CareWell Health

A Balancing Act: Safe Opioid Prescribing and Opioid Stewardship in the Hospital Setting

Alexandra Varga, PharmD
Clinical Pharmacist
CareWell Health Medical Center | East Orange, NJ
300 Central Avenue East Orange, NJ 07018 | 973-672-8400 | carewellhealth.org

Disclosures

- Stockholder: Merck and Co (spouse)

Learning Objectives

1. Describe the current state of the opioid epidemic in the United States
2. Explain the purpose of opioid stewardship in the hospital setting
3. List the core elements of opioid stewardship
4. Discuss strategies for encouraging safe opioid prescribing
5. Recognize the role of the pharmacist in the opioid stewardship committee

CareWell Health Medical Center

- 196 bed community hospital in East Orange, NJ
- Sole independent, acute care hospital in Essex County, NJ
- Expanding behavioral health services to include an inpatient detox unit and a residential substance use disorder rehab

Opioid Epidemic in the United States

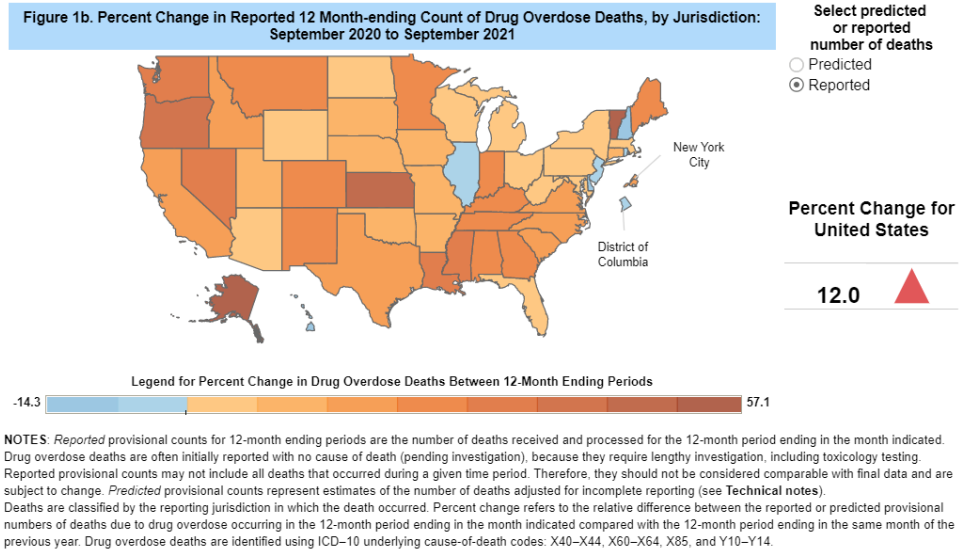
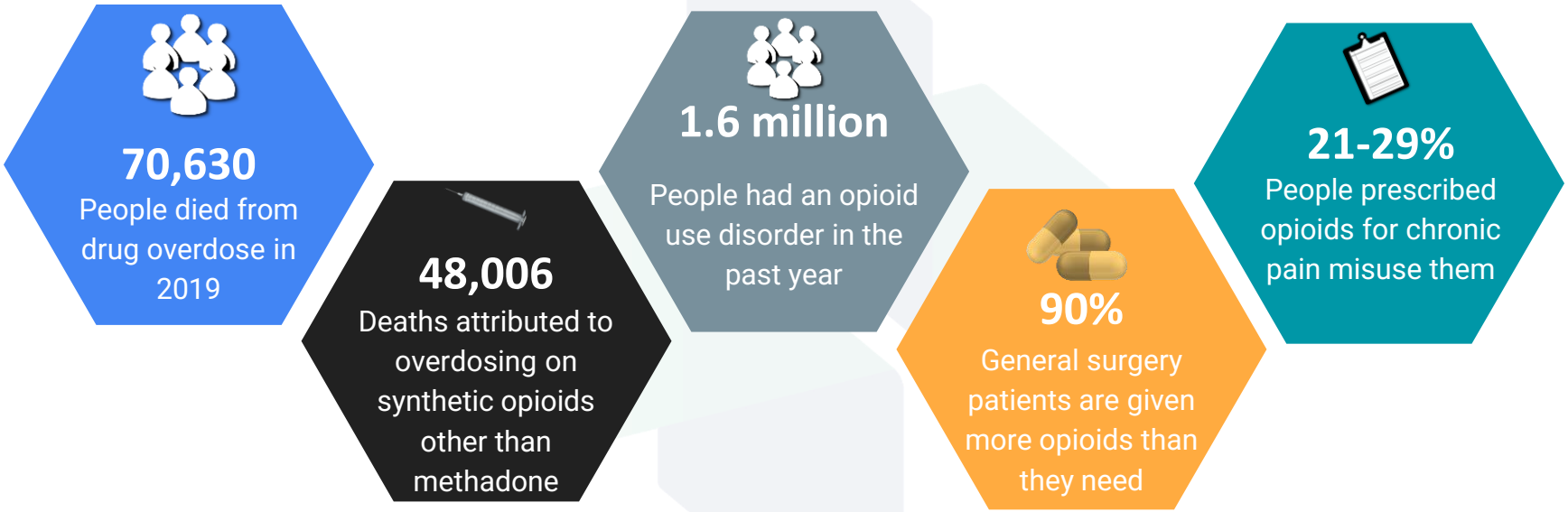


Figure from: U.S. opioid dispensing rate maps 2021

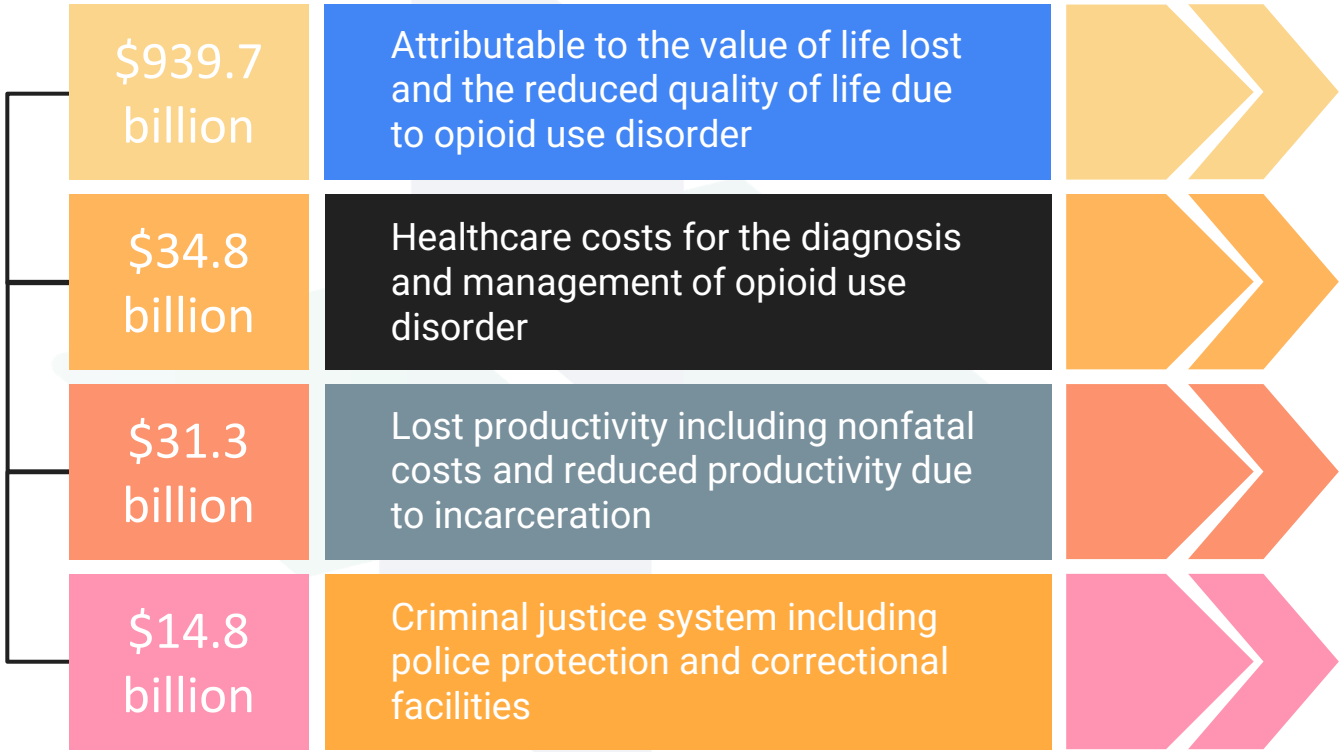
Opioid Epidemic Statistics



2019 National Survey on Drug Use and Health, 2020
NCHS Data Brief No. 394, December 2020
Bicket MC et al.
NCHS. National Vital Statistics System. Provisional drug overdose death counts

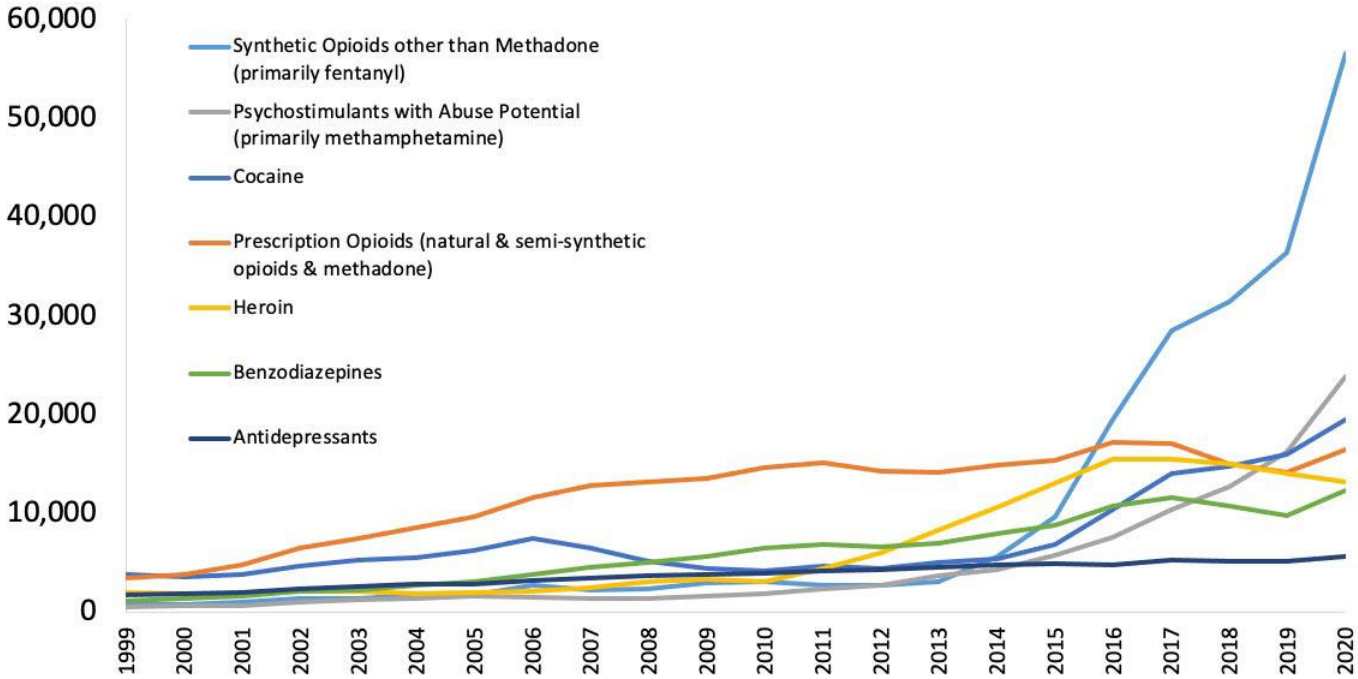
Economic Burden of the Opioid Crisis

Overall estimated cost of the opioid crisis in 2017 was **$1.02 trillion**



Florence et al. Drug and Alcohol Dependence. 2017: 218

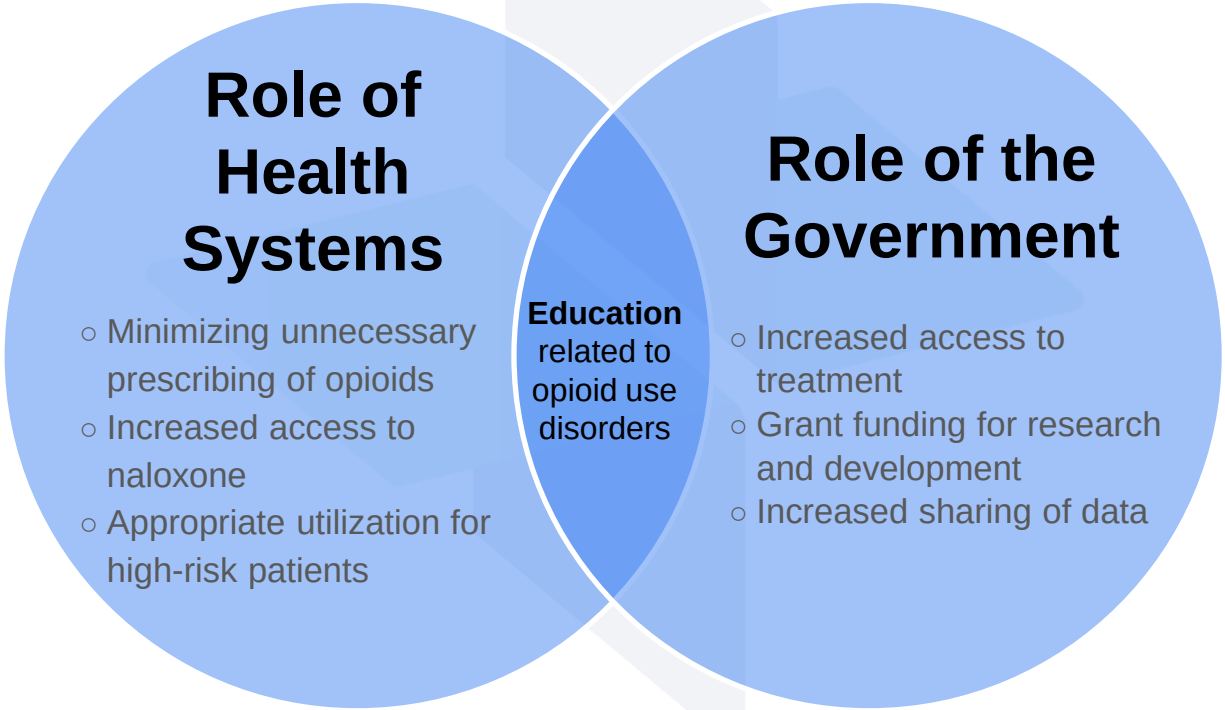
Figure 2. National Drug-Involved Overdose Deaths*, Number Among All Ages, 1999-2020



38% rise in deaths caused by synthetic opioids from the previous year

*Includes deaths with underlying causes of unintentional drug poisoning (X40–X44), suicide drug poisoning (X60–X64), homicide drug poisoning (X85), or drug poisoning of undetermined intent (Y10–Y14), as coded in the International Classification of Diseases, 10th Revision.
Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2020 on CDC WONDER Online Database, released 12/2021.

How do we combat this growing problem?



CMS Roadmap: Strategy to Fight the Opioid Crisis. 2020

Opioid Stewardship

What is opioid stewardship?

- According to the American Hospital Association, “Opioid stewardship is intended to be an encompassing term that considers:
  - Judicious and appropriate opioid prescribing
  - Appropriate opioid disposal
  - Diversion prevention
  - Management of the effects of the use of opioids, including identifying and treating opioid use disorder, and
  - Reducing mortality associated with opioid overdoses.”

American Hospital Association. Stem The Tide. 2020

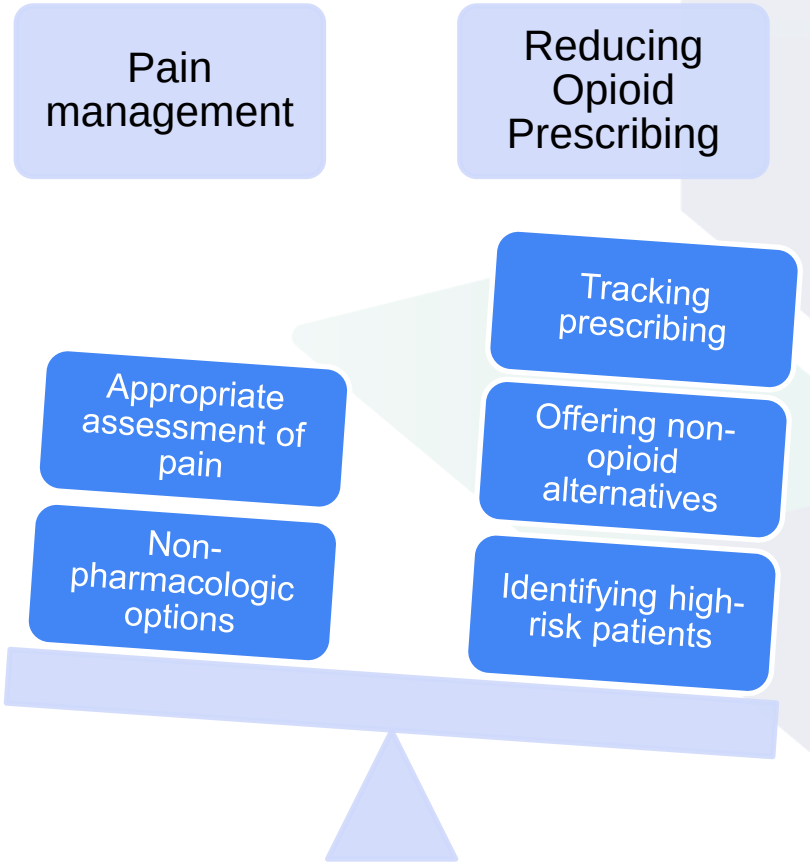
Poll

- Does your organization currently have an opioid stewardship program in place?
  A. Yes, we have a very successful program
  B. Yes, but we would like to improve our efforts
  C. No, but would like to start a program in the near future
  D. No, not a priority at this time

Why is opioid stewardship necessary?

We must do our part in improving the opioid crisis

- Balancing adequate pain management while reducing unnecessary opioid prescribing
- Pain is a complex measure and management must be individualized by patient



Regulatory Requirements

Poll

- Has your facility received a citation or program recommendation for opioid stewardship?
  A. Yes
  B. No

Regulatory Agencies for Inpatient Facilities

Centers for Medicare and Medicaid (CMS)

Condition of Participation 2020

Centers for Disease Control and Prevention (CDC)

CDC Guidelines for Prescribing Opioids for Chronic Pain – 2016

Proposed 2022 Clinical Practice Guideline for Prescribing Opioids

The Joint Commission (TJC)

LD.04.03.13
MD.05.01.01
PC.01.02.07
PI.01.01.01
PI.02.01.01

DNV GL Healthcare NIAHO

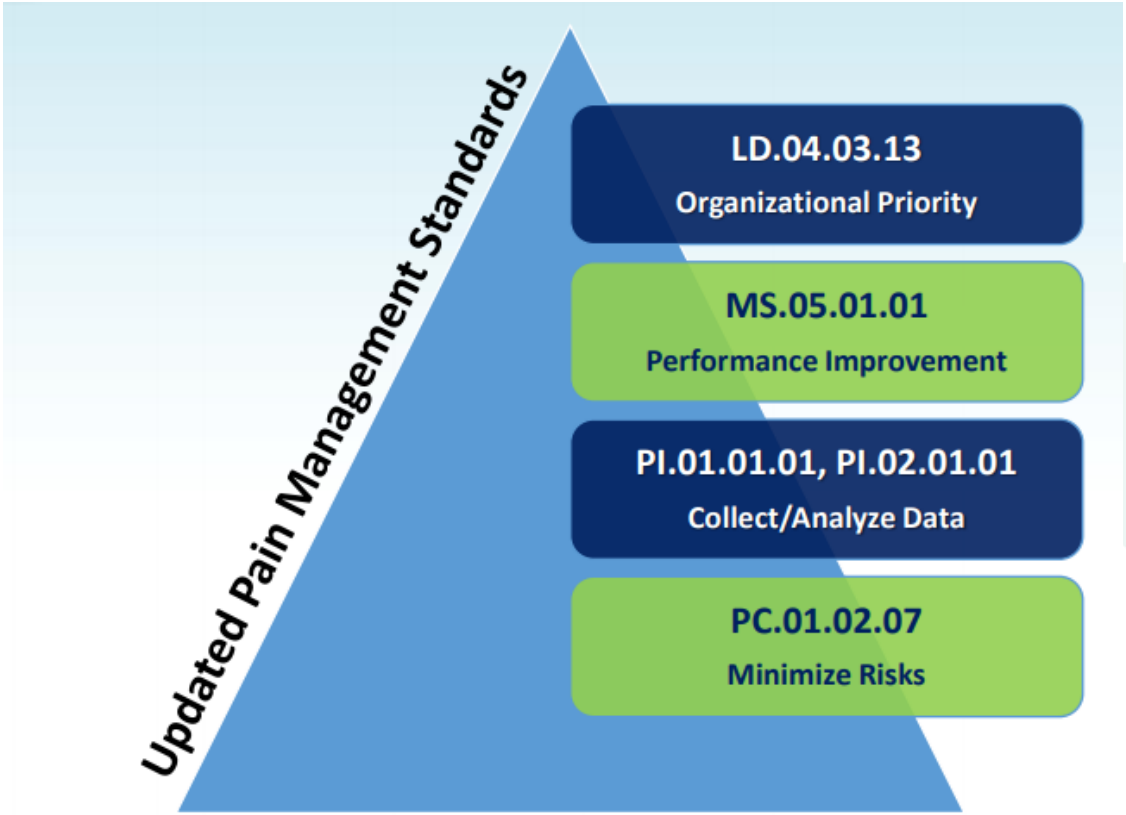
Accreditation Requirements, Interpretive Guidelines and Surveyor Guidance for Hospitals – Revision 20-0

CMS Condition of Participation

- §482.23(c) Standard: Preparation and Administration of Drugs
  - §482.23(c)(1) Drugs and biologicals must be prepared and administered in accordance with:
    - Federal and State laws, the orders of the practitioner or practitioners responsible for the patient's care, and accepted standards of practice
    - Basic safe practices for medication administration **("five rights" of medication administration)**
  - §482.23(c)(4) Intravenous medications must be administered in accordance with state law and approved medical staff policies and procedures
    - **Monitoring patients receiving high-alert medications, including IV opioids**
      - **At a minimum, hospitals are expected to address monitoring for over-sedation and respiratory depression related to IV opioids for post-operative patients**
      - **Staff must be trained in early detection of and timely intervention for IV opioid-induced over-sedation and respiratory depression**

CMS State Operations Manual. 2020
CMS Roadmap: Strategy to Fight the Opioid Crisis. 2020

Regulatory Requirements – The Joint Commission



R3 Report Issue 11: Pain Management and Assessment Strategies for Hospitals. 2018

Standards	Administrative	Prescribing	Patient Care	Education
LD.04.03.13	EP 1: organized leadership team dedicated to opioid stewardship	EP 2: provides non-pharmacologic modalities EP 6: PDMP access	EP 7: provides equipment for monitoring	EP 3: provides education to staff EP 4: provides staff information on consultation services available EP 5: identifies opioid treatment programs for referral
MD.05.01.01	EP 18: medical staff are involved in protocol development			
PC.01.02.07		EP 3 and 4: develops treatment plan and treats pain EP 5: patient is involved in plan	EP 1 and EP 7: defined criteria to assess and reassess pain EP 2: screen patients for pain in the ED EP 6: monitors and identifies high risk patients for adverse events	EP 8: educated patient and family at discharge
PI.01.01.01 PI.02.01.01	EP 56 and EP 18: collects data on pain management and assessment	EP 19: monitors appropriateness of opioid prescribing		

R3 Report Issue 11: Pain Management and Assessment Strategies for Hospitals. 2018

Core Elements of Opioid Stewardship

Core Elements for Building a Stewardship Program

American Hospital Association. Stem The Tide. 2020

Poll

- Does your facility allocate resources (i.e. staffing, funding, education, etc.) for opioid stewardship?
  - Yes
  - No
  - No program in place

Forming a Leadership Team

Executive Leadership

Demonstrates an organizational priority

Multi-Disciplinary

Support must span the entire organization

Project Management

Sets the appropriate scope, schedule and budget

Information Technology

Provide insight on current capabilities

Legal or Compliance

Stay up to date on regulatory changes

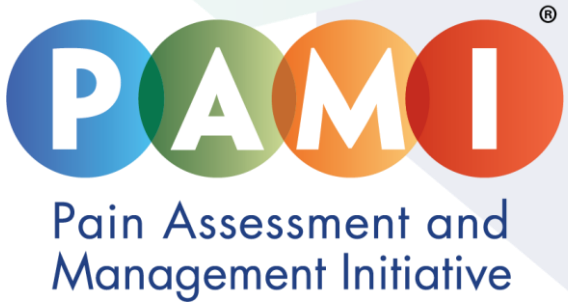
Patient Advocates

Convey critical and unseen perspectives

American Hospital Association. Stem The Tide. 2020

Environmental Scan

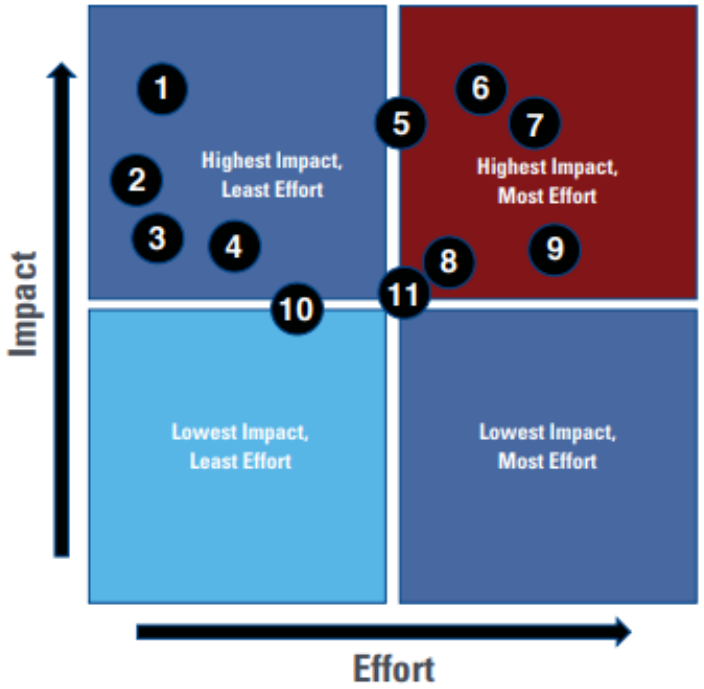
- Leverage existing resources and partners, both internally and externally
- Hospitals and health systems should ascertain:
  - What services exist internally, and what is our capacity to offer new or improved services?
    - Waivered providers capable of prescribing opioid use disorder treatment
  - What services and initiatives exist within the community?
    - Community-based mental health providers specializing in pain management or substance use disorders
    - Drug disposal locations
    - Community access to naloxone



American Hospital Association. Stem The Tide. 2020
Pain Assessment and Management Initiative. 2022

Measure Selection – Acute Pain Management

Figure 3A. Acute Pain Management Related Measures



*Denotes example provided by an advisory group member.

List of Measures:

1. Average Total MME Per Prescription
2. MME Per Opioid Prescription
3. Number of Opioid Prescriptions Per Prescriber at Discharge
4. Average MME Dose Administered Per Inpatient Day
5. Percent of Patients Receiving Opioid Only for Pain Management
6. Percent of Patients Receiving Multimodal Pain Management
7. Proportion of Hospitalized Patients who have Documentation of Patient Defined Comfort and Function Goals
8. Patient Pain Management Planning & Education
9. Baseline Assessment of Pain and Opioid Utilization Upon Admission
10. Pain Reassessment within 60 Minutes of Administration of Pain Medication
11. Use of Pre-Op Analgesia, Local Anesthetic with Surgery, Anesthesia Type, Anesthesia Adjuncts

TJC

American Hospital Association. Stem The Tide. 2020

Morphine Milligram Equivalents Calculations

- Dosages at or above 50 MME/day increases the risk for overdose by at least two times than that of less than 20 MME/day
- Calculating total daily doses of opioids will assist in the:
  - Identification of patients who may benefit from closer monitoring
  - Reduction in dose
  - Naloxone prescriptions
  - Other measures to reduce risk of overdose
- How to calculate MME
  - Determine the total daily dose of each opioid and multiply it by the appropriate conversion factor
  - Add together MME/day results for each opioid the patient takes

OPIOID (doses in mg/day except where noted)	**CONVERSION FACTOR**
Codeine	0.15
Fentanyl transdermal (in mcg/hr)	2.4
Hydrocodone	1
Hydromorphone	4
Methadone	
1-20 mg/day	4
21-40 mg/day	8
41-60 mg/day	10
≥ 61-80 mg/day	12
Morphine	1
Oxycodone	1.5
Oxymorphone	3

These dose conversions are estimated and cannot account for all individual differences in genetics and pharmacokinetics.

CDC. Opioid Prescribing Guideline Resource. 2021

Poll

- A patient takes the following medications:
  - Fentanyl patch 25 mcg/hr
  - Oxycodone 10 mg q6h

- What is the total MME/day for this patient?
  - 60
  - 75
  - 120
  - 1,440

OPIOID (doses in mg/day except where noted)	**CONVERSION FACTOR**
Codeine	0.15
Fentanyl transdermal (in mcg/hr)	2.4
Hydrocodone	1
Hydromorphone	4
Methadone	
1-20 mg/day	4
21-40 mg/day	8
41-60 mg/day	10
≥ 61-80 mg/day	12
Morphine	1
Oxycodone	1.5
Oxymorphone	3

These dose conversions are estimated and cannot account for all individual differences in genetics and pharmacokinetics.

Answer

$$Fentanyl: 25\ x\ 2.4 = 60$$

$$+$$

$$Oxycodone: 10\ mg\ x\ 4 = 40\ \frac{mg}{day}\ x\ 1.5 = 60$$

- What is the total MME/day for this patient?
  - 60
  - 75
  - 120
  - 1,440

OPIOID (doses in mg/day except where noted)	CONVERSION FACTOR
Codeine	0.15
Fentanyl transdermal (in mcg/hr)	2.4
Hydrocodone	1
Hydromorphone	4
Methadone	
1-20 mg/day	4
21-40 mg/day	8
41-60 mg/day	10
≥ 61-80 mg/day	12
Morphine	1
Oxycodone	1.5
Oxymorphone	3

These dose conversions are estimated and cannot account for all individual differences in genetics and pharmacokinetics.

Measure Selection – Harm Reduction

Measure Description	Desired Quality Improvement Trend	Alignment with Federal Quality or Accountability Programs (2020)
Percentage of patients with opioids and benzodiazepines co-prescribed		HEDIS, Medicaid ACS, HIQRP, MSSP
Naloxone prescribed for opioid overdose of high-risk patients		
Opioid prescriptions > 90 MMEs daily		Medicaid ACS
Proportion of hospitalized patients administered naloxone		HIQRP, TJC
Number of adverse safety events due to opioids		TJC
Opioid/controlled substance agreement signed		MIPS QM
Rates of accessing PDMP		MIPS IA

American Hospital Association. Stem The Tide. 2020

CareWell Health Measure Selection

- MedAware is a medication safety monitoring platform that we utilize at our hospital
- In addition to alerts for various potential medication errors, there is a report that is generated for morphine milligram equivalents that can be filtered by:
  - Provider
  - Medication
  - Total and average number of MMEs
  - MMEs by location
  - MME prescriptions over 90 MME/day
  - Inpatient versus outpatient prescriptions
- We also track naloxone utilization and order set utilization

MedAware. 2022. Retrieved from: https://www.medaware.com/

Policies and Procedures

Acute Pain Management	• Multimodal pain management strategies • Prescribing guidelines for non-operative and post-operative pain management
Chronic Pain Management	• Multimodal pain management strategies • Opioid tapering plans and support for patients • Patient risk screening, controlled substance agreements, urine drug screening and PDMP checks
Harm Reduction	• Naloxone administration • Medication reviews for high-risk combinations (i.e. opioids and benzodiazepines)
Supporting Patients with Opioid Use Disorder	• Maintaining current opioid use disorder treatment for inpatients • Screening for concomitant substance use disorder and behavioral health conditions • Transitions of care planning

American Hospital Association. Stem The Tide. 2020

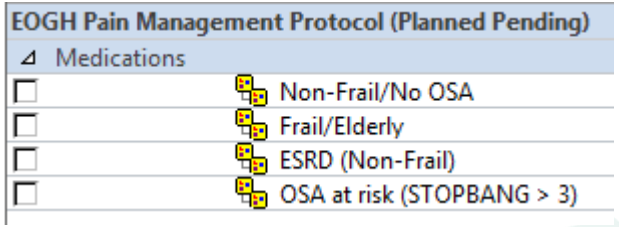
Protocols in Place at CareWell Health

Pain Management and Opioid Stewardship

Multimodal Pain Management Protocol

Alternative to Opioids (ALTO) Protocol

- The protocol identifies appropriate medication selection for patients in various risk categories for opioid-related adverse events
- Lower initial doses of opioids



	Not Frail, No OSA	Frail/Elderly
Non-opiate Alternatives		
Choose One		
Celecoxib *(scheduled)*	200 PO qd	200 mg PO qd
Ketorolac *(scheduled)*	15-mg IV push q8h	15-mg IV push q8h
Ibuprofen *(scheduled)*	400 PO mg q6h	200 mg PO q8h
plus		
Acetaminophen *(scheduled)*	975 mg PO q8h	650 PO q8h
Breakthrough Pain		
Moderate Pain *(pain score 6-7)*		
Oxycodone *(hold for POSS >2 or failed respiratory assessment)*	5 mg PO q6h PRN	2.5-mg suspension PO q6h PRN
Severe Pain *(pain score 8-10)*		
Hydromorphone *(hold for POSS >2 or failed respiratory assessment)*	0.5-1 mg IV q4h PRN	0.3 mg IV q4h PRN
or		
Morphine *(hold for POSS >2 or failed respiratory assessment)*	2-4 mg IV q4h PRN	2 mg IV q4h PRN

Markley J. Anesthesiology News. 2021

Multimodal Pain Management Protocol

Non-opioid options for various types of pain

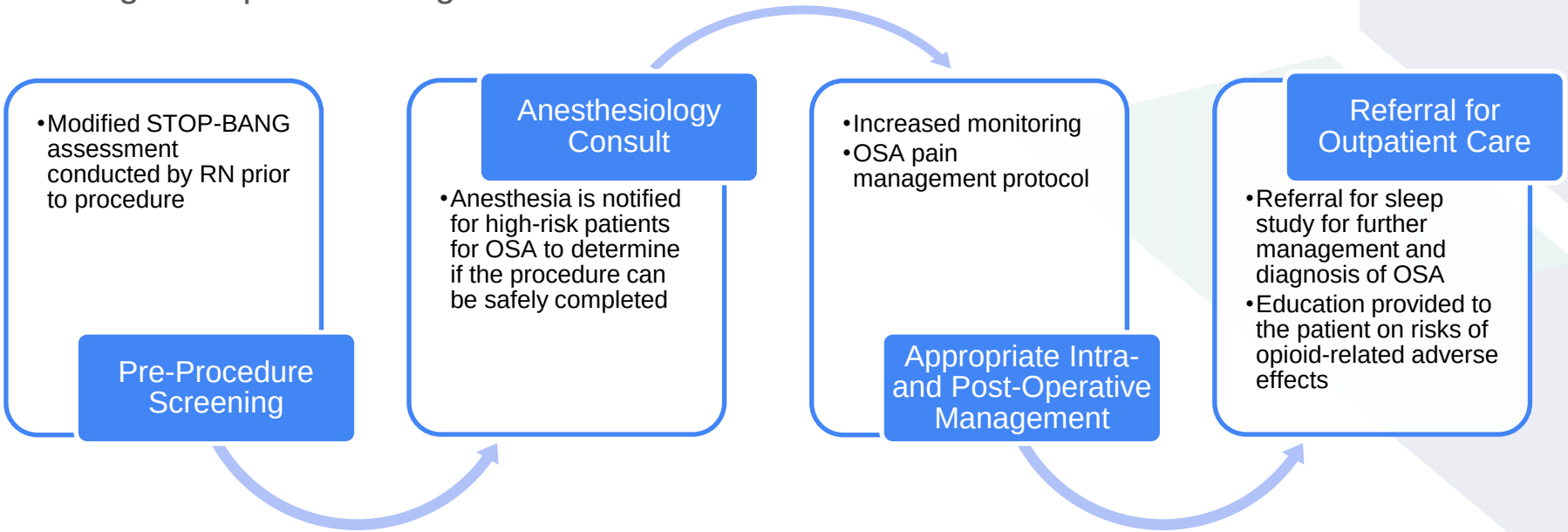
Non-pharmacologic options

Musculoskeletal Pain/Muscle Spasm *(Rare Select Use)*		
Cyclobenzaprine *(caution: additive risk of oversedation)*	5 mg PO tid PRN	
Neuropathic Pain		
Pregabalin *(may cause sedation/confusion)*	Initial: 25-75 mg PO bid	Initial: 25-50 mg qd *(risk vs benefit)*
or		
Gabapentin *(may cause sedation/confusion)*	Initial: 100-300 mg qd-tid	Initial: 100 mg qd *(risk vs benefit)*
Topical Agents		
Menthol 10%, methyl salicylate 15% cream	Apply 1 in of ointment qid	Apply 1 in of ointment qid
Diclofenac 1% gel	2-4 g tid	2-4 g tid
Lidocaine 5% patch	Apply for 12 h/d	Apply for 12 h/d
Nonpharmacologic Options		
Physical therapy	Consult for evaluation and treatment	
Ice pack	Apply to affected area for 20 min q1h as tolerated	
Holistic care teaching by registered nurse	Relaxation, breathing techniques, guided imagery, and free soul meditation techniques	
Psychiatry	Consult for cognitive-behavioral therapy or biofeedback evaluation	

Markley J. Anesthesiology News. 2021

Obstructive Sleep Apnea Screening

- Patients with Obstructive Sleep Apnea (OSA) are at higher risk of experiencing opioid-related adverse events such as respiratory depression
- OSA screening helps to identify high-risk patients to prevent adverse events in the hospital setting and upon discharge



Freire C, et al. Journal of Clinical Sleep Medicine. 2022

Patient Education

Pain Management

- ❑Set pain expectations
- ❑Risks of opioids
- ❑Non-pharmacologic and non-opioid treatment options

Harm Prevention

- ❑Appropriate storage of medications
- ❑Administration instructions
- ❑Naloxone administration

Opioid Use Disorder

- ❑Establish a referral process for opioid use disorders
- ❑Protocols for buprenorphine initiation

American Hospital Association. Stem The Tide. 2020

Role of the Pharmacist

- A national survey was conducted by ASHP evaluating pharmacy practices in the hospital setting
- Pharmacist Roles on Opioid Stewardship Programs
  - Diversion Prevention and Detection (70.8%)
  - Clinical Utilization Review (57.2%)
  - Leadership and Accountability (54.8%)
  - Clinical Prescribing Support (34.5%)

Pharmacy-Led Opioid Stewardship Strategies	
Educating clinicians and/or implementing guidelines	71.40%
Searching PDMP	65.30%
Emphasizing non-pharmacologic and non-opioid pain management	55.60%
Limiting home discharge opioid prescription medications	46.30%
Monitoring opioid prescribing practices to identify outliers	45.80%
Using clinical decision support to guide prescribing	35.90%
Dispensing and educating about naloxone	33.60%
Performing opioid medication reconciliation during transitions of care	28.90%
Restricting specific opioids or doses above a threshold of MME	28.80%
Implementing a prescription opioid take-back program	22.40%
Offering opioid addiction management programs	19.60%

Pedersen CA, et al. American Journal of Health System Pharmacy. 2018.

References

1. U.S. opioid dispensing rate maps. (2021, November 10). Retrieved February 18, 2022, from https://www.cdc.gov/drugoverdose/rxrate-maps/index.html
2. Drug overdose deaths in the United States, 1999–2019. (n.d.). Retrieved February 19, 2022, from https://www.cdc.gov/nchs/data/databriefs/db394-H.pdf
3. Florence, C., Luo, F., Rice, K. (2021). The economic burden of opioid use disorder and fatal opioid overdose in the United States, 2017. Drug and Alcohol Dependence, 218, 108350. doi:10.1016/j.drugalcdep.2020.108350.
4. Overdose death rates. (2022, February 01). Retrieved February 19, 2022, from https://nida.nih.gov/drug-topics/trends-statistics/overdose-death-rates
5. Diener, M. (n.d.). Today not tomorrow: It's Time for Opioid Stewardship: AHA News. Retrieved February 19, 2022, from https://www.aha.org/news/healthcareinnovation-thursday-blog/2021-05-13-today-not-tomorrow-its-time-opioid-stewardship#:~:text=Opioid%20stewardship%20is%20the%20commitment,length%20and%20dose%20of%20treatment.
6. Bicket, M. C., Long, J. J., Pronovost, P. J., Alexander, G. C., & Wu, C. L. (2017). Prescription opioid analgesics commonly unused after surgery. *JAMA Surgery, 152*(11), 1066. doi:10.1001/jamasurg.2017.0831
7. June 2020 CMS ROADMAP: Strategy to Fight the Opioid Crisis. (n.d.). Retrieved February 19, 2022, from https://www.cms.gov/About-CMS/Agency-Information/Emergency/Downloads/Opioid-epidemic-roadmap.pdf
8. American Hospital Association. (2020). Stem the Tide: Opioid Stewardship Measurement Implementation Guide. Chicago, IL. Accessible at www.aha.org/opioids
9. SOM Appendix A - CMS. (n.d.). Retrieved February 19, 2022, from https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/som107ap_a_hospitals.pdf
10. R3 report issue 11: Pain Assessment and Management Standards for Hospitals. (n.d.). Retrieved February 19, 2022, from https://www.jointcommission.org/-/media/tjc/documents/standards/r3-reports/r3_report_issue_11_2_11_19_rev.pdf
11. Pain Assessment and Management Initiative. (n.d.). Retrieved February 20, 2022, from https://pami.emergency.med.jax.ufl.edu/about-us/
12. Opioid prescribing guideline Resource. (2021, February 17). Retrieved February 20, 2022, from https://www.cdc.gov/opioids/providers/prescribing/guideline.html
13. Providing a safety layer within Health Data Systems. (2022, February 07). Retrieved February 24, 2022, from https://www.medaware.com/
14. Markley, J. (2021). A New Approach to Risk Stratification for Inpatient Pain Management Expands Anesthesia Expertise Hospital-JonaWide. *Anesthesiology News,* 1-4. Retrieved February 20, 2022, from: https://www.anesthesiologynews.com/download/BB2112_WM.pdf
15. Freire, C., Sennes, L. U., & Polotsky, V. Y. (2022). Opioids and obstructive sleep apnea. *Journal of Clinical Sleep Medicine, 18*(2), 647-652. doi:10.5664/jcsm.9730
16. Pedersen, C. A., Schneider, P. J., Ganio, M. C., & Scheckelhoff, D. J. (2019). Ashp National Survey of Pharmacy Practice in hospital settings: Monitoring and patient education—2018. *American Journal of Health-System Pharmacy, 76*(14), 1038-1058. doi:10.1093/ajhp/zxz099

CareWell Health

Thank you

Contact information:
Alexandra.varga@CareWellHealth.org