Online Appendix 1. Survey questions for Canadian critical care pharmacists about medication errors and adverse drug events

1. Name of institution (without identifying respondents)

2. Type of institution
   - Academic hospital
   - Community hospital, teaching
   - Community hospital, non-teaching

3. Type of ICU in which you spend most of your time (choose one)
   - Mixed medical/surgical
   - Medical
   - Surgical
   - Coronary
   - Neonatal
   - Cardiothoracic
   - Pediatric
   - Neurologic
   - Trauma
   - Burns

4. How many funded ICU beds are there in the ICU in which you work?
   - 1–10
   - 11–20
   - 21–30

5. Does your ICU have a pharmacist who is familiar with the ICU patients’ conditions, and who reviews the patients’ drug therapy with the ICU team at least 5 days a week, during day time hours?
   - Yes
   - No

6. Does your hospital have computerized physician order entry?
   - Yes
   - No

7. Does the software include decision support?
   - Yes
   - No

8. Does your ICU have a process for tracking medication errors and adverse drug events?
   - Yes
   - No

9. Please identify the locations where the process for tracking medication errors is implemented.
   - The process is specific to the ICU that I spend the most of my time in.
   - This process is used in more than one area of the hospital.
   - This process is used throughout the majority of the hospital.
   - Other (please specify)

10. Please identify which of the following processes your ICU uses for identifying medication errors
    - Voluntary reporting of medication errors, anonymous
    - Chart reviews to identify medication errors
    - Computerized system to identify medication errors
    - Trigger tool (a list of prompts used in focused chart review to identify medication errors and adverse drug events)
    - Tracking pharmacist interventions as a marker of medication errors and potential adverse drug events
    - Other (please specify)

11. If voluntary reporting of medication errors is used, please specify which means
    - Paper reports
    - Intranet
    - Phone calls
    - Web-based or internet based
    - Email
    - Other (please specify)

12. Please specify the Web-based or internet based system
    - Netsafe
    - Meditech-EMR
    - Risk MonitorPro
    - Unknown

13. If a trigger tool is used by your ICU, please identify which of the following are used as the trigger signals
    - Voluntarily reported medication errors
    - Abnormal drug levels (e.g., digoxin level > 2.6 nmol/L)
    - Antidotes (e.g., vitamin K, naloxone)
    - Allergy medications (e.g., diphenhydramine, corticosteroids)
    - Abnormal laboratory values (e.g., INR > 6, serum glucose < 3 mmol/l)
    - Abrupt medication stop
    - Abnormal electrolyte concentrations
    - Antidiarrheals or Clostridium difficile positive stool
    - Abnormal physiologic responses (BP, HR)
    - Other (please specify)

14. Have you implemented any actions as a result of your process for measuring medication errors and/or adverse drug events?
    - Yes
    - No

15. What actions have you implemented?

16. Would you like a summary of the results of the survey?

BP = blood pressure, HR = heart rate, ICU = intensive care unit, INR = international normalized ratio.