Centre universitaire de santé McGill
McGill University Health Centre

CLINICAL PROCEDURE – MUHC

☒ Medication included ☐ No Medication included

THIS IS NOT A MEDICAL ORDER

Title:	Administration of sucrose 24% in pediatric population
This procedure is attached to:	MUHC Patient Double Identification Policy MUHC Hand Hygiene Policy

1. DEFINITION AND PURPOSE

The use of oral sucrose has been the most extensively studied pain intervention in newborn care to date. Sucrose 24% is a product proven to be safe and effective for infants less then 1 year old to control pain related to minor short procedures as described below.

Sucrose is not classified as a medication in Canada as it does not have a drug identification number (DIN). At the McGill University Health Centre (MUHC), sucrose is now considered an intervention vs a medication. The protocol has been modified to include more caregivers such as medical technologists.

2. CARE GOALS

Relief of pain of children under 1 year old during minor painful procedure performed at the MUHC.

3. PROFESSIONALS INVOLVED

Nurses, Licensed practical nurses in collaboration with a nurse, medical technologists, physicians, residents who have read this clinical procedure.

4. PATIENT POPULATION

Children under 1 year old.

5. INDICATIONS

- **Analgesia or co-analgesia for short procedural pain (not exhaustive list)**

  - ✓ Needle procedure
  - ✓ Heel Prick
  - ✓ PICC line insertion
  - ✓ Urinary catheter insertion
  - ✓ Lumbar puncture
  - ✓ Arterial puncture
  - ✓ Retinopathy of prematurity exam
  - ✓ Nasogastric tube insertion
  - ✓ Dressing changes, tape removal
  - ✓ Rectal irrigation
  - ✓ Mobilization and/or manipulations that may cause pain.

- ❖ **Irritability is NOT an indication**

6. CONTRAINDICATIONS

- **Surcrose is contraindicated with**
  - Necrotizing enterocolitis
  - Short bowel syndrome with carbohydrate intolerance
  - Inborn error of metabolism
  - Unrepaired tracheal esophageal fistula or atresia
  - Known fructose or sucrose intolerance
  - Absence of gag reflex (heavy sedation, neurologic impairment)

- **Precautions**
  - ✓ Swallowing disorder or intubated patient
    - ❑ Patient can receive sucrose i.e. small amount of liquid is absorbed by buccal mucosa
  - ✓ Extreme pre-term infants (under 31 weeks gestation age(GA)):
    - ❑ There is a potential poorer neurologic outcome for those patients receiving sucrose for 10 procedures per day in the first week of life.

Adverse effects following the short term use of sucrose are currently not a concern.

7. PHARMACOKINETICS

Immediate endogenous opioid release is activated through taste receptors at the tip of the tongue.
Analgesia is related to the release of endorphins,
Onset of effect: within 10 seconds.
Duration of action 1-2 minutes.

7.1. PREGNANCY RISK

N/A

7.2. MONITORING

N/A

7.3. SIDE EFFECTS

N/A

8. EQUIPMENT

N/A

9. PROCEDURE

ACTION	RATIONAL
TIME OF ADMINISTRATION: • Assess patient for contraindications and precautions	• Inform parent that sucrose is available as pain intervention for needle pain.
PRE-PROCEDURE • Have you combined / offered sucrose with another analgesia method? ➢ Topical anesthetics ➢ Comfort positioning ➢ Distraction when age appropriate	• Best success with combinations of methods to reduce needle pain • Does not replace other analgesics or topical anesthetics
INTERVENTION: ➢ One administration 1-2 minutes before procedure time ➢ One administration at time of procedure ➢ Repeat administration throughout procedure as needed respecting maximum volume. ☆ **Sucrose works better with concomitant use of a pacifier**	• Short acting effect.
POST INTERVENTION Documentation: In-patient and out-patient clinic: Document procedure and sucrose administration in the patient chart nursing progress note or with the system put in place by the concerned unit. Out-patient pediatric test center: No documentation required	As sucrose administration is without consequences for short term use. N.B It is important to monitor multiple and prolonged use of sucrose for patients with higher potential risk such for extreme preterm and critically ill infants.

10. STORAGE

- ❖ In case of Unidose back order, pharmacy will continue to prepare solution for in patients only
  - o Unidose twist-tip vial (e.g.TootSweet®, SweetUms®, Dandle-Lion Kisses®): Room temperature
  - o Solution prepared by pharmacy:
    - ▪ Refrigerate
    - ▪ Discard after 24 hours at room temperature

11. SUPPLIED

- o Unidose twist-tip vial (e.g. TootSweet 24% 1 drop = 0.04 mL)
- o If unidose twist-tip vial are not available, a sucrose solution will be prepared by the pharmacy in syringes for in-patients only. Preparation and expiration date are indicated on the syringe

12. COMPATIBILITY

N/A

13. RECOMMENDED VOLUME

Neonates 36 week GA to 1 year old
➢ **1 - 7 drops** (unidose 0.04mL/drop**)** **OR** **0.1 - 0.3 mL (syringe prepared by pharmacy)** **Maximum 2 mL per procedure**

under 36 weeks GA (including extreme pre-term under 31 weeks GA)
➢ **1 - 3 drops (**Unidose 0.04mL/drop**)** **OR** **0.1 mL (syringe prepared by pharmacy)** **Maximum 0,5 mL per procedure** *Extreme preterm (under 31 weeks); Avoid use of over 10 doses / day especially during the first week of life. Refer to precautions.

14. DOCUMENTATION IN CHART

- In-patient and out-patient clinic: Document procedure and sucrose administration in the patient chart nursing progress note or with the system put in place by the concerned unit.
- Out-patient pediatric test center: No documentation required

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15. APPROVAL PROCESS

Committees	Date [yyyy-mm-dd]
☒ Clinical Practice Review Committee (if applicable)	2017-07-27
☐ Adult Pharmacy and Therapeutics (if applicable)	NA
☒ Pharmacy and Therapeutics Pediatrics (if applicable)	2017-05-01
☒ MUHC Pediatric Medication Administration Policy (PMAP) (if applicable)	2017-04-26
☒ Multidisciplinary Council	2017-11-28

5. REVIEW DATE

To be updated in maximum of 4 years or sooner if presence of new evidence or need for practice change.

6. REFERENCES

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Version History (for Administrative use only)			
Version	**Description**	**Author/responsable**	**Date**
No 1	Development and Approval	Annik Otis	2011-05-14
No 2	Revision with modifications	Annik Otis	2011-02-02
No 3	Revision with modifications	Annik Otis	2012-09
No 4	Revision with modifications	Annik Otis	2017-