

# Emergency Department Perspective

## Access to Care



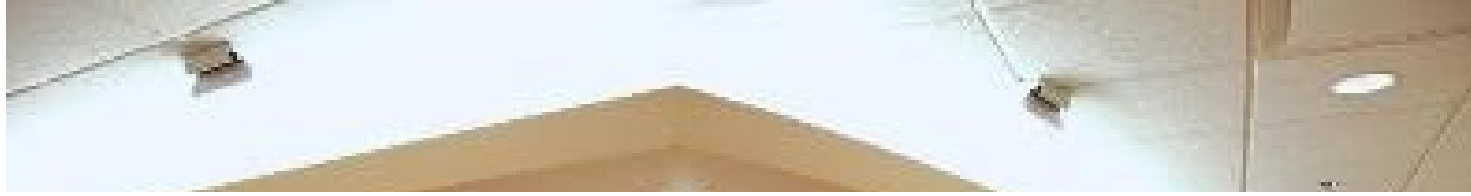
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# Disclosure Statement

## Current grant funding:



# Why focus on the ED?



**Because that's where the patients are!**



Approximately one of every 80 visits to the ED are opioid-related (costing 5 billion per year)

# Not all that looks like an opioid OD is.....

The New York Times

## *New Haven Overdoses Tied to Laced K2*

Aug 15, 2018

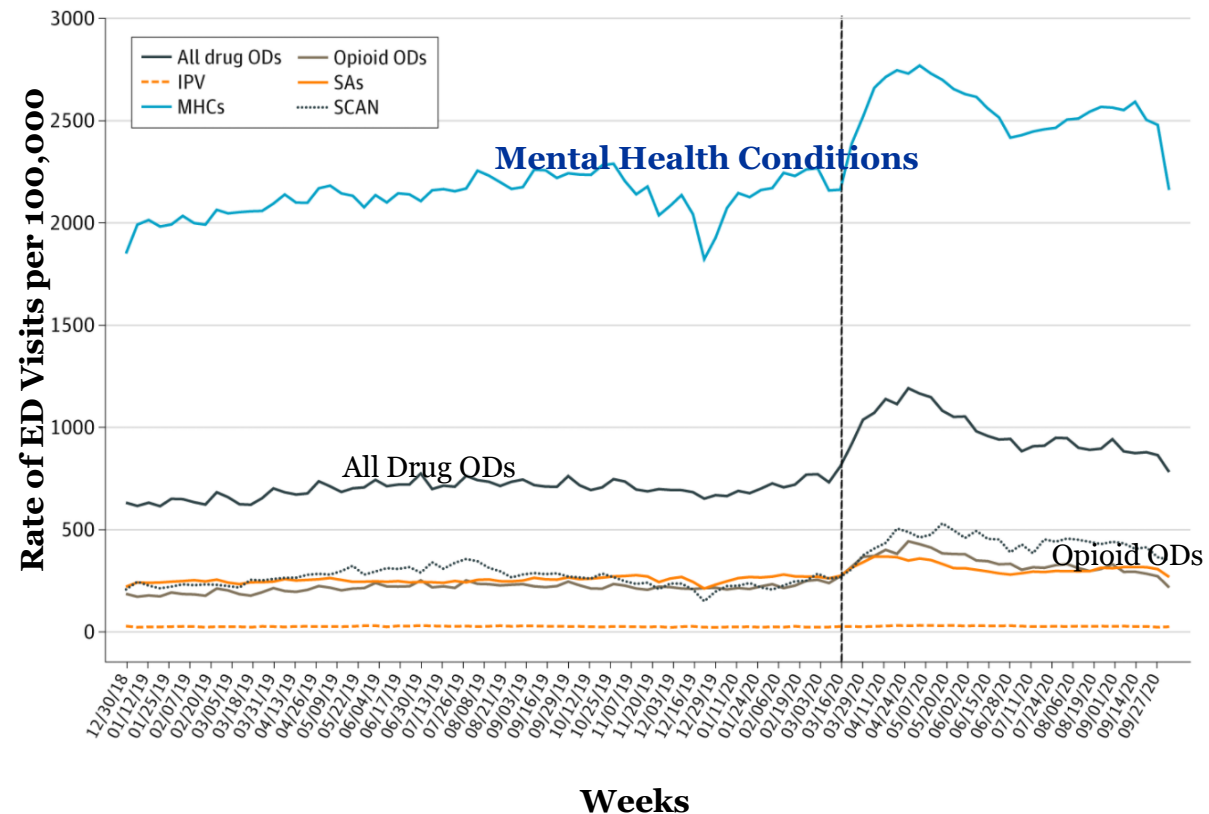


Emergency personnel responded to at least 49 overdoses in New Haven, many on New Haven Green.  
Arnold Gold/Hearst Connecticut Media

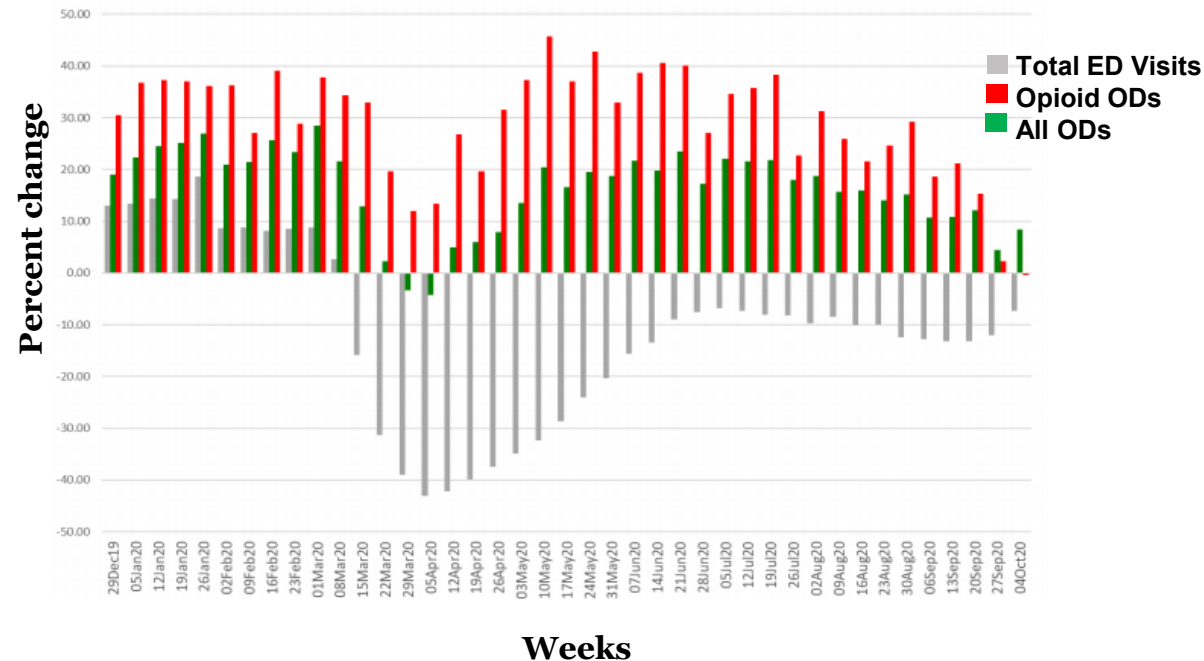
- 52 patients -111 ED visits
- 49 patients within 10 hours
- Variable presentations of altered mental status – ranging from agitated delirium to comatose
- No deaths, 2 intubations

**Synthetic Cannabinoids**  
MMB-FUBINACA  
5F-MDMB-PINACA

# COVID-19 Collides with the Opioid Epidemic



**Count of ED Visits in the US  
December 30, 2018, to October 10, 2020**



**Weekly %  $\Delta$  in Total ED visits, all drug OD,  
and opioid OD in 2020 compared to 2019**

# Use of Medication-Assisted Treatment in Emergency Departments

Emergency



**SAMHSA**  
Substance Abuse and Mental Health  
Services Administration

## Content of the Guide

This guide contains a foreword and five chapters. The chapters are modular and do not need to be read in order. Each chapter is designed to be brief and accessible to health care providers, health care system administrators, community members, and others working to meet the needs of individuals with OUD.

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### FW Evidence-Based Resource Guide Series Overview

Foreword and introduction to the series.

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### 1 Issue Brief

Overview of how the ED is uniquely positioned to help individuals presenting with opioid use disorder; the pharmacology of Medication-Assisted Treatment with specific attention to buprenorphine and its formulations for use in the ED. In addition, tips are provided to improve adoption and reduce the stigma of opioid use disorder.

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### 2 What Research Tells Us

Current evidence regarding the effectiveness of ED-initiated buprenorphine and implementation strategies. Included are harm reduction strategies such as overdose education and naloxone distribution.

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### 3 Examples of Emergency Department Programs

Highlights four innovative ED programs using evidence-based practices for ED-initiated buprenorphine and referral to continuing care.

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### 4 Addressing Myths to Implementing Evidence-Based Practices and Programs

Practical strategies to ensure success in adoption of ED-initiated buprenorphine.

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### 5 Resources to Support Greater Access to and Effective Use of Medications for Opioid Use Disorder in Emergency Departments

Guidance and resources for implementing evidence-based programs and practices, monitoring outcomes, and improving quality.

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## FOCUS OF THE GUIDE

The prevalence of OUD has reached epidemic proportions in the United States.

The ED, with its continual accessibility (24 hours a day/ 7 days a week/365 days a year), offers a unique option to combat this escalating crisis and save lives.

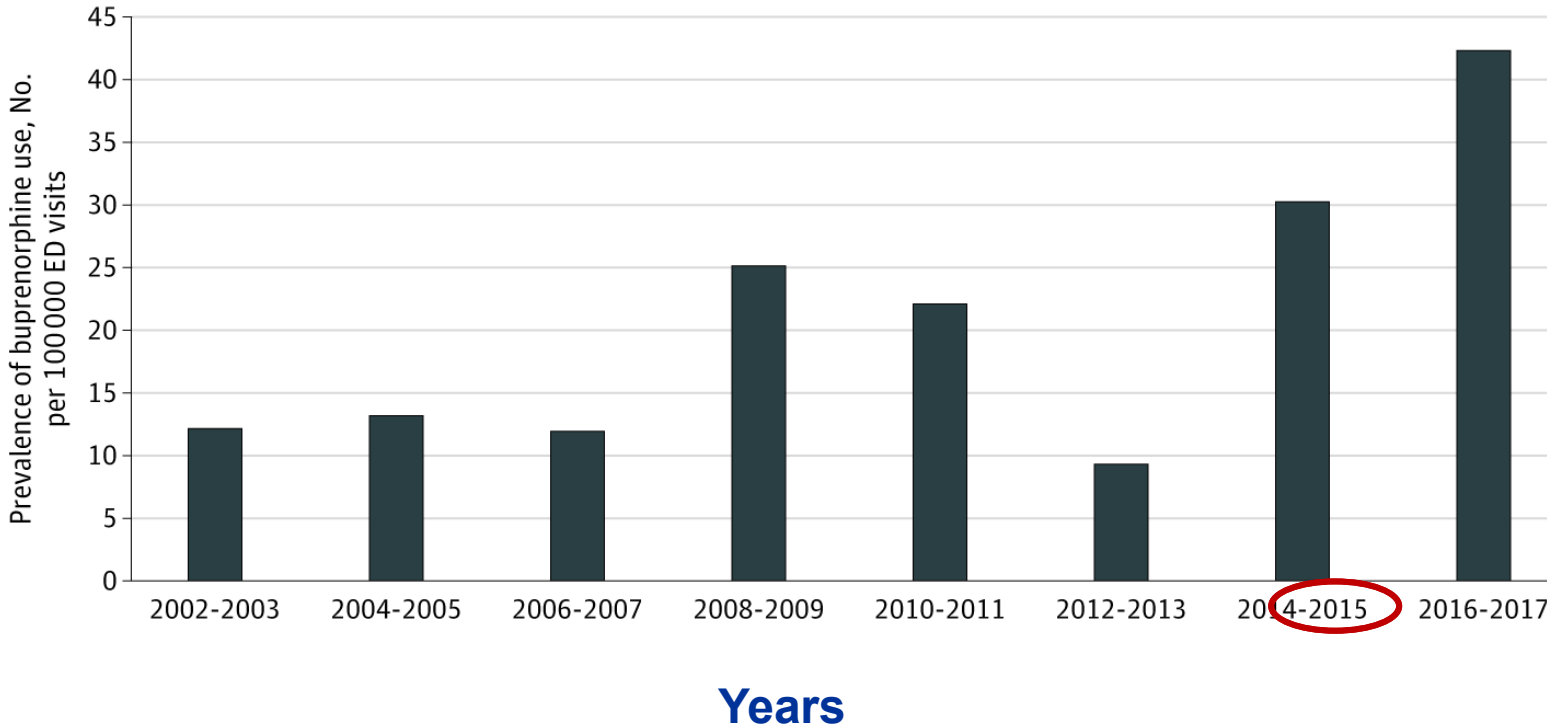
Individuals presenting with life-threatening conditions such as overdose or seeking treatment for withdrawal symptoms or other complications of OUD can find the care they need. The ED visit provides an opportunity to identify individuals needing treatment, offer motivational strategies to enhance acceptance of treatment, initiate evidence-based interventions, and provide direct linkages for ongoing medical management and community services.

This guide focuses on evidence-based interventions for the initiation of MAT in EDs, specifically buprenorphine. It provides guidance on developing programs to provide these clinical services, overcoming challenges, and successful implementation strategies.

## Trends in the Use of Buprenorphine in US Emergency Departments, 2002-2017

Taeho Greg Rhee, PhD, MSW; Gail D'Onofrio, MD, MS; David A. Fiellin, MD

### Prevalence of buprenorphine use, #/100,000 ED visits



**Buprenorphine Use increased significantly from 2002-2003 to 2016-2017** (odds ratio for linear trend, 3.31; 95% CI, 1.04-10.50; P = .04).

# Patient Themes (CTN 0069 & 0079)

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- **Need for low-barrier access to treatment in the ED, particularly after OD**
- **Sense that ED staff did not understand addiction or perceive it as a medical disease**
- **Perception that pain and medical issues were minimized or not taken seriously because of history of addiction**
- **History of feeling stigmatized while receiving ED care, with recent variability noted across EDs**
- **Rare positive experiences with clinicians**



## To Date...

There are no standardized and broadly implemented ED-based detection, intervention, and referral protocols for patients with opioids and amphetamine type stimulant use

# Methamphetamine Use Promotes more Chaotic & Unpredictable Opioid Use

- Fluctuating opioid use amounts and irregular use patterns
- Typical activated state of opioid withdrawal, is diminished as patient sedated, often used for such...(COWS scoring inaccurate)
- Withdrawal of a methamphetamine binge results in severe somnolence that can confound assessment of opioid withdrawal.
- Opioid OD may occur in attempt to reduce effects from a prolonged meth binge
  - Hypersomnolence with opioid use may lead to OD with an opioid dose that might not normally cause an OD.

# Use of Amphetamine-Type Stimulants Among Emergency Department Patients With Untreated Opioid Use Disorder



Marek C. Chawarski, PhD\*; Kathryn Hawk, MD, MHS; E. Jennifer Edelman, MD, MHS; Patrick O'Connor, MD, MPH; Patricia Owens, MS; Shara Martel, MPH; Edouard Coupet, Jr, MD, MS; Lauren Whiteside, MD; Judith I. Tsui, MD, MPH; Richard Rothman, MD; Ethan Cowan, MD; Lynne Richardson, MD; Michael S. Lyons, MD; David A. Fiellin, MD; Gail D'Onofrio, MD, MS

## Editor's Capsule Summary

### *What is already known on this topic*

Individuals with opioid use disorder often use other agents that complicate care and recovery.

### *What question this study addressed*

What are the characteristics of the group of emergency department (ED) patients who have untreated opioid use disorder and urine toxicology evidence of amphetamine-type co-use?

### *What this study adds to our knowledge*

Of 396 ED patients at 4 self-selected urban EDs, 38% had concomitant amphetamine-type drugs detected. There was a complex pattern of differences between patients with and without amphetamine-type drugs in their urine.

### *How this is relevant to clinical practice*

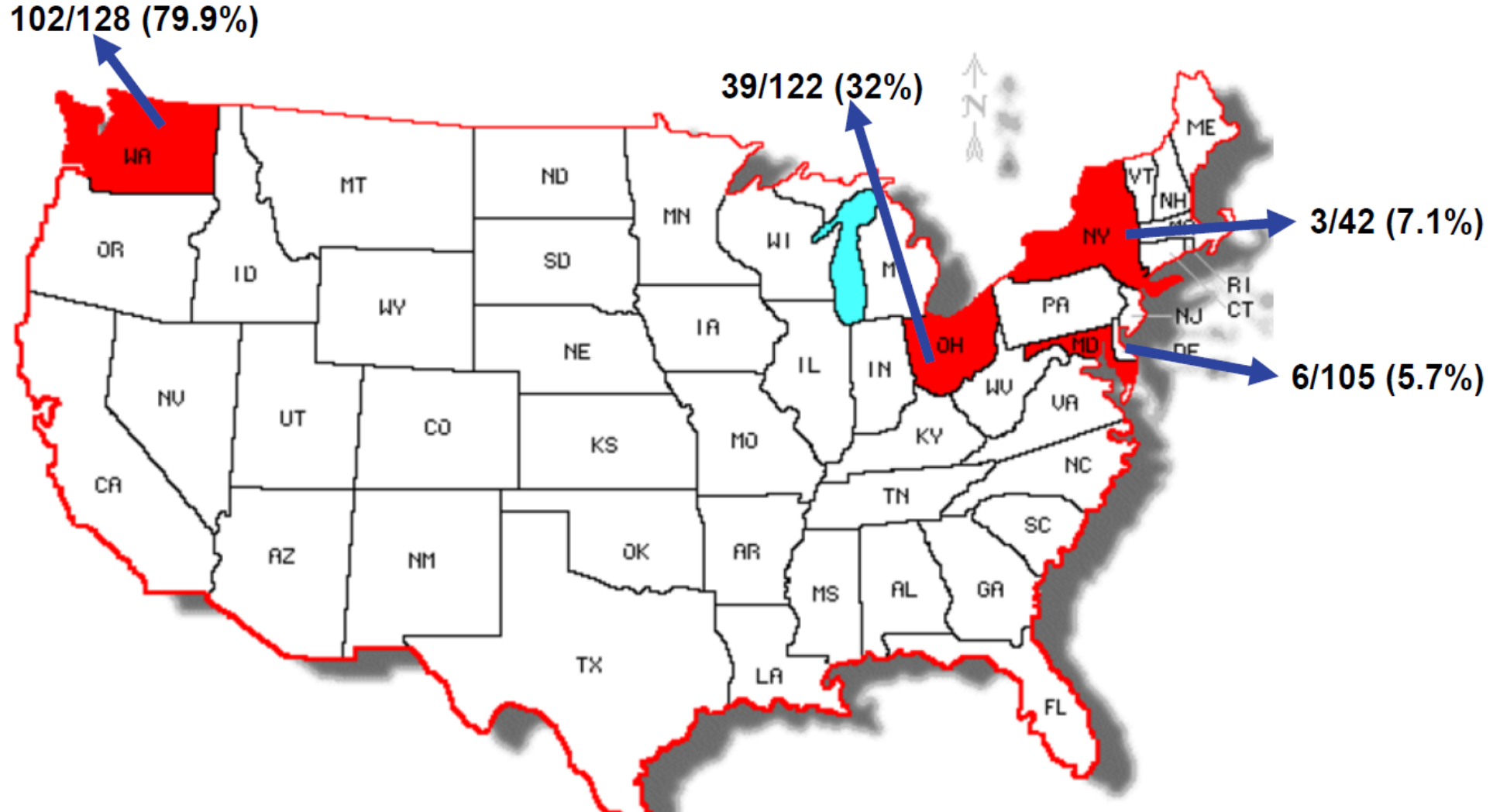
Many opioid use disorder patients co-use stimulants; how this affects care in the ED and afterward is unclear.

**Amphetamine-type stimulant use among ED patients with untreated opioid use disorder was associated with distinct sociodemographic, social, and health factors.**

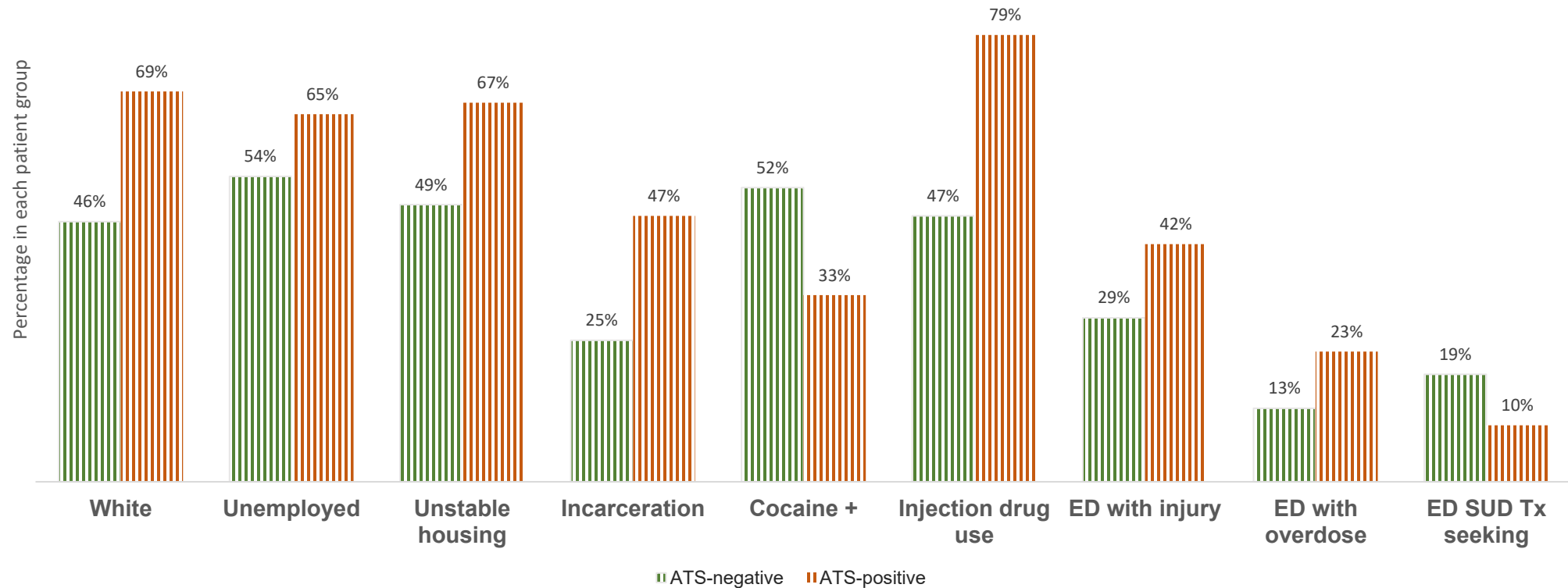
CTN 0069 Project ED Health

**Annals of Emerg Med Dec 2020**

# Amphetamine Type Stimulant Use Baseline CTN 0069



# Differences between ATS+ & ATS- Patients



Note: FDR-corrected significance level for ED presentation with overdose was  $p=0.057$ .  
All other FDR-corrected significance levels were  $p < 0.05$ .

# ED INNOVATION 27 Sites

## ED-INITiated BupreNORphine VALidaTION Network Trial



### Hybrid Type 1 Implementation-Effectiveness

Comparing the effectiveness of XR-BUP (7-day injectable) & SL-BUP induction on engagement in formal addiction treatment at 7 days

# CTN 0099 Substance Use (POC Urine Testing)

Substance	Overall (N = 361)	Region		P Value
		East – 18 sites (N = 213)	West – 8 sites (N = 148)	
N (%)				
Opioid + Other Drug	301 (83.4)	171 (80.3)	130 (87.8)	0.06
Opioid + Marijuana	170 (47.1)	95 (44.6)	75 (50.7)	0.26
Opioid + Benzodiazepines	64 (17.7)	48 (22.5)	16 (10.8)	0.004
Fentanyl Only	17 (4.7)	15 (7.0)	2 (1.4)	0.01
Fentanyl + Other Drug	244 (67.6)	168 (78.9)	76 (51.4)	<.0001
<b>Opioids &amp; Stimulants</b>				
Opioid + Meth	119 (33.0)	39 (18.3)	80 (54.1)	<.0001
Opioid + ATS	131 (36.3)	47 (22.1)	84 (56.8)	<.0001
Opioid + Any Stimulant	208 (57.6)	110 (51.6)	98 (66.2)	0.006

Opioids = buprenorphine, opiates, oxycodone, fentanyl

Other Drugs = amphetamines, barbiturates, benzodiazepines, cocaine, ecstasy, methamphetamine, phencyclidine, marijuana

ATS = methamphetamine, Amphetamine

Stimulant = Cocaine, amphetamine, methamphetamine, phencyclidine

# Possible Treatment Strategies

- Treat the life-threatening disease with known benefit (OUD with buprenorphine)
- Irregular use of opioids, makes chance of taking daily buprenorphine unlikely
  - XR-BUP 30-day injection is most realistic intervention for severe co-use
  - Use of high-dose buprenorphine to bridge gap between ED and follow-up
- Harm reduction may focus on the binge use of methamphetamines and treating insomnia and thought disorder
  - Provide access to mood stabilizing drugs, sleep aids and antipsychotics



# Research Questions & Opportunities for EDs

- Missing critical tools: Test specific pharmaco- & behavioral interventions
  - Current behavioral treatments are complex, (contingency management) and would need funding from insurers (private, Medicaid/Medicare)
- Address vulnerable populations in all interventions
- Test strategies that will promote access and linkage to care
- Use of ED INNOVATION network for surveillance (prevention & treatment efforts before OD death data) as well as provides opportunities for future studies

Thank you!!!



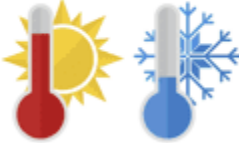







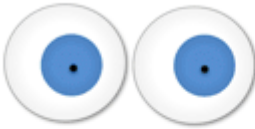



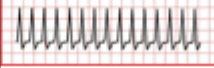

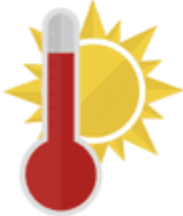
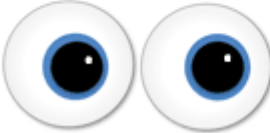

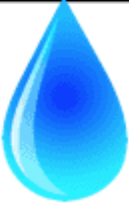


Websites:

<https://www.drugabuse.gov/ed-buprenorphine>

<https://medicine.yale.edu/edbup/>

# Opioid vs. Sympathomimetic Toxidromes

	HR & BP	Resp.	Temperature	Pupils	Bowel Sounds	Diaphoresis
						
<b>Opioid</b> Morphine • Codeine • Tramadol • Heroin • Meperidine • Diphenoxylate • Hydromorphone • Fentanyl • Methadone • Propoxyphene • Pentazocine • DXM • Oxycodone • Hydrocodone	 			<b>Pinpoint</b> 		
<b>Sympathomimetic</b> Caffeine, cocaine, amphetamines, methamphetamines, Ritalin, LSD, Theophylline, MDMA	 			<b>Dilated</b> 		

# A Randomized Trial of ED-Initiated Interventions for Opioid Dependence

Research

**Original Investigation**

## Emergency Department-Initiated Buprenorphine/Naloxone Treatment for Opioid Dependence

### A Randomized Clinical Trial

Gail D'Onofrio, MD, MS; Patrick G. O'Connor, MD, MPH; Michael V. Pantalon, PhD; Marek C. Chawarski, PhD; Susan H. Busch, PhD; Patricia H. Owens, MS; Steven L. Bernstein, MD; David A. Fiellin, MD

**IMPORTANCE** Opioid-dependent patients often use the emergency department (ED) for medical care.

**OBJECTIVE** To test the efficacy of 3 interventions for opioid dependence: (1) screening and referral to treatment (referral); (2) screening, brief intervention, and facilitated referral to community-based treatment services (brief intervention); and (3) screening, brief intervention, ED-initiated treatment with buprenorphine/naloxone, and referral to primary care for 10-week follow-up (buprenorphine).

**DESIGN, SETTING, AND PARTICIPANTS** A randomized clinical trial involving 329 opioid-dependent patients who were treated at an urban teaching hospital ED from April 7, 2009, through June 25, 2013.

**INTERVENTIONS** After screening, 104 patients were randomized to the referral group, 111 to

+ JAMA Report Video  
Author Video Int  
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