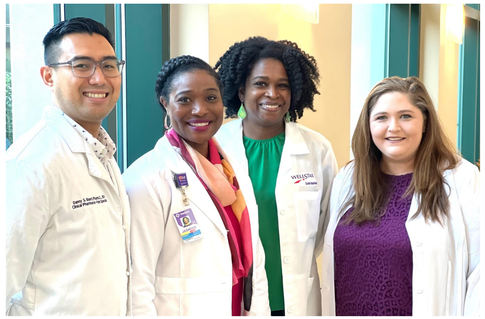
ASHP Best Practices Award

THE DEVELOPMENT AND IMPLEMENTATION OF A SYSTEM-WIDE OPIOID STEWARDSHIP PROGRAM

Elizabeth Pennington, B.S., Pharm.D.
Kimm Freeman, Pharm.D., BCPS, CPE
Jasmine Jones, Pharm.D., BCGP
Danny Basri, Pharm.D., BCPS

Wellstar Health System
Marietta, Georgia



Authors of this presentation disclose the following relationships with commercial interests related to the subject of this poster:

Authors have nothing to disclose

Wellstar HEALTH SYSTEM

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Introduction

Healthcare System
- Non-profit, located in Metro Atlanta
- One of the largest health systems in Georgia
- 11 hospitals, 10 Emergency departments (ED)
  - Average of 123,000 patients admitted per year
  - Average of 604,000 ED encounters per year

Advanced Pharmacy Practice
- Pharmacy based inpatient pain management consult services available
- **Cobb Hospital:** since 2013
- **Kennestone Hospital:** since 2014
  - PGY2 Pain Management and Palliative Care Residency initiated 2022
- **Paulding Hospital:** since 2018

Background
- In 2017, the U.S. Department of Health and Human Services declared a public health emergency centered around the abuse and overdose of opioids
  - The Joint Commission (TJC) issued supporting standards for the assessment and management of pain within the hospital setting.
- STOP-Bang does not consider many of the important risk factors for opioid-induced respiratory depression (OIRD) discussed by TJC.
  - **Michigan Opioid Safety Score (MOSS)** utilizes reduced respiratory rate, increased sedation using **Pasero Opioid-Induced Sedation Scale (POSS)**, and other risk factors (perioperative surgical factors, recent concomitant sedation, smoking history).
- The **PRODIGY study** evaluated patients with and without one or more episodes of OIRD that received parenteral opioids and monitoring (continuous capnography, pulse oximetry) and found an association with higher cost and longer length of stay (LOS).
- Opioid-induced constipation (OIC) has an overall estimated prevalence of 40-80% and has been associated with longer LOS, higher hospital costs, risk of intensive care unit admission, and increased likelihood of 30-day readmission or ED visit.

Description of the Program

Opioid Stewardship Goals and Framework

Increase Interprofessional Collaboration
- *See Figure 1*

Safer Prescribing Practices
- *See Figure 2*

Safer Pharmacist Verification Skills
- Systemwide Education
- Morphine Interchange for Renal Dysfunction
- PDMP access and monitoring
- Methadone Verification, EKG and Drug Interaction Monitoring
- Review Orders for Appropriateness:
  Fentanyl Patch
  Hydromorphone Dosing > 1.5 mg
  Continuous Rate PCA
  Long-Acting/Extended Release or Scheduled Opioids
- Per Protocol Adjustment of Laxative Regimen for OIC
- Per Protocol Ordering of Pulse Oximetry Monitoring on High-Risk Patients

Improve Safety Directly at Bedside
- Increase availability of Continuous Pulse Oxygen Monitoring
- Risk Assessment and Sedation Monitoring with MOSS/POSS
- Comfort Cart and Comfort Menu

Figure 1: Interprofessional Committee Framework

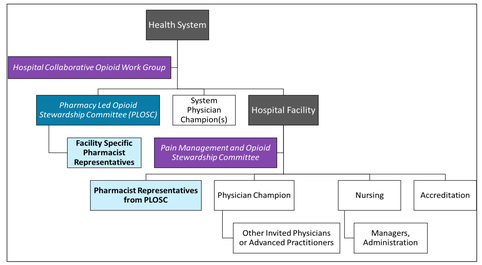


Figure 2: Safer Prescribing Practices

PDMP One-Click Access

Addition of Synthetic Agents to Urine Toxicology Screening
- Methadone, Fentanyl, Oxycodone

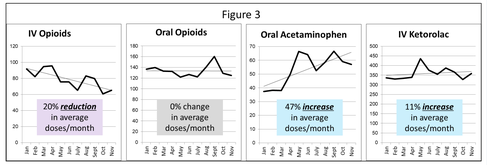
Order Panel Adjustments with Best Practices
- Default Orders to Lowest Dosing and Frequency
- Include oral route of administration, unless strict NPO
- Scheduled non-opioid analgesics
- Caution statements for patients with elevated risk factors
  - Elderly, Elevated BMI, Organ Dysfunction
    - Renal, Liver, Pulmonary (COPD, Sleep Apnea, Pneumonia), Cardiac (Heart Failure, Coronary Artery Disease, Dysrhythmia)
- Multimodal Order Set *(Neuropathic, Musculoskeletal, Headache/Migraine, Bone, Stretching/Capsule Visceral, Abdominal)*

Prescriptions at Discharge
- Opioid Risk Predictive Model Integration for Naloxone Co-Prescribing in High-Risk Patients
- Monitoring Quantity of Oral Morphine Milliequivalents (MME) *(< 50, 50-90, > 90)*
- Post-Surgical Opioid Prescribing (**SOAR/SOLVE study**)
  - Multi-modal Analgesics + Constipation Prophylaxis
  - Tapered Opioid Regimen With Reduced Quantities

Experience with the Program

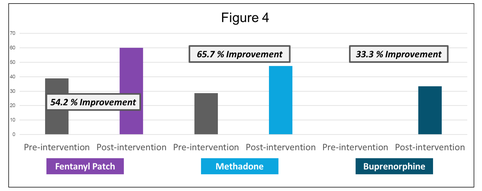
Medication Utilization Findings
- IV hydromorphone ≥ 1.5 mg (*facility*): Doses utilized reduced from 12% to 6%
  - Cost savings of > $10,000/month
- IV and PO utilization changes (*facility*): Number of doses administered per 100 patient day– see Figure 3
  - Post order set changes on acute care units

Figure 3



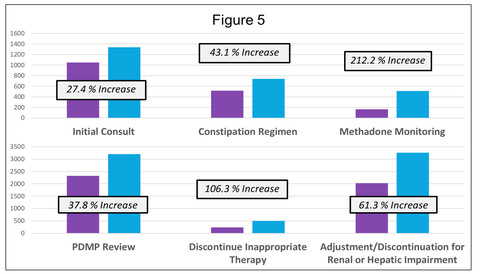
Medication Safety Findings
- Average percentage of medication errors caught to those reported per year (*system*): see Figure 4

Figure 4



- Documented Analgesic Stewardship Pharmacy Interventions (*system*): see Figure 5
  - Cost savings expected, but not known for OIC

Figure 5



- Potential impact for incorporation of opioid predictive risk model to increase naloxone co-prescribing in ED (*facility*): using high risk threshold for CIP-RIOSORD
  - Found an opportunity to reduce harm for nearly 2,500 patients per year in the largest ED
  - Implemented across the system early 2022

Experience with the Program (continued)

Naloxone events related to OIRD– see Figure 6
- Based on the PRODIGY return on investment calculator from Medtronic, estimate cost savings for Med Surg patients on opioid analgesics during post intervention period across the system of about $20,899,340 per year

Figure 6

	Pre-Intervention (June 2018-December 2019)	Post-Intervention (January 2020-December 2021)
Number of patients requiring naloxone per 1000 opioid administrations	4.46	2.88
	35.5 % reduction in patient events	

Discussion / Conclusion

Pharmacy Practice Impact
- Increased opportunities for professional development, new job positions, increased job satisfaction
- Establishment of the first PGY2 Pain Management and Palliative Care residency in Georgia

System Program Impact
- Reduction in rate of OIRD events since implementation, future opportunities found to prevent OIRD events with discharge, and cost reduction associated with prevention of opioid related events

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- Pharmacy Led Opioid Stewardship Committee
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