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Translating Breakthrough Research into Sustainable World-Class Patient Care

Council of Academic Hospitals of Ontario's
Submission to the Standing Committee
on Finance and Economic Affairs

Our Mission: As key partners in the health care system, the CAHO community is committed to harnessing our collective research and innovation strengths to advance world-leading patient care and a sustainable health care system.

The Council of Academic Hospitals of Ontario is the non-profit association of Ontario's 25 academic health sciences centres.

About CAHO Members: CAHO members are fully affiliated with a university medical or health sciences faculty. They provide the most complex and urgent care, teach the next generation of health care providers and foster health care innovation derived from discovery research.

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Context for 2010 Ontario Budget

Over the last few years, Ontario has made steady progress in reducing wait times and improving access to primary care. The Government continues to advance its health care commitments through disease management programs, investments in infrastructure, and strategies for providing timely and appropriate care.ⁱ

However, with 42% of our provincial budget being spent on health care, and with this number expected to rise to 50% within the next three years, sustainability remains a challenge.ⁱⁱ Sustainability, quality and accessibility of health care are equally important principles for the people of Ontario. With mounting cost pressures, the Government is faced with difficult decisions to streamline while delivering on key health care, education and economic growth priorities.

In 2006, the Government created the Ministry of Research and Innovation, signalling its intention to establish Ontario as a globally recognized knowledge-based economy. The Government's innovation goal is to achieve *"a high and sustainable level of prosperity, and healthy communities, that provide high-quality jobs and better lives for people in Ontario"*.ⁱⁱⁱ Indeed, in a time of unprecedented cost pressures, innovation represents a unique lever for strengthening and maintaining our social and economic systems. The Minister of Research and Innovation has publicly expressed interest in leveraging our investments in research to produce results that improve health outcomes, reduce our health care costs and create new wealth in the form of new companies and new jobs.^{iv}

Within this backdrop, the 25 academic health sciences centres of Ontario share with the Standing Committee on Finance and Economic Affairs (SCFEA) our ideas for making Ontario a sustainable world leader in health care delivery and research. At this critical junction, we wish to partner with the Ontario Government to provide better public services to Ontarians and support economic growth through innovation.

About CAHO Members

CAHO members are academic health sciences centres (AHSCs) that have traditionally been defined by a three-pronged mission to: 1) provide the most complex and urgent care, 2) teach the next generation of health care providers, and 3) foster health care innovation through research and discovery. Ontario has 25 AHSCs fully affiliated with university medical or health sciences faculties.

Clinical Care Mission: The primary mission of CAHO members is to deliver world-class patient care to their communities. Our community spans the entire province and indeed includes patients from outside Ontario as well. We provide approximately two-thirds of quaternary care, i.e. the most complex and resource intensive care, in Ontario including 100% of organ transplants and 83% of neurosurgeries.^v

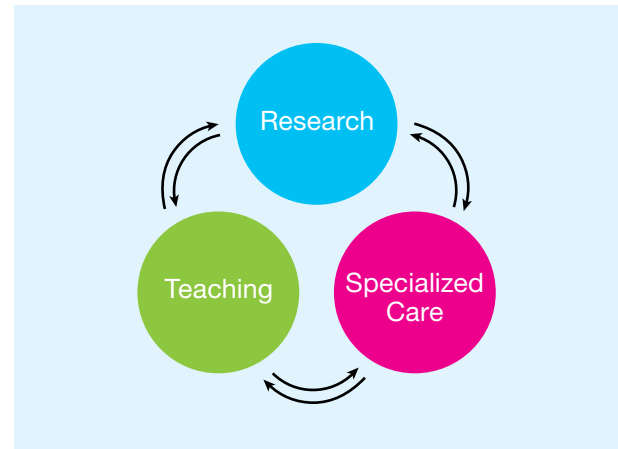
Teaching Mission: CAHO members train future health care providers in every discipline, including doctors, nurses, pharmacists, administrators and others. Every year, over 20,000 trainees immerse themselves in hands-on training at our hospitals. AHSCs train over 90% of doctors, and are almost exclusively responsible for preparing medical specialists and sub-specialists such as surgical oncologists and developmental paediatricians.

Research Mission: 80% of health research in Ontario takes place in academic health sciences centres; the balance occurs at universities.^{vi} As the fourth largest biomedical research centre in North America, Ontario employs 10,000 researchers in a variety of disciplines across its AHSCs. Moreover, CAHO members train 80% of Ph.D. researchers and almost 100% of clinician scientists.

From research in the lab to real-life experience at the bedside, CAHO members focus on improving the delivery of care and developing new and better ways to cure disease. A 2008 national report attributed 77% of Canadian medical breakthroughs to Ontario hospitals.^{vii} These include the development of the first artificial kidney machine, identification of a critical gene that causes colon cancer, and the development of digital mammography and MRI screening for early detection of breast cancer in young women. Such discoveries have led to widespread improvements in mortality and morbidity.

Integrating Our Three Missions: What makes CAHO Members truly innovative is the interplay between our three distinct missions of research, teaching and specialized care. We are the creators and early adopters of many groundbreaking medical therapies and technologies such as the globally used Ottawa Ankle Rules which have cut down the need for unnecessary ankle x-rays by 35%.^{viii} In our hospitals, clinicians inform the research agenda, and researchers bring their discoveries from the lab bench to the patient's bedside. Last year, we launched over 670 clinical trials to test the efficacy of new drugs and medical interventions. Once tested safely, these new forms of treatment are introduced into other health care settings.

The Mission of the Academic Health Science Centres



Health Research: A Lever for Sustainable World-Class Health Care

A recent study out of the UK shows that a dollar invested in health research yields returns as high as 39 cents every year in perpetuity.^{ix} Similar studies done in Australia and the United States demonstrate high long-term returns on health research.^{x, xi}

Ontario's hospital-based health innovation engine has made globally significant discoveries such as stem cells, the gene that causes cystic fibrosis and the first electronic screening test for SARS. CAHO members are currently leading the charge against diseases such as cancer and AIDS, defining the future of individualized medicine, and finding new ways to diagnose and treat mental health issues through brain imaging and drugs therapies.

The generation of employment opportunities and contributions to the economy are also important research outcomes. CAHO Members contribute to the economy by keeping Ontario's population healthy and productive, by creating spin-off companies from our research institutes and inventing innovative and efficient ways to provide health care in the future. Together, Ontario's AHSCs hold a multitude of patents for world-class discoveries and most are licensing their discoveries. We also translate these findings into spin-off companies with direct contributions to Ontario's economy. In 2007 alone, technology transfer offices at our hospitals filed 167 patents and created 11 new companies. For example, Visual Sonics, a medical devices company spun out of research at Sunnybrook Health Sciences Centre in the 1990s, had \$30 million in sales last year and its founder received the Premier's Discovery Award. The funds gained through these initiatives are funnelled back into hospitals in support of improved care and continued research activity.

Enablers of a Successful Health Research Enterprise

Four out of five Canadians believe that health research makes an important contribution to our economy.^{xii} It is no surprise then that in a recent national poll, 89% of Canadians said Canada should be a global leader in health research. Building a dynamic internationally recognized research enterprise in Ontario's academic health sciences centres has taken commitment and resources. While we have been successful in winning national grants for research buildings and securing philanthropic contributions to supplement those grants, the hospital-based research enterprise in Ontario is not immune to the fiscal pressures we face today.

Our success is dependent not only on public support for our mission but also on a clear provincial strategy and adequate resources. Two priority areas that CAHO has identified for government leadership are the creation of a provincial Health Research Council and sustainable support for health researchers who are currently paid through hospital fundraising efforts.

Strategic Leadership and Coordination: In past submissions to the SCFEA, CAHO has recommended the creation of a new arms length agency or council to secure Ontario's place as the pre-eminent Health Research Capital of the world. Such a Council would build a path to better health care through fostering new discoveries and their translation into practice, and provide stronger economic growth by attracting the best researchers to Ontario. Most other provincial governments in Canada have established health research councils or foundations to provide leadership, and human and capital support to their research enterprises, and have achieved successful outcomes since doing so. Since launching the Michael Smith Foundation for Health Research in 2001, British Columbia has seen an increase in its share of national research awards from less than 8% to more than 12%. Ontario, by comparison, has seen a downward trend in its share of national research funds.^{xiii}

Attraction and Retention of Bright Researchers: The global research market is fiercely competitive and other jurisdictions recognize the need to develop a strong researcher base. Government-funded health research councils and foundations in other provinces allocate up to 70% of their funds to researcher salaries and training. At less than 8%, the Ontario Government's investment in researchers pales by comparison.^{xiv}

At present, two-thirds of the health researcher salary support that CAHO members provide is from our independent fundraising efforts.^{xv} Reliance on philanthropic contribution to support the majority of the province's innovation engine for health research is neither sound nor sustainable. CAHO is eager to develop a collaborative provincial approach that will begin to address the need for a stable base of funding for our precious assets, our health researchers.

Our Recommendations

CAHO is committed to partnering with the Government in a time when fiscal prudence and careful planning are paramount. While the need for sustainable salary support persists, CAHO members recognize that this is not the year to ask for new investment but rather a time to partner and find solutions by leveraging existing resources to ensure the best possible outcome for Ontarians. We believe that the key to balancing and achieving the Government's priorities of job creation, health care, education, fiscal management and economic growth lies in innovation. To this end, the Council of Academic Hospitals of Ontario is seeking the Ontario Government's partnership in making innovation and discovery research enablers to advance world-leading patient care and a more sustainable health care system for Ontario.

The Ontario Government has repeatedly recognized that the successful societies of tomorrow will be those that invest in innovation and knowledge creation today. Indeed, every successful industry knows that investing in research and development is a requisite for future success. CAHO members are home to a world-renowned health innovation engine that provides a platform for the some of the world's best and brightest to invent the future of health care. The CAHO community is committed to harnessing this collective research and innovation strength in order to advance world-leading patient care. We look to the Ontario Government to partner with us and champion health research, with the goal of providing sustainable health care to the people of Ontario.

Specifically, we continue to call on the Government to create an Ontario Health Research Council which will be responsible for designing an overall health research strategy for Ontario. CAHO will work with the Government to ensure that this Council is a success. At this time of fiscal restraint, we recommend that the Government pool its existing health research investments under this Council to ensure greater strategic focus of these investments.

Endnotes

- ⁱ Government of Ontario. 2009 Progress Report. Available at: <http://www.premier.gov.on.ca/progress/en/index.asp>
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- ^v Analysis of Hospital Discharge Abstracts data for April 1, 2007 to March 31, 2008 reported by all Ontario hospitals to the Canadian Institutes for Health Information. More information at: http://secure.cihi.ca/cihiweb/dispPage.jsp?cw_page=services_dad_e
- ^{vi} Association of Canadian Academic Healthcare Organizations (ACAHO). Research Funding Flow Survey. 2005.
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- ^{viii} Stiell IG, Greenberg GH, McKnight RD, Nair RC, McDowell I, Worthington JR. A study to develop clinical decision rules for the use of radiography in acute ankle injuries. *Ann Emerg Med.* 1992. 21(4):384-90.
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- ^{xi} U.S. Congressional Joint Economic Committee. Benefits of Medical Research and the Role of NIH. 2000.
- ^{xii} Research Canada. Canada Speaks! 2010 Canadians Go for the Gold in Health and Medical Research.
- ^{xiii} Canadian Institutes of Health Research. Your Health Research Dollars at Work: 2006/2007. 2007.
- ^{xiv} Manitoba Research Council. Health Research Funding in Manitoba: A Description and Comparison across Canada. 2006.
- ^{xv} The Change Foundation. Council of Ontario Research Directors/Ontario Health Research Alliance Baseline Information Survey. 2003.

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