

**UCSF MEDICAL CENTER
DEPARTMENT OF NURSING**
NURSING PROCEDURES MANUAL

**PAIN ASSESSMENT AND MANAGEMENT IN INFANTS, CHILDREN AND ADOLESCENTS
(PEDIATRIC/NEONATAL)**

PURPOSE

Management of pain in infants, children and adolescents is multidisciplinary. The RN is responsible for assessing pain in patients, notifying providers of pain assessments, planning pain management with team members, providing interventions, evaluating responses to interventions, and documentation.

TABLE OF CONTENTS

- ▶ [Critical Points](#)
- ▶ [Procedure](#)
 - I. [Pain Assessment](#)
 - [General Principles](#)
 - [Pain Assessment Tools](#)
 - II. [Pain Management: Non-pharmacologic](#)
 - [General Principles](#)
 - [Age Specific Techniques](#)
 - III. [Pain Management: Pharmacologic](#)
 - [Opioid Analgesics](#)
 - [Non-Steroidal Anti-Inflammatory Drugs](#)
 - [Nerve Blocks](#)
 - IV. [Procedural Pain Management](#)
 - [General Principles](#)
 - [Pharmacologic](#)
 - [Non-Pharmacologic](#)
- ▶ [Troubleshooting](#)
 - [Nausea / Vomiting](#)
 - [Respiratory Depression](#)
 - [Urinary Retention](#)
 - [Pruritis](#)
 - [Tolerance / Dependence](#)
 - [Hypotension](#)
- ▶ [Documentation](#)
- ▶ [Patient and Family Education](#)
- ▶ [Appendix A: Neonatal Pain and Sedation Scale \(NPASS\)](#)
 - [Part 2: Neonatal Infant Pain Scale With Physiological Parameters](#)
- [Appendix B: FLACC \(Face, Legs, Activity, Cry, Consolability\)](#)
- [Appendix C: Wong-Baker Faces Pain Rating Scale](#)
- [Appendix D: Numerical Pain Rating Scale](#)
- ***Related Procedures and Policies::***
 - [Pain Assessment \(General\)](#)
 - [Epidural Analgesia \(General\)](#)
 - [Patient Controlled Analgesia \(Intravenous\) \(General\)](#)
 - [Assessment of Pain In Culturally Diverse Populations \(General\)](#)
 - [Pain Management Procedure Set](#)
 - [State Behavioral Scale In Pediatric Critical Care Patients](#)
 - [Withdrawal Assessment Tool in Pediatric Critical Care Patients](#)
 - [ICN Unit Based Oral Sucrose Procedure](#)

**PAIN ASSESSMENT & MANAGEMENT IN INFANTS, CHILDREN AND ADOLESCENTS
(PEDIATRIC/GENERAL) (continued)**

CRITICAL POINTS

- A. All children, including preterm infants and neonates, experience pain and deserve adequate analgesia. Unrelieved pain in infants and children may have negative physical and psychological consequences.
- B. Infants and children who may have difficulty expressing their pain require particular attention. This includes preterm infants; children who are cognitively impaired, or severely emotionally disturbed; children who do not speak English; infants and children who are intubated, sedated, and/or receiving muscle relaxants; and children from families where the level of education or cultural background differs significantly from that of the health care team.
- C. Children and their families should be informed that pain relief is an important part of their health care, that information about options to control pain is available to them, and that they are welcome to discuss their concerns and preferences with the health care team.
- D. A self-report tool specifically designed for use with children **that is age and condition specific**, provides the most reliable and valid estimates of pain intensity, quality and location.
- E. The management of pain through timely interventions is preferred because pain that is established and severe is difficult to manage.
- F. Unexpected intense pain, particularly if sudden or associated with altered vital signs such as hypotension, tachycardia or fever, should be immediately evaluated by a physician.

PROCEDURE

I. PAIN ASSESSMENT

A. General Principles for Pain Assessment in Neonates and Children

- Obtain a pain history from the child and/or parent at the time of admission and complete the admission pain history navigator.
- Assessment strategies should be appropriate for the child's age and developmental level.
- 1. Self-report method should be used whenever possible. Self-report tools are the “gold standard” for assessing children’s pain and are considered the most accurate measure of pain. They can be used with developmentally normal and awake children four years or older.
- 2. Parent proxy should also be used to assess children’s pain. This is a report of pain from parents, family or others close to the patient. They may be asked to give proxy pain ratings using assessment tools. Parents can accurately rate their children’s pain using a quantitative scale.
- 3. Behavioral measures can be used as adjuncts to pain assessment. Some behavioral indicators associated with pain include grimacing, body posture, limping, guarding and crying.
However, behavioral measures that clinicians expect to see with pain may be absent. Some patients may use laughter, withdrawal or distraction to cope with their pain. In addition, they may demonstrate sleep disturbances or refusal to eat or play as coping mechanisms.

**PAIN ASSESSMENT & MANAGEMENT IN INFANTS, CHILDREN AND ADOLESCENTS
(PEDIATRIC/GENERAL) (continued)**

4. Physiologic measures of pain should be used only as adjuncts to self-report or behavioral tools. Physiologic responses to acute pain include flushing of the skin or pallor, sweating, increase in blood pressure, pulse and respirations, decreased oxygen saturation, dilation of pupils, and restlessness.
 - These responses may represent changes in clinical condition and may stabilize as the body adapts to pain, therefore, they are considered to be the least sensitive indicators of pain.
5. Consider precipitating events in relation to a child's behavior to assist in the differentiation between pain and other responses; for example, surgery, hunger, separation, and procedures.
6. It is not always necessary to wake the sleeping patient for a pain assessment. In this case, consult with the family to provide a pain assessment and plan management according to this assessment, patient history, use of medications for pain and your assumptions about the patients' pain experience.
7. Difficult assessments in infants and children include situations where the ability to assess pain is lost because of the use of muscle relaxants (i.e., some critically ill infants and children).
 - For patients where the assessment of pain is difficult, use the patient's history, autonomic responses to stimuli along with your assumptions and judgment of what might be painful for the patient.
 - In addition, it should be kept in mind that a low or zero score may indicate an infant or child who is too ill or is unable to respond to pain. This may not mean that they are not experiencing pain.
8. After implementing these assessment strategies, you may remain uncertain about the presence or amount of pain in these patients. If you suspect pain, a diagnostic trial of analgesia is appropriate.

B. Pain Assessment Tools

AGE and/or CONDITION	TOOL
Infants in the ICN	NPASS
Newborns up to 2 months	NIPS
2 months up to 4 years	FLACC
4 years up to 9 years	FACES
9 years and up	NRS
Non-verbal secondary to intubation and/or sedation	FLACC
Pre-Verbal or Cognitively Impaired	FLACC
Neuromuscular Blockade	Pediatric NBA
Difficult to assess/pre procedure	Assume pain present (APP)

C. Implementation of Pain Tools

1. **NPASS: Neonatal Pain, Agitation and Sedation Scale** (See [Appendix A](#))

**PAIN ASSESSMENT & MANAGEMENT IN INFANTS, CHILDREN AND ADOLESCENTS
(PEDIATRIC/GENERAL) (continued)**

- a. Is a valid and reliable tool for assessing pain/agitation and sedation in ventilated and/or postoperative infants 0 to 100 days of age, and 23 weeks gestation and above. The tool is used infants in the ICN only.
2. **NIPS: Neonatal Infant Pain Scale:** (See [Appendix B](#))
 - a. This is a six item, 2-3 point scale that assesses neonatal behaviors associated with pain. The behaviors include facial expression, cry, breathing patterns, arm movement, leg movement, and state of arousal.
 - b. Use with preterm and term neonates, and infants up to two months of age.
 - c. Score each of the six behaviors and calculate the total score.
 - d. The possible score range is 0-7. In general, the higher the score, the more intense the pain experience.
 - e. This tool is used in all other BCH units for newborns to 2 months.
3. **FLACC: Face, Legs, Activity, Cry, Consolability** (see [Appendix C](#))
 - a. This is a five-item, three-point scale (0,1,2) that measures pain behaviors. The behaviors include facial expression, leg movement, activity, cry and consolability.
 - b. Use with preverbal and nonverbal children ages two months and up. Can be used in developmentally delayed children who are unable to provide a self-report.
 - c. Score each of the five categories.
 - d. Calculate the total score.
 - e. The possible score range is 0-10.
 - f. Higher scores correlate with higher pain/distress.
4. **Wong-Baker FACES Pain Rating Scale:** (See [Appendix D](#))
 - a. Consists of six black and white cartoon faces representing various degrees of pain.
 - b. Ranges from 0 for a smiling face representing “no pain” to a 10 for a tearful face indicating “worst pain”.
 - c. Faces are scored at 0, 2, 4, 6, 8, and 10.
 - d. Use with patients ages 4 years through 8 years who are able to provide a self-report.
 - e. Explain to the child that each face is for a person who feels happy because there is no pain (hurt) or sad because there is some or a lot of pain.
 - FACE 0 is very happy because there is no hurt.
 - FACE 2 hurts just a little bit.
 - FACE 4 hurts a little more.
 - FACE 6 hurts even more.
 - FACE 8 hurts a whole lot.
 - FACE 10 hurts as much as you can imagine, although you don’t have to be crying to feel this bad.
 - f. Ask the child to choose the face that best describes how he is feeling.
 - g. The numerical value corresponding to the chosen face is the documented pain score.
 - h. A higher score indicates a higher intensity of pain.
 - i. Caution – faces may represent experiences other than pain (i.e, sadness, fear, separation).
 - j. In addition to assessing pain intensity in verbal children, ask the child to *describe the pain* (“Tell me what your hurt feels like?”), and location of the pain (“Where is your hurt?”).
5. **Numerical Rating Scale** (See [Appendix E](#))

**PAIN ASSESSMENT & MANAGEMENT IN INFANTS, CHILDREN AND ADOLESCENTS
(PEDIATRIC/GENERAL) (continued)**

- a. Numbers ranging from 0-10 are verbally used to assess the degree of pain where 0 equals no pain and 10 equals the worst pain imaginable.
 - b. Use in verbal patients nine years and older, who are able to provide a self-report.
 - c. Assess pain intensity by asking the patient "On a scale of 0-10, with 0 being no pain and 10 being the worst pain you can imagine, how much do you hurt right now?"
 - d. The number indicated by the patient is the pain score. A high score indicates severe pain, a low score indicates little to no pain.
 - e. In addition to assessing pain intensity in verbal children, ask the child to describe the pain (Tell me what your hurt feels like?), and the location of the pain ("Where is your hurt?").
6. **Pediatric Neuromuscular Blockade (Pedi NBA)**
- a. Document when neuromuscular blockade is present in the pain assessment field.
7. **Assume Pain is Present (APP)**
- a. May be used in unresponsive patients (who cannot self-report) and have no pain indicators to assess) who have underlying pathology thought to be painful (e.g., surgery, mechanical ventilation)
 - b. To document pain in patients who are undergoing painful activities/procedures, such as turning, ambulation, physical therapy, removal of tubes, or wound care, with the goal of preventing increased pain. Documenting APP in this second case must correspond with a documented activity. Example: 0700: Postoperative patient following abdominal surgery reports 2/10.

II. PAIN MANAGEMENT: NON-PHARMACOLOGIC

A. General Principles

- Non-pharmacologic pain management interventions should be age and developmentally appropriate.
 - Ongoing assessment of the effectiveness of these interventions is necessary.
1. Active Involvement methods:
- Prepare child/family for anticipated procedures and discuss and rehearse coping technique in advance.
 - Refer to Child Life for initial and ongoing therapeutic play to help develop coping techniques.
 - Prepare parent and child, providing guidance and direction for pain and anxiety-relieving activities during procedures.
 - Assist the family in choosing their role during the procedure.
 - Provide choices whenever possible to help promote a sense of control and mastery over a painful procedure and hospital experience.
 - Make environmental changes: Decrease light and unnecessary noise, provide soothing and/or familiar music, wall and ceiling decorations such as murals/poster/decals/mobiles. Cluster nursing and medical care.
 - Maintain the patient's room and bed as a procedure-free place. Whenever possible, perform procedures in a treatment room.

**PAIN ASSESSMENT & MANAGEMENT IN INFANTS, CHILDREN AND ADOLESCENTS
(PEDIATRIC/GENERAL) (continued)**

2. Age-specific techniques:
 - a. ***Neonates:***
 - Containment
 - Swaddling
 - Non-nutritive sucking
 - b. ***Infants***
 - Distraction: Mobiles, toys with music, movement, and/or bright colors
 - Positioning: Swaddle, rocking, nesting, infant swing/carrier
 - Parental presence: Provide parents with a role during procedure
 - Non-nutritive sucking on pacifier
 - Touch: Patting, rubbing, massage, rocking
 - Music: Set tone, relaxation, play/sing soothing or familiar music
 - c. ***Toddlers***
 - Distraction: Music, video, singing, bubbles, pop-up books
 - Positioning: Parent holding, swaddling in blanket, avoid lying down
 - Breathing: Blowing bubbles, pretending to blow candles, wolf puffing down house
 - Cutaneous Stimulation: Touch, massage, patting, ice/heat, squeezing on a ball, play dough, or blanket
 - Music: Interactive songs or sing along, finger plays
 - d. ***School-Age Patients and Adolescents***
 - Distraction: Detailed books, music with headphones, videotapes, videogames
 - Parental presence optional based on patient's interests
 - Relaxation Techniques:
 - ❖ Progressive relaxation - tensing and releasing the muscles from a distal to proximal progression, i.e., hands then arms then shoulders then face
 - ❖ Deep breathing
 - Thought-stopping/positive self-talk
 - Imagery: Using imagination to represent a multi-sensory experience similar to a waking dream

III. PAIN MANAGEMENT: PHARMACOLOGIC

A. General Principles

1. Opioid and non-opioid analgesics are the mainstay of postoperative pain management. The approach varies with the child's age, medical condition, type of surgery, and expected postoperative course.
2. Pain after minor surgery is usually managed with oral or rectal (excluding oncology/BMT population) acetaminophen or nonsteroidal anti-inflammatory drug and/or an oral opioid. In cases where these drugs are contraindicated (preterm infants), opiates may be indicated.
3. Pain after major surgery is managed with parenteral or regional opioids.
4. Pain after major surgery is often managed more effectively with opioids and acetaminophen together. IV Acetaminophen is available and may be used OTC.

B. Opioid Analgesics

**PAIN ASSESSMENT & MANAGEMENT IN INFANTS, CHILDREN AND ADOLESCENTS
(PEDIATRIC/GENERAL) (continued)**

1. Premature infants and neonates are susceptible to apnea and respiratory depression with the use of systemic opioids. Opioids in these patients should be titrated carefully and assessed frequently to avoid these complications.
2. There is no known aspect of childhood development or physiology that indicates any increased risk of physiologic or psychological dependence from the brief use of opioids for acute pain management.
3. Fentanyl is a potent respiratory depressant and should be administered carefully in patients who do not have their airway and ventilation controlled. If fentanyl is being administered, the patient should be monitored closely for respiratory depression.
4. Consider administering opioids around the clock or by continuous infusion rather than as needed (PRN) for the first 24-72 hours following major surgery. Reassess frequently for early signs/symptoms of opioid side effects (e.g., sedation, nausea, pruritus, urinary retention). Reassess daily for continued need or change in patient condition.
5. Titrate the opioid dose and interval to increase the amount of analgesia and/or reduce the side effects when necessary. Children vary greatly in their analgesic dose requirements and responses to opioid analgesics, and the recommended starting doses may be inadequate.
6. Consider the use of patient controlled analgesia (PCA) for developmentally appropriate children seven years and older.
7. Use intramuscular injections only under exceptional circumstances. They are painful and frightening for children. Intramuscular injections are not recommended in preterm infants because of their limited muscle mass.

C. Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) (i.e., Ibuprofen)

1. NSAID's should be used cautiously in patients with or at risk for the development of renal dysfunction and/or bleeding.
2. NSAID's are most commonly used to manage mild to moderate acute or chronic pain.
3. In addition to analgesic action, NSAID's have antipyretic action and/or anti-inflammatory action.
4. Even when insufficient alone to control pain, NSAID's can enhance analgesia action and duration of the opiates thereby reducing opiate side effects, because decreased doses of opiates are used.
5. NSAID's must be used with care in patients with thrombocytopenia or coagulopathies and in those patients at risk for bleeding or gastric ulceration. As an alternative, Acetaminophen does not affect platelet function.

D. Regional Analgesia/Anesthesia

- This usually implies the use of local anesthetics but may also utilize opioids. This form of therapy may involve peripheral nerve blocks, nerve plexuses, or conduction techniques (placing drugs on or near the spinal cord, i.e., "blocking" entire regions of the body).

E. Peripheral Nerve Blocks

- Generally local anesthetics are used. Examples include:
 - ❖ Ilioinguinal/iliohypogastric blocks used post-surgical inguinal hernia repair

**PAIN ASSESSMENT & MANAGEMENT IN INFANTS, CHILDREN AND ADOLESCENTS
(PEDIATRIC/GENERAL) (continued)**

- ❖ Intercostal blocks used for thoracotomies
- ❖ Penile nerve blocks used for hypospadias repair or circumcision.

F. Plexus Nerve Blocks

- Generally, local anesthetics are used. Examples include:
 - ❖ Brachial plexus or axillary blocks used for arm surgery
 - ❖ Sympathetic blocks of the stellate ganglion for neck surgeries

G. Conduction Nerve Blocks

- Use local anesthetics and/or opiates. Caudals and epidurals are the most common examples of this technique:
 - ❖ **Caudal block** – This is a block of the epidural space that enters through the caudal area. This class of regional blockade can often provide prolonged analgesia. Theoretical advantages of this technique include management of pain with limited depression of the central nervous system, long duration of action and hemodynamic stability. Caudal blocks are usually single injection but can be used with a catheter infusion. This technique is generally used for pain below the diaphragm but can be used for pain control for surgery in other areas of the body by use of epidural opiates.
 - ❖ **Epidural analgesia** – This is typically provided by leaving a catheter in place for drug administration post-operatively. Side effects and complications of epidural opioids include pruritus, nausea, urinary retention, sedation and respiratory depression. The area of analgesia is dependent on catheter placement and the amount of opioid delivered.
 - **Note:** Patients receiving epidural opioids may have exaggerated responses to supplemental opioids. This is the reason why supplemental IV doses are small. Sedation is an early sign of opioid toxicity and is generally more sensitive than respiratory rate as an early sign of toxicity.
- Some numbness or weakness may occur with the use of local anesthetics. A physician should be notified immediately in the event of numbness or weakness to rule out a neurological event. After confirming that this is due to the medications used, it is important to reassure patients that this may be an expected side-effect of the analgesic modality. Care should be directed to protect numb or weakened parts of the body.

IV. PROCEDURAL PAIN MANAGEMENT

A. General Principles

1. Provide developmentally appropriate preparation of the child and family for the procedure.
2. Keep procedures to a minimum and cluster multiple procedures together, whenever possible.
3. Avoid performing procedures in the child's bed or room in the acute care setting (utilize treatment room), unless necessary.
4. Educate the patient and family to facilitate informed choices and involvement prior to the procedure. Promote a sense of control and mastery in patients and families by allowing choices whenever possible.
5. Allow parents to be with the child before, during, and after the procedure, as possible. Prepare parents for their role of soothing, comforting or using distraction techniques to help

**PAIN ASSESSMENT & MANAGEMENT IN INFANTS, CHILDREN AND ADOLESCENTS
(PEDIATRIC/GENERAL) (continued)**

their child through the procedure. When the parents are unable to do this, another adult should be present to provide this support to the child.

6. Ensure procedures are performed by nursing and medical professionals with sufficient training to accomplish them with minimal trauma. Limit number of attempts per procedure and cluster procedures.
7. Use non-pharmacologic comfort measures when appropriate and able. Add pharmacologic approaches as appropriate.

B. Pharmacologic Management of Procedure-Related Pain

1. Oral sucrose dripped on a pacifier or directly on the tongue is indicated for procedural pain such as an IV start or a heelstick. Use this in conjunction with containment for infants up to 4 months adjusted age.
2. Analgesics and/or local anesthetics are the foundation for pharmacologic management of painful procedures. Intravenous or oral opioids should be given in increments and titrated to analgesic effect. Injected and topical local anesthetics (e.g., LMX4 or buffered lidocaine), can reduce pain sensation.
3. Anxiolytics and sedatives are specifically for the reduction of anxiety associated with pain. Oral and intravenous benzodiazepines produce anxiolysis and sedation, but not analgesia. Intravenous benzodiazepines should be given in increments and titrated to effect.
4. Oral or intravenous barbiturates and hypnotics provide sedation without analgesic effect and should only be given according to sedation guidelines and criteria
5. Skilled supervision and appropriate monitoring procedures are crucial when planned sedation is used.

C. Non-pharmacologic Management of Procedure-Related Pain

1. Non-pharmacologic strategies can be used alone for less painful procedures, such as venipuncture, or as adjuncts to pharmacologic strategies for more painful procedures. The family can be helpful in facilitating the child's use of these strategies.
2. Older children and adolescents who find non-pharmacologic strategies helpful may prefer these strategies over pharmacologic agents for procedures that are not excessively painful.
3. Implementation of the nonpharmacologic pain management strategies in [Section II](#) can be applied for procedure-related pain management.

PAIN ASSESSMENT & MANAGEMENT IN INFANTS, CHILDREN AND ADOLESCENTS (PEDIATRIC/GENERAL) (continued)

TROUBLESHOOTING

Side Effects of Opiate Analgesics

SIDE EFFECTS	KEY POINTS	MANAGEMENT
Nausea and Vomiting	<ul style="list-style-type: none"> Common side effects of all opioids 	<ul style="list-style-type: none"> If mild — moderate, consider waiting it out Consider anti-emetics If severe, consider possibly changing the opioid
Constipation	<ul style="list-style-type: none"> A known side effect 	<ul style="list-style-type: none"> Consider a stool softener Consider Glycerin suppository
Severe Respiratory Depression	<ul style="list-style-type: none"> Opioids decrease CO₂ responsiveness. Patients at increased risk include preterm infants, neonates and patients with decreased LOC. Fentanyl is a potent respiratory depressant; often occurs without a decrease in LOC. 	<ul style="list-style-type: none"> Naloxone (1-5 mcg/kg); may require repeated doses. For patients at increased risk for respiratory problems, consider decreasing the dose of opioid and administering more often or adjunctive use of NSAID's. Assess carefully when administering to non-intubated patients.
Urinary Retention	<ul style="list-style-type: none"> Administration in all routes 	<ul style="list-style-type: none"> Catheterize if unable to void.
Pruritus	<ul style="list-style-type: none"> Most commonly associated with morphine but can occur with all opiates. Occurs with morphine secondary to histamine release. Common with epidurals and PCAs. 	<ul style="list-style-type: none"> Assess preverbal patients for irritability and itching. Consider antihistamines. If antihistamines don't work consider very small doses of Narcan (consult Acute Pain Service)
Tolerance/Physical Dependence	<ul style="list-style-type: none"> Tolerance occurs commonly in patients who receive long term opioids Physical dependence is not as common but should be considered with long term/continuous use. Long term use is not well defined and should be individually determined. 	<ul style="list-style-type: none"> Watch for signs and symptoms of tolerance. Increase dose as required. Watch for signs and symptoms of dependence; continue to manage pain as appropriate; when stopping treatment gradually decrease opioid
Hypotension	<ul style="list-style-type: none"> Occurs with Morphine secondary to vasodilation. Not common with Fentanyl; may occur secondary to decreased heart rate or interaction with other drugs. 	<ul style="list-style-type: none"> Close monitoring.

**PAIN ASSESSMENT & MANAGEMENT IN INFANTS, CHILDREN AND ADOLESCENTS
(PEDIATRIC/GENERAL) (continued)**

DOCUMENTATION

A. Admission

1. Assess patient's pain on admission according to the assessment guidelines.
2. Documentation at the time of admission includes the following:
 - Pain history and initial assessment of the child's pain from the child and/or family's perspective
 - ❖ Include a pain score and a description of the location and characteristics of the pain, when age appropriate
 - Child's preferred words to describe pain
 - Previous successful pain management interventions as described by the patient and/or family
 - Tool used for ongoing pain assessment
 - Admission pain assessment score
 - Admission Pasero Opioid-induced Sedation Scale (POSS) score (Used by Acute Care only)
3. Initiate a nursing care plan when a pain problem or potential pain problem exists.

B. On-going documentation on the flowsheet:

1. Pain assessment
2. Sedation level
3. Pain location and characteristics for verbal children
4. Intervention strategies
5. Pain reassessment following the intervention
 - a. Within 30 minutes after intravenous administration
 - b. Within 90 minutes after oral administration
 - c. Within 60 minutes after non-pharmacologic intervention
6. Sedation reassessment -document at same frequency as pain reassessments when potentially sedating pain medications are used (e.g., opioids).

PATIENT & FAMILY EDUCATION

A. General points to emphasize with patients/family are:

1. The philosophy and goals of pain management as illustrated in the Introductory Points of this policy.
2. The specific plan for pain management. The plan includes measurement, treatment and evaluation of analgesics. Re-evaluate this plan as necessary with the patient/family.

B. Discharge instructions:

1. Evaluate the effectiveness of home-going pain medications prior to discharge from the hospital in order to ensure adequate pain management at home.
2. As in the hospital, pain at home is a changing sensation; it will most likely lessen over time. However, depending on the specific situation it may worsen or change. It is important for the patient/family to understand the necessity of contacting the health care team if the nature of pain changes or worsens.

NURSING PROCEDURES MANUAL

PAIN ASSESSMENT & MANAGEMENT IN INFANTS, CHILDREN AND ADOLESCENTS (PEDIATRIC/GENERAL) *(continued)*

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◆◆◆◆◆PROCEDURE HISTORY◆◆◆◆◆

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PAIN ASSESSMENT & MANAGEMENT IN INFANTS, CHILDREN AND ADOLESCENTS (PEDIATRIC/GENERAL) (continued)

APPENDIX A:

**N-PASS:
Neonatal Pain, Agitation, & Sedation Scale**

Pat Hummel MA, RNC, NNP, PNP, APN/CNP & Mary Puchalski MS, RNC, APN/CNS

Assessment Criteria	Sedation		Normal	Pain / Agitation	
	-2	-1	0	1	2
Crying Irritability	No cry with painful stimuli	Moans or cries minimally with painful stimuli	Appropriate crying Not irritable	Irritable or crying at intervals Consolable	High-pitched or silent-continuous cry Inconsolable
Behavior State	No arousal to any stimuli No spontaneous movement	Arouses minimally to stimuli Little spontaneous movement	Appropriate for gestational age	Restless, squirming Awakens frequently	Arching, kicking Constantly awake or Arouses minimally / no movement (not sedated)
Facial Expression	Mouth is lax No expression	Minimal expression with stimuli	Relaxed Appropriate	Any pain expression intermittent	Any pain expression continual
Extremities Tone	No grasp reflex Flaccid tone	Weak grasp reflex ↓ muscle tone	Relaxed hands and feet Normal tone	Intermittent clenched toes, fists or finger splay Body is not tense	Continual clenched toes, fists, or finger splay Body is tense
Vital Signs HR, RR, BP, SaO₂	No variability with stimuli Hypoventilation or apnea	< 10% variability from baseline with stimuli	Within baseline or normal for gestational age	↑ 10-20% from baseline SaO ₂ 76-85% with stimulation - quick ↑	↑ > 20% from baseline SaO ₂ ≤ 75% with stimulation - slow ↑ Out of sync with vent

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Premature Pain Assessment

- + 3 if < 28 weeks gestation / corrected age
- + 2 if 28-31 weeks gestation / corrected age
- + 1 if 32-35 weeks gestation / corrected age

Assessment of Sedation

- Sedation is scored in addition to pain for each behavioral and physiological criteria to assess the infant's response to stimuli
- Sedation does not need to be assessed/scored with every pain assessment/score
- Sedation is scored from 0 → -2 for each behavioral and physiological criteria, then summed and noted as a negative score (0 → -10)
 - A score of 0 is given if the infant's response to stimuli is normal for their gestational age
- Desired levels of sedation vary according to the situation
 - "Deep sedation" → score of -10 to -5 as goal
 - "Light sedation" → score of -5 to -2 as goal
- Deep sedation is not recommended unless an infant is receiving ventilatory support, related to the high potential for apnea and hypoventilation
- A negative score without the administration of opioids/ sedatives may indicate:
 - The premature infant's response to prolonged or persistent pain/stress
 - Neurologic depression, sepsis, or other pathology

Pavulon/Paralysis

- It is impossible to behaviorally evaluate a paralyzed infant for pain
- Increases in heart rate and blood pressure may be the only indicator of a need for more analgesia
- Analgesics should be administered continuously by drip or around-the-clock dosing
 - Higher, more frequent doses may be required if the infant is post-op, has a chest tube, or other pathology (such as NEC) that would normally cause pain
- Opioid doses should be increased by 10% every 3-5 days as tolerance will occur without symptoms of inadequate pain relief

Assessment of Pain/Agitation

- Pain assessment is the fifth vital sign - assessment for pain should be included in every vital sign assessment
- Pain is scored from 0 → +2 for each behavioral and physiological criteria, then summed
 - Points are added to the premature infant's pain score based on their gestational age to compensate for their limited ability to behaviorally or physiologically communicate pain
 - Total pain score is documented as a positive number (0 → +10)
- Treatment/interventions are indicated for scores > 3
 - Interventions for known pain/painful stimuli are indicated before the score reaches 3
- The goal of pain treatment/intervention is a score ≤ 3
- More frequent pain assessment indications:
 - Indwelling tubes or lines which may cause pain, especially with movement (e.g. chest tubes) → at least every 2-4 hours
 - Receiving analgesics and/or sedatives → at least every 2-4 hours
 - 30-60 minutes after an analgesic is given for pain behaviors to assess response to medication
 - Post-operative → at least every 2 hours for 24-48 hours, then every 4 hours until off medications

PAIN ASSESSMENT & MANAGEMENT IN INFANTS, CHILDREN AND ADOLESCENTS (PEDIATRIC/GENERAL) (continued)

Scoring Criteria

Crying / Irritability

- 2 → No response to painful stimuli, e.g.:
 - No cry with needle sticks
 - No reaction to ETT or nares suctioning
 - No response to care giving
- 1 → Moans, sighs, or cries (audible or silent) minimally to painful stimuli, e.g. needle sticks, ETT or nares suctioning, care giving
- 0 → Not irritable - appropriate crying
 - Cries briefly with normal stimuli
 - Easily consoled
 - Normal for gestational age
- +1 → Infant is *irritable/awake* at intervals - but can be consoled
 - If intubated - intermittent silent cry
- +2 → Any of the following:
 - Cry is high-pitched
 - Infant cries inconsolably
 - If intubated - silent continuous cry

Behavior / State

- 2 → Does not arouse or react to any stimuli:
 - Eyes continually shut or open
 - No spontaneous movement
- 1 → Little spontaneous *maximal* arousal, arouses briefly and/or minimally to any stimuli:
 - Opens eyes briefly
 - Reacts to suctioning
 - Withdraws to pain
- 0 → Behavior and state are gestational age appropriate
- +1 → Any of the following:
 - Restless, squirming
 - Awakens frequently/easily with minimal or no stimuli
- +2 → Any of the following:
 - Kicking
 - Arching
 - Constantly awake
 - No movement or minimal arousal with stimulation (inappropriate for gestational age or clinical situation, i.e. post-operative)

Extremities / Tone

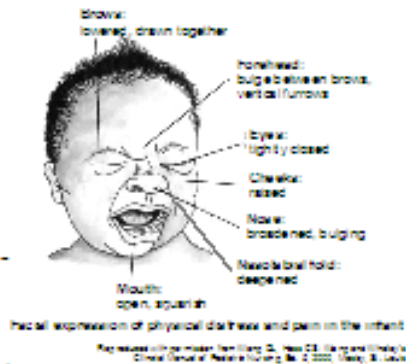
- 2 → Any of the following:
 - No palmar or plantar grasp can be elicited
 - Flaccid tone
- 1 → Any of the following:
 - Weak palmar or plantar grasp can be elicited
 - Decreased tone
- 0 → Relaxed hands and feet - normal palmar or sole grasp elicited - appropriate tone for gestational age
- +1 → Intermittent (<30 seconds duration) observation of toes and/or hands as clenched or fingers splayed
 - Body is *not* tense
- +2 → Any of the following:
 - Frequent (≥30 seconds duration) observation of toes and/or hands as clenched, or fingers splayed
 - Body is tense/stiff

Vital Signs: HR, BP, RR, & O₂ Saturations

- 2 → Any of the following:
 - No variability in vital signs with stimuli
 - Hypoventilation
 - Apnea
 - Ventilated infant - no spontaneous respiratory effort
- 1 → Vital signs show little variability with stimuli - *less*, esp. 10% from baseline
- 0 → Vital signs and/or oxygen saturations are within normal limits with normal variability - or normal for gestational age
- +1 → Any of the following:
 - HR, RR, and/or BP are 10-20% above baseline
 - With care/stimuli infant desaturates minimally to moderately (SaO₂ 76-85%) and recovers quickly (within 2 minutes)
- +2 → Any of the following:
 - HR, RR, and/or BP are > 20% above baseline
 - With care/stimuli infant desaturates severely (SaO₂ < 75%) and recovers slowly (> 2 minutes)
 - Infant is out of synchrony with the ventilator - fighting the ventilator

Facial Expression

- 2 → Any of the following:
 - Mouth is lax
 - Drooling
 - No facial expression at rest or with stimuli
- 1 → Minimal facial expression with stimuli
- 0 → Face is relaxed at rest but not lax - normal expression with stimuli
- +1 → Any pain face expression observed intermittently
- +2 → Any pain face expression is continual



We value your opinion.

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NURSING PROCEDURES MANUAL

PAIN ASSESSMENT & MANAGEMENT IN INFANTS, CHILDREN AND ADOLESCENTS (PEDIATRIC/GENERAL) (continued)

APPENDIX B: NEONATAL INFANT PAIN SCALE (NIPS)

NIPS (NEONATAL INFANT PAIN SCALE)			
Categories	SCORING		
	0	1	2
Face	Relaxed Muscles Restful face, neutral expression	Grimace Tight facial muscles, furrowed brow, chin, jaw (negative facial expression-nose, mouth, and brow)	
Cry	No Cry Quiet, not crying	Whimper Mild moaning, intermittent	Vigorous Cry Loud scream, rising, shrill, continuous (Note: Silent cry may be scored if baby is intubated, as evidenced by obvious mouth, facial movement.)
Breathing patterns	Relaxed Usual pattern for this baby	Change in Breathing In-drawing, irregular, faster than usual, gagging, breath holding	
Arms	Relaxed/Restrained No muscular rigidity, occasional random movements of arms	Flexed/Extended Tense, straight arms, rigid and/or rapid extension, flexion	
Legs	Relaxed/Restrained No muscular rigidity, occasional random leg movement	Flexed/Extended Tense, straight legs, rigid and/or rapid extension, flexion	
State of arousal	Sleeping/Awake Quiet, peaceful, sleeping or alert and settled	Fussy Alert, restless, and thrashing	

NURSING PROCEDURES MANUAL

**PAIN ASSESSMENT & MANAGEMENT IN INFANTS, CHILDREN AND ADOLESCENTS
(PEDIATRIC/GENERAL) (continued)**

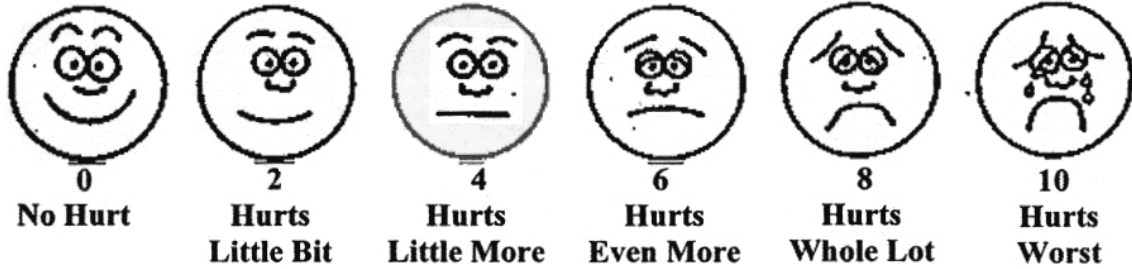
**APPENDIX C
FLACC (FACE, LEGS, ACTIVITY, CRY, CONSOLABILITY)**

FLACC (FACE, LEGS, ACTIVITY, CRY, CONSOLABILITY)			
CATEGORIES	SCORING		
	0	1	2
Face	No particular expression or smile	Occasional grimace or frown, withdrawn, disinterested	Frequent to constant quivering chin, clenched jaw
Legs	Normal position or relaxed	Uneasy, restless, tense	Kicking, or legs drawn up
Activity	Lying quietly, normal position, moves easily	Squirming, shifting back and forth, tense	Arched, ridged or jerking
Cry	No cry (awake or asleep)	Moans or whimpers; occasional complaint	Crying steadily, screams or sobs, frequent complaints
Consolability	Content, relaxed	Reassured by occasional touching, hugging or being talked to, distractible	Difficult to console or comfort

Each of the five categories (F) Face, (L) Legs, (A) Activity, (C) Cry, (C) Consolability is scored from 0-2 which results in a total score between zero and ten.

**PAIN ASSESSMENT & MANAGEMENT IN INFANTS, CHILDREN AND ADOLESCENTS
(PEDIATRIC/GENERAL) (continued)**

APPENDIX D: WONG-BAKER FACES PAIN RATING SCALE



**PAIN ASSESSMENT & MANAGEMENT IN INFANTS, CHILDREN AND ADOLESCENTS
(PEDIATRIC/GENERAL) (continued)**

APPENDIX E: NUMERICAL PAIN RATING SCALE

