

# **Promising practices to support retention of the healthcare workforce in northern, rural and remote communities in Canada**

If you are looking for promising practices used in northern, rural, and remote communities in Canada to improve access to safe, high-quality, team-based primary care, then this promising practice will be of interest to you.

# Basic Radiological Technician Program Provides Specialized Training for X-Ray Procedures Across Nunavut

## What is the promising practice?

A key strategy to strengthen and retain the health workforce in Nunavut is effective and safe task-sharing that engages community members and their expertise. This summary describes the **Basic Radiological Technician (BRT) program**, which offers specialized training to Inuit employees of the department of Health to complete basic x-ray procedures across all 25 communities in Nunavut.

## Key Messages and components of the promising practice

- Task-sharing can be an effective and safe way to improve health services, particularly in northern communities. This has been feasible even in the context of limited human resources and staff shortages – for example vacancy rates of 40 percent or more within health staff.
- X-ray imaging is a critical service in all 25 Nunavut communities. The ability to do more x-rays in the community can be more sustainable, improve patient care, decrease workload for nurses and prevent the need for patients to travel out-of-territory for repeat diagnostic testing.
- In 2018, the Nunavut department of Health worked with the Ontario Association of Medical Radiation Sciences (OAMRS) to create the **Basic Radiological Technician (BRT) program**. This program offers specialized training to Inuit employees of the department of Health (typically clerk interpreters and custodial staff) to complete basic x-ray procedures across all 25 communities in Nunavut.
- Depending on community size and patient volumes, it typically takes approximately 24 months for students to complete the three phases of the program. Ongoing support and refresher training is also provided.
- To date, 19 technicians have graduated from the BRT program throughout the territory; and an additional 47 students are enrolled in various stages of the program.
- This initiative supports Inuit employment and illustrates an investment in health human resources.

## Context

- The BRT program has been in place since 2018. The program design was based on a combination of these insights and issues:
  - The department of Health had some previous experience delivering this type of program in Nunavut which was called the BRW (basic radiography worker) program. It ran in the late 1990s to early 2000s with some great success.

However, the program did not fully provide the continuing education and ongoing support required to sustain graduate competencies.

- Challenges had been identified with inconsistent x-ray services, poor-quality images and limited training and availability of individuals able to perform x-rays.
  - The team that contributed to the previous BRW program now offers an updated program called the BRT program which is delivered by OAMRS. OAMRS has extensive experience working with Indigenous individuals with a wide variety of educational backgrounds in Northwestern Ontario.
  - As part of the discovery phase of the project, OAMRS traveled to Nunavut to interview former BRWs, Inuit staff at health centres, medical radiation technologists, nurses and physicians.
- During the discovery phase, OAMRS worked with Government of Nunavut stakeholders to finalize the design and content of the program to ensure it met the needs of the students and the department of Health. Educational materials including a BRT theory manual and a BRT positioning manual were created, and policies and protocols were developed to define the scope of work for BRTs practicing in Nunavut.
  - The BRT training program was developed specifically to provide focused and specialized x-ray training to Inuit department of Health employees. These employees are typically in administrative or facility support positions and have demonstrated a desire to become more involved with direct patient care in their communities.
  - The program is delivered over 18 to 24 months and uses a blended learning approach that includes three separate week-long, in-person training sessions and remote support between the sessions. After completion of all sessions, students graduate from the program and receive their BRT certificate that is endorsed by OAMRS.
  - The BRT program has enabled the transfer of responsibility for providing x-ray services within health centres to BRTs and away from nursing staff. This transition has greatly improved x-ray quality, consistency and access to these services in some of Canada's most northern, remote and isolated communities.

## Results (how do we know retention is improving?)

Evaluations have been completed through instructor and student assessments, as well as reporting radiologist surveys on the quality of the x-rays.

To date, in-person training has been delivered to more than 60 people in 25 communities in a territory with over 1.8 million square kilometers. Given the relatively small territorial population the number of trained community members is significant. In comparison, community health representative (CHR) positions have existed in the territory for decades and there are approximately 30 to 40 individuals in these positions across the 25 communities (one to two per community). Training of more than 60 people in the new BRT program has made a significant impact in small health centres.

Members of the care team have shared that integration of the BRT-trained technicians has had multiple positive effects, including better task sharing and more manageable workloads across

members of the care team. It has empowered local community members to have a more direct role in providing healthcare in their communities. While not yet fully evaluated, it is believed to have decreased workload for nurses and prevented out-of-territory travel for repeat diagnostic services.

The radiologist ratings indicated a significant improvement in average quality scores of the x-rays, including image quality, patient positioning and image processing.

## What do the staff think?

- “In the BRT program I learned so much about x-ray. I completed the course and it was a lot easier to have a trainer come to our community. We are trained using our equipment. Also, I have small children and need to work. This makes leaving community harder. Being Inuk is a benefit to my community. I understand our language and culture. My community often feels more comfortable having another Inuk taking care of them.” (BRT program participant)
- “[BRT program participant] is the oil to the machine of the health centre. Everything runs more smoothly when she is in the building!” (Nurse, supervisor of health programs)
- "... the Nunavut BRT program is a wonderful initiative. It is great to see local community members be trained and go on to provide healthcare in their home communities. I had the opportunity to be working in Resolute Bay CHC [Community Health Centre] when one of the staff completed her training and we had a big celebration. It was wonderful to see the culmination of her hard work and have the community there to share in her achievement.” (Family physician)



## Key success factors

- Bringing specialized training to Inuit employees within their communities, rather than sending employees to train outside of their communities.
- Ongoing support from OAMRS and the Government of Nunavut medical radiation technologists.
- Specialized healthcare delivered by Inuit for Inuit.

## Major challenges

The pandemic halted in-person BRT training; however, there were times during COVID travel restrictions that emergency training was provided. A positive effect came from this challenge. Monthly BRT meetings were initiated to support continuing education and networking when in-person training ceased during COVID. These monthly meetings are now ongoing events.

## Next steps

- Continue to support enrollment in the BRT program.
- Consider future expansion to other health centre lab-related duties (for example phlebotomy).
- Ensure pay mechanisms are well-aligned with work completed.
- Continue with other related and similar projects such as the introduction of public health assistant (PHA) roles and the resourcing of the regional managers of Population Health that work closely with PHAs and other health roles.

## For more information

To learn more about this summary and promising practice, please contact Jasmine Pawa ([jpawa@gov.nu.ca](mailto:jpawa@gov.nu.ca) or [jasmine.pawa@mail.utoronto.ca](mailto:jasmine.pawa@mail.utoronto.ca)). This summary is written with acknowledgement to Jennifer Berry, Matt Stacey, the individuals who completed the program and the many other team members who supported the development and implementation of this program.