



Thunder Bay Regional
Health Sciences
Foundation

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Synopsis of Grant Commitments 2023/2024

Thunder Bay Regional Health Sciences Foundation

2023-001 Infant Crib, Fun Centre & Scale (\$22,340)

Equipment upgrade and replacement for Paediatrics

A new infant crib replaces ageing equipment, transitioning to a standardized crib. The Fun Centre, extremely popular with paediatric inpatients, replaces ageing electronics and is upgraded to the Nintendo Switch gaming system. A new infant scale increases capacity for both Paediatric Inpatient and Paediatric Outpatient.

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2023-002 Infant Warmer, Delivery Cart, and Perineum Lights (\$149,600)

Equipment upgrade and replacement for Labour & Delivery

A new infant warmer keeps baby warm during post-birth examination; a new instruments cart replaces an ageing wooden cart that cannot be properly cleaned; and a new motorized lighting system assists staff in the delivery room by putting light where it's needed during delivery and post-birth examinations.

2023-003 Infant Radiant Warmer with Resuscitation Panel and Infant Scale (\$49,009)

Equipment upgrade and replacement for NICU

Infant resuscitations are rare, but it's vital to have the right equipment when needed. This new panel assists staff with reviving such a small patient and helps keep baby warm. A new infant scale increases capacity within the 14-bed NICU.

2023-004 Tronix Paediatric Infant Scale (\$4,369)

Equipment upgrade for the Maternity Centre

Newborns typically lose 10% of their weight after birth, and it is important to monitor their weight in the first several weeks. This new scale will increase capacity within the Maternity Centre so babies can be weighed during lactation consultations and other visits.



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2023-005 Natus Brain Monitor Amplifier (\$23,806)

Equipment replacement for NWO Regional Stroke Network

EEGs can help staff assess stroke patients. Electrical signals from the brain must be amplified to read the EEG correctly. The current amplifier is ageing and faulty, so getting an accurate reading is difficult. This replacement amplifier will ensure accurate readings.

2023-006 Automated Medication Dispensing Unit Software Upgrade (\$70,000)

Software Upgrade

Automated dispensing cabinets are proven to improve medication speed and safety - including at our Hospital. Rather than travel to the pharmacy to manually fill prescriptions, they can be reviewed and approved electronically. Over the years, the number of dispensing units available at our Hospital has grown so a software upgrade is required.

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2023-007 Cancer Biomarker/ImmuniHistoChemistry Stainer (\$186,459)

Equipment to expand lab testing capacity for Pathology

Lab technicians study biopsy tissue to identify malignant tumours. However, cancer cells and healthy cells can look similar under a microscope. IHC staining highlights the cancer cells to help with cancer diagnosis and treatment planning. The lab currently has two similar stainers that are running over-capacity. This new unit expands capacity, increasing turnaround times during cancer diagnosis so patients can get answers - and treatment - faster.

2023-008 Point of Care Ultrasound Machine (\$79,191)

Equipment upgrade and replacement for the Cardiac Cath Lab

Ultrasound units are used in the Cardiac Cath Lab for non-invasive diagnosis of certain heart conditions. It can also provide image-guided treatments such as inserting a needle to drain fluid build-up around the heart. This new unit replaces an ageing unit while providing improved image quality and increased functionality.

2023-009 Operating Room Light Replacement (\$2,995)

Equipment replacement for Cardiac Cath Lab

Staff use a portable light in the Cardiac Cath Lab for certain procedures such as pacemaker insertion. The current light is ageing and replacement parts cost more than replacement. The new light will avoid breakdowns during procedures.



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2023-010 Operating Room Equipment (\$191,040)

Equipment replacement for the Operating Room

Instruments in the operating room wear down over time. This grant replaces several items: instruments for cataract surgery, two pieces of equipment for urinary tract imaging, orthopaedic tool for repairing small fractures, orthopaedic drill primarily for repairing larger bones, and a camera for minimally invasive orthopaedic surgery.

2023-011 Aquarius CT Urodynamics System (\$70,950)

Equipment replacement for Ambulatory Care

Urodynamic testing helps doctors diagnose certain urinary tract problems. Advanced equipment precisely measures the pressure within the bladder and records muscle and nerve activity to diagnose issues such as incontinence.

2023-012 CT Scanner (\$337,204)

Equipment replacement and upgrade for Diagnostic Imaging

Our current CT scanner runs 24/5 and 16/2 serving up to 70 patients per day. That amount of use means it is now prone to breakdowns leading to delays for patients – delays that given the heavy usage are not easily recoverable. This new unit replaces the 12+ year unit and provides safer scans using lower doses of radiation.

2023-013 Portable C-Arm (\$200,000)

Equipment replacement and upgrade for imaging in the operating room

The operating rooms use C-Arms, semi-portable digital imaging devices, for image-guided surgeries including fixing broken bones, spinal injuries, and abdominal injuries. Currently, the two units we have are ageing (purchased in 2003) and are getting harder to fix and find parts. This new unit reduces the risk of downtime and uses less radiation to produce better images than previous models for better patient care and safety.

2023-014 Spyglass Endoscopic Camera Probe (\$101,889)

Equipment to image biliary duct system for Endoscopy

Gallstones, like kidney stones, can cause painful blockages in the gallbladder system (biliary duct system), which sometimes requires surgery. This involves breaking down the stones and removing through the duct system. However, these pieces can be small. This special camera will give surgeons visual confirmation that all particles have been removed, reducing the risk of further surgeries.

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2023-015 Automated Medication Dispensing Unit - Pharmacy (\$100,000)

Equipment to improve medication speed and safety

Automated dispensing cabinets are proven to improve medication speed and safety – including at our Hospital. Rather than travel to the pharmacy to manually fill prescriptions, they can be reviewed and approved electronically. Then, the secure cabinet automatically dispenses the right medication and dose to authorized healthcare professionals on that unit. This greatly increases speed and reduces the risk of medication errors, improving both patient safety and comfort. This grant contributes to a unit in the Cardiac Cath Lab.

2023-016 MRI Contrast Agent Injector (\$37,711)

Equipment replacement to control rate of MRI contrast agent for Diagnostic Imaging

MRIs require a gadolinium-based contrast agent for imaging. An attached injector helps control the flow rate of the contrast agent during the MRI scan for best imaging results. However, the current injector is ageing and breaks down often. Staff often need to inject the contrast agent manually. Although safe for the patient, manual injection can compromise the quality of the images.

2023-017 PET/CT Replacement – Diagnostics (\$250,000)

Equipment and Reconstruction to accommodate new equipment

The PET/CT is a type of nuclear medicine that uses medical radioisotopes (generated in our cyclotron) to image cancer and other diseases and conditions. These scans help doctors diagnose cancer and develop radiation treatment plans for patients. Our current PET/CT scanner is 15 years old and needs to be replaced to avoid delays due to breakdown. New technology promises faster scans, increased patient capacity, and more uses including head & neck cancers and cardiac scans, among others.

2023-018 Dose Drawing Robot (\$5,616)

Equipment to prepare correct radioisotope dosage for Diagnostic Imaging

The PET/CT is a type of nuclear medicine that uses medical radioisotopes (generated in our cyclotron) to image the body. These use extremely small doses of radioactive material. Previously, the dosage and volume of patients was so small that technicians could safely draw the dosage manually. However as patient volume goes up, so does the exposure risk to technicians. The Dose Drawing Robot is a shielded device that reduces human contact with the radioisotopes, reducing the risk of overexposure to staff.

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2023-019 Bladder Scanner (\$12,500)

Equipment to image bladder for the Emergency Department

A bladder scanner is a non-invasive method of assessing patients presenting at the Emergency Department with bladder issues using 3D ultrasound. This reduces various risks involved with catheterization including infections and is better for patient comfort. The Emergency Department's previous unit has broken down and is beyond repair.

2023-020 Pulse Generator (\$7,345)

Equipment replacement to increase slow heart rate for the ICU

Patients can experience a dangerously low heart rate for a number of reasons including heart attack, pre-existing heart issues, and certain medications. External pacemakers use a pulse generator help keep the heart beating at a higher level until a pacemaker can be inserted. This pulse generator replaces an ageing unit that is at end of life.

2023-021 Ventilators (\$179,956)

Equipment to assist with breathing for ICU and NICU

Ventilators provide breathing assistance for patients unable to breathe well enough on their own. These two new ventilators will expand capacity for the ICU, and are portable so that they can be used in NICU as needed.

2023-022 Cardiac Monitor System (\$500,000)

Equipment to monitor heart rate and vital signs used throughout our Hospital

Our current cardiac monitor system has reached end of life, and replacement parts are no longer available. This new, integrated cardiac monitor system includes 135 monitors, 57 telemetry packs, and a centralized network, and will be used in the Emergency Department, ICU, NICU, 3C Neurosurgery Unit, Cardiology, Labour & Delivery, and the Post-anaesthetic Care Unit. This grant will support the larger project.





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2023-023 Rhinolaryngoscopes (\$41,019)

Equipment used during head & neck cancer treatment for the Cancer Centre

Our Cancer Centre runs three head & neck cancer clinics every month, which sees up to 20 patients. A rhinolaryngoscope provides images through the nose and into the throat to help monitor the patient during pre-treatment, treatment, and follow-up care of head & neck cancers. This new scope adds capacity to meet growing need.

2023-024 Radiation Therapy Testing Equipment (\$169,783)

Equipment used to test linear accelerators (linacs) for Regional Cancer Care

Radiation therapy is a complex operation. Most importantly, staff at Regional Cancer Care want to ensure that the actual radiation doses administered to patients are what is prescribed for patient safety. This requires advanced and comprehensive testing, particularly during the commissioning of the new linac. This new testing equipment replaces ageing equipment currently in use.

2023-025 Prostate-specific Radioisotope Production (\$268,926)

Radioisotope used during PET scans for Cyclotron/Radio Pharmacy

PET scans were first used at our Hospital to diagnose and stage lung cancer. Today, new applications for PET scans are being researched, including prostate-specific radioisotopes. This grant will allow prostate cancer patients in Northwestern Ontario to enter a clinical trial to measure the effectiveness of this new imaging method using radioisotopes produced at our own cyclotron.

2023-034 Research Study - Nurses' Experiences (\$3,000)

Research to help improve nurse retention at our Hospital

Nursing shortages are felt through Ontario, Canada, and the world. This research study hopes to find the reasons why nurses leave the Thunder Bay Regional Health Sciences Centre and/or the nursing profession. In turn, researchers want to find ways to give nurses the supports they need in order to stay. The information can be shared with other hospitals to improve retention rates elsewhere as well.

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Regional Grants

2023-027 Chemotherapy Program Equipment and Training – Marathon (\$20,110)

Equipment replacement and **Training** courses for nurses for Regional Cancer Program

The North of Superior Healthcare Group, Wilson Memorial Hospital Site in Marathon needs to replace ageing equipment for its Chemotherapy Program including two new infusion pumps and two chemotherapy chairs to replace ageing equipment. This grant also funds Desouza courses, training program nurses in palliative care and in management of patient depression and anxiety.



2023-032 Cellavision Blood Analyzer – Sioux Lookout (\$45,850)

Equipment to speed up cancer detection for Regional Cancer Program

Certain cancers can be detected through blood tests. However, this requires analysis by a specialist, which currently requires the blood samples to be sent away. It can take three to six weeks to get results. This equipment will allow the cancer program at the Meno Ya Win Health Centre in Sioux Lookout to pre-analyze the blood sample, digitize an image, and send electronically for follow-up as needed. This will greatly speed up the process so patients do not need to wait as long for results.

2023-033 Chemotherapy Equipment – Terrace Bay (\$24,975)

Equipment for chemotherapy infusion for Regional Cancer Care

The North of Superior Healthcare Group, McCausland Hospital site in Terrace Bay needs two new infusion pumps to replace ageing equipment. This grant will also purchase a chemotherapy chair and a dedicated stretcher for the chemotherapy program for patients who need to lie down during treatment.

Other Funding

Emergency Department Renovation Project (\$2,830,000)

Cath Lab - remaining half of funding (\$1,018,900)

Family Care Grants 2023/24 (\$100,000)

Parking Revenue - Research Support (\$156,973)

Cancer Patient Program 2023/24 (\$10,000)

Thunder Bay Breast Cancer Support Group (\$5,000)

Total 2023/2024 Funding Allocations: \$7,276,515