

 Advocate Health Care	Title: Pediatric Pain Management for Minor Procedures
	<input type="checkbox"/> Policy <input type="checkbox"/> Procedure <input checked="" type="checkbox"/> Guideline <input type="checkbox"/> Other:
	Scope: <input type="checkbox"/> System <input checked="" type="checkbox"/> Site: ACH Department: Pediatric

I. PURPOSE

To ensure that pharmacologic and/or non-pharmacologic pain management techniques, as appropriate, are offered and provided to pediatric patients undergoing minor procedures at Advocate Children’s Hospital – Oak Lawn.

II. POLICY

Not Applicable

III. DEFINITIONS/ABBREVIATIONS

- A. Venipuncture - is the process of obtaining intravenous access for the purpose of intravenous therapy or obtaining a sample of venous blood.
- B. IM injection - is the injection of a substance directly into a muscle
- C. Lumbar puncture - is a diagnostic and at times therapeutic procedure that is performed in order to collect a sample of cerebrospinal fluid (CSF) for biochemical, microbiological, and cytological analysis, or very rarely as a treatment to relieve increased intracranial pressure.
- D. Heel stick - is a minimally invasive and easily accessible way to obtain capillary blood samples for various laboratory tests in newborns.
- E. Bladder Catheterization - a plastic tube known as a urinary catheter is slid into a patient's bladder via his or her urethra. Catheterization allows the patient's urine to drain freely from the bladder for collection, or to inject liquids used for treatment or diagnosis of bladder conditions.
- F. PICC line - is a form of intravenous access that can be used for a prolonged period of time (e.g. for long chemotherapy regimens, extended antibiotic therapy, or total parenteral nutrition).

IV. PROCEDURE

A. Venipuncture

1. On admission, the pharmacist or nurse will screen the patient for allergies, contraindications, and reactions to lidocaine, and topical anesthetic skin refrigerants. (If use of these agents is contraindicated for the patient, the above individual will notify the admitting physician for orders to discontinue the dermal

- anesthetic protocol). The parents/patient will also be asked their pain management preference (LMX-4, Pain Ease, or defer to pain management).
2. When the dermal anesthetic protocol is ordered, a pharmacist will enter the following medications for the patient:
 - a. Oral Sucrose is available through general supply stock and does not require an order for removal.
 - b. LMX-4
 - i. 1-3 months of age: limit applications to 1 site at a time (1/2 tube per site) PRN for needle procedures.
 - ii. Greater than or equal to 3 months of age: Maximum of 4 applications at a time (1/2 tube per site) PRN for needle procedures.
 - c. Storage and Dispensing
 - i. LMX-4 cream is stored and dispensed through the Pyxis (or medicine cabinet)
 - ii. Buffered Lidocaine 1% 0.2 mL is stored in the medication refrigerator located in the medication room on each floor.
 3. In areas that utilize, phlebotomists, a phlebotomist will perform blood draws in all non-ICU areas and either they or the primary RN will page the Child Life Therapist. If a Child Life Therapist is not available, then an RN will fulfill the role of Child Life by using supportive techniques. Refer to the Pediatric Pain Procedure Algorithm for decision making on proper analgesia. On admission Parent/Patient will be asked if they would like to utilize the treatment rooms or patient room for blood draws and IV insertions. Every effort will be made to not perform any needle pokes in patient's bed.
 4. Medication Administration
 - a. Oral Sucrose
 - i. For babies 31 weeks gestation to 3 months of age
 - ii. Clinical judgment to be used for NPO babies
 - iii. Administer per manufacturer guidelines.
 - iv. Give two minutes before procedure
 - v. May repeat up to two times
 - vi. May be used for both stat and non-stat draws
 5. Gebauer's Pain Ease®
 - a. For patients 3 years and older
 - b. Do NOT spray in eyes or large open wounds. Apply only to intact mucous membranes and NEVER genital mucous membrane.
 - c. Effect feels like an ice cube
 - d. Swab treatment area with appropriate antiseptic
 - e. Hold aerosol can in an upright position 3-7 inches away from the desired site. Spray continuously for 4-10 seconds.
 - f. Do NOT clean site before starting the procedure
 - g. Do NOT give if patient is sensitive to Pain Ease

- h. Do NOT use for blood cultures
 - i. Do NOT use on ports
6. LMX-4 Lidocaine 4% topical anesthetic cream
- a. For children greater than 1 month of age
 - b. Onset 30 minutes
 - c. Effect lasts 60 minute
 - d. Each tube contains enough medication for two application
 - e. Do NOT clean skin before applying (works better when mixed with skins natural surface oils)
 - f. Apply a pea size amount to the site and rub into skin for 30 seconds (wear gloves)
 - g. Follow with a thicker application over the site (half the tube)
 - h. Cover with an occlusive dressing (e.g. Tegaderm). Do NOT flatten as LMX-4 works better when applied as a thick coat.
 - i. After LMX-4 is removed, skin should be cleaned per normal routine.
 - ii. Dosing Limits:
 - a. 1-3 months of age: limit applications to 1 site at a time
 - b. Greater than or equal to 3 months of age: Maximum of 4 applications at a time.
 - c. Procedure must be done within 90 minutes of initial application and LMX-4 may not be applied longer than 2 hours.
 - d. Do NOT give to patients sensitive to Lidocaine or occlusive dressing.
 - e. Do NOT give to patients with known elevated unconjugated hyperbilirubinemia (greater than or equal to 2 mg/dL)
 - f. Do NOT use coolant spray on the same site as LMX-4
 - g. This product when applicable should be used for all non-STAT IV starts and blood draws.
7. J-tip
- a. For patients 3 months and older
 - b. May be used for stat draws; especially for patients 3 months to 3 years of age.
 - c. Anesthetic effect takes place in 1-3 minutes
 - d. Do NOT use on ports.
 - e. Special consideration should be taken on use in patients receiving chemotherapy or who may be a high risk of bleeding.

B. IM Injection

1. Oral Sucrose (see instructions for use under section A)
2. For babies 31 weeks gestation to 3 months of age.
3. Ice
 - a. Use only in term babies
 - b. Use only as a secondary option for children greater than 3 months

4. LMX-4 (see instructions under section A)
 - a. 1-3 months of age: limit applications to 1 site at a time
 - b. Greater than or equal to 3 months of age: Maximum of 4 applications at a time.
 - c. Should be applied on all children greater than three months pending they are not sensitive to lidocaine or occlusive dressing.
5. Gebauer's Pain Ease®
 - a. Use only as a secondary option for children greater than 3 months

C. Lumbar puncture

1. Oral Sucrose (see instructions under section A)
 - a. For babies 31 weeks gestation to 3 months of age.
2. LMX-4 (see instructions under section A)
 - a. 1-3 months of age: limit applications to 1 site at a time
 - b. Greater than or equal to 3 months of age: Maximum of 4 applications at a time.
 - c. Should be applied on all children greater than three months pending they are not sensitive to lidocaine.
3. Buffered Lidocaine
 - a. Alkalinizing (buffering) lidocaine before infiltration will reduce pain and increase duration of action by thorough increased lipid solubility, decreased vasodilatation and washout.
 - b. Mix 1-2 part of Sodium Bicarbonate with 9 parts Lidocaine 1%
 - c. Inject solution subcutaneously with minimum gauge needle
 - d. Buffered lidocaine can be better tolerated when the superficial tissues have been previously anesthetized using LMX-4 or Pain Ease.
 - e. When injecting multiple times, inject through previously anesthetized areas. Slow injection of the local anesthetic agent (10 seconds) is less painful than a fast injection.
 - f. Cold lidocaine is more painful than room temperature lidocaine
 - g. Wait 5-10 minutes for local infiltration to take effect.

D. Heel stick (Full term infants 0-6 months of age)

1. Oral Sucrose (see instructions under section A)
 - a. For babies 31 weeks gestation to 3 months of age

E. Bladder Catheterization

1. Oral Sucrose (see instructions under section A)
 - a. For babies 31 weeks gestation to 3 months of age.
2. Lidocaine 2% gel (Uro-Jet®)
 - a. For term infants and older:
 - i. Open the contents of the Uro-Jet package and cotton swab package and place them on the sterile field of your catheterization kit.
 - ii. Don sterile gloves and assemble the Uro-Jet

- iii. Thoroughly cleanse the urethral opening with Betadine per policy.
- iv. Instillation of Lidocaine Jelly:
 - a) Males: Introduce the tip into the orifice, holding the Urojet firmly in position. Gently instill the jelly until the patient has a feeling of pressure, or a maximum of 5 mL has been injected.
 - b) Females: Deposit some jelly onto a cotton swab and swab the urethra. Introduce the tip of the Uro-Jet into the urethra and gently instill until pressure is felt, or a maximum of 3-5 mL.
 - c) Wait 2-5 minutes before catheter insertion in order for the anesthetic to take effect.
 - d) Re-Clean urethra meatus per policy.
 - e) Additional jelly can be used as a lubricant for the instillation of the catheter.

*Note: The amount of jelly instilled is dependent on the age and size of the child. Do NOT continue to insert jelly if pressure is felt by the patient. For children less than 10 years of age, the maximum amount of lidocaine administered should not exceed 4.5mg/kg.

F. Nasogastric insertion

- 1. Exactacain Spray
 - a. For children 3 years and up
 - i. Attach disposable applicator straw firmly to the end of the spray nozzle.
 - ii. Discard applicator straw after each patient use
 - iii. Apply 2 metered sprays of Exactacain to the back of the throat prior to NG insertion.
 - iv. Do NOT spray in eyes.
 - v. Onset of action for produced anesthesia is 30 seconds and the duration of anesthesia is typically 30-60 minutes.

G. PICC line

- 1. PICC line protocol should be followed via Venous Access Device Team (VAD Team) if available at sites that utilize VAD teams for pediatric PICC insertions.
- 2. LMX-4 (Should be applied prior to PICC line placement on all children greater than three months pending they are not sensitive to lidocaine). See above for dosing guidelines.
- 3. Child Life should be present during the procedure, at all sites that utilize Child Life Therapy.
- 4. Sedation should be administered as per protocol.

H. Administration of Lidocaine-Epinephrine-Tetracaine (LET) in the Emergency Department (ED)

1. LET should be utilized within 2 hours of anticipated repair of laceration or removal of foreign body.
2. Obtain LET solution from ~~Omni-cell~~, cotton ball/gauze, small medicine cup and surgical tape
3. Place cotton ball in cup and saturate with LET
4. Gently squeeze excess from cotton ball
5. Place wet cotton ball directly onto wound and ensure edges are covered
6. Place tape gently across ball and firmly across lower margin to minimize dripping
7. Place tape firmly across center of ball and apply pressure
8. Instruct patient and significant others to avoid touching dressing other than to wipe any leakage from site
9. Check for effectiveness of solution prior to procedure
10. Contraindications
 - a. Allergies to lidocaine, tetracaine or other anesthetics or epinephrine
 - b. Lacerations, which are greater than 5 cm in length
 - c. Lacerations on the nose, ear, finger, toe, lip, mucous membrane or genitalia

V. CROSS REFERENCE

Not Applicable

VI. REFERENCES

- A. Kleiber, C., Sorenson, M., Witeside, K., Gronstal, B.A., & Tannous, R. (2002). Topical anesthetics for intravenous insertion in children: A randomized equivalency study. *Pediatrics*, 110(4); 758-761.
- B. Twycross, A., Dowden, J., & Bruce, E. (2009). *Managing pain in children: A clinical guide*. West Sussex, United Kingdom: Wiley-Blackwell.
- C. Walco, G. A., & Goldschneider, K. R., (2008). *Pain in Children: A Practical Guide for Primary Care*. Totowa, NJ: Humana Press.

VII. RELATED DOCUMENTS/RECORDS

Not Applicable