NURSES ADVANCING PRACTICE THROUGH RESEARCH

The *art* and *science* of caring
Nursing: A Cornerstone Of Innovation And Care Excellence

Inspired Care. Inspiring Science. These four words describe St. Michael’s commitment to integrating scientific discoveries into practice to improve patient care and organizational performance. Our ongoing quest to generate new knowledge and test out innovations advances excellence in patient care every day. And we do this, never forgetting our history of treating all who come to us in need, with dignity and compassion.

Nurses at St. Michael’s are instrumental in finding ways to improve the quality and safety of our patient care and the work environment. With a strong tradition of compassionate caring and professional practice, St. Michael’s nurses are leading research studies that are improving the quality of life and clinical outcomes for patients and their families.

We are proud of what our research-inspired nurses continually contribute to advancing excellence in care. This booklet provides a snapshot of nursing research activities, and highlights how their fact-driven efforts are inspiring science and care at St. Michael’s.

“St. Michael’s nurses’ efforts to advance science in patient care exemplify the six dimensions of quality: safety, outcomes, access, patient experience, equity and efficiency (SOAPEE).”

Dr. Robert Howard
President & Chief Executive Officer
St. Michael’s
This booklet holds excellent examples of how nurses are employing research in daily practice by translating knowledge into action, inspiring compassion through learning and advancing innovations in safe care. Our nurses who are engaged in research activities are drawn from a variety of clinical specialties and roles including designated nursing researchers, administrators, educators, advanced practice and clinical nurses.

Read on to learn about our work with academic and professional nursing organization partners. Front and centre is our Nursing Research Advancing Practice – Career Development (RAP-CD) program. This initiative is a partnership with Ryerson University and currently includes 10 research projects led by clinical nurses aimed at improving patient care and enhancing career resilience.

As we build on the academic achievements and productivity of our nurse researchers at St. Michael’s, we will continue to work closely with our funders, donors and academic partners in the mutual goal of advancing patient care and the health of our communities through research and knowledge translation. Finding answers through scholarly inquiry is an integral step to ensuring that evidence-based care is part of our daily nursing practice at St. Michael’s.

“Generating knowledge through research that advances quality in daily nursing practice and enhances our work environment is a key driving force for ensuring excellence in patient care at St. Michael’s.”

Ella Ferris
EXECUTIVE VICE-PRESIDENT, PROGRAMS, & CHIEF NURSE EXECUTIVE
ST. MICHAEL’S
The number of nurses participating in research has grown exponentially since we published our first Nursing RAP booklet in 2008. That edition showcased the work of St. Michael’s Nursing Research Advancing Practice program’s inaugural members. Key to this growth is the Nursing Research Advancing Practice (RAP)-Career Development program that was launched in 2009 with 10 teams, 40 nurses and 10 faculty. Partnering with Ryerson University, we built on our first Nursing RAP program and added a career development component to the learning modules.

Alongside other strategies including research capacity-building workshops and forums, this program has been invaluable in intensifying the research and knowledge translation that has enhanced our healthcare collaboration with academic partners and professional associations.

The following pages highlight the 10 Nursing RAP-CD projects and other research that are advancing our knowledge and understanding of nursing’s contribution to advancing excellence in patient care, organizational and health system performance, and the nursing profession beyond the walls of St. Michael’s.

The studies of RAP-CD participants in this booklet are denoted with an asterisk (⁎).
NURSING RESEARCH ADVANCING PRACTICE – CAREER DEVELOPMENT PROGRAM MEMBERS

Front Row, L - R
Erinn Rupay
Rola Moghabghab
Allison Leggott
Sharon Barclay
Karen Brownie
Ann Jones
Nancy Lee-Yu
Charlene Chu
Ashley Galang

Middle Row, L - R
Andre Canezal
Rachel Swift
Eslyn Williams
Mavis Afiriyie-Boateng
Darlene O’Donnell
Liz Butorac
Julie Kruchowski
Lisa Beames
Jacki Joy
Donnavan Boyd
Jenny Pak

Back Row, L - R
Beth McKay
Janice Waddell
Heather Beanlands
Maria Maione
Elyse Kalpage
Bianca Fetros
Brenda Stade
Lianne Jeffs
Gail Wilson

Missing: Jacqueline Chen, Trish Gaffney, Nicole Kirwan, Martha Lam, Steve Manning, Katherine Mansfield, Mary Mutuna, Rose Nabert, Janany Nemallan, Marianne Rigatti, Regina Sawh, Souraya Sidani, Caridad Sinajon, Orla Smith, Karen Spalding, Denise Valentine, Michelle Williams, Lily Zhang, Joyce Zheng
Translating Knowledge Into Action
HOW MENTORSHIP CAN INCREASE ON-UNIT NURSING JOB SATISFACTION

Liz Butorac, Julie Kruchowski, Mary Mutuna, Steve Manning & Janice Waddell*

The current nursing shortage is especially problematic in critical care where nurses are required to be highly specialized to tend to the sickest patients. Literature suggests the shortage is due to nurses leaving the profession, and cites lack of peer and workplace support as an indicator of job dissatisfaction and reason to leave. One strategy to address the shortage through workplace support is mentorship programs that engage experienced nurses as professional support resources for new nurse recruits.

In 2008, St. Michael’s piloted the Mentorship in Nursing Development (MIND) program on its medical-surgical intensive care unit. This study explored the attitudes, perceptions and experiences of new-hire critical care nurses along with those of assigned mentors, both engaged in the unit-specific mentorship program. Study findings describe workplace satisfaction indicators.

BRIDGING THE GAP IN DIABETES KNOWLEDGE AMONG HEMODIALYSIS NURSES

Nancy Lee-Yu, Jacqueline Chen, Ann Jones, Lily Zhang, Joyce Zheng & Heather Beanlands*

Approximately 40% of patients receiving hemodialysis at St. Michael’s have diabetes mellitus (DM). Hemodialysis nurses (HD RNs) have specialized knowledge of end stage renal disease, but their knowledge of current diabetes clinical practice guidelines is unknown. Currently there are no standards or tools for diabetes care in the hemodialysis unit.

This study investigated the impact of educating HD RNs on the Canadian Diabetic Association’s diabetes guidelines to screen for the presence of DM complications.

Consenting nurses completed knowledge questionnaires before and immediately after an educational intervention, and then again eight weeks later. Knowledge was reinforced with reference cards.

Results from this study will determine the impact of educating HD RNs about guidelines for screening diabetes patients for complications and how that increased knowledge will improve patient outcomes.
ADVANCING KNOWLEDGE IN THE CARE OF ELDERLY PATIENTS IN THE EMERGENCY DEPARTMENT
Rola Moghabghab

As a geriatric emergency management nurse practitioner at St. Michael’s, Rola’s role is many-fold. Her assessments of the elderly in the emergency department (ED) help identify atypical presentations of acute health issues, functional and cognitive status, symptom management and safety concerns. She also collaborates with the ED and other department care teams and community agencies to develop evidence-based treatments and safe discharge plans.

Rola’s research activities align with her clinical specialty with a focus on the nursing care of older adults and the transitions between acute care and the community. In 2009, she collaborated on several studies including piloting an in-home interprofessional falls prevention program for older adults discharged from the ED after presenting with a fall, and a six-month post implementation evaluation of St. Michael’s new acute care for the elderly (ACE) unit. Rola is currently involved in the implementation and outcomes evaluation of an interprofessional team process of a delirium prevention protocol in St. Michael’s ED.

DISCOVERING THE KEYS TO EMPLOYMENT RETENTION FOR PSYCHIATRIC MENTAL HEALTH NURSES
Mavis Afriyie-Boateng, Nicole Kirwan, Marianne Rigatti, Regina Sawh & Beth McKay*

Specialty nursing areas face challenges attracting and retaining nurses over and above the impact of Ontario’s current nursing shortage. At St. Michael’s, employing sufficient skilled psychiatric mental health nurses to serve our inner city population is of great importance.

A better understanding of the reasons why psychiatric mental health nurses plan to leave their positions, and what factors keep them in their jobs, will inform the planning and implementation of effective nursing human health resource-planning strategies.

Our study used survey questionnaires that measured job satisfaction, organizational commitment, burnout and intent to stay, in order to examine the objectives of psychiatric mental health nurses to remain employed in specialty nursing.

The study’s findings will contribute to the limited body of knowledge on psychiatric mental health nursing retention.
The first months of practice for new graduate nurses (NGNs) can be significantly stressful with frequently cited challenges including a perceived lack of established organization and interpersonal supports. Recognizing the need for established NGN support, this study focuses on the retention impact of early- to mid-career nurses serving as preceptors and mentors to NGNs by providing guidance in developing their nursing practice competencies and promoting career development.

Study objectives examine the effect of a formal career planning and development (CPD) program on career resilience, satisfaction and intent to stay among NGNs, compared to the standard orientation program. We are also evaluating the impact of a CPD and coach mastery intervention program on career satisfaction, perceived organizational support and intent to stay among early- to mid-career nurses. The research also looks at perceived confidence in providing career coaching to NGNs using a single blind randomized controlled trial study design.
Inspiring Compassion Through Learning
IMPROVING PAIN MANAGEMENT PRACTICES FOR CRITICALLY ILL CRANIOTOMY PATIENTS

Gabriela Tataru, Marlene Santos & Jane Topolovec-Vranic

It is often assumed that craniotomy patients do not experience significant post-operative pain. However, recent studies reveal that a proportion of these patients report moderate to severe pain. Acute pain, left untreated, can lead to a number of negative consequences including cardiac arrhythmias and ischemia, poor healing of surgical wounds, hypoxemia and respiratory distress, and long-term chronic pain. Poor pain management can also interfere with recovery and negatively impact patient satisfaction with their hospital care.

An evaluation study of St. Michael's pain management practices for post-craniotomy patients will help the trauma-neurosurgery unit identify potential areas for pain-medication intervention and patient-care improvements. Findings will be used to inform new approaches including standardized protocols for post-craniotomy pain management or enabling the bedside nurse to better advocate for more pain medication on their patient’s behalf.

ASSISTING FAMILIES WITH RESEARCH DECISION-MAKING IN THE ICU

Orla Smith

Research is pivotal to advancing care innovations for the critically ill. In the ICU, the responsibility for research decision-making falls to the families of the critically ill. Orla’s studies show that ICU patients want their family members involved in the research decision-making process when they are incapable of being involved themselves. Her research has also shown that family members’ comfort level in making these decisions decreases with the escalation of risk thus making research decision-making a stressful and uncomfortable responsibility.

As co-investigator on a Canadian Institutes of Health Research-funded study, Orla is currently looking at family members’ real-time experiences around research consent and ways to improve the process. Her other research interests include evidence-based practice and patient safety in the ICU and developing nursing capacity to engage in research. She is also involved in funded research on H1N1 influenza in the ICU.

Orla is an adjunct scientist with the Keenan Research Centre, Li Ka Shing Knowledge Institute of St. Michael’s, and is cross appointed to the Lawrence S. Bloomberg Faculty of Nursing at the University of Toronto.
FACTORs INFLUENCING NURSES’ CONFIDENCE IN HELPING CARDIOVASCULAR PATIENTS QUIT SMOKING

Rose Nabert, Darlene O’Donnell, Denise Valentine & Gail Wilson*

Quitting smoking is one of the most effective ways cardiovascular patients can increase their survival rate.

St. Michael’s heart and vascular program offers its in-patients a smoking cessation intervention that uses a team approach to support patients in kicking the nicotine habit.

Since the bedside nurse is the smoking cessation facilitator and central to the program’s success, our study surveyed heart and vascular program RNs to determine their comfort level in undertaking this role and what factors may impact that confidence.

Survey results will be incorporated into future education sessions to support nurses in this specialized facilitator role.

EXPLORING NURSES’ ATTITUDES TOWARDS DRUG ABUSE PATIENTS IN A GENERAL INTERNAL MEDICINE SETTING

Charlene Chu, Ashley Galang, Caridad Sinajon & Orla Smith*

As an inner city hospital, St. Michael’s serves a large population of patients with a history of illicit drug use. The research team was interested in how nurses on the hospital’s general internal medicine unit (GIM) feel about caring for this group of patients. The purpose of the study was to utilize an existing tool, the Drug and Drug Problems Perception Questionnaire, to explore GIM nurses’ attitudes towards patients who use illegal drugs and identify the influencing factors on their thinking.

Study results show GIM nurses hold a neutral attitude towards this particular patient group that does not appear to be influenced by age or experience. However, motivation to work with this population was low across the study, and a lack of nursing support in caring for these patients was noted. The findings of the study highlight the need for enhanced role support of nurses caring for these vulnerable patients.
MEASURING THE BENEFITS OF PATIENT EDUCATION PRIOR TO ELECTIVE CARDIAC SURGERY

Andre Canezal, Trish Gaffney, Erinn Rupay, Rachel Swift & Orla Smith*

To decrease pre-operative anxiety, elective cardiac surgery patients at St. Michael's view a 20-minute video about what to expect before and after open-heart surgery and participate in a face-to-face teaching session with a registered nurse. Since this teaching approach has never been evaluated at the hospital, the study team developed a questionnaire to measure anxiety levels and knowledge about the procedure in cardiovascular surgery patients. Consenting patients completed the questionnaire before and after the pre-admission teaching session. A visual analogue scale was used to evaluate self-reported anxiety and knowledge with measured knowledge tested via multiple-choice questions. Results showed significant differences between the self-reported and measured knowledge pre- and post-education, implying that the hospital’s approach to pre-operative learning is indeed effective in increasing patient knowledge. However, there were no differences in anxiety levels before and after the teaching session leading the group to observe that education alone may not have the desired impact on alleviating patients’ pre-operative anxiety.

IDENTIFYING THE EXISTENCE OF VICARIOUS TRAUMATIZATION AMONG TRAUMA NURSES

Donnavan Boyd, Jacki Joy, Janany Nemallan, Jenny Pak, Maria Maione & Lianne Jeffs*

Vicarious traumatization (VT) is a type of post-traumatic stress disorder affecting people who work with trauma victims. VT can impair day-to-day social, personal and professional functioning and result in poor work-life balance.

As a designated trauma centre, St. Michael’s trauma nurses are exposed to life-changing events on a daily basis through their empathetic engagement and sense of responsibility in caring for patients and their families.

The purpose of this study was to investigate the extent to which VT is experienced by RNs across the hospital’s trauma continuum comprising the emergency department, trauma-neurosurgery intensive cares and the in-patient ward.

Knowing if VT exists at St. Michael’s, and to what extent, allows us to develop and test prevention and management strategies designed to enhance the quality of work life for our trauma nurses.
Advancing Innovations In Safe Care
An aging population means family healthcare practices are seeing an increase in the number of elderly persons presenting with cognitive impairment symptoms, many coming to clinics with episodic complaints. Having no formalized cognitive screening tool in place to identify the level of a patient’s perceived awareness causes a gap in practice with the potential for delivering less than optimal health care results for this at-risk demographic.

The purpose of this study was to trial and select a cognitive screening tool to be used by the nurses in St. Michael’s department of family and community medicine.

Use of the selected tool will enhance the role of nursing in caring for elderly patients seen in the family practice clinics. It will also build rigour into nursing practice, as well as support the RNAO Best Practice Guidelines on Screening for Delirium, Dementia and Depression.
IMPLEMENTING A TELE-HOMECARE INITIATIVE FOR BRAIN INJURY PATIENTS

Sonya Canzian, Jayne Dabbs, Jane Topolovec-Vranic, Alicja Michalak & Avery Nathens

Patients transitioning to community living following hospitalization for an acquired brain injury (ABI) often report social isolation, insufficient support, monitoring and education, along with limited access to specialized health providers. The situation is exacerbated especially for those living in a rural or remote setting.

Tele-homecare technology (THC) is one way to provide a communication bridge for clinicians, patient and family caregivers to easily connect across geographical boundaries.

This study’s purpose is to clarify the needs and concerns of moderate to severe ABI patients and their caregivers by having them use THC in the first six months post discharge. Results will help us develop a formal intervention program suitable for THC delivery to those living in both urban and rural Ontario. Demonstrating the feasibility of implementing THC for this trauma-neurosurgery population is the first step in potentially providing an important post-care outreach resource for these individuals.
SEEKING EXCELLENCE THROUGH BEST PRACTICE

In May 2009, St. Michael’s became a Registered Nurses Association of Ontario’s (RNAO) Best Practice Spotlight Organization (BPSO) candidate and, in August 2009, an organizational member of the Nursing Best Practice Research Unit, furthering our commitment to evidence-based practice to enhance quality clinical outcomes for all patients. We are currently involved in two research programs, including one with our general internal medicine unit that is led by the University of Ottawa. Their mandate is to examine the RNAO’s Best Practice Guideline (BPG) on Screening for Delirium, Dementia and Depression.

The other program involves 15 nurses from St. Michael’s and three researchers from Ryerson University looking at outcomes associated with an organization-wide approach to BPGs. The investigative collaboration involves three nested studies designed to scrutinize and explore outcomes associated with targeted local and corporate interventions that address key recommendations from the RNAO’s BPGs.

Over a period of three years, a series of surveys, focus groups and interviews will provide rich empirical and narrative data on nurse and patient experiences around professionalism, evidence-based and reflective practice, therapeutic relationships and workplace safety. In addition, specific clinical indicators of patient safety and nursing workforce stability will be tracked to trend changes during and following the BPG implementation period.

This program is funded by the RNAO’s International Affairs and Best Practice Guideline Program Best Practice Spotlight Organization Research Initiative.
ELEVATING THE SCIENCE OF NURSING AND PATIENT SAFETY

Dr. Lianne Jeffs
DIRECTOR, NURSING RESEARCH, & SCIENTIST
KEENAN RESEARCH CENTRE OF THE LI KA SHING KNOWLEDGE INSTITUTE
ST. MICHAEL’S

Through her dual scientist-administrative role, Dr. Lianne Jeffs has established an impressive track record for elevating nursing’s involvement in research at St. Michael’s while also initiating her own investigative program. Her research primarily focuses on enhancing patient safety and organizational performance, especially how clinicians interact in daily practice to detect, respond to and learn from near misses and other safety threats across point-of-care transitions.

In May 2010, Lianne was awarded the esteemed Canadian Institutes of Health Research (CIHR)/Institute of Health Services and Policy Research Rising Star Award for her work in knowledge translation related to the Nursing Research Advancing Practice program. Other honours include the Registered Nurses Association of Ontario’s (RNAO) Leadership Award in Nursing Research, and the University of Toronto’s Rising Star Award, Academic Nursing. Lianne currently holds a Ministry of Health and Long-Term Care Early Nursing Research Career Award. The Canadian Patient Safety Institute, CIHR, RNAO and MOHLTC are funding supporters of her research program.

A published author in several peer-reviewed journals, Lianne frequently presents her work globally and is an associate editor for Healthcare Quarterly’s Patient Safety Special Edition.
The Keenan Research Centre of the Li Ka Shing Knowledge Institute is home to researchers whose areas of expertise cover a wide variety of disciplines and methodologies. Collectively, we have secured over $40 million in grants, and are generating knowledge about a variety of patient care, organizational factors and policy-related issues relevant to the health of people provincially and globally. St. Michael’s has become a leader in accelerating the uptake of basic, clinical and applied research to improve safety outcomes and the work environment.

Over the last five years, nurses at St. Michael’s have established a very strong track record in research; three internal and three external nurses have obtained scientist affiliations with the Keenan Research Centre of the Li Ka Shing Knowledge Institute. Inspired by the leadership of our director of nursing research, and our executive vice-president of programs and chief nurse executive, our nurses have been actively involved as principal or co-investigators in over $4 million of funded research. This includes securing our first Ministry of Health and Long-Term Care Career Scientist Award in nursing, and a number of operating grants.
“St. Michael’s nurses are leaders in their profession, providing exceptional care and advancing practice through research. Thank you for making such a difference.”

MAKING A DIFFERENCE THROUGH THE FOUNDATION AND ENDOWMENT OPPORTUNITIES

L. Alayne Metrick
PRESIDENT
ST. MICHAEL’S FOUNDATION

Nurses make a huge difference. Andy Cumming is one example.

Andy had hemophilia. Because of tainted blood products, he contracted hepatitis C which led to a liver transplant in 2005. He has cleared the virus, and the new liver has cured his hemophilia.

What helped see him through was the care he received – particularly that provided by Ann Harrington at St. Michael’s. Ann was the first nurse coordinator in our Comprehensive Hemophilia Program, which started bringing expert care to people with life-threatening bleeding disorders in 1983.

Now Andy wants to give back. We are working with him to create a new Nursing Fellowship to support clinical care and research ways to share best practices.

Andy is just one example of how care can inspire giving. There are many more grateful patients who support St. Michael’s because of the outstanding care our nurses provide. Every day they treat all who come through our doors with compassion, and people notice.

To help, please call us at 416-864-5000, visit us at the Hospital on the first floor of the Queen Wing, or make a donation online at www.stmichaelshospital.com
It is with great anticipation and pride that we watch the new Li Ka Shing Knowledge Institute (LKSII) rapidly take shape on the corner of Shuter and Victoria Streets. The 335,000 sq. ft. facility, home to the Keenan Research Centre and the Li Ka Shing International Healthcare Education Centre, will open its doors to the world in 2011, providing a stimulating, interactive environment for researchers, educators, clinicians and other hospital staff.

The glass bridge linking the LKSII and St. Michael’s is symbolic of the association of research and education to our hospital, and the importance of the hospital to research and education.

“Building upon the clinical skills and compassion of St. Michael’s nurses, the success of the Nursing Research Advancing Practice – Career Development program is affirmation of the hospital’s commitment to translating research into practice. The contributions of nursing research to the activities of the LKSII are crucial and are growing.”

Dr. Andreas Laupacis
EXECUTIVE DIRECTOR
LI KA SHING KNOWLEDGE INSTITUTE OF ST. MICHAEL’S
“Our nurses’ commitment to engaging in research that aims to improve the quality of care and work environment innovations is inspiring. We are proud of the accomplishments of our nurse researchers at St. Michael’s.”

John King
EXECUTIVE VICE-PRESIDENT, HOSPITAL SERVICES, & CHIEF ADMINISTRATIVE OFFICER

“St. Michael’s nurses are integral members of our health care team and are enhancing patient outcomes through their ongoing research. Their pursuit of care excellence and their commitment to inquiry and learning is truly impressive.”

Dr. Patricia Houston
VICE-PRESIDENT, EDUCATION

“Nurses interact with patients 24/7 and are in a unique position to identify and answer questions around quality and safety that matter to patients and their families. Insights and lessons learned from nursing-led research and knowledge translation activities are accelerating our quality agenda into daily practice at St. Michael’s.”

Dr. Douglas Sinclair
EXECUTIVE VICE-PRESIDENT, PROGRAMS, & CHIEF MEDICAL OFFICER
St. Michael’s gratefully acknowledges the following three inaugural affiliate scientists with the Keenan Research Centre of the Li Ka Shing Knowledge Institute:

**SHERRY ESPIN**

Sherry Espin, associate professor, Daphne Cockwell School of Nursing, Ryerson University, holds a wide breadth of research exploring interprofessional influences on patient safety. Current studies include the interaction of health care teams in context of perceived care errors, the role of simulation in promoting error-disclosure debriefings, apology characteristics within a team-training environment and reporting team-based errors perceived by ICU nursing staff/students. Sherry holds cross appointments with the Ryerson University School of Graduate Studies and is an affiliated scholar with the Wilson Centre for Health Professions Education.

**LOUISE ROSE**

University of Toronto’s Louise Rose holds a tenure-track assistant professorship at the Lawrence S. Bloomberg Faculty of Nursing. Louise’s recent interdisciplinary research collaborations include using provincial data to determine the relationship between emergency department length of stay and patient death for critically ill patients. Study results will inform all cross-country health-care policy makers and clinicians when considering organizational priorities for management processes of critically ill patients in the emergency department.

**KAREN SPALDING**

Research by Karen Spalding, director, Daphne Cockwell School of Nursing, Ryerson University, examines the government’s role and policy impact on the health care system, with a focus on children with complex care needs and their families. In addition, career planning, development and retention of the nursing workforce are of special research interest. Karen’s recently funded work with St. Michael’s enabled nurses to explore career resilience and retention by participating in research studies and career-planning workshops.