# University of Toronto

# CENTRE FOR PATIENT SAFETY

Three-Year Report, 2009-2011

















# St. Michael's

Inspired Care.
Inspiring Science.











# Table of Contents



I. Background and Concept		2
II.	Governance	4
III.	Director's Message	7
IV.	Faculty Profiles	11
V.	Launch Events	17
VI.	Strategic Priorities	18
	– Research	18
– Education		
Supporting Local Improvement		
	– Fostering Connectivity and Dissemination	29
VII. External Profile		
VII	I. Core Members	34

# I. Background And Concept

atient safety has been defined as the "recognition and mitigation of unsafe acts within the healthcare system and adoption of best practices shown to lead to optimal patient outcomes". Widespread attention to patient safety began over 10 years ago with the publication of the US Institute of Medicine's landmark report, To Err is Human (2000) <sup>2</sup>. Extrapolating from two seminal studies, this report produced the headline-grabbing estimate that medical errors cause 44,000 to 98,000 deaths in US hospitals every year. Avoiding the problems of extrapolation, one can accurately state that a substantial body of evidence indicates that 3-13% of hospitalized patients suffer injuries from their medical care and that appropriate care could prevent 30-50% of these injuries.

The Canadian Adverse Events Study<sup>3</sup> was co-led by Professor Ross Baker (Director of Graduate Studies at the Centre for Patient Safety) and also included Dr. Ed Etchells (Associate Director and Sunnybrook Site Lead for the Centre). This frequently quoted study confirmed that the findings from other countries apply to Canadian healthcare: 7.5% of patients admitted to Canadian acute care hospitals in the year 2000 experienced at least one injury from their medical care and 36.9% of these events were judged as preventable.

The Canadian Adverse Events Study set in motion national and provincial interest in improving patient safety and healthcare quality, mirroring similar initiatives in the US, Europe, Australia, and elsewhere. In Canada, the Canadian Institutes for Health Research (CIHR) and the Canadian Patient Safety Institute (CPSI) have dedicated funding for Patient Safety research chairs and ongoing research competitions, the Royal College of Physicians and Surgeons of Canada now requires safety training in educational programs for core and subspecialty programs, and numerous educational events occur nationwide on a regular basis.

Despite this widespread interest in patient safety, few universities have developed centres or dedicated research programs focused on patient safety. Individuals at the University of Toronto recognized the opportunity to build on local expertise in the area of patient safety and healthcare quality improvement to develop such a Centre in partnership with two of its affiliated hospitals, Sunnybrook Health Sciences Centre (SHSC) and the Hospital for Sick Children (SickKids).

<sup>&</sup>lt;sup>1</sup> Canadian Patient Safety Dictionary http://rcpsc.medical.org/publications/PatientSafetyDictionary\_e.pdf

<sup>&</sup>lt;sup>2</sup> Kohn L, Corrigan J, Donaldson M, eds. To Err Is Human: Building a Safer Health System. Washington, D.C.: Institute of Medicine Committee on Quality of Health Care in America. National Academy Press; 2000.

<sup>&</sup>lt;sup>3</sup> Baker GR, Norton PG, Flintoft V, et al. The Canadian Adverse Events Study: the incidence of adverse events among hospital patients in Canada. CMAJ 2004;170:1678-86.

#### Vision For The Centre Of Patient Safety

Individuals who set in motion the planning that culminated in the Centre's creation included Dr. Robert Byrick (Professor of Anaesthesia and the initial Interim Director of the Centre), Dr. Catharine Whiteside (Dean of Medicine), Dr. Ronald Laxer (then VP of Medical Affairs at SickKids), Dr. Wendy Levinson (Chair of the University of Toronto Department of Medicine), Mary Jo Haddad (CEO of SickKids), and Dr. Barry McLellan (CEO of Sunnybrook Health Sciences Centre). In consultation with various experts in patient safety and potential stakeholders, they established the Centre's mission:

"To create, disseminate, and implement new knowledge in the field of patient safety at the University of Toronto and its affiliated hospitals in order to provide the safest possible care for patients."

They envisioned the Centre providing leadership in patient safety education, complemented by research programs and collaborative networks within the Toronto Academic Health Science Network (TAHSN) and the broader healthcare system. In a mature state, the Centre would contribute to improved patient outcomes by promoting education among a broad range of practitioners, developing interventions that reduce or mitigate patient safety problems, and promoting the translation of such knowledge into routine practice.

#### Funding

At the outset, each of the partnering institutions — the UofT Faculty of Medicine, Sunny-brook Health Sciences Centre, and the Hospital for Sick Children — committed to providing \$100,000 per year for three years (2009-11), with a possible renewal for two more years (2012-13). The two hospitals also provided physical spaces for the Centre and some additional salary support for the Director (Dr. Kaveh Shojania) and two Site Leads (Dr. Anne Matlow at SickKids and Dr. Ed Etchells at Sunnybrook). It was clearly expected, however, that the Centre obtain additional funds through external research grants, revenue from professional development activities and consulting services, and direct sponsorships from governments, corporations, and/or philanthropy.

# II. Governance

onsistent with the model for other multi-departmental academic units at the University of Toronto, the Governance of the Centre for Patient Safety consists of an Executive Committee and an Advisory Council.



The Executive Committee advises on high level strategy for the Centre and provides oversight, ensuring progression towards achieving the Centre's goals. Members include the Dean of the Faculty of Medicine, who is also Vice-Provost, Relations with Healthcare Institutions, the

CEOs for the two lead hospitals (Sunnybrook and SickKids), the CEO for at least one other major healthcare institution affiliated with the University of Toronto, and Deans of other Faculties with interests aligned with the Centre for Patient Safety. We plan to add a representative of the public to the Executive Committee in the near future.

Specific Executive Committee membership consists of:

- Dr. Catharine Whiteside (Chair), the Dean of Medicine and Vice-Provost, Relations with Healthcare Institutions
- Mary Jo Haddad, President and CEO, Hospital for Sick Children
- Dr. Barry McLellan, President and CEO, Sunnybrook Health Sciences Centre
- Dr. David Mock, Dean of Dentistry
- Dr. Cheryl Regehr, formerly Dean of Social Work (now Vice-Provost, Academic Programs, University of Toronto)
- Dr. Mark Rochon, President and CEO, Toronto Rehabilitation Institute

Whereas the Executive Committee focuses primarily on broad strategic input and oversight, the Advisory Council provides more direct support for the ongoing development and work of the Centre. We have included the local advisory committee members (local to the two lead hospitals) in the Advisory Council membership listed below.

#### Sickkids Advisory Committee

Dr. Stanley Zlotkin, VP, Medical and Academic Affairs

Pam Hubley, Director, Centre for Nursing

Beverley Hales, Director of Pharmacy

Rick Wray, Director, Quality and Risk Management

Dr. Denis Daneman, Paediatrician-in-Chief

Dr. Jim Drake, Chief of Neurosurgery

Dr. Susan Tallet, Chief of Education

Dr. Ron Laxer, Staff Rheumatologist

#### **Past Members**

Dr. Lawrence Roy, VP, Medical and Academic Affairs (2009)

Polly Stevens, Director, Quality and Risk Management (2009-2010)

Dr. Teresa To, Director, Child Health Evaluative Sciences Program, SickKids Research Institute (2009-2010)

#### Sunnybrook Health Sciences Centre Advisory Committee

Michael Young, Executive Vice-President, Corporate

Ru Taggar, Director, Patient Safety and Quality Improvement

Susan VanDeVelde-Coke, Executive Vice-President, Programs/Chief, Health Professions and Nursing Executive

Dr. Brian Cuthbertson, Chief, Department of Critical Care Medicine

#### **Past Members**

Dr. Merrick Zwarenstein, Director, Centre for Health Services Sciences (2009-2010)

Thomas Paton, Director of Pharmacy (2009-2010)

# III. Director's Message

#### Achievements in our First Three Years



his report marks a major milestone for the U of T Centre for Patient Safety – the end (or almost the end) of its three years of guaranteed funding from the three founding institutions, the University of Toronto's Faculty of Medicine, Sunnybrook Health Sciences Centre, and the Hospital for Sick Children. At the time of this writing, the Executive Committee has characterized the Centre as an unqualified success and stated the intention to continue ongoing funding. The official decision regarding its funding will occur in Fall 2011. This report provides the oppor-

tunity to outline our activities and accomplishments over the past three years, and also outline our future directions.

Early in our first year, Drs. Anne Matlow, Ed Etchells, and I spent much of our time meeting with stakeholders from many hospitals and faculty, including senior administrators and researchers in Nursing, Pharmacy, Rehabilitation, Management, and Engineering, among others, as well as staff at the Ontario Ministry of Health and Long-Term Care, and the Ontario Hospitals Association. We used these meetings to help develop our strategic plan (and increase awareness of the Centre). These meetings culminated in a tentative strategic plan, which we then presented at our first annual symposium (November 2009). We refined the plan on the basis of feedback from focus group style discussions among attendees during a workshop session at the symposium.

The key components of this plan, with some refining over the ensuing two years, are research, education, supporting local improvement, and fostering connectivity and dissemination. The rest of this report describes our activities in each of these areas, but I would like to first highlight several of the achievements of which I am particularly proud.

#### Research

- Dr. Chris Parshuram received a \$3.3M award from CIHR to conduct a multi-centre trial
  of the "The Bedside Paediatric Warning System," which he has developed over the past
  several years.
- **Dr. Ed Etchells** led a team, including several other members of the Centre that successfully competed for a bid from the Canadian Patient Safety Institute to evaluate the economic burden of patient safety to the healthcare system. The CPSI has been very happy with the comprehensive report produced by the team, and is looking into how best to build on this work.
- **Dr. Anne Matlow** led a multi-centre team, including Professor Ross Baker and Virginia Flintoft from the Centre, to conduct the first national paediatric adverse event study. Their paper describing the development and validation of the "Canadian Paediatric Trigger Tool" was published earlier this year and the main paper describing the specific findings (i.e., the specific patient safety problems experienced by hospitalized children) will likely appear later this year. This work represents the first comprehensive study of its kind in paediatrics.
- A team of four members of the Centre received the highest ranking in the Canadian Patient Safety Institute's annual grant program, for our study Promoting Real-Time Improvements in Safety for the Elderly (PRISE), which has generated several exciting interprofessional improvement initiatives at Sunnybrook.

#### **Education**

- We have helped develop an "Integrated Patient Safety Curriculum for Core Internal Medicine Trainees," a major undertaking in which all trainees in the core Internal Medicine program at the University of Toronto will receive approximately 20 hours of education in patient safety and quality improvement over a six-month period in their first year of training.
- In collaboration with the Postgraduate Medical Education Office, we developed the PG-CorEd™ Patient Safety program, a series of four 20-minute multimedia, web-based educational modules for residents in all training programs at the University of Toronto.
- We became the only non-American site participating in the Quality Scholars Program in the US Veterans Affairs system. The VA Healthcare system has become recognized nationally and internationally as a leader in quality improvement over the past 10-15 years.

#### **Supporting Local Improvements**

• The University of Toronto Certificate Course in Patient Safety and Quality Improvement has been an unqualified success. A multidisciplinary mix of 125 staff from a range of clinical settings (academic and community-based) has taken the course over the past three years.

- Based on the success of the Certificate Course, we were awarded a contract (\$248,000 over two years) from the Ontario Ministry of Health and Long-Term Care (MOHLTC) to provide education and mentorship support to physicians enrolled in the MOHLTC's Most Responsible Physician Quality Improvement Program.
- We supported the evaluation of two specific patient safety initiatives at three of the major teaching hospitals in order to inform further refinements to these programs.
- We helped support an exciting joint proposal from the UofT Departments of Medicine and Family and Community Medicine to the Ontario Ministry of Health to use the 30 hospitals, 13 Family Health Teams and 40 Family Medicine teaching practices spanned by the UofT to develop and evaluate innovative models of care. One of the explicit goals of this program is to evaluate scalable projects (i.e., projects that, once known to be effective, can be implemented elsewhere without requiring substantial investments in infrastructure). This focus reflects the desire to avoid the oft-seen pattern of short-lived pilot projects that disappear once the money to support them runs out. Our proposal was received enthusiastically in late 2010 and, after refinements and discussions with the MOHLTC, ultimately funded in mid-2011: \$5.4M over three years with a goal of developing and evaluating nine specific projects. I was fortunate to work with the two Chairs of the Departments involved (Drs. Wendy Levinson and Lynn Wilson), as well as Drs. Michael Schull (Medicine) and Onil Bhattacharyya (Family and Community Medicine) to help develop the idea for this program, and I will serve as Chair of the Scientific Advisory board for this exciting initiative designed to improve care coordination between hospital and ambulatory settings.

#### Fostering Connectivity and Dissemination

- Our annual symposium has attracted approximately 180 researchers, educators, clinicians, patient safety officers, and hospital executives from the Greater Toronto Area and around the province (e.g., Ottawa, Kingston) each year. We have also attracted exceptional, nationally and internationally recognized speakers for these events, including last year's, Dr. Lucian Leape from Harvard University, internationally regarded as one of the founders of the field of patient safety.
- A video highlighting the Centre for Patient Safety was showcased at the Annual Conference
  of the Institute for Healthcare Improvement in Orlando, Florida (December, 2010). This
  video was part of a series profiling organizations doing innovative work in patient safety
  and quality improvement. The Centre was the only non-US organization spotlighted in
  the video series, and was chosen on the basis of our work in building capacity and engaging
  faculty in patient safety efforts.
- I was fortunate to be selected as the new Editor-in-Chief of *BMJ Quality and Safety*, which has the highest impact factor of any of the journals in the fields of patient safety and quality improvement. The journal also supports a major international meeting each year in Europe that typically attracts 3000 attendees from around the world.

I am thrilled with what we have accomplished in the first three years at the Centre for Patient Safety. In addition to the above accomplishments, we were able to bring in approximately \$300,000 in additional support to the Centre from our activities and were fortunate to receive several donations to the Centre. We hope to establish a more coordinated fundraising program in the years to come.

We also have plans to address some of the gaps in our activities to date. For instance, our educational activities have focused largely on physicians and physician trainees. One explanation for this focus has been that the lack of physician engagement has constituted a perennial barrier to quality improvement activities. Engaging more physicians in patient safety and quality improvement through educational efforts thus represented a strategic goal for the Centre. However, we have initiated discussions with the Centre for Interprofessional Education to develop a program in patient safety education for undergraduate education across the health professions.

We are also moving forward with plans to establish a Masters in Patient Safety, led by Professor Ross Baker and based at U of T's Department of Health Policy, Management and Evaluation (HPME). We have received numerous inquiries from trainees, staff, and faculty, asking how and where they can receive advanced training in patient safety and quality improvement. We will offer our first course at HPME in January 2012 and have a working group developing curricula for other courses.

Lastly, there is the issue of our name and the fact that it only mentions patient safety and not quality improvement more broadly. We chose the focus on patient safety for a variety of reasons and in consultation with the Executive Committee. Having a clear focus, especially early on, served a useful purpose. However, many of our activities, especially in education and capacity building related to aspects of healthcare quality broader than patient safety. We may want to make that explicit in the Centre's name. That said, we have accomplished a tremendous amount in terms of research, education, capacity building and support for the local hospitals with the name and branding that we have. We look forward to building on these accomplishments in the years to come, whether as the Centre for Patient Safety or a broader Centre for Patient Safety & Healthcare Improvement.

Kaveh G. Shojania, MD

Canada Research Chair in Patient Safety and Quality Improvement

Editor-in-Chief, BMJ Quality & Safety

 ${\it Director, Centre for Patient Safety, University of Toronto}$ 

## IV. Staff Profiles



Kaveh G. Shojania, MD

Director,

Centre for Patient Safety

Canada Research Chair in
Patient Safety & Quality
Improvement

Editor-in-Chief,

BMJ Quality & Safety

Associate Professor of
Medicine

Sunnybrook Health
Sciences Centre and the
University of Toronto

fter medical school at the University of Manitoba and internship at the University of British Columbia, Dr. Shojania completed his residency in Internal Medicine at Harvard's Brigham and Women's Hospital, one of the world leaders in patient safety research. Following a fellowship in outcomes research at the University of California San Francisco, he stayed on faculty there for four years before returning to Canada — first to the University of Ottawa and then the University of Toronto. He sees patients as a general internist at Sunnybrook Health

Sciences Centre, where he also holds a Canada Research Chair in Patient Safety and Quality Improvement and is an Associate Professor in the Department of Medicine.

Dr. Shojania's research focuses on identifying evidence-based patient safety interventions and effective strategies for translating evidence into practice. He has published over 80 peer-reviewed articles including in leading journals, such as the New England Journal of Medicine, the Journal of the American Medical Association (JAMA), the Annals of Internal Medicine, and the Canadian Medical Association Journal (CMAJ). He has delivered numerous national and international lectures, including two invited presentations to the prestigious US Institute of Medicine. He has received support for his research from the Canadian Institutes for Healthcare Research, the Canadian Health Services Research Foundation, the Canadian Patient Safety Institute, and the US Agency for Healthcare Research and Quality.

Dr. Shojania has also led a number of educational initiatives in patient safety, including a series of 13 case-based articles in *Annals of Internal Medicine* and two websites produced for the US Agency for Healthcare Research and Quality, which receive approximately 100,000 visits each month. A book on patient safety for a general audience that he co-authored with Dr. Robert Wachter (at the University of California San Francisco) received excellent reviews in the New York Times and *Journal of the American Medical Association* and has sold approximately 50,000 copies. For this and other work, Drs. Shojania and Wachter received one of the John M. Eisenberg Patient Safety Awards from the US Joint Commission for the Accreditation of Healthcare Organizations and the National Quality Forum for work in patient safety that has had an impact on a national level.

In January 2011, Dr. Shojania became Editor-in-Chief of the British Medical Journal Group journal, *BMJ Quality and Safety*, which has the highest impact factor in the fields of quality improvement and patient safety.



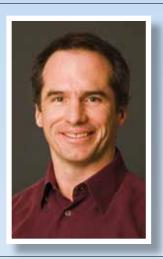
Anne Matlow,
MD, MSc, FRCPC
Associate Director and
SickKids Site Director,
Centre for Patient Safety
Professor, Departments
of Paediatrics, Laboratory
Medicine and Pathobiology
University of Toronto
Member Board of Directors,
Canadian Patient Safety
Institute

r. Matlow is Medical Director of
Patient Safety and Infection Prevention and Control at SickKids and a
Professor in the Departments of Paediatrics, and
Laboratory Medicine and Pathobiology at the
University of Toronto. She received an MSc in
Microbiology and Immunology from McGill
University, graduated from the University of
Toronto, Faculty of Medicine, and obtained
specialty qualifications in Internal Medicine,
Infectious Diseases, and Medical Microbiology.

In 2003 she graduated with the inaugural class of the American Hospital Association/Health Forum's Patient Safety Leadership Fellowship.

Dr. Matlow is active in Patient Safety and Infection Control activities at the local, national, and international levels. She sits on the Executive Board of the Canadian Patient Safety Institute, is a member of the patient safety collaborative of the Canadian Association of Paediatric Health Centres, and is co-founder and chair of the Paediatric International Patient Safety and Quality Community (PIPSQC), a collaborative with members in Canada, the United States, the United Kingdom, and Australia. Dr. Matlow has helped develop educational initiatives in patient safety at the University of Toronto and is working on a curriculum focused on paediatric patient safety through the Paediatric Chairs of Canada.

Dr. Matlow's passion for patient safety in paediatrics spans a number of topics, but she is particularly focused on the importance of communication and family involvement as well as the identification and disclosure of adverse events. She and Professor Ross Baker led a team that recently completed the Canadian Paediatric Adverse Events Study (CPAES), the first study of its kind to characterize the epidemiology of adverse events in hospitalized children. The findings will have major impact on the delivery of healthcare to children in Canada.



Edward Etchells, MD, MSc, FRCPC

Associate Director and Sunnybrook Site Director,
Centre for Patient Safety
Medical Director of Information Services,
Sunnybrook Health
Sciences Centre
Associate Professor of Medicine
University of Toronto

r. Etchells received his MD and subsequent specialty training in General Internal Medicine at the University of Toronto. He joined the faculty of the Department of Medicine after completing an MSc in Clinical Epidemiology. Although his initial academic interest was clinical bioethics, with a focus on informed consent and decision making capacity, he realized—after five years of inpatient attending—that safe and reliable delivery of healthcare were recurrent problems. After delivering teaching

rounds and presentations in patient safety at the University Health Network (Toronto Western Division), he moved to Sunnybrook Health Sciences Centre to direct the new Error Management Unit, inspired by Dr. Donald Redelmeier. Dr. Etchells conducted some of the original research that established medication reconciliation globally as a best practice in patient safety and he was a co-investigator on the Canadian Adverse Events Study.

Working with Dr. Redelmeier, he co-founded the Patient Safety Service, the first hospital-based academic safety service in Canada, with support from the SHSC senior leadership team. The Service delivers educational programs in patient safety to hospital staff and students as well as national and international audiences. The Service's 2005 paper 'Unintended Medication Discrepancies at the Time of Hospital Admission" is cited as a patient safety classic on the Agency for Healthcare Research and Quality Patient Safety Net website and its novel methods for identifying and classifying medication errors were adopted by the Canadian Safer Healthcare Now! and the World Health Organization's 'High 5's' medication reconciliation initiative.

Dr. Etchells helped to establish the Department of Medicine's Quality Partners program in 2006 and the U of T Certificate Course in Patient Safety and Quality Improvement in 2008. He is Medical Director of Information Services at SHSC. His research interests include medication reconciliation, computerized medication order entry, and real-time alerting and decision support for critical laboratory values.



G. Ross Baker, PhD

Director of Graduate
Studies,

Centre for Patient Safety
Professor,

Department of Health
Policy, Management,
and Evaluation

University of Toronto

r. Baker is a Professor in the Department of Health Policy, Management and Evaluation at the University of Toronto. Together with Dr. Peter Norton, at the University of Calgary, he led the landmark Canadian Adverse Events study published in the Canadian Medical Association Journal in 2004.

Dr. Baker was a member of the National Patient Safety Steering Committee that recommended the creation of the Canadian Patient Safety Institute, and he has helped lead the

Safer Healthcare Now! Campaign, the Canadian adaptation of the well-known 100,000 lives campaign in the United States (and the subsequent five million lives initiative) focused on implementing widespread implementation of concrete improvements in patient safety. Further reflecting his national and international recognition as a patient safety researcher, Dr. Baker co-chairs key committees for the World Health Organization's Patient Safety Alliance. He currently chairs an Advisory Committee for the Ontario Ministry of Health and Long-Term Care on Avoidable Hospitalizations and is a member of the Health Foundation (UK) Improvement Science Network Committee supporting the training and development of Improvement Science fellows in the UK.

Dr. Baker's educational and research activities focus on the epidemiology of patient safety problems and organizational innovations that enhance healthcare quality and safety. His book, "High Performing Healthcare Systems: Delivering Quality by Design" (2008), analyzed seven health care systems that have successfully used quality improvement tools and knowledge management strategies to transform their health delivery. In 2007, he received the Filerman Prize for Innovation in Health Management Education by the Association of University Programs in Health Administration (AUPHA).



Christopher Parshuram, MD PhD PRCP

Director of Paediatric Patient
Safety Research,
Centre for Patient Safety
Interim Director,
Child Health Evaluative
Sciences Program,
SickKids Research
Institute
Associate Professor,
Departments of Critical
Care Medicine, Paediatrics,
Health Policy Management
& Evaluation

University of Toronto

r. Parshuram graduated from Otago
University of New Zealand (1990),
with prizes in medicine and pharmacology. Following a residency in paediatrics at the
Royal Children's Hospital in Melbourne, Australia,
he moved to Canada where he completed specialist fellowship training in paediatric critical care
medicine and clinical pharmacology in Toronto
and Edmonton. His Doctoral Studies in Clinical Epidemiology at the University of Toronto
focused on the subject of patient safety.

Dr. Parshuram joined the Department of Critical Care Medicine at the Hospital for Sick Children in 2003, and he is a scientist and the interim head

of the Child Health Evaluative Sciences Program of the SickKids Research Institute. In addition to formal training in systems of healthcare delivery, Dr. Parshuram has expertise in cardiac arrest prevention, reducing errors that are associated with medications, and preventing fatigue in healthcare workers. He has received peer-reviewed research funding from the Heart and Stroke Foundation of Canada, the Society of Critical Care Medicine, and the Canadian Institutes of Health Research. Dr Parshuram was the international member of the US Institute of Medicine's Committee on Optimizing Resident Duty Hours.



Leahora Rotteau, MA

Program Manager,

Centre for Patient Safety

the University of Waterloo Faculty of Applied Health Sciences. She worked in the Veteran's Centre at the Sunnybrook Health Sciences Centre before joining Dr. Shojania's research team as project manager for a national study of implementation issues for patient safety practices in paediatric and adult hospitals. She joined the Centre for Patient Safety in December 2009. Ms. Rotteau oversees the general operations of the Centre, coordinates initiatives and provides project support for Centre-based research programs. She brings expertise in project management and qualitative healthcare research to the team.



**Lisha Lo, MPH**Research and Administrative Assistant,
Centre for Patient Safety

S. Lo received her MPH from the University of Hong Kong and worked at the University's School of Public Health as a research assistant before returning to Toronto, where she conducted a systematic literature review on trigger tools under the guidance of Professor Ross Baker, Dr. Anne Matlow and Virginia Flintoft at the Department of Health Policy, Management and Evaluation at the University of Toronto. She joined the Centre for Patient Safety in April 2010. Ms. Lo provides research and administrative support for Centre-based research projects as well as coordinates events and educational programs for the Centre.

### V. Launch Events

# Opening of the Physical Spaces for the Centre's Two Sites

he Centre for Patient Safety celebrated the opening of both the SickKids and Sunnybrook sites in May 2010. The launch of the SickKids site was held on May 10th, 2010. Colleagues from SickKids and other hospitals and institutions joined us at our SickKids site as Mary Jo Haddad officially opened the site with a ribbon cutting ceremony. The launch event at the SickKids site was followed by our inaugural rounds. The SickKids site is located at 525 University Avenue, Room 630 and includes offices for Dr. Anne Matlow (Associate Director and SickKids Site Lead), Dr. Chris Parshuram (Director of Paediatric Research), and Ms. Lisha Lo (Research and Administrative Assistant), as well as additional space for Centre members visiting the SickKids site. The space also includes a large multi-use room that allows for large and small group meetings, presentations and seminars and a variety of educational events. Facilities for interactive videoconferencing allow for many opportunities for communication and multi-site presentations.

Later that same week, we also held an event marking the opening of the Centre for Patient Safety's offices at Sunnybrook. Many members of the Centre, other colleagues and hospital leaders from Sunnybrook gathered in the conference room and surrounding space to watch Dr. Barry McLellan, Sunnybrook's CEO, cut the red ribbon and officially open the Centre for Patient Safety's space at Sunnybrook. The Sunnybrook site houses offices for Dr. Kaveh Shojania (Director of the Centre), Dr. Ed Etchells (Associate Director and Sunnybrook Site Lead), Dr. Brian Wong (a core member of the Centre), Dr Andrew McDonald (co-director of Sunnybrook's Department of Quality and Safety), and Ms. Leahora Rotteau (Program Manager). The space also includes additional offices for students and other personnel working on projects for the Centre, as well as a conference room regularly used by the Centre and Sunnybrook's Patient Safety Leadership Team.



Dr. Barry McLellan addresses attendees at the opening of the physical space at Sunnybrook.



Dr. Barry McLellan cuts the ribbon at the opening ceremony at Sunnybrook, while Dr. Ed Etchells (Associate Director and Sunnybrook Site Director) and Dr. Kaveh Shojania (Director) looks on..

# VI. Strategic Priority #1 - Research

ne of the core missions of the Centre lies in creating new knowledge in patient safety. The directors and faculty members of the Centre produced approximately 100 peer review publications and obtained several major grants over the past two and a half years. Particularly noteworthy examples are outlined below; a more complete list of research grants and publications appears on the Centre's website.

Dr. Chris Parshuram, who leads the paediatric research program for the Centre, received
a \$3.3M award from CIHR to conduct a multi-centre cluster randomized trial of the
"The Bedside Paediatric Warning System," which he has developed over the past several
years.

The Bedside Paediatric Early Warning System (Bedside PEWS) is a documentation-based system of care designed to identify children at risk for imminent clinical deterioration. Its ultimate goal, thus, lies in preventing near or actual cardiopulmonary arrest in children.

The content of the Bedside PEWS was developed using input from experts and then validated in over 3000 patients. Initial testing showed the Bedside PEWS could be easily and safely implemented. While promising, the effect on important clinical outcomes remains unknown.

In 2010 the CIHR funded a cluster randomized trial, the EPOCH study, a 22-hospital evaluation of the Bedside PEWS on important clinical outcomes and processes of care. The knowledge created by EPOCH will permit optimal application of strategies to prevent cardiac arrests in hospitalized children.

We are excited and privileged to be at this leading edge of resuscitation research aimed at improving outcomes in paediatric hospitals. We also envisage that EPOCH will enable the establishment of new—and the enhancement of existing—collaborative relationships between paediatric hospitals.

 Dr. Ed Etchells along with several other members of the Centre (including Drs Shojania and Matlow) successfully obtained the award associated with a Request for Proposals from the Canadian Patient Safety Institute to evaluate the economic burden of patient safety.

- Dr. Anne Matlow and Professor Ross Baker co-led a multi-centre team to conduct the first national paediatric adverse event study. Their paper describing the development and validation of the "Canadian Paediatric Trigger Tool" was recently published and the main paper describing the specific findings (i.e., the specific patient safety problems experienced by hospitalized children) will likely appear later this year. This work represents the first comprehensive study of its kind in paediatrics.
- Drs. Brian Wong and Kaveh Shojania, along with several other core members of the Centre, including Dr. Ed Etchells and Professor Ross Baker, received the highest ranking in the Canadian Patient Safety Institute's annual grant program, for Promoting Real-Time Improvements in Safety for the Elderly (PRISE). This 2-year research project involves an interprofessional team of physicians (from both General Internal Medicine and Geriatrics), nurses, pharmacists and hospital administrators. The project aims to provide detailed understanding of the important patient safety problems faced by hospitalized elderly patients and to implement targeted quality improvement initiatives to reduce the harms associated with these problems.
- A multicentre team led by Dr. Shojania, and including other members of the Centre, wrapped up a five-year national study involving some 150 interviews with personnel at hospitals across the country regarding implementation experiences for several widely recommended patient safety practices.

This work, funded by the Canadian Health Services Research Foundation, the Canadian Institutes for Health, and the Canadian Patient Safety Institute, aims to characterize the barriers commonly encountered by hospitals in their efforts to implement strategies for improving patient safety. Specific patient safety strategies targeted by this research include: 1) Medication Reconciliation; 2) Computerized Physician Order Entry; 3) Monitoring for critical incidents and other internal safety problems; and 4) Implementation of Surgical Checklists.

The ultimate goal of this research program is to inform hospitals' efforts to implement recommended patient safety practices and increase their likelihood of success.

# Strategic Priority #2 - Education

he Centre is actively involved in education across the continuum of education for health professionals at the University of Toronto.

#### **Undergraduate Medical Education**

For close to a decade the University of Toronto Faculty of Medicine has had an undergraduate patient safety curriculum embedded within the Determinants of Community Health curriculum in both the third and fourth undergraduate years (DOCH 3 and DOCH 4). For the past two years, in collaboration with Drs. Geoff Anderson, Dante Morra and Ian Johnson, the DOCH 3 curriculum has been enriched by a full day in the first block devoted to patient safety. This block has included a combination of didactic teaching and interactive case based learning around diagnostic error and the importance of communication during handoffs. In addition to basic instruction in the science of patient safety, the didactic teaching has also addressed key elements of medication safety.

Since its inception, the DOCH 4 curriculum featuring patient safety has been led by Dr. Ian Johnson with participation from faculty at the Centre for Patient Safety. Over the course of the year, five individual small group sessions focusing on the prevention, management and disclosure of adverse events have been held, followed by a general discussion on the hazards and vulnerabilities in the delivery of safe care that the students have encountered in their training to date. The opportunity for debriefing has been valued by students and faculty alike, and feedback to educators has impacted positively on undergraduate education and patient care. As the 4th year curriculum moves to the Transition to Clerkship "TTR" framework, we are continuing our collaboration as well as introducing an interprofessional perspective.

#### Postgraduate Medical Education

In collaboration with the Postgraduate Medical Education Office, we developed the PGCorEd™ Patient Safety module, a set of four 20-minute multimedia, web-based educational modules for residents in all training programs at the University of Toronto.

We continue to supervise residents doing elective projects or research related to patient safety and quality improvement (especially in medicine and paediatrics). However, in the Department of Medicine, one of our core members, Dr. Brian Wong, has led the development of two exciting programs for exposing large numbers of residents to concepts and methods in patient safety and quality improvement.

#### **Integrated Patient Safety Curriculum for Core Internal Medicine Trainees**

This curriculum in patient safety and quality improvement for first-year internal medicine residents at the University of Toronto will be piloted over a six-month period in the 2011-2012 academic year. It will engage trainees in experiential learning both in the classroom (through interactive exercises) as well as in their clinical environments. Informed by an extensive synthesis of the literature on similar educational curricula related to patient safety and healthcare quality (published in *Academic Medicine* by Dr. Wong and other members of the Centre) and interviews with educators in patient safety at other institutions, this pilot curriculum takes advantage of the best evidence available for teaching post-graduate trainees key concepts in patient safety.

Using patient handover as the clinical context to frame the curriculum, we will focus on a variety of patient safety and quality improvement concepts and skills, including understanding systems, effective communication skills, human factors, audit and feedback, and rapid-cycle improvement methods. The curriculum will take advantage of a number of different teaching methods, including didactic lectures, small and large group discussions, interactive exercises, web-based learning, role-play and peer feedback, and reflective practice. It will be delivered by a core group of general internists and patient safety experts affiliated with the Department of Medicine at the University of Toronto.

# Engaging Trainees in Divisional Quality Improvement Activities: A Pilot Learning Experience in Quality for Subspecialty Trainees in the Department of Medicine at the University of Toronto

Three clinical divisions in the Department of Medicine (Endocrinology, Nephrology, and Medical Oncology) have agreed to pilot an initiative that partners subspecialty trainees with academic faculty to collaborate on quality improvement initiatives relevant to their respective clinical practices.

The curriculum will commence with two face-to-face half-day sessions to provide trainees and faculty with basic quality improvement skills. Under the guidance of an expert faculty lead within the clinical divisions and patient safety experts from the Centre for Patient Safety, subspecialty trainees choose a quality problem, set the project aims, and plan and implement the improvement cycles. At the end of the academic year, we will organize a half-day event where each division will present the results of their improvement initiatives.

#### Promoting Academic Engagement in Paediatric Patient Safety

The Centre has supported an interdisciplinary steering committee to support trainee engagement in patient safety and quality improvement activities, as well as ongoing faculty development in this area. One successful initiative to date has been the introduction of multidisciplinary case-based rounds fostering systems thinking and risk prevention, recognition and mitigation strategies.

#### **Interprofessional Education**

The University of Toronto has a strong IHI (Institute for Healthcare Improvement) Open School Chapter, consisting of healthcare students and professionals from many disciplines, interested in utilizing interprofessional collaboration as one of their strategies to improve the quality and safety of the healthcare system. Faculty at the Centre for Patient Safety are actively engaged with the Chapter as faculty advisors and clinical supervisors. The Chapter is also exploring 'accrediting' their activities as part of the University of Toronto Centre for Interprofessional Education's elective offerings, such as observerships and practice-based improvement projects, some of which would occur through the Centre for Patient Safety. In collaboration with the UofT Centre for Interprofessional Education, we have also begun to explore developing a new elective in patient safety and quality improvement that highlights aspects of interprofessionalism.

#### Masters Program in Patient Safety

We are moving forward with plans to establish a Masters in Patient Safety, led by Professor Ross Baker and based at the Department of Health Policy, Management and Evaluation at the University of Toronto. The first graduate course will begin in January 2012 and we hope to develop several other courses over the coming two to three years. These courses, in conjunction with existing courses in epidemiology, health policy, economics, information systems, and others, will form a Masters Stream in Patient Safety.

# Strategic Priority #3 - Supporting Local Improvement

o foster local improvements, we have combined capacity building with providing expert support and leadership for specific initiatives at hospitals affiliated with the University of Toronto by providing clinicians with the training to undertake improvement initiatives in their own clinical settings.

- The Centre led the evaluation of patient safety programs at three major teaching hospitals in order to inform further refinements to these programs. The evaluations were of the critical incident review process at two of the hospitals and patient safety "walkrounds" (a widely recommended practice in which executives meet with frontline staff and ask them about their concerns related to patient safety).
- At the SickKids site, mentorship and collaboration from the Centre have fostered publications and grants from staff at SickKids who are newly engaged in the disciplines of patient safety and quality improvement. Paediatric adverse events and organizational learning to improve patient safety are unifying themes in the activities underway at SickKids. Further successes are anticipated as we continue to expand physician involvement and increase interprofessional teamwork at the hospital.
- Developing an integrated electronic health care system, SunnyCare, has been a major collaboration between the Centre for Patient Safety and Sunnybrook Health Sciences Centre.
   Under the direction of Dr. Ed Etchells, the Centre has leveraged students from various faculties, such as engineering and medicine, working on research projects and internship programs to enhance the design and contribute to the evaluation of SunnyCare.

#### **Capacity Building in Patient Safety**

Our vision for capacity building consisted of developing a cadre of clinicians—physicians, nurses, pharmacists, and allied health professionals—with sufficient knowledge of patient safety issues and the methods of quality improvement to participate in or take the lead on implementing improvements in their practice settings. Clinical faculty have the understanding of frontline processes necessary to implement changes to existing care delivery, as well as the respect of other colleagues required to generate support for doing so. Without these characteristics of front-line clinicians, efforts to redesign existing protocols, technologies, and work flow will typically flounder.

#### University of Toronto Certificate in Patient Safety and Quality Improvement

To further our goal of local capacity building, we developed a certificate course aimed at clinicians and administrators whose work relates to patient safety or quality improvement, as well as senior trainees considering a focus on quality improvement for their careers. To further this goal, we developed a certificate course aimed at clinicians and administrators whose work relates to patient safety or quality improvement, as well as senior trainees considering a focus on quality improvement for their careers.

The University of Toronto Certificate Course in Patient Safety and Quality Improvement has received incredibly positive feedback and been oversubscribed in each of its three years. The 125 participants to date have come from a range of professions and clinical settings. The participants have also varied widely in their career stages, from senior trainees and junior faculty members to senior executives and academic department leaders. The course has been led by Dr. Ed Etchells, with Drs. Kaveh Shojania, Anne Matlow, and Chaim Bell acting as guest lecturers and helping to facilitate the discussion groups during interactive portions of each session. (Dr. Bell holds the Canadian Patient Safety Institute Chair for Patient Safety in Community-Based Settings and is a Core Faculty Member of the Centre.)

The course consists of approximately 50 hours over eight months, covering core concepts in patient safety and methods of quality improvement, using a mixture of didactic lectures, interactive workshop-type sessions, and project presentations by class participants to receive feedback



A group of Certificate Course participants redesigning a defibrillator using human factors engineering principles



Certificate Course participants working in groups to map the process of exiting an isolation room

on projects they are developing. Attendance has been consistently high despite the busy schedules of the participants. All sessions are available via webcast to accommodate participants who miss any of the classes.

For 2008-09, the course filled to capacity within two weeks of its announcement (39 participants). For 2009-10, we expanded the total number of hours and received a grant from the Ministry of Health AFP Innovation Fund to support the further development and evaluation of this course; 48 participants enrolled. For 2010-11, we had planned to limit enrollment to 25, but received so many requests that we decided to limit the number of participants to 40.

Participants have come from a broad range of professional roles (Table 1) and represent all the fully affiliated teaching hospitals, as well as a number of community settings (Table 2). We consider the high rate of participation from physicians as a major success, as lack of physician engagement has been widely identified as a stumbling block in efforts to improve patient safety and healthcare quality. However, the predominance of physicians partly reflects the greater flexibility in their schedules. It tends to be easier for physicians, especially academic ones, to block off two afternoons a month, than for frontline nurses or pharmacists. (To address this concern, we are planning to develop a shorter version of the course offered over two days.)

At the end of the 2009-2010 session, we conducted a qualitative evaluation, interviewing participants to better understand how the course has impacted professional activities and how to improve the course. Participants appreciated the opportunity to obtain current knowledge,



Certificate Course participants analyzing the mapped process of removing personal protective equipment



Certificate Course participants applying human factors design principles to improve workflow in a paediatric hospital room

Table 1. Professions of participants from all years

Profession		
Physicians	104	
Nurses	7	
Allied Health Professionals*	6	
Hospital Executives	4	
Other Administrators**	4	

<sup>\*</sup> Pharmacists, Physiotherapist, Social Worker, Paramedics

network with peers, and develop projects. Some of their comments are shown below.

- "I didn't know how to go where I wanted to go. Now I know how."
- "I took on more of a leadership role ... so I wanted to take the course just to develop my skills."
- "I thought this would be a great thing to sort of have all the tools and the info to be able to execute quality projects more efficiently."
- "I liked how they...organized it. I think pulling together a community of people was very interesting."
- "It's wetted my appetite for more information and more things to do in this area."

Participants recommended broadening topics beyond acute care and developing ongoing mentoring programs, ("I think we probably with time are going to need more one-to-one mentoring around our projects") which we are looking into providing.

#### Improvement Fellowship

Building on the success of our Certificate Course, the Centre has collaborated with St. Michael's Hospital to establish the Improvement Fellowship Program, which will commence in Fall 2011. The program, accredited by the University of Toronto Office of Continuing Education and Professional Development, consists of 56 hours over five months (16 sessions). Using a mixture of didactic lectures and interactive exercises, the Fellowship will cover the content from the Certificate Course as well as topics such as teamwork and leadership skills, project management

Table 2. Affiliated institutions of participants

Institution			
SickKids	26		
Sunnybrook Health Sciences Centre			
University Health Network	15		
St Michael's Hospital			
Toronto East General Hospital	11		
Mount Sinai Hospital	7		
North York General Hospital	5		
Centre for Addiction and Mental Health	4		
Community Hospitals*	3		
Baycrest	2		
Toronto Rehabilitation Institute			
Women's College Hospital			
Trainees – Multiple Sites	14		
Others**	4		

<sup>\*</sup>Lakeridge Health, St. John's Rehab

<sup>\*\*</sup> Ontario Hospital Association, Healthcare Insurance Reciprocal of Canada

<sup>\*\*</sup>Ontario Hospital Association, Healthcare Insurance Reciprocal of Canada

skills and include special networking sessions such as Lunch and Learns and Site Visits. Finally, there is a mandatory applied project component of the program, with project advisors on hand to support and guide participants.

For our inaugural year of 2011-2012, 37 applicants went through a highly competitive selection process. The 20 successful applicants span a broad spectrum of professional roles, ranging from physicians (9), nurses (3) and allied health professionals (3) to a project manager in environmental services and a decision support associate. We are looking forward to the program and the culmination of the improvement projects that the participants will develop and execute during the program.

#### Safety and Quality Improvement Workshops

We will be offering two-day intensive introductory safety and quality improvement workshops starting in Fall 2011 to participants who have little to no background in this field and would like to learn more, but do not have the time to devote to a course running over several months. The format will be very similar to the workshops developed for the MOHLTC program, as they were very well received.

#### US Veteran Administration Quality Scholars (VAQS) program,

Established in 1999, the US Veteran Administration Quality Scholars (VAQS) program runs for two years and is designed to nurture fellows and allow them to develop a career whether in research, quality improvement, patient safety or health services. The VAQS program is aimed primarily at physicians in advanced stages of training, either in clinical and/or research fellowships or junior level faculty with intentions to pursue careers in quality improvement. The VAQS is considered advanced training and is geared towards developing academic and clinical leaders in the fields of patient safety and quality improvement.

The University of Toronto is the only non-American site participating in the VAQS program. The Centre is supporting monthly videoconferences for candidates through a CIHR/CPSI Chair in Patient Safety and Continuity of Care. The six successful candidates include four physicians from the Department of Medicine – Kieran McIntyre, a clinical associate in Respirology at St Michael's, Ziv Harel a clinical associate in Nephrology at St. Michael's, Rory McQuillan a clinical associate in Nephrology at University Health Network, and Ilana Halberin, a trainee in Endocrinology — as well as two physicians from the Department of Paediatrics at SickKids — Jennifer Thull-Freedman, staff physician in Paediatric Emergency Medicine, and Alène Toulany, fellow in Adolescent Medicine.

#### Capacity Building at a Provincial Level

Based on the success of the Certificate Course, we were awarded a contract (\$248,000 over 2 years) from the Ontario Ministry of Health and Long-Term Care to provide education and support to physicians enrolled in the MOHLTC's Most Responsible Physician Quality Improvement Program. This program aims to have hospital-based physicians across Ontario develop and execute quality improvement projects in their hospitals, receiving financial support for the time they devote to these activities.

On April 2-3 and May 28-29, 2011, the Centre delivered two introductory quality improvement workshops for physicians participating in the MOHLTC program. The aim of these one and a half day workshops was to provide training in basic quality improvement in order to facilitate participants' selection, design, and implementation of quality improvement projects in their hospitals.

In total, 120 physicians from 73 hospitals across Ontario attended the two workshops, and participants provided uniformly enthusiastic evaluations after the sessions:

- "It was inspiring."
- "I learned more in 1 hour than my entire Master's degree."
- "It was the best learning experience I've ever had."
- "Excellent content!"

An advanced workshop for approximately 50 physician participants (on October 14-15, 2011) will cover topics related to implementation, such as change management, and industrial quality improvement methods such as Lean. Our contract with MOHLTC also includes the provision of telephone-based coaching to attendees of the workshops around specific projects. The coaching we have provided thus far has also generated very positive feedback from participating physicians:

- "Thanks again for all your help. It was really inspiring to be able to get assistance from someone so knowledgeable like you! In fact, it made me think that as a working doc in the trenches, unlike as a resident, one gets so little chance to ask for intellectual mentorship, unless one is part of one of the big tertiary academic centres with lots of academics surrounding you, so I really apprecate ... your time to help me think further on my project."
- "Thanks you guys are such a great help/support."

# Strategic Priority # 4- Fostering Connectivity and Dissemination

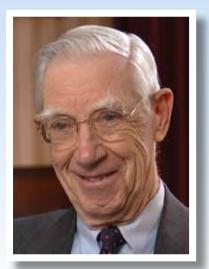
e recognized when the Centre was established that a number of groups with expertise and interests related to patient safety already existed within the University of Toronto community. Unfortunately, these groups often work in isolation, within the silos created by the organization of University faculties and departments, as well as hospital-based research institutes. We have sought therefore to foster connections between these diverse groups in order to enhance collaboration around initiatives to study and address patient safety problems.

- We launched the Centre's website in 2010 (www.patientsafetytoronto.ca) as a central repository of information and activities related to the Centre, such as announcements of rounds and other events. The website also includes a searchable database of faculty affiliated with the Centre along with their areas of expertise. This publicly available database (which should launch by September 2011) will permit users to search by various topic areas, methodologies, and settings of care in order to identify individuals with specific types of expertise. We hope that this database will be used to connect researchers focusing on similar areas of research and lead to greater collaborations across individuals and institutions.
- Our two annual symposia to date (2009 and 2010) have each attracted almost 200 researchers, educators, clinicians, patient safety officers, and hospital executives from the Greater Toronto Area and around the province (e.g., Ottawa, Kingston). Highlights from the event included a panel discussion of the Ontario legislation, the Excellent Care for All Act, including Adelstein Brown, the former Assistant Deputy Minister of Health, two hospital CEOs, Mary Jo Haddad (SickKids) and Barry McLellan (Sunnybrook Health Sciences Centre), and Professor Ross Baker. In 2010, Dr. Tom Lee of Partners Health Care in Boston, Harvard University and the New England Journal of Medicine also gave an outstanding keynote presentation on the ways in which Brigham and Women's Hospital and the Massachusetts General Hospital have applied academic expertise and investments in performance measurement infrastructure to develop a comprehensive program in quality improvement and patient safety. Informal feedback from the annual symposium was universally positive, and 92% of formal evaluations rated the event as "good" or "excellent."
- Preceding the 2010 Symposium, we held a hugely successful dinner event focused on
  education and professional development in patient safety. Approximately 100 educational
  and clinical leaders attended this event, which included a keynote presentation by Dr. Lu-

cian Leape from Harvard University, internationally regarded as one of the founders of the field of patient safety. Dr. Leape and other leaders in patient safety have identified five key strategies for system-wide transformation of healthcare: medical education reform, active consumer engagement in all aspects of health care, transparency, integration of care within and across health care delivery systems, and restoration of joy and meaning in work. While touching on all these issues during the course of his presentation, Dr. Leape focused on his current passion, medical education reform. The event was attended by numerous leaders in education at the undergraduate and postgraduate levels at the University of Toronto and its affiliated hospitals.

The Centre has collaborated with specific groups working in patient safety, including the Healthcare Human Factors group at University Health Network, members of the Patient Safety and Quality Departments at SickKids, Sunnybrook Health Sciences Centre, Mount Sinai Hospital, and St. Michael's Hospital, as well as the Centre for Innovations in Complex Care at University Health Network.

# The Second Annual UofT Centre for Patient Safety Symposium



Dr. Lucian Leape



Two poster presenters pose beside their poster



- The Paediatric International Patient Safety and Quality Community (PIPSQC) was founded at SickKids in 2005. This network of global patient safety experts in paediatric patient safety has led numerous international symposia, including in Toronto, Orlando, London and Amsterdam and is expanding other collaborative initiatives. The PIPSQC website (www.pipsqc.ca) is housed on the SickKids server and can be accessed through the Centre for Patient Safety's website (www.patientsafetytoronto.ca).
- The editorship of *BMJ Quality and Safety* may seem primarily relevant to research, but it represents just as much an important opportunity for connectivity and dissemination. It is the leading journal in the fields of patient safety and quality improvement, so having faculty from the Centre play roles at the journal offers important opportunities in terms of greater recognition for Toronto in the field and establishing connections with a wide range of international researchers and organizations. Currently, the Centre Director is the Editor-in-Chief at the journal and two faculty members affiliated with the Centre (Dr. Chaim Bell and Professor Ann Tourangeau) are Associate Editors.



Dr. Kaveh Shojania presents the Poster Award to Dr. John Abrahamson, Julian Wiegelmann and Dr. Ian Fraser, who are part of the team behind "Community Hospital Critical Care Response Team (CCRT) responses identify more preventable adverse events than incident reporting"



Symposium attendees take part in the Poster Session

Members of the Healthcare Human Factors Group present their poster

#### **Rounds**

We initiated citywide patient safety rounds in 2010, the first of which showcased local work on computerized order sets (by Professor Tony Easty from the Centre of eHealth Innovation and Dr. Shojania), and the second consisted of a presentation by Professor Eduardo Salas from Florida, an internationally recognized leader in research around optimal team functioning and teamwork training. The rounds, which occur three to four times per year at the SickKids site, offer high quality presentations from experts while also providing time for discussion and networking opportunities for the Centre for Patient Safety community.

Speaker	Title	Topic	Date
Kaveh Shojania, MD	Director, University of Toronto Centre for Patient Safety	Computerize reminders at the point of care	May 10, 2010
Anthony Easty, PhD	Director, Centre for Global eHealth Innovations, University Health Network	Order Sets: an evidence- based analysis	May 10, 2010
Eduardo Salas, PhD	Pegasus Professor of Psychology Program Director for Human Systems Integration Research	How to turn a team of experts into an expert team	October 28, 2010
	Department at Institute for Simulation & Training		
	University of Central Florida		
Pat Croskerry, MD, PhD	Professor in Emergency Medicine at Dalhousie University	Clinical decision making in patient safety - A Case of neglect	January 25, 2011
Pascale Carayon, PhD	Professor, Industrial and Systems Engineering	Work system and patient safety in ICUs	February 3, 2011
	Director, Center for Quality and Productivity Improvement		
	University of Wisconsin, Madison		
Matt Scanlon, MD	Pediatric critical care specialist, Children's Hospital of Wisconsin	Understanding work in the context of patient safety	June 8, 2011
	Associate professor, Pediatrics (Critical Care), Medical College of Wisconsin.		



Dr. Pat Croskerry delivers a citywide Patient Safety rounds at the SickKids site



Dr. Pascale Carayon delivers a citywide Patient Safety rounds at the SickKids site

# **External Profile**

#### Media Coverage

#### **VIDEO**

video highlighting the Centre for Patient Safety was shown at the Annual Conference of the Institute for Healthcare Improvement in Orlando, Florida (December, 2010). This video was part of a series profiling organizations doing innovative work in patient safety and quality improvement. The Centre was the only non-US organization spotlighted in the video series, and was chosen on the basis of our work in building capacity and engaging faculty in patient safety efforts (e.g., through the Certificate Course).

The Institute for Healthcare Improvement (IHI) has an international reputation and is widely seen as the single most influential organization in the field of quality improvement. Their annual conference attracts over 5,000 attendees from around the world and from a wide variety of backgrounds—healthcare managers and executives, researchers, clinicians, and those involved with changing policy to foster improvements in healthcare. The video was shown in a special session at the meeting and also ran on monitors in various areas throughout the conference. The full video can be seen on the Centre's website.

#### Other examples of the Centre's external profile include

- The contract from the Ontario Ministry of Health and Long-Term Care to deliver educational workshops and mentorship support to physicians enrolled in the MOHLTC's Most Responsible Physician Quality Improvement Program.
- Consultations to assist hospitals with specific safety problems, including one in the Greater Toronto Area (not one of the core major teaching hospitals for we already provide support) and one elsewhere in Ontario
- Editorship for the BMJ Quality & Safety, the highest impact journal in the field
- Membership on the Board of the Canadian Patient Safety Institute (Dr. Matlow)
- Performance Measurement Advisory Board, Health Quality Ontario (Dr. Shojania)
- Numerous invited international presentations, including Dr. Matlow in Florida for the Institute for Healthcare Improvement's annual meeting (2010 and 2011) and the International Forum on Quality & Safety in Healthcare in Amsterdam (2011), Dr. Etchells (Hamburg, Germany 2011), and Dr. Shojania (International Forum on Quality & Safety in Healthcare in Amsterdam, 2011), the Keynote presentation at the 6th Annual Meeting of the Japanese Society for Quality & Safety in Health Care in Tokyo (November 2011), as well as a visiting professorship at Dartmouth University, one of the leading academic centres in quality improvement (January 2012).

# **Core Members**

#### Chaim Bell, MD, PhD

Staff physician, Division of General Internal Medicine, St. Michael's Hospital

Scientist, Keenan Research Centre for the Li Ka Shing Knowledge Institute

Adjunct Scientist, Institute for Clinical Evaluative Sciences (ICES) of Ontario

Associate Professor, Department of Health Policy, Management and Evaluation, University of Toronto Assistant Professor, Department of Medicine, Division of General Internal Medicine, University of Toronto

#### Saulo Castel, MD, PhD

Staff Psychiatrist, Inpatient Services, Sunnybrook Health Sciences Centre Department of Psychiatry University of Toronto

#### Joseph Cafazzo, PhD, PEng

Centre Lead and Director of Medical Device Informatics and Healthcare Human Factors
Centre for Global eHealth Innovation
University Health Network
University of Toronto

#### Anjum Chagpar, MHSc, PEng

Manager, Healthcare Human Factors Group University Health Network

#### Matthew Cheung, MD, SM

Clinical Hematologist, Odette Cancer Centre Sunnybrook Health Sciences Centre Associate Scientist, Combined Health Services Sciences Odette Cancer Research Program and Sunnybrook Research Institute

Assistant Professor, Department of Medicine - Division of Hematology, University of Toronto

#### Marlys Christianson, MD PhD

Assistant Professor of Organizational Behaviour and Human Resource Management Rotman School of Management University of Toronto

#### Natalie Coburn, MD, MPH

Surgical Oncologist, Surgical Oncology, Sunnybrook Health Sciences Centre

Associate Scientist, Combined Health Services Sciences Odette Cancer Research Program and Sunnybrook Research Institute

Assistant Professor, Surgery, University of Toronto Adjunct Scientist, Institute for Clinical Evaluative Sciences (ICES) of Ontario

#### Maitreya (Trey) Coffey, MD

Division of Paediatric Medicine, The Hospital for Sick Children

Project Investigator, SickKids Research Institute Assistant Professor, Department of Paediatrics, University of Toronto

#### Eyal Cohen, MD, MSc

Division of Paediatric Medicine, The Hospital for Sick Children

Project Investigator, Child Health Evaluative Sciences, SickKids Research Institute

Assistant Professor, Paediatrics, University of Toronto Assistant Professor, Lawrence S. Bloomberg Faculty of Nursing, University of Toronto

Investigator, CanChild Centre for Childhood Disability Research, McMaster University

#### Nick Daneman, MD, MSc

Clinician Scientist, Division of Infectious Diseases Sunnybrook Health Sciences Centre Scientist, Clinical Epidemiology Program, Sunnybrook Research Institute

Lecturer, Department of Medicine, University of Toronto

Adjunct Scientist, Institute for Clinical Evaluative Sciences (ICES) of Ontario

#### Neil D'Souza MRT(T), BSc, MHSc

Radiation Therapist and Quality Assurance Coordinator Radiation Oncology Program Odette Cancer Centre Sunnybrook Health Sciences Centre

#### Chris Denny, MD, MSc

Staff Physician, Department of Emergency Medicine Sunnybrook Health Sciences Centre

Scientist, Clinical Epidemiology Program, Sunnybrook Research Institute

Assistant Professor, Department of Medicine, University of Toronto

#### Tony Easty, PhD, PEng, CCE

Senior Director, Department of Medical Engineering and Chair, Management Committee, Centre for Global eHealth Innovation University Health Network University of Toronto

#### Sherry Espin, RN, MEd, PhD

Associate Professor, School of Nursing Ryerson University

#### Virginia Flintoft, RN, MSc

Project Director,

Department of Health Policy Management and Evaluation

Faculty of Medicine, University of Toronto

#### Olavo Fernandes, PharmD

Clinical Director of Pharmacy, Toronto General Hospital

University Health Network

Assistant Professor, Leslie Dan Faculty of Pharmacy, University of Toronto

#### William Geerts, MD

Director, Thromboembolism Program, Sunnybrook Health Sciences Centre

Senior Scientist, Clinical Epidemiology Program, Sunnybrook Research Institute

Professor, Department of Medicine, University of Toronto

Associate Professor, Department of Health Policy, Management and Evaluation, University of Toronto

#### David Goldstein, MD, MSc.

Anesthesiologist and Associate Professor of Anesthesiology and Perioperative Medicine and Surgery Queens University

#### Astrid Guttmann, MD, MSc

Director, Thromboembolism Program, Sunnybrook Health Sciences Centre

Senior Scientist, Clinical Epidemiology Program, Sunnybrook Research Institute

Professor, Department of Medicine, University of Toronto

Associate Professor, Department of Health Policy, Management and Evaluation, University of Toronto

#### Carrie-Lynn Haines, RN, BScN

Manager, Patient Safety Mt. Sinai Hospital

#### Linda McGillis Hall, PhD

Professor and Associate Dean, Research & External Relations

Lawrence S. Bloomberg Faculty of Nursing University of Toronto

Adjunct Scientist, Institute for Clinical Evaluative Sciences (ICES) of Ontario

#### Chris Hayes, MD, MSc, MEd

Medical Director, Quality and Patient Safety Scientist in the Keenan Research Centre of the Li Ka Shing Knowledge Institute

St. Michael's Hospital Assistant Professor, Department of Medicine

University of Toronto Medical Officer, Canadian Patient Safety Institute

#### Sandra Howie, PharmD

Clinical Practice Leader, Infectious Disease Mount Sinai Hospital

#### Lianne Jeffs, PhD, MSc

Director, Nursing/Clinical Research, Nursing Administration

Scientist in the Keenan Research Centre of the Li Ka Shing Knowledge Institute

St. Michael's Hospital

Clinical Appointment, Lawrence S. Bloomberg Faculty of Nursing, University of Toronto

Adjunct Professor, School of Nursing, York University Adjunct Professor, School of Nursing

Humber Institute of Applied Technology/University of New Brunswick

#### Dave Juurlink, MD, PhD

Division Head, Clinical Pharmacology and Toxicology Staff Physician, Division of General Internal Medicine Sunnybrook Health Sciences Centre Scientist, Institute for Clinical Evaluative Sciences (ICES) of Ontario

Associate Professor of Medicine, Paediatrics, and Health Policy, Management, and Evaluation, University of Toronto

Medical Toxicologist for Ontario Poison Centre

#### Andrew McDonald, MD

Medical Director, Quality and Patient Safety Staff Physician, Emergency Medicine Sunnybrook Health Science Centre Assistant Professor, Department of Medicine University of Toronto

#### Conor McDonnell, MD

Staff Anesthesiologist, Department of Anesthesia & Pain Medicine

The Hospital for Sick Children

Assistant Professor, Department of Anesthesia University of Toronto

#### Dante Morra, MD, MBA

Medical Director, Centre for Innovation in Complex Care

University Health Network

Assistant Professor, Department of Medicine Associate, Collaborative for Health Sector Strategy, Rotman School of Management University of Toronto

#### Andrew Morris, MD, SM

Divisions of Infectious Diseases and General Internal Medicine

Director, Antimicrobial Stewardship Program Mount Sinai Hospital/University Health Network Associate Professor, Department of Medicine University of Toronto

#### Emily Musing BScPharm, MHSc

Executive Director, Pharmacy, Clinical Risk and Quality

University Health Network

Adjunct Faculty Member, Department of Health Policy Management and Evaluation

Faculty of Medicine

Assistant Professor of Pharmacy University of Toronto

#### Matthew Oliver, MD

Director of Hemodialysis, Division of Nephrology Sunnybrook Health Sciences Centre Assistant Professor, Department of Medicine University of Toronto

#### Guiseppe (Joe) Papia, MD, MSc

Staff Physician, Division of Cardiac and Vascular Surgery and Critical Care Medicine Sunnybrook Health Sciences Centre Associate Scientist, Sunnybrook Research Institute Assistant Professor, Department of Surgery, University of Toronto

#### Don Redelmeier, MD, MSc

Canada Research Chair in Medical Decision Sciences Director of Clinical Epidemiology & Health Services Research Program

Sunnybrook Health Science Centre Senior Scientist, Institute for Clinical Evaluative Sciences (ICES) of Ontario

Professor of Medicine, University of Toronto

#### Gareth Seaward, MD, MSc

Head, Division of Obstetrics and Medical Director Intrapartum

Mount Sinai Hospital

Professor of Obstetrics and Gynecology, University of Toronto

#### John Senders, PhD

Professor Emeritus of Industrial Engineering at the University of Toronto James Marsh Professor-at-Large, University of Vermont, Burlington

#### Maureen Shandling, MD

Senior Vice-President, Medical Affairs
Mount Sinai Hospital
Associate Professor, Division of Neurology, Department
of Medicine
University of Toronto

#### Andrew Smith, MD, MSc

Head, Division of General Surgery Surgical Oncologist, Odette Cancer Centre Sunnybrook Health Sciences Centre Associate Professor, Department of Surgery University of Toronto

#### Jennifer Thull-Freedman, MD, MSc

Staff Physician, Paediatric Emergency Medicine Co-Director, Paediatric Emergency Medicine Clinical Fellowship Program The Hospital for Sick Children Assistant Professor, Department of Paediatrics University of Toronto

#### Homer Tien, MD, MSc

Associate Scientist, Clinical Epidemiology Program, Sunnybrook Research Institute Medical Director, Tory Regional Trauma Centre Sunnybrook Health Sciences Centre Assistant Professor, Department of Surgery University of Toronto

#### Ann Tourangeau, RN, PhD

Graduate Chair in Patient Safety and Associate
Professor
Lawrence S. Bloomberg Faculty of Nursing
Co-Investigator, Nursing Health Services Research Unit
University of Toronto

Adjunct Scientist, Institute for Clinical Evaluative Sciences (ICES) of Ontario

#### Patricia Trbovich, PhD

Human Factors Specialist, in the Healthcare Human Factors Group

Centre for Global eHealth Innovation

University Health Network

Assistant Professor, Clinical Engineering, Institute of Biomaterials and Biomedical Engineering, University of Toronto

#### Maureen Trudeau, MD, MA

Head, Division of Medical Oncology/Hematology Sunnybrook Health Sciences Centre Head, Systemic Therapy Program, Odette Cancer Centre

Professor, Department of Medicine Associate Member, Institute of Medical Science, University of Toronto

#### Mary Vearncombe, MD

Medical Director, Infection Prevention and Control Sunnybrook Health Sciences Centre Associate Professor, Department of Laboratory Medicine & Pathobiology University of Toronto

#### Randy Wax, MD, MEd

Staff Intensivist, Critical Care Unit,
Senior Medical Director, Program for Resuscitation
Education and Patient Safety
Mount Sinai Hospital
Assistant Professor, Department of Medicine
University of Toronto
Medical Director, Advanced Cardiac Life Support
training
Heart and Stroke Foundation of Ontario

#### Brian Wong, MD

Staff Physician, Division of General Internal Medicine, Sunnybrook Health Sciences Centre Assistant Professor, Department of Medicine University of Toronto

#### Robert Wu, MD, MSc

Staff Physician, Division of General Internal Medicine University Health Network Research Director, Centre for Innovation in Complex Care

Assistant Professor, Department of Medicine University of Toronto









# St. Michael's

Inspired Care.
Inspiring Science.











