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[1]
- 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

1. Cohen JW, Monheit AC, Beauregard KM, Cohen SB, Lefkowitz DC, Potter DE, Sommers JP, Taylor AK, Arnett RH III: The Medical Expenditure Panel Survey: A national health information resource. 2008 data set

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

Darrell J. Gaskin, PR. "The Economic Costs of Pain in the United States" *The Journal of Pain*, 13(8) 2012: 715-724

Prescription Drug Abuse Epidemic

- $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

Prescription Drug Abuse Epidemic

- 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)

Opioid Abuse in Ohio

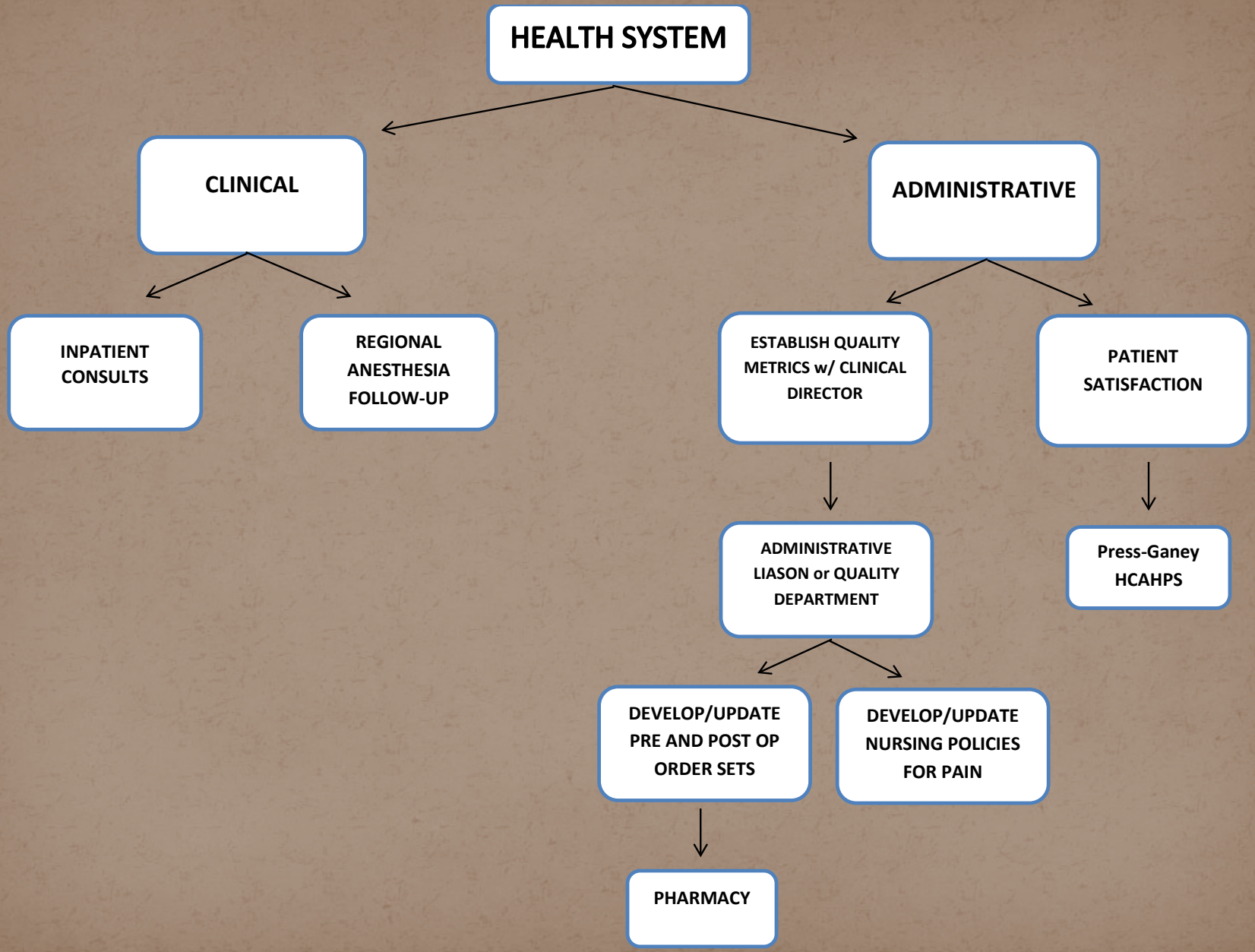
- In 2007, deaths from unintentional drug overdoses became #1 cause of accidental death in Ohio, surpassing motor vehicle accidents
- Every day in Ohio, 4-5 people die from a drug overdose (2011)
- Prescription opioids are the #1 type of drug causing deaths; typically in combination with other substances
- **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
ADMINISTRATIVE
INPATIENT CONSULTS
REGIONAL ANESTHESIA FOLLOW-UP
ESTABLISH QUALITY METRICS w/ CLINICAL DIRECTOR
PATIENT SATISFACTION
ADMINISTRATIVE LIASON or QUALITY DEPARTMENT
Press-Ganey HCAHPS
DEVELOP/UPDATE PRE AND POST OP ORDER SETS
DEVELOP/UPDATE NURSING POLICIES FOR PAIN
PHARMACY

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

HCAHPS

- 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
Acetaminophen1000mg 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

EQUIANALGESIC OPIOID TABLE (mg)

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