

**Troubling Economics Times:  
How Money \$\$\$  
Influences  
Cancer Pain Management**

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**Objectives**

- Describe factors that influence the cost of uncontrolled pain.
- Identify issues that directly effect the cost of individual's pain management therapies.

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**Cancer Pain: A Public Health Problem**

- *It is postulated that 25% of all patients with cancer throughout the world die without relief from severe pain.*
- *Cancer pain can be effectively treated in 85%-95% of patients with an integrated program of systemic, pharmacologic & anticancer therapy.*
- *Approximately 5%-10% of patients with cancer related pain will have inadequate control of pain with orally administered medication at some time during the course of their illness.*

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**Cancer Pain and Quality of Life**

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Uncontrolled cancer pain can result in:

- Loss of physical and social functioning
- Increased psychological distress
- Depression and suicide
- Impact on families
- Patients and families seeking unscheduled medical care

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**Cancer Pain-Evidence Based Treatment Guidelines**

- World Health Organization Three Step Analgesic Ladder
- American Pain Society's Quality Improvement Guidelines for the Treatment of Acute Pain & Cancer Pain
- ASCO's Cancer Pain Assessment & Treatment Curriculum Guidelines
- National Comprehensive Cancer Network Pain Guidelines
- Oncology Nurse Society's Position Paper on Cancer Pain
- AHCPR Clinical Practice Guidelines No. 9: Management of Cancer Pain
- ASA Guidelines

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**Unequal Quality of Cancer Pain Management: Disparity in Perceived Control & Proposed Solutions (2007)**  
 McNeill, Reynolds, & Ney

Socioeconomic status, race, ethnic identity, education, insurance status, and geographic location are interlinked in defining disparities in pain management.

Perceived control may mediate outcomes for cancer pain and may influence disparity in quality of cancer care for pain.

All components of cancer pain management have the potential for disparities, including assessment, reassessment, treatment, and end-of-life care.

Evidence-based solutions include appropriate patient education and systems-level revisions to improve timely and appropriate access and to enforce nationally established guidelines.

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**Healthcare System Financial Burden of Pain  
Cancer as a model**

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Cancer patients with uncontrolled pain are more likely to:

- Have unscheduled hospitalizations and:
  - More frequent Emergency Department (ED) visits
  - Unscheduled office visits
  - Increased use of Staff time
- Need technological interventions
  - Radiographic examinations
- Have increased cost of analgesic medications
  - Particularly IV meds in ED / hospitals

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**Uncontrolled Cancer Pain  
Cost of Hospitalization**

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- Grant et al (City of Hope)<sup>1</sup>
  - 26% of unscheduled admissions
  - Average length of stay 12 days (3 days>pneumonia)
  - Total estimated cost \$5 million
- Larsen et al (M.D. Anderson)<sup>2</sup>
  - 14% of all admissions
  - Average length of stay 10.5 days
  - Total estimated cost \$4.7 million

1. Grant et al. *Nurs Clin North Am* 1995; 30:673  
2. Larsen et al. *American J Hospice Palliative Care*. 1998; July/August: 223-226

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**Oh! Our Shrinking Resources!**

- Decreasing or loss of prescription coverage
- Higher co-pays
- Documentation to use second line
- Baby boomers become seniors
- Push to generics
- No unlimited healthcare resources
- Prior auth here, there, and everywhere!

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**Performance Status *Rules***

- 0 Asymptomatic and fully active
- 1 Symptomatic; fully ambulatory; restricted in physically strenuous activity
- 2 Symptomatic; ambulatory; capable of self care; more than 50% of waking hours are spent out of bed
- 3 Symptomatic; limited self-care; spends more than 50% of time in bed, but not bedridden
- 4 Completely disabled; no self-care; bedridden

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***Risky but Necessary Business***

- *Most cancer patients are very complicated*
- *Post Chemo (window of opportunity), timing of nader ex.*
- *Staying away from the RT field*
- *Code Status Issues*
- *Anesthetic Choice; safety, comfort*
- *Necessary Psyche for additional procedures?!*
- *Is the epidural or intrathecal space compromised?*

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***Risky Business, cont.***

- *Is therapy allowed on Phase I study?*
- *Nutritional status*
- *How low is too low for WBCs, neutrophil count, platelet count?*
- *MRI compatibility*
- *Anticoagulation issues, ASA guidelines, [www.asra/consensus-statement/2.html](http://www.asra/consensus-statement/2.html).*
- *VEGF inhibiting agents*

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## Epidural Injections in Cancer Pain

- **Cervical**
  - Pain secondary to head, face, neck, shoulder and upper extremity malignancies
  - Bony metastases to head, face, cervical spine, shoulder girdle, and upper extremity
  - Chemotherapy-related peripheral neuropathy
- **Thoracic**
  - Pain chest malignancies or post thoracotomy
  - Bony metastases to chest
  - Chemotherapy-related peripheral neuropathy
- **Lumbar**
  - Pain secondary to abdominal, pelvic and lower extremity malignancies
  - Bony metastases to abdominal, pelvic and lower extremity
  - Chemotherapy-related peripheral neuropathy

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## Interventional Pain Management

- **Interventional procedures are therapeutic options for managing cancer pain that is uncontrollable by conventional pharmacotherapy.**
  - **Nerve blocks**
  - **Neuromodulation**
    - **Intraspinal**
  - **Vertebral compression fracture stabilization**
  - **Neurosurgical intervention**
  - **Opioid sparing**

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## Peripheral Nerve Blocks for Cancer Pain

- **Typically Somatic pain**
  - Readily localized
  - Squeezing, sharp, dull, aching.
- **Trigeminal for face**
- **Brachial plexus for upper extremity**
  - Interscalene
  - Supraclavicular
  - Infraclavicular
  - Selective
- **Intercostal for chest wall**
- **Femoral for anterior/lateral proximal lower extremity**
- **Sciatic for posterior/medial and distal lower extremity**
- **Selective lower extremity nerve blocks**

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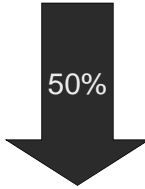
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### Screening Test (Pain)

- Purpose: Evaluate patient's response to intraspinal morphine over a short test period
  - Assess pain relief
  - Evaluate side effects
- At least 50% reduction in pain is usually considered a positive response<sup>1</sup>



<sup>1</sup>Hassenbusch, S.J., Stanton-Hicks, M., Covington EC. Long-term intraspinal infusions of opioids in the treatment of neuropathic pain. JPSM. 1995; 10(5): 527-543.

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### ***Patient Selection: Timing of Referral for Intrathecal Trials***

- Pain greater than or equal to 5 on a 10 point visual analog scale (VAS)
- Inadequate pain relief with 200 mg oral morphine or equivalent
- Intolerable side effects with 200 mg or less oral morphine or equivalent
- Individualized per patient situation
- Life expectancy

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**Randomized Clinical Trial  
looking at CMM vs IDDS  
Journal of Clinical Oncology,  
Vol. 20, No. 19 (October 1) 2002**

**Smith, T.J., Staats, P.S., et al.**

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## Smith, et al. 2002

- Presented at ASCO as abstract 2002
- Published October 2002
- Prospective, multicenter, randomized study, participation total 200.
- Compared Comprehensive Medical Management (CMM) with intraspinal drug delivery systems (IDDSs)

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## Conclusions

Whether given as part of initial therapy or applied after failure of CMM, IDDS reduced pain scores, significantly relieved most toxicities of pain control drugs, and was associated with improved survival for the length of this 6-month trial. Even the most refractory patients failed by CMM had a 27% reduction in pain scores, a 50% reduction in drug toxicity, and a median survival of 3 months after receiving IDDS.

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## Better Care of Sickest Patients can save Hospitals Money

- *Archives of Internal Medicine, Sept. 8, 2008*
- Study of 8 hospitals; saved \$279 to \$374 per day on patients in palliative care programs
- Save \$1700 to \$4900 on each admission of a palliative care patient
- By 2006, more than 41% of U.S. hospitals reported having a palliative program
- Savings included significant reductions in pharmacy, intensive care, and laboratory costs----- more than \$1.3 million for 300 bed facility, more than \$2.5 million for the average academic medical center.

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### Hospice Care Saves Money for Medicare

■ Study conducted by National Hospice & Palliative Care Organization (NHPCO), funded by Health Care Financing Organization of the Robert Wood Johnson Foundation (2006).

■ Results: Decrease costs 7 out of 10 hospice patients

Average savings per pt: \$2309  
If earlier referral to hospice, savings would be even greater

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### Hospice

■ Current Medicare reimbursement: \$130-186 per day

■ 4500 Hospices in the United States

■ 100,000 patients under hospice care

■ Many, many patients who are eligible for Medicare Hospice benefits are referred late i.e. Karmanos Hospice <14 day LOS

■ Signing in under "duress"

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### References

■ Abraham, J.L. (2005) A Physician's Guide to Pain and Symptom Management in Cancer Patients. The John Hopkins University Press, Baltimore, MA.

■ Arthritis Foundation (2000) Gallup Pole Study.

■ Frymoyer, JW, Cats-Baril, WI. (1991) *Ortho Clinic North America*, 22:263.

■ Grant, M. et. al (1995) Unscheduled readmissions for uncontrolled symptoms. *Nursing Clinics of North America*, (30)4, 673-682.

■ McHale, H.K. (2002) Palliative Care in Kuebler, K.K. & Esper, P. Palliative Practices from A-Z for the Bedside Clinician. Oncology Nursing Society, Pittsburgh, PA.

■ McNeil, J.A., et. al (2007) Unequal Quality of Cancer Pain Management: Disparity in Perceived Control and Proposed Solutions. *Oncology Nursing Forum*, Vol. 34, No. 6.

■ Moulin, et. al (2002). *Pain Research and Management*, 7:179-184.

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## References

- National Hospice and Palliative Care Organization (2007). Hospice care saves money for Medicare. *Social Science & Medicine*, October.
- Ohio Pain Initiative(2007) Opioid Analgesic Table, [www.ohiopaininitiative.org](http://www.ohiopaininitiative.org).
- Sipkoff, M. (2003). Pain Management: Health care plans need to take control. *Managed Care*, October 2003.
- Smith, T.J., et. al (2002). Randomized Clinical Trial of an Implantable Drug Delivery System compared with Comprehensive Medical Management for Refractory Cancer Pain: Impact on pain, drug-related toxicity, and survival. *Journal of Clinical Oncology*, vol. 20, No. 19, pp 4040-4049.
- Stewart, et al (2003). Lost productive time and cost due to common pain conditions in the U.S. workforce. *JAMA*, Vol. 290, No. 18, p. 2449.
- University of Michigan, News Service (July 5, 2005). The rich die differently than you and me, study shows.
- U.S.Department of Health and Human Services, National Cancer Institute (2007), EPEC™, O, CD-ROM.
- Vallerand, A. et. al (2005). Dispariencies between black and white patients with cancer pain: The effect of perception over pain. *Pain Medicine*, 6, 242-250.

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