

**INVESTING IN
MEDICAL IMAGING,
DIAGNOSTIC
LABORATORY AND
PHARMACY AT
MACKENZIE HEALTH**



Mackenzie
Health
Foundation

THE ULTIMATE SUITS YOU



WE'RE CREATING THE ULTIMATE

Technology is a powerful enabler of exceptional care. It's changing the way we diagnose and treat patients across Mackenzie Health, improving accuracy, speeding up results, reducing risks and creating efficiencies that allow health care providers to focus on what matters most: providing the best possible care to our patients.

From state-of-the-art imaging technologies and fully automated diagnostic laboratories at Mackenzie Richmond Hill Hospital and Cortellucci Vaughan Hospital — Canada's first smart hospital — to the pharmacy of the future at the new Cortellucci Vaughan Hospital, Mackenzie Health is poised to become a community health leader.

We invite you to join us in creating the ultimate.

Every Mackenzie Health patient is unique. But no matter what brings you in the door, just about every health journey includes the same three vital touchstones: Medical Imaging, Laboratory and Pharmacy. Virtually every patient benefits from these three services, which is why they have undergone a major transformation across our two-hospital system to enable the leading-edge care our community needs and deserves.



MEDICAL IMAGING

The imaging departments at both Mackenzie Richmond Hill Hospital and Cortellucci Vaughan Hospital feature a full range of high-resolution imaging technologies and a first-in-Canada artificial intelligence (AI) system to securely store, analyze and digitally transmit clinical images and reports across the two sites. This state-of-the-art equipment enables Mackenzie Health's approximately 25 radiologists to diagnose diseases earlier and more accurately, and guide minimally-invasive treatments to get patients recovering faster and home sooner.



DIAGNOSTIC LABORATORY

When doctors order a laboratory test, the entire process — from the detailed request and specimen delivery, to analysis and results — is automated, digitized and available in real-time to the patient's entire health care team. Renovations to the Mackenzie Richmond Hill Hospital Diagnostic Laboratory are now underway, and the new Cortellucci Vaughan Hospital laboratory is custom designed to support fast and accurate diagnosis.



PHARMACY

The pharmacy of the future is housed at Cortellucci Vaughan Hospital and includes robots working alongside our skilled team of pharmacists and technicians. The pharmacy robots sort through the more than 1.5 million daily medication doses for patients at both hospitals, organizing them in the proper dosages and, after verification by a team member, ensuring they are efficiently and accurately dispensed to patients across the two sites.

“Toward our vision of becoming a world-class health organization, Mackenzie Health is investing in technology. We've designed new, state-of-the-art Medical Imaging and Laboratory departments and Pharmacy at Cortellucci Vaughan Hospital, and implemented new technologies at Mackenzie Richmond Hill Hospital that are transforming the way we deliver care and raise the best practice bar across the entire community health sector.”

— AMIR SOHEILI, PROGRAM DIRECTOR, CLINICAL SUPPORT SERVICES

THE PICTURE OF HEALTH

ADVANCED MEDICAL IMAGING AT MACKENZIE HEALTH

Mackenzie Health features two full-service, high-tech imaging departments: one at Mackenzie Richmond Hill Hospital and the other at Cortellucci Vaughan Hospital. As the number of patients has grown, so too has the demand for medical imaging services at Mackenzie Richmond Hill Hospital — by 17 per cent in the last three years alone.

The 30,000-square-foot Medical Imaging department on the first floor of Cortellucci Vaughan Hospital will serve an additional 19,000 patients a year, representing 24,000 imaging exams.

FASTER, ACCURATE DIAGNOSTICS

Cortellucci Vaughan Hospital's Medical Imaging department includes two state-of-the-art, high-definition computerized tomography (CT) scanners and two magnetic resonance imaging (MRI) scanners. Our experts diagnose injuries and diseases like cancer earlier and with pinpoint accuracy, and deliver the information our patients and health providers need to make the best, personalized treatment decisions.

What's more, thanks to an innovative partnership with Philips Healthcare, every imaging technology across Mackenzie Health will be regularly updated to harness the latest advances and meet the changing needs of our growing community.

FIRST-IN-CANADA TECHNOLOGY

We have introduced an upgraded and expanded Picture Archiving and Communication System (PACS) at Mackenzie Richmond Hill Hospital to securely store and share electronic health images and reports and support seamless and collaborative care across the hospital and, eventually, both Mackenzie Richmond Hill Hospital and Cortellucci Vaughan Hospital. The first-in-Canada system includes an artificial intelligence component, shown through extensive testing to successfully fast-track and improve diagnosis. When a patient receives a CT scan, for example, PACS sorts through the hundreds of image slices and flag those of potential concern for the radiologist to review.

WHERE IMAGING AND SURGERY MEET

Already a Canadian community hospital leader in image-guided minimally-invasive surgery, Mackenzie Health plans to grow the program significantly now that Cortellucci Vaughan Hospital is open. The new imaging department includes two interventional radiology suites with one more available at Mackenzie Richmond Hill Hospital. Mackenzie Health's interventional radiologists use imaging technologies to safely and accurately guide procedures such as the insertion of a stent to open a blocked artery or an embolization to stop a major internal bleed.

MEDICAL IMAGING AT CORTELLUCCI VAUGHAN HOSPITAL

All of Cortellucci Vaughan Hospital's imaging services — MRI, CT, ultrasound, nuclear medicine, radiography and fluoroscopy — are conveniently located on the first floor, with the exception of interventional radiology next to the second floor operating rooms.

EASY ACCESS

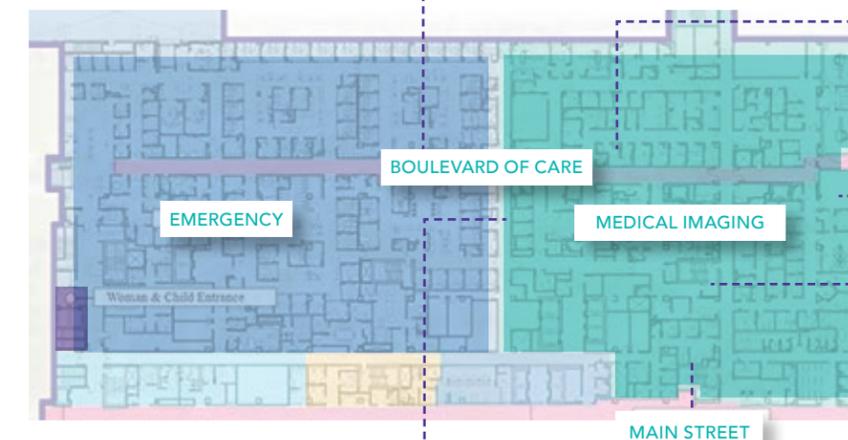
Patients receiving care in the Magna Emergency can easily access imaging services through the Lorenzo and Melina De Meneghi Boulevard of Care, which also links to the inpatient elevator bank.

PORTABLE X-RAYS AND ULTRASOUNDS

Portable X-rays and ultrasound units are also available throughout the hospital, and the operating room includes two image-guided interventional radiology suites.

TELEMEDICINE

Telemedicine uses technology to allow the Mackenzie Health team to consult and collaborate on clinical health care at a distance. Telemedicine capabilities are built into each procedure room, so professionals at other locations can benefit from Mackenzie Health's cutting-edge technologies and expertise.



FUTURE GROWTH

Designed with future growth in mind, the unit includes room for an additional MRI and CT when needed.

SEPARATE ENTRANCES

Inpatients and outpatients benefit from separate entrances, which will help maintain patient privacy and keep infections at bay.

TWO WAITING AREAS

Patients transition through two waiting areas, the second of which is private and only accessible by patients who are gowned and ready to begin their procedure.

“Technology is changing our ability to care for patients in remarkable and hugely beneficial ways. In 10 years, what we do now in operating rooms will be done in an intervention suite because the lines between imaging and surgery are blurring. And the good news is these advances allow doctors to focus on the patient and let the technology enable care.”

— DR. PETER LAW, CHIEF AND MEDICAL DIRECTOR, MEDICAL IMAGING



FASTER FOR PATIENTS, SAFER FOR STAFF

MACKENZIE HEALTH'S STATE-OF-THE-ART DIAGNOSTIC LABORATORIES

A significant number of clinical decisions are based on laboratory testing. Hospital testing that is fast, accurate and safe can quite literally be a matter of life or death. A renovated and expanded Diagnostic Laboratory at

Mackenzie Richmond Hill Hospital and a new lab on the third floor of Cortellucci Vaughan Hospital will help Mackenzie Health continue to deliver exceptional care with unprecedented levels of efficiency.

380+ diagnostic tests will be performed each day at Mackenzie Richmond Hill Hospital and Cortellucci Vaughan Hospital.

“As automation technologies change, our patients will benefit from faster and more accurate diagnosis. Digital pathology, for example, will allow us to introduce faster turnaround, from test requests to results, while also supporting the ability of Mackenzie Health’s pathologists to consult on complex cases.”

— DR. JOHN DOUCET, MEDICAL DIRECTOR, LABORATORY SERVICES



SEAMLESS AUTOMATION

From start to finish, the entire diagnostic testing process at both hospitals features fully automated systems and a track system for the rapid and seamless movement of clinical samples from one analysis machine to another. In the renovated and expanded Diagnostic Laboratory at Mackenzie Richmond Hill Hospital, Mackenzie Health administrators and front-line staff test and refine workflow practices to ensure patients and clinicians at both hospitals fully realize the benefits of the new automation technologies: faster analysis that puts accurate results into doctors' hands sooner.

The completion of the automated lab represents the first major milestone towards incorporating smart design at Mackenzie Richmond Hill Hospital.



DIGITAL SOLUTIONS

Specimen slides and microscopes are the analogue tools of the diagnostic trade, but that doesn't mean clinical testing can't go digital. While the paper trail isn't likely to ever disappear completely, a majority of the testing processes at Mackenzie Health are trackable online through the Picture Archiving and Communication System linked to each patient's electronic medical record. Health care providers across both hospitals are able to request tests, see the results and even consult with the lab pathologist online and in real time — even in the midst of surgery, when timely, accurate results could save a life.



RUSH DELIVERY...BY TUBE

Transporting sensitive clinical specimens throughout hospital hallways can prove time-consuming and risky. Not at Cortellucci Vaughan Hospital, where some common samples — primarily blood and urine — are safely and efficiently transported to and from their destinations via a hospital-wide pneumatic tube system. Receiving samples promptly means Mackenzie Health's diagnosticians are able to analyze them sooner and get the results our health providers need faster.



THE NEED FOR SPEED AND ACCURACY

THE PHARMACY OF THE FUTURE AT MACKENZIE HEALTH

Each day, more than 650 patients will be in the care of the Mackenzie Health team at both hospitals and each of those patients will take, on average, 13 different medications during their stay. Ensuring the safety and accuracy of the process across our two-hospital model are more than 100 pharmacists and pharmacy technicians.

Behind the scenes, technology is completely changing the way medications are ordered, reviewed and dispensed from the main Pharmacy at Cortellucci Vaughan Hospital and via the satellite Pharmacy at Mackenzie Richmond Hill Hospital.

MORE THAN 650 PATIENTS will be served each day at Mackenzie Richmond Hill Hospital and Cortellucci Vaughan Hospital.

“Combining the tremendous knowledge and skills of our pharmacists with the efficiency and precision of technology, high-quality care will be further enhanced to better serve our patients and create a healthier community.”

— SUSAN SIMAO, MANAGER, PHARMACY SERVICES



ONE CENTRAL HUB, ONE SATELLITE

The new 12,000-square-foot Pharmacy on the third floor of Cortellucci Vaughan Hospital serves as the central dispensary for both Mackenzie Richmond Hill Hospital and Cortellucci Vaughan Hospital. Scheduled patient medications are transported daily from the Pharmacy at Cortellucci Vaughan Hospital to Mackenzie Richmond Hill Hospital, along with other hospital items, via delivery vehicle. The current Mackenzie Richmond Hill Hospital Pharmacy serves as a satellite location supporting patients’ emergency needs.



MEET THE PHARMACY ROBOT

For years, tasks like counting pills and measuring liquid medications and putting them in packages or bottles were the purview of pharmacists. All that has changed at Cortellucci Vaughan Hospital, where pharmacy robots complement our skilled team of pharmacists and technicians. The robotic technology manages the initial counting, measuring and packaging processes, saving the team time and reducing the risk of error. Each order is then approved by the pharmacy team before being transported to the patient floors and to Mackenzie Richmond Hill Hospital.



MEDICATION DELIVERY...STAT

When medication is urgently required to help manage pain or infection, the Cortellucci Vaughan Hospital pharmacy team has a new rapid delivery option — sending the doses directly to the inpatient unit via the same tube system used by the Diagnostic Laboratory. Patients receive the drug interventions they need faster, so they can recover and get home sooner.



A DIGITAL TRAIL

Every step of every patient’s diagnosis and treatment, including prescriptions and drug histories, reactions and interactions, are immediately recorded in the patient’s electronic medical record so both the patient and their health care team have the up-to-date information they need to make care decisions. The electronic record also serves as a built-in warning system, alerting the pharmacy team to potential health issues involving, for example, changes in recommended dosages or potential drug-drug interactions.

Patients take on average

13
DIFFERENT
MEDICATIONS

in hospital.



STRONGER TOGETHER

CREATING AN INTEGRATED, DIGITAL CLINICAL SUPPORT SYSTEM

Building Canada's first smart hospital doesn't just mean investing in high-tech imaging technologies, an automated laboratory system or a pharmacy robot. Mackenzie Health is committed to creating a truly integrated smart hospital system with technologies that speak to each other and across the two hospital sites to maximize information exchange and establish Mackenzie Health among the highest performing community hospitals in Canada for clinician communication, patient safety and outcomes.

At the heart of Medical Imaging, Diagnostic Laboratory and Pharmacy is Mackenzie Health's electronic medical record (EMR) system, launched in 2017 at Mackenzie Richmond Hill Hospital to give both patients and their health care providers access to every step of the patient health journey anytime, anywhere — including imaging, diagnostic testing and medication.

With these pioneering technologies working together via the EMR, we have the power to diagnose illness earlier and more accurately, create personalized treatment plans and foster efficiencies that will allow us to continuously advance and provide even more of our community members with the exceptional care they've been waiting for.

SAFE AND EFFICIENT WORLD-CLASS CARE

In 2018, Mackenzie Health was recognized as the first Canadian acute care hospital to receive Healthcare Information and Management Systems Society's Electronic Medical Record Adoption Model Stage 7 designation. From prevention of medication administration errors to ensuring complete health records are available to all clinicians, the designation signifies that Mackenzie Health has implemented a paperless environment. It also recognizes Mackenzie Health's successful adoption of digital health solutions that help deliver on our promise of world-class, safe and efficient care for our growing community.



HELP US CREATE THE ULTIMATE

Mackenzie Health Foundation is spearheading the \$250-million Ultimate campaign — the largest fundraising drive led by a community hospital in Canada — to help purchase equipment for Cortellucci Vaughan Hospital and enhance care at Mackenzie Richmond Hill Hospital. Our goal is now within reach. Help us cross the finish line. Your leadership investment will help create high-tech imaging, laboratory and pharmacy services that will transform the way we diagnose and treat patients.

If you have any questions about Mackenzie Health's vision for Medical Imaging, Diagnostic Laboratory and Pharmacy, the Ultimate campaign or to discuss this opportunity in more detail, please contact:

Mackenzie Health Foundation
303-955 Major Mackenzie Dr. W.
Vaughan, ON, L6A 4P9

T 905-883-2032

E foundation@mackenziehealth.ca

theultimatesuitsyou.ca



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303-955 Major Mackenzie Drive West
Vaughan, Ontario
L6A 4P9

theultimatesuitsyou.ca

Charitable Business Number: 11930 6215 RR0001