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CMAJ headlines:

- ☐ **What influences critical care doctors in withdrawing life support for patients with severe brain injury?**
- ☐ **Preventing hepatitis C transmission from mothers to babies**

What influences critical care doctors in withdrawing life support for patients with severe brain injury?

Visual abstract: https://bit.ly/2F4OHlt

Decisions to withdraw life support treatments in critically ill patients with severe brain injury are complicated, are based on many factors, and are usually made by critical care physicians and families in the intensive care unit. A study in *CMAJ (Canadian Medical Association Journal)* provides new understanding on the decision-making processes for this patient population, which accounts for most hospital deaths from trauma.

“Many clinicians struggle to make recommendations to withdraw life-sustaining treatments because decision-making is often complicated by uncertainty from trying to match family or caregiver opinions about what they think the patient would have wanted in terms of quality of life and how well physicians can predict a prognosis,” says Dr. Alexis Turgeon, a critical care physician and researcher at CHU de Québec — Université Laval Research Centre and Canada Research Chair in Critical Care Neurology and Trauma at Université Laval, Québec City, Quebec.

Most deaths in critically ill patients with severe traumatic brain injury occur after a decision to withdraw life-sustaining treatments. This patient population differs from the general intensive care unit (ICU) population as most patients were healthy before admission to the ICU, as compared with older patients who may already have poorer quality of life due to pre-existing illness. Therefore, decisions to withdraw life-sustaining treatments are made differently — mainly based on long-term prognosis and quality of life.

Researchers performed a descriptive qualitative study of interviews with critical care physicians from across Canada to understand the factors that determine a critical care physician’s decision to discuss with families the withdrawal of life-sustaining treatments in patients with severe traumatic brain injury. Results show that several factors are involved, including the patient’s pre-expressed wishes and the family’s wishes, severity and location of the injury, along with evidence. Past physician experience, legislation, opinions of colleagues and time are additional factors influencing decisions. The

incidence of withdrawal of life-sustaining treatments and of death in critically ill patients with traumatic brain injury varies between hospitals.

“A major factor for physicians in decision-making is the influence of the patient circumstances and the family,” says Dr. Turgeon. “This is reassuring but challenging when the patient’s prognosis is uncertain.”

Better evidence, tools to help predict patient outcomes, standardization, better ways to integrate patient values and preferences into decision-making, improved training during critical care fellowships and more time to estimate prognosis are some things that could improve decision-making regarding whether to withdraw life-sustaining treatments.

“Our study has implications for the care of critically ill patients with traumatic brain injury, and we hope it will inform policy to improve how critical care physicians determine prognosis and level of care decisions with families,” says Dr. Turgeon.

“*Factors influencing decisions by critical care physicians to withdraw life-sustaining treatments in critically ill adult patients with severe traumatic brain injury*” is published June 17, 2019.

MEDIA NOTE: Please use the following public links after the embargo lift:

Research *http://www.cmaj.ca/lookup/doi/10.1503/cmaj.190154*

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Preventing hepatitis C transmission from mothers to babies

Hepatitis C virus (HCV) transmission from mothers to babies could largely be prevented if Canada recommended universal screening for HCV in pregnancy, argues a commentary in *CMAJ (Canadian Medical Association Journal*).

“We encourage all care providers to consider the reproductive implications of HCV, to consider HCV screening in pregnancy and referral for treatment of HCV,” write Drs. Chelsea Elwood, Department of Obstetrics and Gynaecology, University of British Columbia, and Laura Sauve, BC Children’s Hospital, University of British Columbia, Vancouver, BC. “The time has come to move toward universal HCV screening in women who are pregnant, with initial prenatal investigations that are then repeated based on risk factors in the third trimester.”

Almost half of women infected with HCV are unaware of their infection, and current treatment with direct-acting antiviral regimens is quite effective.

“With the care gaps in both maternal screening in pregnancy and postnatal infant screening, Canada likely has a large cohort of infants, children and young adults with

progressive liver disease, who could have been cured of the HCV infection if it had been identified early or, quite simply, would not have been infected at all," write the authors.

The elimination of vertical transmission of HCV from mother to child is achievable with collaboration of public health and health care professionals.

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Commentary *http://www.cmaj.ca/lookup/doi/10.1503/cmaj.181662*

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