

# Synopsis of Grant Commitments 2017/2018

## Thunder Bay Regional Health Sciences Foundation

1/8

### **2017-001** Q/A Monitoring System: DQA3 (McGhee, \$7,923)

**Equipment** for measuring and monitoring dosage during radiation treatment

Radiation dose is extremely important for ensuring proper treatments and safe operation. This monitoring system measures radiation output and other properties of the linear accelerators daily to ensure they are functioning properly.

### **2017-003** Respiratory Gating System (McGhee, \$76,252.36)

**Equipment** to improve CT imaging for more accurate patient treatment planning

CT scanners can pinpoint diseases such as lung cancer. However, something as simple as breathing can blur the images, making treatment planning less accurate. The respiratory gating system uses a “four-dimensional” system that takes images at precise moments in the breathing cycle to ensure a more even scanning process and in turn clearer images for patient treatment planning.

### **2017-004** Mobius 3D Brachytherapy Module (McGhee, \$4,950)

**Equipment** for measuring and monitoring radiation dosage during brachytherapy

Unlike linear accelerators which deliver external beams of radiation to the tumour, brachytherapy places the radiation source in or near the tumour. The Mobius 3D brachytherapy module measures and monitors radiation dosages to ensure the proper amount for effective treatment and patient safety.

### **2017-005** Speciality Bed – Adult Mental Health (Price, \$7,070)

**Equipment** to improve patient safety for adult mental health patients

There are additional safety concerns when treating mental health issues. This bed is designed specifically to improve the safety of mental health patients with more secure head and foot boards, tamper-proof screws, and manual adjustments to eliminate electrical cords.

### **2017-006** Diagnostic Imaging CR X-ray Equipment (Wilson, McKnight, Kisselgoff, \$100,000)

**Equipment** upgrade for faster, more efficient X-ray imaging

The oldest X-ray unit at the Hospital still requires cartridges (which adds 25-50% more time to each patient visit) and is at end of life. This upgrade to newer digital technology will eliminate cartridges, providing faster and more timely scans, reduce wait times, and provide better overall imaging service.



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**2017-007 Automated Medication Dispensing Cabinets for Pharmacy** (Emery, \$50,000)

**Equipment** to improve medication dispensing accuracy and in turn patient safety

Automated medication dispensing cabinets help reduce medication errors by dispensing the right medication at the right dose for the right patient. These new units replace and upgrade ageing units with new technology such as clinician fingerprint scanning to dispense, better integration with the record system, and faster access for authorized users. Also includes licensing fees and costs for required renovations and IT upgrades to accommodate the units.

**2017-008 Pathology Lab Modernization, Stainers, Microtomes** (Kisselgoff, McKnight, Crocker Ellacott, Welbourne, Carr, Kubinec, \$280,000)

**Equipment** replacement and upgrade to ensure timely pathology results for cancer

The Pathology Department reviews 160,000 slides annually to diagnose or rule out cancer. Previous catastrophic failures with tissue processors led to delays, making patients wait longer for diagnosis and delaying cancer treatment for those who needed it. These new tissue processors will help ensure timely diagnosis, reduce staff overtime and burnout, and reduce the risk of error.

**2017-009 Renal Water System - Expansion** (Skillen, \$108,400.00)

**Equipment** to purify water for the dialysis process, expanding capacity

The Hospital provides dialysis treatments to approximately 182 kidney disease patients in Thunder Bay – and that number is growing. The dialysis process requires ultra-pure water to reduce the risk of infection and other complications. This new water purification system will ensure capacity as the number of dialysis patients continues to grow.

**2017-011 Defibrillator** (Beck, Gurney, \$23,000)

**Equipment** located in the Cardiac Cath Lab for restarting heart during cardiac arrest

Defibrillators are located in key locations throughout the Hospital for emergency use should a patient go into cardiac arrest. Ageing units must be replaced to ensure safe and proper operation. Three units in particular have been identified as needing replacement in the coming years. This unit will replace the current defibrillator in the Cardiac Cath Lab, and features upgraded response readiness monitoring.

**2017-012 Bariatric Bed** (Skillen, \$38,715)

**Equipment** to improve patient comfort and safety as well as staff safety

Standard beds sometimes cannot accommodate patients due to weight and/or size limitations. There are currently bariatric beds in the Hospital shared among all clinical departments, though sometimes there are not enough. This new bed will reduce wait times for bariatric patients needing a bed, will improve patient safety and comfort, will improve staff safety, and will allow better care for patients accessing surgical and other services through the Regional Bariatric Care Centre.



**2017-013 Level 1 Infuser for the Emergency Department** (Ross, \$10,000)

**Equipment** to warm IV fluids for patients before infusion

Often trauma patients require a rapid infusion of fluids to replace blood and other fluid loss. Replacing high volumes of fluids at temperatures below body temperature can result in hyperthermia and other complications. The Level 1 Infuser warms fluids to reduce these risks and increase patient comfort.

**2017-014 Videoconferencing Units (x6)** (Barro, \$70,987.07)

**Equipment** for the Telemedicine Department to ensure compatibility with the OTN network

The successful Telemedicine Department is the most used in the province, reducing travel and providing closer-to-home care for almost 2,400 patients in 2016. The initial equipment used in the program is coming to end of life and is no longer supported by the Ontario Telemedicine Network (OTN) or vendors.

3/8

**2017-017 BiPAP Units for the Emergency Department and Critical Care (x2)** (Miller, Winslow, \$30,000)

**Equipment** to assist patients who have difficulty breathing

In emergency situations, intubation opens airways for patients in distress. However, this can require longer recovery times and increase the risk of complications. Some patients encountering difficulty breathing due to an acute episode of a chronic disease such as COPD or congestive heart failure are better cared for with a less invasive method. BiPAP (Bilevel Positive Airway Pressure) provides patients with breathing assistance that is just as effective but is more comfortable while eliminating the risk of intubation complications.

**2017-020 Ventilator for the Critical Care Department** (Miller, Winslow, \$55,000)

**Equipment** to provide breathing assistance

Often patients with severe trauma cannot breathe on their own and require a ventilator to move air in and out of the lungs. This unit replaces ageing equipment and upgrades current capabilities by providing settings and attachments that can be used for both adults and children for greater flexibility.

**2017-021 Equipment for the Women and Children's Program** (Purdon, Moorehouse, \$67,358.59)

**Equipment** to outfit the Women and Children's Program

The Women and Children's Program at the Hospital oversees seven units including Labour & Delivery, Maternal Newborn, Inpatient Unit 1B (Paediatrics), and Paediatric Outpatient. The grant provides several pieces of equipment including two Bili blankets to provide phototherapy for jaundiced newborns, an infant weight scale with rolling stand, a fetal telemetry monitor to monitor the baby's vital signs before birth and during delivery, a shower/commode system, and a standard inpatient bed.



**2017-023 Vacuum-Assisted Closure (VAC) Unit for Improved Wound Care** (MacAskill, \$26,000)

**Equipment** to improve wound care for faster recovery and fewer complications

Wounds that do not heal quickly after surgery or trauma, and ongoing wound care such as with diabetic ulcers can lead to longer hospitalization, reduced quality of life, and long-term consequences. Vacuum-assisted closure (VAC) units help the healing process by draining fluids through the use of negative pressure (a vacuum). This new unit would reduce the need to rent a unit, which in past use has cost the same in one year as simply purchasing a unit. This purchase then would ensure better patient access to this important level of wound care at a lower overall cost.

**2017-025 Maloney Dilators for Endoscopy** (Edwards, \$4,959)

**Equipment** to improve swallowing capability for patients

Patients can experience difficulty swallowing for a variety of reasons including tumour growth, a complication after surgery, or scarring due to acid reflux. Dilation is a non-surgical approach to help open up the esophagus to allow patients to swallow more easily, and is the first treatment option. Up to four patients per day could require this intervention in the Endoscopy Department, with occasional need for the unit in the Emergency Department. An additional unit will ensure continuous service since the two Maloney Dilators currently in use are nearing end of life.

**2017-026 Syringe Pump for the Anaesthesia Department** (Erickson, \$4,034.10)

**Equipment** for regulated drug delivery, especially during surgical procedures

Currently there are only three infusion pumps for 10 operating rooms and other departments in the Hospital. These pumps help regulate accurate delivery of anaesthesia during surgery, but also help with other areas of patient care including post-anaesthetic care and chronic pain management. The addition of a new pump will increase availability by 33%, increase efficiency, and provide overall better patient care.

**2017-029 Skull Base Instruments for Pituitary Gland Cancer Surgery** (Kelly, \$5,031.94)

**Instruments** used to remove cancer tumours from the pituitary gland

The pituitary gland is a pea-size gland located at the bottom of the brain. During cancer surgery, access is commonly through the nose, which requires long and delicate instruments. Currently, these instruments are shipped in on loan as needed. Having a set at the Hospital would reduce wait times for patients and eliminate costs associated with shipping them here.

**2017-030 Paediatric Bronchoscope** (Kelly, \$19,217.99)

**Equipment** for real-time imaging of respiratory system (airways and lungs) in children

Patients may have trouble breathing for a variety of reasons including trauma and foreign objects lodged in the airway. The bronchoscope provides real-time imaging to diagnose airway blockages and treatment planning. This unit is specially designed for use in a child's smaller airways.



**2017-032** Cystoscopy Instruments for Urology (Kelly, \$7,686.71)

**Equipment** to assist with cystoscopy or imaging of the urinary tract

Cystoscopy is a method of urinary tract imaging to look for kidney stones, cancerous tumours, or other abnormalities. The imaging tool requires various sheaths, stone baskets, and other instruments depending on the exact procedure. These instruments will help meet the needs of a growing number of procedures.

**2017-033** Laparoscopic Instrument Sets (x3) (Korol, \$102,495)

**Instruments** used during minimally invasive laparoscopic surgery

Laparoscopic surgery is a type of surgery that uses small incisions to insert instruments and a small video camera called a laparoscope. This approach is used for many different diagnostic and treatment procedures at the Hospital including appendicitis and cancer surgery. The technique usually requires less recovery time and reduces the risk of infection, among other advantages. These instruments (scissors, forceps, retractors, etc.) replace ageing instruments used in over 3,000 laparoscopic procedures per year.

5/8

**2017-036** Laparoscopes with Light Source (x4) (Korol, \$51,350)

**Equipment** to assist with minimally invasive laparoscopic surgery

These specialized cameras help surgeons see inside the body during laparoscopic surgery (please see 2017-033, above). This grant includes two 10mm and two 5mm cameras to replace ageing equipment.

**2017-037** Hip Retractor and Bookwalter Retractor Set (Everts, \$25,222)

**Equipment** used during hip and abdominal surgeries (Bookwalter)

Retractors keep skin and other tissues out of the way during surgery, give the surgeon a clear view and access to the disease/injury area. The hip retractor is used during hip replacements. The Bookwalter retractor is used for abdominal surgeries including bowel surgeries for cancer and other diseases.

**2017-038** Hysteroscopy Sets (x2) (Korol, \$34,097.87)

**Equipment** to assist with gynaecological surgeries

Hysteroscopy uses a video camera to examine the cervix, uterus, and fallopian tubes. This grant provides for two sets: one that is camera only, and one that includes a resectoscope, a device used to remove abnormal growths.



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**2017-040 Microchoice Drill, Saw, and Minor Microchoice Set** (Everts, \$64,166.17)

**Instruments** used during orthopaedic surgery

Orthopaedic surgeons use a wide range of saws, drills, and burs for a wide range of surgeries. All equipment must be sterilized between procedures, which can impact patient wait times and even reduce the number of procedures that can be completed in a day. These new instruments will reduce wait times and will extend the life of all instruments thanks to reduced wear and tear.

**2017-042 Stapilizer** (Everts, \$19,053.71)

**Equipment** to assist ACL surgery

Orthopaedic surgeons use the patient's own tendon during the repair of an anterior cruciate ligament (ACL) injury. The bottom of the graft is stapled into place – and accuracy is paramount. This new stapilizer is air-driven, so it increases accuracy and does not require any strength as previous ones did.

**2017-043 Dermatome Skin Grafting Equipment** (Everts, \$11,733.42)

**Equipment** used to harvest patient skin for grafting at injury site

Skin grafting is a remarkable procedure that allows plastic surgeons to remove skin from one area of the body and add it to an injured, burned, or diseased area of the body, sort of like a skin bandage. It reduces the risk of infection, helps the healing process, and reduces scarring in most cases. This dermatome equipment will replace a loaner set that is due for return.

**2017-045 Stretcher Chair for Video Fluoroscopic Swallow Studies** (Ryan-Cooper, Perri, Barrie, \$14,296.01)

**Equipment** to increase patient comfort and safety and decrease test time during swallow assessments

Swallowing disorders can lead to serious discomfort and diminished quality of life for patients. They have many causes including stroke, brain injury, cancers, cardiac disease, respiratory disease, and others. State-of-the-art imaging equipment called the video fluoroscope along with swallowing assessments can improve quality of life and reduce costs to the healthcare system. This new stretcher chair will allow more accurate assessments, make it easier to transport the patient, reduce assessment time, and increase safety with features such as manual quick release for emergency CPR.

## Regional Grants

**2017-039 Triple-Channel IV Pump – Fort Frances** (Morand, \$9,548.50)

**Equipment** for the chemotherapy program

La Verendrye Hospital in Fort Frances provides closer-to-home cancer care for its residents including chemotherapy. A new triple-channel IV pump designed specifically for chemotherapy use will update current equipment to ensure continued patient care.



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**2017-041 Wellness Chemotherapy Chair – Fort Frances (Lavallee, \$2,823.87)**

**Equipment** for the chemotherapy program

Chemotherapy patients often have to sit for hours, so comfort is a top priority. This specialized chair offers massage and heat settings to reduce the discomfort of long treatment sessions.

**2017-046 IV Pump, Pole, and Carries – Hearst (Mitron, \$4,370)**

**Equipment** for the chemotherapy program

This equipment for the chemotherapy program at Hôpital Notre-Dame Hospital will ensure timely treatments in the community for care that's closer to home.

7/8

**2017-047 iPads – Kenora (Fitzgerald, \$998.00)**

**Equipment** for the chemotherapy program

**2017-048 Vital Signs Monitor – Red Lake (Bishop, \$2,300)**

**Equipment** for the chemotherapy program

A new dedicated vital signs monitor will help staff examine patients before and during chemotherapy.

## **Additional Grants**

**Family CARE (Care Advancements Recommended by Employees) Grants (\$30,000)**

**Equipment** and other program enhancements identified by staff

Each year, the program provides up to \$60,000 to fund staff-generated projects with preference going to those projects that demonstrate the greatest patient need and benefit. These funds – \$30,000 contributed by the Volunteer Association and \$30,000 by the Health Sciences Foundation – come directly from our generous donors, many of whom designate their donations directly to the Family CARE Grant program.



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Research Projects (\$211,009)

**Research**

Funds directed specifically to revolutionary research at the Thunder Bay Regional Research Health Institute (TBRHRI).

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

**Support**

Funds support the Thunder Bay Breast Cancer Support Group; a proactive, non-medically aligned, survivor-directed, self-help group that shares information and provides emotional support for men and women at various stages of breast cancer.

