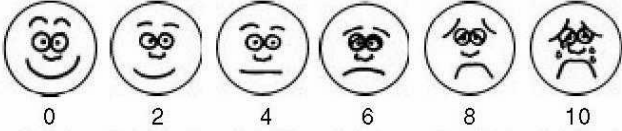


Assessment and Diagnosis	Treatment	Management and Monitoring
<p><b>All patients should be screened for pain. Once identified, a complete assessment, including physical, emotional, and spiritual components is necessary to determine cause of pain and appropriate therapy.</b></p> <p><b>History: Assess</b></p> <ul style="list-style-type: none"> <li>Onset, location, quality, intensity, temporal pattern, aggravating and alleviating factors, associated symptoms</li> <li>Characteristics of pain*</li> <li>Previous methods of treatment</li> <li>Other medical and surgical conditions.</li> <li>Substance use</li> </ul> <p><b>Psychosocial History: Assess</b></p> <ul style="list-style-type: none"> <li>Depression, anxiety, PTSD, sleep pattern **, suicide risk</li> <li>Impact on quality of life, ADL's &amp; performance status***</li> <li>Patient, family, and caregiver's cultural and spiritual beliefs</li> <li>Secondary gain: psychosocial/financial</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li><b>Order and evaluate appropriate diagnostic testing</b></li> <li>Evaluate pain on all patients using the 0-10 scale:                     <ul style="list-style-type: none"> <li>A. mild pain: 1-3</li> <li>B. moderate: 4-7 (interferes with work or sleep**)</li> <li>C. severe: 8-10 (interferes with all activities***)</li> </ul> </li> </ul> <div data-bbox="46 857 730 1192" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="text-align: center;"><b>Wong-Baker FACES Pain Rating Scale</b></p> <p style="text-align: center;">CHOOSE THE FACE THAT BEST DESCRIBES HOW YOU FEEL</p>  <p style="text-align: center;"> <span>0 No Hurt</span>                       <span>2 Hurts Little Bit</span>                       <span>4 Hurts Little More</span>                       <span>6 Hurts Even More</span>                       <span>8 Hurts Whole Lot</span>                       <span>10 Hurts Worst</span> </p> <p style="font-size: small;">From Wong D.L., Hockenberry-Baron M., Wilson D., Winkelschtein M.L., Schwartz P.: Wong's Essentials of Pediatric Nursing, ed. 6, St. Louis, 2001, p. 1301. Copyrighted by Mosby, Inc. Reprinted by permission.</p> </div> <p><b>Diagnostic Terms:</b></p> <ul style="list-style-type: none"> <li><b>*Somatic pain:</b> localized; ache, throb, or gnaw</li> <li><b>*Visceral pain:</b> often referred; cramp, pressure, deep ache, squeeze</li> <li><b>*Neuropathic pain:</b> burns, electric shock, hot, stab, numb, itch, tingle</li> <li><b>"Malignant" pain:</b> associated with cancer, HIV</li> <li><b>"Non-malignant" pain:</b> e.g. arthritis or musculoskeletal disorders</li> <li><b>Acute Pain:</b> ↑HR, HBP, diaphoresis, pallor, fear, anxiety</li> <li><b>Chronic pain:</b> sleep difficulties, loss of appetite, psychomotor retardation, depression, career/relationship change</li> </ul>	<p><b>Goals:</b></p> <ul style="list-style-type: none"> <li><b>Rx acute pain aggressively to avoid chronic pain</b></li> <li><b>Rx chronic pain thoughtfully and systematically</b></li> <li>Identify and address the cause of pain</li> <li>Maintain alertness, ability to function safely/productively</li> <li>Allow emergence of feelings other than pain</li> <li>Intervene as noninvasively as possible</li> <li>Negotiate target with patient</li> </ul> <p><b>Non-Pharmacological Therapy</b></p> <ul style="list-style-type: none"> <li>Patient/Family Education</li> <li>Cognitive Behavioral Therapy; Supportive Counseling</li> <li>Chiropractic Care; Osteopathic Manipulation; Massage</li> <li>Physical Therapy/Exercise: Tai Chi, Qi Gong, Yoga</li> <li>Cutaneous Stimulation: Ice, Heat</li> <li>Counterstimulation: TENS</li> <li>Acupuncture &amp; Acupressure (trigger point Rx)</li> <li>Relaxation techniques: Biofeedback, Reiki</li> <li>Meditation, Prayer, Spiritual &amp; Pastoral Support</li> <li>Visualization/Interactive Guided Imagery</li> </ul> <p><b>Pharmacological Therapy:</b></p> <ul style="list-style-type: none"> <li>Use WHO/AHCPDR step care as "ramp" (See pg. 6.)</li> <li>Use adjuvant therapies prn (See pg. 6)</li> <li><b>Avoid Demerol® (meperidine) &amp; Darvon® (propoxyphene)</b></li> <li>Use care with combinations (acetaminophen/ASA)</li> <li>Use short acting meds for acute pain exacerbation</li> <li>Switch to long acting meds when pain stabilized</li> </ul> <p><b>For chronic moderate or severe pain:</b></p> <ul style="list-style-type: none"> <li>Give baseline long acting med around the clock</li> <li>For breakthrough, give 10% of total daily dose as prn</li> <li>PRN interval: 1-2 h oral, and 30-60 min parenteral</li> <li>Adjust baseline upward daily by total amount of prns</li> <li>When converting from one opioid to another, reduce total dose by 1/3-1/2 to account for incomplete cross tolerance</li> </ul> <p><b>Anticipate side effects:</b></p> <ul style="list-style-type: none"> <li>Prevent constipation: start senna, sorbitol</li> <li>Mental impairment: avoid driving/hazardous situations until side effect profile stabilizes; reassess safety for self/others periodically</li> <li>Nausea: Rx with antiemetics or change meds</li> <li>Pruritus: Rx with antihistamines or change meds</li> <li>Myoclonus: Rx with benzodiazepine or change meds</li> </ul>	<p><b>General</b></p> <ul style="list-style-type: none"> <li><b>Reassess regularly</b></li> <li>Measure "5th vital sign" <b>using tools</b> (i.e. numeric scale, face scale); respond urgently to pain 8 or more</li> <li>Follow amount and duration of response</li> <li>Assess performance status</li> <li>Partner with patient/family in setting goals of care</li> <li>Balance function versus complete absence of pain</li> </ul> <p><b>Acute Pain</b></p> <ul style="list-style-type: none"> <li><b>Refer</b> early to appropriate specialist or Pain Center, if diagnosis unclear or pain refractory to treatment</li> </ul> <p><b>Chronic, "Non-malignant" Pain</b></p> <ul style="list-style-type: none"> <li>Set realistic chronic care goals</li> <li>Transition from passive recipient to patient-directed management of therapies</li> </ul> <p><b>"Malignant" Pain</b></p> <ul style="list-style-type: none"> <li>Refer "difficult to treat" cases to MD with Palliative Care expertise: H/O substance abuse, neuropathic pain, rapidly escalating opioid doses</li> </ul> <p><b>Neuropathic Pain</b></p> <ul style="list-style-type: none"> <li>Use anti-epilepsy drugs (AED's) first</li> <li>Use step 2 or 3 drug to help Rx</li> </ul> <p><b>SPECIAL SITUATIONS:</b></p> <p><b>Anxiety and depression</b></p> <ul style="list-style-type: none"> <li>Refer to Depression Principles</li> </ul> <p><b>Verbally Noncommunicative Patients</b></p> <ul style="list-style-type: none"> <li>Infants, children &amp; cognitively impaired all feel pain</li> <li>Evaluate patient's non-specific signs: noisy breathing, grinding teeth, bracing, rubbing, crying, agitation</li> </ul> <p><b>Elderly/ renal or hepatic disease</b></p> <ul style="list-style-type: none"> <li>Start at ½ usual dose</li> <li>Watch carefully for toxicity from accumulation</li> </ul> <p><b>Patients with substance abuse history</b></p> <ul style="list-style-type: none"> <li>May need higher starting dose (tolerance)</li> <li>Use prescribing contracts for outpatient use</li> <li>N.B. Addiction is very rare when opioids are used for pain in patients with no prior substance abuse hx</li> </ul>

Assessment and Diagnosis	Treatment	Management and Monitoring <sup>4</sup>																																																												
<p><b>QUEST</b> Principles of pain assessment <sup>1</sup></p> <ul style="list-style-type: none"> <li>• Question the child</li> <li>• Use pain rating scales</li> <li>• Evaluate behavior and physiological changes</li> <li>• Secure parent's involvement</li> <li>• Take cause of pain into account</li> <li>• Take action and evaluate results</li> </ul> <p><b>Neonates</b> <sup>2</sup></p> <table border="1" data-bbox="100 438 619 755"> <thead> <tr> <th>Signs of Acute Pain</th> <th>Signs of Chronic Pain</th> </tr> </thead> <tbody> <tr> <td>Crying and moaning</td> <td>Apathy</td> </tr> <tr> <td>Muscle rigidity</td> <td>Irritability</td> </tr> <tr> <td>Flexion or flailing of the extremities</td> <td>Changes in sleeping and eating patterns</td> </tr> <tr> <td>Diaphoresis</td> <td>Lack of interest in their surroundings</td> </tr> <tr> <td>Irritability</td> <td></td> </tr> <tr> <td>Guarding</td> <td></td> </tr> <tr> <td>Changes in vital signs and pupillary dilatation</td> <td></td> </tr> </tbody> </table> <p><b>Older Children</b> <sup>2</sup></p> <ul style="list-style-type: none"> <li>• Children &lt; 3 years old or unable to communicate, clinicians should use the FLACC scale</li> <li>• Children over 3 may use the Faces scale</li> <li>• Children over 5 may be able to use descriptor words (stinging, burning)</li> <li>• Children over 6, who understand the concepts of rank and order, can use numerical scale, color scale, and word scale</li> </ul> <p><b>Categories of Pain</b> <sup>3</sup></p> <p><b>Procedure-Related Pain</b></p> <ul style="list-style-type: none"> <li>• Anticipation of intensity, duration, coping style and temperament child, type of procedure, history of pain and family support system</li> </ul> <p><b>Operative Pain and Trauma-Associated Pain</b></p> <ul style="list-style-type: none"> <li>• Postoperative pain management should be discussed prior to surgery</li> <li>• Control pain as rapidly as possible</li> </ul> <p><b>Acute Illness</b></p> <ul style="list-style-type: none"> <li>• Determine severity of pain by the particular illness and situation (e.g. Otitis media, meningitis, pharyngitis, etc.)</li> </ul>	Signs of Acute Pain	Signs of Chronic Pain	Crying and moaning	Apathy	Muscle rigidity	Irritability	Flexion or flailing of the extremities	Changes in sleeping and eating patterns	Diaphoresis	Lack of interest in their surroundings	Irritability		Guarding		Changes in vital signs and pupillary dilatation		<p><b>Pharmacologic</b> <sup>2</sup></p> <ul style="list-style-type: none"> <li>• Oral or IV administration of pain medication is the preferred method. Avoid painful IM injections</li> <li>• The initial choice of analgesic should be based on the severity and type of pain.</li> </ul> <table border="1" data-bbox="703 251 1333 560"> <thead> <tr> <th>Pain Severity</th> <th>Analgesic Choice</th> <th>Examples</th> </tr> </thead> <tbody> <tr> <td>Mild (pain score 1-3)</td> <td>Acetaminophen* (APAP) NSAID</td> <td>Tylenol®, Ibuprofen, Naproxen</td> </tr> <tr> <td>Moderate (pain score 4-6)</td> <td>IV / PO Ketorolac**, PO APAP/opioid combinations IV / PO low dose MSO4</td> <td>Toradol®, Vicodin®, Tylox®, Tylenol® with codeine #3</td> </tr> <tr> <td>Severe (pain score 7-10)</td> <td>Opioid</td> <td>Morphine, Fentanyl®, Hydromorphone</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>• IV Opioids can be safely titrated to effect in the pediatric setting</li> <li>• PCA or NCA is an acceptable form of administering pain medication with proper patient and family education.</li> </ul> <table border="1" data-bbox="693 682 1365 1088"> <thead> <tr> <th rowspan="2">Drug</th> <th colspan="2">Dose (PO)</th> </tr> <tr> <th>Child</th> <th>Adolescent</th> </tr> </thead> <tbody> <tr> <td><b>Mild Pain</b></td> <td></td> <td></td> </tr> <tr> <td>Ibuprofen</td> <td>5-10 mg/kg</td> <td>400-600 mg q6<sup>o</sup> prn</td> </tr> <tr> <td>Acetaminophen (APAP)</td> <td>10-15 mg/kg</td> <td>300-600 mg q4-6<sup>o</sup> prn</td> </tr> <tr> <td colspan="3">APAP, or ibuprofen to enhance analgesia</td> </tr> <tr> <td>Ketorolac**</td> <td>0.5-1 mg/kg</td> <td>10 mg q6<sup>o</sup> prn</td> </tr> <tr> <td><b>Severe or moderate pain</b></td> <td></td> <td></td> </tr> <tr> <td>Morphine</td> <td colspan="2">IR = 0.2-0.5 mg/kg/dose q 4-6 hrs CR = 0.3-0.6 mg/kg/dose q 8-12 hrs</td> </tr> <tr> <td>Hydromorphone</td> <td colspan="2">0.03-0.08mg/kg/dose q3-6 hrs</td> </tr> <tr> <td>Oxycodone</td> <td colspan="2">0.05-0.15/mg/kg/dose q4-6 hrs</td> </tr> </tbody> </table> <p>*Daily dosing of Acetaminophen not to exceed 1000 mg /24 hrs. in children &lt; 40 kg and 4000 mg /24 hrs. in adolescents &gt; 40 kg</p> <p>**Ketorolac – monitor in patients on anticoagulation therapy and/or history of bleeding disorder; limit use ≤ 5 days.</p> <p><b>Non-Pharmacologic</b> <sup>2</sup></p> <p><b>Cognitive-behavioral</b></p> <ul style="list-style-type: none"> <li>• Education, imagery, relaxation, psychotherapy, counseling, hypnosis, biofeedback, music, literature, art, play, prayer, and meditation.</li> </ul> <p><b>Physical</b></p> <ul style="list-style-type: none"> <li>• Massage, acupuncture, acupressure, application of heat or cold, TENS, immobilization, graded mobilization, and therapeutic exercise.</li> </ul>	Pain Severity	Analgesic Choice	Examples	Mild (pain score 1-3)	Acetaminophen* (APAP) NSAID	Tylenol®, Ibuprofen, Naproxen	Moderate (pain score 4-6)	IV / PO Ketorolac**, PO APAP/opioid combinations IV / PO low dose MSO4	Toradol®, Vicodin®, Tylox®, Tylenol® with codeine #3	Severe (pain score 7-10)	Opioid	Morphine, Fentanyl®, Hydromorphone	Drug	Dose (PO)		Child	Adolescent	<b>Mild Pain</b>			Ibuprofen	5-10 mg/kg	400-600 mg q6 <sup>o</sup> prn	Acetaminophen (APAP)	10-15 mg/kg	300-600 mg q4-6 <sup>o</sup> prn	APAP, or ibuprofen to enhance analgesia			Ketorolac**	0.5-1 mg/kg	10 mg q6 <sup>o</sup> prn	<b>Severe or moderate pain</b>			Morphine	IR = 0.2-0.5 mg/kg/dose q 4-6 hrs CR = 0.3-0.6 mg/kg/dose q 8-12 hrs		Hydromorphone	0.03-0.08mg/kg/dose q3-6 hrs		Oxycodone	0.05-0.15/mg/kg/dose q4-6 hrs		
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1. Baker CM, Wong DL, Q.U.E.S.T.: a process of pain assessment in children (continuing education credit), *Orthopedic Nursing*, 6(1):11-21, 1987 Jan-Feb.  
 2. American Academy of Pediatrics. The Assessment and Management of Acute Pain in Infants, Children, and Adolescents (Policy Statement, 0793). 108(3): 793-797, Sept. 2001.  
 3. <http://www.aap.org/policy/015642.htm>  
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