Programme de GESTION THÉRAPEUTIQUE des médicaments

# PGTM Clinical Intervention Model (CIM)

## *Descriptive analysis of the use of sugammadex in Quebec's university teaching hospitals (UTHs) - 2020*

**Background:**

Sugammadex is indicated for decurarization following moderate to deep blockade induced by rocuronium or vecuronium in adults who are to undergo surgery. In its assessment published in December 2016, INESSS issued a favourable opinion for the following use only: *"in an emergency situation for adults requiring immediate decurarization following neuromuscular blockade induced by a single dose of rocuronium."* The UTHs made sugammadex available as per INESSS's recommendation, and a request was made to monitor its use. In the spring of 2018, significant sugammadex use was identified as an important issue affecting most of Quebec's adult UTHs. The PGTM wanted to document the use of sugammadex in the operating rooms of Quebec's UTHs in order to provide an overview of its use in adults.

**The PGTM's scientific recommendations**

In light of the data presented in that report, the PGTM recommends to the UTHs that they:

- Remind clinicians that the only currently approved indication for using sugammadex is immediate decurarization.

  However, following the analysis of the results of this study, the Scientific Committee considers it reasonable to extend the use of sugammadex to the following indications:
  - Decurarization in a patient with:
    - A contraindication to neostigmine or glycopyrrolate
    - A contraindication to succinylcholine necessitating the use of rocuronium
  - Persistent residual curarization despite the use of neostigmine in an extubated patient with signs of respiratory failure, given the urgency of the clinical situation and to avoid reintubation.
  - Curarization after surgery cut short in relation to the initially planned duration because of patient management other than that anticipated, e.g., inoperable cancer.
  - Deep curarization required until the end of surgery.
- Form a working group whose tasks would include:
  - Establishing vulnerability criteria for patients for whom the benefits of decurarization with sugammadex have been demonstrated or are expected.
  - Reviewing whether additional indications might be justified. Since INESSS has not recognized other uses, it would be important that these situations address a relevant clinical need.
  - Reviewing the tool and the different useful data to be gathered for effective monitoring.
- Implement a pre-induction verification process to inform the anesthesiologist of the need for a quick nerve check and thus ensure good communication between the health professionals.
- Make known, through teaching, the proper doses to be prescribed according to the different indications and create a tool to help clinicians.
- Continue monitoring sugammadex use:
  - Track its use and perform another descriptive analysis if significant trends or changes are identified.

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**Objective**: To promote sugammadex use that meets clinicians' needs, by adapting INESSS's recommendations and keeping within the administrative framework.

**Intervention measurers:** Each UTH is to determine which interventions apply to its situation and to make one or more of them priorities.

**Timetable:** Institute applicable measures at each UTH within 6 months of March 2020.

**Proposed intervention plan:**

1. Involve the UTH's anesthesiologists in the implementation of the proposed measures throughout the process.
2. Present the results to the Pharmacy and Therapeutics Committee.
3. Present the following to the anesthesiologists and pharmacists:
   - The local and the PGTM's results;
   - Sugammadex's status and the reasons governing its use;
   - The new approved indications;
   - The expected developments in this dossier (INESSS's status update, continuation of the necessary monitoring, data unavailable for certain unresolved issues, costs, etc.);
   - The sugammadex doses to be prescribed by indication;
   - The need to implement a pre-induction verification process to inform the anesthesiologist of the need for a rapid nerve check and to ensure good communication between the health professionals.
4. Form a working group consisting of pharmacists and anesthesiologists that would be responsible for:
   - Establishing vulnerability criteria for patients for whom the benefits of decurarization with sugammadex have been demonstrated or are expected;
   - Reviewing whether additional indications might be justified;
   - Reviewing the monitoring tool and the different useful data to be gathered for effective monitoring.
5. Implement a revised monitoring tool as soon as it is available.
6. Establish a communication plan to inform clinicians of the recommendations and tools that have been created.
7. Continue monitoring sugammadex use.
8. Review sugammadex's status in light of new data (e.g., INESSS status).