



EMPOWERING THE ULTIMATE

echnology is a powerful enabler of exceptional care. It's changing the way we diagnose and treat patients: improving accuracy, speeding up results, reducing risks and creating efficiencies. That way, health care providers can focus on what matters most – providing the best possible care for our patients.

From state-of-the-art imaging technologies to fully automated diagnostic laboratories to the pharmacy of the future, Mackenzie Health is leading the way for better health in our community.

Maintaining these important assets means continuously updating critical technology. With your support today, we'll always be ahead of the innovation curve.

MEDICAL IMAGING, DIAGNOSTIC LABORATORY AND PHARMACY

very 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 are a focal point for our ongoing efforts to drive better patient outcomes by leveraging the latest smart technologies.



MEDICAL IMAGING

The imaging departments at both Mackenzie Richmond Hill Hospital and Cortellucci Vaughan Hospital feature a full range of highresolution 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. Mackenzie Richmond Hill Hospital Diagnostic Laboratory and the Cortellucci Vaughan Hospital laboratory 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.

Did you know provincial funding only covers our capital and operating costs? That means all the leading-edge medical tools we need to serve and support our community are purchased through donations from people like you. Help us stay ahead of the smart-tech curve by making an investment in the ultimate in care — for today and tomorrow.

THE PICTURE OF HEALTH

ADVANCED MEDICAL IMAGING AT MACKENZIE HEALTH

ackenzie Health features two full-service, hightech 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 use them to 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 is regularly updated to harness the latest advances and meet the changing needs of our growing community.

FIRST-IN-CANADA TECHNOLOGY

Our upgraded and expanded Picture Archiving and Communication System (PACS) securely stores and shares electronic health images and reports while enabling and supporting seamless and collaborative care across both hospital sites. This 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 flags 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 is working to grow the program significantly. Our 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.

SPOTLIGHT ON MEDICAL IMAGING AT CORTELLUCCI VAUGHAN HOSPITAL

EASY ACCESS ·----

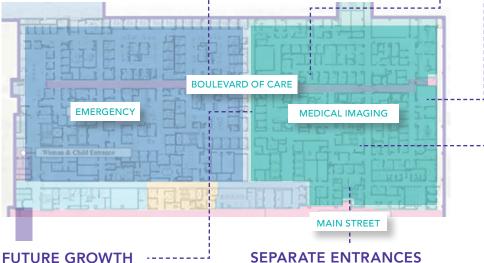
Patients receiving care in the Magna Emergency can easily access imaging services through the Lorenzo and Melina De Meneghi Boulevard of Care, which also links to the inpatient elevator bank.

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.



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

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."



FASTER FOR PATIENTS, SAFER FOR STAFF

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

ospital testing that is fast, accurate and safe can quite literally be a matter of life or death. Diagnostic laboratories at Mackenzie Richmond Hill Hospital and Cortellucci

Vaughan Hospital help Mackenzie Health continue to deliver exceptional care with unprecedented levels of efficiency.

380+

diagnostic tests are performed each day at Mackenzie Richmond Hill Hospital and Cortellucci Vaughan Hospital. "As automation technologies change, our patients are benefitting from faster and more accurate diagnosis. Digital pathology, for example, allows 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.



DIGITAL SOLUTIONS

Specimen slides and microscopes are the analog 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 can request tests, see the results and consult with the lab pathologist online and in real-time — even during 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

ach day, more than 650 patients are 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 network 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.



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

Patients take on average



in hospital



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 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 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, is 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 records 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.



STRONGER TOGETHER

CREATING AN INTEGRATED, DIGITAL CLINICAL SUPPORT SYSTEM

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. EMR gives 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 provide even more of our community members with the exceptional care they need and deserve.

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 STAY ON THE LEADING EDGE

Mackenzie Health has ushered in a new era of leading-edge health care for western York Region, driven by the power of smart technology and the promise of better patient outcomes.

Join us as we work to ensure our powerful new two-hospital health care network — and the growing number of medical experts who call it home — have the advanced technology they need to save lives, now and in the future.



THE ULTIMATE SUITS YOU

If you would like to learn more about how you can help bring Mackenzie Health's vision for advanced imaging, laboratory and pharmacy services to life, please contact: Mackenzie Health Foundation 303-955 Major Mackenzie Dr. W. Vaughan, ON, L6A 4P9 **T** 905-883-2032 **E** foundation@mackenziehealth.ca **MackenzieHealthFoundation.ca**

Charitable Business Number: 11930 6215 RR0001



THE ULTIMATE SUITS YOU

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

MackenzieHealthFoundation.ca

Charitable Business Number: 11930 6215 RR0001