June 6, 2012

Dear Colleagues:

Re: Update on Multiple IV Infusions Study for OHTAC

As you may be aware, the Ontario Health Technology Advisory Committee (OHTAC) engaged the Health Technology Safety Research Team (HTSRT) to conduct an analysis of the risks and mitigation strategies regarding the administration of multiple IV infusions to a single patient. The HTSRT worked in close collaboration on this project with the Institute for Safe Medication Practices Canada. On behalf of OHTAC and the HTSRT, we are writing to update you on progress to date and to share recommendations emerging from the study.

To date, the study team has completed two phases of work:

- **Phase 1a: Situation Scan**
  - a systematic literature review
  - an incident analysis of FDA MAUDE and the Institute for Safe Medication Practices Canada (ISMP Canada) databases
  - a review of existing technology in the Canadian marketplace

  Download the [Phase 1a report](#).

- **Phase 1b: Practice and Training Scan**
  - field observations of the administration of multiple IV infusions in 12 clinical units across Ontario
  - interviews with educators in
    - baccalaureate nursing degree programs
    - critical care nurse certificate programs

The Phase 1b report and OHTAC recommendations have now been published as part of the [Ontario Health Technology Assessment Series (Volume 12, Number 16)](#).

Nine recommendations for implementation by Ontario hospitals have emerged from the observational work done in Phase 1b. The Multiple IV Infusions Expert Panel reviewed these recommendations and OHTAC endorsed them. This multidisciplinary Expert Panel comprises representatives from pharmacy, medicine, nursing (critical care, pediatrics, and oncology), professional associations (e.g., the Canadian Vascular Access Association, the Ontario Hospital Association) and other regulatory and professional bodies (e.g., Health Canada, the Institute for Safe Medication Practices Canada).

Accompanying this letter is a document that summarizes the nine recommendations and provides a rationale as context for each recommendation, so that the motivation behind the recommendations are better understood, and so that clinical teams are best positioned to adapt them to their specific circumstances. We encourage your clinical teams to read the Phase 1b draft report for more details.

Phase 2 of the study will consist of an experiment to test the effectiveness of different strategies to reduce the potential for errors. The frequency and types of errors that occur in a simulated nursing unit
with representative clinical equipment and practices will be compared with the frequency and types of errors that occur in a simulated nursing unit into which safety-related changes have been introduced.

The following topics are being considered for testing in the experiment:
- technology-based solutions to minimize secondary infusions risks
- methods to assist in identifying multiple IV tubing and lines
- optimal approaches to IV bolus administration
- shift and break handover protocols as they relate to multiple IV infusions
- education and training requirements for the safe management of multiple IV infusions

Phase 2 will also include an Ontario-wide, online hospital survey. This voluntary survey will target nurse managers and/or educators of clinical units where multiple IV infusions are frequently delivered, in order to learn more about current practices and policies in Ontario.

As the HTSRT completes these final activities, we encourage health care providers to observe practices in their own institutions, and to share any related thoughts or feedback for the purposes of enhancing patient safety and recommending potential risk-mitigating strategies. Individual feedback to the study team will remain confidential and will be shared only with your permission.

We ask that you distribute this letter and the attached materials to the appropriate staff in your facility, to increase awareness of the risks and the recommendations related to multiple IV infusion administration. Anyone interested in sharing his or her experiences with multiple IV infusions, or who would like to learn more about this initiative, may contact the principal investigator, Tony Easty, as indicated below.

We look forward to sharing the results with you.

Sincerely,

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