Standing in the Analgesic Gap: Pharmacist’s Role in Pain Management and Opioid Stewardship

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Objectives

- Explain the impact of pain on individuals, health care institutions and society
- Explain the evidence supporting pharmacy-based pain management and opioid stewardship
- Describe a model pharmacy-based pain management and analgesic stewardship program and the process for development and implementation of a pharmacy-based pain consult service
- Identify educational resources for assessing and enhancing clinician’s knowledge base in pain management and analgesic stewardship

Definition of Pain

- The International Association for the Study of Pain (IASP) defines pain as “an unpleasant sensory and emotional experience associated with actual or potential tissue damage”

Individual Impact

- Cardiovascular effects
  - Increased HR, BP, demand on the heart, reduce blood flow to organs and skin delaying wound healing
- Respiratory effects
  - Diaphragmatic splinting and hypoventilation, atelectasis, pneumonia
- Endocrine/metabolic effects
  - Decreased insulin production, increased glucose levels, fluid retention
- Gastrointestinal effects
  - Delayed gastric emptying; ileus; nausea
- Hemostasis
  - Immobility; increased blood viscosity; hypercoagulability and risk of deep vein thrombosis (DVT)
- Psychological
  - Altered perception of pain, hyper-vigilance, fear, worry and catastrophizing, anxiety, insomnia, depression

Disclosure Statement

- I have no conflicts of interest to disclose

Institutional Impact

- 2003 national survey
  - 80% of patients report acute pain after surgery
  - 86% of those patients described pain as moderate, severe or extreme
- 2013 surgical pain congress report
  - Inadequate pain control was the most common reason for readmission after same-day surgery
  - Surgical pain was the leading driver of surgery patient dissatisfaction

[References]

Societal Impact

- Chronic non-cancer pain = leading cause of disability
  - back pain, osteoarthritis, fibromyalgia, headache
- Back pain alone in 2004 and 2005 estimated $85 to $100 billion
- Total costs of chronic pain in 2010 estimated $560 – 635 billion

[References]

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- Increased opioid use
- No significant improvement in pain control

[References]

Statistically Significant Drug Overdose Death Rate Increase from 2013 to 2014, US States

[Map]

Joint Commission Sentinel Event Alert #49 (2012)

- Consult a pharmacist or pain management expert (when available) when converting from one opioid to another, or changing routes of administration
- Implement a process for second-level review of pain management regimens with high-risk opioids by pain specialists or pharmacists.
Centers for Medicaid and Medicare Services (CMS)

- Hospice Conditions of Participation
  - Mandates an individual possessing education and training in drug management perform ongoing medication review
- HCAHPS Survey
  - HCAHPS = Hospital Consumer Assessment of Healthcare Providers and Systems
  - Measures patients’ perspectives on hospital care in 8 domains, one of which is pain management

CDC Overdose Prevention Strategy

- Improve opioid prescribing
  - Clinical practice guideline
- Prevent abuse
  - Prescription drug monitoring programs
- Provide treatment and prevent death
  - Expand access to medication-assisted therapy (MAT)
  - Expand access to and use of naloxone

Essential Services (Opioid Stewardship)

- Perform controlled substance medication reconciliation using state prescription drug monitoring program
- Monitor high-risk opioid therapies
- Participate in quality improvement programs to increase adherence to pain management guidelines
- Perform opioid equianalgesic conversions
- Counsel patients on safe storage and disposal of prescriptions opioids

Desirable Services (Advanced Pain Management and Administrative Support)

- Conduct advanced pain/symptom assessment
- Monitor medication therapy using patient/caregiver history and order, recommend, or interpret laboratory and test results
- Develop policies, procedures and guidelines
- Propose new or expanded pharmacy services
- Develop students and practicing health professionals
- Conduct or disseminate research

Pain and Palliative Care Clinical Pharmacy Specialists

- June 2015, 109 clinical pharmacist survey respondents
- Most provided pain management or palliative care services, significant number provided both
- Most participated on interdisciplinary teams
- 63% acute care, 30% ambulatory care, 7% other settings
- Most were board certified in pharmacotherapy, smaller number certified geriatric pharmacists
- Services provided – medication regimen reviews, education of staff, dosage adjustments opioid dose conversions

**Ambulatory Clinic**

- Pharmacist-led outpatient palliative care practice under the supervision of physician (California code allows for pharmacist-physician collaborative practice, pharmacists have independent prescriptive authority with DEA licensure and NPI status)
- Pharmacist assess, initiate, stop and/or adjust therapy
  - Pain, nausea/vomiting, other symptoms related to ineffective therapies, adverse effects, drug interactions, therapy duplications
- Oncology and hematology referrals
- Pain stabilized over three subsequent visits
- Statistically significant decrease in pain at the third visit


**Academic Medical Center**

- Opioid stewardship pharmacist reviewed daily computer-generated reports of all active orders for oral long-acting opioids, fentanyl formulations and methadone and reconciled orders with state PDMP database
- 12 months, 2499 patients (16% of all admissions)
- 1099 (44%) required an intervention related pain medication reconciliation, most commonly clarifying inpatient dosages (945, 86%)
- Physicians or de-centralized pharmacists requested pain management review consults for 154 (16%) patients

Ghafoor V. Implementation of a pain medication stewardship program. AJHP. Dec 1, 2013:70;2070-75.

**Community Hospital**

- Three FT pharmacists – Pharmacy Pain Management Service (PPMS) program
- Reviewed daily lists of patients deemed at risk for opioid related complications
  - Multiple prescribed opioids or respiratory depressants, renal or hepatic dysfunction, respiratory failure, high BMI, sleep apnea, immediate post-operative period
- $400,000 cost avoidance due to stewardship activities, alone, over 9 months. Used published cost avoidance data (Pharmacotherapy 2003; 23:113-132)
- 59% drop in opioid-associate rapid response and Code Blue calls, decreased use in high dose dilaudid and transdermal fentanyl
- Physician-requests for pain consultations steadily increased

Wild D. Opioids for pain optimized by stewardship plan major savings reported. Pharmacy Practice News. March 2015

**Kennestone Hospital PPMS**

- Goals - Staff education, patient experience enhancement and quality and safety improvement
- Funding – nursing and pharmacy shared
- Initial services – quality and safety improvement project support, physician referrals for pain consultation
- Target population - post-operative patients
- Service initiated - March 2014

**Spine Surgery**

- Daily interdisciplinary rounds – nursing, care coordination, pharmacy
- Pain pharmacist
  - performed analgesic medication profile review, patient counseling and nursing education
- Bedside tool
  - Medication white board in every patient’s room
- IV Acetaminophen pilot study

**Spine Surgery**

- Pain Pharmacist
  - Co-developed discharge medication side effect handout for patients
  - Facilitated nursing in-services on analgesic pharmacology, administration, side effects monitoring of opioids as well as post-operative bowel care
- Bedside tool
  - Comprehensive medication side effect poster

**HCAHPS**

**Communication About Medication**
**Hip and Knee Surgery**

**Interventions**
- Pain pharmacist
  - Co-facilitating the daily discharge class with the nurse navigator
  - Co-developed patient education handouts
- 4th year PharmD students continue teaching these classes

**Post-operative Discharge Education Class**

**General Surgery**

**Interventions**
- Development of IV PCA to oral opioid algorithm
- Development of discharge pain zone tool & education
- Pharmacy added to IDR to review medications, especially analgesic regimens

**72 Hour Readmissions**

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<td>Post-intervention, Jun '15</td>
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**Service Development**

- Needs assessment
- Funding allocation
- Service design and staffing
- Job description or scope of practice policy and clinical credentialing

**Opioid Stewardship Model**

**Retrospective medication review**
- Medication reconciliation using state PDPMP
- High risk opioid therapies – LAER oral opioids, methadone, PCA with opioid continuous infusion
- Patients at high risk for opioid adverse events – OSA, opioid naïve, kidney/liver dysfunction, elderly
- Patients with uncontrolled pain

**Communicate drug related problems to provider**
- Clarify current orders
- Make alternate opioid therapy recommendations
- Recommend non-opioid and/or co-analgesics
- Recommend bowel care agents
- Recommend laboratory monitoring

**Document Interventions**
- Progress note
- Physician “sticky note”

**Recommend comprehensive pain management consultation**
- Complex pain and therapy, high dose of opioids, substance abuse history, psychiatric comorbidity, aberrant drug use behavior

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References:
Advanced Pain Management Consult Model

Physicians, pharmacists, nurses, PT/OT request pain consults

- Patients with persistent pain and opioid tolerance
- Patients with renal or hepatic dysfunction
- Patients with multiple drug allergies
- Complex profiles – high dose IV opioids, multiple opioids, substance abuse history, psychiatric comorbidity, aberrant drug use behavior

Pharmacist performs comprehensive pain assessment and profile review

- Review medical history, PUMP, laboratory results, diagnostic scans, current orders
- Conduct patient interview
- Design analgesic plan and communicate recommendations to provider

Document interventions

- Progress note

Reassess patient on a daily basis until therapeutic goals are met

- Pain decreases to a tolerable level and patient can perform ADLs
- Establish a discharge analgesic regimen

Kennestone Hospital PPMS

- Monday - Friday 8:00 - 3:30 pm.
- Census caps at 8 patients per day with no more than 4 new consults per day
- Providers enter an EPIC Order “Consult Pharmacy for Pain Management”
- PMP order procedure: Initiation or modification of high risk opioid therapies including PCA and long-acting opioids require a provider’s prior-approval. All orders require co-signature by the consulting/attending physician.

Kennestone Hospital PPMS

- Practice Challenges
  - Estimating the time required for services
  - Overcommitment of the PMP
  - Hospital infrastructure changes
  - Proactively budgeting for additional pharmacy positions to manage increased referrals and requests for institutional support

Kennestone Hospital PPMS

- Expansion of services
  - Individual pain management consults for non-surgical patients (chronic, non-cancer pain)
  - Sickle cell pathway, order set, automatic PPMS consult on admission
  - Pharmacy student and resident involvement
  - Graduate medical education support
  - Development of a system analgesic stewardship policy, adopted September 2016

Kennestone Hospital PPMS

- Future activities
  - Recruiting additional pain pharmacists
  - Opioid stewardship
  - Co-develop an analgesic stewardship pharmacist CE series
Professional Development

• Online courses and continuing education
  – ASHP Foundation “Principles of Pain and Pain Management”
    • http://www.ashpfoundation.org/MainMenuCategories/Traineeships/PainMgmtTraineeship
  – The Chronic Pain & Headache TeleECHO Clinic (ECHO Pain)
    • http://echo.unm.edu/
  – City of Hope Pain and Palliative Care Resource Center
    • www.prc.coh.org

• Conference Attendance
  • American Pain Society
  • American Academy Pain Management
  • American Society of Pain Management Nurses
  • PAINWeek

– ASHP Foundation “Principles of Pain and Pain Management”
  – The Chronic Pain & Headache TeleECHO Clinic (ECHO Pain)
  – City of Hope Pain and Palliative Care Resource Center

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Professional Development

• Advanced/Experiential Training
  – 14 PGY2 pain and palliative care residencies
    • https://accred.ashp.org/aps/pages/directory/residencyprogramsearch.aspx
  – ASHP Foundation Advanced Pain Management Traineeship
    • http://www.ashpfoundation.org/MainMenuCategories/Traineeships/PainMgmtTraineeship
  – University of Southern Indiana College of Nursing and Health Professions online pain management certificate program
    • https://www.usi.edu/health/certificate-programs/pain-management-program/

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Professional Development

• Conference Attendance
  • American Pain Society
  • American Academy Pain Management
  • American Society of Pain Management Nurses
  • PAINWeek

• Practice Connections
  – ASHP Section Advisory Group, Pain and Palliative Care, within the Section of Ambulatory Care Pharmacists
  – ACCP Pain and Palliative Care Practice Resource Network
  – American Society of Pain and Palliative Care Pharmacists

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Key Points

• The human and economic costs of pain and opioid abuse require all health care clinicians to invest in education and training to improve pain management and opioid prescribing practices
• Pharmacists in all settings should have the basic knowledge and skills to perform essential opioid stewardship activities
• Pharmacists performing opioid stewardship and advanced pain management consultation have demonstrated the ability to improve opioid prescribing, avoid costs associated with opioid adverse effects and increase patient satisfaction
Learning Assessment

Our nation prioritizes health conditions that are costly to the US economy including heart disease, diabetes and cancer. How does the national cost of pain compare to the individual cost of each of those priority conditions?

A. Smaller  
B. Equal  
C. Larger  
D. Unknown

Learning Assessment

Which publication suggests that hospitals create and implement policies and procedures for a second-level review of pain management regimens with high-risk opioids by pain specialists or pharmacists.

A. Institute of Safe Medication Practices (ISMP) February 2016 Newsletter  
B. The Joint Commission’s Sentinel Event Alert Issue 49  
C. Medicare’s Conditions of Participation  
D. Agency for Healthcare Research and Quality (AHRQ) Annual Hospital Review

Learning Assessment

The following are essential services that may be provided by pharmacists with basic level knowledge of pain management and analgesic pharmacology.

A. Perform controlled substance medication reconciliation using state prescription drug monitoring program  
B. Monitor high-risk opioid therapies  
C. Perform opioid equianalgesic conversions  
D. All of the above

Learning Assessment

What database do pharmacists have access to which can be useful for opioid medication reconciliation as well as identification of possible drug diversion and/or drug misuse?

State Prescription Drug Monitoring Program

https://georgia.pmpaware.net/login