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*


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.

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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

Cancer Patients’ Beliefs about Pain Control

<table>
<thead>
<tr>
<th>Belief</th>
<th>% Agreeing</th>
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<tbody>
<tr>
<td>Addiction is a danger with pain meds</td>
<td>79</td>
</tr>
<tr>
<td>Side effects cannot be controlled.</td>
<td>61-85</td>
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<tr>
<td>A choice might be necessary between treating the disease and the pain</td>
<td>60</td>
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<tr>
<td>Pain medicine should be “saved” for when the pain is severe, otherwise it might become ineffective.</td>
<td>59</td>
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</tbody>
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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?
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.

- 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 mg po MS/day x 0.33 = 7mg 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.
- 4mg x 24 hrs = 96 mg x 3 = 288 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