Pain Management in a Healthcare System

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Economic Impact of Chronic Pain

- 2 components
  - Direct incremental costs of health care
  - Indirect costs
    - Lower productivity
      - Lost days vs. decreased work being done while at work
    - Lower wages

- About 100 million in the US are affected by pain

- Current cost of pain conditions $560-$635 billion/year
  - More than cancer ($309B), heart disease ($243B) and diabetes ($188B)
  - Direct ($261-$300B) and indirect ($299-$334B) costs

Economic Impact of Chronic Pain

- Average health care expenditure $4475/adult (no pain)
- Prevalence/Health care Cost with pain
  - 10% moderate: + $4516
  - 11% severe: + $7726
  - 33% joint pain: + $4048
  - 25% arthritis: + $5838
  - 12% functional disability: + $9680

$8.5 billion worth of narcotic painkillers were prescribed and sold in the U.S. in 2010
(Washington Post, 12/15/11)

This is enough medication “to medicate every American adult around the clock for one month”
(CDC, 2011)

USA = 4.9% of world population; consumes 80% of narcotics, 99% of hydrocodone
ED visits for the non-medical use of opioids increased 111% from 2004 to 2008
Highest numbers related to oxycodone, hydrocodone, and methadone
ED visits for the non-medical use of benzodiazepines increased 86% from 2004 to 2008
Every day in the U.S., 82 people die from unintentional poisoning and 1,941 are treated in the ER for the same (CDC Poisoning Factsheet, 2011)
In 2007, deaths from unintentional drug overdoses became #1 cause of accidental death in Ohio, surpassing motor vehicle accidents.

Every day in Ohio, 4-5 people die from a drug overdose (2011).

Prescription opioids are the #1 type of drug causing deaths; typically in combination with other substances.

350% increase from 1999-2008.
Pain and Comorbidities

- Chronic pain and obesity
  - Mechanical factors and metabolic abnormalities
- Chronic pain and smoking
  - Poor health choices in people that smoke
  - Circulation issues
Healthcare Systems and Pain Management

• Current “crisis”
  • Reimbursement for hospital care decreasing
    • Portions of income related to patient satisfaction
  • Bundled payments/Value-based purchasing
    • Payment distribution managed by hospital
  • Increased regulation of pain management
    • Federal and state regulations for narcotic prescribing
      • Fixing the over-prescribing from “Decade of Pain” (2000-10)
        • JCAHO – Pain is the “5th vital sign”
        • Recent DEA re-scheduling for Hydrocodone products
HEALTH SYSTEM

CLINICAL

INPATIENT CONSULTS
REGIONAL ANESTHESIA FOLLOW-UP

ADMINISTRATIVE

ESTABLISH QUALITY METRICS w/ CLINICAL DIRECTOR

PATIENT SATISFACTION

ADMINISTRATIVE LIASON or QUALITY DEPARTMENT

DEVELOP/UPDATE PRE AND POST OP ORDER SETS
DEVELOP/UPDATE NURSING POLICIES FOR PAIN

PHARMACY

Press-Ganey HCAHPS
Healthcare Systems and Pain Management

- Cost savings
  - Decrease complications
  - Hip fracture recovery program
    - Length of stay
    - Pain score
- Patient satisfaction
  - If pain isn’t addressed, nothing else matters
Pain Management: Patient Satisfaction

- HCAHPS – Hospital Consumer Assessment of Healthcare Providers and Systems
  - Care from Nurses: 4
  - Care from Doctors: 3
  - Hospital Environment: 2
  - Experiences in the Hospital: 8 (3 regarding pain)
  - Leaving the Hospital: 3
  - Overall Hospital Rating: 2
  - Understanding of Care at Discharge: 3
  - About You: 7
Pain questions - #12-14

- During this hospital stay,....
  - did you need medicine for pain?
  - how often was your pain well controlled? (Never/Sometimes/Usually/Always)
  - how often did the hospital staff do everything they could to help you with your pain? (Never/Sometimes/Usually/Always)
Treatment strategies

- **Multi-modal**
  - Interventional
  - Alternative treatments
  - Medications – treatment oriented should be the priority

- **Multi-disciplinary**
  - Surgery
  - Neurology
  - Physical therapy
Pain Management: Standard of Care

- Nursing policies
  - Evaluation/treatment
    - Appropriate pain scales for patient population
  - Documentation
    - Timeliness of treatment and re-evaluation

- Order sets
  - Pre-op and Post-op
    - Meet with service line leaders to discuss
PAIN AROUND THE CLOCK-use scheduled
Acetaminophen 1000mg q 8hrs (max from all sources no more than 3000-4000 mg/day) or Ibuprofen 600-800 mg q 6-8hrs or Celecoxib 200mg bid

ACTIVITY PAIN-use prn dosing, dose prior to PT/activity

ICE- order for any painful area unless contraindicated

NEUROPATHIC PAIN-use Gabapentin scheduled 300mg q 8h or Pregabalin 25-50mg q 8h

MUSCLE SPASM-Methocarbamol 500mg q 6h (IV or po)

ACHY/Inflammatory PAIN-use NSAIDS unless contraindicated

NOT SLEEPING-try low dose tricyclic 10-20 mg at HS

ADVICE?-call Pain CNS on pager #334-1587

GIVE opioids SUB-Q instead of IM (same dose)-more reliable, less abscess risk

EATING? Switch to oral analgesics ASAP

MEPERIDINE-Restricted use per policy d/t seizure risk

EQUIANALGESIC CONVERSION-use when switching routes/meds, on Intranet/Physicians/Forms

NARCOTIC TOLERANCE-reorder all analgesics as at home plus additional meds for acute process

TRAMADOL/ULTRAM-consider as mild analgesic unless seizure hx., start 50 mg po q 6 hrs prn

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**EQUIANALGESIC OPIOID TABLE (mg)**

<table>
<thead>
<tr>
<th>Opioid</th>
<th>Parenteral</th>
<th>Oral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine IR</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>1.5</td>
<td>7.5</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>0.1</td>
<td>n/a</td>
</tr>
<tr>
<td>Oxymorphone IR</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>(non-formulary)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meperidine</td>
<td>100</td>
<td>300</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>Not available in US</td>
<td>20</td>
</tr>
<tr>
<td>Codeine</td>
<td>n/a</td>
<td>200</td>
</tr>
<tr>
<td>Hydrocodone</td>
<td>n/a</td>
<td>30</td>
</tr>
<tr>
<td>Buprenorphine</td>
<td>0.3</td>
<td>0.4 (SL)</td>
</tr>
<tr>
<td>Tapentadol (non-formulary)</td>
<td>n/a</td>
<td>75-100</td>
</tr>
<tr>
<td>Tramadol</td>
<td>Not available in US</td>
<td>100</td>
</tr>
<tr>
<td>Methadone*</td>
<td>2*</td>
<td>5*</td>
</tr>
</tbody>
</table>

Fentanyl patch **= 25mcg/hr =12-20 mg IV morphine /day or 36-60 mg oral morphine/day –dosed q 72 hours

* Methadone - individual variability exists. Always start with a conservative dose; even if calculations indicate otherwise, starting dose should not exceed 30mg/day**Fentanyl patch starting dose = TDD 60-134 mg oral morphine = 25 mcg/hr patch q 72 hours. Opioid Tolerant (60 mg oral morphine, 30 mg oxycodone, 8 mg oral hydromorphone daily for 1 week or longer – maintain current dose and treat for acute pain with additional dosing; if converting to another opioid, decrease new opioid 24 hour dose by 1/3-1/2.

PAIN CONSULT – CALL PAGER 334-5183
Looking ahead,...

- EDUCATION!!!

- Quality care
  - Will improve patient satisfaction
  - Will reduce complications
  - Will reduce cost