SARASOTA MEMORIAL HOSPITAL
NURSING DEPARTMENT POLICY

TITLE: PEDIATRIC PAIN MANAGEMENT FOR NEEDLE STICKS

POLICY #: 126.855 (Peds)

EFFECTIVE DATE: 10/06

REVISED DATE: 

POLICY TYPE: DEPARTMENTAL

PAGE: 1 of 6

Job Title of Reviewer: Director, Children’s

PURPOSE: The goal of the pediatric unit at SMH is to provide atraumatic pain management for needle-stick procedures (if time allows) including peripheral intravenous cannula insertion, venipuncture, port-a-cath access, arterial blood gases, and intramuscular injections. The purpose of this policy is to provide safe protocol-based access to pain management for needle sticks in pediatric patients.

POLICY STATEMENT:

1. Atraumatic needle procedures will be facilitated based on the following information:
   a. Individualized care by considering patient/family preferences and prior patient experience.
   b. The nurse determines the most appropriate pain management to be used based on the algorithm (see Appendix Table 1) and enters the order in CareVision as a nursing med order (e.g. “EMLA cream per protocol”).
   c. The nurse will assess the patient’s history of allergies to local anesthetics and any reactions to topical creams.
   d. The nurse will coordinate with respiratory therapists and phlebotomists to use topical anesthetic agents or 24% sucrose for needle procedures in appropriate situations.

2. Wong’s Principles of Atraumatic Care should be used to minimize pain and stress to all patients during all procedures. The goals are:
   a. Avoid or reduce intrusive and painful procedures.
   b. Avoid or reduce other kinds of distress.
   c. Manage pain.
   d. Prevent or minimize parent/child separation.
   e. Promote a sense of control.
   f. Reduce fear of the unknown.
   g. Provide opportunity for control.

3. The goal is to provide comfort, analgesia/anesthesia for all needle procedures realizing that at times it is not possible as the use of a topical agent may affect the success of the procedure.

4. Encourage use of the treatment room for all needle procedures in order to preserve the patient’s bed as a “safe place”.

5. Alternative methods of pain control (e.g. distraction, music) should be considered and may be used in addition.

6. Discuss with the patient and family the use and variety of
pharmacologic and non-pharmacologic pain management options for painful needle procedures. Families and patients should also know that each case is considered individually.

7. Topical anesthetics may be ordered by registered nurses following this protocol.

**EXCEPTIONS:**

1. A physician may enter an order to exclude patients from access to topical anesthetics and/or sucrose as described in the Pediatric Pain Management for Needle Sticks Policy.

2. Time-sensitive procedures may not allow for the provision of topical anesthetics in order to protect the safety of the child. In this case, however, it is emphasized that there exist age-appropriate non-pharmacologic techniques which may be employed without time delay (e.g. sucrose, distraction, hand-holding, etc.).

3. Do not use EMLA cream if patient has an allergy to lidocaine or prilocaine.

4. Contraindications to use of EMLA include liver disease, G-6 PD deficiency, and idiopathic methemoglobinemia.

5. Do not use topical anesthetics for finger or heel sticks as it may cause vasoconstriction and make obtaining blood for the sample more difficult.

**DEFINITION(S):**

Non-pharmacologic pain management: Options to assist with pain management that do not involve use of medications (e.g. distraction, music, comfort measures, drawing, bubble-blowing, singing, reading, guided imagery, television, conversation, pacifiers, etc.)

**PROCEDURE:**

1. The type of topical anesthetic or analgesia chosen is determined by patient age, personal preference, and type of procedure. Use the following guidelines
   a. Sucrose use per procedure nur27 ("Sucrose Administration in the NICU, Pediatrics, and Mother-Baby Unit")
   b. Sucrose is effective for controlling pain under the age of 6 months and non-pharmacologic pain management.
   c. In infants 6 months and older, use topical anesthetic on one site only and non-pharmacologic pain management.
   d. In toddlers, preschoolers, school-age children, and adolescents, use topical anesthetic and age-appropriate non-pharmacologic pain management.

2. The urgency of a medical situation may supersede the use of topical anesthetics for pain management.

3. The nurse assesses the patient and family’s perception of the painfulness of the procedure.

4. The nurse considers the patient’s level of development and their sedation and anxiety levels.
5. Topical anesthetic:
   a. EMLA (Lidocaine 2.5% & Prilocaine 2.5%):
      i. Contraindications to use of EMLA include liver disease, G-6 PD deficiency, and idiopathic methemoglobinemia.
      ii. Apply according to Table 2 “EMLA Recommended Dose and Application Area for Infants and Child Based on Application to Intact Skin”.
      iii. Use only on intact skin.
      iv. Do not use if patient has an allergy to lidocaine or prilocaine.
      v. Apply to the site so that skin is not visualized under cream, not exceeding the maximum dose per procedure/day (please see appendix).
      vi. Cover with bio-occlusive dressing for at least 60 minutes for EMLA cream before the intended needle procedure.
      vii. The vein may constrict after EMLA application. A warm compress may help reverse the vasoconstriction sometimes caused by EMLA.
      viii. Do not use topical anesthetics for finger or heel sticks as it may cause vasoconstriction and make obtaining blood for the sample more difficult.

1. Report any of the following conditions:
   a. EMLA: itching, erythema, rash, edema, urticaria.
      1. Multiple simultaneous applications of EMLA may increase the risk of methemoglobinemia toxicity from prilocaine in infants. Chocolate-colored arterial blood and hypoxia are symptoms of methemoglobinemia.
      2. Lidocaine toxicity can cause tremors, convulsions, confusion, bronchospasm or arrhythmias.

2. Patient and Family Instructions:
   1. Discuss the use and variety of pharmacologic and non-pharmacologic pain management options for painful needle procedures.
   2. Remind patients and families that each case is considered individually.

3. Documentation:
   a. Enter nursing order per protocol into CareVision as a “nursing med order”.
   b. Document and sign off EMLA order on medication record.
   c. Document procedure and interventions, including
results from interventions, in pediatric assessment/reassessment flowsheet.
d. Document any education provided to patient and family.

REFERENCE(S):

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Sue Bolton, RN, Women’s and Children’s Intervention Service

REVIEWER(S):
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Ellen French, RN, CPS, Labor & Delivery
Bernie Coulombe, RN, CNS, Mother-Baby Unit

ATTACHMENT(S):
Table 1. Pain Management Algorithm for Needle Procedures (based on age/weight)
Table 2. EMLA Recommended Dose and Application Area for Infants and Child Based on Application to Intact Skin
### APPROVALS:

Signatures indicate approval of the new or reviewed/revised policy

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**Committee/Sections (if applicable):**

- Nursing Standards and Practice: 9/7/06
- Pediatric Department Meeting: 10/12/06

**Vice President/Administrative Director (if applicable):**

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<td><strong>Title:</strong> Jan Mauck, Vice President, Chief Nursing Officer</td>
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Appendix

Table 1. Pain Management Algorithm for Needle Procedures in Children.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Age</th>
<th>Recommended Analgesia</th>
<th>Onset</th>
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<tbody>
<tr>
<td>PIV insertion</td>
<td>≤ 6 mos</td>
<td>Sucrose AND topical anesthetic (lidocaine/ prilocaine) for procedures expected to last several minutes</td>
<td>1 hour</td>
</tr>
<tr>
<td></td>
<td>≤ 6 mos</td>
<td>Sucrose AND topical anesthetic (lidocaine/ prilocaine) for procedures expected to last several minutes</td>
<td>1 hour</td>
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<tr>
<td></td>
<td>&gt; 6 mos</td>
<td>Topical anesthetic (lidocaine/ prilocaine)</td>
<td>1 hour</td>
</tr>
<tr>
<td>Venipuncture</td>
<td>≤ 6 mos</td>
<td>Sucrose</td>
<td>2 min</td>
</tr>
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<td></td>
<td>&gt; 6 mos</td>
<td>Topical anesthetic (lidocaine/ prilocaine)</td>
<td>1 hour</td>
</tr>
<tr>
<td>Port-a-cath Access</td>
<td>All ages</td>
<td>Topical anesthetic (lidocaine/ prilocaine)</td>
<td>1 hour</td>
</tr>
<tr>
<td>IM Injections</td>
<td>≤ 6 mos</td>
<td>Sucrose</td>
<td>2 min</td>
</tr>
<tr>
<td></td>
<td>≤ 6 mos</td>
<td>Multiple Injections: Sucrose AND topical anesthetic (lidocaine/ prilocaine)</td>
<td>1 hour</td>
</tr>
<tr>
<td></td>
<td>&gt; 6 mos</td>
<td>Topical anesthetic (lidocaine/ prilocaine)</td>
<td>1 hour</td>
</tr>
</tbody>
</table>

Table 2. EMLA Recommended Dose and Application Area for Infants and Child Based on Application to Intact Skin.

<table>
<thead>
<tr>
<th>Age &amp; Body Weight Requirements</th>
<th>Max Total Dose Per Procedure</th>
<th>Max Application Area</th>
<th>Max Application Time</th>
<th>Max Daily Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth* to 3 mos or &lt;5kg (*)corrected gestational age)</td>
<td>Up to 1 gram total</td>
<td>1 ¼ x 1 ¼ inches</td>
<td>1 hour</td>
<td>1 gram</td>
</tr>
<tr>
<td>3-12 mos and &gt; 5kg</td>
<td>Up to 2 grams total</td>
<td>1 ¾ x 1 ¾ inches</td>
<td>4 hours</td>
<td>2 grams</td>
</tr>
<tr>
<td>1-6 years and &gt; 10kg</td>
<td>Up to 5 grams total</td>
<td>4 x 4 inches</td>
<td>4 hours</td>
<td>10 grams</td>
</tr>
<tr>
<td>7-12 years and &gt;20kg</td>
<td>Up to 10 grams total</td>
<td>5 ½ x 5 ½ inches</td>
<td>4 hours</td>
<td>20 grams</td>
</tr>
</tbody>
</table>

Note: Apply to site until skin is not visualized under cream, not exceeding the maximum dose per procedure.