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MADISON EMERGENCY PHYSICIANS

EMERGENCY MEDICINE & EMS IN OPIOID RELATED EMERGENCIES

NO DISCLOSURES

OBJECTIVES

- Current opioid overdose surveillance and options for acute interventions by EMS in the out-of-hospital environment
- Current options available for acute medical intervention/ support in some Wisconsin Emergency Departments (EDs)
- Limitations to implementing programs in the ED and EMS

OUTLINE

- EMS & Emergency Medicine in Wisconsin
- Basic overview of opioid related emergencies
- Surveillance
- Existing programs
- Challenges to implementation

OPIOID RELATED EMERGENCIES

- Opioid related emergencies (simple categories)
  - Acute opioid overdose
  - Acute opioid withdrawal
- Can be isolated medical emergencies, or concomitant with:
  - Other substance use or withdrawal syndrome
  - Medical emergencies or complications
  - Psychiatric emergencies or complications

DEFINING EMS & EMERGENCY MEDICINE

- In Emergency Medicine & EMS, our primary goal is to assess for and treat emergency medical conditions in a safe, effective, and evidence-based way
- In cooperation with local hospitals and healthcare systems, public health, law enforcement, supporting services, etc
- Treat patients with the underlying bioethical principals of:
  - Beneficence
  - Non-maleficence (*Primum non nocere*: “First, do no harm”)
  - Confidentiality
  - Distributive justice (fairness)

EMS IN WISCONSIN

- 5 “levels” of EMS
  - EMR (First Responder, non transport, often volunteer)
  - EMT-Basic
  - Advanced EMT
  - Paramedic
  - Critical Care Paramedic (interfacility transport)
- EMS Physician Medical Director

EMS IN WISCONSIN

- Basic skills (Airway, Breathing, Circulation) such as BVM, CPR, are required at all levels. IVs start at the AEMT level.
- Medications are either optional or required defined by WI Scope of Practice:

VIII. Skill—Medications Approved per Protocol	EMR	EMT	AEMT	INT	PARA	CCP
Morphine				O[9]	O[10]	O[10]
Naloxone (Narcan)	O	R	R	R	R	R

EMS RESPONSE TEAMS OFTEN TIERED/MULTIDISCIPLINARY

- 911: Emergency Medical Dispatcher
- Law enforcement
- Fire/EMR
- EMS

EMS IN WISCONSIN

- Additional EMS specialities
  - Tactical EMS
  - Community Paramedicine
- EMS-adjacent
  - 911 EMD: Emergency Medical Dispatch
  - Law enforcement naloxone administration

EMS IN WISCONSIN

- All EMS services operate with:
  - A defined and state approved set of protocols
  - Under the supervision and direction of a physician medical director
- Ongoing education, skills, state and national licensure, quality assurance, medical oversight, etc

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EMS IN WISCONSIN

- All EMS services operate with:
  - A defined and state approved set of protocols
    - Under the supervision and direction of a physician medical director
- Wisconsin DHS defined statutes: DHS 110 and DHS 256
- Ongoing education, skills, state and national licensure, quality assurance, medical oversight.

EMS IN WISCONSIN

- Transport or Refusal
  - EMS will transport to an area ED (location is protocol/ guideline defined or patient choice)
  - If patient has *capacity* to refuse, they can decline transport. Informed of risks and benefits of the medical professional recommendation for treatment/transport.
  - If **no** capacity to refuse and transport required, law enforcement can assist.

EMERGENCY MEDICINE IN WISCONSIN

- Providers:
  - Physicians (MD, DO) Board eligible/certified in Emergency Medicine (may also be Family or Internal Med)
  - Advanced Practice Providers (NP, PAs)
- Team consisting of ED RNs, Techs, Respiratory Therapists. May also include Social workers, Case Managers, Physical Therapists, Pharmacists, students/residents.

EMERGENCY MEDICINE IN WISCONSIN

- Locations
  - Tertiary Care and Academic Centers
  - Hospital based Emergency Departments (majority)
  - Free standing Emergency Departments
- According to the WHA (WI Hospital Association): In 2019, 156 EDs reported 1,823,723 visits

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Wisconsin DHS

Opioids in Wisconsin

Deaths

15.8
2019 Rate per 100,000 Residents

In the last three years (**2017** to **2019**) the Rate of opioid-related deaths in Wisconsin changed by **-1.8%.**

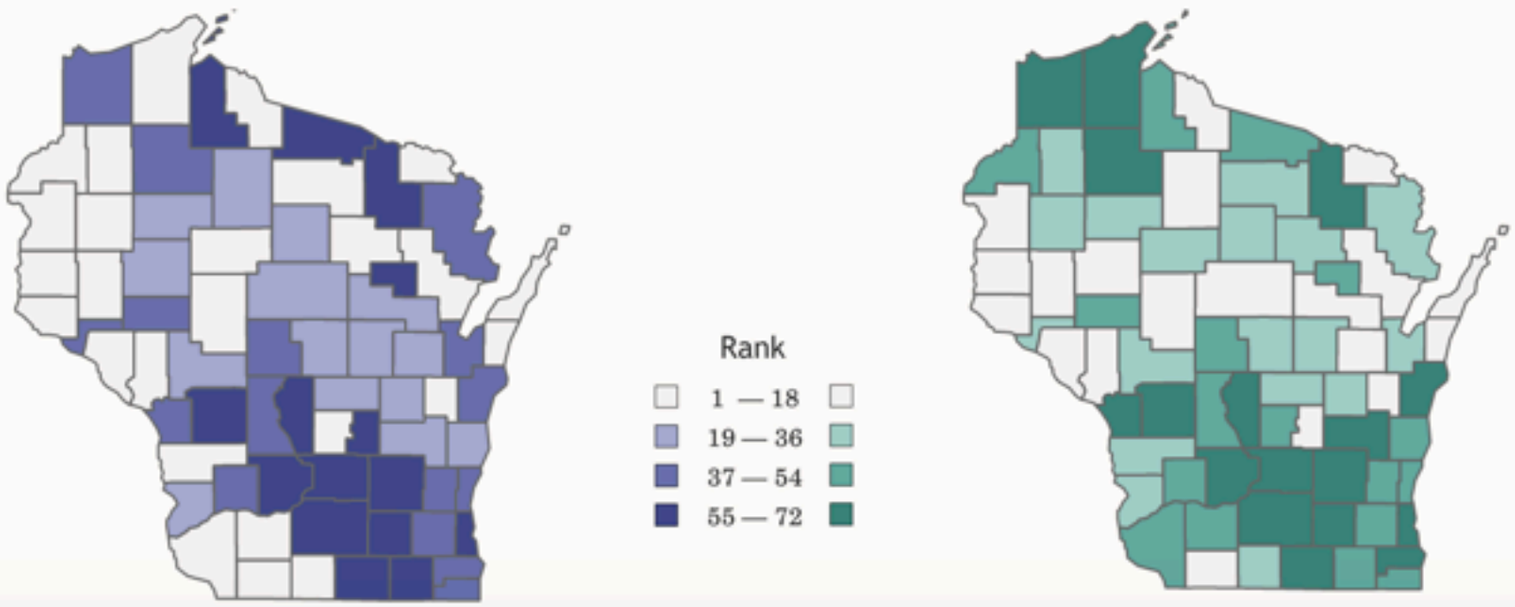
As of **3/31/2020**, there have been **256** opioid-related deaths in the year.

Hospitalizations

Emergency Room	Inpatient
43.9	**20.3**
2019 Rate per 100,000 Residents	**2019 Rate per 100,000 Residents**

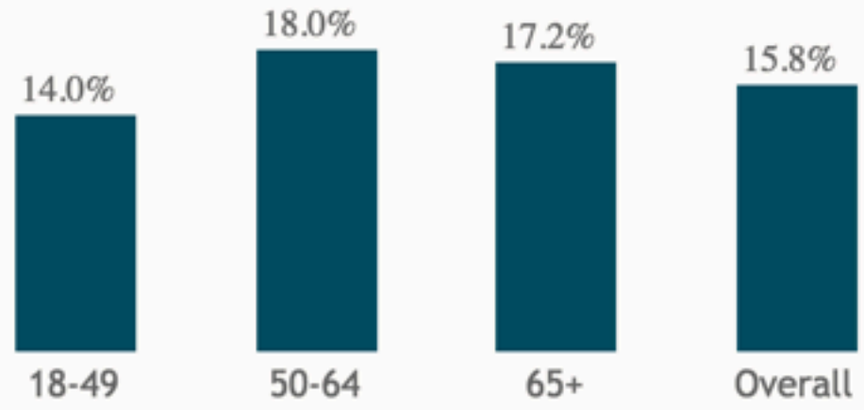
In the last three years (**2017** to **2019**) the Rate of opioid-related **emergency room visits** in Wisconsin changed by **-16.8%.**

As of **3/31/2020**, there have been **1,030** opioid-related inpatient and emergency room hospital visits in the year.



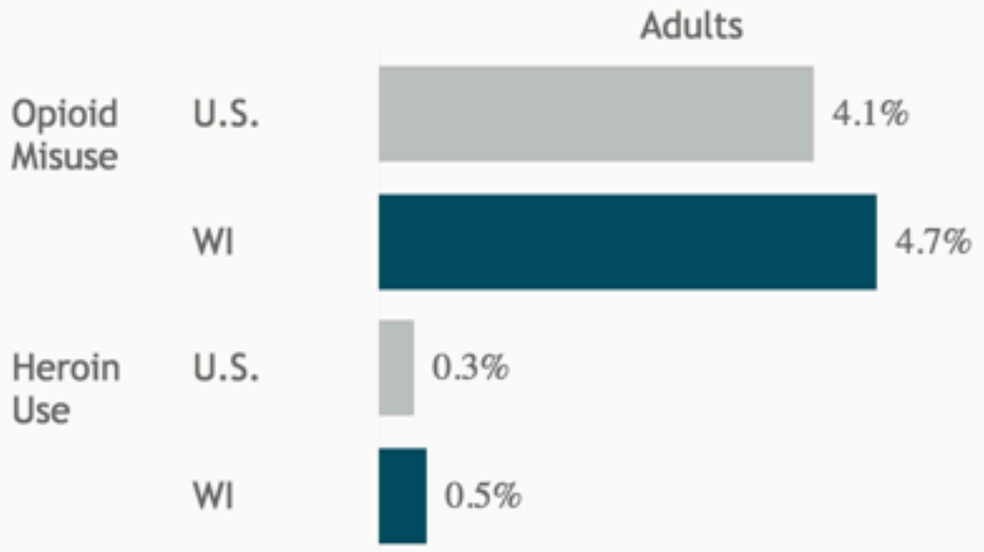
Use of Opioids and Heroin in Wisconsin

Proportion who Used a Prescribed Opioid in the Past Year: Wisconsin 2019



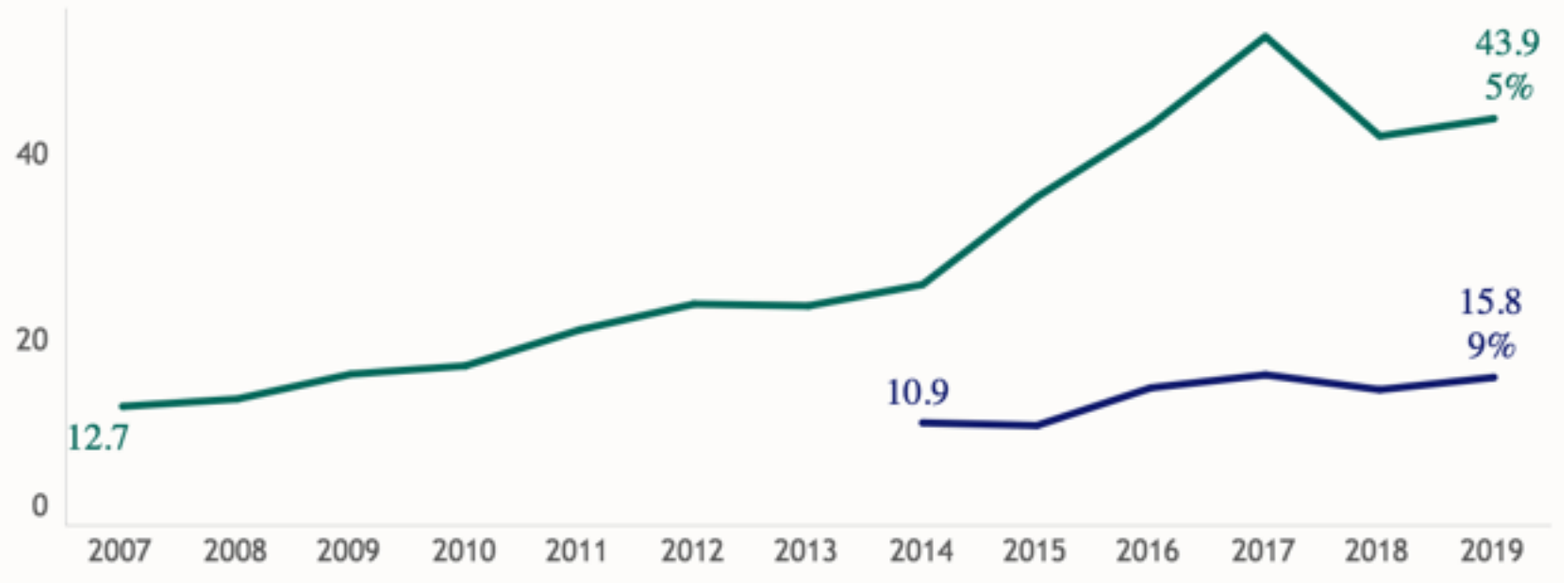
An estimated 1 in 6 Wisconsin adults (18+) were prescribed and used an opioid in the past year.

Estimated Proportion of Drug Misuse in the Past Year



Recommended Citation: Wisconsin Department of Health Services. Data Direct, Opioid Summary Module [web query]. Data last updated 9/1/2020 1:20:20 PM.

Rate per 100,000 of Opioid-Related **Deaths** and **Emergency Room Hospitalizations**



ACUTE OPIOID OVERDOSE

- Scene safety for first responders
- ABCs: Open airway if occluded, provide respirations, start chest compressions if no pulse.
- EMS will not initiate CPR if WI DNR bracelet in place or in “Obvious death”: signs of rigor mortis, dependent lividity, other signs of decomposition or obvious death.

ACUTE OPIOID OVERDOSE

- Scene safety for first responders
- If EMD trained, 911 dispatchers can talk through either administration of naloxone or CPR with caller if applicable
- Law enforcement may initiate care if first on scene, and most can provide intranasal naloxone.

ACUTE OPIOID OVERDOSE

- EMS providers are trained: “There is no “N” in the ABCs”- airway, breathing, and circulation come in the first moments, even in suspected opioid overdose. This provides vital oxygen and perfusion, despite underlying presumed cause. Other causes of respiratory depression/arrest considered.
- Naloxone can be administered nasally, IV or Intraosseous/IO (AEMT or Paramedic services).
- Other routes (IM, SQ, and via endotracheal tube) less effective and not preferred.

ACUTE OPIOID OVERDOSE

- Naloxone in adolescents and adults:
  - Intranasal (IN) doses tend to be higher due to poor bioavailability: 2 to 4mg every 2 to 3 minutes, split nares if injectable form given via nasal atomizer.
  - IV doses: 0.4 to 2mg every 2-3 minutes
  - Titrated to return of spontaneous respirations
  - Can precipitate withdrawal, unmask concomitant stimulant or other underlying complication.
  - Rarely can cause acute pulmonary edema, but severe

ACUTE OPIOID OVERDOSE

- Naloxone in infants and children:
  - Intranasal (IN) dosing is the same: 2 to 4mg, every 2 to 3 minutes, split nares if injectable form given via nasal atomizer.
  - IV doses: 0.1mg/kg/dose, 2mg max, every 2-3 minutes
  - Titrated to return of spontaneous respirations and signs of adequate perfusion.

ACUTE OPIOID OVERDOSE

- Care in the ED:
  - Initial interventions & naloxone as EMS dosing
  - Continuous naloxone infusion: In ED/ICU, if a long acting opioid or prolonged exposure to high doses or high potency opioid, can be initiated.
- Other medical evaluation & medical intervention as required (IV fluids, blood glucose, etc)

POST ACUTE OPIOID OVERDOSE

- Patient can refuse (EMS) or leave against medical advice (ED) early if they have capacity and ability to do so.
- Once medically stable in the ED, can discharge patient
- If OUD (opioid use disorder), discharge with naloxone prescription & guidance for use
- Resources and referrals, primary care, addiction medicine, mental health support, etc as needed

POST ACUTE OPIOID OVERDOSE

- Peer support in the ED
  - Pre-coordinated, ideally 24/7, call peer support for presence in the ED
- Patient can accept or decline
- Example: ED2Recovery
- Goal: Increase support, decrease ED recidivism and overdose fatalities

https://eipd.dcs.wisc.edu/non-credit/WI_Voices/Peer-Support-ED-Setting/Transcript/RecoveryU%20Module%201_%20Peer%20Support%20in%20the%20ED%20Setting.pdf

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MAT: BUPRENORPHINE INDUCTION & REFERRAL

- Some EDs have induction protocols
- Some Emergency Physicians are X-waivered to prescribe buprenorphine, but most are not. Data not available.
- X-waivered ED physicians can prescribe for 72 hours
- Referral program for prompt follow up a key component, partnering community clinics & prescribing physicians

https://eipd.dcs.wisc.edu/non-credit/WI_Voices/Peer-Support-ED-Setting/Transcript/RecoveryU%20Module%201_%20Peer%20Support%20in%20the%20ED%20Setting.pdf

MAT: BUPRENORPHINE INDUCTION & REFERRAL

- Limitations to establishing ED MAT induction & referral:
  - Stigma among ED providers
  - Continuing education, time for MAT eduction, X-waiver
  - Time/length of stay in ED typically longer than average, times often incentivized metric, waiting room/boarding
  - Coordination of follow-up/referral, establishing and maintaining reliable clinic/provider connection

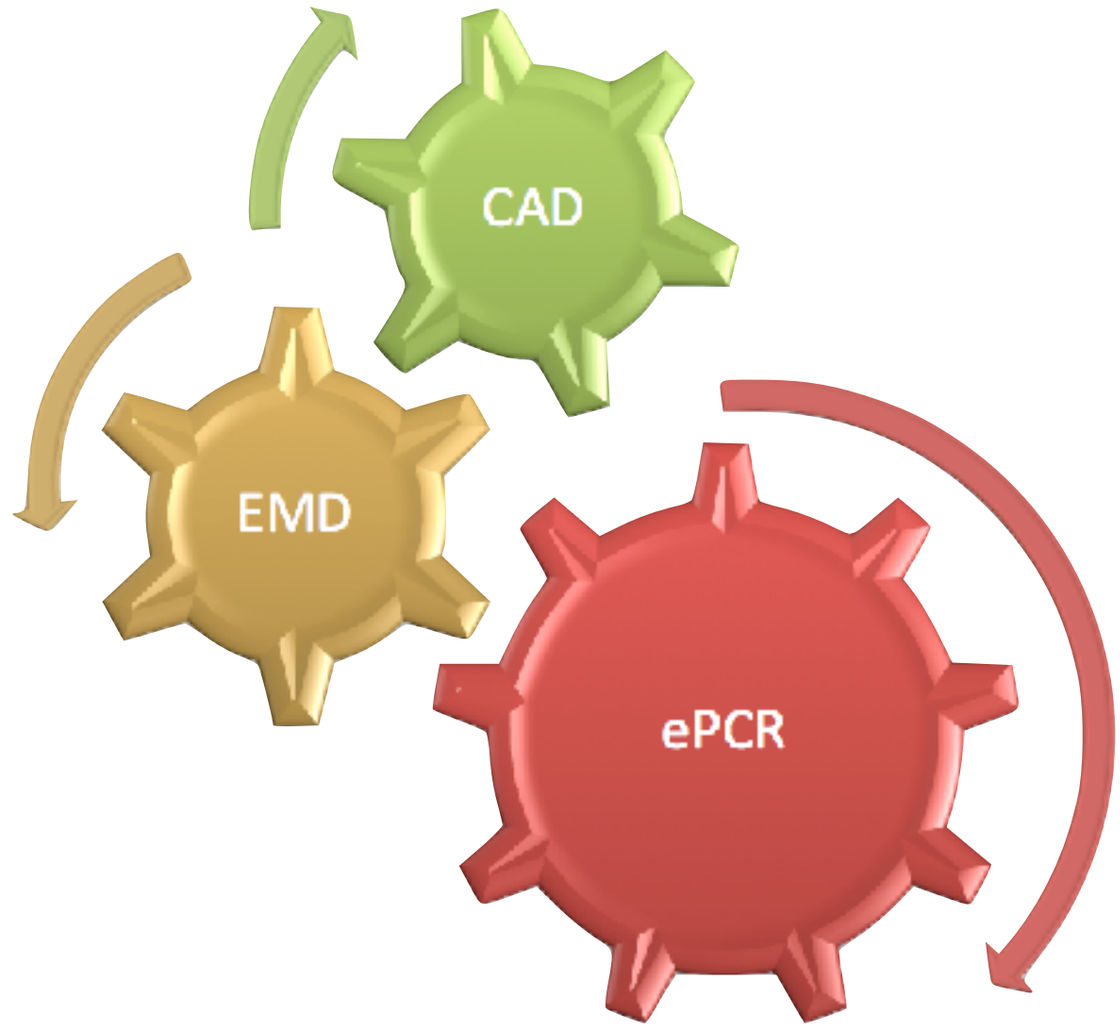
https://eipd.dcs.wisc.edu/non-credit/WI_Voices/Peer-Support-ED-Setting/Transcript/RecoveryU%20Module%201_%20Peer%20Support%20in%20the%20ED%20Setting.pdf

SURVEILLANCE

- National, state, County, and local data
- More timely data can be obtained from:
  - 911 call data
  - EMS run report data
  - ED medical record data
  - External local sources: Public Health, Coroner data

SURVEILLANCE

- More timely data can be obtained from:
  - 911 (CAD= computer aided dispatch, EMD= emergency medical dispatch codes)
- EMS run report data (ePCR)
- ED medical record data
- External local sources: Public Health, Coroner data



SURVEILLANCE

Enhanced State Opioid Overdose Surveillance (ESOOS)

NEW DATA: REPORTING ON NONFATAL AND FATAL OVERDOSE

Every four months, ESOOS-funded states report overdose data about ED visits and EMS transports to CDC, including:

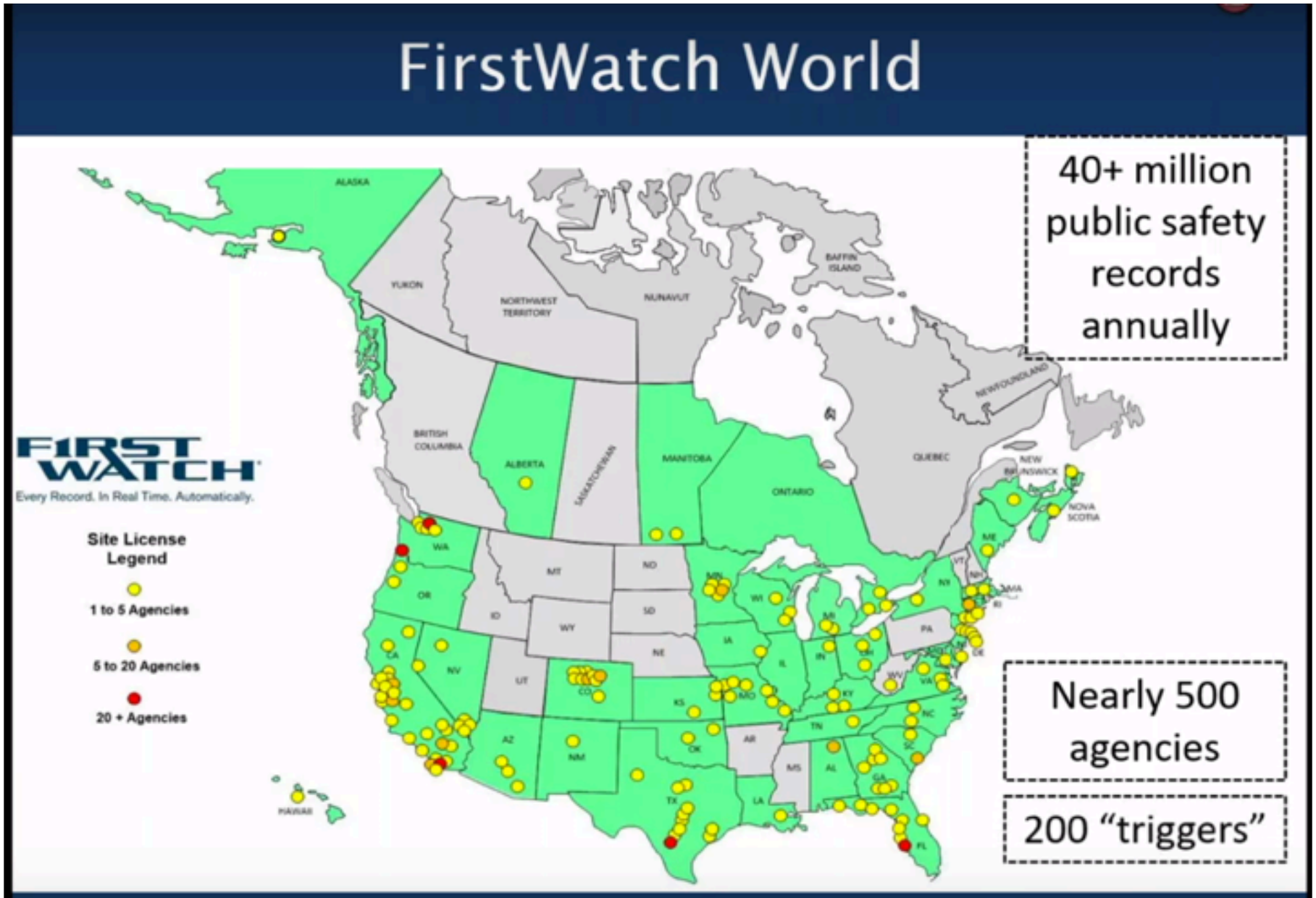
- Syndromic or hospital billing data to identify all drug, opioid, and/or heroin overdoses that presented in EDs
- Data on EMS transports, such as whether naloxone was administered and, if so, the number of doses
- Demographic characteristics of those who overdosed, such as sex, age, race/ethnicity, and county of residence

Every six months, ESOOS-funded states report critical death-scene investigation information on overdose deaths through SUDORS, including:

- Type of opioid (e.g., prescription, heroin, or illicitly manufactured fentanyl) from toxicology reports
- Evidence of injection drug use (e.g., needles on scene, track marks on decedent, tourniquet) or other illicit drug use (e.g., drug paraphernalia, powders, crystal substances)
- Whether someone administered naloxone during the emergency medical response and, if so, who
- Evidence that the opioid overdose progressed rapidly
- Recent release from an institution, such as prison
- History of mental health disorders
- History of substance use disorders
- County where fatal overdose occurred

SURVEILLANCE

- More timely data can be obtained from:



POST OVERDOSE FOLLOW UPS

- Community paramedicine-based outreach
- 2-3 day follow up, example team: 2 EMTs and a peer support person
- Provide resources, support, naloxone, and establish peer support relationship

Tri-State Ambulance paramedics to distribute naloxone kits

Tri-State Ambulance will be first in Wisconsin to distribute a kit containing the life-saving drug to those with opioid addiction.

Posted: August 26, 2020 8:25 AM

Journal of Substance Abuse Treatment 111 (2020) 11–15

Contents lists available at ScienceDirect

Journal of Substance Abuse Treatment

journal homepage: www.elsevier.com/locate/jsat

Outreach to people who survive opioid overdose: Linkage and retention in treatment

James Langabeer[a,b,*], Tiffany Champagne-Langabeer[a], Samuel D. Luber[b], Samuel J. Prater[b], Angela Stotts[c], Katherine Kirages[a], Andrea Yatsco[a], Kimberly A. Chambers[b]

Highlights

- Many individuals with prior opioid overdose do not voluntarily engage in treatment.
- Mobile peer and paramedic outreach teams were used to engage people who survived a recent overdose into treatment.
- 33% of people contacted chose to engage in treatment and 88% of these remained in treatment for the first 30 days.
- Outreach could be a promising strategy to

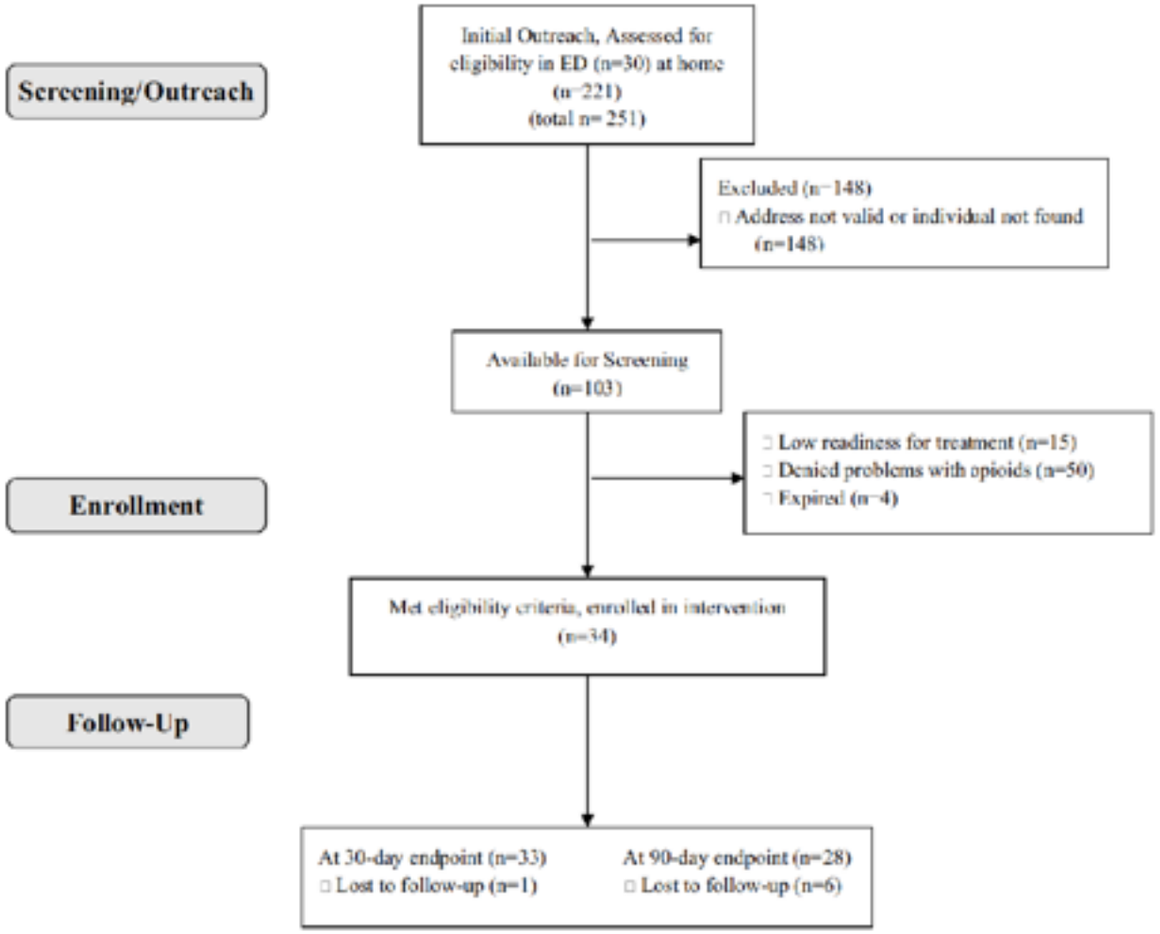


Fig. 1. Study enrollment and follow-up diagram.

EMERGENCY MEDICINE FOCUS

WACEP
Wisconsin Chapter
American College of Emergency Physicians

MAT and the Emergency Medicine Workforce

Opioid use disorder is out of control in Wisconsin!

- The CDC reports that 91 Americans die every day from an opioid overdose and that there is 1 opioid death for every 32 ED visits for opioid use disorder or withdrawal
- Wisconsin DHS found a 35% increase in deaths due to opioid overdoses from 2015 to 2016 prompting the governor to declare the opioid epidemic a public health crisis
- In 2018, the number of Wisconsin ED visits for opioid overdose doubled
- 92% of Wisconsin emergency physicians report treating a patient suffering from opioid use disorder or opioid withdrawal every single clinical shift

Patients are not getting their pills from the ED

- While pain is the #1 chief complaint among patients seeking emergency care, only 5% of opioids prescribed originate from the ED
- ED prescribers accounted for only 1.5% of pills prescribed to patients in the 12 months before their death

EMERGENCY MEDICINE FOCUS

WACEP
Wisconsin Chapter
American College of Emergency Physicians

Medication Assisted Treatment Works and the Wisconsin emergency physician workforce is ready!

- MAT Decreases opioid use, opioid-related overdose deaths, criminal activity, and infectious disease transmission
- Wisconsin emergency physicians strongly support MAT for opioid use disorder, ranking it the second most effective available treatment option after intensive outpatient long-term treatment
- Wisconsin EDs are in a strong position to reduce opioid use in our communities, because they have regular contact with the highest risk patients
- The majority of Wisconsin emergency physicians support initiating MAT in the ED and 42% support the initial prescription coming from an emergency physician

But... Wisconsin emergency physicians need help from our health systems and community partners!

- 86% of Wisconsin emergency physicians require expanded social work services in to help with scheduling/assuring outpatient MAT follow up
- 85% of Wisconsin emergency physicians require timely outpatient follow up (within 3 days) for MAT patients
- 82% of Wisconsin emergency physicians require increased availability of behavioral/mental health support services
- 68% require additional knowledge and clinical expertise in order to prescribe buprenorphine effectively
- 53% see the state training requirement (X-Wavier) as a barrier

CHANGE CAN START WITH ONE ED DOCTOR AND ONE REFERRAL CLINIC.

Cultivate CHAMPIONS among clinicians, nurses, pharmacists, social workers, behavioral health staff, and administrators.

Encourage clinicians to get BUPRENORPHINE TRAINING.

Partner with PHARMACISTS.

Build relationships with fellow CLINICIANS for ongoing cases.

Collaborate with BEHAVIORAL HEALTH SERVICES where available.

Develop a TEAM-BASED APPROACH involving the ED, inpatient services, and outpatient clinics.

Integrate buprenorphine into SAFE PRESCRIBING GUIDELINES in the ED.

Connect addiction treatment with the TREATMENT OF WITHDRAWAL AND OVERDOSE.

EMERGENCY MEDICINE FOCUS

WACEP
Wisconsin Chapter
American College of Emergency Physicians

- Increasing support and championing programs in various EDs and EMS systems around WI
- Resources and support online for education/ CME for physicians
- Wisconsin Hospital Association
- Wisconsin Medical Society
- Federal support and resources: CDC, SAHMSA, and professional groups (ACEP, AAEM, ASAM)

RECAP: OBJECTIVES

- Current opioid overdose surveillance and options for acute interventions by EMS in the out-of-hospital environment
- Current options available for acute medical intervention/ support in some Wisconsin Emergency Departments (EDs)
- Limitations to implementing programs in the ED and EMS

QUESTIONS? FEEDBACK?

THANK YOU!

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