

TO SAVE A LIFE: EMERGENCY MEDICINE AND THE OPIOID EPIDEMIC

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DISCLOSURES

- I receive research effort funding as a co-investigator from the Statewide Cooperative Agreement for Emergency Response: Public Health Crisis Response Activities. Sponsors: Tennessee Department of Health Services through the CDC.
- I am a site principal investigator for a NIH/NIDA sponsored "Emergency Department-Initiated Buprenorphine Validation Network Trial".
- I receive research effort funding from the CDC SHEPherD OUD-IVDU project as a co-investigator.
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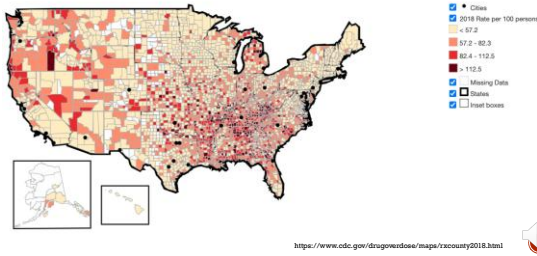


OBJECTIVES

- Provide an overview of the Opioid epidemic's impact on Emergency Departments (EDs)
- Opioid Epidemic during the COVID Pandemic
- Discuss ED strategies to address the Opioid Use Epidemic
 - Opioid Light Pain Management
 - Increasing Access To Naloxone
 - Peer Opioid Prescribing Data Comparisons
 - Initiation Of Medication-assisted Treatment
 - Research and Public Health Initiatives



US COUNTY OPIOID PRESCRIBING - 2018



THE EMERGENCY DEPARTMENT - FRONT LINES & FRONT DOOR TO THE OPIOID EPIDEMIC



EMERGENCY DEPARTMENT ROLE IN CRISIS

Rising Opioid Prescribing in Adult U.S.
Emergency Department Visits: 2001–2010

Maryann Mazer-Amirshahi, PharmD, MD, Peter M. Mullins, MA, Iris Rascooby, John van den Anker, MD, PhD, and Jesse M. Pines, MD, MBA, MSCE. *ACADEMIC EMERGENCY MEDICINE* 2014; 21:286–293

Take Home Point: 2001-2010: Using NHAMCS data, overall ED Visits where an opioid was prescribed increased from 20.8% to 31.0%

Trends in emergency physician opioid prescribing practices during the United States opioid crisis

Ryan Gleber, BS, Gary M. Vilke, MD, Edward M. Castillo, PhD, MPH, Jesse Brennan, MA, Leslie Oyama, MD, Christopher J. Coyne, MD, MPH* *AJEM* 2019; In Press.

Take Home Point: 2012-2018: In 2 EDs, opioid prescriptions decreased from 37.8% to 13.3%



RISK OF CONTINUED OPIOID USE AT 1 YEAR IF PRESCRIBED ≥ 4 DAYS

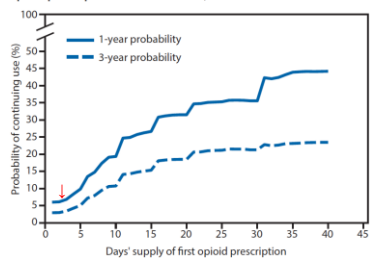
1 in 12

If each student in a typical class was prescribed ≥ 4 days of opioids at some point during the year, 3 students would still be using opioids a year later

Shah et al. *Characteristics of Initial Prescription Episodes and Likelihood of Long-Term Opioid Use — United States, 2006–2015*. *MMWR* / March 17, 2017 / Vol. 66 / No. 10



FIGURE 1. One- and 3-year probabilities of continued opioid use among opioid-naïve patients, by number of days' supply* of the first opioid prescription — United States, 2006–2015



Shah et al. *Characteristics of Initial Prescription Episodes and Likelihood of Long-Term Opioid Use — United States, 2006–2015*. *MMWR* / March 17, 2017 / Vol. 66 / No. 10



THE EMERGENCY DEPARTMENT - FRONT LINES & FRONT DOOR TO THE OPIOID EPIDEMIC

- Naloxone
- Public Health Surveillance
- Increasing cases of IVDU associated infectious outbreaks
 - HIV
 - Hepatitis A
- Endocarditis



Notes from the Field

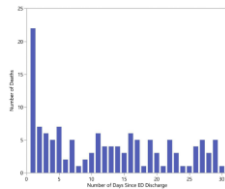
Counterfeit Percocet-Related Overdose Cluster — Georgia, June 2017

Laura Edson, DVM^{1,2}; Amber Erickson, MPH³; Sasha Smith, MPH³; Carliel Lopez, PharmD⁴; Stephanie Hsu, PharmD⁵; Alexandra King, PharmD⁶; Nancy Nyland⁷; J. Patrick O'Neal, MD¹; ¹Florida Department of Health

MMWR / October 20, 2017 / Vol. 66 / No. 41



1 IN 20 "NALOXONE RESCUED" PATIENTS ARE DEAD WITHIN 1 YEAR!



- 5.5% of patients treated for nonfatal opioid overdoses in the ED will be dead within 1 year
- Among these fatalities,
 - 5% will die within 2 days
 - 20% will die within 30 days

Weiner et al. One-Year Mortality of Patients After Emergency Department Treatment for Nonfatal Opioid Overdose. *Ann Emerg Med*. 2019.



OPIOIDS DURING COVID-19 PANDEMIC

- More than 40 states reported increases in opioid-related mortality
- Increased overdoses related to fentanyl and fentanyl analogs
- Reduced access to treatment centers due to COVID-imposed temporary closures
- EDs remain the option that is always open to provide care



Issue brief: Reports of increases in opioid-related overdose and other concerns during COVID pandemic

*Updated September 8, 2020

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The Opioid Crisis, Already Serious, Has Intensified During Coronavirus Pandemic

Overdose deaths rise as job losses and stress from Covid-19 destabilize people struggling with addiction



EMERGENCY DEPARTMENT-BASED STRATEGIES TO COMBAT THE OPIOID EPIDEMIC



TREATING ACUTE PAIN ASSOCIATED WITH INJURIES

- A trial published in JAMA (2017) found no clinically important difference in pain due to acute extremity injuries when given:
- 400mg Ibuprofen + 1000mg Acetaminophen
- 5mg Oxycodone/325mg Acetaminophen (e.g., Percocet)
- 5mg Hydrocodone/300 mg Acetaminophen (e.g., Lortab™, Norco™)
- 30mg of codeine + 300mg of acetaminophen (e.g., Tylenol #3™)
- **Take Home Point: Anti-inflammatories work very well for most injuries.**

Chang et al. Effect of a Single Dose of Oral Opioid and Nonopioid Analgesics on Acute Extremity Pain in the Emergency Department A Randomized Clinical Trial. JAMA. 2017;318(17):1661-1667.



OPIOID LIGHT ED PAIN MANAGEMENT

Headache/Migraine	
Immediate/First-Line Therapy	Alternative Options
<ul style="list-style-type: none"> 1.5-2 mg IV or high-flow oxygen Metoclopramide 10 mg IV Dexamethasone 8 mg IV Hydrocodone/acetaminophen 5 mg/325 mg PO 	<ul style="list-style-type: none"> acetaminophen 1000 mg PO + ibuprofen 400 mg PO Dexamethasone 4 mg PO Propofol 1-2 mg IV Magnesium 2 g IV Magnesium 1 g IV Hydrocodone 5 mg PO Propofol 10-20 mg IV bolus every 10 min
Musculoskeletal Pain	
Non-IV Therapies	IV Therapy Options
<ul style="list-style-type: none"> acetaminophen 1000 mg PO + ibuprofen 400 mg PO gabapentin 300 mg PO acetaminophen 1000 mg PO lidoderm patch (max 3 patches) ketamine 0.5 mg IV Hydrocodone/acetaminophen 5 mg/325 mg PO 	<ul style="list-style-type: none"> ketamine 0.2 mg/kg IV x 0.1 mg/kg/h q1h ketamine 10 mg IV Dexamethasone 8 mg IV Propofol 10 mg IV
Renal Colic	
Immediate/First-Line Therapy	Second-Line IV Therapy
<ul style="list-style-type: none"> acetaminophen 1000 mg PO metoclopramide 10 mg IV 1.5-2 mg IV or high-flow oxygen 	<ul style="list-style-type: none"> lidocaine 1.5 mg/kg IV over 200 mg

Ref: COLORADO ACEP 2017 Opioid Prescribing & Treatment Guidelines



OPIOID LIGHT ED PAIN MANAGEMENT

Colorado ERs work together to lower opioid prescribing by 36%

MARIA CASTELLUCCI



The emergency room is a hotbed for opioid abuse. Patients visiting the ER often are treated for pain, and opioids are a traditional remedy for doing that.

But as opioid addiction ravages communities across the U.S., a group of ER clinicians in Colorado have changed how they treat pain, recognizing the contribution they have made to the crisis by their prescribing patterns.

"What we were doing with opioids was harming our population instead of helping," said Dr. Don Stader, an ER physician at Swedish Medical Center in Englewood and architect of the Colorado Opioid Safety Pilot. "We helped create this epidemic."

<https://www.medicinesafetypilot.com/article/2018/02/15/TRANSFORMATION/180217/colorado-ers-work-together-to-lower-opioid-prescribing-by-36>



INCREASING ACCESS TO NALOXONE

JAMA Network Open.

Original Investigation | Subscriptions and Additions

Association of Naloxone Coprescription Laws With Naloxone Prescription Dispensing in the United States

Wojcik, PhD, MPH; Scharf, PhD; Zengier-Huang, PhD; Minkoff, PhD; Hoot, PhD; Hoot, PhD

JAMA Network Open. 2019;2(5):e190205.

Opioid Education and Nasal Naloxone Rescue Kits in the Emergency Department

Russell Dwyer, MD¹
Alexander Y. Wu, MD, MSc²
Bryant R. Longene, MD³
Patricia B. Mitchell, MD⁴
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[JAMA J Emerg Med. 2019;16(3):381-384]

- **Naloxone saves lives!**
- **Increased education to patients & family**
- **Increased public access**
 - **First Responders**
 - **ED dispensing & education**
 - **Retail pharmacy access w/o prescription**
 - **Co-prescription laws**



NALOXONE (NARCAN®)

- **Reversal agent for Opioid overdose**
- **Saves Lives**
- **Nasal spray and intramuscular injections**
- **Available at many retail pharmacies without a prescription**



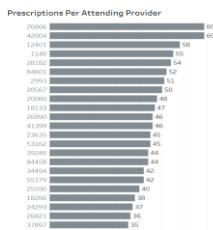


Source: <https://harmreduction.org/blog/overdose-awareness-day/>



- Ensure that patients and their family know when and how to use naloxone
- Need to increase access to naloxone
- May not be the patient who overdoses but another family member or visitor

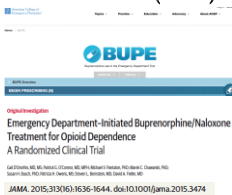
PEER OPIOID PRESCRIBING DATA COMPARISON



- Provide individual clinicians with peer comparison data
- Ensure Fair Comparisons: Must adjust for differences in # patients seen
 - e.g. Opioid Rx per 100 ED Discharges, Surgeries, inpt discharges or clinic visits
- Provide education to outliers and then monitor prescribing practices after intervention for short & long-term change



ED INITIATION OF MEDICATION-ASSISTED TREATMENT (MAT)



- ED-based MAT provides life-saving treatment to patients
- Major paradigm shift in clinical practice
- Multiple clinical trials ongoing and planned to determine best practice



IMPACT OF ED-INITIATED MAT

- EDs are already treating patients with Opioid Use Disorder (OUD)
- Initiating MAT is best for the patient and healthcare system given associated illnesses
- MAT initiation is cost-effective
- ED referral for ongoing treatment needs established flexible referral systems
- Many OUD Treatment Programs are interested in enrolling ED patients

A scalable, automated warm handoff from the emergency department to community sites offering continued medication for opioid use disorder: Lessons learned from the EXHRED trial stakeholders
 Ousman M. Ahmed¹, Joel A. Han², Stephen R. Hall³, Kathryn Hawk⁴, Gail D'Onofrio⁵, Shree Menon⁶, Edward R. McEneaney⁷
Journal of Substance Abuse Treatment 102 (2019) 47–52

Emergency Departments — A 24/7/365 Option for Combating the Opioid Crisis
 Gail D'Onofrio, M.D., Ryan P. McCormack, M.D., and Kathryn Hawk, M.D., M.H.S.

N ENGL J MED 379:26 NEJM.ORG DECEMBER 27, 2018



CHALLENGES WITH IMPLEMENTING MAT

- Stigma
- Provider beliefs
 - Lengthen ED stay
 - Attract more patients seeking Buprenorphine to the ED
 - ED will become the Opioid Detox Hospital in town
- Cost and Time of MAT training “X-waiver requirement”
- Initiation of MAT is too complicated
- Lack of treatment centers to refer these patients from ED

N ENGL J MED 379:26 NEJM.ORG DECEMBER 27, 2018



RESEARCH & PUBLIC HEALTH CHAMPIONS

JAMA | Original Investigation
 Effect of a Single Dose of Oral Opioid and Nonopioid Analgesics on Acute Extremity Pain in the Emergency Department
 A Randomized Clinical Trial

Andrew K. Chang, MD, MS, PhD¹, Ryan P. McCormack, MD, PhD², Douglas F. Karmaliy, MD, MS, MPH³, Anna Gao, MD

THE TREATMENT GAP
 This E.R. Treats Opioid Addiction on Demand. That's Very Rare.
 Some hospital emergency departments are giving people medicine for withdrawal, plugging a hole in a system that too often fails to provide immediate treatment.

Emergency Departments — A 24/7/365 Option for Combating the Opioid Crisis

Gail D'Onofrio, M.D., Ryan P. McCormack, M.D., and Kathryn Hawk, M.D., M.H.S.

N ENGL J MED 379:26 NEJM.ORG DECEMBER 27, 2018

Medical News & Perspectives

May 16, 2018

As Overdoses Climb, Emergency Departments Begin Treating Opioid Use Disorder

Free Article

JAMA. Published online May 16, 2018. doi:10.1001/jama.2018.4548



RESEARCH & PUBLIC HEALTH CHAMPIONS



Facing Off Against A Dangerous Opponent

Nashville Doctor And Hockey Dad Spreads The Word To The Grassroots About The Dangers Of Opioids

AUGUST 2018 BY JENNIFER HARRIS FOR THE NASHVILLE POST

- Everyone can make a difference in their community
- Encourage Hospital Administration to prioritize opioid stewardship
- Seek opportunities to educate your community especially parents and adolescents/teenagers



NONMEDICAL USE OF OPIOIDS

Survey of 21,557 US 12th graders (2006-2014) who participated in ≥ 1 sport reported the following nonprescription use of Opioids within the prior year

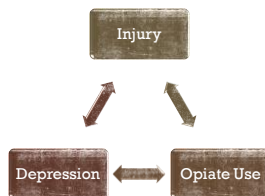
Sport	% use/past year	Sport	% use/past year
Baseball	9.6%	Swimming	9.1%
Basketball	8.7%	Soccer	6.9%
Cross Country	6.0%	Tennis	7.3%
Field Hockey	9.1%	Track	6.6%
Football	11.4%	Volleyball	7.7%
Gymnastics	10.9%	Weightlifting	12.3%
Ice Hockey	14.0%	Wrestling	14.6%
Lacrosse	11.8%	All Surveyed	8.3%

Values are all nonmedical use of prescription opioids and heroin use among adolescents involved in competitive sports. J Adolescent Health. 2017 March; 60(3):346-348. doi:10.1016/j.jadohealth.2016.08.001



MENTAL HEALTH AND OPIATE USE

- Treating these conditions may lower risk of opiate use³



1:Yang et al., 2007; 2:Edlund et al., 2015; 3:Velis et al., 2017



EDUCATE PATIENTS ON PROPER DISPOSAL OF LEFTOVER PILLS



NEXT STEPS

- Remember who matters most – the patient & their family
- Strike a balance between appropriate opioid stewardship and pain management
- Be hypervigilant during the COVID-19 Pandemic
- Educate our patients, our communities, and our policy makers
- Continued research into the consequences of this epidemic