Narrowing the Gap of Health Care Inequality in the North by Using Remote Presence Robotic Technology

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Disparities in the provision of health care services to Canadians who live in the north have a major negative impact on their health and life expectancy. Aboriginal communities in the North have an average life expectancy significantly lower than the rest of Canadians. Barriers of distance, lack of adequate health care infrastructure and expertise limit the provision of health care to vulnerable populations such as children and the elderly.

The expansion in telecommunication technology has opened the door for solutions that may help address these challenges. We have pioneered the use of remote presence robotic technology in the Canadian North by using robots and portable devices capable of real-time connectivity using available cell phone networks or Wi-Fi link.

After the first deployment of a telepresence robot “Rosie” in Nain, Labrador, the program has expanded with a second generation robot to the Northern Saskatchewan aboriginal community of Pelican Narrows. The first priority in Pelican Narrows has been to provide pediatric care as it was deemed to be an urgent need by the community. Our approach to implementation of this technology has been inclusive and multidisciplinary. It involved the active participation of the aboriginal community, their leaders and the local health care workers before the robot was deployed.

Specialists in pediatric emergency, intensive care and surgery provide remote presence medical service to Pelican Narrows. Our experience in managing pediatric emergencies, triaging of patients, providing elective and follow up care has been so far positive. The impact of this technology on health outcomes, patient transportation, nurse’s support and patient satisfaction will be discussed.

This project strongly suggests that the use of remote presence robotic technology using a multidisciplinary and culturally inclusive approach has the potential to empower remote aboriginal communities to narrow the gap of inequality in health care delivery.

References

