The Opioid Epidemic: *Crisis vs. Competency*

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Disclosure Statement

- *I have no financial relationships with any commercial interest related to the content of this activity.*
- *I may discuss off-label use during my presentation and will disclose such information as applicable.*

Learner Objectives

- Discuss the history of opioid practice and the state of current practice
- Review evidence of post-op pain management's potential role in the opioid crisis
- Detail national efforts to raise awareness of opioid crisis and increase education of providers in multi-modal pain management
- List evidence based treatment alternatives to opioid use in acute and chronic pain management
- Locate resources to aid providers in opioid education initiatives and reduction of opioid use in chronic pain management

Facts and Figures - CDC

- Up to 25% of those who receive prescription opioids long term for non-cancer pain in a primary care setting admit to addiction struggles
- Greater than 50% suffered from pain in the last days of their lives with research showing 50-75% die in moderate to severe pain
- 20% US adults report pain/physical discomfort interfering with sleep at least several nights/week
- NIH fact: LBP leading cause of disability American <45 yrs, those with LBP being in worse physical/mental health than those without LBP

US National Center for Health Statistics (Who is reporting Pain?)

- 2006, Special Report on Pain
- > 25% of Americans age 20 and over (77 million) report pain that lasted more than 24 hours – these figures do not account for acute pain
- Adults 20-44, 25% reported pain
- Adults 45-64 group most likely to report pain > 24 hrs (30%)
- Adults 65 and over were least likely to report pain (21%)

Summary Health Statistics US Adults: HHS Report

- 2009, National Health Interview Survey
- Women higher incidence of pain – especially migraines, neck/low back/face/jaw pain
- 18-44 year group reports less LBP in prior 3 months
- % of migraines/severe headaches inversely related to age
  - 20% 18-44
  - 15% 45-64
  - 7% 65-74
  - 6% > 75

- Adults educated with a Bachelor's degree reported less migraines, neck/back/face/jaw pain

CDC – National Center for Health Statistics -- 2016

# Drug OD Deaths	Drug OD death rate (per 100,000 population)
Highest: FL 4728	Worst: WV 52
Lowest: SD 69	Best: SD 8.4
US: >98,000 (63,632 opioid)	US: 19.8
TN 1630 – 13th highest	***TN 24.5 – 13th highest***

HOW DID WE GET HERE?

The PERFECT Storm

- Mid 1990's
- JCAHO, patient's right to have pain managed
- Pain as the 5th vital sign
- Hospital reimbursement tied to patient satisfaction
- Patients rated hospitals on pain management

- Purdue Pharma introduced Oxycontin 1996
  - Sales $48M 1996, nearly $1.1B 2000
    - Van Zee, MD, *Am J of Public Health*, 2009

- Feb. 2009 Article, American Journal of Public Health
- Health Policy and Ethics subheading
- Dr. Art Van Zee *The Promotion and Marketing of Oxycontin: Commercial Triumph, Public Health Tragedy*

Feb. 2009


The New York Times
Origins of an Epidemic: Purdue Pharma Knew Its Opioids Were Widely Abused
A confidential Justice Department report found the company was aware early on that OxyContin was being crushed and snorted for its powerful narcotic, but continued to promote it as less addictive.

May 29, 2018

National Strategies

What Came Next In The Journey?

Increased Interest in Pain Management

US Congress dubbed 2001-2010 as “the decade of pain”

National Pain Care Policy Act and VA Pain Act -- 2009

THE IOM REPORT

Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research --June 29, 2011

- Chronic pain, a condition that affects more than 100 million Americans and costs the U.S. between $560 and $635 billion annually in medical treatment and lost productivity

IOM Report

- Much of the chronic pain experienced by Americans isn't treated correctly, in part because doctors are not taught in medical school how to help patients manage pain
- Called for a cultural change in order to prevent, assess, treat and understand all types of pain and laid out a blueprint for providing relief from pain.

IOM Report

- Directed the Department of Health and Human Services to develop a plan to increase awareness about pain, its health consequences; improve how pain is assessed, how treatment of pain is paid for by the federal government; and to address disparities in how different groups of people experience pain

IOM Report

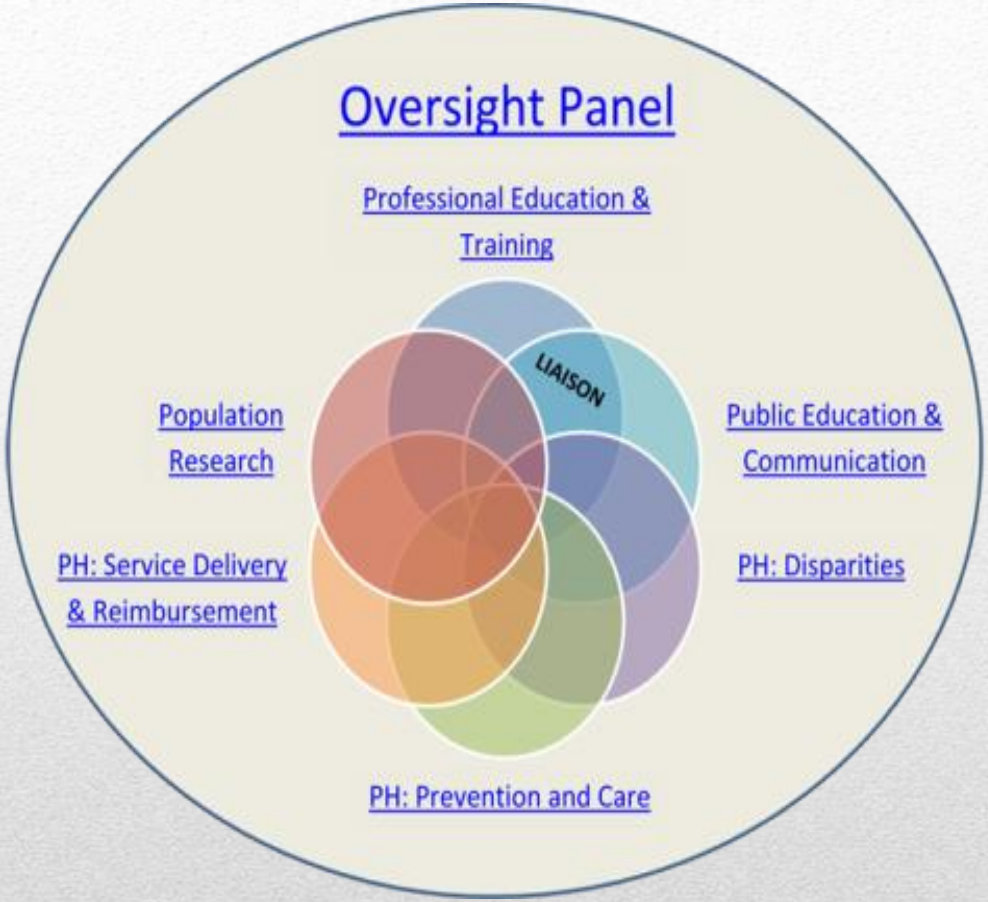
- The report recommended healthcare providers engage in **continuing education programs**, and that **licensure, certification, and recertification** should **include assessment of providers' knowledge of pain management**

Important Message

ALL providers need more training in pain management!

National Strategy: Congressional Role

- Public Law 114-198 (114th Congress, 2015)
  - Authorized the Attorney General and Secretary of HHS to award grants to address prescription opioid abuse, heroin use crisis & others
  - SEC. 101. Task Force on Pain Management. The Secretary HHS, in cooperation with the Secretary of Veterans Affairs and the Secretary of Defense, shall convene a Pain Management Best Practices Inter-Agency Task Force.



HHS/NIH Interagency National Pain Strategy Team

New Educational Model: PAIN as a Disease

- Chronic pain, or unrelieved pain isn't just a symptom – it affects every organ system and causes a change in physiologic responses (cardiovascular, pulmonary, GI, renal, coagulation, immunologic, neuromuscular, psychiatric).

The NIH/HHS National Pain Strategy Report

- National Pain Strategy: A Comprehensive Population Health-level Strategy for Pain
- Final report published May 2015

https://iprcc.nih.gov/docs/HHSNational_Pain_Strategy.pdf

Increasing Knowledge and Effectiveness in Pain Management

- Appendix D – Chronic pain screening questions (determine chronicity and severity of pain)
- Appendix E – Operational questions for determining high-impact chronic pain (functional limitations)
- Appendix F – Diagnostic clusters for population pain research
- Appendix J – Core competencies for pain education (4 domains)

NPS Team Report: Quick-start

Domain 1 – Multidimensional Nature of Pain: What is Pain?

- Fundamental concepts of pain: the science, nomenclature, experience of pain
- Impact of pain on the individual and society

- How pain is assessed, quantified, and communicated
- How the individual, the health system, and society affect these activities

Domain 2 – Pain Assessment & Measurement: How is Pain Recognized?

Domain 3 – Management of Pain: How is Pain Relieved or Reduced?

- Collaborative approaches to decision-making, diversity of treatment options, importance of patient agency, risk management, flexibility in care, and treatment based on appropriate understanding of the clinical condition

- The clinician's role in applying the competencies developed in domains 1-3 and in the perspective of diverse patient populations, settings, and care teams.

Domain 4 – Clinical Conditions: How Does Context Influence Pain Management?

NPS Team Report

- Appendix K
  - Public education general awareness campaign
  - 11 learning objectives

- Shouldn’t we teach these to the pain providers also?

New HHS Task Force

- Health and Human Services Pain Management Best Practices Inter-Agency Task Force
- Dr. Bruce Schoneboom, PhD, CRNA, FAAN, COL (Ret) AANA Chief Learning Officer
- Began work in May 2018

Obama Administration Announces Additional Actions to Address the Prescription Opioid Abuse and Heroin Epidemic

FACT SHEET (March 2016)

FACT SHEET (July 2016)

- More Americans die each year from drug overdoses than motor vehicle crashes
- Majority of the overdoses involve prescription medications
- Health care providers wrote 259 million prescriptions for opioid pain medications in 2012 – enough for every American adult to have a bottle of pills

White House Opioid Fact Sheets

Private Sector Commitments to White House Call to Address the Epidemic

- March 2016 the White House called for opioid prescriber education to be included in healthcare provider education
- 60 Medical Schools signed a pledge to require prescriber education beginning Fall 2016 as a requirement for graduation (to include CDC Guidelines for Prescribing Opioids for Chronic Pain)

American Association of Colleges of Nursing (AACN)

- April 2016, AACN announces nursing schools commitments to combat opioid use disorder

Nursing Stands United for Collaborative Education

- AACN, American Association of Nurse Anesthetists, American Association of Nurse Practitioners, American College of Nurse-Midwives, American Nurses Association, National Association of Clinical Nurse Specialists, and National Organization of Nurse Practitioner Faculties unite in joint educational series for practicing nurses, faculty and students
- Set up a 4 part webinar on the opioid crisis in Fall 2016

Nurse Anesthesia Professional Pain Education and Validation

- Specialty pain training began 2008, now basic and advanced with didactic training and cadaveric training
- Post Master's Certificate in Advanced Pain Management Hamline University 2011-2015, moved to Fellowship 2014 then to Texas Christian University in 2016
- Pain Management Simulation Fellowship University of South Florida 2016
- Acute Pain Management Fellowship, Middle Tennessee 2017
- National Board for Certification and Recertification of Nurse Anesthetists certification exam began in 2015 Non-Surgical Pain Management (NSPM-C)

Opioid Crisis = National Emergency

- August 10, 2017 Trump declared the opioid crisis a national emergency
- Two days after the presidential opioid commission recommended this action
- Reported 142 deaths a day in US
- Ohio AG filed lawsuits against 5 Pharm companies "flooded Ohio with prescription painkillers creating patients who are physically and psychologically dependent"
- 6 states and >60 cities have filed lawsuits (May 2018)

The Opioid Crisis Continues

- Over 72,000 estimated opioid ODs 2017 (CDC)
- 3.1 fold increase 2002-2017
- 30,000 due to Fentanyl or Fentanyl analogs
- Estimated 174 deaths a day

- Aug 7th, 2017 UVA study reports mortality rates underreported by 24% for opioids and 22% for heroin

The Center for Disease Control (CDC) Prescribing Guidelines

March 2016

CDC Prescribing Guidelines

Goals

- **Increase communication/improve understanding among providers and patients concerning risks/benefits of opioid use in chronic pain management**
- **Improve safety and effectiveness of pain treatment**
- **Reduce risks of long term opioid therapy**

CDC Prescribing Guidelines Overview

- Non-opioid therapy
  - Exercise
  - **Multi-modal therapies**
  - First line pharmacologic agents
  - Cognitive behavioral therapy

CDC Prescribing Guidelines Overview

- Timing and appropriateness of opioid use
  - Never monotherapy
  - Goal directed
  - **Realistic discussion of use and discontinuance if no meaningful clinical benefit (30% increase in function/pain)**
  - Use of evidenced based tools for pain measurement

CDC Prescribing Guidelines Overview

- Communication of evidence
  - Opioids good for short term, no long term evidence for function/pain improvement
  - **Complete pain relief expectation is unrealistic**
  - Focus on increased function which is often with a continued presence of pain

CDC Prescribing Guidelines Overview

- Medication selection
  - Avoid extended release (ER) or long acting (LA) pharmacologic agents as initial agent
  - **Avoid ER/LA in combination with immediate release agents**
  - Carefully consider use of transdermal fentanyl if limited knowledge of pharmacodynamics and pharmacokinetics; unable to adequately educate

CDC Opioid Prescribing Overview

- Prescribing
  - First line for LBP is acetaminophen, NSAIDs
  - Start at lowest effective dose
  - Careful eval before increases to 50 MME/day
  - Follow-up evaluation at least q 90 days
  - Avoid increases of 90 MME/day
  - Consider naloxone for history of OD, substance abuse, concurrent opioids/benzos
  - **Provide education on opioid use, risks**

CDC Prescribing Guidelines Overview

- **Risk Assessment**
  - Review history of medication use – prescription drug monitoring programs (initial and on-going)
  - UDS (initial, for cause, on-going)

www.cdc.gov/drugoverdose/prescribing/guideline.html

Response to Opioid Epidemic Does Not Address Postop RX

- Following release of the *CDC Guidelines*, focus has been on opioid use for noncancer chronic pain
- Little focus on post-op prescribing/resultant nonmedical use of post op prescriptive opioids
  - Many patients first exposed to opioids after surgery
  - Need to minimize potential/probable introduction of opioids into circulation
  - Focus on avoiding increased number of chronic opioid users

CDC=Centers for Disease Control and Prevention

- **Minor Surgery 5.9%**
  - Varicose vein removal
  - Lap chole
  - Lap appy
  - Hemorrhoidectomy
  - TURP
  - Parathyroidectomy
  - Carpal tunnel

- **Major Surgery 6.5%**
  - Incisional hernia repair
  - Colectomy
  - Reflux surgery
  - Bariatric surgery
  - Hysterectomy

- **Nonoperative comps 0.4%**

Incidence of New Persistent Opioid Use by Surgical Condition (Brummet, *JAMA Surg* 2017)

New Persistent Opioid Use After Surgical Procedures (Brummet, *JAMA Surg* 2017)

- ~50 million ambulatory surgical procedures performed in the US in 2010
  - >2 million individuals/yr may transition to persistent opioid use
  - May be higher when including inpatient surgical procedures and considering the growth in surgical care

- Urologic 67%
- Orthopedic 77%
- Thoracic 81%
- Dermatologic 89%
- C-section 90%
- Dental 91%
- General 92%

Prevalence of Any Unused Opioids Prescribed After Surgery (Bickett, *JAMA Surg, 2017)*

Storage and Disposal of Opioids After Surgery (Bickett, *JAMA Surg, 2017*)

- Storage prescription opioids
  - Medicine cabinet/other box:
    - 54-70%
  - Cupboard or wardrobe:
    - 21-26%
  - Unlocked location:
    - 73-77%
- Opioid disposal
  - Planned to/actually disposed of unused opioids:
    - 4-30%
  - Considered/used method recommended by FDA:
    - 4-9%

Role of Postsurgical Prescribing in the Opioid Crisis

- Opioid pain control pain has become engrained as a component of surgical care and is a conduit for opioid entry into the community
- With surgery increasingly performed during same day, more patients are sent home with opioids
- Providers incentivized to overestimate opioid needs in order to reduce the burden of hospital discharge or avoid unintended hospitalization
- Seemingly innocent strategy can create a reservoir of unused opioids

Current Anesthesia Trends

- Will this help address the opioid crisis?

YES!

Enhanced Recovery After Surgery (ERAS)

ERAS

- Provides a pathway to limit/avoid perioperative influencers of the opioid crisis
  - Central principle: multimodal pain therapies will reduce dependence on opioids
- Perioperative providers have always had to carefully consider analgesia and adverse effects, but must now also consider the opioid crisis impact

AANA Resources for ERAS

- **Position Statement** "*A Holistic Approach to Pain Management: Integrated, Multimodal, and Interdisciplinary Treatment" July 2016*
- **Enhanced Recovery After Surgery** *Considerations for Pathway Development and Implementation July 2017*
  - *aana.com (resources/professional practice)*

- Local anesthetic infusions (lidocaine)
- Ketamine & magnesium, N2O
- Gabapentin
- Esmolol
- Anti-inflammatory medicines
- Corticosteroids
- Precedex, or other alpha2 agonists
- Topical agents
- BZDs or other muscle relaxants

Array of Some Non-opioid Alternatives

Sample Ketamine/Mg^{2+} Dosing

- *Magnesium 2 - 3 gm, or 30mg/kg*
- Ketamine should be co-administered with Versed or Propofol
- Will spare the usual needed narcotic dose by approximately 50%
- Should be discontinued in the last 30 minutes prior to surgery end for outpatients, or those patients without a history of CP
- Ketamine 0.25 - .50 mg/kg bolus
  - Drip rates: 10-15mg/hr. or achieve the same by timed bolus
  - Drip rates: 0.05 – 0.3 mg/kg/hr

Society for Opioid Free Anesthesia (SOFA)

Society for Opioid Free Anesthesia

- Goal 1: summarize the existing literature on this anesthetic technique and provide evidence-based recommendations
- Goal 2: Promote new research in this area of anesthesia
- Goal 3: Educate and help guide anesthesia professionals as they learn about and transition to practicing opioid free anesthesia
- First Annual Meeting, Nov. 10-11th, 2018, UAB

- https://goopioidfree.com

Homeopathic or Herbal Alternatives

Ideas That Work: Herbal Post-op Pain Control

Outpatient Surgery
June 2017
Hernia Center -- CA

Inflammation as key source of post-op pain

3 days prior to surgery

- Arnica 12C 5 pellets SL TID (inflammation/bruising)
- Bromelain 500 mg 1 BID (inflammation/swelling)

- Arnica Montana 12C 5 pellets SL TID (inflammation and bruising)
- Alpha Lipoic Acid 300 mg 1 QD (inflammation/nerve pain)
- Bromelain 500 mg 1 BID (inflammation/swelling)
- Ginger Root 550 mg 1 BID (inflammation/nausea)
- Super B-Complex 1 QD (nerve pain)
- Turmeric 500 mg 3 QD or 1 TID (inflammation/nerve pain)

Outpatient Surgery article: 24 hour post-op regimen

Outpatient Surgery Article

- Injection local before incision
- Toradol IV at end of surgery
- Ice pack 1-2 days (French study 1 hr before surgery)
- <5% patients get opioid scripts
- 15% patients need more analgesia
- Herbals don’t interfere with bleeding or healing, no drug interactions

Examples of Multimodal Strategies

- Polypharmacy, reduce or eliminate opioids
  - Acetaminophen, NSAIDS, Anticonvulsants, Antidepressants
  - Endocannabinoids?
  - Corticosteroids
- PT
- OT
- Pain Psychology/support groups
- Diet and Nutrition
- Massage
- Manipulation
- IV therapy

Chronic Pain Providers

Summary

Unrelieved Pain Consequences

- Delays discharge or requires hospitalization
- Decreases ability to participate in Rehab
- Delays recovery and return to normal activities
- Ineffective treatment increases possibility of progression to chronic or neuropathic pain
- Associated with poor treatment outcomes
- Increased use of healthcare resources
- Increased cost of care

What Providers Must Consider

Managing the Opioid Crisis

Scientific evidence is clear: pain is best managed using multi-modal techniques

Over Prescribing

Limited Access/Street Acquisition/Overdose

Education on Effective Management of Pain/Multi-modal Techniques

Access to Unused Opioids/Overdose

Access to Treatment & First Responder Naloxone

Diversion & Addiction

Interprofessional Collaboration

The Future of Anesthesia Care and Pain Management

- Scientific evidence is clear: pain is best managed using multi-modal techniques
- There is a place for opioid use but it is best utilized for long term, chronic pain management
- We must **educate ALL** of our healthcare providers in best practices in pain management
- ERAS demonstrates effectiveness in decreasing opioid use

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