# Three-Pronged Approach to Address Gaps in Northern Ontario First Nations Emergency Services & Health Related Data



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# Background - Over 25,000 Ontarians in 27 remote First Nation communities have no formal paramedicine or 911 services.<sup>1</sup> - Studies of emergency health conditions have not been conducted in this region for nearly twenty years.<sup>2</sup> Lack of reliable and accessible health data is a critical problem for community health, health equity, and health program development in the remote North. **COMMUNITIES WITHOUT PARAMEDICAL & 911 SERVICES** MOOSE FACTORY

COMMUNITIES WITHOUT PARAMEDICAL & 911 SERVICES MAIN REFERRAL HOSPITALS FOR REMOTE COMMUNITIES

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Adapted from: Orkin A, VanderBurgh D, Ritchie S, et al. *Community-Based Emergency Care: An Open Report for Vishnawbe Aski Nation*. Thunder Bay: Northern Ontario School of Medicine, 2014.

#### Purpose

Develop an innovative approach to data acquisition and program development to deepen our understanding of emergency health issues and community-based care in remote First Nations communities.

## **Methods & Results**

Advance a three-pronged approach that seeks data from local, regional and international sources to aid in the development of a Community-Based Emergency Care (CBEC) system for remote communities.

Data Source	Research Objective	Preliminary Results
International systematic review	Understand health effects of training laypeople to deliver emergency care in underserviced populations.	<ul> <li>PROSPERO No. CRD42014009685.</li> <li>Reviewers recruited.</li> <li>cd 6,000 articles collected.</li> </ul>
Regional medical transport (Ornge) & emergency services administrative data (James Bay Ambulance Service)	Understand the epidemiology of emergency health conditions in remote communities.	<ul> <li>Roughly 1 air evacuation for every 10 people per year in remote Northwestern Ontario.</li> <li>Multilateral ethical and data sharing agreements in development.</li> </ul>
Local knowledge from Windigo First Nations Council (WFNC) Communities	Collaborate with five WFNC communities to develop strategic plan to implement a locally relevant CBEC system.	<ul> <li>Collaborative meetings with local Health Directors.</li> <li>Letters of support and resolutions received from First Nations governance organizations.</li> </ul>

### **Anticipated Outcomes**

Increased knowledge about emergency response in remote contexts

#### International

Summary of scientific knowledge on role of laypeople in delivery of emergency care in low-resource settings.

#### Regional

Understanding of burden of disease & medical emergencies in remote Northern Ontario communities.



#### Local

Five year strategic plan to implement CBEC in seven remote communities of Windigo First Nations Council.



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#### **Development of CBEC**

Community-Based Emergency Care (CBEC) is a program to address the lack of prenursing station care and formal response services in remote communities.

- Most people must rely on friends and family members for essential care and transport to local nursing stations.<sup>1,3</sup>

- With CBEC, local community members are engaged in developing and implementing first response emergency care.<sup>3</sup>

Pilot project in Sachigo Lake First Nation provided locally appropriate first response training and enhanced the comprehensive management of medical emergencies and *community resilience.*<sup>4</sup>

## Conclusion

- Community-based approaches can be used to overcome an information vacuum, gather new data, and develop new health programs.

- This international, regional and local approach will:

- 1. Deepen our understanding of emergency care issues in remote First Nations communities.
- 2. Inform emergency care practice and systems in Ontario and beyond.

#### References

Glazier RH, Gozdyra P, Yeritsyan N. 2011. Geographic Access to Primary Care and Hospital Services for Rural and Northern Communities: Report to the Ontario Ministry of Health and Long-Term Care. Toronto: Institute for Clinical Evaluative Sciences.

Whitehead, S, Henning, B, Johnston, J, and Devlin, A. 1996. Developing an Injury Morbidity and Mortality Profile in the Sioux Lookout Zone: 1992-1995. Project supported by the Canadian Hospitals Injury Reporting and Prevention Program.

Orkin A, VanderBurgh D, Ritchie SD, et al. 2014. Community-Based Emergency Care: An Open Report for Nishnawbe Aski Nation. Thunder Bay: Northern Ontario School of Medicine. Available at: www.nosm.ca/cbec.

Born K, Orkin A, VanderBurgh D, Beardy J. 2012. Teaching wilderness first aid in a remote First Nations community: the story of the Sachigo Lake Wilderness First Response Education Initiative. International Journal of Circumpolar Health 71: 19002.