



Executive Summary



→ Central Monitoring System

Introduction

Every day, our care teams rely on advanced monitoring technology to observe vital signs, identify early warning signals and respond immediately when seconds matter most. To continue delivering exceptional care, close to home, our hospital must now replace and modernize the Central Monitoring System that safeguards some of our most vulnerable patients.

Current Challenges

NBRHC's current monitoring system was first installed in 2011 and is now reaching the end of its lifecycle. It is no longer supported for software or hardware updates which, without upgrade, will mean inoperability and manual charting by clinicians. The system's components, including bedside monitors, telemetry and network infrastructure, are showing their age, increasing the risk of downtime, delayed alerts or data interruptions.

This system is vital to our Emergency Department, Critical Care Unit, Post-Anesthesia Care Unit, Paediatrics and Neonatal Intensive Care Unit. This represents roughly 100 patient beds which play an essential role in acute and specialized care at NBRHC. Modern, reliable monitoring is essential to ensuring rapid response and the safest care for patients of all ages.

The Solution

Our hospital is undertaking a critical modernization of its Central Monitoring System, replacing aging infrastructure and ensuring the highest standards of patient safety, reliability and cybersecurity. This upgrade will expand monitoring capacity, reduce system downtime and support proactive patient care.

The Project

A phased approach is being utilized for this upgrade, which is to be completed by the end of the 2026/2027 fiscal year. This essential project is anticipated to cost \$3,000,000.

Central Monitoring Stations will aggregate real-time data from multiple patients, enabling staff to quickly detect changes and respond to alerts. At the bedside, new monitors and telemetry units will continuously track vital signs such as heart rate, blood pressure, respiratory rate and oxygen saturation.

Upgraded network infrastructure will ensure high-speed, secure connectivity with built-in redundancy to prevent data loss or signal interruption, while advanced alarm management tools will help deliver the right alerts to the right clinicians, reducing fatigue and improving response times.

Enhanced cybersecurity measures and integration with hospital information systems will further safeguard patient information and support compliance with evolving standards.

Together, these improvements will create a stable, scalable foundation for clinical monitoring which will be ready to meet the growing and changing needs of patient care for years to come.

The Impact

Upgrading the Central Monitoring System will:

- Improve patient safety through faster, more reliable alerts and real-time surveillance.
- Enhance efficiency by reducing equipment downtime and streamlining clinical workflows.
- Strengthen cybersecurity and compliance, protecting sensitive patient information.
- Support our care teams with intuitive tools that ease the cognitive load of monitoring multiple patients.
- Enable future scalability, ensuring our hospital can continue to meet community needs as technology evolves.

This project represents a vital investment in the quality and reliability of care across NBRHC's critical and paediatric areas, helping our hospital remain responsive, connected and ready for the future.

Conclusion

Every patient deserves to receive exceptional care, close to home, supported by the safest and most reliable technology available. The Central Monitoring System upgrade is a cornerstone investment in that vision—one that will touch countless lives each year and empower our clinical teams to provide the highest standard of care.