



Inspired by research.
Driven by compassion.

Designing the Future of Health Care

OTTAWA HOSPITAL RESEARCH INSTITUTE
STRATEGIC PLAN

Affiliated with  uOttawa

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We are very pleased to present the Ottawa Hospital Research Institute (OHRI) Strategic Plan, titled *Designing the Future of Health Care*. This plan is the result of significant time, thought and effort by many stakeholders, squarely focused on realizing our shared vision — **to give our patients and their loved ones new hope through research that is making tomorrow's health care possible today.**

As the research arm of The Ottawa Hospital, OHRI is committed to research that is focused on and inspired by patients. Our new Strategic Plan continues to put patients at the heart of everything we do, with two overarching Strategic Research Priorities designed to accelerate the development of new treatments and better health care. Our two Strategic Research Priorities, *Breakthroughs by Design* and *Practice-Changing Research*, leverage our unique success in advancing discoveries from the bench to the bedside and changing clinical practice through rigorous clinical trials, knowledge translation and implementation science.

By restructuring our Scientific Programs and fostering new Research Communities, we will strengthen the full spectrum of health research, from basic discovery to clinical research to implementation. We will also enhance collaboration, enable greater engagement of clinicians in research and increase alignment with Clinical Departments. We believe this approach will spur exciting new synergies and innovations that will deliver more progressive treatment options and enhance the lives of our patients.

Our Strategic Plan also reinforces our commitment to enhancing the experience of students and postdoctoral fellows. We will also strategically recruit new talent and strengthen our core research facilities and resources, all while ensuring financial sustainability.

In line with our fundamental social responsibilities, our plan also includes significant emphasis on Equity, Diversity and Inclusion (EDI), Truth and Reconciliation and planetary health.

We will also seek out strategic partnerships to strengthen Ottawa's position as a major hub for bioscience and health-care innovation, leveraging our strong relationship with the University of Ottawa and other important stakeholders.

With more than 2,000 researchers, 700 active clinical trials, 60 research laboratories and \$120 million in annual research funding, The Ottawa Hospital is already one of the top hospitals in Canada for research. Realizing this Strategic Plan will take us to the next level and enhance our reputation as a leading global force in translational research.

Moving this plan forward will require strong leadership and collaboration, organizational service excellence and significant investment. As The Ottawa Hospital embarks on its state-of-the-art New Campus Development to revolutionize patient care, a robust Strategic Plan for research could not be more important.

We look forward to this exciting journey to design the future of health care and bring life-changing innovations to our patients!



Katie Lafferty

Chair, Board of Directors, Ottawa Hospital Research Institute



Dr. Duncan Stewart

CEO and Scientific Director, Ottawa Hospital Research Institute
Executive Vice-President, Research, The Ottawa Hospital
Professor of Medicine, University of Ottawa



Our new Strategic Plan continues to put patients at the heart of everything we do.

The Ottawa Hospital Research Institute (OHRI) is the research arm of The Ottawa Hospital and an affiliated institute of the University of Ottawa. With more than 2,000 researchers, 700 active clinical trials, 60 laboratories and \$120 million in annual funding, OHRI is one of the top hospital-based research institutes in Canada.

OHRI encompasses the full spectrum of health research, including discovery and clinical research, knowledge translation and implementation research, and population health. Our researchers have been highly successful in developing innovative new therapeutics and in performing pivotal trials that change the practice of medicine internationally. This is facilitated by a culture of collaboration between basic scientists and clinical researchers, supported by expert methodologists, as well as the availability of critical shared core facilities and resources, such as the Biotherapeutics Manufacturing Centre and the Ottawa Methods Centre.

In October 2017, OHRI initiated a two-phase strategic planning process. The first phase, completed in 2019, resulted in the development of a **Corporate Strategic Plan for 2020–2025**, designed to enable a robust, nurturing and sustainable research enterprise.

The second phase, which was delayed due to COVID-19, focused on refreshing the Institute's Strategic Research Priorities and Scientific Programs. The two phases have now been integrated into an overall OHRI Strategic Plan, which will sit within The Ottawa Hospital's Strategic Plan.

OHRI's Strategic Plan, titled *Designing the Future of Health Care*, includes two overarching Strategic Research Priorities: *Breakthroughs by Design* and *Practice-Changing Research*. While previously, OHRI's Strategic Research Priorities were more notional or aspirational, they will now have leadership and will be invested with essential core resources to move the Priorities forward and enable the translation of research into benefits for patients.

OHRI's Strategic Plan also includes a significant restructuring of Scientific Programs in order to break down silos, enhance collaboration, align better with the activities of Clinical Departments, and enable greater representation and engagement of clinical researchers within OHRI. The new Scientific Programs (Acute Care Research; Cancer Research; Inflammation and Chronic Disease; Methodological and Implementation Research; Neuroscience; and Regenerative Medicine) will each be able to advance the full spectrum of research and provide a home for disease-themed researchers.

The plan also incorporates a series of Research Strategies and Enablers with specific objectives in areas such as recruitment, infrastructure renewal, patient

engagement, equity, open science, partnerships, commercialization and the integration of research into patient care.

Realizing this plan will position The Ottawa Hospital to be a leading force globally in translational research, leveraging our unique success in moving discoveries from the bench to the bedside and changing clinical practice through rigorous clinical trials, knowledge translation and implementation science. It will also position our city as a major hub for bioscience and health-care innovation, in partnership with the University of Ottawa and others.

Moving this plan forward will require leadership, collaboration and significant investment. As The Ottawa Hospital embarks on construction of a state-of-the-art new campus that will revolutionize patient care, a robust Strategic Plan for research could not be more important.



I run, I bike, I canoe. I do all the things I could do before. I feel like I could do anything.

Heather Harris (shown with daughter) participated in a groundbreaking clinical trial of stem cell transplantation for multiple sclerosis at The Ottawa Hospital



SECTION 1



VISION & STRATEGIC RESEARCH PRIORITIES



Patient-oriented research is about researching what patients want, with patients. I've seen OHRI's commitment to patient-oriented research first-hand and I am looking forward to benefiting from it next time I need care.

Maxime Lê is a patient advisor at The Ottawa Hospital who has partnered with researchers on several studies.





VISION

OHRI's Vision is:

To give our patients and their loved ones new hope through research that is making tomorrow's health care possible today.

This vision expresses our commitment to research that is focused on patients and inspired by patients. It draws on the compassion and dedication we feel each day, knowing that every question we answer and every problem we solve could eventually impact many people, including our loved ones. Our researchers, trainees and staff are committed to translating our results into benefits for patients and society and making tomorrow's health care possible today.

OHRI's vision is closely aligned with The Ottawa Hospital's vision, which is: **"To provide each patient with the world-class care, exceptional service and compassion we would want for our loved ones."**



As a clinician-scientist at The Ottawa Hospital, I have access to the best support system in the country for designing new therapies and clinical trials, and even manufacturing those therapies onsite. This means our patients get access to innovative treatments first.

Dr. Natasha Kekre, Scientist and Hematologist



STRATEGIC RESEARCH PRIORITIES

OHRI's new Strategic Plan includes two overarching Strategic Research Priorities: *Breakthroughs by Design* and *Practice-Changing Research*. These are both highly translational priorities, leveraging OHRI's unique success in moving discoveries from the bench to the bedside and changing clinical practice through rigorous clinical trials, knowledge translation and implementation science.

While previously, OHRI's Strategic Research Priorities were more notional or aspirational, in the new Strategic Plan these Priorities will have leaders — outstanding scientists who will work closely with Scientific Program Directors to move the Priorities forward, foster cross-Program collaboration and enable the translation of research into benefits for patients.

Each Priority will also be responsible for critical core resources that are essential for their translational missions, specifically the Biotherapeutics Manufacturing Centre and the Ottawa Methods Centre. Moving these key core facilities out of individual Programs will ensure equitable access across the Institute.



The goal of *Breakthroughs by Design* (BBD) is to understand the fundamental biology of health and disease and use this knowledge to develop revolutionary new approaches for the prevention, diagnosis and treatment of disease. The Ottawa Hospital is already a world-leader in this kind of bench-to-bedside translational research and we will build on this success by:

- Continuing to support, nurture and recruit top scientists in key research domains with high translational potential.
- Investing in cutting-edge research facilities and equipment for performing discovery research into the molecular and systems biology networks that control cells and tissues.
- Enhancing the 'Excelsior' program, in collaboration with the *Practice-Changing Research* Priority, to guide researchers through every step of the process of translating a discovery into a new therapy, from preclinical efficacy and toxicity studies to preparation of a regulatory submission.
- Expanding the Biotherapeutics Manufacturing Centre (BMC), which produces clinical-grade stem cell, vaccine, gene therapy and cancer-fighting viral products for clinical trials here in Ottawa and all around the world. **This core facility will now be embedded in, and managed by, this Research Priority, with equitable access across all Scientific Programs.**
- Fostering a culture of collaboration between laboratory and clinical scientists.

The BBD priority replaces the current *Regenerative and Biological Therapeutics* Priority. With a broader scope, *Breakthroughs by Design* will support translational research in all areas of health and disease, including cancer, neuroscience, infectious diseases, cardiovascular diseases and much more.



Basic science is hugely valuable — without it there would be no new therapies. But if you can also collaborate with clinicians to turn your research into new treatments, that's even better.



Dr. Bill Stanford,
Senior Scientist,
Regenerative Medicine



The goal of *Practice-Changing Research* (PCR) is to redefine the way patient care is practiced and managed not only at The Ottawa Hospital, but around the world. This often begins by identifying the pivotal questions that are most important to clinicians and patients and then designing and performing definitive trials to provide the needed evidence to inform practice.

We will continue to lead the world in *Practice-Changing Research* by supporting people and infrastructure to enable research such as:

- Comparing the safety and efficacy of commonly used treatments.
- Establishing the effectiveness of emerging therapies.
- Studying better ways to prevent, diagnose and manage diseases.
- Developing better ways to deliver health care, especially to disadvantaged or vulnerable populations.
- Using implementation science to accelerate the integration/translation of research into practice and policy.
- Translating discoveries into novel clinical therapies through the 'Excellerator' program (in partnership with the *Breakthroughs by Design* Priority).
- Leveraging artificial intelligence and machine learning to improve diagnosis and treatment.

The Ottawa Hospital is a world leader in *Practice-Changing Research* thanks to a long-standing focus across Clinical Departments, with support from our Ottawa Methods Centre **which will now be embedded in, and managed by this Research Priority with equitable access across all Scientific Programs.**

While these Priorities are quite distinct, there are at least two nodes of intersection that require the Priorities to operate in tandem. The first is in bench-

to-bedside translation of basic science discovery which is catalyzed by BBD, often using the BMC to produce clinical grade therapeutic products, but requires the support of PCR in navigating the challenging clinical trial and regulatory landscape. Another example is big data and artificial intelligence which span both BBD and PCR and share common expertise, tools and infrastructure. By linking bioinformatics researchers from both Priorities, we can create a greater critical mass of expertise and be more efficient in use of infrastructure.



As a health economist, I see huge opportunities to improve value and efficiency in health care. I love being able to bring this perspective to many of our research projects and resource allocation decisions at The Ottawa Hospital.



*Dr. Kednapa Thavorn,
Senior Scientist and
Scientific Lead for
Health Economics at
The Ottawa Hospital's
Ottawa Methods Centre*

SECTION 2



SCIENTIFIC PROGRAMS & RESEARCH COMMUNITIES



This is the greatest teamwork I have ever seen in my life.

Dr. Taha Azad and many other trainees adapted their research to fight the COVID-19 pandemic. Dr. Azad received The Ottawa Hospital's Worton Researcher in Training Award in 2022 for his outstanding work.



All Scientists and Investigators at OHRI are currently organized into five Scientific Programs, each under the leadership of a Scientific Program Director. While all of the Scientific Programs have fostered exceptional research, the Clinical Epidemiology Program has grown far beyond the others in size and is now widely thought of as OHRI's primary program for clinical and implementation research, as well as the home of the Ottawa Methods Centre.

The four other Programs (Cancer Therapeutics; Chronic Disease; Neuroscience; and Regenerative Medicine) have excelled in basic science and translational research and have pockets of excellence in clinical research. However, they tend to be perceived as primarily basic science programs. This perception of basic versus clinical research programs has limited the opportunity for interactions between basic and clinical researchers, which is a critical element to fostering translational research.

In OHRI's new Strategic Plan, the Clinical Epidemiology Program's excellence in clinical research will be spread across all the Programs to enhance collaboration and translation. A core group of researchers from Clinical Epidemiology will form a new Methodological and Implementation Research Program, which will also include data science, artificial intelligence and quality research. Two new Programs will be created, specifically Acute Care Research, and Inflammation and Chronic Disease, which will house some of most successful clinical researchers who are currently in Clinical Epidemiology. Smaller adjustments will be made to existing Programs such as Cancer Research, Neuroscience and Regenerative Medicine to better align with appropriate disease themes, research approaches or clinical specialties.



The learning environment at OHRI is truly unique, especially for trainees looking to collaborate across the spectrum of basic, clinical and translational research. The senior leadership is also committed to listening to trainees and enhancing their training environment.

Dr. Allison Tschner, former postdoctoral fellow and member of OHRI's Trainee Committee



SCIENTIFIC PROGRAMS & RESEARCH COMMUNITIES

As indicated in **Figure 1**, all of The Ottawa Hospital's Clinical Departments will have a home in the new Scientific Program structure, with flexibility to allow individual researchers to determine where they fit best (especially for crosscutting disciplines).

A key feature of the Strategic Plan is that Program Directors will be given a new mandate to identify and foster Research Communities dedicated to advancing research within certain disease areas, clinical domains or methodologies. These Research Communities will build on existing OHRI centres and research groups (e.g. Kidney Research Centre, Parkinson Research Consortium, Thrombosis Research Group, Centre for Implementation Research, Epigenetics) as well as building new groupings based around areas such as artificial intelligence, educational research, allied health research, etc. These Communities are expected to enhance engagement with Clinical Departments, Divisions and investigators, and could include researchers from other institutions and patient/family representatives.

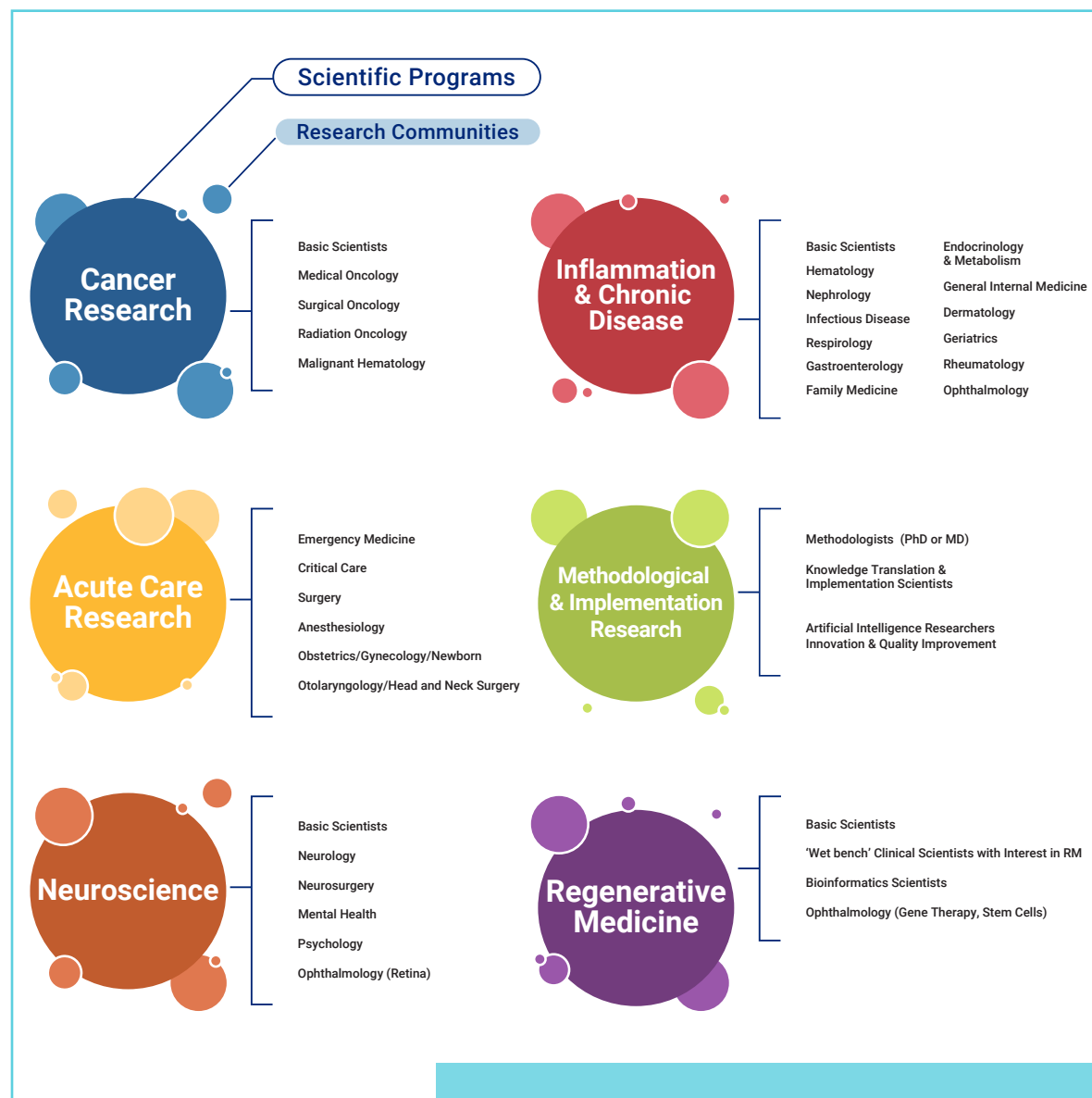


Figure 1 • OHRI's new Scientific Program structure, highlighting how Clinical Departments and Divisions will fit into OHRI Programs. Some Clinical Departments, such as Radiology and Pathology & Laboratory Medicine, would be cross-cutting, and members of those departments could choose the most appropriate OHRI program. Allied health research and educational research would also be cross-cutting.

SCIENTIFIC PROGRAMS & RESEARCH COMMUNITIES

As indicated in **Figure 2**, OHRI's Strategic Research Priorities, Scientific Programs and Research Communities will work together to foster collaboration, translation and patient-focused research.

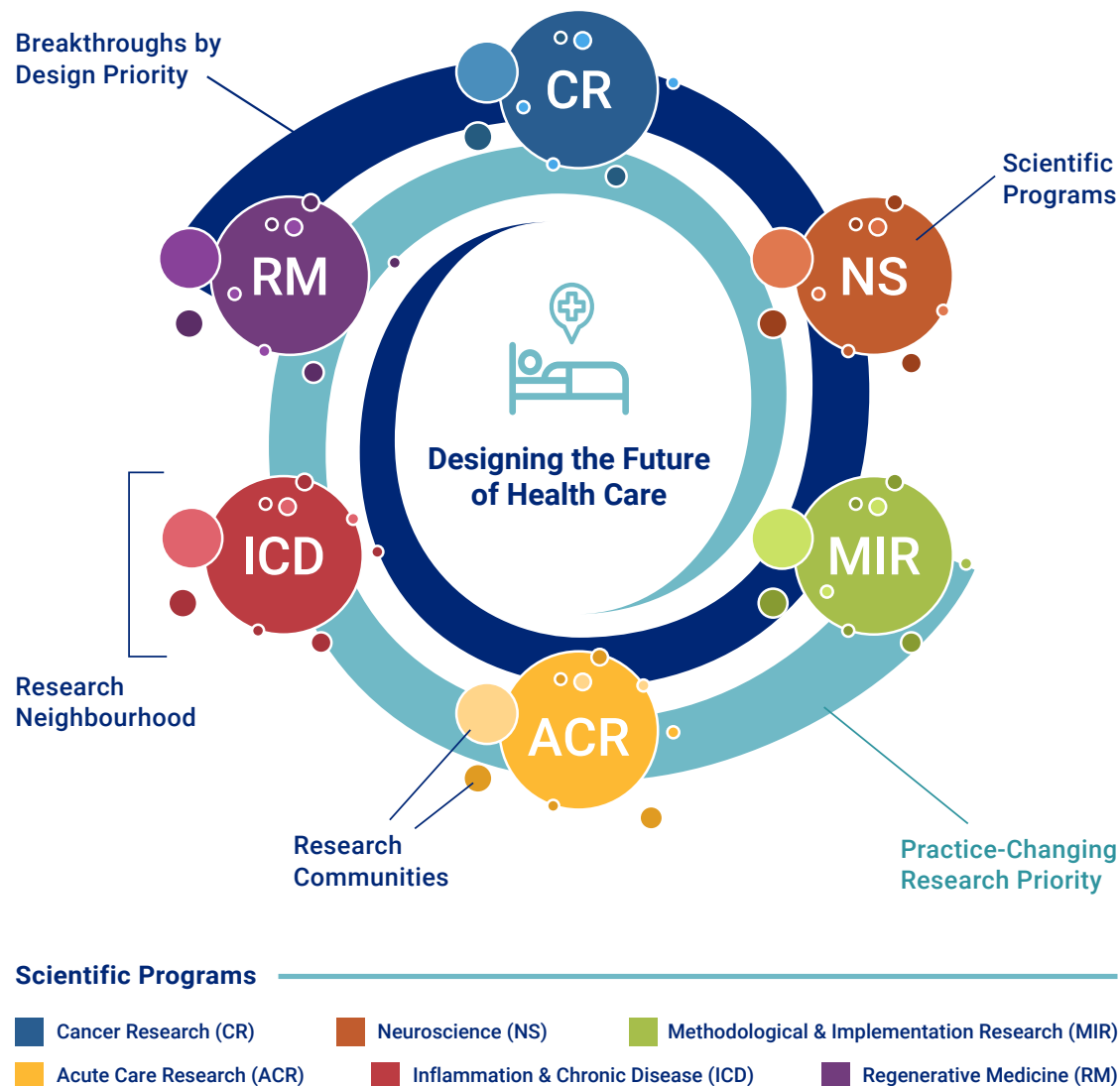


Figure 2 • Model showing how Strategic Research Priorities, Scientific Programs and Research Communities could work together to foster collaboration, translation and patient-focused research.

SECTION 3



RESEARCH STRATEGIES



OHRI is committed to enhancing Equity, Diversity and Inclusion and helping to drive deeper cultural change within the research ecosystem.

Dr. Manish Sood, Senior Scientist, Physician and Co-Chair, OHRI's Equity, Diversity and Inclusion Council



OHRI's Strategic Plan includes three Research Strategies that focus on 3 Is: *Invest*, *Integrate* and *Innovate through Partnership*. These strategies apply across all the Scientific Programs and Strategic Research Priorities.



I'm constantly blown away by the innovative research being done at The Ottawa Hospital and the success that many of our scientists have had with commercialization and startup companies. It is really rewarding to be able to contribute to this success.

Leah Labib is a Technology Transfer Officer at OHRI and organizer of the Elevator Pitch competition



RESEARCH STRATEGY 1 (INVEST): Strategically invest in research that will have the greatest impact on health

This strategy focuses on ensuring the financial sustainability of research at The Ottawa Hospital by generating new revenues and making strategic research investments that will have the greatest impact on health.

Objectives include:

- Make strategic investments and decisions aligned with the refreshed Strategic Research Priorities, including recruitment of key scientific positions, keeping principles of Equity, Diversity and Inclusion (EDI) at the forefront.
- Implement and foster a renewed Scientific Program structure, including recruitment or appointment of scientific leaders to fill new positions related to program reorganization.
- Continue implementation of a new framework for inspiring and managing philanthropic gifts, with a focus on an education and engagement strategy with researchers.
- Collaborate with the University of Ottawa to leverage research opportunities and maximize mutual benefit from shared resources.
- Implement a new commercialization framework and strategy.
- Develop a proactive, focused and strategic approach to business development focused on major core resources and facilities.



RESEARCH STRATEGY 2 (INTEGRATE): *Accelerate the integration of research into patient care*

This strategy focuses on fostering collaboration and accelerating the integration of research into clinical care for the benefit of patients. The new Research Communities will be a key vehicle for advancing this Strategy.

Objectives include:

- Develop mechanisms to foster collaboration between different disciplines, including basic and clinical researchers.
- Translate advances in biomedical research into better approaches for diagnosis, prevention and treatment of disease to improve patient and population health and help ensure a sustainable health system. This will be done through patient and clinician engagement, a focus on the science of implementation and enhanced implementation research, and using best practices in knowledge translation.
- Continue to implement and support the Office for Patient Engagement in Research Activities (OPERA) to further implement and foster patient engagement in our research activities and governance.
- Conduct a Clinical Research Review with TOH in collaboration with Clinical Department Heads to identify further strategies and measures to enhance and facilitate clinical research.



RESEARCH STRATEGY 3 (INNOVATE THROUGH PARTNERSHIP): *Make The Ottawa Hospital a leading health research and innovation hub by creating and nurturing strategic partnerships*

This strategy focuses on attracting and nurturing strategic partners to join The Ottawa Hospital as a leading hub for health research in Canada and around the world.

Objectives include:

- Build on continued organizational alignment and operational integration with the Hospital and the Quality and Innovation program.
- Continue to strengthen the relationship with the Foundation by further alignment on governance, communications, collaborative action and accountability.
- Implement the action plan arising from the University-Hospital Health Research Network of Ottawa agreement.
- Leverage the opportunity of a new, state-of-the-art hospital campus, and renewal of existing campuses, to promote broader regional approaches or the creation of 'research hubs' with other strategic partners across multiple sectors.

SECTION 4



RESEARCH ENABLERS



The Ottawa Hospital and OHRI have wholeheartedly committed to creating a culture of belonging and cultural safety for Indigenous Peoples and all the people and patients we care for.

Marion Crowe, Vice-Chair, OHRI Board of Directors and member of the Piapot First Nation



OHRI's Strategic Plan includes five Research Enablers, each with specific objectives. These Enablers will help to advance the Research Strategies, Scientific Programs and Strategic Research Priorities.



RESEARCH ENABLER 1: *Governance and Leadership*

- Continue to implement Board reforms focusing on best practices in governance.
- Strategically invest in our people, including scientific leadership and administrative personnel.



RESEARCH ENABLER 2: *Infrastructure*

- Build on the momentum of the new campus and the opportunities for innovative, state-of-the-art facilities that will strategically position the Research Institute for the future.
 - Focus on investment in space renewal and expansion (e.g. CPCR, BMC, core facilities, Neuroscience Institute).
- Develop a strategy for ongoing renewal of core resources (facilities and services).
- Make planetary health and the environment a priority in infrastructure planning.



RESEARCH ENABLER 3: *Operational and Administrative Capacity*

- Invest in administrative personnel to support the research mission and vision.
- Work with the Hospital and the University of Ottawa and the Heart Institute to reduce barriers and find ways to streamline administrative processes to better enable research.
- Improve process efficiency for approval and initiation of clinical research studies.
- Challenge and support management and staff to continually seek ways of streamlining our processes, increasing efficiency and better enabling research.



**This research saved my life.
I'm convinced of it.**



Jacinthe Bisson received quick treatment for a life-threatening heart problem that was picked up by a wearable heart-monitor as part of a research study on fainting at The Ottawa Hospital.



RESEARCH ENABLER 4: Culture

- Create an internal culture where research is embraced, valued and rewarded throughout the Hospital.
- Support due process and transparency in decision-making.
- Promote and support responsible research conduct through the effective management of conflicts of interest and publication practices.
- Ensure that Board and Management processes are nimble and responsive and actively promote a service-oriented culture among administrative staff.
- Seek to create a collaborative, dynamic and inclusive environment with the implementation of a comprehensive EDI strategy and action plan, including a framework and plan to advance the recommendations from the Truth and Reconciliation Commission.
- Foster a culture that values and supports all members of the research enterprise, including trainees, allied health professionals, educational researchers and research staff and administration.
- Refresh and build upon our Trainee Program to elevate the experience of students and postdoctoral fellows at OHRI and enhance mentorship, professional development and recruitment.
- Develop a plan with resources and mechanisms to help reduce the impact of our research on planetary health and the environment.



RESEARCH ENABLER 5: Communications and Promotion of Research

- Work with the Hospital and Foundation to create an exciting and compelling brand and case for support that highlights how research can improve and save lives.
- Increase the visibility and profile of research.
- Increase the participation and engagement of patients and families in research and better integrate research into clinical settings.
- Advance and promote OHRI's strategic directions and accomplishments through refreshed communications channels.





The Ottawa
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