Selected research, publications, and resources to promote evidence-informed risk management in Canadian healthcare organizations. Prepared by Healthcare Risk Management staff at the Healthcare Insurance Reciprocal of Canada (HIROC). Titles with an open lock icon (🔒) indicate that a publication is open access; for all others, a subscription or library access is required. Please contact riskmanagement@hiroc.com for assistance, if required.

Hot Off the Press

**DIAGNOSTIC ERRORS** The value of autopsies in the era of high-tech medicine: discrepant findings persist

Analysis of over 400 adult autopsy cases performed in 2007 and 2012/2013 in The Netherlands to determine the frequency of discrepancies between clinical and autopsy diagnoses. Overall, major discrepancies (missed diagnoses related to cause of death) decreased from 20% to 16% while minor discrepancies (diagnoses not directly related to cause of death) increased from 22% to 31%. Most of the major discrepant diagnoses were myocardial infarction, pulmonary embolism, and pneumonia. Most minor discrepancies were benign tumours, polyps, and cysts.

“Surprisingly, we found a higher percentage of major discrepancies when imaging was applied during life. Further analysis revealed that this was mainly due to imaging of an improper body part or with an improper imaging modality, thereby failing to identify the actual [cause of death], which was the case in 15.6%” (p.7).

**OBSTETRICS** Improved obstetric safety through programmatic collaboration

Report of a collaborative initiative to improve patient outcomes in four large obstetrical programs in New York. Interventions included: consensus on best practices; standardized education; mandatory electronic fetal monitoring training; team and simulation training; documentation; and audit and feedback. A 42% decrease in the Adverse Outcome Index (e.g. birth trauma, NICU admissions, blood transfusions and perineal lacerations) was seen over three years. A table of identified best practices is included.

“Although the process described here requires commitment, hard work, extensive collaboration, compromise, and intellectual and financial commitment from leadership at the institutional and department levels and at the insurance carrier, it does lead to improved outcomes and should be implemented as widely as possible” (p.20).

**MEDICAL MALPRACTICE / PATIENT SAFETY** Conditions that influence the impact of malpractice litigation risk on physicians’ behavior regarding patient safety

Study involving 22 key stakeholders in the malpractice litigation process in the US to identify factors which might influence the relationship between the risk of litigation and physician behaviours that run counter to patient safety including: defensive medicine, failing to report incidents, and hesitating to disclose incidents to patients. Four factors that (positively or negatively) influence these behaviours were found to be: complexity of care, discussing incidents with colleagues, personalized responsibility, and hospitals’ response to physicians following incidents.
LEADERSHIP The implementation leadership scale (ILS): development of a brief measure of unit level implementation leadership

Exploratory and confirmatory factor analysis study of 93 outpatient mental health programs in the US to determine a brief and efficient measure of unit level leadership for evidence based practice (EBP) implementation. Elements of the resulting scale include: (1) proactive leadership (establishes clear standards, develops a clear plan, removes obstacles); (2) knowledge leadership (knows what he/she is talking about, is knowledgeable about EBP, is able to answer staff questions); (3) supportive leadership (supports employee efforts to use and learn more about EBP, recognizes and appreciates employee efforts); and (4) perseverant leadership (perseveres through ups and downs of implementing, and reacts to related critical issues).

INFECTION CONTROL Working relationships of infection prevention and control programs and environmental services and associations with antibiotic-resistant organisms in Canadian acute care hospitals

Survey of lead infection control professionals from more than 100 Canadian acute care hospitals to determine if educational collaboration and cooperation between infection prevention and control (IPAC) and environmental services programs affected rates of antibiotic-resistant organisms (AROs) in hospitals. The greater number of mental health and acute care beds was associated with higher MRSA and CDI rates, respectively. Seeking IPAC input before changing cleaning protocols was associated with lower VRE and CDI rates. A greater degree of cooperation between the programs was related to lower MRSA rates.

“Most IPAC programs provide education and training in infection prevention and control directly to Environmental Services staff, and most respondents reported that the education and training is well received. One-third of respondents did not rate their hospital’s Environmental Services cleaning staff as adequately trained to clean to standards, however” (p.351).

INFECTION CONTROL Patient-as-Observer approach: an alternative method for hand hygiene auditing in an ambulatory care setting

A quality improvement project over an 11-month period in an Ontario academic ambulatory care hospital using patients as observers to assess health care providers’ compliance with hand hygiene. Survey cards with instructions and an area to record compliance were developed. Overall hand hygiene compliance was 97%; patients’ comments were shared with health care providers to motivate continued improvement. A copy of the survey card is included.

“In the age of patient safety and continuous quality improvement, we believe that the patient-as-observer approach is a promising tool for championing both causes because it supports the education, engagement, and empowerment of patients to play a more active role in their own health care” (p.441).
DISRUPTIVE BEHAVIOUR  *Instituting a culture of professionalism: the establishment of a center for professionalism and peer support*  

Overview and outcomes of a program in a large academic centre in the US to educate the hospital staff on professionalism and manage unprofessional behaviour. Program components include leadership support, behavioural expectations and assessments, mandatory skills training on communication and professionalism, and a robust process for reporting, assessment, remediation and monitoring of professional concerns. Career outcomes for reported persons over an 18 month period include: 78% remained in role, 11% left due to professionalism issue, 5% demoted, and 5% left for other reasons. A copy of the organization’s “code of professional conduct” is included.

“By introducing our professionalism initiative at the orientation seminar for all new interns, residents, fellows, staff physicians, and scientists, we establish the expectations and boundaries for acceptable behavior, as well as the importance of holding one another accountable for our behavior” (p.175).

PATIENT SAFETY / HIGH RELIABILITY  *Health care huddles: managing complexity to achieve high reliability*  

Study incorporating complexity and high-reliability theories to identify theoretical links between huddles and improvements in patient safety. Results found that the impact of huddles on patient safety could be through: (1) creating time and space for conversations (on topics that might not otherwise be discussed; between individuals who might not otherwise communicate; and that span boundaries and hierarchies), (2) enhancing relationships (among individuals who might not otherwise interact; and inclusion of newly trained clinicians in the huddle can foster new shared understandings of work to be done), and (3) strengthening a culture of safety (repetition and consistency; and facilitating assessment of routine and unexpected events by a diverse group of care providers).

“Respectful interaction boosts capabilities for heedful rather than habitual action and increases the likelihood that individuals will be careful, critical, consistent, purposeful, attentive, and conscientious” (p.9).

WANDERING PATIENTS  *A new tool to assess risk of wandering in hospitalized patients*  

Study of the development and implementation of an electronic health record wandering screening and intervention tool at a large tertiary care hospital in the US. Screening consisted of two questions related to cognitive impairment and mobility. For positively screened patients, nine interventions and seven additional interventions are outlined (e.g. take picture of patient, coloured gown, hourly rounding, patient room assignment). Advanced practice nurses (APN) were consulted regarding the accuracy of screening and the appropriateness of the interventions implemented by bedside nurses. The tool was applied to over 1,500 patients over three weeks; 3.1% were screened positive for wandering risk. APN agreement with screening and interventions was 78% and 90%.
ETHICS / PATIENT SAFETY Application of surgical safety standards to robotic surgery: five principles of ethics for nonmaleficence

Review of medical ethics and just culture as it applies to robotic surgery. Recommendations include: recognition that initial credentialing might not be adequate and that mentorship should not be limited to the initial credentialing process; robotic surgery should be coupled with knowledge of laparoscopic physiology, access, and management of minimally invasive complications; case selection should be appropriate for the robotic skill level of the surgeon; when needed for safety reasons, conversion from robotic assisted to laparoscopic or laparotomy should be encouraged by the organization and be accepted to the surgeon, patient and operating room team; industry representatives can be present to ensure that the equipment is functional, but they should not influence medical or surgeon decisions.

“Some physicians might view robotic-assisted surgery as merely another laparoscopic device rather than a substantial change in surgical technique requiring additional training and a new skillset. The literature, however, supports the idea that a separate learning curve exists, even in the hands of highly experienced laparoscopic surgeons” (p.290).

Other Resources of Interest

A digitally-enabled health system (March 2014). CSIRO (Australia) report highlighting key issues facing the healthcare system and ways that digital technology can help reduce costs and deliver quality care.

Appropriate use of the copy and paste functionality in electronic health records (March 2014). American Health Information Management Association’s position paper on e-health record ‘copy and paste’ functionality.


Fall prevention for seniors in institutional healthcare settings in Newfoundland & Labrador (April 2014). Newfoundland & Labrador Centre for Applied Health Research (NLCAHR) research synthesis report on falls.

Implementing a state-level quality improvement collaborative (September 2013). Medicaid Network for Evidence-based Treatment (US) resource guide.

Implementing midwifery in Newfoundland and Labrador (December 2013). McMaster University report on the benefits of midwifery and guidelines for establishing midwifery in the province, including developing regulations.


Josh Hardy and the #SaveJosh army: how corporate risk escalates and accelerates through social media (April 2014). Stanford University case study about a young cancer patient and access to an experimental drug.

Measuring the level and determinants of health system efficiency in Canada (March 2014). Canadian Institute for Health Information (CIHI) analysis of efficiency at the regional level.

The content does not necessarily reflect HIROC’s views. For queries contact riskmanagement@hiroc.com.
Managing the risks of labour induction (March 2014). CMPA article on issues, case example and key learnings related to risks with inducing labour.


Skilled for improvement? Learning communities and the skills needed to improve care: an evaluative service development (March 2014). Health Foundation (UK) report describing skills required for successful improvement including: ‘technical’, ‘soft’ (e.g. political), and ‘learning’ skills.


HIROC Healthcare Risk Management

HIROC Monthly Risk Management Webinars – 2014 Upcoming Topics
- May 6  Governing Law and Jurisdiction Agreement (labour & delivery focus)
- June 12 High Reliability and Best Practices related to Group Purchasing of Medications
- June 19 Chart Audits
- September 18 Documentation – Non-acute Care
- October 9 How to Align Risk Assessment Checklists with ERM/IRM
- November 20 Managing the Risks of IV Infusions
- December 11 Gestational Surrogacy
- TBD Medical Directives

The content does not necessarily reflect HIROC’s views. For queries contact riskmanagement@hiroc.com.