

RISK WATCH Quarterly

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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.



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Editor's note

The August 2022 issue of Risk Watch includes articles on the three HIROC patient safety drivers: maternal neonatal care, mental health death by suicide while under care, and patient deterioration.

Maternal neonatal care is explored through a Canadian study by McClymont et al., who provide insights on the association of SARS-CoV-2 infection during pregnancy with maternal and perinatal outcomes, as well as an article by Hinton et al. on the development of a quality improvement framework for remote antenatal care.

Mental health death by suicide under care is explored through an analysis of mortality rates of inpatient suicide attempts within high-risk subgroups compared to the general population (Probert-Lindström et al.), and a literature review by Cameron et al. looking at the benefits and challenges of involving families in the mental health patient's care. As well, Bell et al. investigate the interest among young patients and clinicians in using digital technologies to support mental health.

Prevention of patient deterioration is explored through a scoping review prepared by Blythe et al., on the impact of real-time automated clinical deterioration alerts on patient outcomes, concluding that most studies did not report statistically significant results. Fawzy et al. examined the racial inaccuracies in oxygen saturation measured by pulse oximetry in patients with COVID-19.

You will also find a collection of resources, including an article on Bill C-26: Canada's New Critical Infrastructure Cyber Security Law, a Maternal Mortality Review Toolkit developed by the SOGC, the Positive Mental Health Surveillance Indicator Framework from Public Health Agency of Canada, and a commentary on a co-design project addressing challenges associated with delayed hospital discharge.

If you have feedback about this quarterly edition of Risk Watch, please send them to me at asoungyee@hiroc.com

MATERNAL NEONATAL**Association of SARS-CoV-2 Infection During Pregnancy with Maternal and Perinatal Outcomes**

McClymont E, Albert AY, Alton GD, Boucoiran I, Castillo E, Fell DB, Kuret V, Poliquin V, Reeve T, Scott H, Sprague AE, Carson G, Cassell K, Crane J, Elwood C, Joynt C, Murphy P, Murphy-Kaulbeck L, Saunders S, Shah P, Snelgrove JW, van Schalkwyk J, Yudin MH, Money D; CANCOVID-Preg Team. JAMA. 2022 May 24;327(20):1983-1991. doi: 10.1001/jama.2022.5906. PMID: 35499852; PMCID: PMC9062768.

Canadian study examining whether SARS-CoV-2 infection during pregnancy is associated with increased risk of adverse maternal and perinatal outcomes. Population-level data from six Canadian provinces for the period of March 1, 2020, to October 31, 2021 was examined. Among cases of infection during pregnancy compared with cases of infection among the general Canadian population of reproductive-age female individuals, there was a significantly increased risk of SARS-CoV-2 related hospitalization and intensive care unit admissions. Among cases of infection during pregnancy compared with pregnant individuals without SARS-CoV-2 infection, there was a significantly increased risk of preterm birth.

Quality Framework for Remote Antenatal Care: Qualitative Study with Women, Healthcare Professionals and System-Level Stakeholders

Hinton L, Dakin FH, Kuberska K, Boydell N, Willars J, Draycott T, Winter C, McManus RJ, Chappell LC, Chakrabarti S, Howland E, George J, Leach B, Dixon-Woods M. BMJ Qual Saf. 2022 May 12:bmjqs-2021-014329. doi: 10.1136/bmjqs-2021-014329. Epub ahead of print. PMID: 35552252.

UK-based qualitative study investigating what quality would look like for remote antenatal care, from the perspectives of those who use, provide, and organize it. Qualitative data were analyzed to generate a framework of the domains of quality that appeared to be most relevant to stakeholders in remote antenatal care. They included: efficiency and timeliness, effectiveness, safety, accessibility, equity and inclusion, person-centeredness and choice and continuity. The authors concluded that by offering a systematic way of structuring thinking about quality in remote antenatal care, the framework may help guide policy and practice.

MENTAL HEALTH - DEATH BY SUICIDE UNDER CARE**Excess mortality by suicide in high-risk subgroups of suicide attempters: a prospective study of standardised mortality rates in suicide attempters examined at a medical emergency inpatient unit**

Probert-Lindström, S., Öjehagen, A., Ambrus, L., Skogman Pavulans, K., & Berge, J. (2022). BMJ open, 12(5), e054898. <https://doi.org/10.1136/bmjopen-2021-054898>

Swedish study investigating the putative excess mortality by suicide in suicide attempters across several subgroups, including individuals with repeated suicide attempts (RA); individuals who used violent methods at the attempt (VA); and those who scored high on the Suicide Intent Scale (HS) at the time of the baseline attempt. Analysis of over 1000 psychiatric inpatients showed an elevated risk of premature death by suicide was found in suicide attempters compared with the general population. The authors provide recommendations regarding data collection of past suicidal attempts and whether the attempts involved high suicidal intent and violent methods, also stating that healthcare interventions may benefit from targeting identified subgroups of attempters.

Mental health service users' experiences and perspectives of family involvement in their care: a systematic literature review

Cameron SLA, Tchernegovski P, Maybery D. J Ment Health. 2022 Jul 8:1-17. doi: 10.1080/09638237.2022.2091760. Epub ahead of print. PMID: 35808821.

Australian study summarizing the literature on how mental health service users view the involvement of family in their engagement with services and care. Thematic analysis of relevant literature identified four primary themes: family involvement can be positive and negative; barriers to family involvement; family involvement is variable; and communication and collaboration among stakeholders. The authors concluded that despite the widely reported benefits of including families in mental health care, it does not always occur. A clearer and more nuanced understanding of service users' needs and preferences for family involvement is required.

Ownership, Use of, and Interest in Digital Mental Health Technologies Among Clinicians and Young People Across a Spectrum of Clinical Care Needs

Bell IH, Thompson A, Valentine L, Adams S, Alvarez-Jimenez M, Nicholas J. JMIR Ment Health. 2022 May 11;9(5):e30716. doi: 10.2196/30716. PMID: 35544295; PMCID: PMC9133993.

Australian study aiming to understand the technologies that young people have access to and use in their everyday lives, as well as what technologies youth mental health clinicians currently use within their practice and what applications of these technologies they are interested in to support their clients' mental health. Results from 588 young people and 73 youth mental health clinicians showed that smartphone use was ubiquitous, and that clinicians were significantly more interested in using technology for mental health support than young people. As well, young people were most interested in web-based self-help, mobile self-help, and blended therapy.

PATIENT DETERIORATION

A scoping review of real-time automated clinical deterioration alerts and evidence of impacts on hospitalised patient outcomes

Blythe R, Parsons R, White NM, Cook D, McPhail S. BMJ Qual Saf. 2022 Jun 22;bmjqs-2021-014527. doi: 10.1136/bmjqs-2021-014527. Epub ahead of print. PMID: 35732487.

Australian study examining the impact of systems for detecting and responding to real-time, automated alerts for clinical deterioration on patient outcomes. Of 639 studies identified, 18 were included in this review. Most studies did not report statistically significant associations between alert implementation and better patient outcomes. The authors concluded that future implementation studies should consider: directly involving the patient's physician or a dedicated surveillance nurse in structured response protocols for deteriorating patients; the workflow of alert recipients; and incorporating model features into the decision process to improve clinical utility.

Racial and Ethnic Discrepancy in Pulse Oximetry and Delayed Identification of Treatment Eligibility Among Patients With COVID-19

Fawzy A, Wu TD, Wang K, Robinson ML, Farha J, Bradke A, Golden SH, Xu Y, Garibaldi BT. JAMA Intern Med. 2022 May 31. doi: 10.1001/jamainternmed.2022.1906. Epub ahead of print. PMID: 35639368.

US retrospective cohort study examining reported racial inaccuracies in oxygen saturation measured by pulse oximetry in patients with COVID-19. Clinical data from five referral centers and community hospitals in the Johns Hopkins Health System included patients with COVID-19 who self-identified as Asian, Black, Hispanic, or White. The results suggested that racial and ethnic biases in pulse oximetry accuracy were associated with greater occult hypoxemia in Asian, Black, and non-Black Hispanic patients with COVID-19, which was associated with significantly delayed or unrecognized eligibility for COVID-19 therapies among Black and Hispanic patients. This disparity may contribute to worse outcomes among Black and Hispanic patients with COVID-19.

OTHER RESOURCES OF INTEREST

Bill C-26: Canada's New Critical Infrastructure Cyber Security Law (Arnold, B.J., Antaki, N. Gowling WLG. Web Article, June 20, 2022). Web article reviewing the impact of [Bill C-26, an Act respecting cyber security, amending the Telecommunications Act and making consequential amendments to other Acts](#). The Bill takes two important steps beyond the requirements of existing privacy laws. Please consult the link above for more details.

Canada's Maternal Mortality Review Committee Toolkit (The Society of Obstetricians and Gynaecologists of Canada, 2022). Toolkit developed by the SOGC promoting best practices in maternal mortality review. It provides guidance related to gathering resources, tools, and provides support for establishing a review committee.

Positive Mental Health Surveillance Indicator Framework (Public Health Agency of Canada, Centre for Surveillance and Applied Research, 2022). The Positive Mental Health Surveillance Indicator Framework (PMHSIF) provides information on positive mental health outcomes and its associated risk and protective factors. The PMHSIF contains a core set of indicators grouped by positive mental health outcomes and four key domains: individual, family, community, and society determinants.

In Pursuit of Better Care Transitions: Lessons Learned from a Co-Designed Project (Kuluski K, Bilotta L, McLaughlin I, Bennett L, McGregor G, Farrell B, Powell M, Syed M. *Healthc Q*. 2022 Apr;24(SP):49-54. doi: 10.12927/hcq.2022.26774. PMID: 35467511.). This commentary reflects on co-designing an intervention to address challenges associated with delayed hospital discharge (known as alternate level of care in Canada). The authors used methods including focus groups and co-design sessions, with the goal amplifying voices of patients and caregivers, and developing tools that aim to improve patient, caregiver, and provider experiences.