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The eNuk program:

Developing a community-based, participatory health and environment surveillance strategy alongside Inuit in Rigolet, Nunatsiavut, Labrador



Labrador Institute



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Setting the Stage: Climate Change Impacts on Inuit Health in the Canadian North

The Canadian North is experiencing intense and rapid socio-cultural stresses resulting from various shifts in the environment, including climate change and resource extraction and development. These current stresses take place within the context of underlying socio-economic and health disparities, stemming from a long and enduring history of colonisation, forced relocation, land dispossession, political disenfranchisement, and systemic marginalisation.

When combined, these changes present major challenges to health and wellbeing and are currently disrupting the livelihoods and cultural practices of many Northern Indigenous peoples, including Inuit in the Nunatsiavut region of Labrador, Canada, and can lead to a range of climate-change-related health impacts. Addressing these climate-change-sensitive health impacts is a pressing priority across the Circumpolar North, and finding ways to mitigate, respond, and adapt to these impacts through locally-appropriate and culturally-relevant strategies, which are community-led and community-based, is essential.

The Call for Community-Based Environment & Health Monitoring in Rigolet, Nunatsiavut

One strategy for responding and adapting to the health impacts of climatic and environmental change is the creation of public health monitoring systems. However, existing monitoring systems are often not adequately equipped for or intended to detect and respond to multiple sources of environmental change and variability, nor structured to understand the range and cumulative nature of environment-sensitive health impacts that are experienced. Furthermore, these systems do not adequately reflect Indigenous or Northern cultures, ways of knowing, values, or priorities, nor are they driven or designed by Indigenous peoples, leading to large gaps in coverage, data quality, and relevance, particularly within a Northern context.

Given the rapidity of the climatic and environmental changes, and the ways in which these changes affect all aspects of Inuit lives and livelihoods, there is a clear need for integrated, community-led, and community-designed environment and health monitoring strategies that include Indigenous knowledge sources, and give equal attention to physical, mental, emotional, and spiritual health and wellness, as defined by Inuit themselves.

Responding to this need, and building from over a decade of climate change and health research



in the region, the Nunatsiavut Government Departments of Health and Social Development and Lands and Natural Resources, the Rigolet Inuit Community Government, and researchers from the University of Guelph and Cape Breton University began working with Inuit and key stakeholders to conceptualise a community-based and community-led environment and health monitoring system in the Nunatsiavut Land Claim Settlement Region of Labrador, Canada.

Building the foundation: Inuit-identified needs, goals, and priorities for the eNuk program

Through ongoing consultations with Inuit community partners, the following priorities and principles for the program have been identified:

- Consider environmental factors, as well as physical, mental, social, cultural, and spiritual aspects of health and wellbeing;
- Focus on community needs, priorities, and values in order to produce relevant, meaningful, and locally-appropriate results;
- Inuit conceptualisations of health, wellness, and the environment need to be recognised as distinct and equally valuable sources of knowledge;
- Strong partnerships between communities, researchers, and governments are needed;
- Reliable, timely information is needed so that monitoring strategies provide real-time information for communities to develop effective responses; and
- Information must be shared with all stakeholders via well-developed communication strategies and knowledge mobilisation tools.

Indicators of value: what environment- and health- related observations are important to monitor?

Additionally, a list of indicators of environmental changes and their potential impacts on health and wellbeing was developed in collaboration with key stakeholders. The main themes that resonated throughout these conversations included:

- Changes in the environment impact all aspects of health;
- Tracking changes in the environment is important for individual and community wellbeing;
- There is a need for a central place to both give and receive environment- and health-related information;
- Knowing more about changes in ice and trail conditions would help with planning travel routes;
- Tracking numbers, locations, and migratory patterns of animals would be useful for hunters, and would improve access to country food;
- Monitoring seasonal patterns in weather, temperature, and climate is needed to help prepare for and adapt to changes year-to-year;
- We must engage with multiple generations to develop this program;
- This program must be centred around the use and sharing of traditional knowledge; and

- Ongoing collection of information will improve the understanding of how environment and health issues change over time

Digging deeper: why are these environment- and health- related observations important to monitor?

Monitoring observations in the environment will help Inuit adapt to and plan for changes in the short term. For example, environmental conditions are changing so rapidly in and around Rigolet that paths known to be safe in the past may present unexpected dangers. As such, community members want to keep track of changes in the environment in order to share timely, accurate information with each other regarding when and where is safe to travel off on the land. Ongoing collection of information through this program will also help improve the understanding of, and preparation for, future environmental changes in Rigolet, and will offer a means to compare these changes between seasons and years.

Participatory App development: how can environment and health information be collected and shared?

Inuit in Rigolet are already using many strategies and technologies to adapt to changes in their environment while also promoting health and safety in their community. Currently, information – such as wildlife sightings and unexpected weather conditions – is shared in the community via social media or word of mouth, and is shared off on the land via various technological devices such as GPS units and SAT phones. Essentially, these methods of communication are used to efficiently share important information that will help keep others safe both in town and off on the land.

The eNuk team met with community members to brainstorm ways of streamlining these existing strategies for collecting and sharing environment and health information into a more comprehen-

sive monitoring system. Together, we began engaging in an iterative design process to develop a mobile App that will allow Inuit to track, monitor, and respond to environment and health conditions, both within the community and out on the land around the community, where Inuit and their ancestors have traditionally hunted, harvested country food, and traveled for millennia. This App will enable the on-going and near-real-time monitoring of a variety of environment and health conditions in Rigolet.

Launching the eNuk App

In August 2016, the initial version of the eNuk App was launched in Rigolet. This version of the App is currently being tested with a small cohort of households who will be meeting regularly with the research team to provide feedback on the overall program, and ensure that the final versions of the App and website are engaging, useful, and aligned with the initial goals set out by the community.

After any necessary revisions are made following this testing period, more households will be recruited to begin a two-year period of active in-community and on-the-land monitoring. One third of the households in Rigolet will be given iPods, enabled with the App, to gather environmental observations in and around town, and when travelling on the land, to hunt, trap, fish, or forage for berries and traditional medicines.

The App will allow individuals to input information in the form of pictures, videos, audio-recordings, geo-location and mapping, note-recording, and question-answering – allowing for a diversity of audio-visual and written information to be collected on a range of physical, mental, emotional, and spiritual health factors and environmental conditions.

Looking ahead

This information will be stored on the eNuk website in a central database, controlled by

local and regional government stakeholders, with observational information about the land and weather being publicly available to the entire community. Data gathered will be used to inform community priorities, programming, and policies around responding to environmentally-sensitive health impacts, as well as create a living archive of land-based knowledge and Inuit wisdom about the region. This program will serve as a model for community-driven environment and health monitoring that produces data for informing Northern policy, programming, and decision-making – not only in Canada, but across the Circumpolar North. This model may also be transferable to other locations and with other populations where localised environment and health monitoring is desirable.

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