CANADIAN ANESTHESIOLOGISTS' SOCIETY
SOCIÉTÉ CANADIENNE DES ANESTHÉSIOLOGISTES

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CAS EMERGENCY SAFETY BULLETIN

Medication Substitutions

The COVID 19 pandemic has resulted in a number of safety related issues that have needed to be addressed by anesthesiology departments and their members. These responses, by the nature of this crisis, have had to be multipronged and carried out swiftly.

One of the issues that is emerging over time is a growing shortage of some medications that are used by anesthesiologists and acute care physicians on a regular basis. In response, Health Canada has issued an interim order to procure critical care medications from alternate sources during this pandemic. As a result, we may very soon encounter medications (e.g. Propofol, hydromorphone, fentanyl, ketamine, midazolam, cisatracurium and rocuronium) that have different packaging, foreign language labelling and *different concentrations* than we are accustomed to.

One prime example is the arrival of 2% Propofol from Europe, which is double the concentration of the 1% Propofol used in Canada. This formulation may arrive in some hospitals as early as this week. In some regions, this external supply will be contained to specific areas (e.g. specific hospitals, only in ICU's) and will not reach most OR's but this may need to change over time. Although medication shortages and temporary substitutions are not new to Canadian Anesthesiologists, the risk of medication errors in the coming months may be elevated given the number and type of substitutions and the fact that these arrive at a time of increased cognitive load brought on by this pandemic.

Given the anticipated enhanced risk level, the CAS urges each Canadian Department of Anesthesiology to proactively review and enhance (as needed) their current medication substitution protocols. Basic strategies to consider should include the following:

- A designated anesthesia department lead should have an active relationship with their designated hospital pharmacy lead, which include regular and timely communications about medication safety issues, including substitutions.
- Anesthesia department members should be notified when shortages (or anticipated shortages) exist, to allow members to employ strategies to alter medication usage in a way that does not compromise patient care.
- The anesthesia department should be notified by pharmacy when a substitution occurs (or more ideally when it is anticipated, to have input at the planning stages). Substitutions should be communicated to all department members in a timely fashion and using a variety of means (e.g. emails, staff meetings, highly visible signage, etc.).
- If substitutions resulting in look-alike vials within the anesthesia medication cart are unavoidable, strategies should be considered to reduce the risk (physical distancing, "look alike" warning stickers/signs).
- Cart restocking personnel should also be made aware (by pharmacy) of substitutions which result in look-alike vials, to reduce the risk of restocking shelves and carts with the wrong vials.
- In the case of medication vials with a different concentration than previously used, consideration should include: limiting these to a specific institution and/or unit, never co-locating vials with different concentrations and (if medication is infused) reprogramming all infusion pumps to require

the active selection (and verification) of the correct concentration. For medication pre-prepared in syringes, labeling of the new concentration should be clear and highly visible. For those drawn up at the point of care, labels indicating concentration should be made readily available.

The above examples represent suggestions of basic strategies that can be adopted. More details can be found within the latest released ISMP Bulletin. It is understood that Departmental leads, in close collaboration with their Pharmacy leads, will need to tailor their approach according to their individual department's circumstances and closely assess the effectiveness of these interventions over time.

Should any adverse events or near misses occur, we strongly urge individuals to use both their local adverse event reporting systems as well as our national reporting system, CAIRS: Canadian Anesthesia Incident Reporting System to document these events. Reporting is a necessary step in recognizing and addressing factors that lead to adverse events to ultimately reduce the frequency of their occurrence. We also encourage anesthesiologists to use the newly created CAS Discussion Forums to share ideas/ strategies on how to best overcome the challenges that lie ahead. The CAS remains committed to supporting anesthesiologists and anesthesiology departments and welcomes your feedback on how it can continue to serve you most effectively.

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