

Nurse Initiated Medication

Medications should be administered according to this protocol by hospital-accredited staff only. The protocol includes sufficient detail on the medication for the direction and information of nursing staff.

This protocol contains NO AMENDMENTS.

No preparation containing Schedule 4 or Schedule 8 drugs may be included in this Nurse Initiated Protocols

Nurse initiated medications are not be administered on an **ongoing** basis without a medical review. If, on review, the medication is to continue, it must be ordered on the medication chart by the medical officer.

Medication: Sucrose

Valid until: 1st March 2025

Approved by Drug Committee on: December 2021

Developed by:

Team Leader: Alyssa Fraser

Department: For use in departments across SCHN who meet the eligibility criteria listed within document

Team Members:

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Description of the drug:

- A sweet solution that when administered orally results in mediated increase in endogenous opioids and multi-sensorial stimulation

Expected outcomes:

- Small amounts of sweet solutions placed into the infant's mouth have been shown to reduce procedural pain [1] and minimise crying following the procedure by mediating an increase in endogenous opioid [2]. Using non-nutritive sucking with a pacifier together with the sucrose has been found to be beneficial [3]. Pain responses that have been shown to be reduced are crying time, heart rate and SpO2 desaturation [4].

Side effects:

- The long term effects are unknown, therefore sucrose should be used with caution for infants hospitalised for a prolonged period of time, in particular infants of less than 31 weeks gestation and those at risk of necrotising enterocolitis [3].

Dosage range:

- Neonates >31 weeks corrected age and infants up to 3 months of age: Concentration 24%, Dose per procedure 0.05 – 0.5mL, maximum dose of 5mL in 24 hours [4].
- Preterm neonates <31 weeks corrected age: Concentration 24%, dose per procedure 0.05-0.5mL, maximum dose 1mL in 24 hours [4-6]
- Note: 0.05mL = one drop, 0.5mL = 10 drops

Strength (where applicable):

- 24% solution

Route of administration:

- PO

Indications/patient eligibility criteria:

- Neonates undergoing a painful procedure.

Contraindications (including possible interaction with other drug therapy):

Infants excluded from receiving oral sucrose include those with:

- carbohydrate metabolism disorders (such as fructose or sucrose intolerance),
- disruption to the integrity of oral mucosa e.g. mucositis
- diagnosed yeast infection
- oral surgery/trauma

Restrictions on categories of staff who may administer the medication and/nursing accreditation criteria, including completion of current nursing education package where applicable:

- **Registered** nurses employed by SCHN

Any other information deemed necessary:

- Sucrose is used for reducing procedural pain. It is not to be used for general infant settling practice.

Process for documentation:

- **Documentation** to be kept in clinical area and should be transferred or available to other clinical areas as necessary

Nursing assessment: (all documentation to be kept in clinical area by CNE or NE)

- Nursing **assessment** includes
 - a. Pain scoring using pain scoring tool applicable to local area
 - b. Completion of nurse initiated sucrose package – 100% pass is required for competency (see *attached [competency assessment](#)*)

Observations

- **Nil increased monitoring required beyond duration of procedure**

Expectation of the RN initiating the medication is to:

Clearly document and sign the date/time and dose given on the PRN medication chart (M64B) or in eMM.

Time/dose limit that a RN can initiate a Nurse Initiated Medication before consultation with a medical officer

- Maximum dose 0.5mL per procedure. Maximum daily dose 5mL for >31 week corrected age
- Maximum dose 0.5mL per procedure. Maximum daily dose 1mL for <31 week corrected age

References

1. Banga S, Datta V, Rehan HS, Bhakhri BK. Effect of Sucrose Analgesia for Repeated Painful Procedures, on Short-term Neurobehavioral Outcome of Preterm Neonates: A Randomized Controlled Trial. J Trop Pediatr. 2015 Nov 27.
2. Lago P, Cavicchiolo ME, Mion T, Dal Cengio V, Allegro A, Daverio M, Frigo AC. Repeating a dose of sucrose for heel prick procedure in preterms is not effective in reducing pain: a randomised controlled trial. Eur J Pediatr. 2020 Feb;179(2):293-301.
3. Stevens B, Yamada J, Ohlsson A, Haliburton S, Shorkey A. (2016) Sucrose for analgesia in newborn infants undergoing painful procedures. Cochrane Database of Systematic Reviews, Issue 7. Art. No.: CD001069. DOI: 10.1002/14651858.CD001069.pub5.
4. Thakkar P, Arora K, Goyal K, Das RR, Javadekar B, Aiyer S, Panigrahi SK. (2016) To evaluate and compare the efficacy of combined sucrose and non-nutritive sucking for analgesia in newborns undergoing minor painful procedure: a randomized controlled trial. J Perinatol. Jan;36(1):67-70
5. Johnston CC, Filion F, Snider L, Limperopoulos C, Majnemer A, Pelousa E, et al. How much sucrose is too much sucrose? Pediatrics. 2007;119(1):226-.
6. Johnston CC, Filion F, Snider L, Majnemer A, Limperopoulos C, Walker C-D, et al. Routine sucrose analgesia during the first week of life in neonates younger than 31 weeks' postconceptional age. Pediatrics. 2002;110(3):523-8.