ICES Institute for Clinical Evaluative Sciences

Evidence Guiding Health Care

Who we are

Institute for Clinical Evaluative Sciences (ICES)

An independent, non-profit organization that produces knowledge to enhance the effectiveness of health care for Ontarians.

Population-based health research that makes a difference

ICES research provides insight on a broad range of over 50 topics and issues including population health, health system performance, primary care, drug safety and effectiveness, diagnostic services and chronic diseases, such as cancer, cardiovascular disease and diabetes. The Institute conducts over 100 studies a year, many in collaboration with other organizations.

Scientists and clinicians lead world-class research teams

ICES scientists are internationally recognized leaders; many are practicing clinicians who understand the everyday challenges of health care delivery. They lead multidisciplinary teams of more than 100 individuals, including statisticians, epidemiologists and specialists in knowledge transfer management and information security, privacy and technology. The diverse expertise represented within these specialized teams is the foundation of ICES' innovative approach to research.

Evidence-based research informs decisions

ICES researchers take a unique approach to studying the continuum of care. They link data from many sources, including population-based health surveys, anonymous patient records and major clinical and administrative databases, to obtain a comprehensive view of health care issues.

Their unbiased, evidence-based knowledge and recommendations, profiled in atlases, investigative reports and peer-reviewed journals, are used to guide decision-making and inform changes in health care delivery. Highly regarded in Canada and abroad, ICES research can be applied by governments, planners and health care providers.

Growing partnerships with Canada's leading research institutions

ICES is located at Sunnybrook Health Sciences Centre in Toronto and at Queen's University in Kingston. ICES-Queen's, the first of several planned satellite partnerships, was established in 2007. Initial areas of focus for the ICES-Queen's facility include cancer, pharmacoepidemiology studies and dementia. Partnerships with the Ottawa Health Research Institute and the University of Toronto are in process.

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"Extending access to ICES data is a timely, practical way forward and will create one of the most extensive health services research networks in the world.

See **CEO message,** page 1.

ICES is funded by the Ontario Ministry of Health and Long-Term Care and receives peer-reviewed grants and project-specific funds from provincial and national organizations, including the Canadian Institutes of Health Research.

Message from the Chief Executive Officer

Institute for Clinical Evaluative Sciences

After one year as the CEO of ICES, I am pleased to reflect on my experience. The outstanding features have been the great warmth of my welcome and the support of people at ICES and from the research community at large.

I have been in awe of ICES since its establishment by David Naylor in 1992. I have been impressed to find that it is even better than I expected. The most striking single strength of ICES is the quality of its people. I have never worked with such a smart and committed group of individuals. Their expertise, combined with their access to the health data of over 12 million Ontario citizens and the intellectual capital ICES has created over the past 16 years, is a powerful mix which produces unique and relevant science.

The past year has been a time of change at ICES, a reflection, I think, of the fact that organizations need to continually adapt to changing circumstances. But our central aim remains the same: to conduct high quality health services research. It is essential that ICES keeps this focus, as we expand our data-sharing network to university-based satellite centres across Ontario where there are new opportunities for collaboration with other talented researchers.

"This large expansion of capacity will create one of the most extensive health services research networks in the world."

Extending access to ICES data beyond our offices on the campus of Sunnybrook Health Sciences Centre in Toronto is consistent with ICES' provincial mandate, and is a timely, practical way forward. This model recently became feasible after changes to the legislation that governs our use and distribution of data.

In October 2007, we partnered with Queen's University in Kingston to launch the province's first satellite unit of ICES. I was very pleased to be present at its opening. As ICES Chair Brian Golden has announced, plans are underway to connect with the Ottawa Health Research Institute of the University of Ottawa and with the University of Toronto. As well, discussions are being held with other potential partners across the province.

This large expansion of capacity will create one of the most extensive health services research networks in the world. Researchers at the satellite centres will have access to health care data within a secure framework that previously was available only at our offices on the Sunnybrook campus. They will also benefit from the intellectual property created by scores of ICES researchers. The new ICES network will enable us to build on the foundation laid by my predecessors, Jan Hux, Andreas Laupacis, Jack Williams and David Naylor.

As you'll read in the pages of this report, during the past year, scientists at ICES have continued our long tradition of producing independent research evidence, which has contributed significantly

Dr. David Henry, President and CEO

to inform decision-making by government policy makers, researchers and health care practitioners in Ontario. Their work has also influenced health services research throughout Canada and internationally. In 2007, ICES scientists published on average two papers a week in peer-reviewed journals. A number of our publications have garnered considerable media attention, a useful measure of their relevance and timeliness, and also an indicator of our commitment to broadly sharing ICES research findings through an active knowledge transfer program.

I want to recognize the ongoing support of the Ministry of Health and Long-Term Care. Over the years, its commitment to outstanding health services research has helped ICES build the necessary infrastructure and recruit the highly skilled workforce we need to attract additional funding support. Every dollar invested in ICES generates $4 in additional peer-reviewed funding to Ontario research institutions. This is achieved through partnerships with academic institutions and teaching hospitals. We are also collaborating with important agencies inside and outside of Ontario. We work closely with data from the Canadian Institute for Health Information, from Cancer Care Ontario and from the Cardiac Care Network. We also have close relationships with the Ontario Health Quality Council, the new Ontario Agency for Health Protection and Promotion and the Heart and Stroke Foundation of Ontario. We greatly value these relationships and the breadth and depth that they bring to our work.

Since its establishment, ICES has built an excellent body of research. As CEO, I feel very privileged to have had the opportunity to contribute to this remarkable year, and I look forward with great anticipation to the next phase of ICES' development.

Expanding Health Services Research Network of ICES

Current Health Services Research Programs and Faculty Leaders

Cancer

David Urbach, MD, MSc, FRCSC
Adjunct Scientist

Cardiovascular and Diagnostic Imaging

Jack Tu, MD, MSc, PhD, FRCPC
Senior Scientist

Health System Planning and Evaluation

Geoff Anderson, MD, PhD
Adjunct Scientist

Primary Care and Population Health

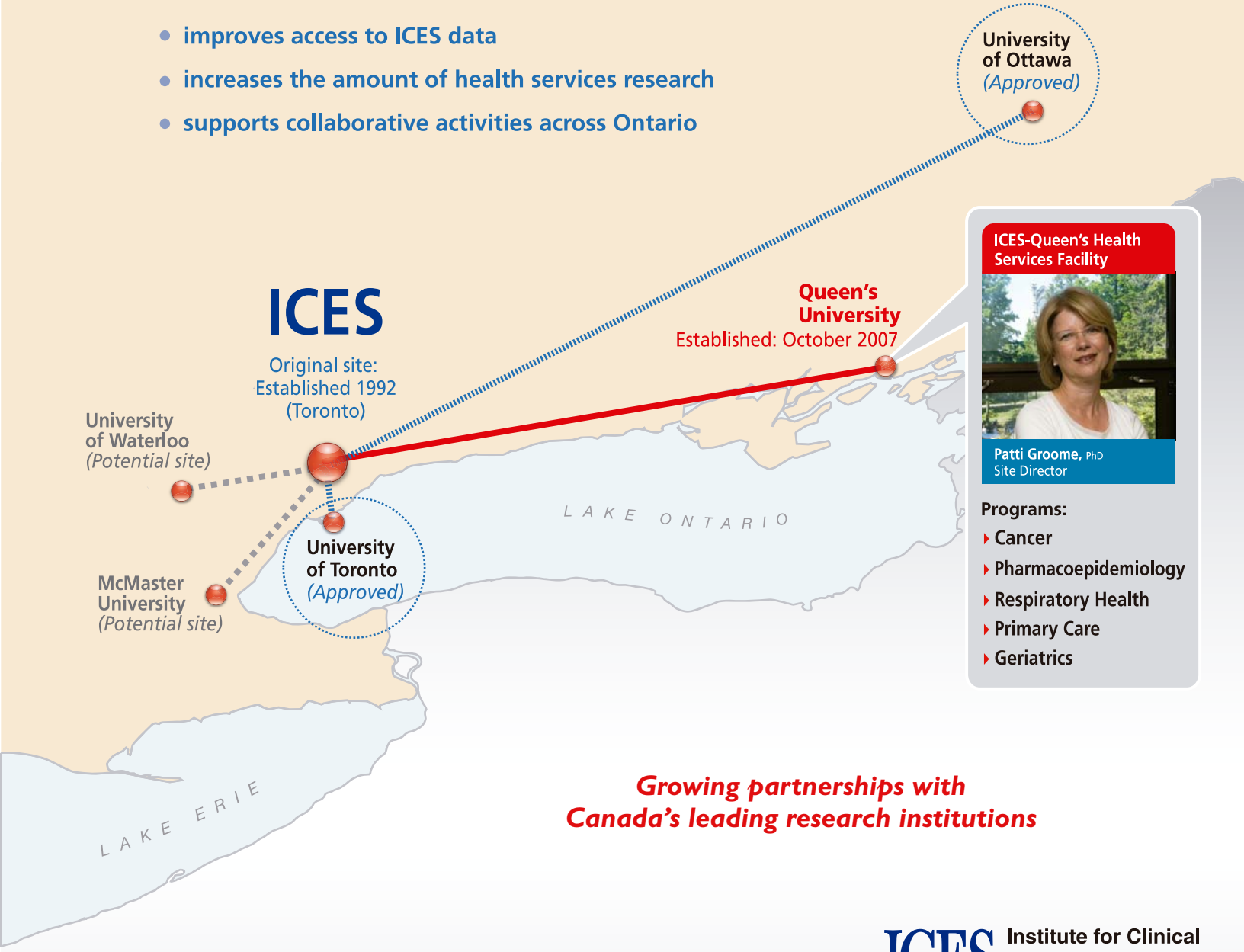
Rick Glazier, MD, MPH, CCFP, FCFP
Senior Scientist

Drugs, Diabetes and Kidney

Michael Paterson, MSc
Scientist

Research network benefits:

- improves access to ICES data
- increases the amount of health services research
- supports collaborative activities across Ontario



ICES-Queen's Health Services Facility

Patti Groome, PhD
Site Director

Programs:

- Cancer
- Pharmacoepidemiology
- Respiratory Health
- Primary Care
- Geriatrics

Growing partnerships with Canada's leading research institutions

ICES Institute for Clinical Evaluative Sciences

"The Board has responded…and has approved…the establishment of ICES satellite units at the Ottawa Health Research Institute and the University of Toronto."

Message from the Board Chair and Directors

Institute for Clinical Evaluative Sciences

This has been a year of transition at the Institute for Clinical Evaluative Sciences, marked by new leadership, a refocusing of our strategic direction, and the launch of a major initiative to increase ICES' health services research capacity.

One of the year's most significant events was the installation of a new Chief Executive Officer in September 2007. During 2008, a number of new members joined the Board.

I believe that David Henry has the experience and vision to lead ICES as it grows to meet the increased demand for evidence to inform decision-making across the province and beyond. This will ultimately result in improved health care for Ontarians. Our sincere thanks go to interim President and CEO, Jan Hux, for successfully maintaining organizational stability during the transition period and for subsequently accepting the new position of Chief Operating Officer at ICES.

The Board of Directors initiated a strategic planning process in late 2007, and this has continued through 2008, culminating in a planning day in which several Board Directors participated along with staff from ICES, the MOHLTC and other academic centres and agencies. The Board has responded to the guidance from this meeting and has approved the establishment of ICES satellite units at the Ottawa Health Research Institute and the University of Toronto. Planning is underway with other potential partners.

In my view, ICES has the capacity to become a foundational network for performing high quality health services research in Ontario, and the Board looks forward to working with the staff at the Institute to ensure that it fulfills its mandate to perform high-quality, relevant and timely health services research.

Drs. Brian Golden & David Henry

ICES is governed by a voluntary Board of Directors* whose collective range of experience and expertise guides our strategic direction and priorities.

Chair
Dr. Brian Golden, Sandra Rotman Chair in Health Sector Strategy, University of Toronto and University Health Network; Executive Director, Collaborative for Health System Performance, University of Toronto

Vice-Chair
Mr. John Wright, Senior Vice-President, Canadian Public Affairs Division, Ipsos Reid

Directors
Mr. John Callaghan, Partner, Gowling Lafleur Henderson LLP

The Honourable Elinor Caplan, Former Ontario Minister of Health and Federal Cabinet Minister

Mr. William Falk, Managing Partner, Accenture's Health and Life Science Practice in Canada

Ms. Patricia Mandy, Chief Executive Officer, Hamilton-Niagara-Haldimand-Brant Local Health Integration Network

Mr. Denis Morrice, Ambassador, Bone and Joint Decade

Ms. Katherine Rethy, Corporate Director and Principal Atticus Interim Management

Mr. Mark Rochon, President and Chief Executive Officer, Toronto Rehabilitation Institute

Mr. Mark Rudowski, Director, Enterprise Risk and Compliance, George Weston Limited

Mr. Gabriel F. Sékaly, Executive Director, Institute of Public Administration of Canada

Dr. Duncan Sinclair, Former Chair, Health Services Restructuring Commission of Ontario

The Honourable Hugh Segal, Senator, Kingston-Frontenac-Leeds, Senate of Canada

Dr. Robyn Tamblyn, Scientific Director, Integrated Health Care and Research Network of Quebec

Professor Carolyn Tuohy, Senior Fellow, School of Public Policy and Governance, University of Toronto

Dr. Ruth Wilson, Family Physician and Chair, Action Group on Primary Care Reform

*Membership for 2007/08

Reporting unfit drivers: physicians, public safety and the law

Ontario physicians are legally required to report medically unfit drivers, but does this mandatory reporting requirement remove unsafe drivers from the road? This was the research challenge identified by senior scientist at ICES and Sunnybook Health Sciences Centre, Dr. Donald Redelmeier.

"Our hypothesis was that drivers involved in serious crashes often have impairments, frequently visit physicians, yet are rarely reported."

A study of 1,605 patients who had been drivers in life-threatening motor vehicle crashes over a five-year period found that 37% suffered from alcohol abuse, cardiovascular disease or a neurological disorder—three chronic medical conditions that are reportable to the Ontario Ministry of Transportation.

The research team linked these patients to their health care records and driving reports; then determined how many of these drivers had been seen by a doctor before the crash. Of the 37% diagnosed with a reportable medical condition, researchers found that:

- **83%** had visited a doctor in the year before the crash and **14%** during the previous week. This is contrary to a presumption that unfit drivers rarely visit physicians.
- Only **3%** of unfit drivers had been reported.
- Alcohol abuse (72% of reportable patients) was the most common condition—but least reported.

The law isn't working: future directions require a balance of responsibilities Although the study data do not indicate alternatives to the current reporting system, they do provide a sound evidence base for a review of current legislation and possible future directions for healthy public policy.

The study is available online at http://www.openmedicine.ca/article/viewArticle/141/110

Redelmeier DA, Venkatesh V, Stanbrook MB. Mandatory reporting by physicians of patients potentially unfit to drive. *Open Med.* 2008; 2(1): 8–17.

"Our research suggests many missed opportunities to prevent serious crashes....There is widespread failure of physicians' duty to inform authorities, despite mandatory laws."—Dr. Donald Redelmeier

What the law says

Section 203 of the Ontario Highway Traffic Act states that doctors are legally required to report to the Ministry of Transportation the name of any person *"…who, in the opinion of the medical practitioner, is suffering from a condition that may make it dangerous for the person to operate a motor vehicle."*

Why don't doctors report drivers-at-risk?

Although the ICES study did not address why doctors fail to comply with Ontario law, it did suggest some contributory factors, including:

- Doctors may be unclear about the guidelines and wording of the legislation.
- They may view the reporting of patients to outside authorities as a breach of trust.
- They may not have sufficient medical and other data to make an informed decision to evaluate driver risk.

Diabetes drug study influences safety guidelines

A recent ICES study led by Dr. Lorraine Lipscombe found that TZDs, a popular class of oral diabetes drugs such as Avandia, increased the risk of heart failure, heart attacks and death in the elderly. These findings have contributed to revisions in the recommendations regarding the use of TZDs by Health Canada.

Drugs intended to prevent heart complications actually increased their risk The study, which tracked all Ontario residents aged 66 years or older taking at least one oral diabetic medication, found a 60% relative increase in heart failure, a 40% relative increase in heart attacks and a 30% relative increase in death in patients taking a medication of this class of drugs. In the high-risk, older population, this translates into an estimated additional three episodes of heart failure, four heart attacks and five deaths for every 100 individuals taking these drugs over a four-year period—the very outcomes that diabetes treatments are intended to prevent.

ICES monitors real world drug safety using linked, multi-source health data

This study underscores the need for independent analysis of drugs once they have been approved for the marketplace. As the first ***real world*** population based study of its kind on these diabetes drugs, it allowed for ongoing surveillance in real patients, rather than in carefully monitored test subjects. The authors note that manufacturers are only required to demonstrate that diabetes medications lower blood sugar, but do not look at long-term effects. Dr. Lipscombe explains that ongoing safety monitoring of drug side-effects in larger, real world populations is vital.

Dr. Lipscombe's team linked population-based health information to anonymized records of individual diabetes patients and cross-referenced them with major clinical and administrative databases to track hospital visits and patient admissions for congestive heart failure, heart attacks and death. This approach gives a comprehensive view of the medications' effects.

Dr. Lorraine Lipscombe with patient

"These findings provide evidence from a real world setting that the harms of TZDs may outweigh their benefits."
—Dr. Lorraine Lipscombe

This study is available online in JAMA (The Journal of the American Medical Association)
http://jama.ama-assn.org/cgi/content/full/298/22/2634

Lipscombe LL, Gomes T, Lévesque LE, Hux JE, Juurlink DN, Alter DA. Thiazolidinediones and cardiovascular outcomes in older patients with diabetes. *JAMA.* 2007; 298(22):2634–2643.

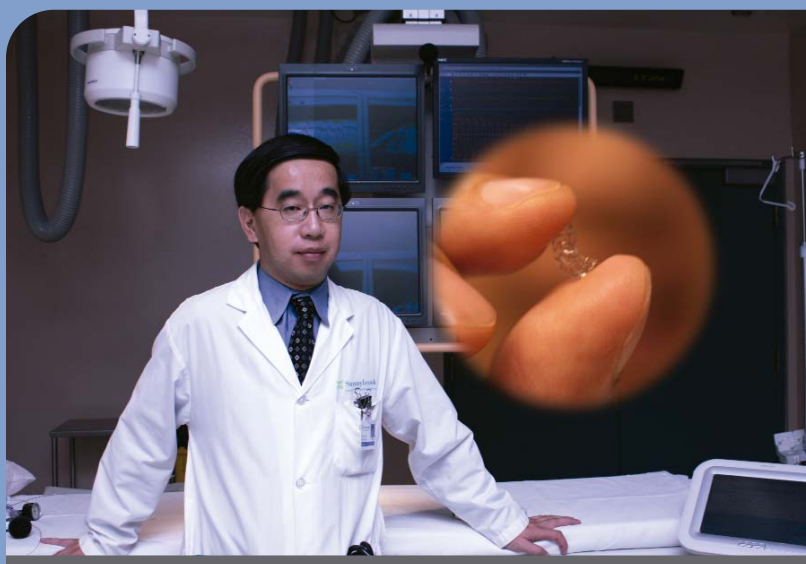
Clinical trials are often insufficient to detect less common adverse effects of drugs.

Definitive evidence guides selective use of drug-eluting heart stents

A recent ICES study led by senior scientist Dr. Jack Tu provided much-needed clarity on the effectiveness and safety of drug-eluting heart stents commonly used in angioplasty procedures. The study was done jointly with the Program for Assessment of Technology in Health (PATH) at McMaster University and the Cardiac Care Network (CCN) of Ontario. Since their introduction in 2003, there has been controversy and worldwide debate about the safety and potential complications of these medical devices. On average, approximately 20,000 angioplasties are performed in Ontario every year.

Patients at highest risk for re-narrowing of the artery benefit the most The ICES study found that drug-eluting stents are safe and most effective in reducing the need for repeat angioplasty or bypass surgery in patients who are at the highest risk for a re-narrowing of the artery, without significantly increasing their rate of death or risk of heart attack. Patients considered to be high-risk have a combination of factors: diabetes, small arteries and long blockages. For patients at lower risk, the study found minimal benefit from the drug-eluting stents.

Targeting drug-eluting stents for high-risk patients makes good medical sense and is also cost effective.



"Our study could be used to help clinicians determine whether a bare metal stent or drug-eluting stent is better for a particular patient."—Dr. Jack Tu

ICES' *real world* research informs choices for cardiologists and policy makers This study provided an evidence-based evaluation in real time by assessing a new medical intervention in its first two years of use. Dr. Tu's team linked data from the Cardiac Care Network's population-based angioplasty registry together with multiple clinical and administrative databases to establish a study population of 3,700 matched pairs of patients. This allowed researchers to tease out the effects of drug-eluting and bare metal stents.

The result provides strong evidence for cardiologists to determine which patients will benefit most from the drug-eluting stents versus those who will do well with the less costly bare metal stents.

The study is available online in The New England Journal of Medicine
http://content.nejm.org/cgi/content/full/357/14/1393

Tu JV, Bowen J, Chiu M, Ko DT, Austin PC, He Y, Hopkins R, Tarride JE, Blackhouse G, Lazzam Cohen EA, Goeree R. Effectiveness and safety of drug-eluting stents in Ontario. *New Engl J Med* 2007; 357(14):1393–1402.

All about stents

Heart stents are tiny mesh tubes that are used to keep arteries open after angioplasty, a procedure to prevent heart attacks by re-opening narrowed or blocked arteries. Two kinds of stents can be used:

1. Drug-eluting stents, which slowly release medication to prevent the artery from re-narrowing
2. Bare metal stents, which have no medication but act to support arterial walls widened with angioplasty. In use for 14 years, these stents are less than a third of the cost of the drug-eluting stents.

Neighbourhood health maps chart new directions to reduce diabetes risk

When Drs. Rick Glazier and Gillian Booth and their colleagues at ICES and St. Michael's Hospital began to collaborate in diabetes research, they wanted to study risk factors in a whole new way—by mapping neighbourhoods into a comprehensive atlas. Toronto was an ideal research setting, with 2.5 million people, one of the highest rates of diabetes in Ontario and a diverse population that includes recent immigrants from communities that are at an increased risk for diabetes. Toronto also has diverse levels of wealth and poverty.

Impact of Diabetes Atlas already evident

- Less than one year after its publication, Ontario's Ministry of Health and Long-Term Care incorporated the findings into the new province-wide Diabetes Strategy to identify areas with the greatest need for better access to information, programs and services.
- The Canadian Diabetes Association has now funded ICES to research the same link in York, Peel, Halton and Durham regions and in other major Ontario cities.

New ICES tools developed to measure key variables For three years, the ICES researchers mapped diabetes rates to key characteristics in Toronto's 140 neighbourhoods: where people were born, how long they had lived in Canada, whether they were employed and how much money they earned. Because the two variables known to prevent and reduce risk for diabetes are physical activity and healthy eating, which help people maintain a healthy weight, researchers developed original tools to measure these variables in each neighbourhood:

- The Activity-Friendliness Index (AFI) measured how favourable individual neighbourhoods were to walking, bicycling and other types of physical activity.
- The Healthy Resources Index (HRI) measured access to health care resources within neighbourhoods, such as diabetes treatment and education and the availability of fresh vegetables, fruit and other healthy food.

The Diabetes Atlas is available online at http://www.ices.on.ca

Glazier RH, Booth GL, Gozdyra P, Creatore MI, Tynan AM. Neighbourhood Environments and Resources for Healthy Living—A Focus on Diabetes in Toronto: ICES Atlas. Toronto: Institute for Clinical Evaluative Sciences; 2007.

"There has been a dramatic 69% rise in diabetes over the last decade and obesity is contributing to the onset of the disease."—Drs. Rick Glazier and Gillian Booth

The groundbreaking research had some striking results. When comparing Toronto's low-income, high-risk neighbourhoods, researchers found lower than expected rates of diabetes in downtown areas than in outlying areas. This was most likely because in downtown neighbourhoods, people can walk to services and have better access to public transit, recreation and health care facilities, and to healthy food.

There is a clear link between the risk of developing type 2 diabetes and where people live.

Mapping healthy resources and activity friendliness can support healthy urban planning

The study's finding that *where you live matters to your health* is significant news for health care decision-makers, policy makers and city planners. Investing in high-need communities has the potential to reduce the risk for obesity and diabetes.

ICES studies show… And tell so much.

✔ **Sleeping pill dependency common among elderly patients after hospital discharge**

Bell C, Fischer H, Gill S, et al. *J Gen Intern Med* 2007; 22(7):1024–1029.

✔ **Hospitals should examine pediatric asthma management strategies in EDs**

Guttmann A, Zagorski B, Austin P, et al. *Pediatrics* 2007; 120(6):e1402–e1410.

✔ **Improving quality of care in long-term care hospitals not always more costly**

Wodchis W, Teare G, Anderson G. *Med Care* 2007; 45(10):981–988.

✔ **Antipsychotics linked to increased risk of death in older adults with dementia**

Gill S, Bronskill S, Normand S-L, et al. *Ann Intern Med* 2007; 146(11):775–786.

✔ **Inpatient smoking cessation counselling is an underused intervention**

Van Spall H, Chong A, Tu J. *Am Heart J* 2007; 154(2):213–220.

✔ **Growth of cardiac technology is outpacing scientific evidence**

Singh S, Austin P, Chong A, Alter D. *Arch Intern Med* 2007; 167(8):808–813.


TORONTO STAR

Access to services vital

HOW TO LOWER DIABETES RATES

NATIONAL POST

Long-term use of Alzheimer's drugs questioned by study

The Medical Post

ER order sheets may reduce return visits for pediatric asthma patients

We're in the news—television, radio, print and online.

More telling evidence

- **Heart attack survivors who don't fill prescriptions increase risk of dying:** Four months after their heart attacks, 25% of patients had not yet filled all the prescriptions given to them upon discharge from hospital. These patients had an **80% higher chance of dying in the year following their heart attacks** vs. those who had filled all of their post-discharge prescriptions.
  Jackevicius C, Li P, Tu J. *Circulation* 2008; 117(8):1028–1036.

- **Gun- and knife-related injuries place burden on emergency departments (EDs):** In 2002–2003, **40,240 ED visits for trauma were related to guns and knives or sharp objects**; 1.5% of these visits were gun-related, and 26% of those required hospital admission. Male victims accounted for 65% of these trauma visits.
  Macpherson A, Schull M. *Can J Emerg Med* 2007; 9(1):16–20.

- **Flu vaccination rates have doubled, yet still fall short of national targets:** Although national flu vaccination rates rose from 15% in 1997 to 34% in 2005, the **target rate of 80% was not met for most high-risk groups**, including elderly adults and those with chronic conditions.
  Kwong J, Rosella L, Johansen H. *Health Reports* 2007; 18(4):9–19.

- **Colonoscopies done in doctors' offices or private clinics more likely to be incomplete:** Colonoscopies performed in a doctor's office or private clinic in Ontario were three times more likely to be incomplete than those done in a teaching hospital. Patients with an incomplete colonoscopy were older, more likely to be female, or have a history of prior abdominal or pelvic surgery.
  Shah H, Paszat L, Saskin R, Stukel T, Rabeneck L. *Gastroenterology* 2007; 132(7):2297–2303.

- **Recent immigrant women not receiving adequate cervical cancer screening:** Pap smears are recommended for all women aged 18 to 69 years. Only **37% of recent immigrant women in Toronto received Pap smears** compared to 61% of non-recent immigrants.
  Lofters A, Glazier R, Agha M, Creatore M, Moineddin R. *Prev Med* 2007; 44(6):536–542.

- **Ontario's Wait Time Strategy (WTS) has not affected other surgical procedure rates:** No significant decrease was observed in the rates of 27 "non-priority" surgery areas after the introduction of WTS in 2004. In fact, rates for a small number of non-priority orthopedic procedures may have increased since the start of the WTS.
  Paterson J, Hux J, Tu J, Laupacis A. *The Ontario Wait Time Strategy: No Evidence of an Adverse Impact on Other Surgeries.* ICES Investigative Report. Toronto: Institute for Clinical Evaluative Sciences; 2007.

- **Ezetimibe prescribing soars in the U.S. as compared with Canada:** Per capita spending on ezetimibe, a controversial cholesterol-lowering drug, was four times higher in the U.S. than in Canada in 2006. Canada's prohibition of direct to consumers drug advertising and conservative approach to the adoption of new drugs may save money and prevent wider use of new drugs with uncertain outcomes.
  Jackevicius C, Tu J, Ross J, Ko D, Krumholz H. *N Engl J Med* 2008; 358(17):1819–1828.

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YAHOO NEWS • GLOBE & MAIL • TORONTO STAR • NATIONAL POST • CANADIAN PRESS
MACLEAN'S MAGAZINE • NEW YORK TIMES • WASHINGTON POST • HEALTH QUARTERLY
WALL STREET JOURNAL • FORBES • SCIENTIFIC AMERICAN • THE GUARDIAN (UK)
NATIONAL REVIEW OF MEDICINE • BLOOMBERG

2007/08

World-class researchers

ICES scientists are internationally recognized leaders. —David Henry

- **Abdullah Alguwaihes** (supervisor Baiju Shah) was awarded a Trainee Travel Award from the Banting and Best Diabetes Centre, University of Toronto.
- **Clare Atzema** received a 2007 Clinician Scientist Award from the Heart and Stroke Foundation of Ontario and was awarded a Canadian Cardiovascular Outcomes Research Team research fellowship.
- **Peter Austin** was awarded a five-year Career Investigator Award from the Heart and Stroke Foundation of Ontario for his work on statistical methods.
- **Eric Benchimol** (supervisors Astrid Guttmann and Teresa To) was the first non-American to receive the Fellow to Faculty Transition Award in Inflammatory Bowel Diseases from the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition and the Children's Digestive Health and Nutrition Foundation.
- **Arlene Bierman** received a Most Outstanding Abstract Award at the AcademyHealth annual meeting and was appointed Chair of the Performance Measurement Advisory Board of the Ontario Health Quality Council.
- **Vivek Goel**, ICES scientist emeritus, was named founding President and CEO of the Ontario Agency for Health Protection and Promotion.
- **Dan Hackam** (supervisor David Alter) was awarded the Thomas and Edna Naylor Memorial Award by the University of Toronto for best thesis in the field of health services research.
- **Doug Manuel** was awarded a Canadian Institutes of Health Research Chair in Applied Public Health Research for his work on population health impact intervention assessment tools.
- **Laura Park-Wyllie, David Juurlink, Alex Kopp, Baiju Shah, Thérèse Stukel, C. Stumpo, L. Dresser, D. Low** and **Muhammad Mamdani** received the 2006 Best Publication Award from The Canadian Society for Clinical Pharmacology for their paper "Outpatient gatifloxacin therapy and dysglycemia in older adults."
- **Linda Rabeneck** was awarded the distinction of Master of the American College of Gastroenterology. As well, Dr. Rabeneck was the Honoree at Colon Cancer Canada's 6th Annual Gala of Hope.
- **Donald Redelmeier** was honoured with the 2008 Wightman Visiting Professorship in Medicine by The Royal College of Physicians and Surgeons of Canada.
- **Laura Rosella** (supervisor Doug Manuel) received the Population and Public Health Student Award (PhD Level) from the Canadian Public Health Association.
- **Damon Scales** (supervisor Donald Redelmeier) received the Claire Bombardier Award for Most Promising PhD Researcher in the Clinical Epidemiology Program at the University of Toronto.
- **Michael Schull** received the 2007 Goldie Award from the University of Toronto's Department of Medicine as the faculty member who has made significant contributions to research in their first 10 years as faculty.
- **Baiju Shah, Gillian Booth and R. Retnakaran** received the Michaela Modan Memorial Award from the American Diabetes Association.
- **Thérèse Stukel** was named a Fellow of the American Statistical Association for her outstanding contribution to statistical work.
- **Thérèse Stukel, David Alter and Marian Vermeulen** authored a paper with U.S. collaborators E. Fisher, D. Wennberg and D. Gottlieb that was nominated by The *Lancet* as its 2007 Paper of the Year. "Analysis of observational studies in the presence of treatment selection bias: effects of invasive cardiac management on AMI survival using propensity score and instrumental variable methods" was published in *JAMA*.
- **Teresa To** received the University of Toronto's Dales Award for Medical Research. The award recognizes an investigator whose work has had a substantive impact in the areas of clinical, community or basic health research.
- **John You** received a 2007 Career Scientist Award from the Ontario Ministry of Health and Long-Term Care.
- **Merrick Zwarenstein** was appointed inaugural Chair of the Centre for Health Services Sciences at Sunnybrook Health Sciences Centre.

"The most striking single strength of ICES is the quality of its people. I have never worked with such a smart and committed group of individuals."—David Henry

Photography: Nadia Gunraj and Laura Benben

3,000	**Unique website visitors per week**
90	**Staff**
85	**Researchers/scientists**
51	**Trainees**
30+	**Major research partnerships**
30	**Journal publications *per week* that cite ICES research**
$4	**The amount that every dollar invested in ICES generates in additional peer-reviewed funding to Ontario research institutions**

1) Alex Glinka, Senior Application Developer; 2) Student Centre—Toronto; 3) ICES-Queen's [L: Weidong Kong, Patti Groome, Marlo Whitehead, Susan Rohland, Lori van Wynsberghe]; 4) Pam Slaughter, Chief Privacy Officer 5) Peter Gozdyra, Medical Geographer; 6) Jeanette Tedford, Receptionist; 7) Jan Hux, Chief Operating Officer (Interim CEO) and Senior Scientist; 8) ICES Staff—Toronto

AUDITORS' REPORT ON SUMMARIZED FINANCIAL STATEMENTS

To the Board of Directors of
The Institute for Clinical Evaluative Sciences… *The accompanying summarized statements of financial position, operations and cash flows are derived from the complete financial statements of the Institute for Clinical Evaluation Sciences as at March 31, 2008 and for the year then ended on which we expressed an opinion without reservation in our report dated June 19, 2008. The fair summarization of the complete financial statements is the responsibility of management. Our responsibility, in accordance with the applicable Assurance Guideline of The Canadian Institute of Chartered Accountants, is to report on the summarized financial statements.*

In our opinion, the accompanying financial statements fairly summarize, in all material respects, the related complete financial statements in accordance with the criteria described in the Guideline referred to above. These summarized financial statements do not contain all the disclosures required by Canadian generally accepted accounting principles. Readers are cautioned that these statements may not be appropriate for their purposes. For more information on the entity's financial position, results of operations and cash flows, reference should be made to the related complete financial statements.

PricewaterhouseCoopers LLP

Chartered Accountants, Licensed Public Accountants
Toronto, Canada
June 19, 2008

TWO-YEAR HISTORICAL SUMMARIZED FINANCIAL DATA

Statement of Financial Position

As at March 31, 2008

	2008			2007		
	Capital and Operating Fund $	Restricted Fund $	Total $	Capital and Operating Fund $	Restricted Fund $	Total $
Assets						
Current assets						
Cash	48,607	7,551,811	7,600,418	474,326	4,253,817	4,728,143
Accounts receivable	705,696	877,919	1,583,615	997,846	-	997,846
Prepaid expenses	55,809	57,826	113,635	20,449	44,009	64,458
	810,112	8,487,556	9,297,668	1,492,621	4,297,826	5,790,447
Property, plant and equipment	598,123	-	598,123	730,710	-	730,710
	1,408,235	**8,487,556**	**9,895,791**	**2,223,331**	**4,297,826**	**6,521,157**
Liabilities and Deferred Amounts						
Current liabilities						
Accounts payable and accruals	505,309	-	505,309	460,690	-	460,690
Due to Sunnybrook Health Sciences Centre	256,703	-	256,703	541,181	-	541,181
	762,012	-	762,012	1,001,871	-	1,001,871
Post-retirement benefits other than pensions	48,100	-	48,100	32,400	-	32,400
Deferred operating grant	-	-	-	458,350	-	458,350
Deferred capital grant	598,123	-	598,123	730,710	-	730,710
Deferred expense grants	-	8,487,556	8,487,556	-	4,297,826	4,297,826
	1,408,235	**8,487,556**	**9,895,791**	**2,223,331**	**4,297,826**	**6,521,157**

Full audited statements are available upon request.

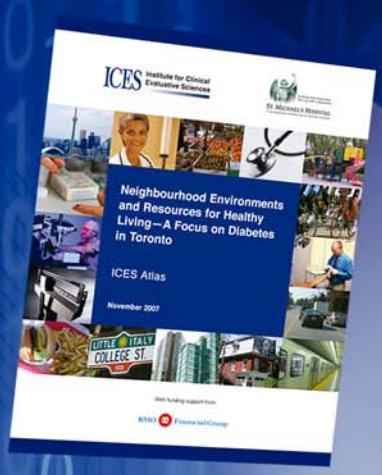
For the year ended March 31, 2008

Statement of Operations

	Capital and Operating Fund		Restricted Fund		Total	
	2008 $	2007 $	2008 $	2007 $	2008 $	2007 $
Revenue						
Grants-operating	5,562,591	5,517,023	-	-	5,562,591	5,517,023
Interest income	47,197	57,297	-	-	47,197	57,297
Other income	4,142,864	3,047,799	-	-	4,142,864	3,047,799
Amortization of deferred expense grants	-	-	6,168,836	5,399,025	6,168,836	5,399,025
	9,752,652	**8,622,119**	**6,168,836**	**5,399,025**	**15,921,488**	**14,021,144**
Expenditures						
Salaries and benefits	7,545,620	6,339,281	3,164,553	3,585,224	10,710,173	9,924,505
Consultative services	515,091	629,752	2,400,146	1,230,837	2,915,237	1,860,589
Computer supplies and software	218,036	186,575	149,712	65,995	367,748	252,570
Office and general	326,023	309,591	215,264	294,279	541,287	603,870
Travel	25,455	42,631	90,640	89,296	116,095	131,927
Amortization of property, plant and equipment	310,087	294,291	-	-	310,087	294,291
Professional	57,895	54,383	12,458	13,306	70,353	67,689
Administrative	406,293	392,183	81,435	78,749	487,728	470,932
Other	348,152	373,432	54,628	41,339	402,780	414,771
	9,752,652	**8,622,119**	**6,168,836**	**5,399,025**	**15,921,488**	**14,021,144**
Excess of revenue over expenditures for the year	**-**	**-**	**-**	**-**	**-**	**-**

Statement of Cash Flows

Cash provided by (used in)						
Operating activities						
Items not affecting cash						
Increase in post-retirement benefits other than pensions	15,700	14,700	-	-	15,700	14,700
Increase (decrease) in deferred operating grant	(458,350)	458,350	-	-	(458,350)	458,350
Amortization of deferred capital grant	(132,587)	(294,291)	-	-	(132,587)	(294,291)
Amortization of deferred expense grants	-	-	(6,168,836)	(5,399,025)	(6,168,836)	(5,399,025)
Transfer from deferred expense grant	-	-	(138,366)	(86,548)	(138,366)	(86,548)
Amortization of property, plant and equipment	132,587	294,291	-	-	132,587	294,291
Change in non-cash working capital	16,931	(379,541)	(891,736)	(44,009)	(874,805)	(423,550)
	(425,719)	**93,509**	**(7,198,938)**	**(5,529,582)**	**(7,624,657)**	**(5,436,073)**
Investing activities						
Transfer from operating grant to deferred capital grant	177,500	97,177	-	-	177,500	97,177
Purchase of property, plant and equipment	(177,500)	(97,177)	-	-	(177,500)	(97,177)
	-	**-**	**-**	**-**	**-**	**-**
Financing activities						
Deferred grants received plus interest income	-	-	10,496,932	5,403,603	10,496,932	5,403,603
Increase (decrease) in cash for the year	(425,719)	93,509	3,297,994	(125,979)	2,872,275	(32,470)
Cash—Beginning of year	474,326	380,817	4,253,817	4,379,796	4,728,143	4,760,613
Cash—End of year	48,607	474,326	7,551,811	4,253,817	7,600,418	4,728,143



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