Strengthening
Research Capacity

ANNUAL REPORT 2010

Canada's Leading Health Services Research Institute

ICES Institute for Clinical Evaluative Sciences

STRENGTHENING RESEARCH CAPACITY

ICES creates and shares knowledge to enhance the effectiveness of Ontario's health system and promote better health for Ontarians.

Population-based health research that makes a difference

ICES research provides insight on a broad range of topics and issues (see green sidebar). The Institute conducts well over 300 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 consisting of statisticians and epidemiologists, as well as specialists in knowledge translation, 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

To obtain a comprehensive picture of health care issues, 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 clinical and administrative databases.

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 clinicians, governments and health care planners.

Growing partnerships with Canada's leading institutions

ICES is located on the campus of Sunnybrook Health Sciences Centre in Toronto, at Queen's University in Kingston (ICES@Queen's) and at the Ottawa Hospital Research Institute (ICES@uOttawa). Additional partnerships have been established with the University of Toronto, the Lawson Health Research Institute in London, Ontario and other sites across Ontario (see page 2).

CONTENTS

ICES research covers the issues facing Ontario's health system

- Aging
- Asthma
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- Health Resources
- Health Policy
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- Immigrant Health
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- Pharmaco-epidemiology
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- Screening
- Social Determinants
- Stroke
- Surgery
- Vaccination
- Wait Times
- Women's Health

Strengthening Research Capacity to Inform Ontario's Health System

With over 200 faculty and staff and more than 150 projects underway at any given time, ICES has vast amounts of anonymous data to sift through, including 17 years of data on every hospitalization, physician appointment and publicly funded drug claim in the province. Each month, an additional 20 million physician claims for patient services are added to the system.

MESSAGE FROM THE PRESIDENT AND CEO

The work we do at ICES provides unique scientific insights to help policy makers, managers, planners, practitioners and other researchers. Our impartial research findings and recommendations—profiled in our atlases and investigative reports, and published in the leading peer-reviewed scientific journals—are used to guide decision-making and inform changes in health care delivery.

Despite challenges and changes in the last year, I am pleased to report that the substantial growth ICES experienced this past year has helped to strengthen our research capacity.

Highlights of our major achievements in 2009/10 include:

- A new ICES campus: The opening of the ICES@uOttawa site builds on existing strengths in many fields, including population health and evidence-based medicine. Site director Dr. Carl Van Walraven and the staff and faculty at the Ottawa Hospital Research Institute have made a great start towards developing a very productive facility. I must also acknowledge Dr. Jeremy Grimshaw, director of the Institute's clinical epidemiology program and the Canadian Cochrane Centre, who was instrumental in creating the Ottawa site.

- An impressive amount of research: ICES scientists and staff produced more than 200 peer-reviewed papers covering a wide array of topics, which were published in major national and international journals in 2009/10. Our findings not only benefitted Ontarians but contributed significantly to the international body of health knowledge, for example, in the area of drug safety and effectiveness. (See pages 5-10 for selected research highlights.)

- An expanded research program: We continued the expansion of our research program to include mental health and addictions, child health, respiratory and musculoskeletal theme groups and an increased emphasis on population health and health systems research.

- New partnerships: We established relationships with the Chiefs of Ontario and the Métis Nation of Ontario, which will enable us to work collaboratively to report on the health of Aboriginal peoples in Ontario.

- Increased communications: We shared our work with many different constituencies—we hosted our 11th annual data symposium, issued more than 40 media releases, and delivered more than 100 presentations to local, national and international audiences.

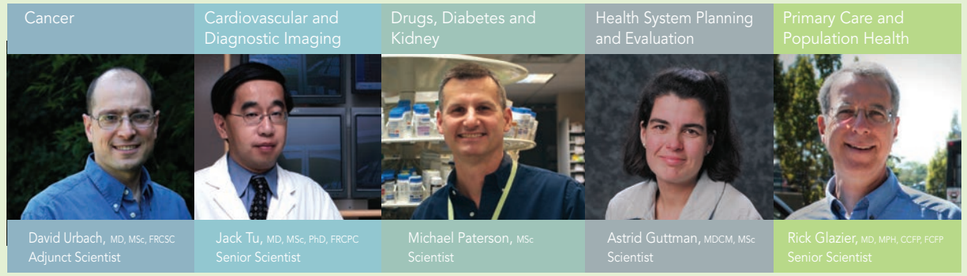
While this report is a chance to look back at recent accomplishments, I am also excited about what lies ahead. In the next year, we look forward to opening ICES satellite sites at the University of Toronto and the University of Western Ontario, both of which represent significant opportunities for research and teaching.

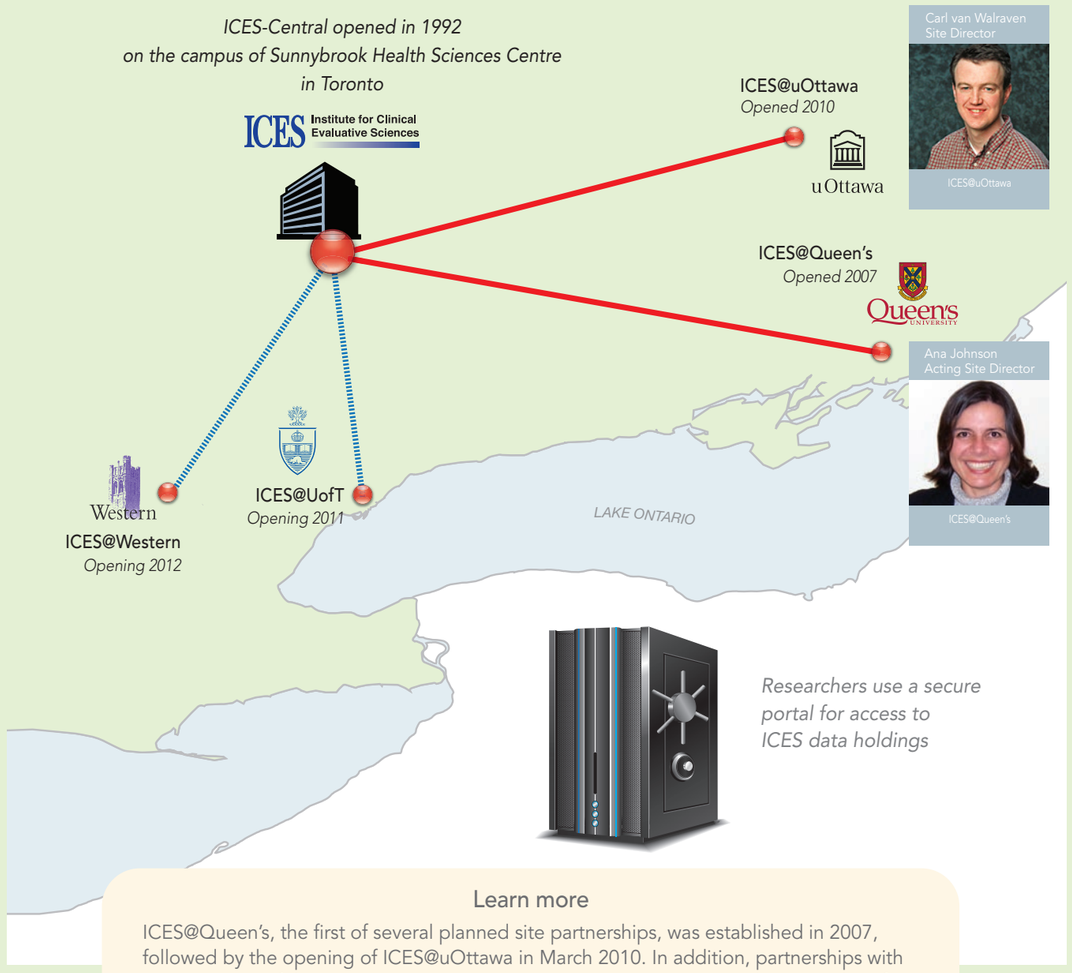
I would like to thank Brian Golden, who completed his term as Chair of the ICES Board of Directors in 2010. Brian helped guide ICES through a period of rapid growth, and I am very grateful for his support and counsel during that period. We are fortunate indeed to have Mark Rochon as the new Chair of the ICES Board, and we look forward to working with him and the Board.

Lastly, I would like to thank the ICES staff for their dedication and productivity. Their efforts demonstrate ICES' ongoing commitment to quality research that aims to improve the health of Ontarians.

Dr. David Henry, President and CEO

Expanding Partnerships with Ontario's Leading Research Institutions





Learn more

ICES@Queen's, the first of several planned site partnerships, was established in 2007, followed by the opening of ICES@uOttawa in March 2010. In addition, partnerships with the University of Toronto, the Lawson Health Research Institute—a research institute of London Health Sciences Centre, St. Joseph's Health Care and the University of Western Ontario—and other sites across Ontario are in process. The network will provide increased access to a broad variety of data to support health services research across Ontario.

MESSAGE FROM THE CHAIR, BOARD OF DIRECTORS

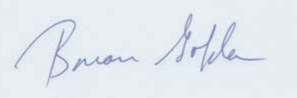
As I leave the ICES Board of Directors after six years of service, including five as Chair, I am struck by the magnitude of growth and change that ICES has experienced during that period.

ICES has continued to increase and strengthen its scientific capacity and expertise to conduct cutting-edge research, analysis and evaluation. We have created more comprehensive research resources by actively seeking out new datasets and have expanded existing science programs and services to reflect burden of disease and health services priorities.

To enhance the relevance and impact of our work, we have strived to align our external communications with important stakeholder needs and key ICES outputs. We have accomplished this alignment through our ongoing engagement with the Ministry of Health and Long-Term Care, Ontario's 14 Local Health Integration Networks and a multitude of partners.

During an era which demands greater accountability, we have endeavoured to improve the governance of ICES, including our board structures and processes. Good governance has been particularly important as we have expanded the virtual and physical footprints of ICES to our new campuses. This expansion, which is ongoing, has both greatly leveraged Ontario's investment in ICES and provided ICES with access to world-class Ontario researchers who previously were not part of our organization.

I would like to thank the many individuals and partner organizations who have generously supported the mission and activities of ICES—one of the world's premier health services research institutes. I consider my time on the ICES Board to have been a tremendous privilege and honour and am proud of the foundation for growth and collaboration that we have helped to build. I am confident that as I step down, ICES will stay on its proven trajectory to have significant local, national and international impact.



A corporate board guides ICES operations.

Board Membership for 2009/10

Chair
Brian Golden, PhD
Sandra Rotman Chair in Health Sector Strategy at the University of Toronto & the University Health Network; Professor of Strategic Management, Rotman School of Management; Executive Director, Collaborative for Health Sector Strategy

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

Directors

Dr. Michael Baker,
Rose Family Chair in Medicine, University Health Network; Professor of Medicine, University of Toronto; Executive Lead, Patient Safety, Ministry of Health and Long-Term Care

Mr. John Callaghan,
Partner, Gowling Lafleur Henderson LLP

The Hon. Elinor Caplan,
Former Ontario Minister of Health and Federal Minister of Citizenship and Immigration, and National Revenue

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

Dr. Carol Herbert,
Dean, Schulich School of Medicine and Dentistry, University of Western Ontario

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

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

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

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

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

Welcome to cd-link

New data release mechanism

As a major initiative of the **Ontario Institute for Cancer Research (OICR)/Cancer Care Ontario (CCO)** Health Services Research Program, in 2010 ICES scientist **Dr. Craig Earle** launched the **Ontario Cancer Data Linkage Project (cd-link).** This new innovation is a precursor to wider distribution of anonymized or encrypted data by ICES.

What is cd-link?

Datasets relevant to cancer research are created on disk and sent to investigators at Ontario academic institutions.

How does it work?

- Investigator submits a brief proposal
- Application is reviewed by ICES Cancer Program members for **privacy and feasibility**
- Investigator works with an analyst to define a dataset creation plan, **removing and scrambling identifiers**
- Dataset is evaluated with the **Privacy Analytics Risk Assessment Tool (PARAT)**
- Variables are modified to ensure that there are at least three and preferably five patients in the dataset with the same characteristics
- The final product is **risk-reduced de-identified data**

Available datasets include:

- CIHI–Discharge Abstract Database (DAD)
- CIHI–National Ambulatory Care Reporting System (NACRS)
- Home Care Database
- Ontario Drug Benefit Claims (ODB)
- Ontario Health Insurance Plan Claims Database (OHIP)
- CytoBase (Cervical Screening)
- Ontario Breast Screening Program (OBSP)
- Ontario Cancer Registry Information System (OCRIS)
- Registered Persons Database (RPDB)

Partnerships with:

Ontario Institute for Cancer Research
science → discoveries → solutions

cancer care ontario
action cancer ontario

Dr. Craig Earle, *Ontario Cancer Data Linkage Project (cd-link).*

inTool

instant • interactive • information

inTool is a web-based reporting tool providing **in**stant **in**teractive **in**formation on a variety of health topics. The application draws on ICES-developed knowledge and provides information at the provincial, regional and local level in a variety of formats, including graphs, tables and interactive maps. Posted information can be exported for many purposes, and PowerPoint slides are available for presentations and planning documents.

This past year, ICES application developers and epidemiologists have been working behind the scenes to create an enhanced version of **inTool**, allowing more regular posting of new topics and updates.

Health topics include:

- Access to health services
- Asthma
- Cancer surgery
- Cerebrovascular disease (including stroke)
- Chronic obstructive pulmonary disease
- Congestive heart failure
- Diabetes
- Diagnostic services
- Dialysis services
- Primary care

Studies that focus on access and quality of care issues

Quality and access continue to be critical issues facing our health care system. Patients, providers and policymakers all want to know that the system is delivering timely and high-quality care. Research from ICES is a key resource for measuring and monitoring health care quality and access in the province.

- ICES researchers developed Canada's first quality index for emergency departments. The tool assesses 48 evidence-based measures and can be used to evaluate and compare the quality of care in emergency departments.

Application of the quality index in Ontario emergency departments showed that the initial patient assessment was commonly found to be inadequate often leading to delays in critical tests and life-saving treatment for heart attack patients. "In our study, we observed that half of patients who were ultimately found to be having a heart attack were given a lower-priority triage score when they arrived at an emergency department in Ontario. What's most worrisome is that these patients were more likely to suffer delays in the diagnosis of their heart attack and in receiving clot-busting drugs," said lead researcher Dr. Clare Atzema.

- Another ICES study, led by Dr. Jack Tu, explored whether public report cards of hospital performance are an effective

method for improving the quality of cardiac care for patients. The published findings, named "Article of the Year" by the Canadian Institutes of Health Research/Institute of Health Services and Policy Research, reported that one in four Ontario hospitals changed cardiac care policies after public report cards were released.

- Three key hospital management markers were associated with improved survival rates and a reduced number of readmissions for heart attack patients across Ontario:
  - ✓ appropriate initial emergency department assessment,
  - ✓ high rates of appropriate cardiac drug prescribing at patient discharge, and
  - ✓ high rates of cardiac revascularization.

"We studied the 77 largest hospitals in Ontario and found vast differences in quality and outcomes among these hospitals; in fact, a patient's chances of dying or having another heart attack was more than doubled, depending on where they were treated," said study lead, Dr. Thérèse Stukel.

Problems after discharge are predictable

Dr. Carl van Walraven and his ICES@uOttawa research team developed the LACE index, a simple tool to predict the probability that a patient discharged from hospital to the community will die or be unexpectedly readmitted within 30 days. The acronym **LACE: L**ength of stay in hospital, **A**cuity of admission (whether or not it was through the emergency department), **C**omorbidity (based on the presence of other chronic diseases) and **E**mergency room utilization (number of visits in the previous six months), captures the predictive factors which are used to generate an index score.

"Many patients face serious health challenges in the weeks following discharge from hospital," said Dr. van Walraven. "This tool is an important step toward identifying those who are most at risk, so that we can address their health problems earlier and prevent serious complications."

- *What Makes a Healthy Province?* This report by Dr. Doug Manual found that although Ontarians are not the healthiest Canadians, that could change if the province follows lessons learned by other provinces and countries. "Quebec was identified as a leader, not because the health of its citizens is better than Ontario's, but because their health is rapidly improving," said Dr. Manuel. "Quebec's life expectancy will surpass Ontario's within the next 10 to 15 years for the first time since life expectancy has been recorded in Canada."

Dr. Jack Tu

Dr. Clare Atzema

Dr. Thérèse Stukel

Dr. Doug Manuel

Dr. Carl van Walraven

Drug safety – alerting patients to potential problems

ICES research on drug safety provides necessary information about drug effectiveness, as well as any unintended negative consequences or drug interactions. In the last year, ICES researchers have identified several dangerous drug side effects and interactions and brought this vital information to the attention of the Canadian public.

Dr. David Juurlink joined forces with Public Citizen, an American-based consumer group, to call on the U.S. Food and Drug Administration to stop a large international clinical trial comparing the popular diabetes medications rosiglitazone (Avandia®) and pioglitazone (Actos®). Dr. Juurlink and colleagues found that rosiglitazone is associated with a higher risk of heart failure and death than pioglitazone, thus making it unethical to proceed with the trial.

ICES researchers also found that Paxil®, an antidepressant commonly prescribed to women with breast cancer, can reduce or even negate the effects of the breast-cancer drug tamoxifen and increase a woman's risk of death.

Another ICES study observed that deaths related to narcotic pain relievers have doubled since 1991. Researchers were able to link the introduction of OxyContin® in 2000 to a five-fold increase in deaths.

Dr. David Juurlink

"Patients and doctors may not fully appreciate the potential danger of these narcotic pain relievers, particularly when they are taken in combination with other sedating drugs or alcohol," said Dr. Juurlink.

HEALTHY PAPERS

- Association between tamsulosin and serious ophthalmic adverse events in older men following cataract surgery.
  JAMA, 2009.
- Adverse cardiovascular events during treatment with pioglitazone and rosiglitazone: population based cohort study.
  CMAJ, 2009.
- Prescribing of opioid analgesics and related mortality before and after the introduction of long-acting oxycodone.
  Arch Intern Med, 2009.
- How to ascertain drug safety in the context of benefit. Controversies and concerns.
  J Rheumatol, 2009.
- Selective serotonin reuptake inhibitors and breast cancer mortality in women receiving tamoxifen: a population based cohort study.
  BMJ, 2010.

How chronic disease impacts Ontarians

Chronic disease remains the leading cause of death and disability in Ontario but there is great potential to improve health outcomes and reduce disease burden. Over the past year, ICES research provided a detailed look at how certain diseases impact Ontarians and affect their use of the health care system:

- More Ontario children are being diagnosed with diabetes than their American counterparts. Researchers found an alarming three percent increase per year in the rate of diabetes in Ontario children during a 10-year span.

- Examining the financial impact of diabetes, ICES researchers projected that the total cost of blood glucose test strips for older Ontarians would exceed $500 million by 2013. Test strips were found to be the third largest cost for the Ontario Public Drug Program in 2007/08. According to the researchers, the routine use of blood glucose test strips may not improve outcomes and quality of life among most adults with type 2 diabetes who are being treated with oral hypoglycemic agents.

- Recent immigrants to Ontario have a 30 percent lower risk of stroke than long-term residents. New immigrants also showed a lower rate of hypertension – 14 percent of the new immigrants suffered from hypertension as compared to 18 percent of long term residents.

"We need to do further research but the study points to the need for policies that aim to preserve the healthier state of new immigrants while continuing to focus on lowering stroke risk among all adults," said research lead Dr. Gustavo Saposnik.

"It is concerning that we are seeing more children in Ontario diagnosed with diabetes. We need to better understand why this is happening and ensure that adequate healthcare resources are available to diagnose and treat these children and youth," said lead researcher Dr. Astrid Guttmann.

Dr. Astrid Guttmann

Dr. Gustavo Saposnik

Tara Gomes

Pregnancy studies assess quality of care and outcomes

How care is provided during pregnancy and the outcomes of pregnancy are both important markers of how well a health system functions. Several ICES studies over the past year focused on how well Ontario's system is doing in caring for pregnant women:

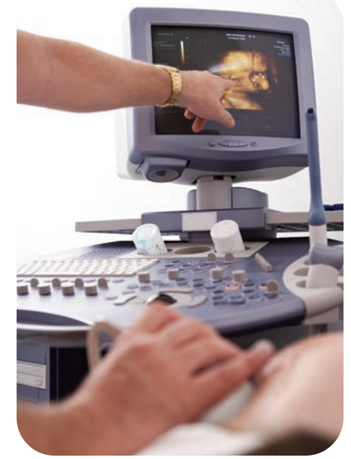
- Pregnant women with mildly abnormal blood sugar levels are 2.5 times more likely to develop type 2 diabetes later in life compared to those who have normal glucose levels.

"While the benefits of prenatal ultrasound in high-risk pregnancies may be clear, the value of repeat ultrasounds in low-risk patients is not," said lead researcher Dr. John You.

According to Dr. Baiju Shah, "Even a mild abnormality in glucose testing during pregnancy is associated with an increased risk of diabetes later in life. Although we already know that women who've had gestational diabetes need to be monitored, the study suggests that even women with mild glucose abnormalities might benefit from diabetes prevention and detection strategies."

- Those same pregnant women are also at higher risk of developing hypertension, high cholesterol and cardiovascular disease.

- Prenatal ultrasonography was found to have increased 55 percent between 1996 and 2006, even for low-risk pregnancies.



Dr. Baiju Shah

Dr. John You

How do income and education affect health?

Social and economic conditions of life—the so-called social determinants of health—are critical factors in shaping the health of Canadians. These determinants not only have a direct impact on health but they may also influence access to health services—even in a publicly-funded system. ICES researchers have studied how income and education affect the quality of care that Ontarians receive.

- Psychiatric care in Ontario is fully covered by provincial health insurance, but despite this, highly educated Ontarians have better access to psychiatrists than those who are less well educated.

"A significant portion of users of psychiatric services find ways to directly access psychiatric care without being referred by their family doctors. This gets them specialty care faster. The worry is that the people who are most likely to be able to navigate the system in this way are the people who are least likely to need fast access to a specialist. Socially disadvantaged groups, such as the homeless or at-risk youth, who need more help more urgently are getting less help and more slowly," said researcher Dr. Leah Steele.

- Mortality declined by more than 30 percent in patients with diabetes between 1995 and 2006 in Ontario. People from lower income neighbourhoods, however, experienced a significantly smaller improvement compared to their counterparts from wealthier neighbourhoods. In fact, the research shows that the mortality ratio between those aged 30 to 64 in the lowest and the highest income groups widened by more than 40 percent.

"Our findings illustrate the widening impact of income on the health of diabetes patients," said researcher Dr. Lorraine Lipscombe. "Even in Canada, where much of health care is universally funded, income-based inequities in health and access to care remain."

- Cardiovascular disease is increasing in adults of lower socioeconomic status, despite recent trends which show that cardiovascular disease is declining in Canada overall. Untreated cardiovascular disease can lead to death, and is the most common cause of hospitalization in North America.

Dr. Leah Steele

Dr. Lorraine Lipscombe

How does gender affect health?

The POWER (Project for an Ontario Women's Health Evidence-Based Report) study is the first study in Ontario to provide a comprehensive overview of women's health in relation to the impact of gender, income, education, ethnicity and geography.

The POWER study reports on indicators of population health and health system performance. Policymakers and health care providers can use the study's findings to improve access, quality and outcomes of care for Ontario women. "Ensuring all Ontarians have equal access to care is important if we want to improve the health and well-being of men and women across the province," said study leader Dr. Arlene Bierman. "We need to better serve the growing health care needs of this community and reduce barriers to care to improve health outcomes."

Dr. Arlene Bierman

Key POWER study findings include:

- Low-income women are the most disadvantaged group because they battle more chronic disease and disability than women and men in higher income groups.
- Screening rates for breast and cervical cancers remain below provincial targets, despite the existence of long-standing screening programs.
- Less than 50 percent of all Ontario women with abnormal Pap tests receive recommended and potentially life-saving follow-up care. Low-income women are less likely to be screened for cancer compared to their high-income counterparts.
- Ontario women who have heart attacks are less likely than men to receive care from a cardiologist, be referred for angiography or be prescribed cholesterol-lowering drugs.
- South and West Asian and Arab women report the most difficulty in finding a doctor and getting an appointment.

"While we knew that these inequities existed, we were quite startled by how large the gap was among different groups of women. The good news is, much can be done to close this gap," said Dr. Bierman.

To the Board of Directors of
Institute for Clinical Evaluative Sciences

We have audited the statement of financial position of the **Institute for Clinical Evaluative Sciences as at March 31, 2010** and the statements of operations and cash flows for the year then ended. These financial statements are the responsibility of the Institute's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these financial statements present fairly, in all material respects, the financial position of the Institute as at March 31, 2010 and the results of its operations and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.

PricewaterhouseCoopers LLP

Chartered Accountants, Licensed Public Accountants
Toronto, Canada—June 21, 2010

Statement of Financial Position

As at March 31, 2010

(in thousands of dollars)

	General Fund		Restricted Fund		Total	
	2010 $	2009 $	2010 $	2009 $	**2010 $**	2009 $
Assets						
Current assets						
Cash	655	689	9,234	11,059	**9,889**	11,748
Accounts receivable	953	434	-	236	**953**	670
Prepaid expenses	141	87	72	73	**213**	160
Due from Sunnybook Health Sciences Centre	-	193	-	-	**-**	193
	1,749	1,403	9,306	11,368	**11,055**	12,771
Capital and intangible assets	977	1,102	-	-	**977**	1,102
	2,726	2,505	**9,306**	11,368	**12,032**	13,873
Liabilities and Deferred Amounts						
Current liabilities						
Accounts payable and accrued liabilities	1,619	1,330	-	-	**1,619**	1,330
Due to Ministry of Health and Long-Term Care	-	-	1,084	172	**1,084**	172
Due to Sunnybrook Health Sciences Centre	36	-	-	-	**36**	-
	1,655	1,330	1,084	172	**2,739**	1,502
Post-employment benefits other than pensions	94	73	-	-	**94**	73
Deferred capital grant	977	1,102	-	-	**977**	1,102
Deferred expense grants	-	-	8,222	11,196	**8,222**	11,196
	2,726	2,505	**9,306**	11,368	**12,032**	13,873

Full audited statements are available upon request.

Statement of Operations

For the year ended March 31, 2010

(in thousands of dollars)

	General Fund		Restricted Fund		Total	
	2010 $	2009 $	2010 $	2009 $	**2010 $**	2009 $
Revenue						
Grants - operating	6,024	6,420	-	-	**6,024**	6,420
Interest income	5	27	-	-	**5**	27
Other revenue	4,417	3,898	-	-	**4,417**	3,898
Amortization of deferred capital grant	295	277	-	-	**295**	277
Amortization of deferred expense grants	-	-	8,792	9,993	**8,792**	9,993
	10,741	10,622	**8,792**	9,993	**19,533**	20,615
Expenditures						
Employee costs	9,945	9,384	3,440	3,061	**13,385**	12,445
Contracted services	277	82	4,208	4,124	**4,485**	4,206
Information, technology and security	519	226	105	270	**624**	496
Office and general	416	623	190	338	**606**	961
Amortization of capital and intangible assets	295	277	-	-	**295**	277
Professional	215	203	849	2,199	**1,064**	2,402
Premises	426	437	-	1	**426**	438
	12,093	11,232	**8,792**	9,993	**20,885**	21,225
Deficiency of revenue over expenditures for the year	(1,352)	(610)	**-**	-	**(1,352)**	(610)
Transfer from Indirect Cost Fund	**1,352**	610	**-**	-	**1,352**	610
Excess of revenue over expenditures for the year	**-**	-	**-**	-	**-**	-

Statement of Cash Flows

For the year ended March 31, 2010

(in thousands of dollars)

	General Fund		Restricted Fund		Total	
Cash provided by (used in)	2010 $	2009 $	2010 $	2009 $	**2010 $**	2009 $
Operating activities						
Items not affecting cash						
Increase in post-employment benefits other than pensions	21	25	-	-	**21**	25
Amortization of deferred capital grant	(295)	(277)	-	-	**(295)**	(277)
Amortization of deferred expense grants	-	-	(8,792)	(9,993)	**(8,792)**	(9,993)
Transfer from deferred expense grant	-	-	(3,366)	(1,234)	**(3,366)**	(1,234)
Amortization of capital and intangible assets	295	277	-	-	**295**	277
Change in non-cash working capital	(55)	615	1,149	798	**1,094**	1,413
	(34)	640	**(11,009)**	(10,429)	**(11,043)**	(9,789)
Investing activities						
Transfer from operating grant to deferred capital grant	146	216	-	-	**146**	216
Transfer from OICR grant to deferred capital grant	24	565	-	-	**24**	565
Purchase of capital and intangible assets	(170)	(781)	-	-	**(170)**	(781)
	-	-	**-**	-	**-**	-
Financing activities						
Deferred grants received plus interest income	**-**	-	**9,184**	13,936	**9,184**	13,936
Increase (decrease) in cash during the year	(34)	640	(1,825)	3,507	**(1,859)**	4,147
Cash—Beginning of year	689	49	11,059	7,552	**11,748**	7,601
Cash—End of year	**655**	689	**9,234**	11,059	**9,889**	11,748

www.ices.on.ca

ICES collaborates with many organizations including:

- Canadian Institute for Health Information
- Cancer Care Ontario
- Cardiac Care Network of Ontario
- Chiefs of Ontario
- Council of Academic Hospitals of Ontario
- Dartmouth Institute for Health Policy and Clinical Practice
- Heart and Stroke Foundation of Ontario
- Lawson Health Research Institute
- Manitoba Centre for Health Policy
- McMaster University Health Sciences Centre
- Métis Nation of Ontario
- Ontario Agency for Health Protection and Promotion
- Ontario Health Quality Council
- Ontario Institute for Cancer Research
- Ontario Local Health Integration Networks
- Ontario Ministry of Health and Long-Term Care
- Ontario Ministry of Health Promotion
- Ottawa Hospital Research Institute
- Public Health Agency of Canada
- Statistics Canada
- Queen's University
- University of Ottawa
- University of Toronto

How is ICES funded?

ICES receives core funding from the Ontario Ministry of Health and Long-Term Care. ICES faculty and staff also compete for peer-reviewed grants from federal agencies, such as the Canadian Institutes of Health Research. Some receive project-specific grants from provincial and national organizations. However, ICES maintains an independent stance from these funding sources and takes pride in its international reputation as an objective and credible source of health and health services evaluation.

Where does ICES get its information?

ICES researchers link information from a number of population and health databases. This includes the health records of millions of Ontarians. ICES is the only research organization in Ontario that is privileged to hold and use such data. ICES goes to great lengths to protect the privacy interests of the people of Ontario and is recognized as an international leader in maintaining the security of health information.

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