
- Colquhoun A., S. Carraher, M. Keelan, B.L. Koe, P.D. Edwards, K.J. Goodman, and the CANHelp Working Group. (2013b). Learning From One Another: The Dissemination of Microbiology Research Results in Indigenous Arctic Communities Through a Joint Community-University Knowledge Exchange Project. *Helicobacter*. 18(suppl 1): 105.
- Committee on the Rights of the Child. (2009). *Convention on the Rights of the Child: The Right of the Child to be Heard*. Geneva: United Nations.
- Craig, G. (2007). Community capacity-building: Something old, something new...? *Critical Social Policy*. 27(3): 335-359.
- Fletcher, F., D. McKennit, & L. Baydala (2009). Community Capacity Building: An Aboriginal Exploratory Case Study. *Pimatisiwin*. 5: 9-31.
- Ford, T., S. Rasmus, & J. Allen (2012). Being useful: Achieving indigenous youth involvement in a community-based participatory research project in Alaska. *International Journal of Circumpolar Health*. 71(1): 18413. doi:10.3402/ijch.v71i0.18413 [doi].
- Genuis, S. K., N. Willows, Alexander First Nation, & C.G. Jardine (2015a). Partnering with Indigenous student co-researchers: improving research processes and outcomes. *International Journal of Circumpolar Health*, 74, 27838. doi:10.3402/ijch.v74.27838 [doi].
- Genuis, S., N. Willows, & C. Jardine (2015b). Through the lens of our cameras: Children's lived experience with food security in a Canadian Indigenous community. *Child: Care, Health and Development*. 41(4): 600-610.
- Goodman, K. J., K. Jacobson, & S.V. van Zanten (2008). *Helicobacter pylori* infection in Canadian and related Arctic Aboriginal populations. *Canadian Journal of Gastroenterology and Hepatology*. 22(3): 289-295.

- Hastings, E. V., Y. Yasui, P. Hanington, K.J. Goodman, & the CANHelp Working Group. (2014). Community-driven research on environmental sources of *H. pylori* infection in Arctic Canada. *Gut Microbes*. 5(5): 606-617.
- Institute of Aboriginal Peoples' Health. (2011). *About LAPH*. Retrieved 13 May 2017 from, <http://www.cihr-irsc.gc.ca/e/8172.html>.
- Jacquez, F., L.M. Vaughn, & E. Wagner (2013). Youth as Partners, Participants or Passive Recipients: A Review of Children and Adolescents in Community-Based Participatory Research (CBPR). *American Journal of Community Psychology*. 51(1-2): 176-189.
- Jardine, C., & C. Furgal (2010). Knowledge Translation with Northern Aboriginal Communities: A Case Study. *Canadian Journal of Nursing Research*. 42(1): 119-127.
- Jardine, C., & A. James (2012). Youth Researching Youth: Benefits, Limitations and Ethical Considerations Within a Participatory Research Process. *International Journal of Circumpolar Health* (71): 10.3402/ijch.v21i0.18415 [doi].
- Ninomiya, M.E.M., & N. Pollock (2017). Reconciling community-based indigenous research and academic practices: Knowing principles is not always enough. *Social Science and Medicine*. 172: 28-36.
- NWT Bureau of Statistics. (n.d.). Fort McPherson. Retrieved May 13 2017 from, [http://www.statsnwt.ca/community-data/infrastructure/Fort\\_Mcpherson.html](http://www.statsnwt.ca/community-data/infrastructure/Fort_Mcpherson.html).
- Paradis, G., L. Levesque, A.C. Macaulay, M. Cargo, A. McComber, R. Kirby, O. Receveur, N. Kishchuk, & L. Potvin (2005). Impact of a Diabetes Prevention Program on Body Size, Physical Activity, and Diet Among Knien'keha:ka (Mohawk) Children 6 to 11 Years Old: 8-Year Results From the Kahnawake Schools Diabetes Prevention Project. *Pediatrics*. 115(2): 333-339.
- Pigford, A. E., N.D. Willows, N.L. Holt, A.S. Newton, G.D. & Ball (2012). Using first nations children's perceptions of food and activity to inform an obesity prevention strategy. *Qualitative Health Research*. 22(7): 986-996.
- Smith, L. T. (1999). *Decolonizing methodologies: Research and indigenous peoples* Zed books.