

Pain Control in 2006



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“God whispers to us in our pleasures,
Speaks to us in our conscience,
but shouts in our pains;
It is his megaphone to rouse a deaf world...”

C.S. Lewis, *The Problem of Pain*



What is Pain?

- A complex constellation of unpleasant sensory, perceptual and emotional experiences
- Associated with autonomic, psychologic, emotional and behavioral responses.
- It tells you something is wrong, serves a purpose.

“Pain is whatever the person who experiences it says it is, existing whenever he/she says it does.”

Margo McCaffrey, Pain Specialist

Physiological Effects of Pain

- Increased catabolic demands: poor wound healing, weakness, muscle breakdown
- Decreased limb movement: increased risk of DVT/PE
- Respiratory effects: shallow breathing, tachypnea, cough suppression, increasing risk of pneumonia and atelectasis
- Increased sodium and water retention
- Decreased gastrointestinal motility
- Tachycardia and elevated blood pressure
- Immunologic: decreased natural killer cell counts*

**Koga, et al. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2001 Jun;91(6):654-8.*

Psychological Effects of Pain

- Negative emotions: anxiety and depression
- Sleep deprivation
- Existential suffering

Barriers to Pain Control

Health Care Professionals

- Inadequate assessment of pain and pain relief (MOST COMMON).
- Lack of understanding of the pathophysiology of pain.
- Lack of understanding of the clinical pharmacology of analgesics.
- Lack of knowledge of new methods to control pain to include adjunct drugs and neurosurgical procedures.

Barriers to Pain Control

Health care professionals, continued

- Lack of knowledge of the difference between physical dependence and addiction.
- Excessive concern about adding opioids.
- The belief that pain should be severe before patients receive opioid medication.
- The belief that patients are not good judges of the severity of their pain.
- Assignment of low priority to pain management.
- The difficult and frustrating nature of certain pain management problems

Barriers to Pain Control

The Healthcare System

- Lack of accountability for pain management because hospitals have historically operated on an acute, disease-oriented model.
- Lack of coordination of care as patients move from one setting to another.
- Lack of contact with patients who have returned home.

Barriers to Pain Control

The Healthcare System (continued)

- Fragmentation of care.
- Unwillingness of certain pharmacies to stock opioids because of risk of theft.
- In rural areas, resources may be limited.

Barriers to Pain Control

Patients and family members

- Lack of awareness that pain can be managed; patients may often suffer in silence.
- Fear that narcotics will lead to addiction.
- Fear that use of analgesics will lead to confusion, disorientation and/or personality changes.
- Failure to report pain in a desire to be a "good patient" and not distract physicians from treating the disease.
- Under-reporting of pain as a form of denial of disease progression or sparing family.

Scope of the Problem

- At least 50% of all cancer patients have pain.
- >70% of patients with advanced cancer have pain with pain intensity moderate to severe in 50% and excruciating in 30% .
- 50-80% of cancer patients do not obtain satisfactory pain relief.¹
- Surgery: 33-88% of patients experience moderate to severe postoperative pain ^{2,3}

¹Cleeland CS et al. *N Engl J Med.* 1994 Mar 3;330(9):592-6.

²Donovan BD. *Anaesth Intensive Care.* 1983 May;11(2):125-9.

³Svensson I, Sioström G, Haliamae H. *J Pain Symptom Manage* 2000 Sep;20(3):193-201

Cancer Patients' Beliefs about Pain Control

Belief	% Agreeing
Addiction is a danger with pain meds	79
Side effects cannot be controlled.	61-85
A choice might be necessary between treating the disease and the pain	60
Pain medicine should be "saved" for when the pain is severe, otherwise it might become ineffective.	59

AHCPR Cancer Pain Guidelines; 1994

Populations at Risk for Inadequate Analgesia

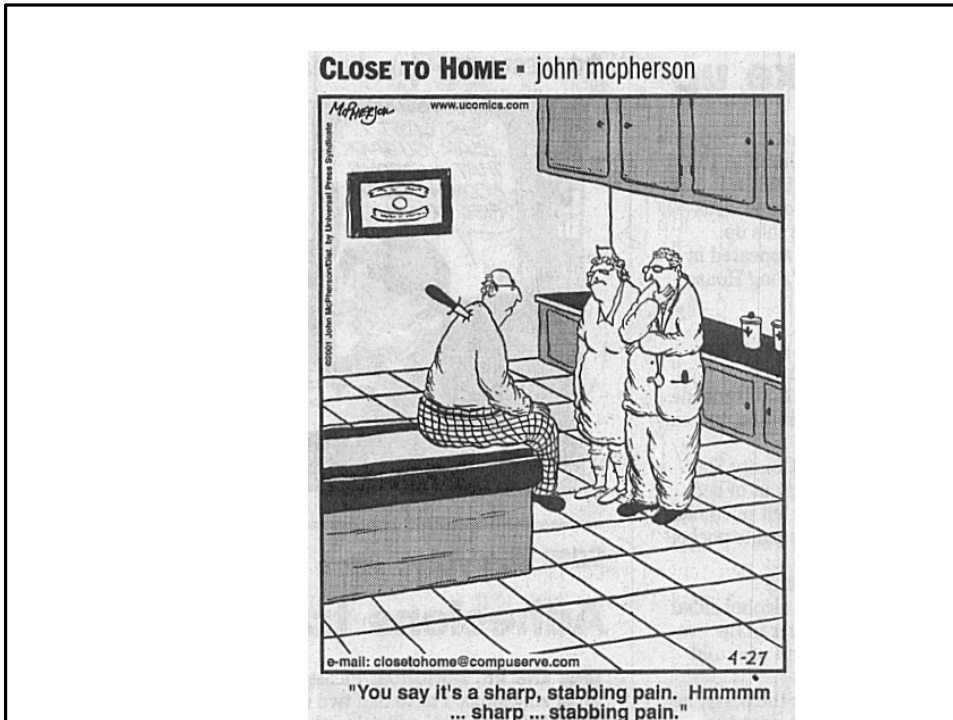
- Women
- Elderly
- Minorities
- Children
- The Poor
- Nursing home residents
- Past/active injecting drug users
- Patients with language/communication issues
- Patients of a different educational/cultural or socioeconomic background than their caregiver

Reasons for Special Needs

- Limited verbal communication
- Lack of advocate
- Differences from health caretakers
- Stigmatization
- Differences in reactions to medications
- Physical and emotional dependence
- Inability to consent
- Lack of adequate research

Patients with Limited Communication Skills

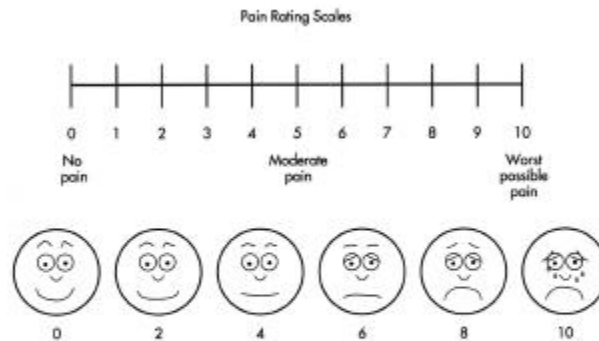
- May give up hope after a few days of pain
- May not mention pain or demonstrate pain behaviors
- May be apathetic, listless, depressed
- Need a careful assessment
- Consider diagnostic/therapeutic trial of analgesics



Pain Assessment

- Pain and medication history
- Location, character, intensity, frequency
- Aggravating and relieving factors
- Meaning of the pain to the person
- What pain level is tolerable?
- Type of pain: somatic, visceral, neuropathic?

Visual Analog Scale



May be duplicated for use in clinical practice. As appears in McCaffery M, Pasaro C: *Pain: Clinical manual*, p. 67, 1999, Mosby, Inc.

FIGURE 24 Example of how some clinical settings combine the horizontal numerical rating scale (NRS) with word anchors and the Wong-Baker faces scale. These are placed on one card or piece of paper so that the patient has a choice of pain rating scales. If the numerical scale with word descriptors is not easily understood, the faces scale is likely to be. The numbers beneath the faces have been changed from 0 to 5 to a 0 to 10 scale so that the recording of pain intensity is consistently on a 0 to 10 scale.

Faces pain rating scale modified from Wong R, Riley A: *Wong's essentials of pediatric nursing*, ed 5, pp. 1115-1116, St. Louis, 1997, Mosby.




Assessment and Reassessment are KEY

- Assess pain relief regularly and after each intervention.
- Should be a minimum of every shift for nursing.
- Physicians should assess daily.

Pain vs. Suffering

- Suffering: The perception of distress engendered by all the adverse factors that together undermine quality of life.
- Pain may contribute profoundly, but other factors (e.g. other symptoms, progressive physical impairment, psychological disturbance) may be equally important.
- Evaluation and treatment of suffering requires an interdisciplinary approach: nursing, medicine, social work, pastoral care, counseling, physical and occupational therapy, and pharmacy.

Communicating Pain Management Issues Among Health Care Professionals

- Discuss present pain status, use 0-10 scale for uniformity.
- Nurses, therapists to formulate a plan, determine equianalgesic requirement prior to calling physician. 
- Reassessment is crucial!
- Patient/family education is critical.

Definitions

(American Pain Society, American Academy of Pain Medicine,
American Society of Addiction Medicine, 2001)

- **Tolerance:** Tolerance is a state of adaptation in which exposure to a drug induces changes that result in a diminution of one or more of the drug's effects over time.
- **Physical Dependence:** Physical dependence is a state of adaptation that is manifested by a drug class specific withdrawal syndrome that can be produced by abrupt cessation, rapid dose reduction, decreasing blood level of the drug, and/or administration of an antagonist.

Definitions, continued

- Psychological dependence=Addiction
- Addiction is a primary, chronic, neurobiologic disease, with genetic, psychosocial, and environmental factors influencing its development and manifestations.
- Characterized by behaviors that include one or more of the following:
 - Compulsive use
 - Impaired control over drug use
 - Use in spite of harm
 - Craving

Definitions, continued

- Drug-seeking behavior DOES NOT always mean addiction.
- May occur as result of inadequate pain control (“pseudoaddiction”).
- May be considered “relief-seeking behavior.”

Adverse Effects of opioids

- Constipation: ALWAYS begin a bowel regimen (daily stool softener + prn laxative) when starting opioids
- Nausea, vomiting
- Drowsiness, dysphoria, nightmares
- Myoclonic jerks: due to buildup of breakdown products; change to different opioid to resolve.

Routes of Administration

- Parenteral
 - Subcutaneous
 - Intravenous
 - Intramuscular (try to avoid)



Routes of Administration

■ Oral

- Preferred whenever possible
- Not so rapid relief as IV

■ Transdermal

- Delayed onset of action
- Lasts approximately 3 days
- Do not cut patches



Routes of Administration

- Nasal
- Spinal
 - Epidural
 - Intrathecal




Principles of Opioid Therapy

- For chronic pain, use scheduled medication. PRN will cause a patient to have uneven pain relief.
- Titrate scheduled oral medication every 2-3 days. Consider sustained release or long-acting opioids such as MS Contin, Oxycontin, Methadone.
- Also provide a breakthrough dose, which should minimally equal 10-20% of the
- 24-hour opioid requirement.

Principles of Opioid Therapy



- Example: Chronic severe back pain from spinal stenosis: after exhausting NSAIDs and non-pharmacologic measures, begin
- MS Contin 15mg Q12H
- Oxycodone 10mg Q2-4h prn for breakthrough
- Re-evaluate after 2 weeks, if using >3-4 doses of oxycodone/day, increase MS Contin to 30 mg Q12H, continue or increase dose of oxycodone or change to MSIR 15mg Q2-4h.

Principles of Opioid Therapy

- If severe pain, may need admission for IV, then may titrate quickly; patients may require 50-100% dose increases hourly, depending on drug half life. Use PCA so patient may determine.
- Once optimum dose is determined, convert to long-acting, sustained-release medication, eg extended MS, Oxycodone (oxycontin) or methadone.
- Also prescribe breakthrough opioid of 10-20% of total daily scheduled dose.
- Reassess within one week. 

Principles of Opioid Therapy: Equianalgesia

- Determine equal doses when changing opioid medications or routes of administration.
- Use of morphine equivalents helpful

- Example:
 - 65 y/o man with multiple myeloma and severe back pain from lytic bone disease, new compression fracture. Has previously taken 4 Percocet 5/325 /day (equianalgesic dosing= $20 \text{ mg po MS/day} \times 0.33 = 7 \text{ mg IVMS/day}$).
 - Admit and administer MS bolus 4mg, begin PCA at MS 2mg q6 minutes and monitor for pain control. Reassess frequently. 
 - Titrate to 4mg q 6min after 1 hour of no pain relief.
 - Patient achieves relief with ~4mg 1x/hour.
 - $4 \text{ mg} \times 24 \text{ hrs} = 96 \text{ mg} \times 3 = 288 \text{ mg po Morphine}$; administer as MS Contin 150 mg q12H
 - Add 10-20% = 15-30 mg MSIR q2-4h for breakthrough.
 - Reassess frequently. 
 - Consider radiation therapy, physical therapy, NSAIDS.

Principles of Opioid Therapy: Rotation of Opioids

- Use when one opioid seems to lose its effectiveness.
- Use when adverse effects.
- Example: tremendous nausea with morphine; may need to switch to methadone or hydromorphone (Dilaudid®)

Adjuvant analgesics for neuropathic pain

- Anticonvulsants
- Tricyclic antidepressants
- Local anesthetics
- Corticosteroids (may also be used for other types of pain)
- Baclofen
- Capsaicin topical

Adjuvants for pain relief include:

- Biphosphonates
- Palliative chemotherapy

Non-Pharmacologic Techniques of Pain Control

- Utilize interdisciplinary colleagues
- Anesthesia, neurosurgery
- General surgery
- Radiation


Non-Pharmacologic Techniques of Pain Control

- Cognitive-behavioral therapy, eg relaxation, imagery, distraction, prayer
- Physical measures: heat, cold, massage
- Complementary therapies: acupuncture and acupressure

Intractable Pain

- Sedation
- Treatment: may require specialists, particularly anesthesia
- Comfort measures
- Emotional support
- Principle of double effect

Conclusion

- Pain relief is contingent on adequate assessment and reassessment
- Knowledge of principles of opioid therapy necessary to provide state-of-the-art pain control 
- Interdisciplinary approach
- Pain extends to other causes beyond suffering