The Hospitalized Older Patient with Pain

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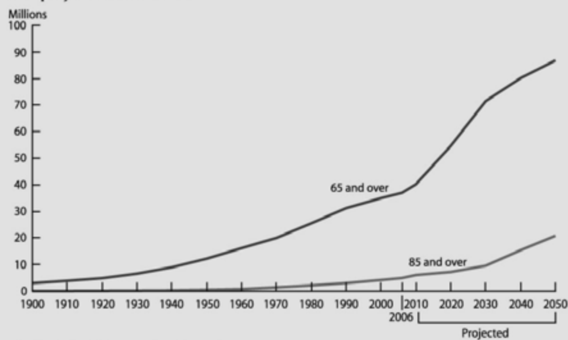
Trends in Aging

- The world's population is aging, and the current generation can expect to survive into their 80s or 90s and beyond for some
- With each passing year human life expectancy increases by approximately two weeks

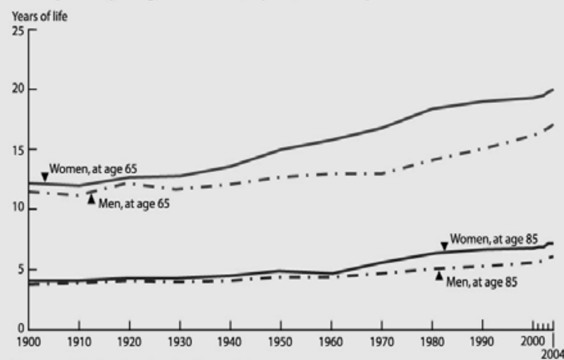
Melding PS. (2005). *Pain in Older Persons*, Seattle, IASP Press.



Trends in Aging

- 35 million adults aged 65 and older lived in the U.S. in 2006
- Oldest-old (85 and older) grew from 100,000 in 1900 to 5.3 million in 2006
- Aging baby boomers will result in an increase in older adults from 35 to 71.5 million, 20% of the population, by 2030
- People age 65 can expect to live an average of 18.7 more years, almost 7 years longer, than the same in 1900

http://agingstats.gov/agingstatsdotnet/Main_Site/Data/2008_Documents/Population.aspx



The Hospitalized Older Patient

- 38% of all inpatient admissions in 2005
  - CV 30%; respiratory 14.5%; digestive 10%; injury (i.e., fractures) 8%; musculoskeletal (i.e., arthritis) 7%
- Underwent 36% of the total inpatient surgical procedures performed in 2005
  - CV 22%; digestive 15%; musculoskeletal 10% (i.e., joint replacements and fractures)
- Cost containment programs resulted in a decline in LOS from 12.6 days (1970) to 5.5 days (2005); 45% had a 3-day LOS (2005)

http://www.cdc.gov/nchs/data/ad/ad385.pdf

The Future Now

- Trends related to aging and the health care experiences of older people indicate we can expect to see:
  - An increase in older hospitalized patients
  - Higher acuity if hospitalized
  - More patients with comorbidities and concurrent disabilities
    - Polypharmacy (7) and drug interactions
  - More hospitalized older patients with pain

Gloth FM. (2001). *Clin Geriatr Med* 17(3):553-73.
Podrazik PM, Whelan CT. (2008). *Med Clin N Am* 92:387-406.

Aging and Pain

- Aging and pain are not synonymous
- However, pain is a common component of many of the disabilities, co-morbidities and conditions older adults experience
  - Arthritis
  - Diabetes
  - Cancer
  - Injury and trauma
  - Surgery

Pasero C, McCaffery M. *Pain: Assessment and Pharmacological Management* (in press).

"… prior conventional wisdom, that older age brings an increasing insensitivity to pain, is hardly defensible…the opposite position, that increasing age confers greater vulnerability to the deleterious impact of persistent pain, seems likely to become the newly dominant paradigm in the next generation of research on the interrelationship between pain and aging."

Edwards RR. (2005). *Pain in Older Persons,* p. 61, Seattle, IASP Press.

Persistent Pain in Older Adults

- Persistent pain affects 20% – 80% of older adults[1-3]
- Older people are more likely to report persistent pain in multiple sites
  - One-third of men and one-half of women aged 75 years and older reported pain at two or more sites[1]
- 18% take analgesics[2,3]

1. Jones GT, MacFarlane GJ. (2005). *Pain in Older Persons*, Seattle, IASP Press.
2. Deane G, Smith HS. (2008). *Clin Geriatric Med* 24:185-201.
3. American Geriatrics Society (AGS). (2002). *J Am Geriatr Soc* 50(1):1-20.

Cancer Pain in Older Adults

- 21.2% of adults 65 and older had some type of cancer in 2005-2006[1]
- 92.5% of patients of all ages with cancer experience one or more pains caused directly by cancer[2]
  - 20.8% is the result of cancer treatment[2]
- Reports of pain may be less frequent and less intense the older the person is[2,3]

1. CDC. (1997-2006). Trends in Health and Aging. *http://www.cdc.gov/nchs/agingact.htm*
2. Pickering G. (2005). *Pain in Older Persons*, Seattle, IASP Press.
3. Bernabei R, et al. (1998). *JAMA* 279(23):1877-82.

Acute Pain in Older Adults

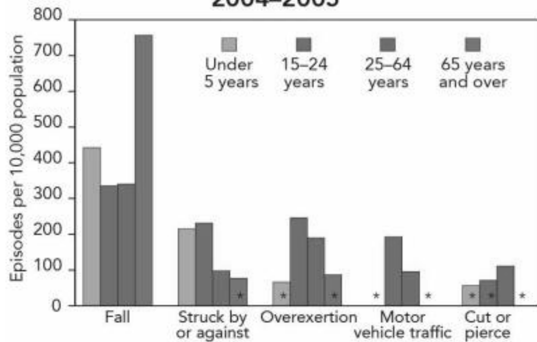
- The protective nature of acute pain may be blunted in older people
- Atypical presentations are prevalent
  - Peptic ulcers: 30% have no pain
  - Appendicitis: 90% lack classic symptoms
  - MI: 25% of cases apparent only with EKG
- Painless disease presentation increases the risk of complications

Pickering G. (2005). *Pain in Older Persons*, Seattle, IASP Press.

Injury Pain in Older Adults

- Injury from falls: > 1/3 of older adults fall every year; risk increases with age[1]
  - 1.8 million treated in EDs for fall injuries[1]
  - Most common cause of fracture and admission for trauma in older adults[1]
  - 25% with hip fracture are hospitalized[1]
  - > 60% report pain at rest[2]

1. CDC. (2006). Falls Among Older Adults. *http://www.cdc.gov/ncipc/factsheets/adultfalls.htm*
2. Feldt KS, Oh HL. (2000). *Orthop Nurs* 19(6):35-44.



Surgical Pain in Older Adults

- Older people have the highest rate of surgical procedures of all age groups[1]
- 43.6% had surgery in 2004[2]
  - Older patients tend to report lower pain intensity than younger patients[1]
  - 62% reported severe pain; 30% 10/10[1]
  - Surgical pain may be less intense than underlying pain, e.g., osteoarthritis[3]

1. Pickering G. (2005). *Pain in Older Persons*, Seattle, IASP Press.
2. CDC. (1997-2006) Trends in Health and Aging. *http://www.cdc.gov/nchs/agingact.htm*
3. Feldt KS, Oh HL. (2000). *Orthop Nurs* 19(6):35-44.

Long-term Consequences of Poorly Managed Postoperative Pain

- Prolonged convalescence
- Functional disability
- Development of chronic pain syndromes
- Increased reliance on the health care system
- Increased mortality

Pasero C, Rakel B, McCaffery M. (2005). *Pain in Older Persons*, Seattle, IASP Press.

Assessment and Treatment

- Pain is poorly and infrequently assessed in older patients, particularly those with dementia[1,2]
- Pain is also often undertreated in older adults, especially those with dementia[1-5]
  - 21% of the mean *minimum* prescribed amount of opioid was administered[4]
  - Eight patients received no analgesia[1,4]

1. Ardery G, et al. (2003). *Geriatr* 24:353-60.
2. Herr K, et al. (2004b). *Clin J Pain* 20(5):331-40.
3. Feldt KS, Oh HL. (2000). *Orthop Nurs* 19(6):35-44.
4. Titler MG, et al. (2003). *App Nurs Res* 16(4):211-27.
5. Bernabei R, et al. (1998). *JAMA* 279(23):1877-82.

Challenges in Assessment

- Older adults hesitate to report pain[1,2]
  - Belief that pain is normal and to be tolerated
  - Fear of bothering, distracting or angering caregivers = “complainer”
  - May indicate life-threatening disease
  - Fear of side effects or addiction
- 4.5 million Americans have dementia; this number will triple by 2050[3]

1. Pasero C, Rakel B, McCaffery M. (2005). *Pain in Older Persons*, Seattle, IASP Press.
2. Abrahm J, Balducci L. (2004). *Cancer Pain Release* 17(1, 2).
3. Herr K, et al. (2006a). *J Pain Symptom Manage* 31(2):170-92.

Assessment Hierarchy

1. Self report: Single most reliable[1,2]
2. Presence of a pathologic condition or procedure that usually causes pain; assume pain present ("APP")[1,2]
3. Behaviors, e.g., cry, activity change, grimace, moaning, guarding[1,2]
   - Surrogate report of behaviors[1,2]
4. Analgesic trial[2]

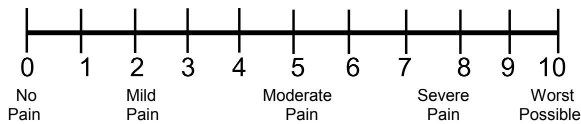
1. McCaffery M, Pasero C. (1999). *Pain: Clinical Manual.*
2. Herr K, et al. (2006b). *Pain Manag Nurs* 7(2):44-52. *http://www.aspmn.org*

Attempt Self Report

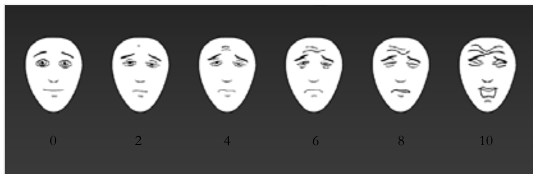
- Assess during rest <u>and</u> activity[1]
- Insure eyeglasses and hearing aids are functioning[1]
- Ask about pain in the present[1]
- Repeat question more than once and allow time to respond[1]
- Enlarge the font of the tool[1]
- Use NRS, VDS, or FPS-R[2]

1. Pasero C, McCaffery. *Pain: Assessment and Pharmacological Management* (in press).
2. Herr KA, et al. (2004a). *Clin J Pain* 20(4):207-219.

Numerical Rating Scale



Faces Pain Scale – Revised



Pain Treatment Plan: Considerations

- Current as well as underlying pathology and conditions
- Strategies that prevent analgesic adverse effects and complications
- Opportunities to prevent future pain
- Analgesic pharmacokinetics and pharmacodynamics
- Age related physiological changes

Age-related Physiologic Changes

- Absorption: ↓ gastric pH and motility
  - ↑ GI irritation, bleeding, ulceration
- Distribution: ↓ lean body mass, ↑ body fat, ↓ total body water, ↓ albumin production
  - Lipid soluble drugs: ↑ distribution area, ↑ risk of accumulation, slightly delayed onset
  - Water soluble drugs: ↓ distribution area, higher peak, slower ↓ in plasma concentration = ↑ toxicity, faster onset, longer duration

Aubrun F. (2005). *Reg Anesth Pain Med* 30(4):363-79.
Cooke DJ, Rooke GA. (2003). *Anesth Analg* 96:1823-36.
Pasero C, McCaffery. *Pain: Assessment and Pharmacological Management* (in press).

Age-related Physiologic Changes

- Metabolism: ↓ hepatic function
  - ↑ accumulation and toxicity, need for longer interval between doses
- Elimination: ↓ hepatic and renal blood flow
  - ↓ clearance and elimination
  - ↑ half-life, ↑ accumulation of drugs and metabolites, ↑ therapeutic effect, and ↑ toxicity

Aubrun F. (2005). *Reg Anesth Pain Med* 30(4):363-79.
Cooke DJ, Rooke GA. (2003). *Anesth Analg* 96:1823-36.
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Principles of Analgesic Therapy

- Carefully optimize current analgesic regimen[1]
- Use multimodal approaches to give lowest effective analgesic doses[1,2]
  - Acetaminophen, NSAID, anticonvulsant, + opioid[2,3]
  - Epidural local anesthetic + opioid[2]
  - Perineural local anesthetic + PRN opioid[2]

1. Pasero C, Rakel B, McCaffery M. (2005). *Pain in Older Persons*, Seattle, IASP Press.
2. Pasero C, McCaffery M. (2007). *J PeriAnesth Nurs* 22(3):160-173.
3. Buvanendran A, Kroin JS. (2007). *Best Prac Res Clin Anaesth* 21(1):31-49.
4. Schug SA. (2007). *Best Prac Res Clin Anaesth* 21(1):15-30.

Principles of Analgesic Therapy

- Slow, steady titration[1]
  - Reduce adult starting opioid dose by 50%, e.g., 0.5 mg IV morphine PCA dose (opioid naïve)[1]
  - Recall that some may require and tolerate regular starting doses[2]
  - Increase doses per response[1]
- Treat continuous pain ATC[1]

1. Pasero C, Rakel B, McCaffery M. (2005). *Pain in Older Persons*, Seattle, IASP Press.
2. Aubrun F, et al. (2004). *Anesthesiology* 99:160-165.

Principles of Analgesic Therapy

- Prevent adverse analgesic effects
  - Multimodal prophylactic and treatment strategies
- Supplement with simple nondrug methods, e.g., cold, heat, positioning
- Monitor closely
- Focus on outcomes

Pasero C, Rakel B, McCaffery M. (2005). *Pain in Older Persons*, Seattle, IASP Press.

Comfort-Function Goals

- What level of pain relief would allow the patient to accomplish functional or quality of life goals?
- Pain ratings above 3/10 significantly interfere with activity and mood; above 5/10 interfere with quality of life

McCaffery M, Pasero C. (1999). *Pain: Clinical Manual.*
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Basic Principle

- Adjust the treatment plan based on patient response:
  - Level of function (achievement of functional or QOL goals)
  - Pain relief
  - Adverse effects
- Find the right balance for the patient

Pasero C, McCaffery. *Pain: Assessment and Pharmacological Management* (in press).

The Hospitalized Older Patient with Pain: References

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