

Five Things Clinicians and Patients Should Question

1 Don't start or continue life supporting interventions unless they are consistent with the patient's values and realistic goals of care.

Patients and their families often value the avoidance of invasive or overly aggressive life-sustaining measures when they are at the end of life. However, many dying patients receive aggressive life-sustaining therapies, in part due to clinicians' failures to elicit patients' preferences and to provide recommendations.

2 Don't prolong mechanical ventilation by over-use of sedatives and bed rest.

Maintaining critically ill patients in an immobile or minimally mobile state during care may potentiate muscle loss and deconditioning. Excessive and/or prolonged use of sedatives is associated with worse outcomes, including increased delirium, excessive use of diagnostic imaging for coma, increased number of tracheostomies, greater duration of mechanical ventilation and ICU length-of-stay.

3 Don't continue mechanical ventilation without a daily assessment for the patient's ability to breathe spontaneously.

Screening for readiness for liberation from mechanical ventilation with spontaneous breathing trials allows clinicians earlier recognition of patients that may be liberated from mechanical ventilation.

4 Don't order routine chest radiographs for critically ill patients, except to answer a specific clinical question.

Chest radiographs ("X-rays", CXRs) are not indicated for routine assessment of critically-ill patients except when indicated for specific procedures (e.g., endotracheal tube, naso- or orogastric tube, central vein catheter, pulmonary artery catheter, or other procedure requiring verification after insertion), or to provide information for a specific question related to a change in a patient's clinical condition, and if the information will likely impact a specific decision related to diagnosis or treatment.

5 Don't routinely transfuse red blood cells in hemodynamically stable ICU patients with a hemoglobin concentration greater than 70 g/l (a threshold of 80 g/L may be considered for patients undergoing cardiac or orthopedic surgery and those with active cardiovascular disease).

Unnecessary transfusion of red blood cells (RBCs) is more harmful than helpful, and wastes a limited resource, which should be reserved for patients with proven indications. Transfusing RBCs at a threshold higher than 70 g/L does not improve survival in ICU patients, and is associated with more complications and higher costs. This has been extensively studied and a restrictive transfusion strategy results in similar or lower mortality compared with higher thresholds, and other complications, including stroke and infections, may also be reduced.

How the list was created

The Choosing Wisely Canada list of recommendations relevant to critical care was assembled by a collaborative task force from Canadian Critical Care Society (CCCS), Canadian Association of Critical Care Nurses, Canadian Society of Respiratory Therapists and representatives from pharmacy, dietician and physiotherapy. The initial list of items were generated by task force, with support from CCCS Google groups. A modified Delphi method was used to retain 10 items from the initial list. A modified Delphi method was then used to generate domains of interest for ranking items and to select the final list of 5 items. Members of all collaborating societies were surveyed during the 2016 Canadian Critical Care Conference, and for 2 weeks afterwards. Items were modified after review of the survey and feedback from the Choosing Wisely Canada campaign leadership.

Sources

- 1** Downar J, You JJ, Bagshaw SM, et al. Nonbeneficial treatment Canada: definitions, causes, and potential solutions from the perspective of healthcare practitioners*. *Crit Care Med*. 2015 Feb;43(2):270-81. PMID: 25377017.
Myburgh J, Abillama F, Chiumello D, et al. End-of-life care in the intensive care unit: Report from the Task Force of World Federation of Societies of Intensive and Critical Care Medicine. *J Crit Care*. 2016 Aug;34:125-30. PMID: 27288625.
- 2** Burry L, Rose L, McCullagh IJ, et al. Daily sedation interruption versus no daily sedation interruption for critically ill adult patients requiring invasive mechanical ventilation. *Cochrane Database Syst Rev*. 2014 Jul 9;(7):CD009176. PMID: 25005604.
Schweickert WD, Pohlman MC, Pohlman AS, et al. Early physical and occupational therapy in mechanically ventilated, critically ill patients: a randomised controlled trial. *Lancet*. 2009 May 30;373(9678):1874-82. PMID: 19446324.
- 3** Girard TD, Kress JP, Fuchs BD, et al. Efficacy and safety of a paired sedation and ventilator weaning protocol for mechanically ventilated patients in intensive care (Awakening and Breathing Controlled trial): a randomised controlled trial. *Lancet*. 2008 Jan 12;371(9607):126-34. PMID: 18191684.
- 4** Ganapathy A, Adhikari NK, Spiegelman J, et al. Routine chest x-rays in intensive care units: a systematic review and meta-analysis. *Crit Care*. 2012 Dec 12;16(2):R68. PMID: 22541022.
- 5** Carson JL, Guyatt G, Heddle NM, et al. Clinical Practice Guidelines From the AABB: Red Blood Cell Transfusion Thresholds and Storage. *JAMA*. 2016 Nov 15;316(19):2025-2035. PMID: 27732721.

About Choosing Wisely Canada

Choosing Wisely Canada is a campaign to help clinicians and patients engage in conversations about unnecessary tests, treatments and procedures, and make smart and effective choices to ensure high-quality care.

For more information on Choosing Wisely Canada or to see other lists of Five Things Physicians and Patients Should Question, visit www.choosingwiselycanada.org. Join the conversation on Twitter @ChooseWiselyCA.

About The Canadian Association of Critical Care Nurses

The Canadian Association of Critical Care Nurses (CACCN) is a proud partner of the Choosing Wisely Canada campaign. CACCN is a volunteer organization of critical care nurses. CACCN is the voice for excellence in Canadian critical care nursing. Their shared goal is promote quality patient- and family-centered care for Canadian's experiencing life threatening illness and injury.

About The Canadian Critical Care Society

The Canadian Critical Care Society (CCCS) is a proud partner of the Choosing Wisely Canada campaign. CCCS is the national specialty society, representing adult and paediatric critical care medicine physicians in Canada. The practice of critical care medicine in Canada is multidisciplinary and CCCS members hold base specialty certification in anaesthesia, medicine, paediatrics, emergency medicine or surgery and some surgical subspecialties such as cardiac surgery and neurosurgery.

About The Canadian Society of Respiratory Therapists

The Canadian Society of Respiratory Therapists (CSRT) is a proud partner of the Choosing Wisely Canada campaign. CSRT is the national professional association for respiratory therapists. Founded in 1964 as the Canadian Society of Inhalation Therapy Technicians, the CSRT is dedicated to excellence in cardiorespiratory care.