Ontario’s Research Hospitals

Making Ontario Healthier, Wealthier, Smarter

A Year in Review: 2016-2017
Ontario’s research hospitals are advancing health research across the province, building a healthier, wealthier, smarter province for Ontarians today—and tomorrow.
ABOUT CAHO
The Council of Academic Hospitals of Ontario (CAHO) represents Ontario’s research hospitals that play a unique and vital role in the province’s health care system. Collectively, we provide advanced patient care services, train the next generation of health care professionals and conduct leading-edge research to discover tomorrow’s care today. On the foundation of this work, we generate the expertise and evidence to drive change as system leaders, building a healthier, wealthier, smarter Ontario.
ABOUT CAHO

Vision
Ontario’s research hospitals are making the province healthier, wealthier and smarter.

Mission
The CAHO community harnesses its collective research and innovation strengths to advance world-leading patient care, a high-quality health care system and a knowledge-based economy.

Values
Collaboration, Leadership, Discovery, Innovation and Excellence

Areas of Strategic Focus (2015-2020)
- Demonstrate the value of Ontario’s Research Hospitals
- Increase investment in, and stabilize, our health research enterprise
- Drive best practices for patient and public involvement, engagement and participation in health research
- Accelerate implementation of health research evidence into practice across the province

Roles and Accountabilities of Ontario’s Research Hospitals
- Provide advanced patient care services
- Train the next generation of health professionals
- Conduct cutting-edge research
- Drive change as system leaders

CAHO’s 2016-2017 Financials
Message from our Chair

As Chair of CAHO, it’s been my privilege to champion the role of Ontario’s research hospitals in creating a healthier, wealthier and smarter province.

As system leaders, research hospitals invent the future of health care and fuel Ontario’s innovation economy. Collectively, we conduct leading research, commercialize and implement evidence, create new jobs and draw investment into the province, all while training the next generation of health care leaders.

Health research is a necessity, not a luxury, for patients both today and tomorrow; patients locally and globally. This fact has been brought to life by the patients and caregivers who have shared their experience as part of our Healthier, Wealthier, Smarter campaign. I want to thank them for sharing their stories.

Thank you also to CAHO Council and those individuals who contributed to CAHO’s committees and task forces. Our core values of collaboration and leadership have guided our work, and as I conclude my term as CAHO Council Chair, I look forward to a new chapter in working with health care and research partners, and with government to ensure that we maintain our momentum.

On behalf of CAHO Council, a special thank you to CAHO’s Executive Director, Karen Michell. Karen will be moving on from her role after almost eight years of leadership with CAHO. During that time, Karen has helped us refine our strategic focus as a community of research hospitals in Ontario. With Karen’s leadership, we created the ARTIC Program, gave life to Clinical Trials Ontario, established our own measurement framework for health research (the CAHO Research Financials and Research Impact Metrics), launched a compelling narrative about our value under the Healthier, Wealthier, Smarter campaign, saw the renewal of funding for the Ontario Research Fund and the Health System Research Fund, and most recently received an appointment as an Innovation Broker for the Office of the Chief Health Innovation Strategist. As Karen moves on to new challenges, I know that her legacy of identifying strategic issues for us to address as a community will endure at CAHO.

Catherine Zahn, Chair, Council of Academic Hospitals of Ontario
President and CEO, Centre for Addiction and Mental Health
For the last time as the CAHO Executive Director, it is with great pleasure that I present CAHO’s 2016-2017 Year in Review. After almost eight years here, I continue to be inspired by the incredible work that Ontario research hospitals do, and this year is no exception.

Our Healthier, Wealthier, Smarter campaign continues to be a strong enabler for our work together. It has allowed us to spotlight the unique value of research hospitals, while hearing from a diverse group of health research champions. From patients and community leaders, to government and sector partners, to our own membership – thank you for adding your voice to the Healthier, Wealthier, Smarter conversation this year.

As CAHO embarks on its important work as an Innovation Broker, we know that our success in this role will build on our experience in accelerating implementation and spread through the Adopting Research to Improve Care (ARTIC) Program, now in its third year of partnership with Health Quality Ontario. This year, the ARTIC Program saw the completion of two spread projects that have improved mental health care across Ontario, as well as the launch of the Patient Oriented Discharge Summary (PODS) project, which will improve the discharge experience for patients and families.

In partnership with our committees, task forces, patients and external partners, CAHO has also undertaken corporate initiatives that help us advance our strategic areas of focus and strengthen our role as key enablers and capacity builders for Ontario’s health system. You will read more about these activities and others in this report.

As I reflect on my time at CAHO, I am acutely aware that it has been a true privilege to lead this organization. CAHO has a unique viewpoint into Ontario’s health care and health research ecosystem. My sincere thanks to all of the CAHO CEOs, executives and researchers who were generous with their time and expertise, investing in CAHO and in our community.

A special thanks also to the CAHO team; your partnership and support makes coming to work an energizing and enjoyable experience. I am incredibly proud of your hard work, collaboration and dedication to Ontario’s health research sector. Keep bringing your passion and creativity to work every day!

And finally, to our colleagues and partners across Ontario and Canada, thank you for your support and collaboration. I count on you to continue to work with CAHO towards a healthier, wealthier and smarter Ontario.

Karen Michell, Executive Director, Council of Academic Hospitals of Ontario
OUR IMPACT
OUR IMPACT

CAHO hospitals are leaders in the system and collectively we make Ontario healthier, wealthier and smarter.

**Healthier**
- Conduct leading-edge research - discovered here, tested here, delivered here
- Provide access to the most specialized care for patients from across Ontario
- Discover better care, cures and treatments for the most pressing health challenges of today and tomorrow

**Wealthier**
- Attract $1.4 billion in health research revenues annually
- Support knowledge-based jobs, commercialize discoveries, generate spin-off companies and draw investment into Ontario
- Implement evidence-based care to reduce costs while improving quality
- Healthy ROI: $1 spent on hospital research generates $3 of economic output

**Smarter**
- Attract and retain top researchers and specialists from Ontario and around the globe
- Train more than 80% of undergraduate medical students, 90% of Ontario’s medical residents and 99% of Ontario’s clinical fellows
- Make health care smarter by spreading and implementing what works through the Adopting Research to Improve Care (ARTIC) Program

Ontario-led research on early, aggressive multiple sclerosis gave Jennifer Molson a second chance at life

Trio of Ontario researchers commercialize a low-cost device for better diagnosis of sleep apnea

Ontario researchers led a team of international experts to create world’s first one-stop-shop for paediatric concussion care
BY THE NUMBERS
Contributions of CAHO Hospitals to Ontario’s Health Research Enterprise

Every year, CAHO collects members’ Research Financials and Research Impact Metrics to articulate the size and scope of our contribution to Ontario’s health research enterprise.

- **$1.4 Billion** Total Investment in Health Research
  - vs. **$1.3B** R&D spend by Canada’s pharmaceutical industry
  - **Over 50%** of the total health research spend by Canadian hospitals

- **17,500** Researchers and Research Staff
  - More than double... pharmaceutical industry jobs at Ontario research-based pharmaceutical companies
  - Half... employed at assembly plants of 5 of the largest automotive companies in Ontario

- **109** Health research commercializations made by Ontario’s research hospitals in 2016

- **329** Intellectual Property disclosures made by Ontario’s research hospitals in 2016

- **60%** of grants come from outside Ontario, generating jobs inside the province

- **3:1** Return on investment

- **42,000** total jobs supported across Ontario by R&D investment in Ontario’s research hospitals

- **15%** of research investment in CAHO hospitals is from private industry
  - 2x the OECD average for business investment in higher education R&D
What is ARTIC?

Co-led in partnership with Health Quality Ontario, the Adopting Research to Improve Care (ARTIC) Program is a proven model that accelerates the spread and implementation of evidence-based health care interventions into broader clinical practice across Ontario’s health system.

New ARTIC Projects

Patient Oriented Discharge Summary (PODS), led by OpenLab at the University Health Network, reimagines the current hospital discharge process by arming patients with the knowledge they need the moment they leave the hospital. The PODS care instruction form and accompanying processes have been co-designed with patients and caregivers, and can be tailored to the unique care requirements of each hospital and patient population. The goal of PODS is to improve the discharge experience and give patients and families the knowledge and confidence they need to manage their health when returning home. With support from ARTIC, PODS will be spread across 25 partner sites in Ontario.

Learn more about ARTIC
Ongoing ARTIC Projects

**Choosing Wisely: An Idea Worth Spreading**, led by Dr. Donna McRitchie and Deepak Sharma (North York General Hospital), aims to reduce unnecessary medical treatments by implementing Choosing Wisely Canada recommendations. ARTIC support enabled a project that has already demonstrated positive results at North York General Hospital and Toronto East Health Network to effectively spread recommendations across 3 additional hospitals and their 6 associated family health teams.

**Primary Care Memory Clinics Model**, led by Kitchener-based family physician Dr. Linda Lee, aims to improve access to dementia care by establishing 17 primary care-based Memory Clinics in rural, remote and underserviced Ontario communities. The project team will build capacity for dementia care by integrating supports and services needed by patients and families throughout the course of the illness.

**ARTIC Projects Completed in 2016/17**

**Depression and Alcoholism – Validation of an Integrated Care Initiative (DAVINCI)**, led by Dr. Andriy Samokhvalov and Saima Awan (Centre for Addiction and Mental Health), aims to ensure patients with both a Major Depressive Disorder (MDD) and Alcohol Use Disorder (AUD) have access to a person-centered, evidence-based integrated care pathway. DA VINCI is the first program in Canada to implement a way to systematically screen and treat depression and alcohol dependency together. With its standardized treatment program, patients saw a 62% reduction in drinks per week and a self-reported 95% improvement in mood.

**Mentorship, Education, and Training in Addictions: Primary care-Hospital Integration (META:PHI)**, led by Dr. Meldon Kahan (Women’s College Hospital), has reduced the emergency department in-and-out cycle for people living with opioid addiction and alcohol abuse by integrating treatment provided by emergency department and hospital staff, primary care providers, addictions specialists at Rapid Access Addiction Medicine clinics and front-line community services, such as withdrawal management and shelters. In Sudbury, Health Sciences North has seen a 63% reduction in emergency department visits related to opioid overdose.

Our heartfelt thanks to the project leads and partner sites for their work in spreading these proven interventions!
In 2016-2017, CAHO seized the opportunity to offer our collective leadership to support innovation by applying for the position of Innovation Broker with the Office of the Chief Health Innovation Strategist (OCHIS). This process was made possible through the hard work and strategic thinking of the CAHO Council, Resources Committee, CAHO staff and strong collaboration with our partners at MEDEC. Thanks to everyone for the support.

We were honoured to be selected as an Innovation Broker, under the leadership of the CAHO Executive Director, and are looking forward to pulling innovation into our hospitals in 2017-2018. As a partner to the OCHIS, CAHO and its new Innovation Broker Task Force will connect innovators and remove barriers so that innovations are brought into our hospitals and the system faster, benefiting the Ontario economy and improving patient care.

“We are ready to help clear the path to market for Ontario’s health innovation industry.”

- Karen Michell, Executive Director, CAHO

Further details and communications about CAHO’s role will be shared over the coming months.
INVESTING IN ONTARIO’S HEALTH RESEARCH ENTERPRISE

Ontario is home to world-class research hospitals that make our province healthier, wealthier and smarter today. Investing in research hospitals will help ensure a healthier, wealthier and smarter tomorrow for patients and the economy. CAHO and its committees have worked closely with health partners, funders and government decision makers towards stable and sustainable funding for Ontario’s health research enterprise.

Ontario Research Fund

Ontario Research Fund investments help sustain Ontario’s health research enterprise by fostering new discovery and retaining top talent, while leveraging additional investment. CAHO was pleased to see the renewal of the Ontario Research Fund at historical levels this year.

Canadian Institutes for Health Research

Canadian Institutes for Health Research (CIHR) funding is critical to Canada’s health research enterprise and an essential support to allow CAHO hospital researchers to advance research and discovery. CAHO supported its federal partner, HealthCareCAN, in the recommendation that the Government of Canada increase the base budget of CIHR to stabilize research funding and support a strong and sustainable health research enterprise in Canada. CAHO will continue working with HealthCareCAN to enhance CIHR support, particularly in light of the recent release of Canada’s Fundamental Science Review, Investing in Canada’s Future: Strengthening the Foundations of Canadian Research.

“Good evidence is the foundation for rational and effective investment in the Ontario health care system. CAHO hospitals collaborate with our health community partners to conduct the research that informs policy decisions to address resource gaps that limit equitable access to excellent care.”

– Catherine Zahn, Chair of CAHO and CEO of the Centre for Addiction and Mental Health
Health System Research Fund

The Health System Research Fund provides Ontario decision makers with policy-relevant evidence to help guide rational and effective investment. This type of research is especially important at a time of significant health system transformation. Ontario’s research hospitals applaud the Ontario Government for recognizing the value of this critical research and unpausing the Health System Research Fund in March 2017, and affirming its importance in the 2017 Ontario Budget.

“How health care is organized affects the quality and cost of health care. It is, therefore, crucially important that we understand how well our health care system is working and how we could do things better. That is the focus of health system and policy research.”

– Dr. Andreas Lupacis, Executive Director of the Li Ka Shing Knowledge Institute at St. Michael’s Hospital

Read more about the value of health system research:
CORPORATE INITIATIVES
As part of our 2015-2020 strategic plan, CAHO member hospitals are committed to driving best practices in patient and public involvement, engagement and participation in health research.

Over the past year, CAHO has:

- Worked closely with a thought leadership task force of scientists, patients and their families, and clinical, medical and communication leaders, with the aim of outlining best practices for meaningful and authentic engagement of patients and families in research across CAHO hospitals.

- Created a Community of Practice of patients, caregivers and hospital staff that will champion and implement best practices for patient engagement in research within their organizations, while sharing successes and challenges as a group.

- Heard from numerous patients and caregivers on the value of health research and engagement as part of the Healthier, Wealthier, Smarter campaign.
RESEARCH HOSPITALS ARE SYSTEM LEADERS

Playing a unique role in the province’s health care system, Ontario’s research hospitals have evolved beyond their traditional tripartite mandate of research, teaching and advanced patient care to embrace a fourth mandate of system leadership.

Collectively, CAHO hospitals act as leaders, creating partnerships across the health care system to drive the competitive strength of the province by contributing to its innovation economy. The appointment of CAHO as an Innovation Broker underscores the value of research hospitals as leaders in the system.

Demonstrating the value of research hospitals is a central focus of CAHO’s strategic plan. The Research Hospitals of Today and Tomorrow Task Force worked to articulate and demonstrate the current system leadership role of research hospitals, while proactively defining the future of that role.

Accountabilities of Ontario’s Research Hospitals

- Drive change as system leaders
- Provide advanced patient care services
- Conduct cutting-edge research
- Train the next generation of health professionals
Ontario is home to many world-class health sciences institutions, including CAHO member hospitals. By connecting these existing assets, Ontario has a significant opportunity to optimize health sciences output while drawing even more investment and new talent into our province, helping to drive Ontario’s innovation economy.

As provincial and federal governments turn their attention to cultivating a thriving innovation economy, CAHO and its committees articulated the opportunity and recommendations to establish a health sciences innovation cluster in Ontario that would enhance connectivity and strengthen relationships between research hospitals, companies, incubators, government and other like-minded organizations.

This cluster could drive a healthier, wealthier, smarter Ontario by:

- Increasing productivity and stimulating innovation through collaboration
- Representing the entire value chain of an industry and facilitating coordination
- Developing and validating intellectual property and skilled personnel
- Enabling strategic government investment in sectors instead of individual companies

Hamilton’s Story

Discover how health research can accelerate transformation and stimulate a diversified economy.
Health research makes Ontario healthier, wealthier and smarter. Launched in June, 2015, CAHO’s Healthier, Wealthier, Smarter campaign has continued to generate a conversation about the value that health research brings to our province. We want to thank all those who’ve joined the conversation and shared their stories!

**HEALTHIER, WEALTHIER, SMARTER HIGHLIGHTS**

“Health research has enhanced our community’s knowledge economy allowing us to compete on an international scale.”

– **Debbi M Nicholson**, President and CEO of the Greater Sudbury Chamber of Commerce

“Brain-CODE enhances OBI’s initiatives to transform Ontario’s neuroscience research environment, improve brain health, and support Ontario’s economy – in essence, to contribute to a healthier, wealthier, smarter Ontario.”

– **Tom Mikkelsen**, President and Scientific Director of the Ontario Brain Institute

“For me, health research is about advancing cutting-edge treatments that improve the day-to-day life of our patients, at the same time engaging our patients and families and ensuring we provide opportunities to support the brightest minds in Ontario to continue to do this.”

– **Barry McLellan**, President and CEO of Sunnybrook Health Sciences Centre

[Read more of Debbi’s blog post](#)
[Read more of Tom’s blog post](#)
[Read more of Barry’s blog post](#)
Health Research Showcase at Queen’s Park

To demonstrate the breadth, depth and impact of the health research being done across CAHO hospitals, we hosted a showcase at Queen’s Park on December 6, 2016. Over 30 Ministers, Members of Provincial Parliament and Government Officials, along with over 230 voices on Twitter, had the opportunity to see incredible science and learn about the difference it’s making for patients and the economic well-being of the province.

“Healthier, Wealthier, Smarter… these are important words.”
– Hon. Reza Moridi, Minister of Research, Innovation and Science

“Investing in research means investing in progress and in families.”
– Susan Cosgrove, family leader on the Research Family Engagement Committee at Holland Bloorview Kids Rehabilitation Hospital

Hon. Helena Jaczek with Dr. Fang Liu from CAMH
Lab Tours & Field Trips

CAHO members hosted live tweets and lab tours to give MPPs, MPs, Government Officials and the public a behind-the-scenes look at research in action.

MP Karen Vecchio, MPP Jeff Yurek and Vice President of Research, Dr. David Hill are ready to kick off the healthier, wealthier, smarter tour at the Lawson Health Research Institute in London!

HWS Field Trips: Kingston

Rick King shares his experience participating in health research with Dr. Denis O’Donnell at Kingston General Hospital.

MP Karen Vecchio, MPP Jeff Yurek and Vice President of Research, Dr. David Hill are ready to kick off the healthier, wealthier, smarter tour at the Lawson Health Research Institute in London!

HWS Field Trips: London

MPP Sophie Kiwala tries her hand at real-time navigation surgery on synthetic breast tumours at Hotel Dieu Hospital.

Inside London’s cyclotron lab at St. Joseph’s Health Care with Dr. Mike Kovacs.