

Synopsis of Grant Commitments 2015/2016

Thunder Bay Regional Health Sciences Foundation

2015-002 Anaesthesia Care Stations (5) (\$96,717)

Equipment for safer anaesthesia during patient operations and to allow a wider range of cases

When a patient “goes under” anaesthetic during surgery, anaesthesia machines help monitor patient vital signs and maintain a continuous supply of anaesthetic. This new care station will replace ageing equipment and will upgrade our OR capabilities, providing service for more complex cases including vascular and bariatric surgery, and will help us prepare for full cardiovascular surgical services.

2015-003 Vital Signs Monitors (12) Throughout the Health Sciences Centre (\$55,020)

Equipment for monitoring patient vital signs

Vital signs monitors are the single most important piece of technology that nurses use in the acute care setting. Every patient that visits the Emergency Department, an outpatient clinic, or is admitted to an inpatient bed must have their pulse, blood pressure, oxygen levels, and other vital signs accurately measured and recorded for best care. About two-thirds of the monitors at the Health Sciences Centre will reach end of service by 2017. These new machines will replace and upgrade ageing monitors.

2015-004 Neonatal Ventilator (\$46,582)

Equipment to help newborns in the Neonatal Intensive Care Unit (NICU) breathe

On rare occasions, premature babies or other newborns with underdeveloped lungs require a ventilator to help them breathe in the first days and sometimes weeks of life. This specialized equipment is designed for smaller lungs. The NICU has plans to replace three units in total which are reaching end of service.

2015-005 Intensive Care Unit Ventilators (2) (\$102,975)

Equipment to help critically injured patients breathe

Patients who are critically injured and require intensive care services often require a ventilator to help them breathe. These two units will replace and upgrade equipment that is past end of service to ensure high-quality care and avoid possible breakdowns when they are needed most.

2015-006 Birthing Bed for Labour and Delivery (\$22,776)

Equipment to help make labour and delivery safer, easier, and more comfortable for mother

Special birthing beds make it safer and easier for mothers to deliver, and easier for healthcare professionals to assist. This new bed will replace ageing models and upgrade the style with a more ergonomic design, lighter frame, and two built-in cradles for IV poles. The new bed provides better comfort for mother and caregiver for improved patient- and family-centred care.



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2015-008 Defibrillators (3) for Emergency Department (\$63,996)

Equipment for CPR for cardiac arrest patients

Not surprisingly, some of the sickest patients are in the Emergency Department, and heart attacks are relatively common. Three new “crash carts” will replace high-use equipment in the department. The new units feature the latest technology including “Real CPR Help” that helps ensure proper CPR and “See-Thru CPR” which filters out CPR compressions on the ECG monitor for heart rhythm monitoring.

2015-009 Intercranial Pressure (ICP) Monitor for ICU/Neuro Unit (\$9070.05)

Equipment to monitor pressure within the brain after injury or disease

After a major injury to the head or a medical condition including stroke and meningitis, swelling or fluid build-up can cause an increase in pressure that can lead to further brain injury. An intercranial pressure (ICP) monitor alerts medical staff if the pressure rises. Previously, the Critical Care Unit (ICU) and Neurosurgical Unit were using a monitor on loan from the manufacturer after theirs stopped working.

2015-010 C-MAC Intubation Blade for Critical Care (ICU) (\$6,368)

Equipment to help with difficult intubations for assisted breathing

Patients who have difficulty breathing may be intubated, in which a healthcare professional inserts a plastic tube into the airway to open it. However, some patients are difficult to intubate, and multiple attempts lead to further complications including reduced oxygen and heart attack. This new unit uses a video feed that allows the healthcare professional to guide the tube into place faster and safer.

2015-012 Argon Plasma Coagulation (APC) Electrosurgical Generator for Endoscopy (\$97,104)

Equipment to help stop bleeding during endoscopy procedures

Endoscopy allows doctors to explore inside body cavities including the throat/stomach and colon using a flexible video camera. It also allows them to do minor procedures such as remove polyps or repair tissues. An electrosurgical generator helps stop the bleeding using heat (cauterization). This new model uses updated technology for non-touch cauterization that is safer with less risk of complications.

2015-013 Skin Graft Mesher for the Operating Room (\$5,000)

Equipment for improved skin grafts and better patient care

Surgeons sometimes use skin grafts to help repair extreme trauma to the skin including burns, large wounds, and after the removal of skin cancer. This skin graft mesher along with accompanying precision instruments improves results in several different ways such as allowing the donor tissue to increase in size several times to cover a larger area, provides a better bond with the donor tissue with the patient tissue, and better drainage. The equipment would replace ageing equipment and upgrade capabilities including with the addition of the microplastic instruments.



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2015-015 TURP Instrument Set for the Operating Room (\$8,089)

Equipment for prostate surgery

Transurethral resection of the prostate (TURP) is a surgery for men who experience moderate to severe urinary problems due to an enlarged prostate. It is also a surgical option for various conditions which block the flow of urine. These vital instruments allow surgeons to perform approximately 300 TURP surgeries in Thunder Bay each year safely and effectively.

2015-022 Ultrasound Unit for Diagnostic Imaging (\$160,000)

Equipment to upgrade and expand ultrasound imaging capabilities

The use of ultrasound for diagnostic imaging has grown exponentially over the last 10 years, with six suites in use daily (three on weekends). This new unit will replace an ageing unit first purchased in 2000, which means the image quality is vastly superior.

2015-023 Polymerase Chain Reaction (PCR) Testing Equipment for the Clinical Lab (\$79,474)

Equipment to provide rapid testing of specific, highly infectious diseases

The highest precautions must be taken when a patient is suspected of having a highly infectious disease – especially if that disease is antibiotic resistant such as MRSA or VRE. Traditionally, that meant isolation of the patient for four or more days while cultures confirmed or ruled out these infections. This new PCR testing machine examines the DNA of an infection to identify it quickly. This will improve patient care tremendously by avoiding approximately 700 patient isolations per year, and reduce associated costs.

2015-028 Triple channel infusion pump for Chemotherapy – Atikokan (\$8,500)

Equipment specifically for chemotherapy program to enhance patient services

The chemotherapy program at the Atikokan General Hospital provides closer-to-home care for its residents. However, the program had to borrow both the IV pump needed from other areas of the hospital during chemotherapy. This dedicated equipment will ensure faster treatment times, lower the risk of infection to immunocompromised cancer patients, and provide an IV pump designed specifically for chemotherapy use.

2015-029 Triple channel infusion pump for Chemotherapy – Geraldton (\$8,500)

Equipment specifically for chemotherapy program to enhance patient services

The chemotherapy program at the Geraldton District Hospital was borrowing a single-channel IV pump from the Emergency Department as needed. This grant provides for a dedicated triple-channel IV pump – one that is designed specifically for chemotherapy – leading to faster treatment times for patients.



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2015-030 Vital Signs Monitor for Chemotherapy Program – Terrace Bay (\$5,000)

Equipment specifically for chemotherapy program to enhance patient services

The Chemotherapy Program at McCausland Memorial Hospital shared a vital signs monitor, used for pre-chemotherapy assessments and during treatment, with the acute care floor. This sometimes led to delays in treatment trying to locate a monitor. A new dedicated vital signs monitor will lead to faster treatment times for patients, reducing anxiety, and will reduce the risk of infection from other areas of the hospital.

2015-031 Triple channel infusion pump for Chemotherapy – Nipigon (\$8,500)

Equipment specifically for chemotherapy program to enhance patient services

The chemotherapy program at the Nipigon District Memorial Hospital was using an ageing (20+ years) IV pump. This grant provides for a dedicated triple-channel IV pump for chemotherapy, designed specifically for chemotherapy.

2015-032 Triple channel infusion pump for Chemotherapy – Hearst (\$8,500)

Equipment specifically for chemotherapy program to enhance patient services

The chemotherapy program at Hôpital Notre-Dame Hospital required a new IV pump for improved patient care. This grant provides for a dedicated triple-channel IV pump for chemotherapy, designed specifically for chemotherapy.

2015-034 Emergency Shower for Chemotherapy Program – Sioux Lookout (\$6,786)

Equipment to protect staff and in turn patients

Preparing chemotherapy mixtures is a hazardous activity. Although all appropriate measures are taken to ensure safe handling, a self-contained emergency shower (i.e., one that does not drain to community sewage system) provides an extra safety net should a problem occur, minimizing exposure to staff and risk to patients. This grant provides for such a shower for the chemotherapy program at Sioux Lookout Meno Ya Win Health Centre.

Additional Grants

Breast MRI Coil (\$125,000)

Equipment to assist with MRI imaging for breast cancer diagnosis

MRI imaging is an alternative to mammography for some women who are identified as at high risk for breast cancer. The breast MRI coil connects to the MRI and, with the help of a contrast agent, allows cancer cells to “light up” on the MRI image. This equipment will also allow MRI-guided biopsies, making the procedure more accurate and cause less discomfort for patients.



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YAG/SLT Laser (\$95,000)

Equipment for laser eye surgery

This unit is actually two lasers in one – a traditional YAG laser for eye surgeries and a newer technology called Selective Laser Trabeculoplasty (SLT) used in some cases to reduce scarring, pressure build-up, and pain for better results and patient comfort. This model has the latest YAG technology, is more energy efficient, and is more portable with a bigger table so people in wheelchairs can remain in their chairs during the procedure.

Vital Signs Monitors (\$32,000)

Equipment for monitoring patient vital signs

A recent inventory of vital signs monitors indicated that many are nearing end of service (please see Grant Number 2015-003, above). Thanks to gifts from employees at Thunder Bay Regional Health Sciences Centre through payroll deduction and a matching donation from Tbaytel, eight new vital signs monitors will be distributed to patient care areas throughout the Health Sciences Centre.

COPE 2016 (\$3,000)

Program speaker series for medical professionals

The Community Oncology Professional Education (COPE) is an annual professional education workshop for healthcare professionals. This grant will allow COPE to invite relevant cancer experts from around the world.

Research Projects (\$528,999)

Research

Funds directed specifically to revolutionary research at the Thunder Bay Regional Research Institute (TBRRI). Current projects underway include advanced lung imaging, stroke rehabilitation, cervical cancer treatment, positron-emission mammography (PEM), high-intensity focused ultrasound (HIFU), development of new probes for nuclear imaging, and many others.



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