RISK WATCH

March 2019

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; the librarian at your organization may be able to assist you. Please contact riskmanagement@hiroc.com for assistance if required.

HOT OFF THE PRESS

TEAMWORK/MEASUREMENT

Measuring patient and family perceptions of team processes and outcomes in healthcare teams: questionnaire development and psychometric evaluation

Kilpatrick K, Tchouaket E, Paquette L, et al. *BMC Health Serv Res*. 2019 (online, January):1-16.

Canadian study to develop a questionnaire designed to measure acute and primary care team functioning from the patient and family perspective. Supporting the study was a conceptual framework to explain team functioning, consisting of three central processes: role enactment, boundary work, and perceptions of team effectiveness. Empirical evidence from studies examining team processes and interview data were used to generate statements which were mapped to the framework. The final questionnaire contains 43 items and was assessed to have validity. Authors noted the questionnaire can help identify areas of team functioning that can be improved, and it is possible to aggregate individual data to the team, organizational or system level. The questionnaire was developed in English and French and a copy is available in a supplementary file.

MENTAL HEALTH/PRIMARY CARE

Not missing the opportunity: improving depression screening and follow-up in a multicultural community

Schaeffer A, Jolles D. *Jt Comm J Qual Patient Saf*. 2019 (January);45(1):31-39.

Quality improvement project at a multisite, rural community health center in the US to increase the efficacy of depression screening and follow up, including intervention and referral to treatment, from 9% to 75% in 90 days. Four interventions were operationalized using four plan-do-study-act cycles: patient health questionnaire screening tool in six languages, a tool to help standardize shared decision-making conversations for patients who screen positive for depression, a "right care" tracking log, and team meetings to support capacity building. A point-of-care notebook served as a physical reminder to use these tools. Results showed that 237 patients were served during the project; an overall average of 71% received appropriate care. Authors noted that when systems were in place to respond to patients who screened positive for depression, the systems managed reliably regardless of clinical severity.

MACHINE LEARNING/DECISION SUPPORT

Artificial intelligence, bias and clinical safety

Challen R, Denny J, Pitt M, et al. *BMJ Qual Saf*. 2019 (online, January): 1-7.

Article to assess medical artificial intelligence (AI) and machine learning (ML) research from a quality and safety perspective, highlighting safety questions to be considered if application of this technology is to be used successfully. Authors noted ML is expected to move from rule-based, reactive guidance (e.g. diagnostic decision support, simple risk prediction) in the short term, to data-driven supervised ML in the medium term, and to systems that behave autonomously and continuously evolve (active learning) in the long term. Authors outlined clinical safety issues in the short (e.g. distributional shift), medium (e.g. reinforcement of outmoded practice), and long term (e.g. unsafe exploration) to be addressed in order to bring AI to the bedside and a set of quality control questions for short and medium term issues in ML.

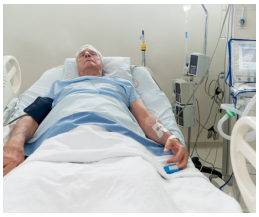
PATIENT SAFETY/SCRIBES

Impact of scribes on emergency medicine doctors' productivity and patient throughput: multicentre randomised trial

Walker K, Ben-Meir M, Dunlop W, et al. *BMJ*. 2019 (online, January):1-10.

Study to explore changes in productivity when scribes were used by emergency physicians in Australia. Participants involved 88 physicians from five emergency departments (ED). The role of the scribe included standing with the physician at the patient's bedside, documenting consultations, arranging tests and appointments, and other clerical tasks. Data was collected from 589 scribed shifts (5,098 patients) and 3,296 non-scribed shifts (23,838 patients). Results showed scribes increased physician productivity in the number of patients seen per hour per doctor representing a 16% gain and primary consultations increased by 26%. With regard to patient flow, there were no significant differences between door-to-doctor times, however, there was a 19-minute reduction in patient length of stay in ED. Incidents were reported at a rate of one in every 300 consultations; patient identification errors was the most common category. Authors noted that no significant harm involving scribes was reported. A table of incident summaries and error categories involving scribes is provided.

PATIENT SAFETY/WEEKENDS



Quality and safety of in-hospital care for acute medical patients at weekends; a qualitative study

Sutton E, Bion J, Aldridge C, et al. *BMC Health Serv Res*. 2018 (online, December):1-9.

Study to explore the mechanisms related to quality and safety of care which could contribute to poorer patient outcomes for acute medical patients on weekends. Interviews and focus groups were conducted with 19 clinicians and 12 patients with experience of acute medical care (non-operative) at three hospitals in the UK. Results showed four themes that could impact quality and safety and are more prominent on weekends: the rescue and stabilisation of sick patients; monitoring and responding to deterioration; timely and effective management of the therapeutic pathway; and resilience and risk of error. Highlighted is the value of focusing on care processes and systems resilience over the weekends, with some specific examples provided to be considered even with the limited resource environment that exists in many hospitals on weekends.

ADVERSE EVENTS/MORTALITY

Association of adverse effects of medical treatment with mortality in the United States: a secondary analysis of the Global Burden of Diseases, Injuries, and Risk Factors study

Sunshine J, Meo N, Kassebaum N, et al. *JAMA Netw Open.* 2019 (online, January):1-14.

Study to quantify the cause-specific mortality associated with adverse effects of medical treatment (AEMT) in the US from 1990-2016 using death records used in a previous study. AEMT is defined as an injury that arises from an individual's medical treatment and was divided into six categories: adverse events (AEs) related to 1) medication; 2) surgery; 3) misadventure (events likely to represent medical error, such as accidental laceration); 4) medical management; 5) medical/surgical devices; 6) other. Results showed AEMT was the underlying or contributing cause of death in close to 3% of all deaths in the US between 1990-2016. AEMT was the underlying cause in more than 123,600 deaths. There was an overall increase in the number of deaths during the study period due to population growth and aging; however, when the data was age-standardized over the same period, the mortality rate decreased by 21%. The leading causes of AEMT were surgical AEs (64%), AEs associated with medical management (14%), and medication AEs (9%). Authors noted there was an increased mortality risk in the pediatric and elderly patient population.

OBSTETRICAL SAFETY

A decision aid may offer liability protection for a bad obstetrical outcome: results of mock trials

Brodney S, Wescott P, Moulton B, et al. *J Law Med Ethics*. 2018 (online, December);46(4):967-974.
Study in the US to assess the impact of a patient decision aid (PDA) on liability protection when there is a negative obstetrical outcome relating to vaginal birth after cesarean (VBAC). Sixty participants attended one of six focus groups to role play being a part of a jury making a decision about a malpractice case involving VBAC. Results showed when a PDA was provided to the patient and the clinician discussion was documented in the medical record, 98% of participants voted the standard of care was met. When only the clinician discussion was documented in the medical record, 70% of participants thought the standard of care was met. When there was an oral discussion but no notes were documented in the medical chart, 20% of the participants thought the standard of care was met. Authors suggested the use of shared decision making assisted with a PDA increased liability protection in VBAC cases.

PATEINT SAFETY/EDUCATION

The Swiss Cheese Conference: integrating and aligning quality improvement education with hospital patient safety initiatives

Durstenfeld M, Statman S, Dikman A, et al. *Am J Med Qual*. 2018 (online, December):1-6.
Quality improvement project in the US using the Swiss Cheese Conference to improve resident education in patient safety. Graduate medical education (GME) trainees investigated a specific patient safety event, presented their findings, and provided solutions for improvement at each monthly conference. The most common topics included: communications and handoffs (28%), procedural complications/equipment issues (23%), medication errors (21%), culture/policies (18%) and end of life needs (10%). Results showed an increase in staff reported adverse events, suggesting the conference enhanced quality and safety education at the institution. Authors suggested by teaching at the conferences, GME trainees learned about important patient safety events and worked together to create solutions to enhance patient safety.

HAND HYGIENE/INFECTION CONTROL

Improved hand hygiene compliance with patient zone demarcation: more than just lines on the floor

Yin S, Lim P, Chan Y. *J Patient Saf Risk Manage*. 2018 (online, December):1-8.
Study to assess the impact of patient safety zone demarcations on hand hygiene compliance in a children's intensive care unit within a women's and children's specialty hospital in Singapore. Clinicians were required to clean their hands whenever they crossed marked zone lines. Results showed overall hand hygiene increased (77% vs. 90%) and physician hand hygiene increased (72% to 86%). Authors suggested patient zone demarcations are impactful because they are less intrusive than other methods as they occur before or after a task, or at breakpoints during a task sequence resulting in reduced perceived negative effects of reminders.

Other Resources of Interest (all)

Adverse event during intrahospital transfer (February 2019). Agency for Healthcare Research and Quality (US) web M&M case on a pediatric patient who deteriorated during transfer from the postanesthesia care unit.

Court denies certification in privacy class action: personal information is not necessarily private information (February 2019). Borden Ladner Gervais LLP (CDN) article describing a court decision on privacy class action.

Hallway health care: a system under strain (January 2019). Premier's Council on Improving Healthcare and Ending Hallway Medicine (CDN) first interim report on the strengths and inefficiencies of Ontario's system.

Health Information and Privacy PHIPA decision 83 (January 2019). Information and Privacy Commissioner of Ontario (CDN) decision related to a parent's no right of access to information about them in a child's health record.

Lessons learned from recent cases: the importance of your contracts with service providers (January 2019). Borden Ladner Gervais LLP (CDN) article describing lessons learned on contracts, including insurance language.

Medical device and health IT joint security plan (January 2019). Healthcare Sector Coordinating Council (US) recommendations for securing medical devices and health IT products against cybersecurity incidents.

When a privacy policy is not enough: Canadian privacy commissioners issue new guidance on obtaining meaningful consent (February 2019). DLA Piper (CDN) article with guidelines for a transparent consent process.