

ULANCE

MR

DICAL RESPONSE

The Opioid Crisis

**Emergency Physicians as Innovators,
Policymakers & Heroes**



Yale SCHOOL OF MEDICINE



The Opioid Crisis

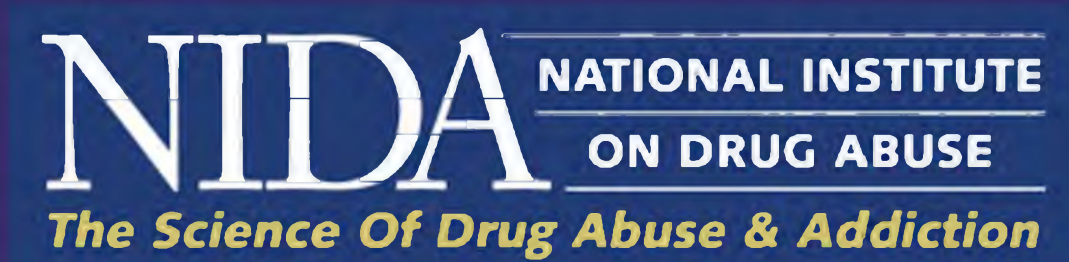
**Emergency Physicians as Innovators,
Policymakers & Heroes**



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Disclosure Statement

Current grant funding:



Provided funding for filming & production of videos displayed on our interactive web portal



Faces of Addiction



Beau Allen Patterson 3/3/93 - 2/10/17
Vienna, WV
Home from a 90 day rehab program. Cause of death fentanyl intoxication. Veteran of U.S. Army

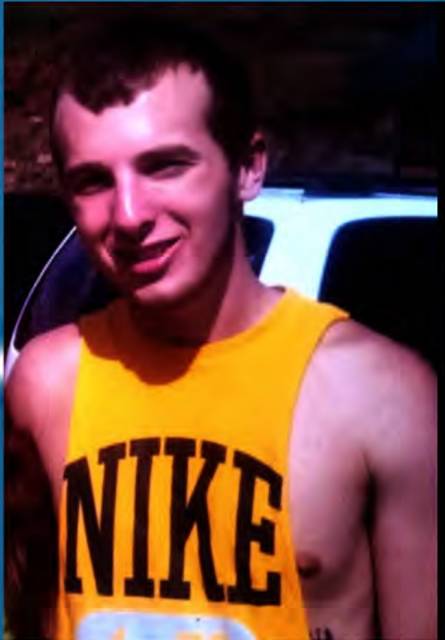


Tommy Sowell 7/3/91 - 2/13/16
Kincheloe, WV
Cause of death heroin overdose. Avid hunter and fisherman

Every day, more than 115 people in the U.S. die after overdosing on opioids.

CDC, 2016 Data

Sources: <https://losttoopioids.nsc.org/index.html>



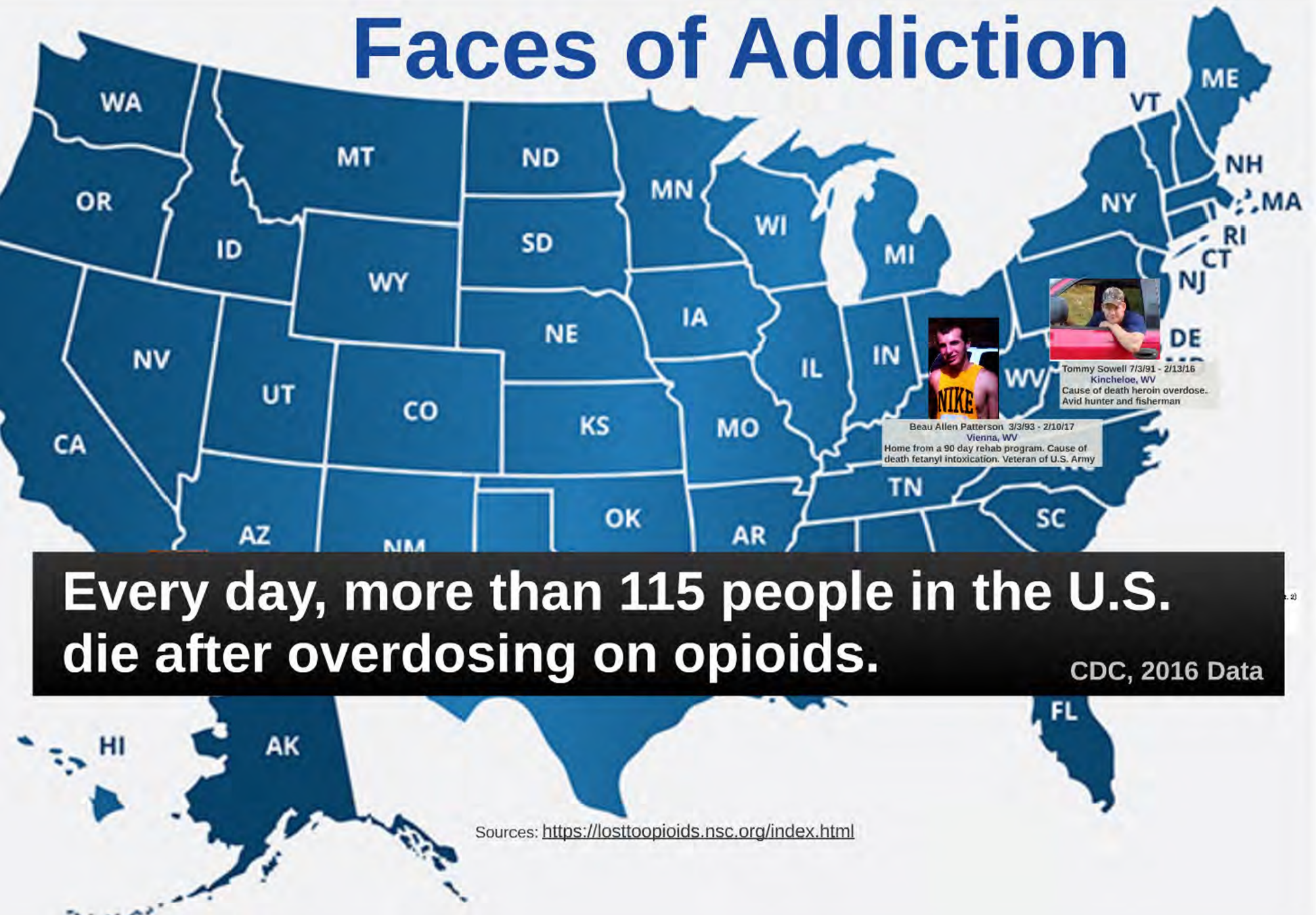
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Faces of Addiction



Every day, more than **115** people in the U.S. die after overdosing on opioids.

CDC, 2016 Data

Sources: <https://losttoopioids.nsc.org/index.html>

**20.1 million Americans > 12 years of age
have a substance use disorder**

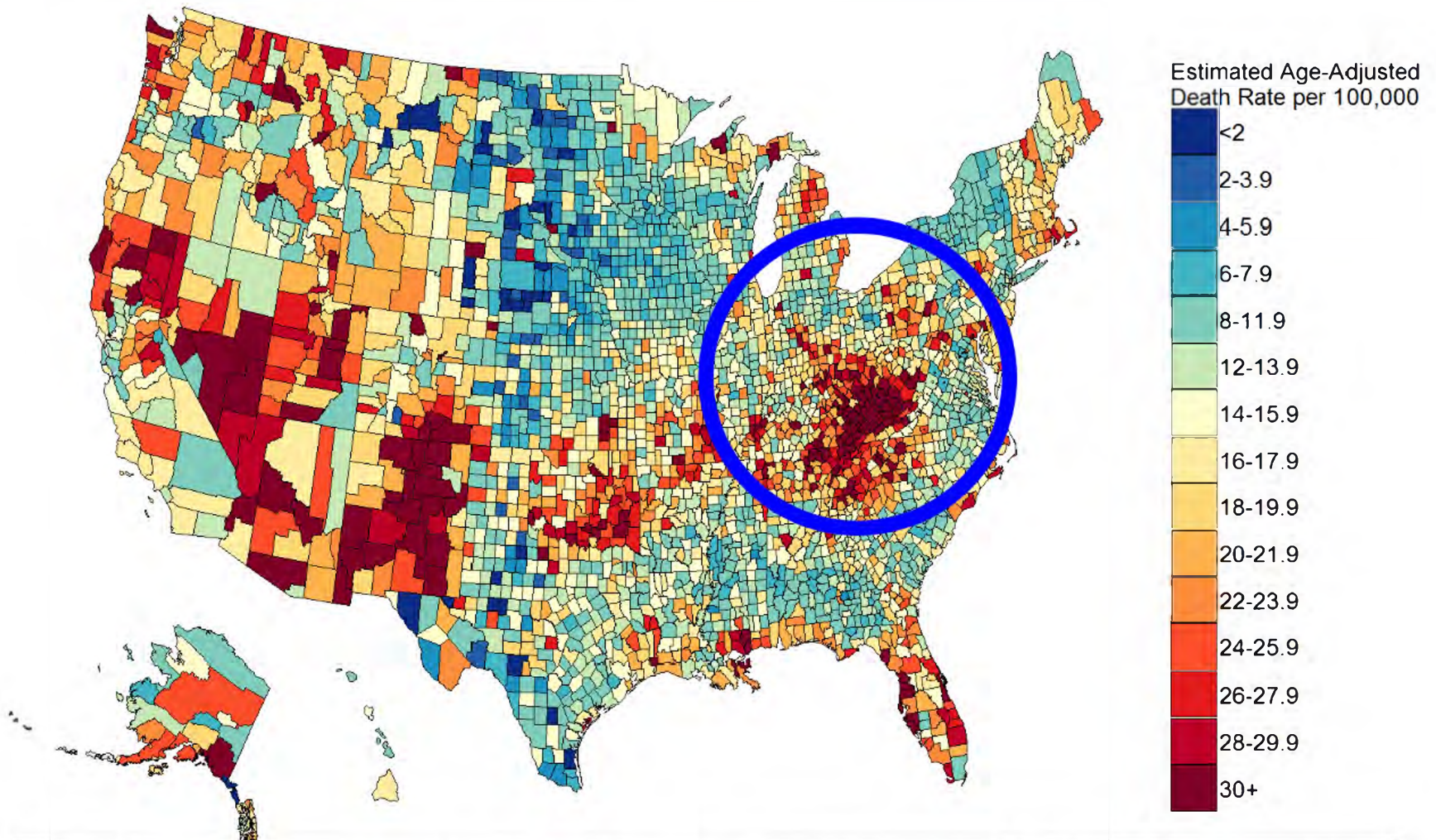
2.1 million have a opioid use disorder

**3.3 million report non-medical use of
pain relievers in the past month**

NSDUH, 2017

Overdose Death Rates

2016



Virtually all corners of the U.S. impacted by drug overdose

West

States With the Most Opioid Deaths

200

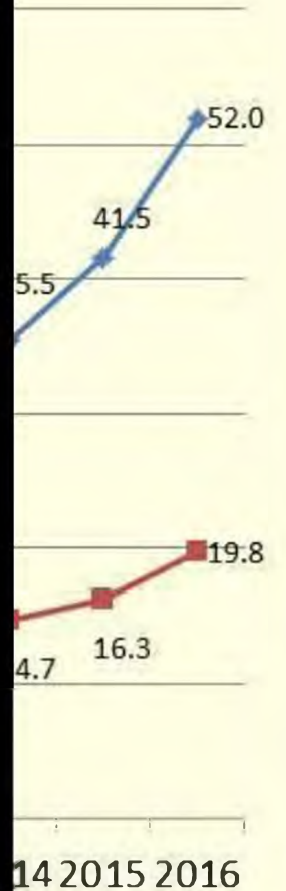
60.0
50.0
40.0
30.0
20.0
10.0
0.0

2001

Data Source: WV
Rates are age-adjusted

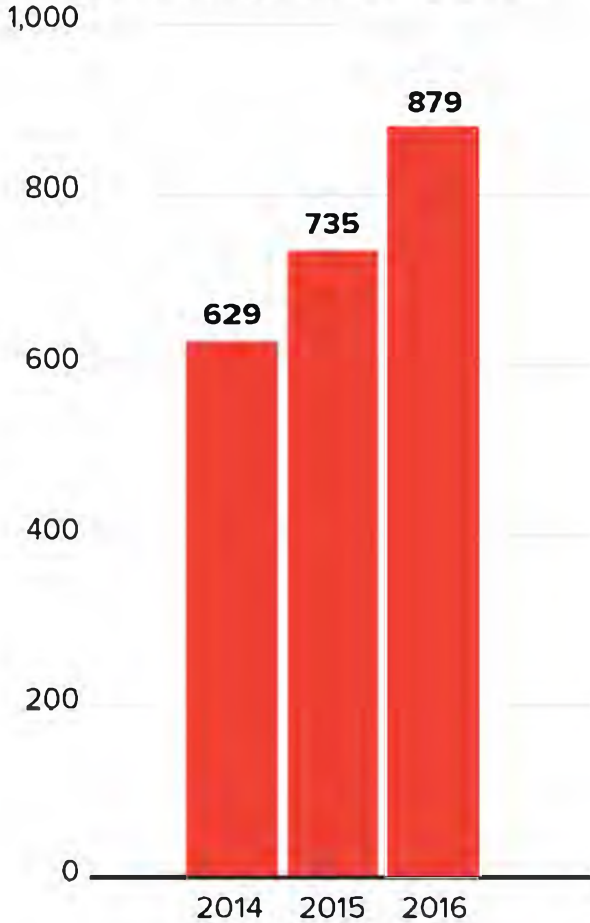


- West Virginia (52.0 per 100,000)
- Ohio (39.1 per 100,000)
- New Hampshire (39.0 per 100,000)
- Pennsylvania (37.9 per 100,000)
- Kentucky (33.5 per 100,000)

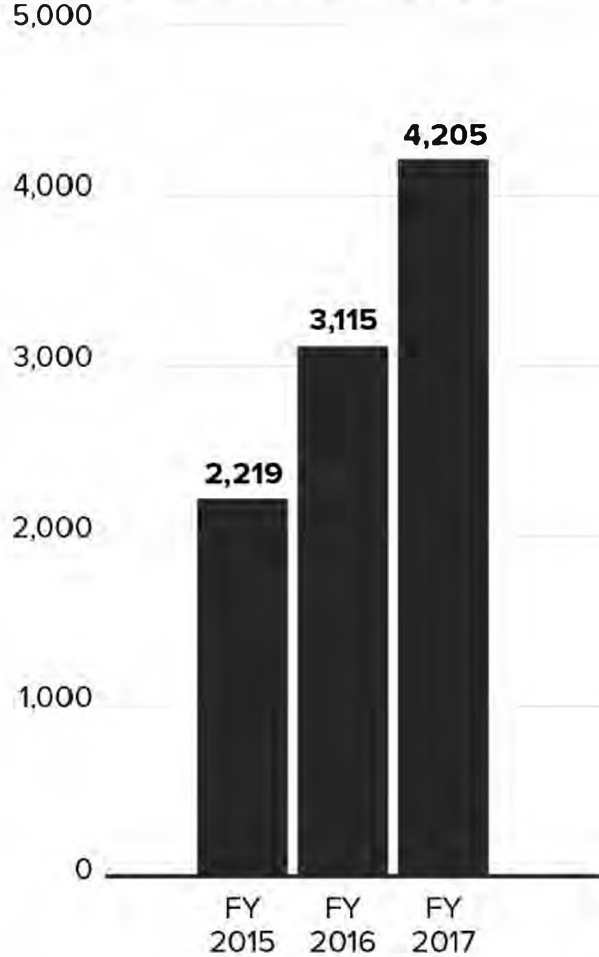


The Opiate Crisis Is Costing West Virginia

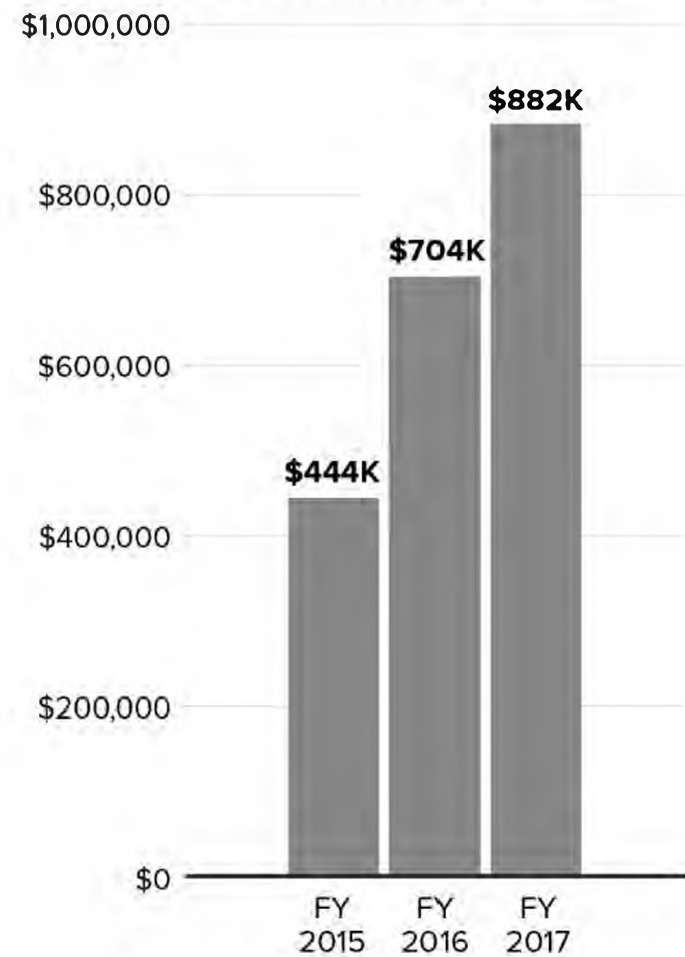
West Virginia drug overdose deaths



West Virginia total body transports



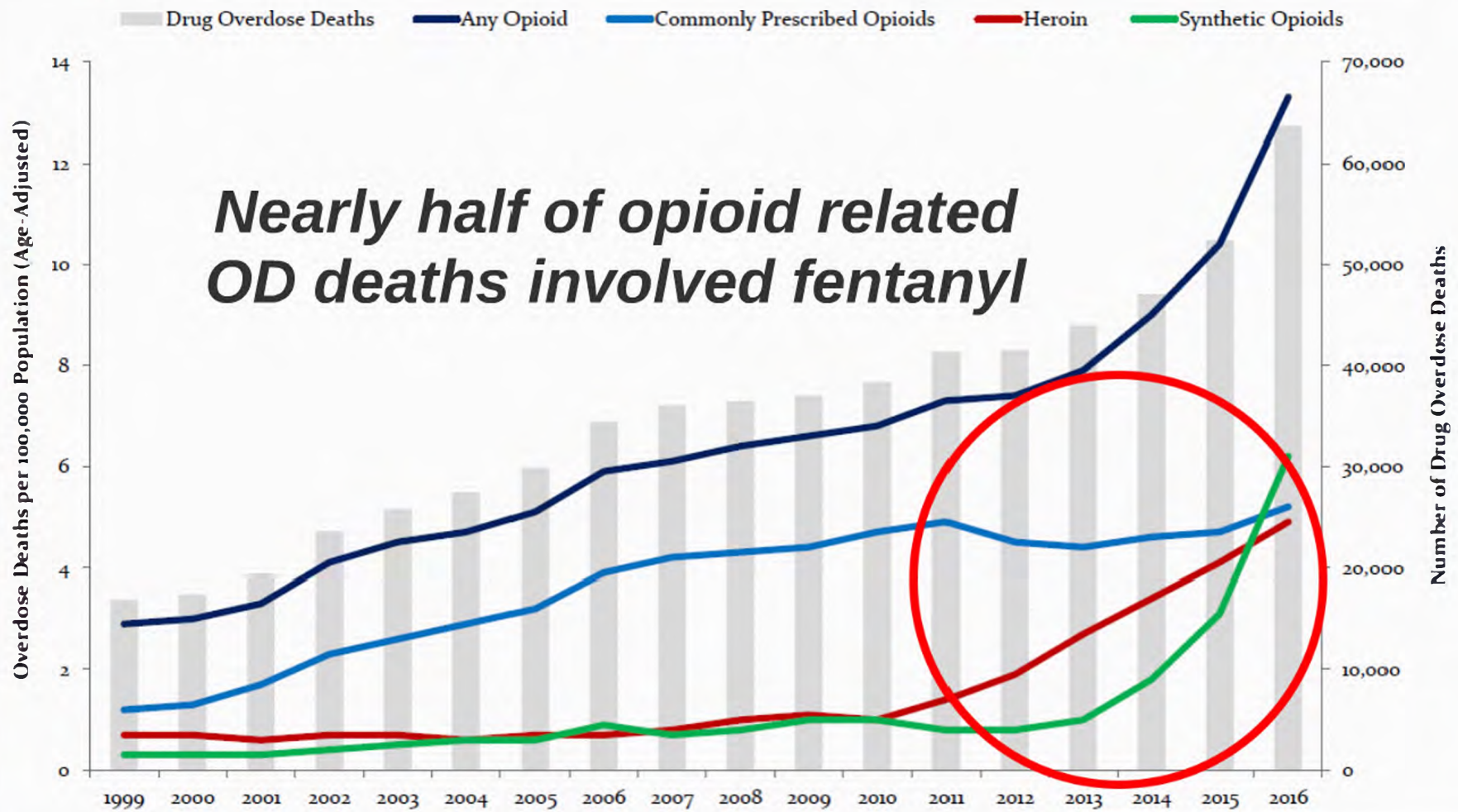
West Virginia body transport expenditures



Note: 2017 fiscal year ended June 30.
Source: West Virginia Department of Health and Human Resources

Alissa Scheller/HuffPost
Huff Post: Sept 2017

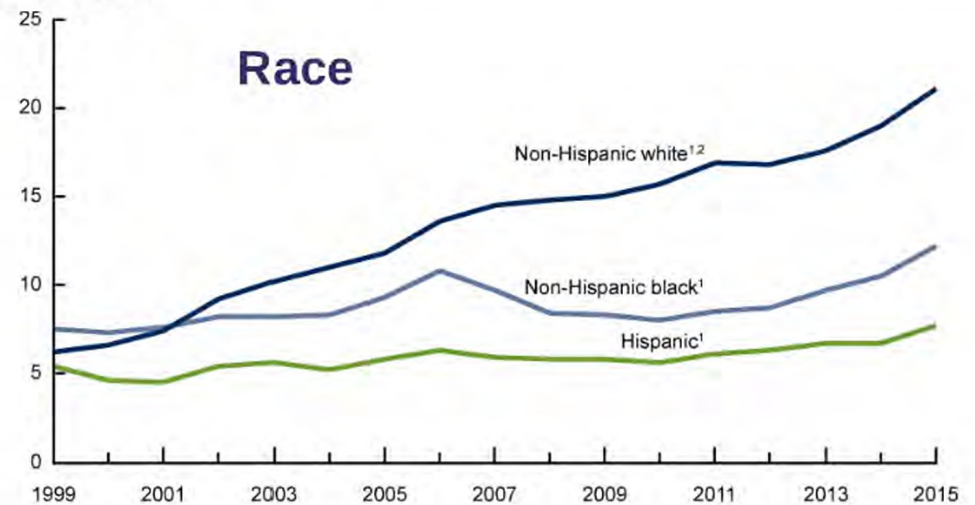
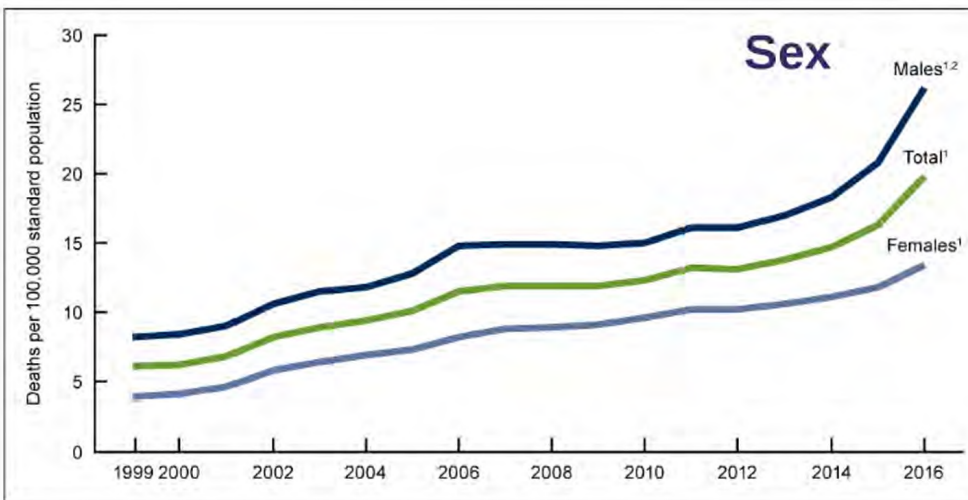
Opioid Overdose Deaths



Source: CDC National Vital Statistics System

Special Populations

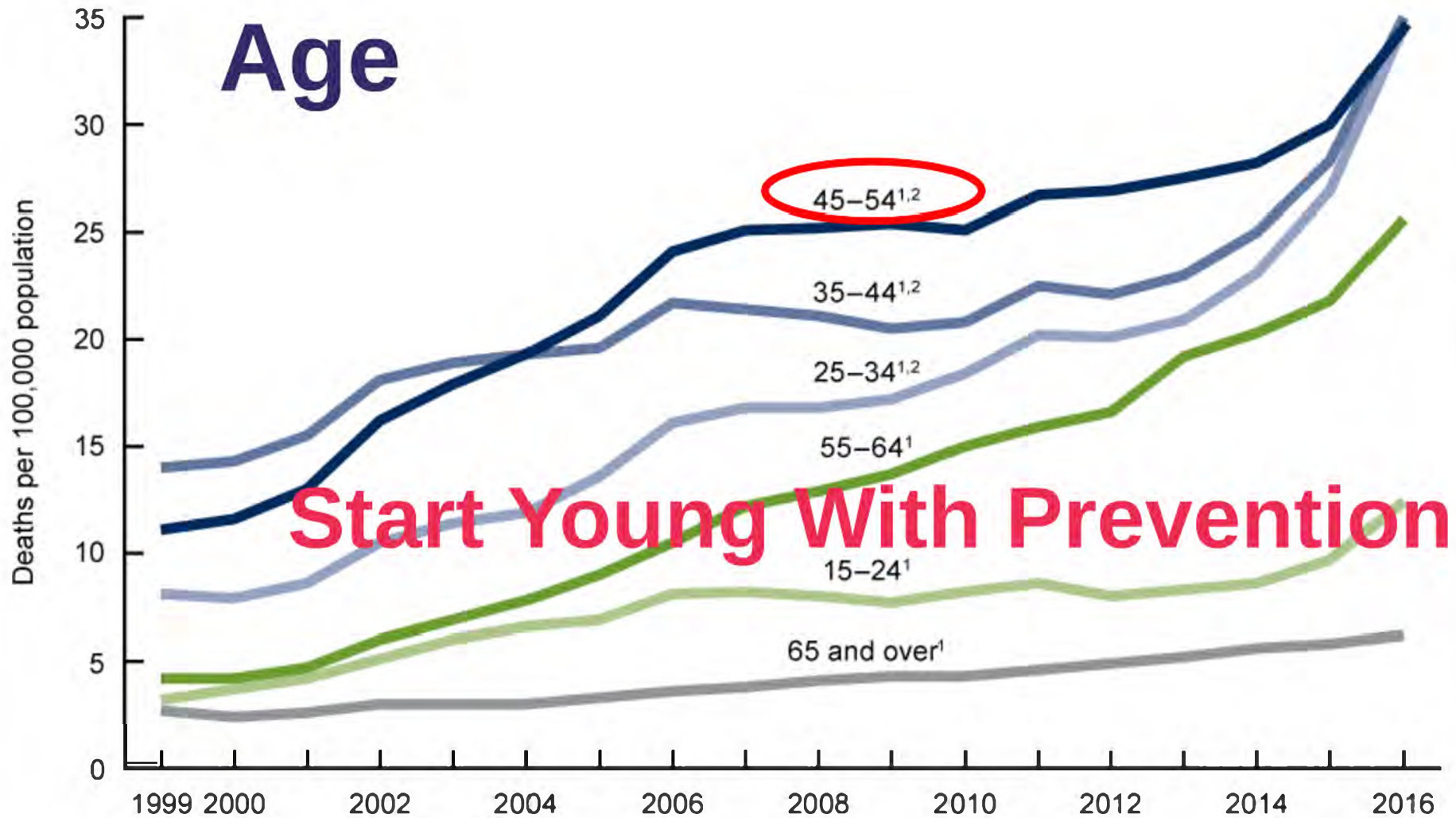
Drug Overdose Death Rates 1999-2016



Source: NCHS National Vital Statistics System, Mortality



Age

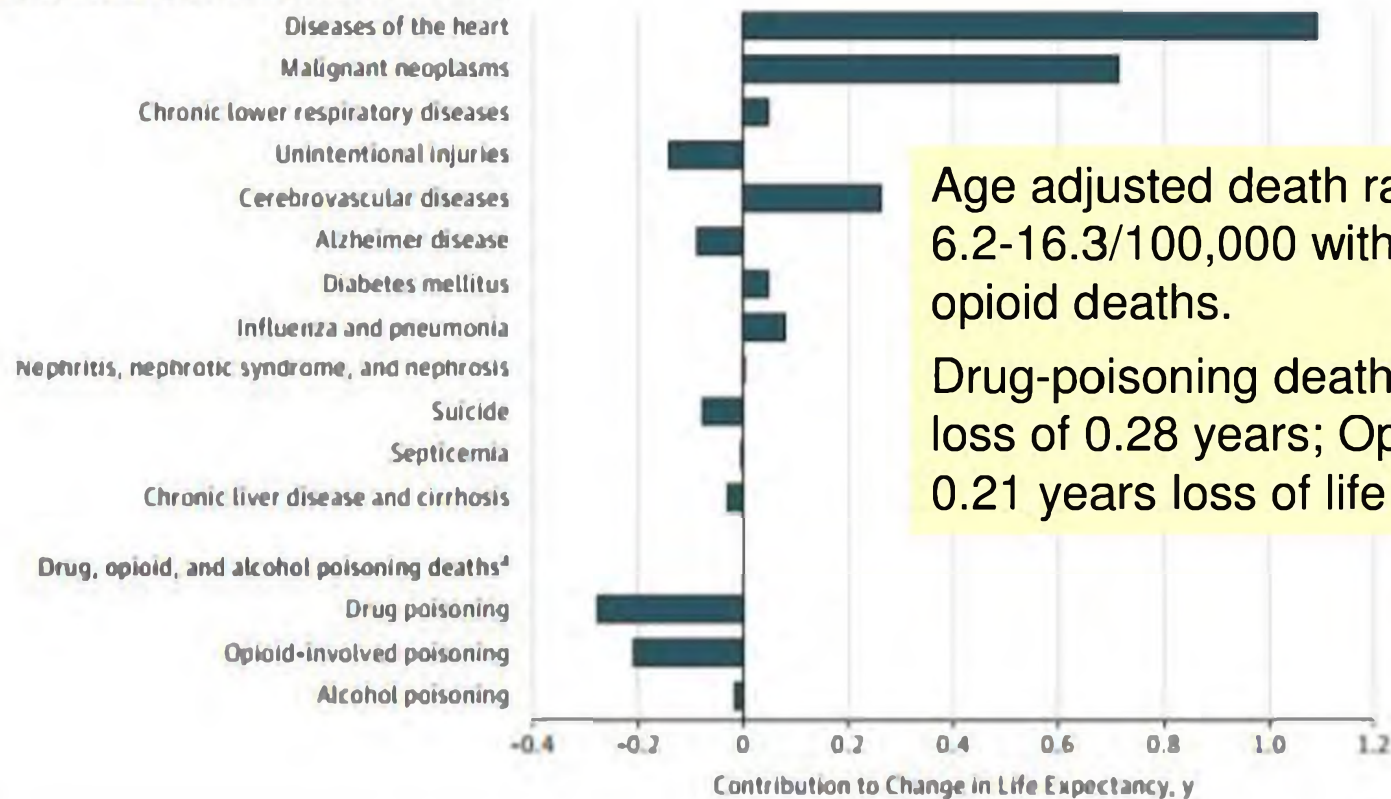


Start Young With Prevention

Change in Life Expectancy

Figure. Contributions of Selected Causes of Death to the Change in Life Expectancy in the United States, 2000-2015

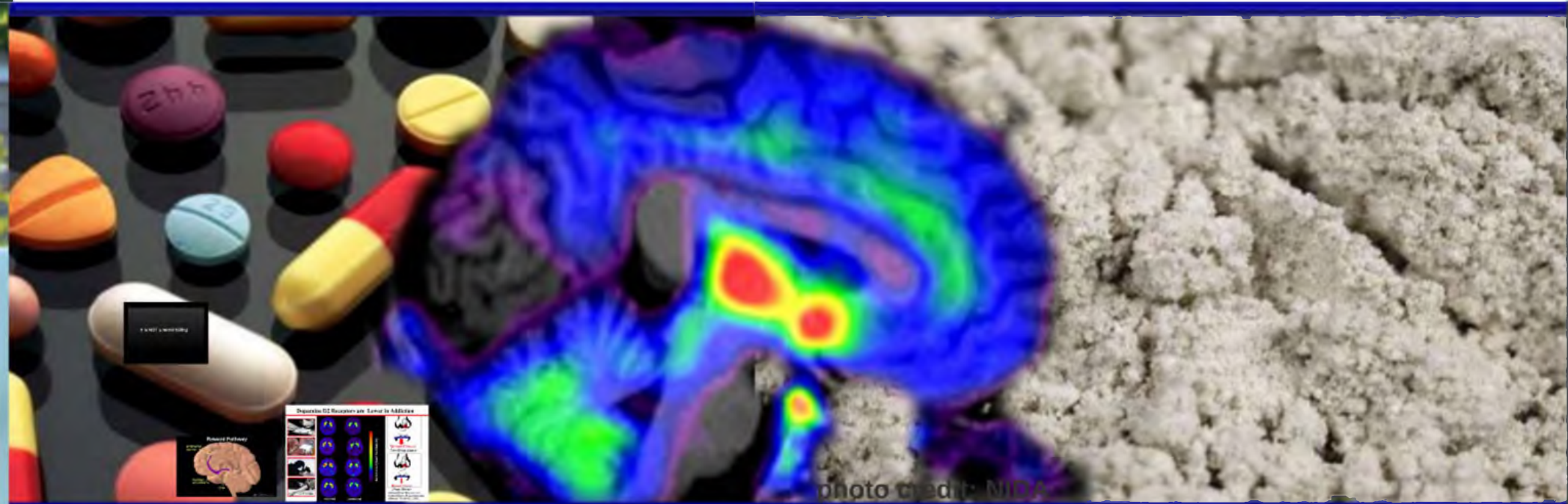
12 Leading causes of death (ranked highest to lowest according to No. of deaths in year 2015)



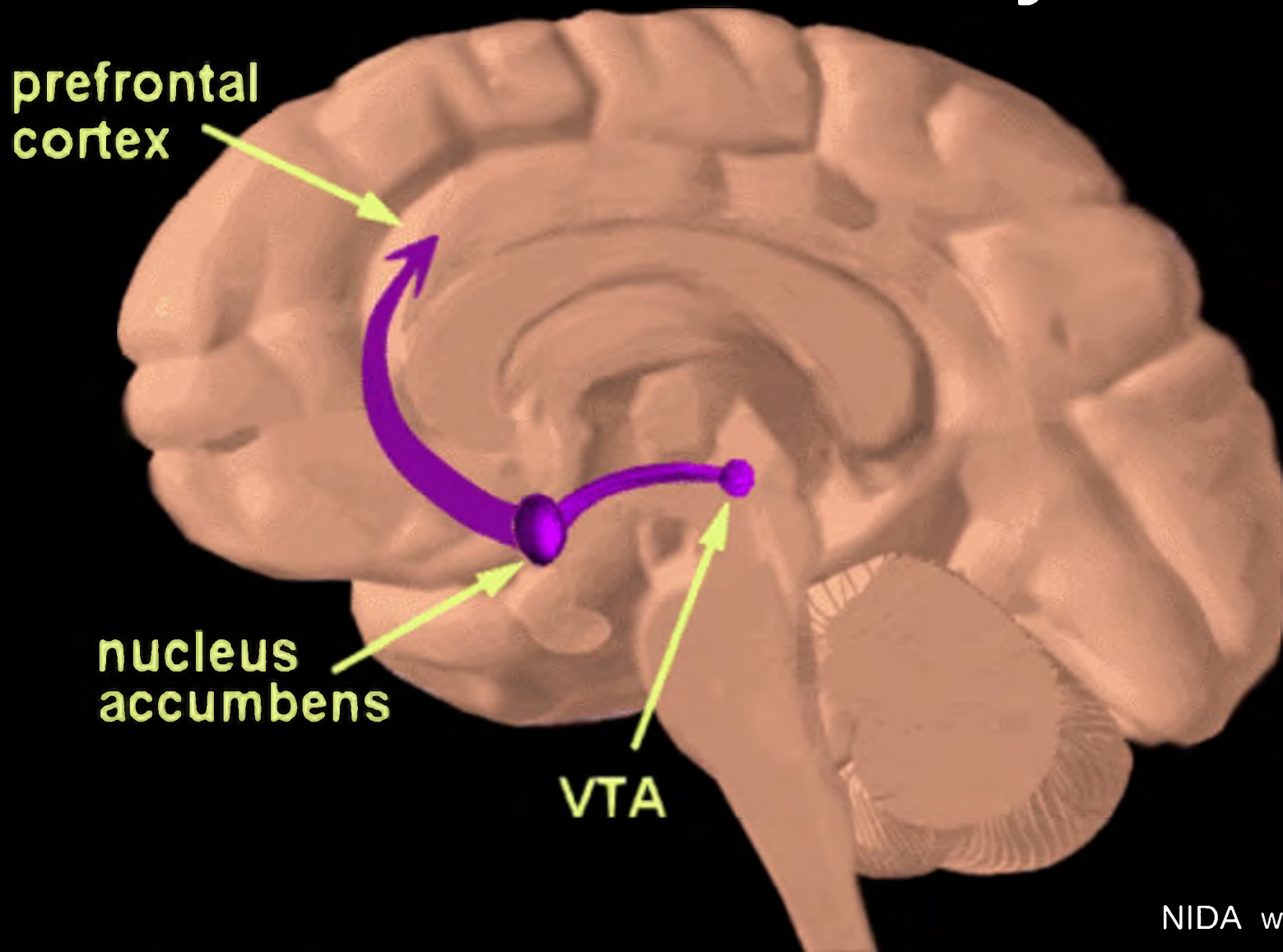
Age adjusted death rate increased from 6.2-16.3/100,000 with (7.4) related to opioid deaths.

Drug-poisoning deaths contributed to a loss of 0.28 years; Opioid deaths to 0.21 years loss of life expectancy.

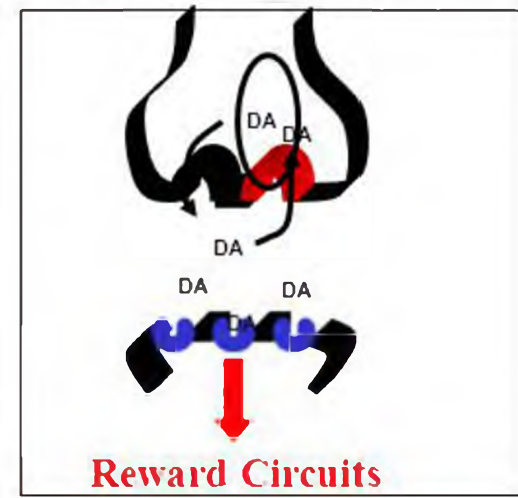
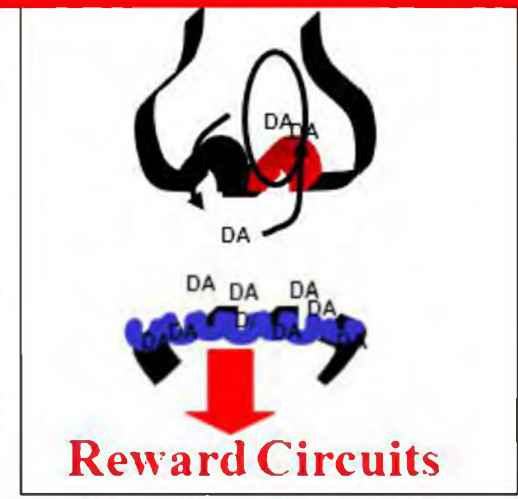
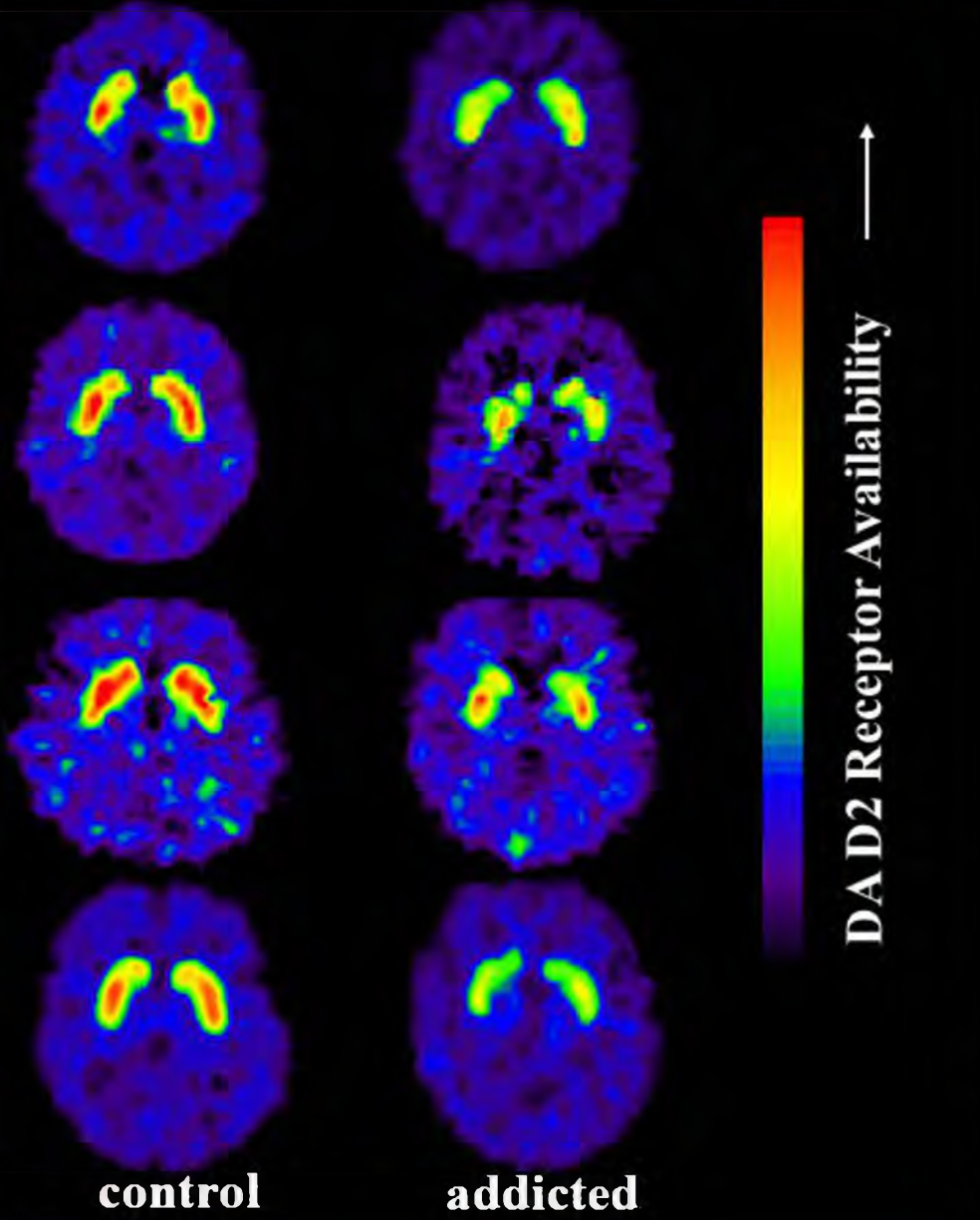
The Science of Addiction



Reward Pathway



Dopamine D2 Receptors are Lower in Addiction



Adapted from Volkow et al.,
Neurobiology of Learning and Memory 78:610-624, 2002.

It is NOT a moral failing

terminated

a specified

addiction. 1.

substance, es

narcotic dr

emotional

**Chronic
Pain**

**Opioid Use
Disorder**

**Experimental
Use**

**Criteria criteria for diagnosis of
Opioid Use Disorder**
At least 2 criteria need to be met over a 12 month period

1. Take more/opiate than intended
2. Unable to control or reduce or quit opiate use
3. A great deal of time spent by activities related to use
4. Craving or strong desire to use opiate
5. Continued opiate use despite physical or psychological problems
6. Continued use despite having persistent social problems
7. Significant increase in physical tolerance of use
8. Withdrawal symptoms that require medical or self-medication to relieve physical symptoms
9. Use despite knowledge of problems
10. Tolerance
11. Withdrawal

| | Presence of symptoms |
|-------|----------------------|
| 1-4 | 1-4 |
| 5-11 | 5-11 |
| 12-14 | 12-14 |

- Combination of behavioral, environmental and biological factors increase vulnerability
- Genetic risk factors account for 50% of the likelihood that an individual will develop addiction

DSM-5 criteria for diagnosis of Opioid Use Disorder

At least 2 criteria must be met within a 12 month period

1. Take more/longer than intended
2. Desire/unsuccessful efforts to quit opioid use
3. A great deal of time taken by activities involved in use
4. Craving, or a strong desire to use opioids.
5. Recurrent opioid use resulting in failure to fulfill major rôle obligations
6. Continued use despite having persistent social problems
7. Important activities are given up because of use.
8. Recurrent opioid use in situations in which it is physically hazardous (e.g. driving)
9. Use despite knowledge of problems
10. Tolerance
11. Withdrawal

Severity

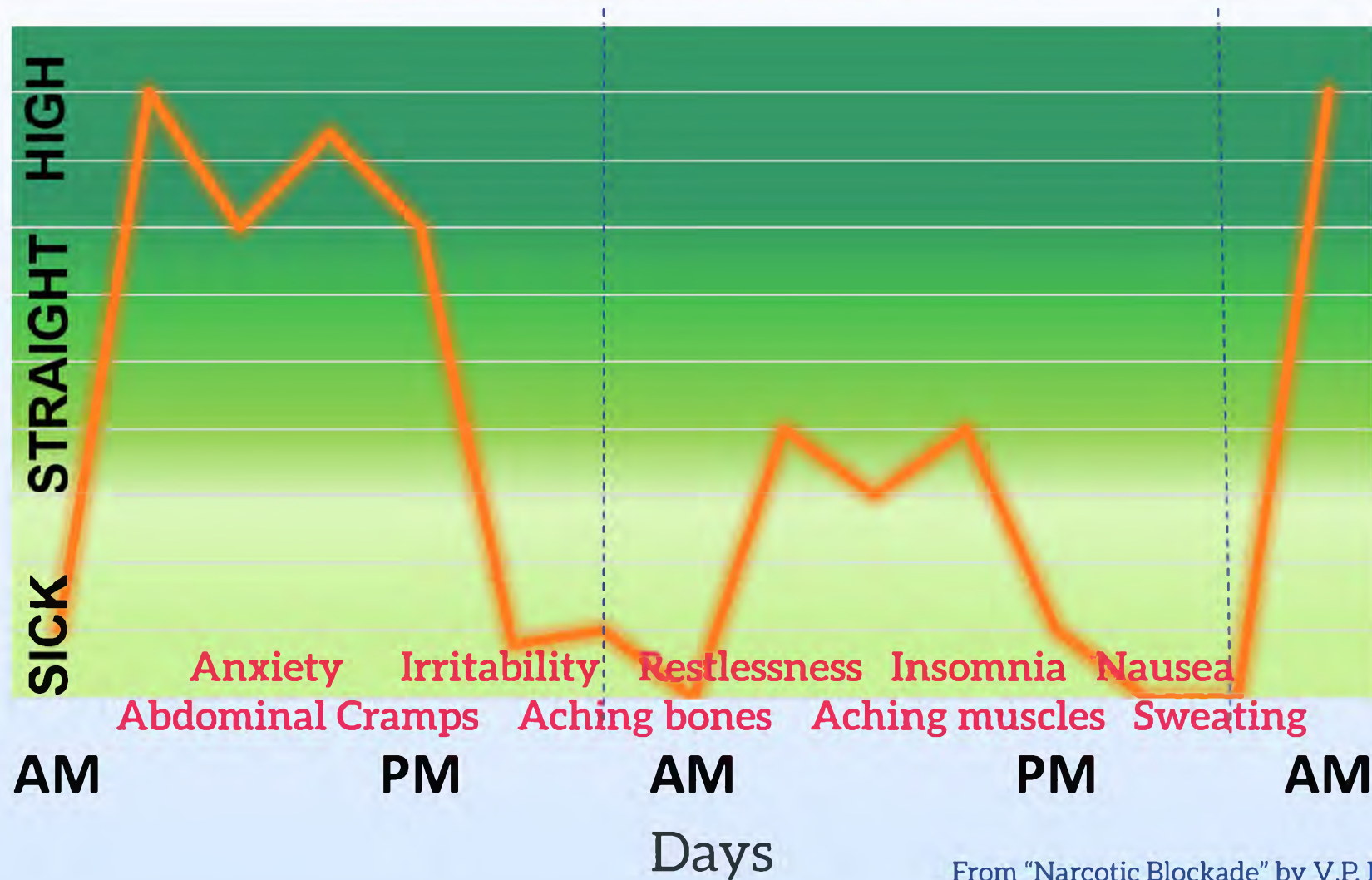
Presence of Symptoms

Mild: 2-3

Moderate: 4-5

Severe: ≥ 6

What does it feel like to have opioid use disorder?



From "Narcotic Blockade" by V.P. Dole, M.E. Nyswander and M.J. Krock, 1966, Archives of Internal Med

Effective Treatments for Opioid Use Disorders



Medication-Assisted Treatment (MAT)

What is NOT considered evidence based treatment?

Detoxification only

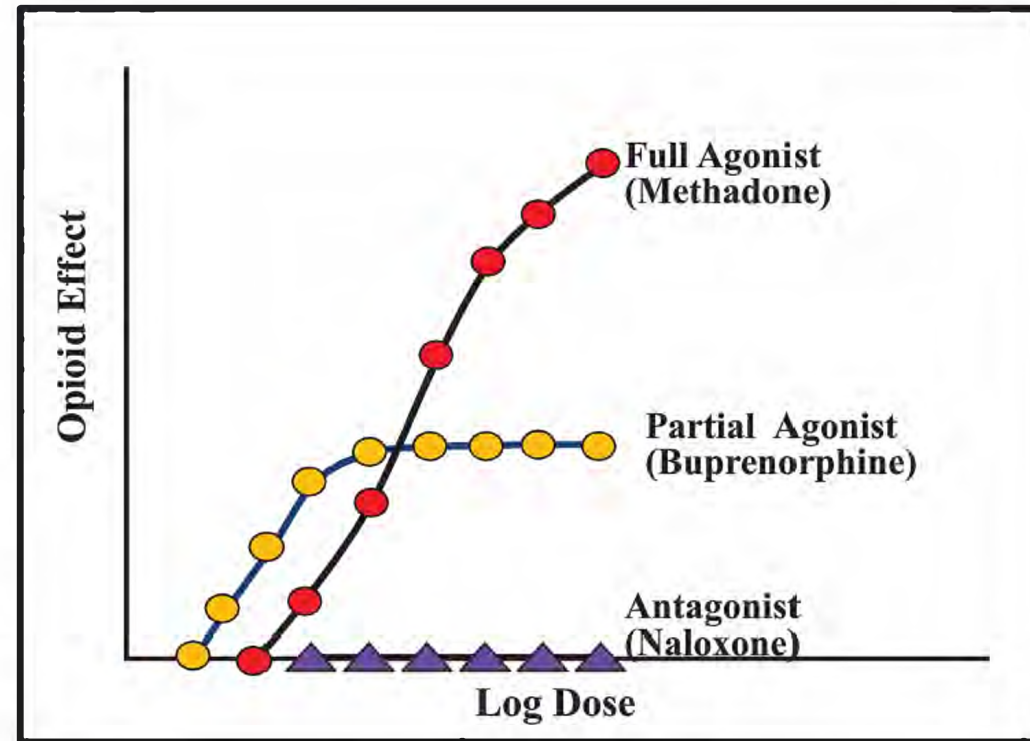
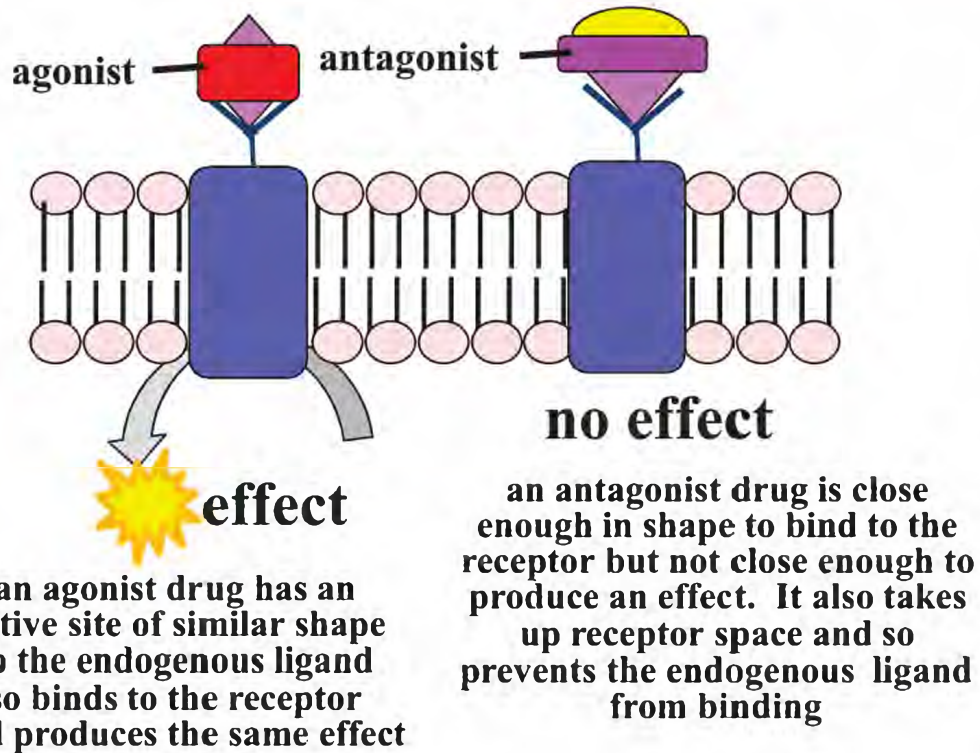
Abstinence-oriented therapy

Mutual support programs

Naloxone (Narcan)

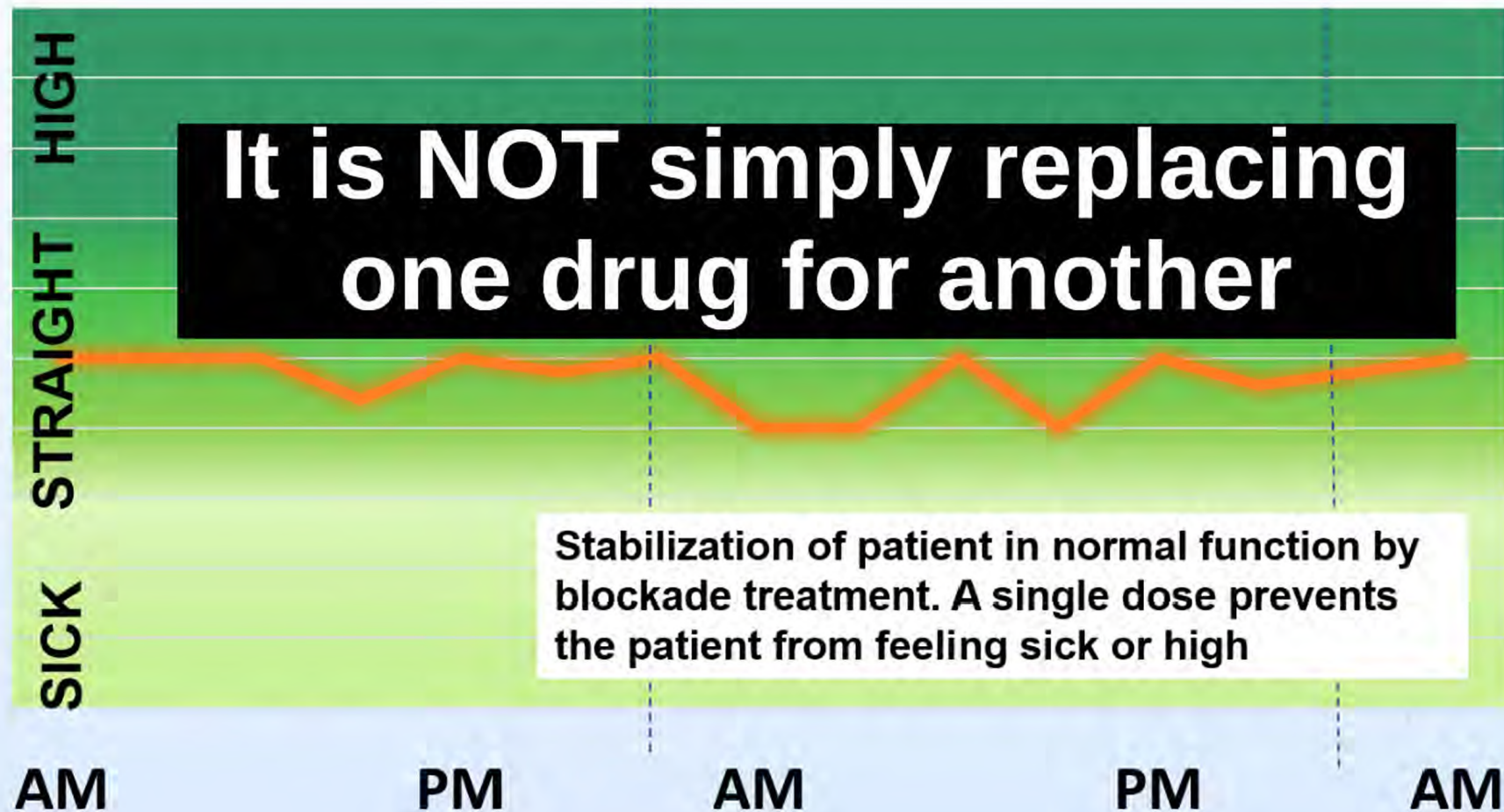
Medication for **Addiction Treatment**

Medications *for* Addiction Treatment

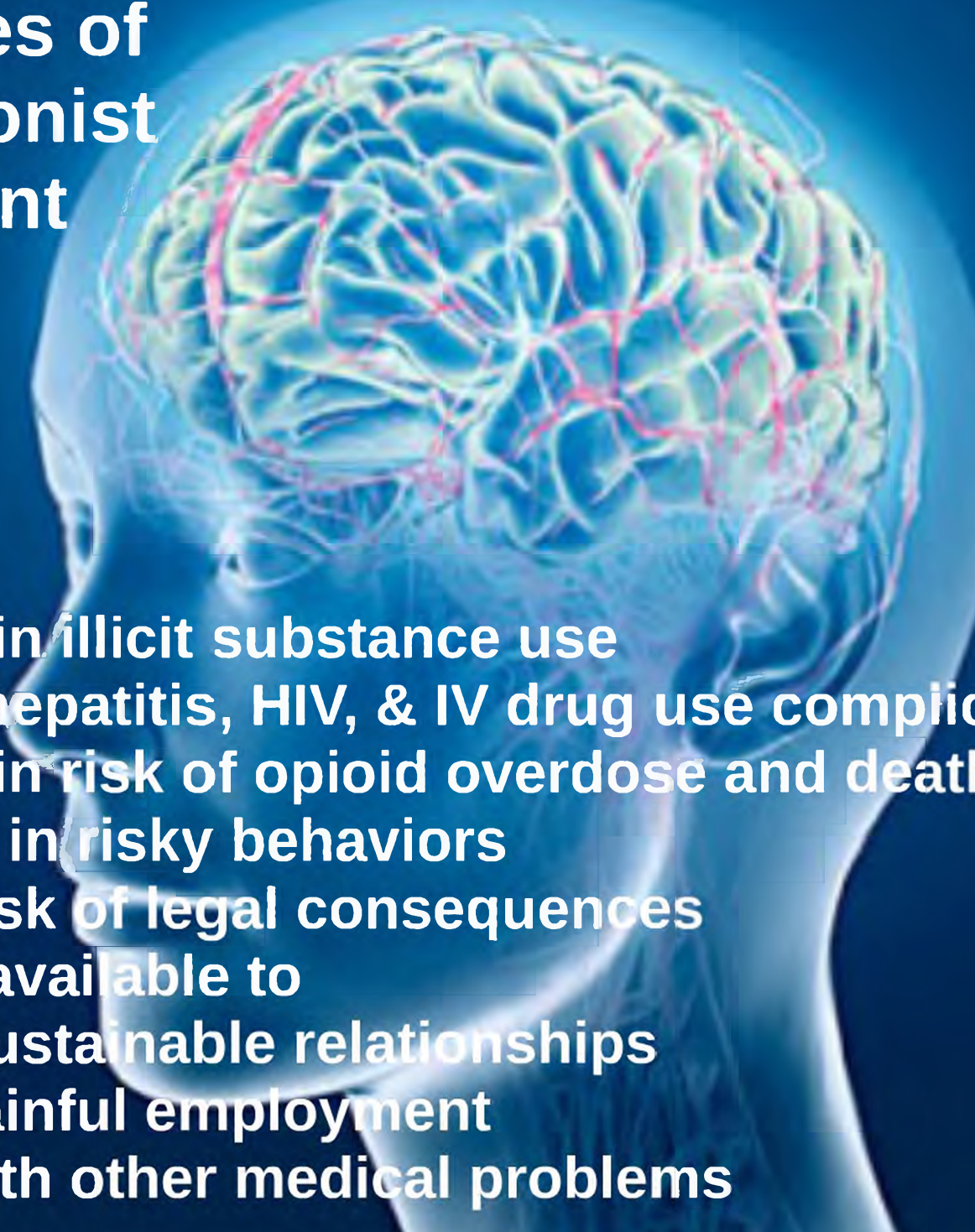


Source: NIDA

What does it feel like when taking opioid agonist treatment?

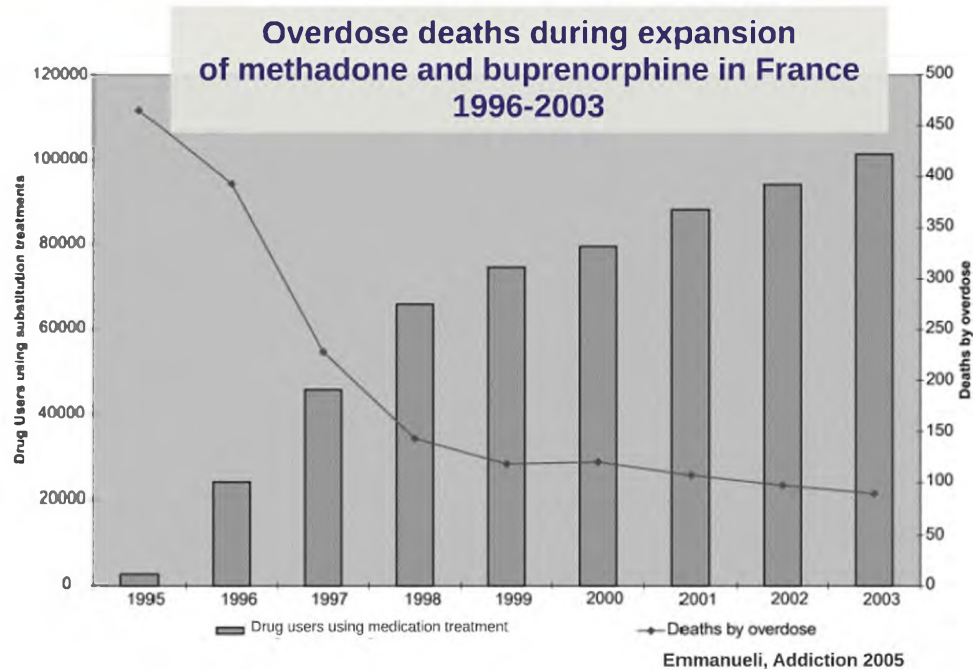


Advantages of Opioid Agonist Treatment

- 
- Reduction in illicit substance use
 - Less viral hepatitis, HIV, & IV drug use complications
 - Reduction in risk of opioid overdose and death
 - Reduction in risky behaviors
 - Reduced risk of legal consequences
 - More time available to
 - Have sustainable relationships
 - Find gainful employment
 - Deal with other medical problems

Evidence

RESEARCH



Heroin OD deaths during expansion of methadone & buprenorphine in Baltimore 1995-2009

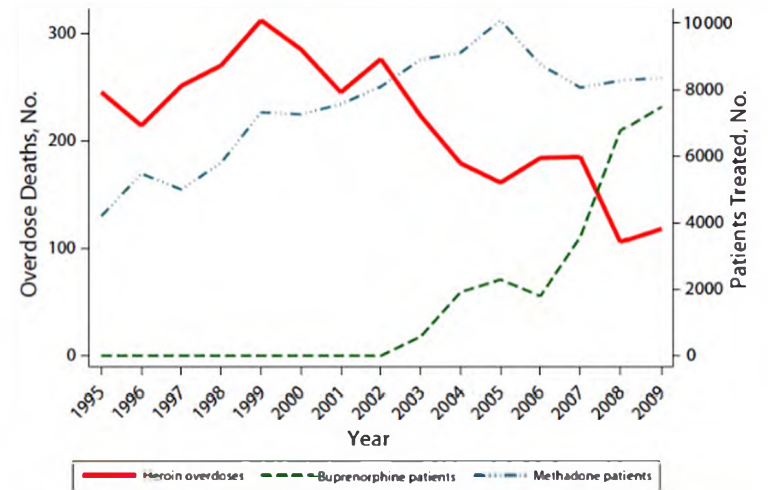
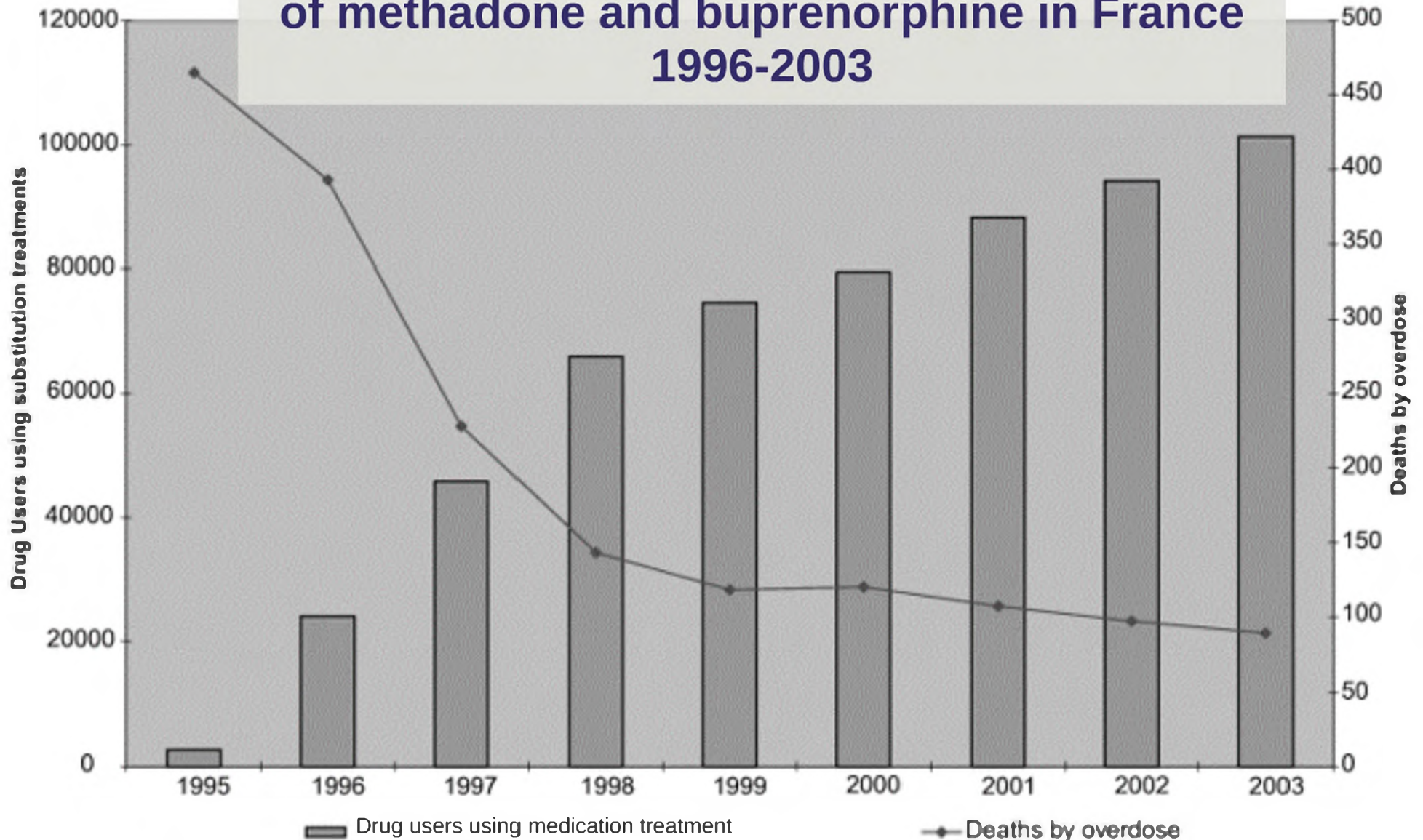


FIGURE 1—Heroin overdose deaths and opioid agonist treatment: Baltimore, MD, 1995-2009.
Schwartz, AJPH, 2013

Overdose deaths during expansion of methadone and buprenorphine in France 1996-2003



Emmanueli, Addiction 2005

Heroin OD deaths during expansion of methadone & buprenorphine in Baltimore 1995-2009

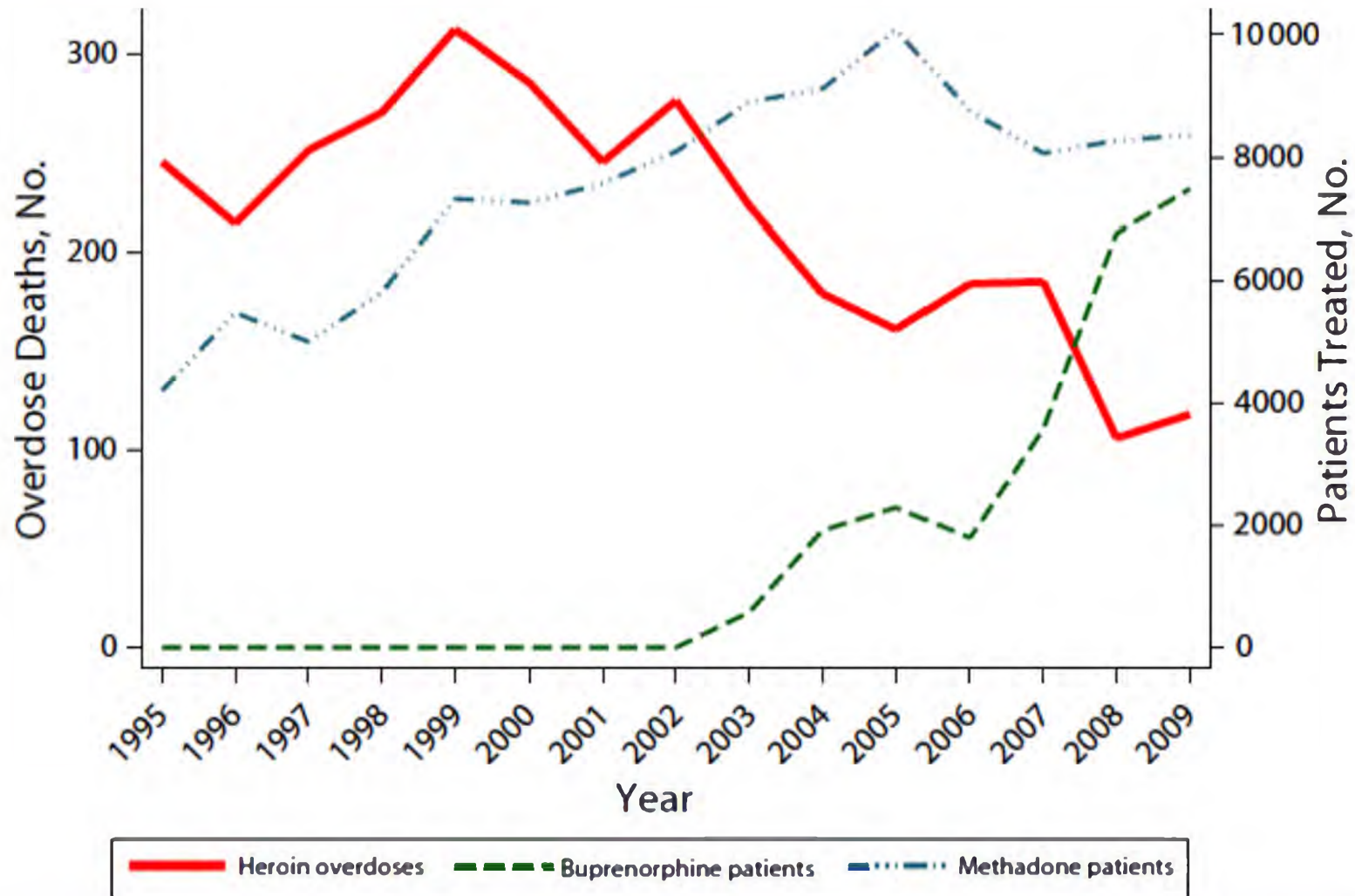


FIGURE 1—Heroin overdose deaths and opioid agonist treatment: Baltimore, MD, 1995-2009.

Schwartz, AJPH, 2013

Medication for Opioid Use Disorder After Nonfatal Opioid Overdose and Association With Mortality

A Cohort Study

Marc R. Larocbelle, MD, MPH; Dana Bernson, MPH; Thomas Land, PhD; Thomas J. Stopka, PhD, MHS; Na Wang, MA; Ziming Xuan, ScD, SM; Sarah M. Bagley, MD, MSc; Jane M. Liebschutz, MD, MPH; and Alexander Y. Walley, MD, MSc

Background: Opioid overdose survivors have an increased risk for death. Whether use of medications for opioid use disorder (MOUD) after overdose is associated with mortality is not known.

Objective: To identify MOUD use after opioid overdose and its association with all-cause and opioid-related mortality.

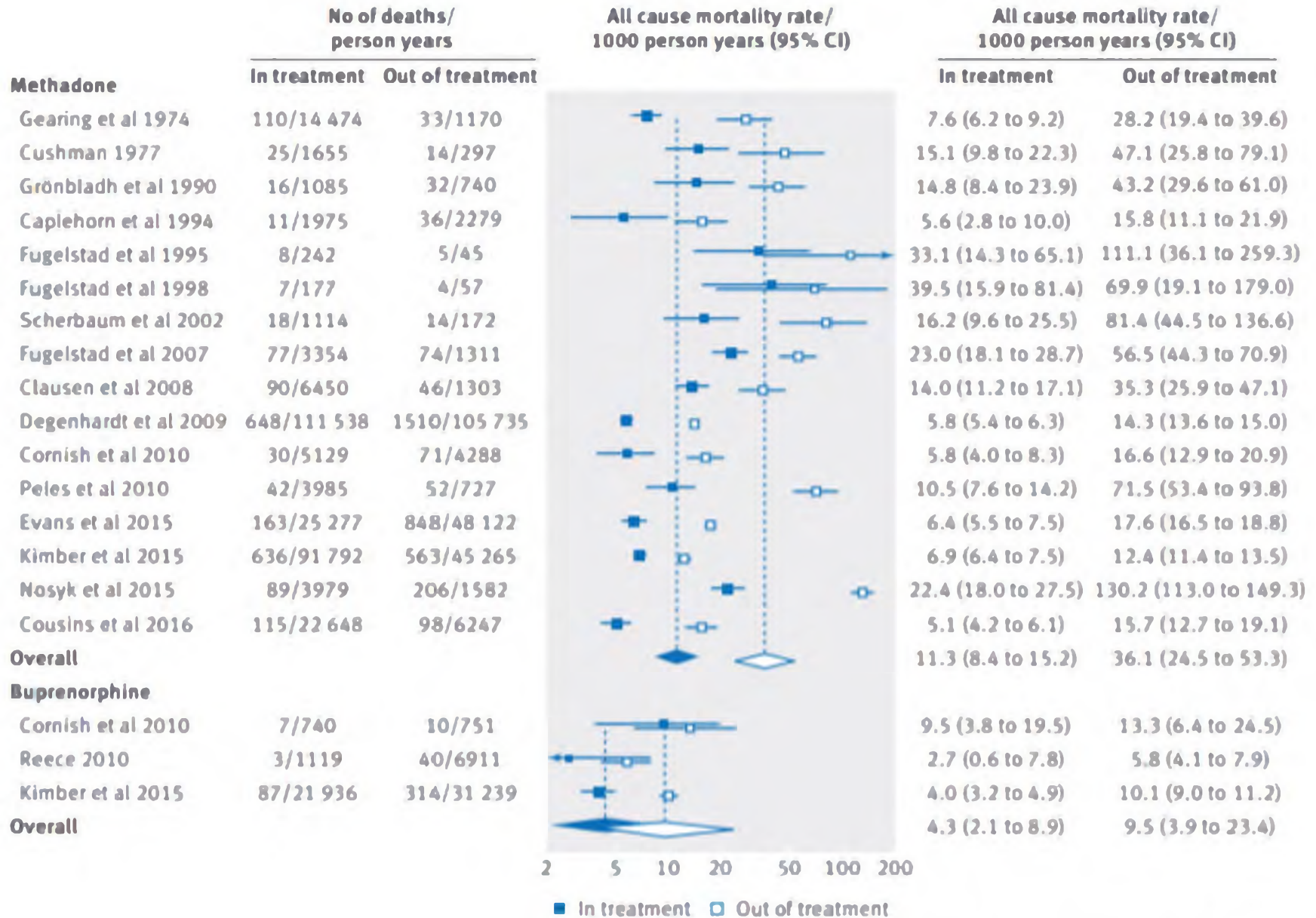
Design: Retrospective cohort study.

Setting: 7 individually linked data sets from Massachusetts government agencies.

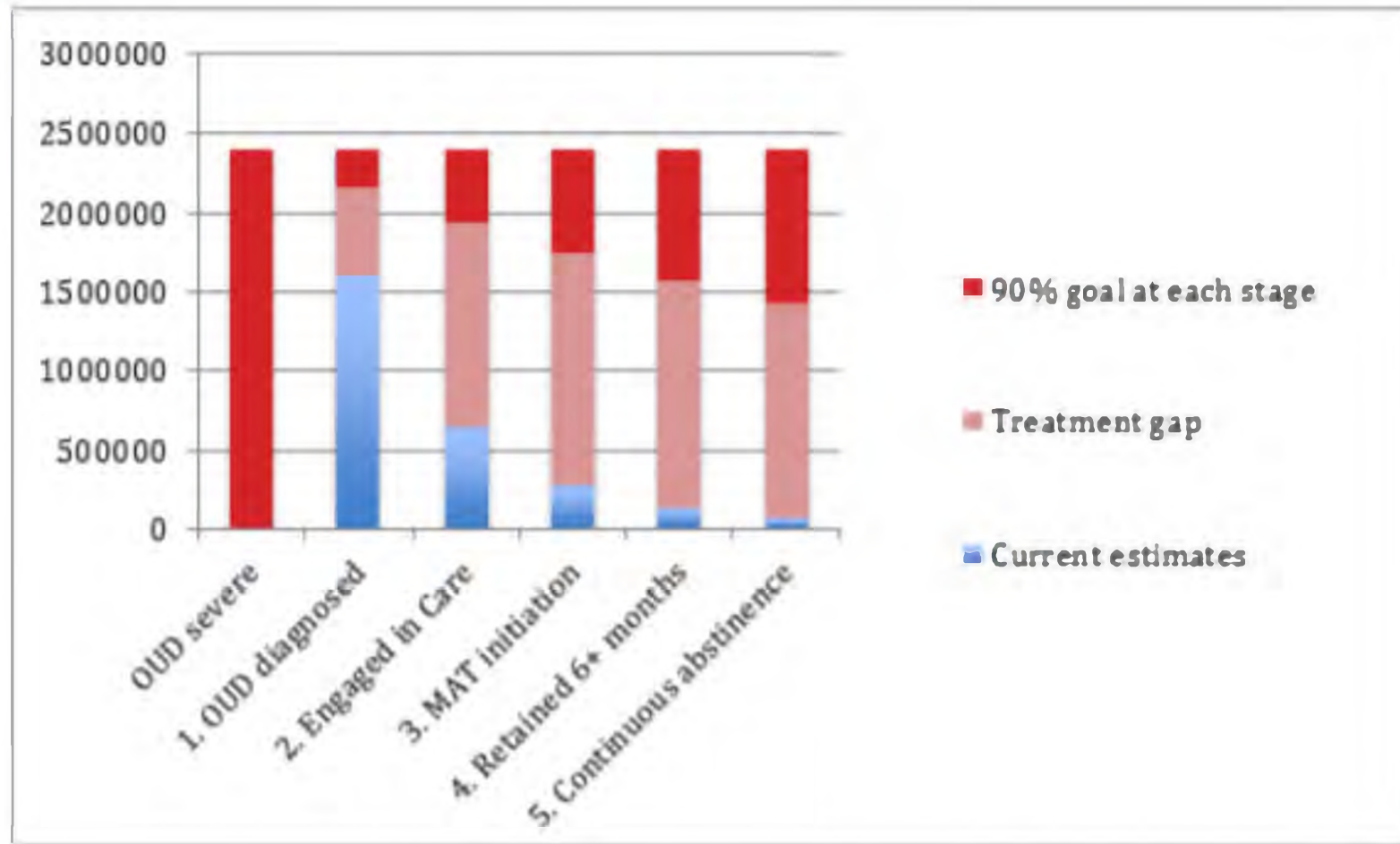
dian of 1 month (interquartile range, 1 to 2 months). Among the entire cohort, all-cause mortality was 4.7 deaths (95% CI, 4.4 to 5.0 deaths) per 100 person-years and opioid-related mortality was 2.1 deaths (CI, 1.9 to 2.4 deaths) per 100 person-years. Compared with no MOUD, MMT was associated with decreased all-cause mortality (adjusted hazard ratio [AHR], 0.47 [CI, 0.32 to 0.71]) and opioid-related mortality (AHR, 0.41 [CI, 0.24 to 0.70]). Buprenorphine was associated with decreased all-cause mortality (AHR, 0.63 [CI, 0.46 to 0.87]) and opioid-related mortality (AHR, 0.62 [CI, 0.41 to 0.92]). No associations between naltrexone and all-cause mortality (AHR, 1.44 [CI, 0.84 to 2.46]) or

Conclusion: Bup & MMT were associated with reduced all-cause and opioid related mortality

All cause mortality rates in and out of treatment methadone or buprenorphine and overall pooled all cause mortality rates, 1974-2016



Treatment Gap In Substance Abuse Treatment System among OUD Cascade of Care





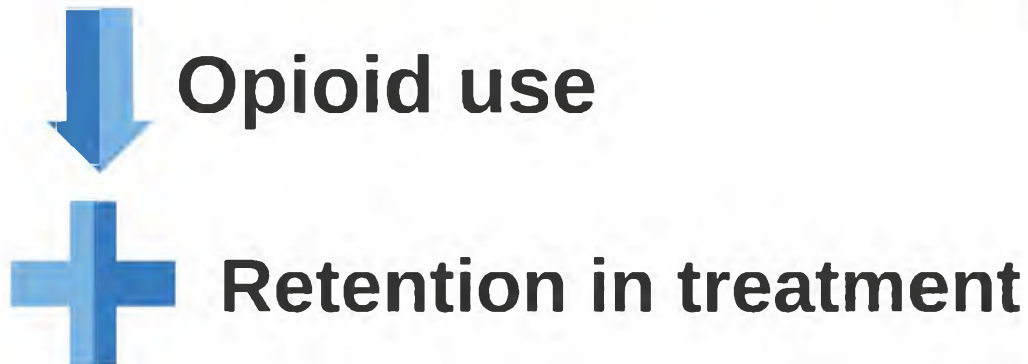
**Cochrane
Library**

Cochrane Database of Systematic Reviews

**Buprenorphine maintenance versus placebo or methadone
maintenance for opioid dependence (Review)**

31 trials (5430 participants)

Methadone and Buprenorphine are equally effective
(at adequate dosing)



The Other Medication for OUD

Naltrexone (Vivitrol)

- Pure antagonist
- Requires 7-10 day detoxification
- Injectable or pill form
- No potential for abuse or diversion
- Has a higher cost than buprenorphine or methadone



AMA Psychiatry | Original Investigation

Effectiveness of Injectable Extended-Release Naltrexone vs Daily Buprenorphine-Naloxone for Opioid Dependence: A Randomized Clinical Noninferiority Trial

Lars Tanum, MD, DMSc; Kristin Klemetsby Soll, MSc; Zili-e-Huma Latif, MD; Jürate Saltyté Benth, PhD; Arild Opheim, MSc; Kamini Sharma-Haase, MD; Peter Kravitz, MD, PhD; Nikolaj Kunze, MSc, PhD

Supplemental content
CME Quiz at jamanetwork.com/learning
and CME Questions page 1284

IMPORTANCE To date, extended-release naltrexone hydrochloride has not previously been compared directly with opioid medication treatment (OMT), currently the most commonly prescribed treatment for opioid dependence.

OBJECTIVE To determine whether treatment with extended-release naltrexone will be as effective as daily buprenorphine hydrochloride with naloxone hydrochloride in maintaining abstinence from heroin and other illicit substances in newly detoxified individuals.

DESIGN, SETTING AND PARTICIPANTS A 12-week, multicenter, outpatient, open-label randomized clinical trial was conducted at 5 urban addiction clinics in Norway between November 1, 2012, and December 23, 2015; the last follow-up was performed on October 23, 2015. A total of 232 adult opioid-dependent (per DSM-IV criteria) individuals were recruited from outpatient addiction clinics and detoxification units and assessed for eligibility. Intention-to-treat analyses of efficacy end points were performed with all randomized participants.

INTERVENTIONS Randomization to either daily oral flexible dose buprenorphine-naloxone, 4 to 24 mg/d, or extended-release naltrexone hydrochloride, 380 mg, administered intramuscularly every fourth week for 12 weeks.

MAIN OUTCOMES AND MEASURES Primary end points (protocol) were the randomized clinical trial completion rate, the proportion of opioid-negative urine drug tests, and number of days of use of heroin and other illicit opioids. Secondary end points included number of days of use of other illicit substances. Safety was assessed by adverse event reporting.

RESULTS Of 159 participants, mean (SD) age was 36 (8.6) years and 44 (27.7%) were women. Eighty individuals were randomized to extended-release naltrexone and 79 to buprenorphine-naloxone; 105 (66.0%) completed the trial. Retention in the extended-release

Comparative effectiveness of extended-release naltrexone versus buprenorphine-naloxone for opioid relapse prevention (X:BOT): a multicentre, open-label, randomised controlled trial

Joshua D Lee, Edward V Nunes Jr, Patricia Nova, Ken Bachrach, Genie L Bailey, Snehal Bhatt, Sarah Farkas, Marc Fishman, Phoebe Gauchier, Candace C Hodgkins, Jacque King, Robert Lindblad, David Liu, Abigail G Matthews, Jeannine May, K Michelle Reay, Stephen Ross, Dagmar Salazar, Paul Schkainik, Dilko Shmueli-Alumberg, Don Stabilein, Geetha Subramaniam, John Rotrosen

Lancet, 2018

Summary
Background Extended-release naltrexone (XR-NTX), an opioid antagonist, and sublingual buprenorphine-naloxone (BUP-NX), a partial opioid agonist, are pharmacologically and conceptually distinct interventions to prevent opioid relapse. We aimed to estimate the difference in opioid relapse-free survival between XR-NTX and BUP-NX.

Methods We initiated this 24 week, open-label, randomised controlled, comparative effectiveness trial at eight US community-based inpatient services and followed up participants as outpatients. Participants were 18 years or older, had Diagnostic and Statistical Manual of Mental Disorders-5 opioid use disorder, and had used non-prescribed opioids in the past 30 days. We stratified participants by treatment site and opioid use severity and used a web-based permuted block design with random equally weighted block sizes of four and six for randomisation (1:1) to receive XR-NTX or BUP-NX. XR-NTX was monthly intramuscular injections (Vivitrol; Alkermes) and BUP-NX was daily self-administered buprenorphine-naloxone sublingual film (Suboxone; Indivior). The primary outcome was opioid relapse-free survival during 24 weeks of outpatient treatment. Relapse was 4 consecutive weeks of any non-study opioid use by urine toxicology or self-report, or 7 consecutive days of self-reported use. This trial is registered with ClinicalTrials.gov, NCT02032433.

Findings Between Jan 30, 2014, and May 25, 2016, we randomly assigned 570 participants to receive XR-NTX (n=283) or BUP-NX (n=287). The last follow-up visit was Jan 31, 2017. As expected, XR-NTX had a substantial induction hurdle: fewer participants successfully initiated XR-NTX (204 [72%] of 283) than BUP-NX (270 [94%] of 287).

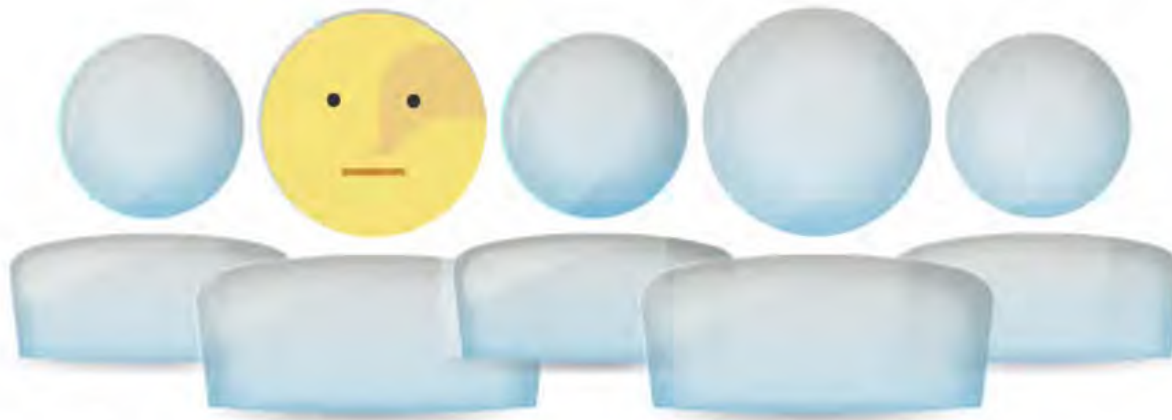
Findings:

- Only 72% initiated XR-NXT (204/283) vs 94% 270/287 for BUP-NX p<0.0001
- Relapse rates > XR-NTX than BUP-NX (65% vs 57%)

Interpretation:

Once initiated both medications were equally safe and effective





only 1 in 5 get treatment

NSDUH, 2017

Treatment Gap

SPECIAL REPORT

NEJM, June 2017

The Rôle of Science in Addressing the Opioid Crisis

Nora D. Volkow, M.D., and Francis S. Collins, M.D., Ph.D.

"These medications ... are the current standards of care for reducing illicit opioid use, relapse risk and overdoses... However, limited access... can create barriers to treatment."

Endorsed By



World Health Organization

THE SURGEON GENERAL

November 17, 2016



The surgeon general's call for addiction to be treated "with the same skill and compassion with which we approach heart disease, diabetes, and cancer"

"Buprenorphine treatment should be available in EDs."



November 17, 2016



FACING ADDICTION IN AMERICA

*The Surgeon General's Report on
Alcohol, Drugs, and Health*

The surgeon general's call for addiction to be treated "with the same skill and compassion with which we approach heart disease, diabète, and cancer"

"**Buprénorphine**... treatment should be available in EDs."

1/3 of Addiction Treatment Programs Use MAT

MAT and Opioid Use Before and After Overdose in Pennsylvania Medicaid

| Médication Patterns Before and After Heroin or Opioid Overdose Events, 2008-2013 | | | | |
|---|---------------------------------|-----------------------------|---|-----------------------------|
| | Heroin Overdose (n=2068) | | Prescription Opioid Overdose(n=3945) | |
| Characteristics | Before overdose % | After overdose % | Before overdose % | After overdose % |
| Any prescription opioid use | 43.2 | 39.7 | 66.1 | 59.6 |
| Prescription opioid duration > 90d | 10.5 | 9.0 | 32.4 | 28.3 |
| Any medication-assisted treatment | 29.4 | 33.0 | 13.5 | 15.1 |
| Buprénorphine | 19.2 | 20.3 | 5.4 | 6.7 |
| Methadone | 10.4 | 12.6 | 8.2 | 8.3 |
| Naltrexone | 2.4 | 3.0 | 0.4 | 0.8 |

Opioid prescribing and MAT changes from before to after overdose among medicaid enrollees who have a 3X higher risk of opioid overdose

Patients continued to have high prescription opioid use, with only slight increases in MAT engagement

Emergency

Because that's where the patients are!



So Why the ED?

Because that's where the patients are!

July 2016 - September 2017

30%



**Visits for Opioid
Overdose**

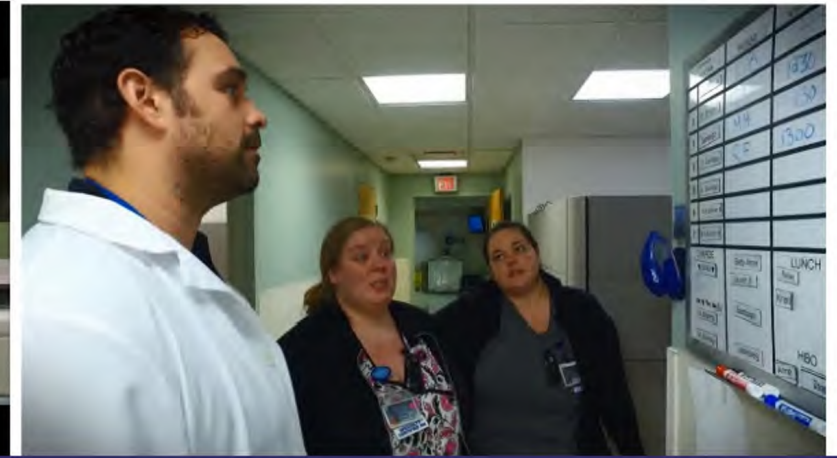
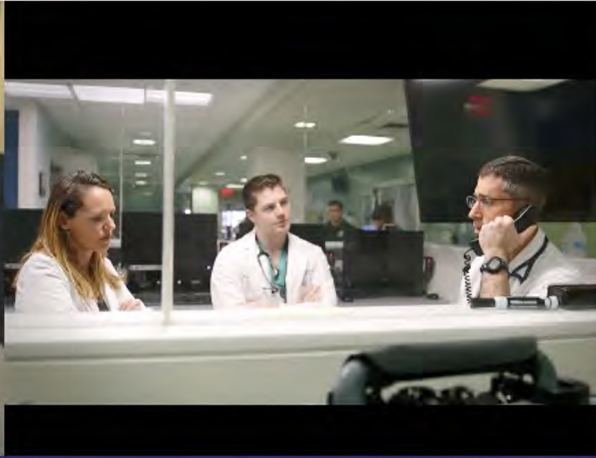
16/10,000

CDC National Syndromic Surveillance Program NSSP

MMWR March 9, 2018

Offering treatment will NOT increase visits

So Why the ED?




What Role can Emergency Physicians Play in this Escalating Epidemic?



**Safe
Prescribing**

**Harm
Reduction**

**Reducing
the stigma**

A dark blue silhouette of the United States map is centered in the image. The text "Reduce OD Deaths" is written in a smaller, dark blue font across the middle of the map.

**Reduce OD
Deaths**

Advocacy

**Access
to MAT**

EM LEADERS ACROSS THE U.S.



Reducing the stigma

VIEWPOINT

Michael P. Botticelli, MEd
White House Office of National Drug Control Policy, Washington, DC.

Howard K. Koh, MD, MPH
Harvard T.H. Chan School of Public Health, Boston, Massachusetts; and Harvard Kennedy School, Cambridge, Massachusetts.

Chair

Words matter. The way we use language can create barriers to accessing effective treatment. Words matter. The way we use language can create barriers to accessing effective treatment. Words matter. The way we use language can create barriers to accessing effective treatment.

Words Matter

Words are powerful... They can contribute to stigma and create barriers to accessing effective treatment

Use person-first language; focus on the person, not the disorder

When Discussing Opioid or Other Substance Use Disorders...

Avoid These Terms:

Addict, user, drug abuser, junkie

Addicted baby

Opioid abuse or opioid dependence

Problem

Habit

Clean or dirty urine test

Opioid substitution or replacement therapy

Relapse

Treatment failure

Being clean

Use These Instead:

Person with opioid use disorder or person with opioid addiction, patient

Baby born with neonatal abstinence syndrome

Opioid use disorder

Disease

Drug addiction

Negative or positive urine drug test

Opioid agonist treatment

Return to use

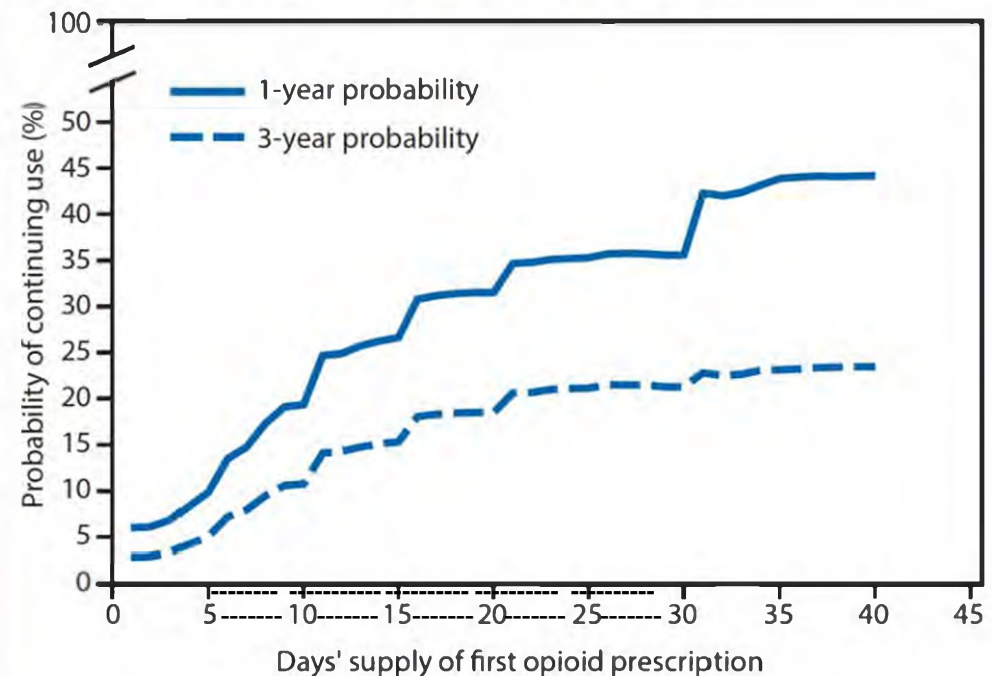
Treatment attempt

Being in remission or recovery

Characteristics of Initial Prescription Episodes and Likelihood of Long-Term Opioid Use — United States, 2006–2015

Safe Prescribing

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



* Days' supply of the first prescription is expressed in days (1–40) in 1-day increments. If a patient had multiple prescriptions on the first day, the prescription with the longest days' supply was considered the first prescription.

Opioid-Prescribing Patterns of Emergency Physicians and Risk of Long-Term Use

Michael L. Barnett, M.D., Andrew R. Olenski, B.S.,
and Anupam B. Jena, M.D., Ph.D.

ABSTRACT

BACKGROUND

Increasing overuse of opioids in the United States may be driven in part by physician prescribing. However, the extent to which individual physicians vary in opioid prescribing and the implications of that variation for long-term opioid use and adverse outcomes in patients are unknown.

METHODS

We performed a retrospective analysis involving Medicare beneficiaries who had an index emergency department visit in the period from 2008 through 2011 and had not received prescriptions for opioids within 6 months before that visit. After identifying the emergency physicians within a hospital who cared for the patients, we categorized the physicians as being high-intensity or low-intensity opioid prescribers according to relative quartiles of prescribing rates within the same hospital. We compared rates of long-term opioid use, defined as 6 months of days supplied, in the 12 months after a visit to the emergency department among patients treated by high-intensity or low-intensity prescribers, with adjustment for patient characteristics.

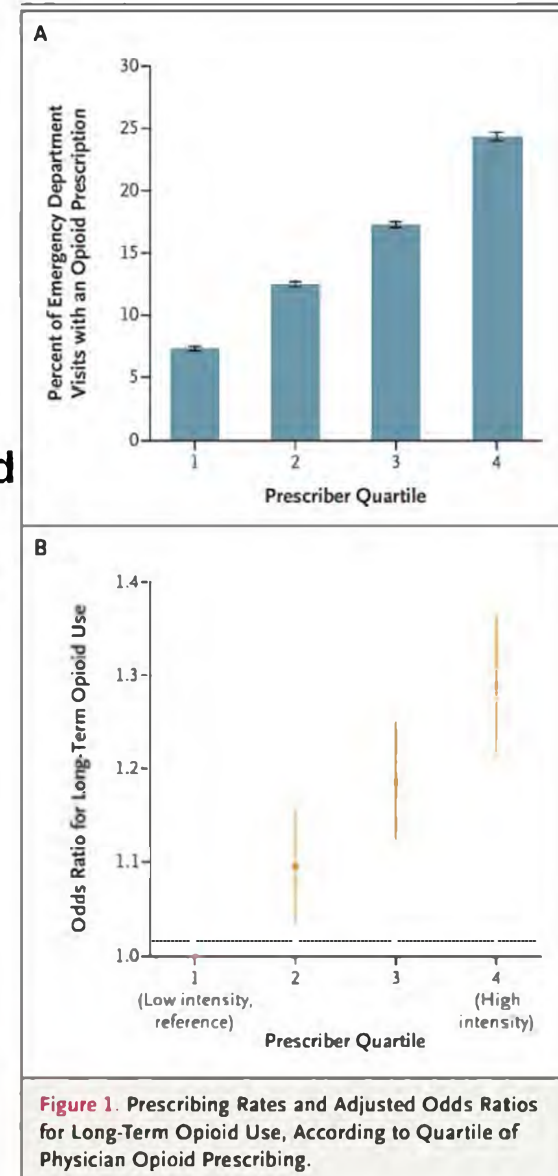
RESULTS

Our sample consisted of 215,678 patients who received treatment from low-intensity prescribers and 161,951 patients who received treatment from high-intensity prescribers. Patient characteristics, including diagnoses in the emergency department, were similar in the two treatment groups. Within individual hospitals, rates of opioid prescribing varied widely between low-intensity and high-intensity prescribers (7.3% vs. 24.1%). Long-term opioid use was significantly higher among patients treated by high-intensity prescribers than among patients treated by low-intensity prescribers (adjusted odds ratio, 1.30; 95% confidence interval, 1.23 to 1.37; $P < 0.001$); these findings were consistent across multiple sensitivity analyses.

CONCLUSIONS

Wide variation in rates of opioid prescribing existed among physicians practicing within the same emergency department, and rates of long-term opioid use were increased among patients who had not previously received opioids and received treatment from high-intensity opioid prescribers. (Funded by the National Institutes of Health.)

Number need
to harm
(NNH) = 49



Safe Prescribing PDMPs

Annals of Internal Medicine

Association Between Prescription Drug Monitoring Programs and Nonfatal and Fatal Drug Overdoses: A Systematic Review

Fink, MPH; Julia P. Schleimer, BS; Aaron Sarvet, MPH; Kiran K. Grover, BA; Chris Delcher, PhD; Carniglia, PhD; June H. Kim, PhD; Ariadne E. Rivera-Aguirre, MPP; Stephen G. Henry, MD; Magdalena Cerdá, DrPH

Ann Intern Med, 2018

program features (n = 5), PDMP implementation with mandated provider review combined with pain clinic laws (n = 1), and PDMP robustness (n = 1). Evidence from 3 studies was insufficient to draw conclusions regarding an association between PDMP implementation and nonfatal overdoses. Low-strength evidence from 10 studies suggested a reduction in fatal overdoses with PDMP implementation. Program features associated with a reduction in overdose deaths included mandatory provider authorization to access PDMP data, and monitoring of non-scheduled drugs.

Annals of Internal Medicine

EDITORIAL

Prescription Drug Monitoring Programs: Promising Practices in Need of Refinement

Compton W - NIDA

Although recent data indicate that overdose deaths involving illicit opioids (including heroin and, especially, synthetic opioids, such as fentanyl and related compounds) have escalated in the past 3 years, widespread overprescription, diversion, and misuse of opioid analgesics started the crisis (1). Prescription opioids remain a major contributor to overdose deaths and serve as an entry point for many persons to become addicted to opioids, even if they switch to illicit opioids later because of lower cost and progression of their opioid use disorder (2-4).

The authors also report that 3 studies found an increase in heroin overdose deaths after PDMP implementation, suggesting that heroin substitution may have increased after PDMP-inspired restrictions on opioid prescribing. The increases in heroin overdose deaths associated with PDMP implementation in those studies raises the possibility of unintended consequences. Prescription drug monitoring programs are among several initiatives to curb excess opioid prescribing and to limit the quantity of pills available for diversion, especially to high-risk patients who may be

Harm Reduction OEND

This Drug Could Save Thousands Of Lives A Year, So Why Aren't We Using It?



Joan Papp MD

Metro Health - Cleveland, Ohio

Founder and Medical Director of Project DAWN
(Deaths Avoided With Naloxone)



Krista Brucker MD

Eskenazi Health - Indianapolis, Indiana

Project POINT
(Planned Outreach, Intervention, Naloxone & Treatment)

Overdose Education &
Naloxone Distribution

Options for ED Providers

**Initiation of
buprenorphine**
(FDA 2002 Specially trained MDs/Exemptions)

Referral

**Access
to MAT**

Buprenorphine



Sublocade™
(buprenorphine extended-release)
injection for subcutaneous use ©
100mg-300mg

Formulations

Braeburn Pharmaceuticals And Camurus
Announce Positive Top-Line Phase 3
Results For Long-Acting Buprenorphine For
Treatment Of Opioid Addiction

TOPICS: Clinical Trials For Opioid Addiction Medical News



FDA News Release

FDA approves first once-monthly buprenorphine injection, a medication-assisted treatment option for opioid use disorder

Agency encourages safe adoption and more widespread use of FDA-approved treatments to help combat opioid addiction

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For Immediate
Release

November 30, 2017

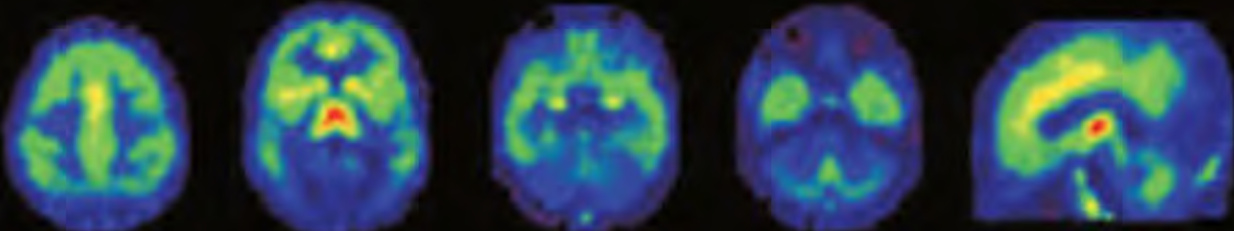


Effects of Buprenorphine on m-Opioid Receptors

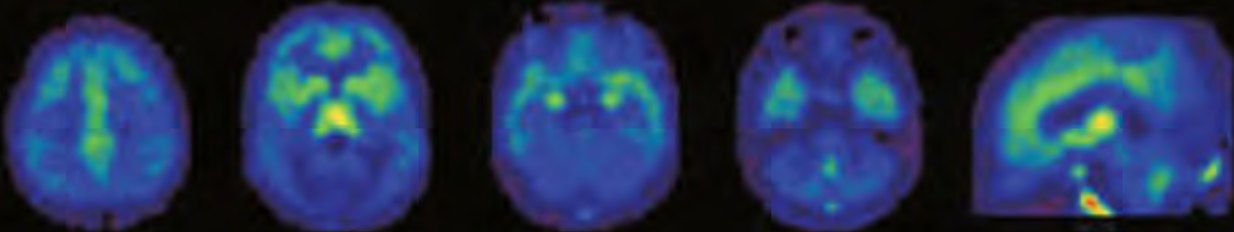
MRI



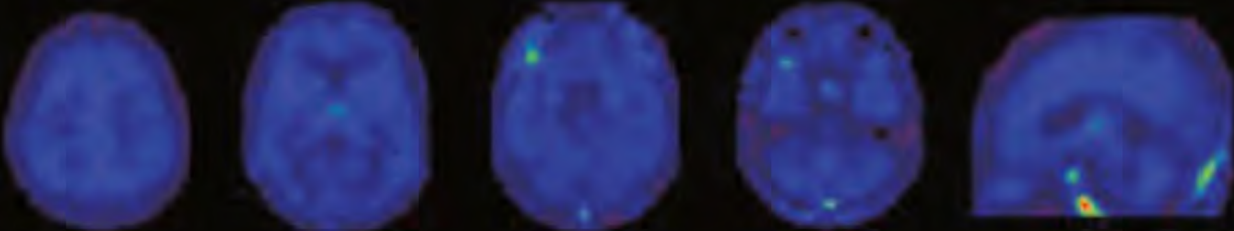
Bup 0



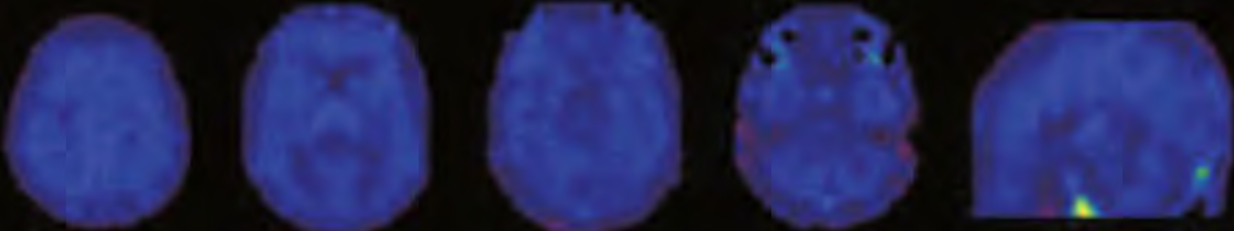
Bup 2



Bup 16



Bup 32



DVR



72-hour rule

Title 21, Code of Federal Regulations, Part 1306.07(b)

Allows to administer (but not prescribe) narcotic drugs for the purpose of relieving acute withdrawal symptoms while arranging for the patient's referral for treatment

- **Not more than 1-day's medication may be administered or given to a patient at one time**
- **Patient must return to ED each day for no more than 72 hours**
- **This 72-hour period cannot be renewed or extended.**



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 and Author Video Interview at jama.com](#)

 [CME Quiz at jamanetworkcme.com and CME Questions page 1670](#)

JAMA, 2015

Objective

To compare the efficacy of 3 interventions for opioid dependent ED patients

**Referral to
Treatment**

**Brief Intervention
& Facilitated Referral**

**Brief Intervention
with ED-initiated
Buprénorphine**
Primary Care follow-up
for 10 weeks treatment

329 Patients were enrolled from April 2009 - June 2013

Interventions

Referral

Handout of all drug treatment providers/services in the area relevant to insurance status and access to a phone

Brief Intervention

The BNI, discussion of treatment options, and a *facilitated* referral to treatment
[BNI, mean time 10.6 (SD) 4.3]

Buprénorphine


The BNI + ED-initiated buprénorphine and referral to Primary Care in 24-72 hours for ongoing buprénorphine medical management (10 weeks), followed by transfer or détoxification

Outcome Measures


30 days



Proportion enrolled in formal addiction treatment on day 30



Self-reported non-prescribed opioid use. HIV risk and rates of negative urine testing for opioids



Use of addiction treatment serves as measured by number of outpatient and inpatient treatment services and ED visits since randomization

Formal opioid addiction treatment is defined as:

Clinical settings including office-based providers of BUP or inpatient, detoxification, therapeutic community, naltrexone, methadone or buprenorphine maintenance. Participation in a self-help program such as N.A. alone will not be considered as engagement in a formal treatment program.

Inclusion/Exclusion Criteria

Inclusion: Patients presenting to the Yale-New Haven Hospital ED

- >18 years of age
- Opioid dependent: MINI
- Positive urine toxicology for opioids

Exclusion:

- Inability to read or understand English
- Currently enrolled in a formal substance abuse program
- Currently suicidal or psychotic
- Presenting with a life-threatening or unstable illness or injury
- Requiring hospital admission
- Requiring opioid agonist medication for a pain-related diagnosis (contraindication to buprenorphine)

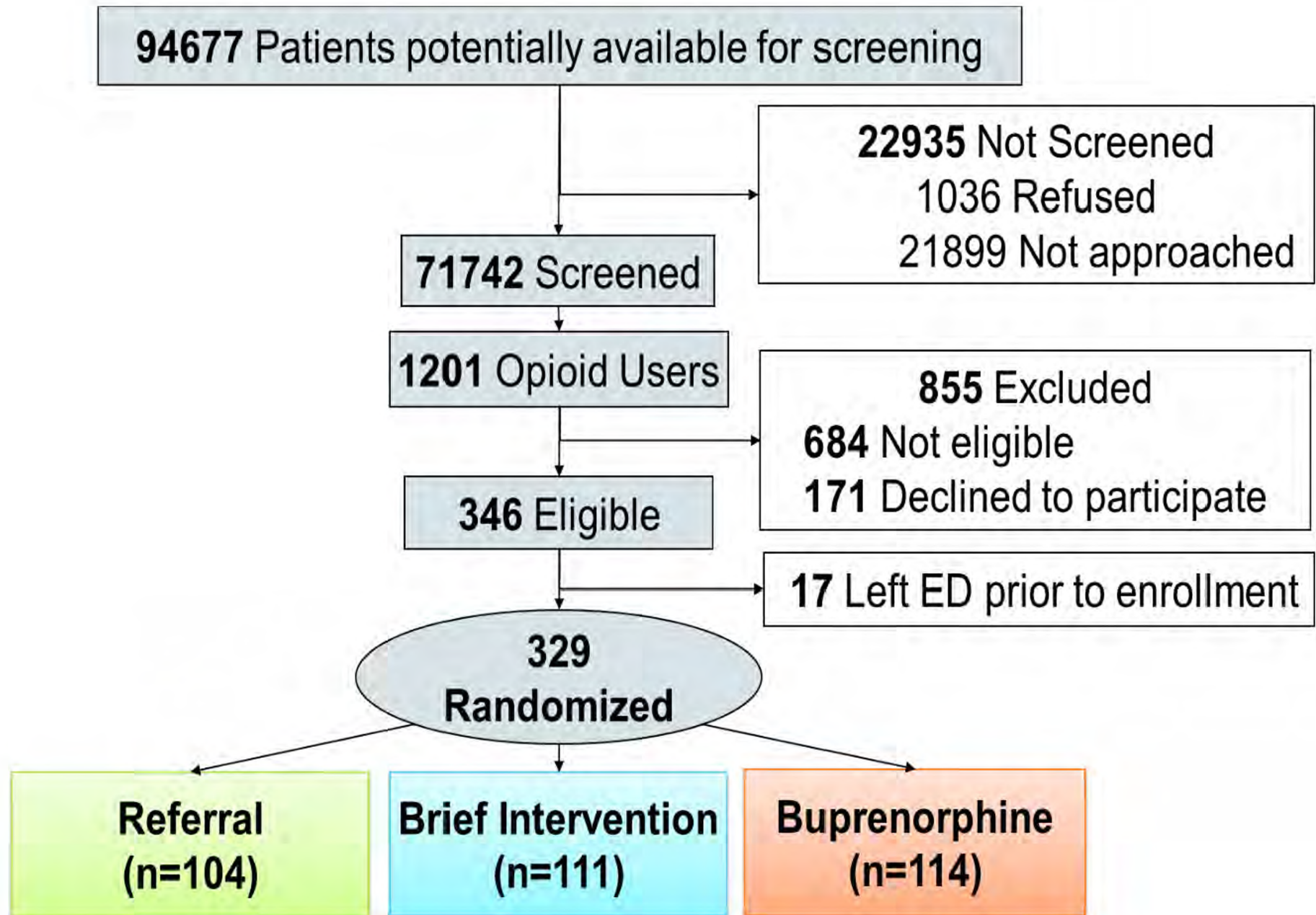
Screening: Health Quiz

| | | |
|--|---------------------------------|----------------------------------|
| 1. In the PAST 30 days have you used any of the following pain relievers? | | |
| a) Codeine | <input type="checkbox"/> 0...No | <input type="checkbox"/> 1...Yes |
| b) Fentanyl (Duragesic, Actiq, Sublimaze) | <input type="checkbox"/> 0...No | <input type="checkbox"/> 1...Yes |
| c) Hydrocodone (Vicodin, Lorcet, Lortab, Hycodan, Norco, Vicoprofen) | <input type="checkbox"/> 0...No | <input type="checkbox"/> 1...Yes |
| d) Hydromorphone (Dilaudid, Palladone) | <input type="checkbox"/> 0...No | <input type="checkbox"/> 1...Yes |
| e) Meperidine (Demerol) | <input type="checkbox"/> 0...No | <input type="checkbox"/> 1...Yes |
| f) Methadone (Dolophine, Methadose) | <input type="checkbox"/> 0...No | <input type="checkbox"/> 1...Yes |
| g) Buprenorphine (Subutex, Suboxone) | <input type="checkbox"/> 0...No | <input type="checkbox"/> 1...Yes |
| h) Morphine (MS Contin, Kadian, Duramorph) | <input type="checkbox"/> 0...No | <input type="checkbox"/> 1...Yes |
| i) Oxycodone (Percocet, Percodan, Roxicet, Oxycontin, Roxicodone, Endocet, Tylox) | <input type="checkbox"/> 0...No | <input type="checkbox"/> 1...Yes |
| j) Oxymorphone | <input type="checkbox"/> 0...No | <input type="checkbox"/> 1...Yes |
| k) Pentzocine (Talwin) | <input type="checkbox"/> 0...No | <input type="checkbox"/> 1...Yes |
| l) Propoxyphene (Darvocet, Darvon, Wygesic) | <input type="checkbox"/> 0...No | <input type="checkbox"/> 1...Yes |
| m) Other (specify) _____ | <input type="checkbox"/> 0...No | <input type="checkbox"/> 1...Yes |
| 2. Were these drugs prescribed for you? | | |
| | <input type="checkbox"/> 0...No | <input type="checkbox"/> 1...Yes |
| 3. Have you ever taken the drug(s) for the experience or feeling it caused? | | |
| | <input type="checkbox"/> 0...No | <input type="checkbox"/> 1...Yes |
| 4. In the PAST 30 days have you used heroin? | | |
| | <input type="checkbox"/> 0...No | <input type="checkbox"/> 1...Yes |
| 5. How often do you use heroin or <u>insert name of drug(s)</u> | | |
| | _____ Days | _____ Weeks |

For Additional Probing:

Have you requested refills earlier than prescribed? How do you usually take your medication?

Consort Diagram



Characteristics of Patients

| | Overall (n=329) | Referral (n=104) | Brief Intervention (n=111) | Buprénorphine (n=114) |
|--|--------------------|---------------------|----------------------------------|--------------------------|
| Démographie Characteristics (%) | | | | |
| Male sex | 76.3 | 77.9 | 75.7 | 75.4 |
| Race/Ethnicity | | | | |
| White | 75.4 | 75.0 | 73.9 | 77.2 |
| Black | 7.0 | 6.7 | 7.2 | 7.0 |
| Hispanic | 16.4 | 15.4 | 18.9 | 15.0 |
| Other | 1.2 | 2.9 | 0 | 0.9 |
| Age, mean (SD), years | 31.4(10.6) | 31.4 (10.6) | 31.9(9.7) | 31 (9.8) |
| Education | | | | |
| High school graduate or équivalent | 41.3 | 38.5 | 45.9 | 39.5 |
| Some college | 34.4 | 31.7 | 31.5 | 39.5 |
| College degree or more | 6.1 | 8.7 | 7.2 | 2.6 |
| Usual employment, past 3 years | | | | |
| Full | 52.3 | 56.7 | 51.4 | 49.1 |
| Part time | 25.5 | 25.0 | 25.2 | 26.3 |
| Married | 10.9 | 11.5 | 9.0 | 12.3 |
| No stable living arrangement past 30 days | 9.1 | 7.7 | 9.0 | 10.5 |

| | Overall (n=329) | Referral (n=104) | Ir |
|--|--------------------|---------------------|----|
| Health insurance | | | |
| Private/Commercial | 31.6 | 31.7 | |
| Medicare | 1.8 | 1.0 | |
| Medicaid | 43.2 | 46.2 | |
| None | 21.6 | 20.2 | |
| Primary Care Physician | 41.9 | 40.4 | |
| Usual source of care | | | |
| Private physician' s office | 27.9 | 28.8 | |
| Clinic | 26.7 | 25.0 | |
| Emergency Department or none | 45.3 | 46.2 | |
| Clinical Characteristics (%) | | | |
| ED Identification of Participants- | | | |
| Seeking Treatment for opioid dependence | 34.0 | 30.8 | |
| Identified via screening | 66.0 | 69.2 | |
| - Overdose | 8.8 | 6.7 | |
| Primary type of opioid drug used and route of administration- | | | |
| Prescription | 24.9 | 29.8 | |
| Heroin | 75.1 | 70.2 | |
| -Intravenous Use | 52.9 | 44.2 | |

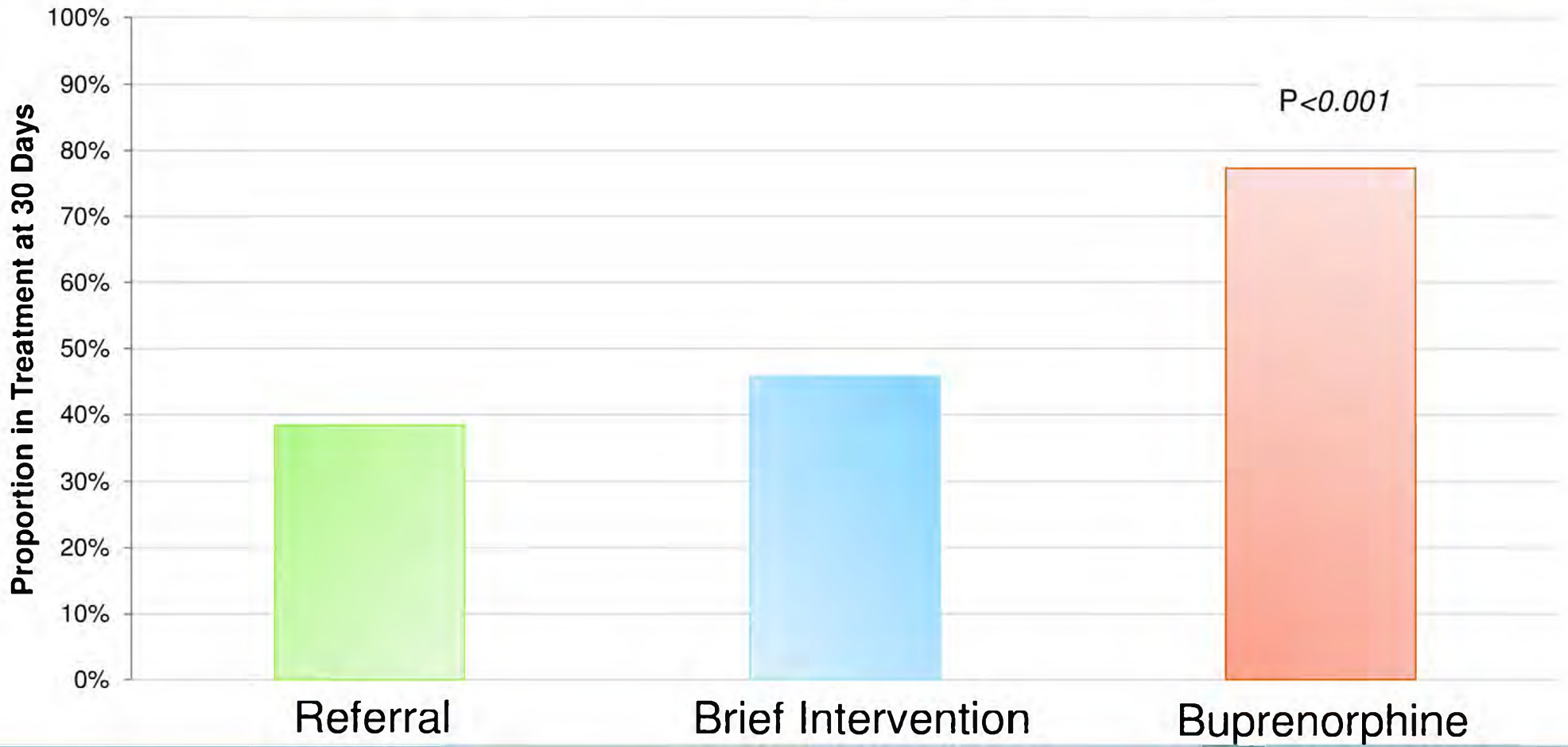
Characteristics of Patients

| | Overall (n=329) | Referral (n=104) | Brief Intervention (n=111) | Buprenorphine (n=114) |
|--|--------------------|---------------------|----------------------------------|--------------------------|
| Health insurance | | | | |
| Private/Commercial | 31.6 | 31.7 | 29.7 | 33.3 |
| Medicare | 1.8 | 1.0 | 2.7 | 1.8 |
| Medicaid | 43.2 | 46.2 | 41.4 | 42.0 |
| None | 21.6 | 20.2 | 23.4 | 21.1 |
| Primary Care Physician | 41.9 | 40.4 | 41.4 | 43.9 |
| Usual source of care | | | | |
| Private physician's office | 27.9 | 28.8 | 23.4 | 31.6 |
| Clinic | 26.7 | 25.0 | 31.5 | 23.7 |
| Emergency Department or none | 45.3 | 46.2 | 45.0 | 44.7 |
| Clinical Characteristics (%) | | | | |
| ED Identification of Participants- | | | | |
| Seeking Treatment for opioid dependence | 34.0 | 30.8 | 30.6 | 40.4 |
| Identified via screening | 66.0 | 69.2 | 69.4 | 59.6 |
| - Overdose | 8.8 | 6.7 | 9.0 | 10.5 |
| Primary type of opioid drug used and route of administration- | | | | |
| Prescription | 24.9 | 29.8 | 21.6 | 23.7 |
| Heroin | 75.1 | 70.2 | 78.4 | 76.3 |
| -Intravenous Use | 52.9 | 44.2 | 59.5 | 54.4 |

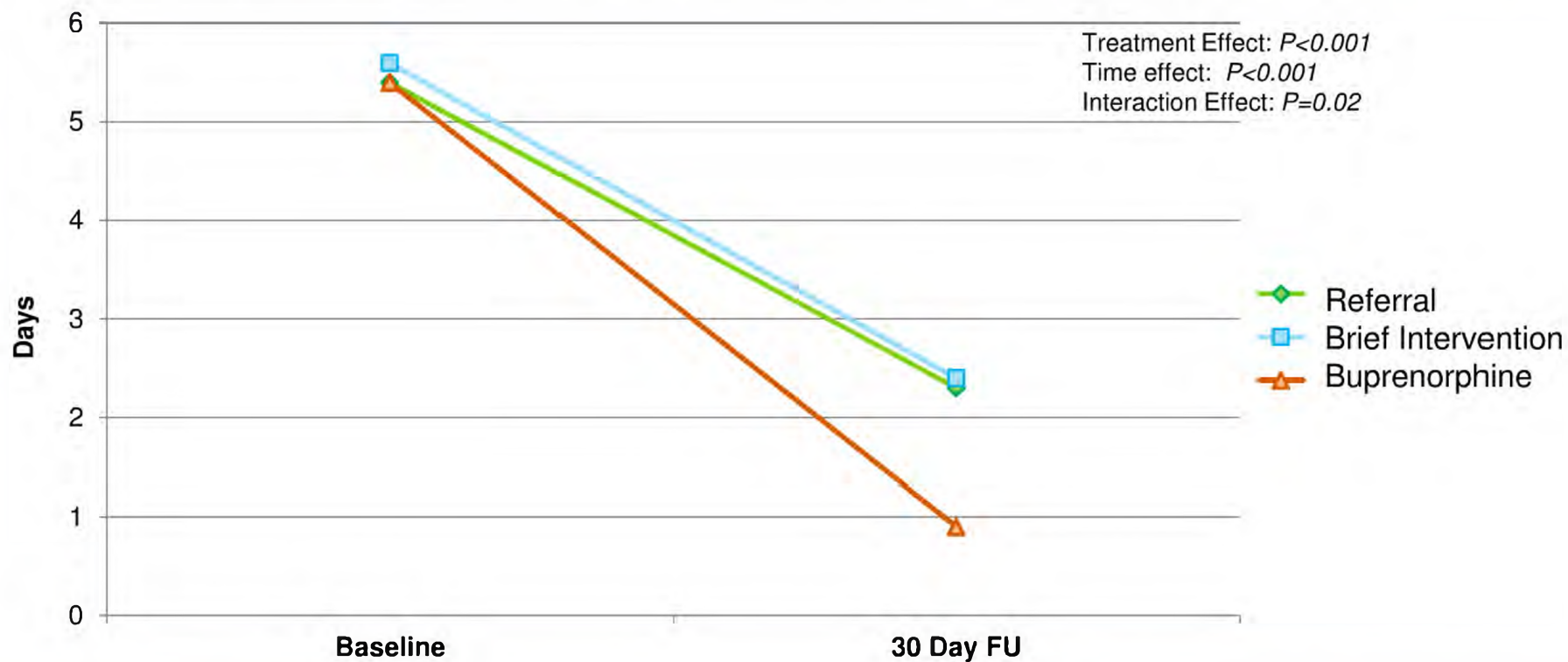
Characteristics of Patients (continued)

| | Overall (n=329) | Referral (n=104) | Brief Intervention (n=111) | Buprénorphine (n=114) |
|---|--------------------|---------------------|----------------------------------|--------------------------|
| Non-opioid substance use, past month | | | | |
| Alcohol to intoxication | 34.3 | 30.8 | 42.3 | 29.8 |
| Sédative use | 47.4 | 53.8 | 45.0 | 43.9 |
| Cannabis use | 52.9 | 58.7 | 48.6 | 51.8 |
| Cocaïne use | 55.3 | 54.8 | 59.5 | 51.8 |
| Cigarette use | 88.1 | 87.5 | 87.4 | 89.4 |
| Mental Health History- | | | | |
| Lifetime psychiatrie treatment | 51.1 | 51.9 | 53.2 | 48.2 |
| Inpatient | 26.1 | 26.9 | 26.1 | 25.4 |
| Outpatient | 41.9 | 47.1 | 40.5 | 38.6 |
| Any psychiatrie symptom past 30 days-ASI | 88.1 | 89.4 | 86.5 | 88.6 |
| Received treatment for dépression past 30 days | 12.2 | 8.7 | 15.3 | 12.3 |
| Acute psychiatry évaluation in ED | 23.4 | 22.1 | 27.0 | 21.1 |
| Lifetime treatment for addiction | | | | |
| Alcohol | 14.0 | 16.3 | 18.0 | 7.9 |
| Drugs | 72.9 | 70.2 | 79.3 | 69.3 |

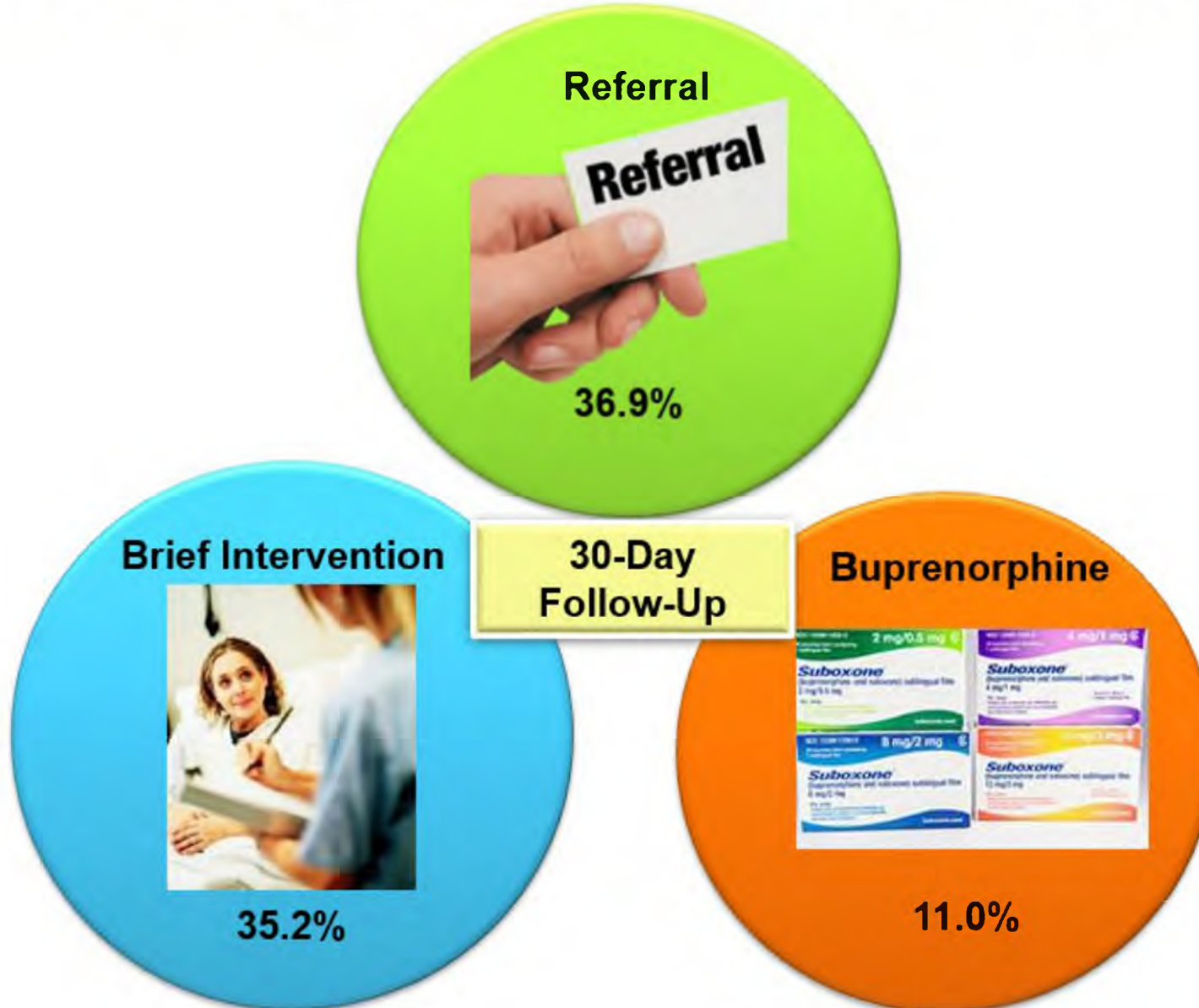
Engaged in Treatment 30-Days



Past 7 Day illicit Opioid Use



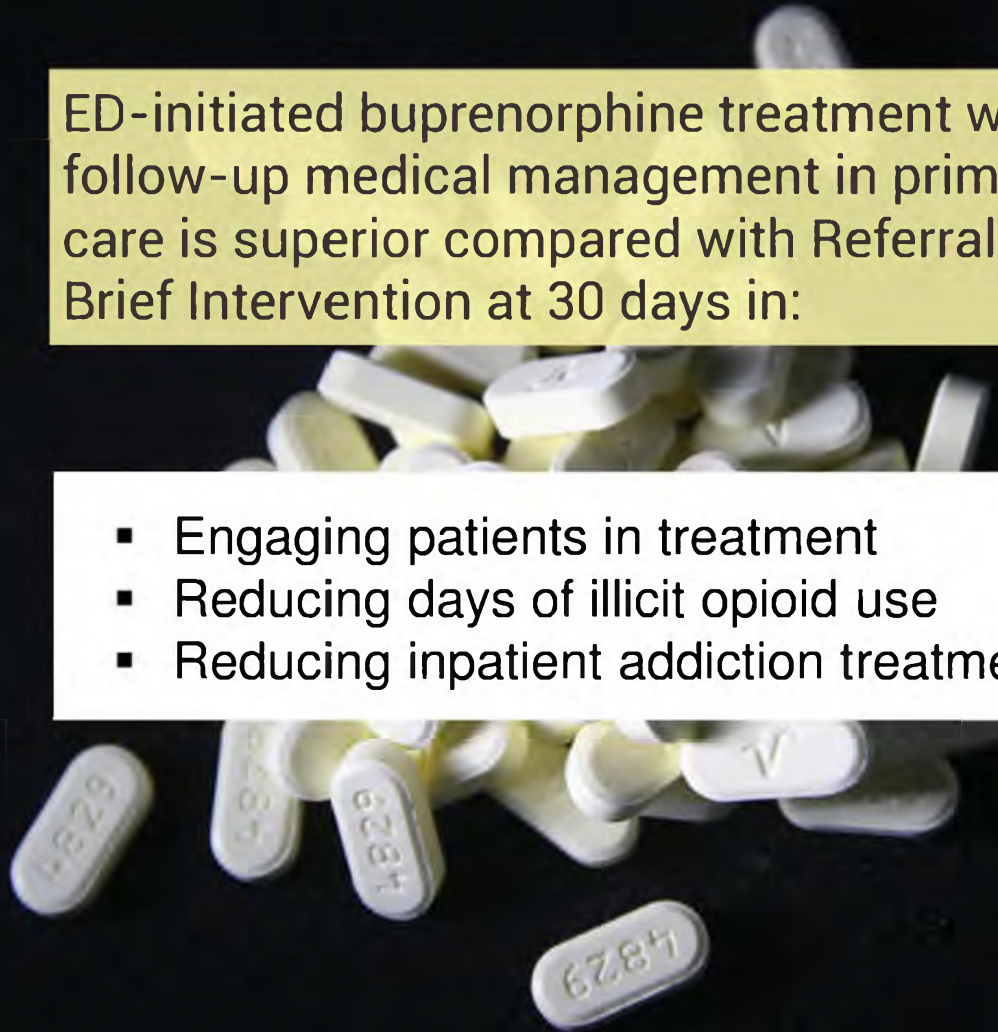
Reduces Inpatient Addiction Treatment



Conclusion

ED-initiated buprenorphine treatment with follow-up medical management in primary care is superior compared with Referral and Brief Intervention at 30 days in:

- Engaging patients in treatment
- Reducing days of illicit opioid use
- Reducing inpatient addiction treatment



Long-term Outcomes

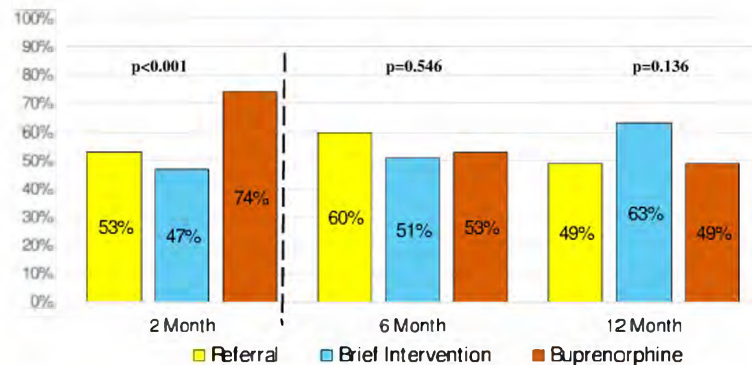
Emergency Department-Initiated Buprenorphine for Opioid Dependence with Continuation in Primary Care: Outcomes During and After Intervention

Gail D'Onofrio, MD, MS¹, Marek C. Chawarski, PhD^{1,2}, Patrick G. O'Connor, MD, MPH³, Michael V. Pantalon, PhD¹, Susan H. Busch, PhD⁴, Patricia H. Owens, MS¹, Kathryn Hawk, MD, MHS¹, Steven L. Bernstein, MD¹, and David A. Fiellin, MD^{3,4}

¹Department of Emergency Medicine, Yale School of Medicine, New Haven, CT, USA; ²Department of Psychiatry, Yale School of Medicine, New Haven, CT, USA; ³Department of General Medicine, Yale School of Medicine, New Haven, CT, USA; ⁴Yale School of Public Health, New Haven, CT, USA.

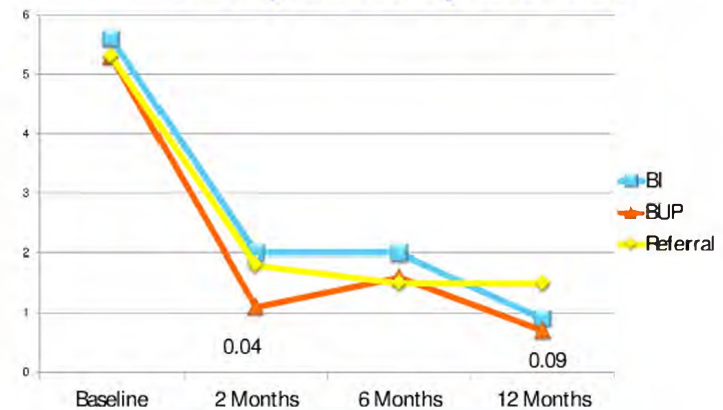
BACKGROUND: Emergency department (ED)-initiated buprenorphine for opioid dependence with continuation in primary care treatment is associated with improved outcomes compared to referral to primary care.

Engagement in Formal Addiction Treatment



when buprenorphine was continued in primary care. Outcomes at 6 and 12 months were comparable across

7-Day Illicit Opioid Use

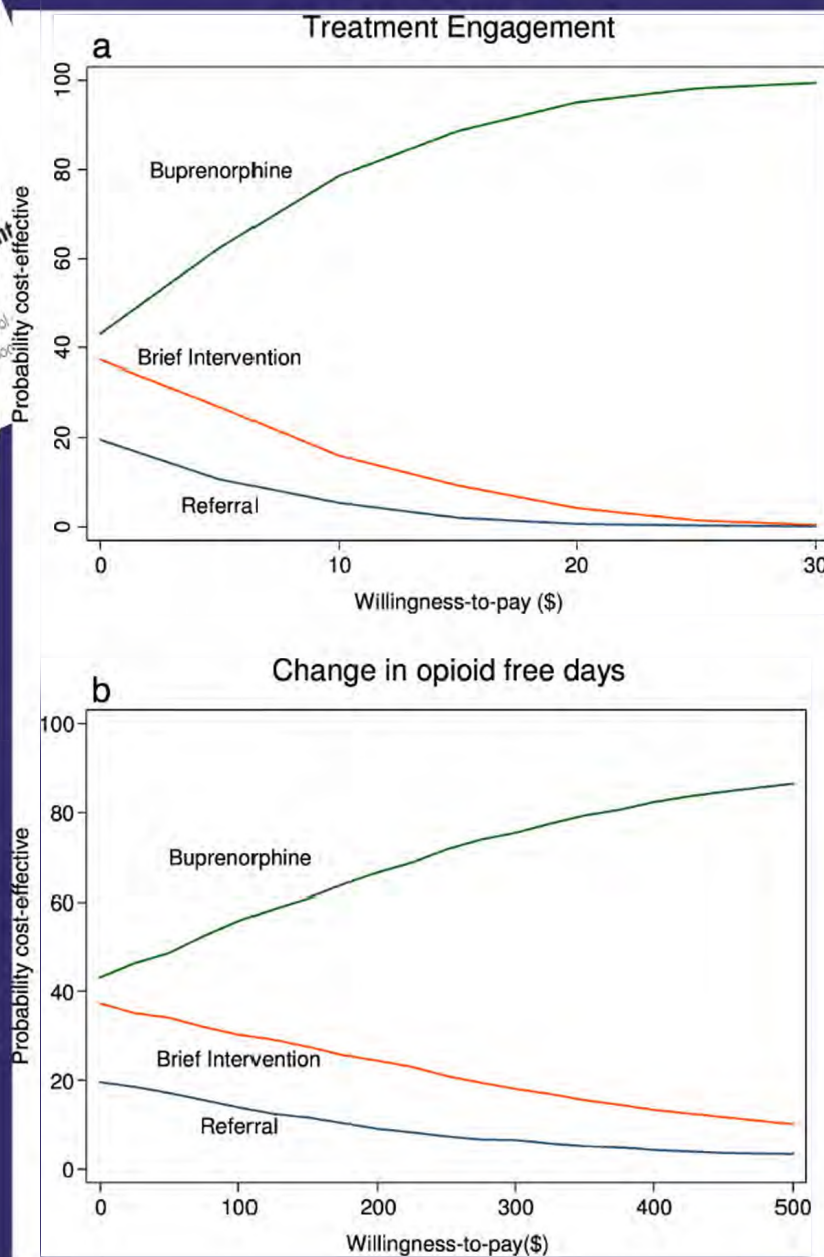


*The rates of illicit opioid negative urine toxicology and HIV risk behaviors were not significantly different



Cost-effective acceptability curve: base case analysis.

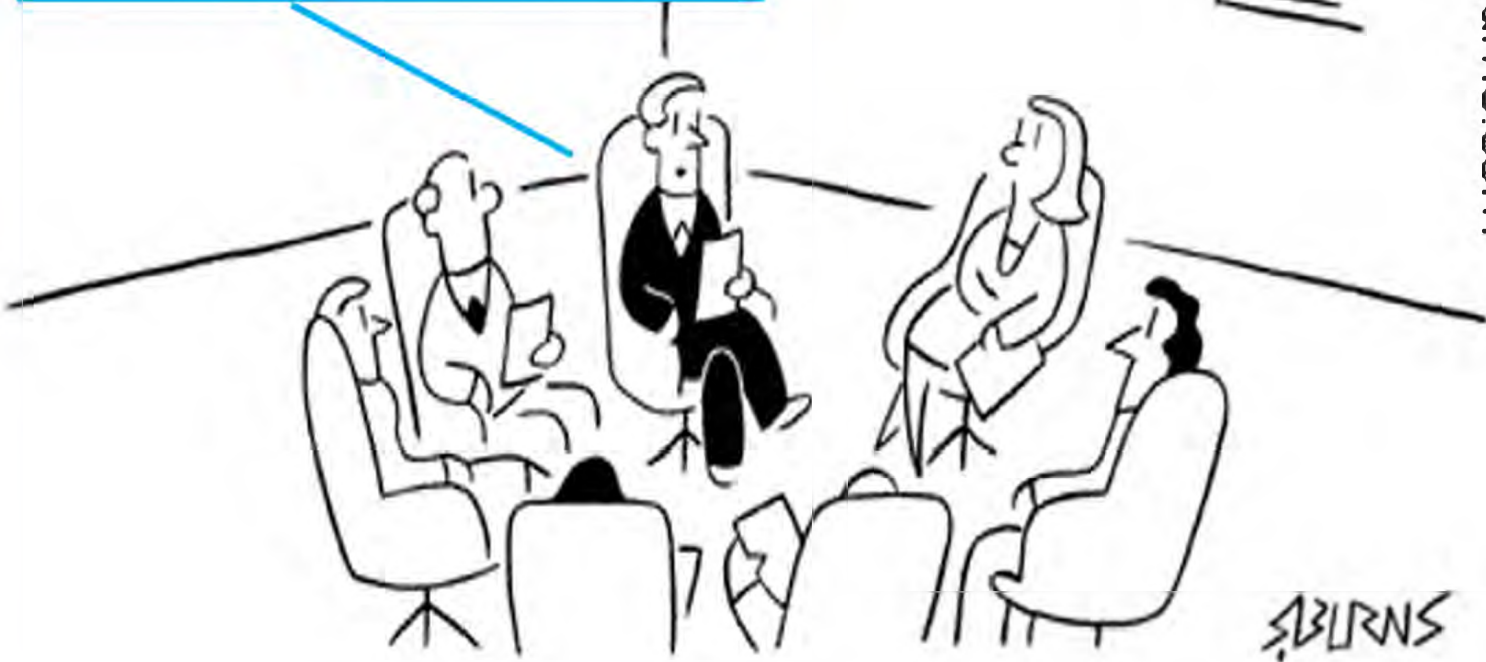
- (a) Willingness-to-pay for a 1 percentage point increase in the probability a patient is engaged in treatment 30-days post-enrollment.
- (b) Willingness-to-pay for 1 additional opioid-free day in the past 7-days



The latest research shows that we really should do something with all this research

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Research Into Practice



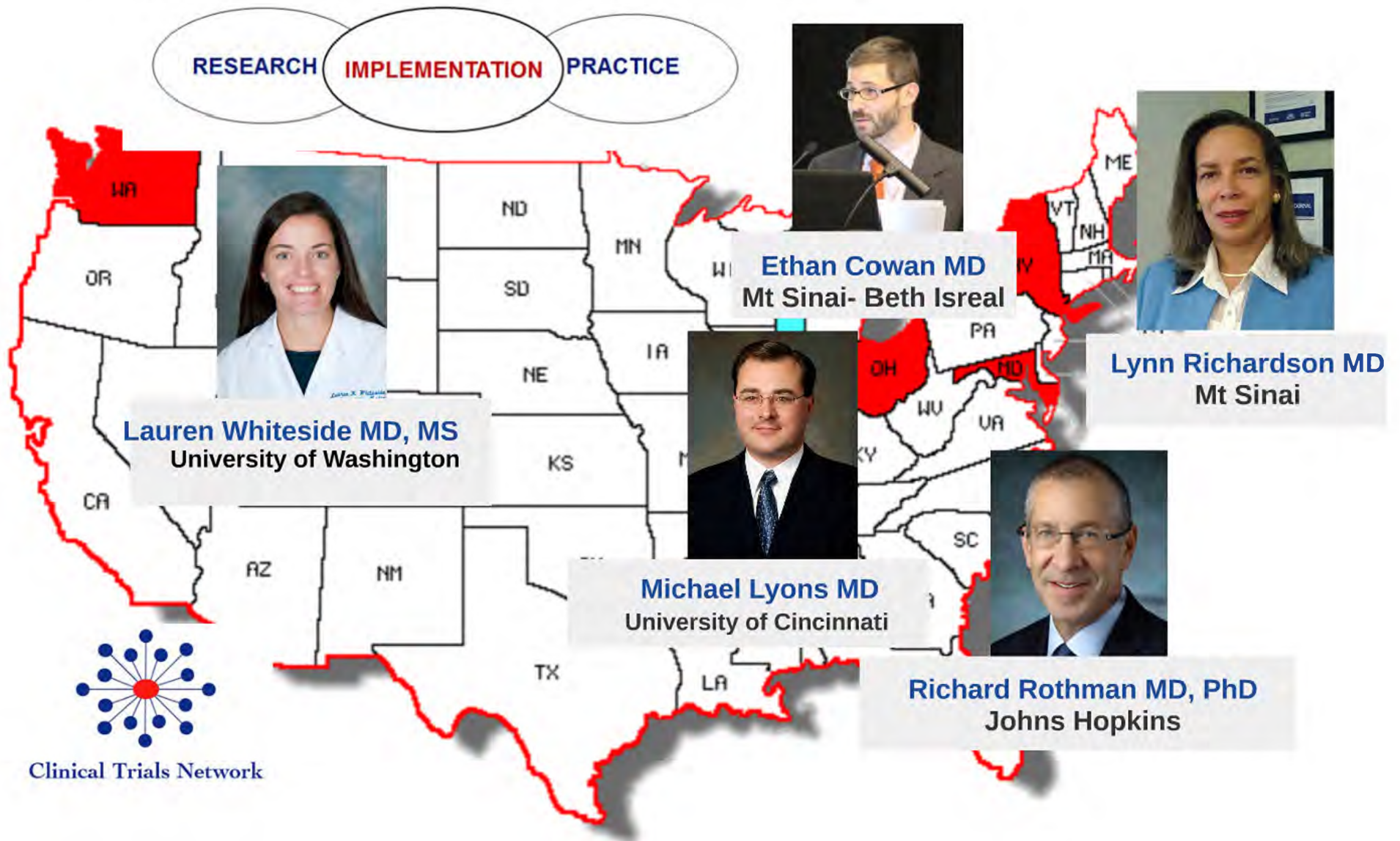
**Project ASSERT
Health Promotion Advocates**



NIDA Clinical Trials Network: Opioid Use Disorder in the ED

Project ED Health

Design: Hybrid Type 3 Effectiveness-Implementation Study



Clinical Trials Network: Initiating Extended Release Buprenorphine for OUD in Low Resourced, High Intensity EDs



The image features a map of the United States with state abbreviations. Three investigator portraits are overlaid on the map: Ryan McCormack, MD (Lead Investigator) is positioned over the central US; Kate Hawk MD, MHS (Investigator) is positioned over the eastern US; and Randy Knight MD (Investigator) is positioned over the northeastern US. The state of New Hampshire (NH) is highlighted in red on the map. Insets for Alaska (AK) and Hawaii (HI) are shown to the left of the main map.

Ryan McCormack, MD
Lead Investigator

Kate Hawk MD, MHS
Investigator

Randy Knight MD
Investigator



Clinical Trials Network

The Opioid Crisis From Research to Practice

THE
MILBANK QUARTERLY

A JOURNAL OF PUBLIC HEALTH AND POLICY

Op-Ed

The Opioid Crisis From Research to Practice

JOSHUA M. SHARFSTEIN

2017

IN 2015, RESEARCHERS FROM YALE UNIVERSITY PUBLISHED A randomized, controlled trial on the treatment of opioid addiction.¹ The study asked whether patients identified in the emergency department would benefit from prompt access to the well-proven medication buprenorphine, including usual care (to discharge). The researchers were questioning not what, how, why, or when—but where.

The results of their study were that patients who received access to buprenorphine in the emergency department were twice as likely to remain engaged in treatment 30 days later compared with those who just received a referral, 70% versus 37%. (In the third arm of the study, only 45% of those who received a brief intervention and referral but no buprenorphine in the emergency department continued to treatment.)²

Effective treatment for opioid use disorder is associated with a much lower risk of overdose, infection, and criminal behavior, as well as a substantially greater chance of employment and life success.³ Given the magnitude of the opioid crisis, with more than 28,000 deaths each year and rising in the United States, the Yale study should have caused an earthquake in clinical medicine. Instead, it registered barely a tremor. Few emergency departments in the United States routinely offer access to this treatment.

On November 17, 2016, the surgeon general released a landmark report entitled "Facing Addiction in America." Citing the Yale study, the report states: "Buprenorphine . . . treatment for opioid misuse should . . . be available in emergency departments."⁴

The surgeon general's report also provides insight into why so little progress toward this goal has been made:

Until recently, substance misuse problems and substance use disorders were viewed as social problems, best managed at the individual and family levels, and sometimes through the existing social infrastructure [such as the criminal justice system]. . . . Despite a compelling

The Milbank Quarterly, Vol. 97, No. 1, 2017, pp. 24-27.
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Effective treatment for opioid use disorder is associated with a much lower risk of overdose, infection, and criminal behavior, as well as a substantially greater chance of employment and life success.² Given the magnitude of the opioid crisis, with more than 28,000 deaths each year and rising in the United States, the Yale study should have caused an earthquake in clinical medicine. Instead, it registered barely a tremor. Few emergency departments in the United States routinely offer access to this treatment.

On November 1, 2016, the White House released a landmark report entitled "Tackling Addiction in America." Citing the Yale study, the report states: "Buprenorphine... treatment for opioid misuse should... be available in emergency departments."

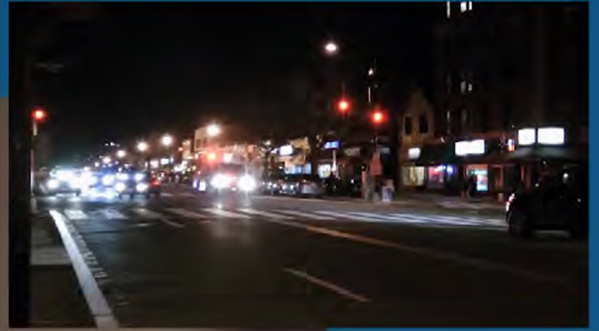
The surgeon general's report also provides insight into why so little progress has been made

A composite image featuring a globe of Earth in the upper portion, showing continents and oceans. The globe is overlaid with a network of glowing orange-red cracks, resembling a cracked surface or a map of tectonic plates. Below the globe, a person in a dark suit stands on a dark, textured surface, casting a shadow. The overall scene is set against a black background.

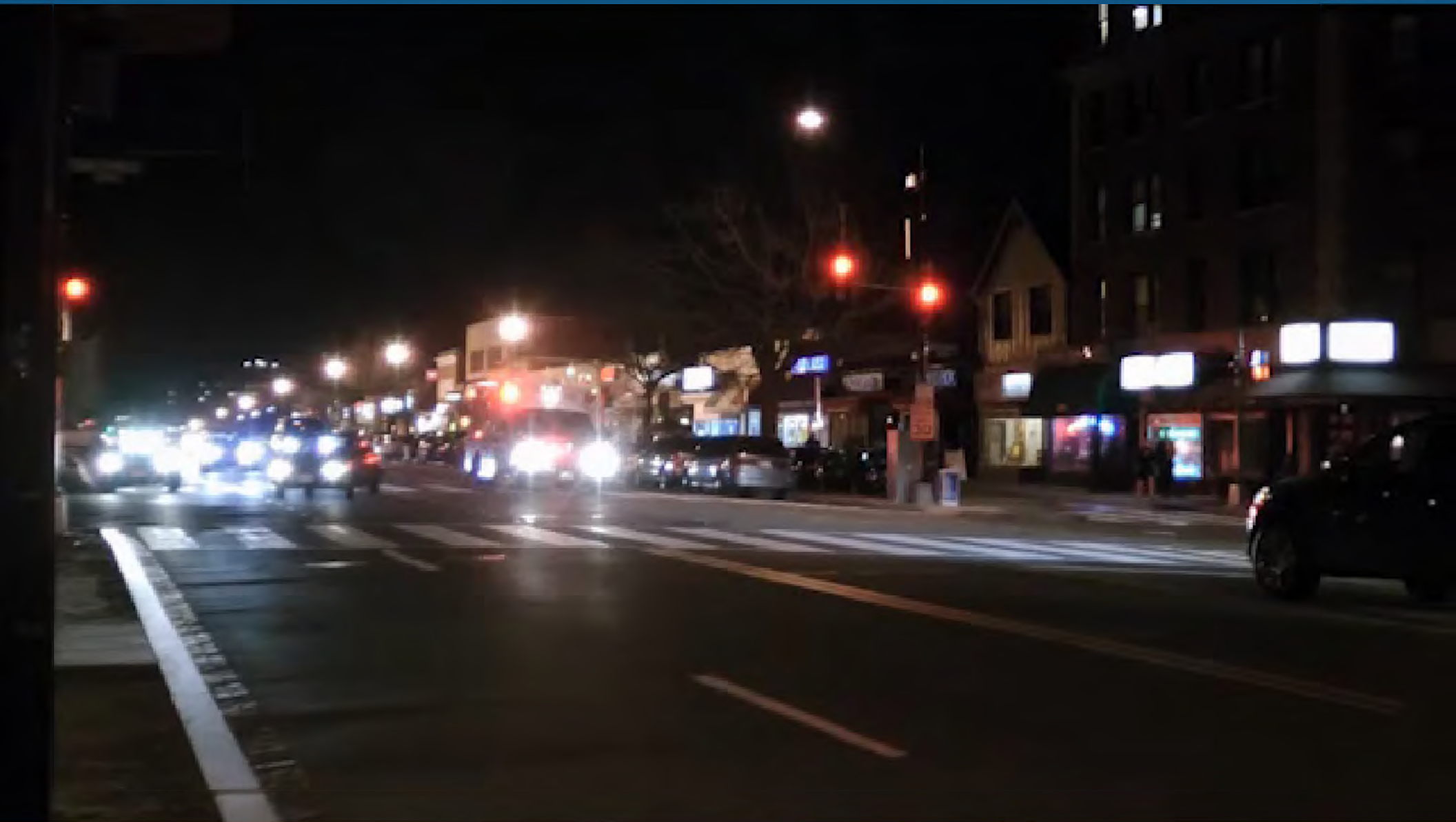
SUPER HEROES ARE HERE

EM LEADERS ACROSS THE U.S.





ANDREW HERRING MD - HIGHLAND HOSPITA



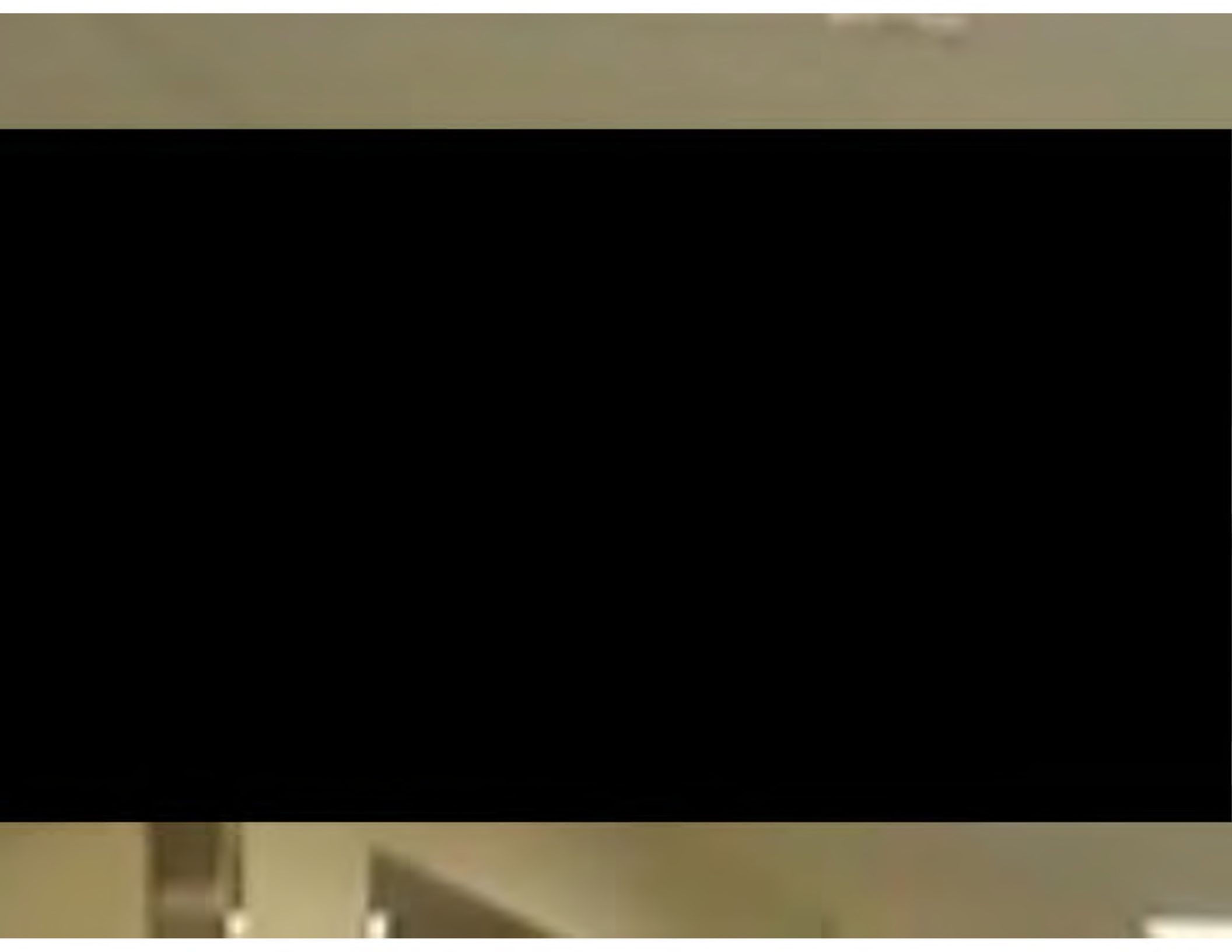
Day 1 Contact, IVD





ROSS SULLIVAN MD -UPSTATE UNIVERSITY HOSPITAL





What is the future?

Resources

| Resource | Link |
|----------|------|
| ... | ... |
| ... | ... |
| ... | ... |

Data Collection

| Category | Value |
|----------|-------|
| ... | ... |
| ... | ... |



Advocacy

The New York Times

An Opioid Crisis Foretold

By The Editorial Board

The editorial board represents the opinions of the board, its editor and the publisher. It is separate from the newsroom and the Op-Ed section.

April 21, 2018

Lawmakers so far have fallen far short of such a vigorous effort when it comes to opioid addiction. Congress has taken what can be considered only baby steps by appropriating a total of a few billion dollars of discretionary opioid funding in recent years. This funding amounts to a

Funding at is needed: such a long-term plan for prevention, addiction treatment and research. Andrew Kolodny, co-director of opioid policy research at Brandeis University, says **at least \$6 billion a year is needed for 10 years to set up a nationwide network of clinics and doctors to provide treatment with medicines like buprenorphine and methadone.** Those drugs have a proven track record of reducing overdoses and giving people struggling with addiction a shot at a stable life. Today, large parts of the country have few or no

Access to Buprenorphine according to an analysis by amfAR, a foundation that funds AIDS research.

Next, lawmakers need to remove regulations restricting access to buprenorphine, an opioid that can be used to get people off stronger drugs like heroin; its use is unlikely to end in an overdose. Doctors who want to prescribe the drug have to go through eight hours of training, and the government limits the number of patients they can treat. These limits have made the drug harder to obtain and created a situation in which it is easier to get the kinds of opioids that caused this

State Initiatives



Connecticut Opioid Response



Elizabeth Samuels MD, MPH

Quality Improvement Measures



Opioid Initiative for dissemination through a national quality network of EDs



Opioid-focused interventions, best-practice toolkit



Buprenorphine (BUP) Initiation

Do you have a waiver to prescribe Buprenorphine?

No Yes

Select from one of the four treatment options

ONLY 1 Click!



EMBED

Pragmatic trial to develop and test a user-centered clinical decision support to implement Emergency department-initiated Buprenorphine for opioid use Disorder



VIEWPOINT

Addiction Medicine

The Birth of a New Discipline

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Substance use is highly prevalent, a substantial cause of morbidity and mortality and accounts for over 1500 deaths annually. We have asked organized medicine to make addiction a high

Bring Addiction Medicine into EM

State University School of Medicine, Detroit, Michigan.

Gail D'Onofrio, MD, MS

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from motor vehicle crashes. Similarly, the global impact on disability and mortality of substance use and the phenomenon of addiction that often follows is enormous.²

Individuals with specific substance use disorders and addiction interact frequently with the health care system, offering opportunities to intervene. The evidence base of research supporting the effectiveness of prevention and treatment of addiction is growing. For example, randomized clinical trials have demonstrated the effectiveness of Screening, Brief Intervention, and

give confidence to primary care physicians that they can access expert consultation and follow up, when needed, such as with complex withdrawal or repeated relapse. In addition, specialists can help to decrease practice variation and ensure evidence-based care. The availability of addiction specialists who are broadly integrated into the medical community can also provide a bridge to substance abuse treatment programs, which many physicians are either unfamiliar with or reluctant to use. Once assessed by an addiction specialist, program re-

Live in one month!

Resources

website: yale.edu/edbup/

DSM-5 for Opioid Use Dis

I'd like to ask you more questions about your use of [name of drug] in the past 12 months:

1. Have you often found that when you started using (name of opioid(s)), you ended up taking more than you intended to?
2. Have you wanted to stop or cut down using or control your use of XX?
3. Have you spent a lot of time getting XX or using XX?
4. Have you had a strong desire or urge to use XX?
5. Have you missed work or school or often arrived late because you were intoxicated, high or recovering from the night before?
6. Has your use of XX caused problems with other people such as with family members, friends or people at work?
7. Have you had to give up or spend less time working, enjoying hobbies, or being with others because of your drug use?
8. Have you ever gotten high before doing something that requires coordination or concentration like driving, boating, climbing a ladder, or operating heavy machinery?
9. Have you continued to use even though you knew that the drug caused you problems like making you depressed, anxious, agitated or irritable?
10. Have you found you needed to use much more drug to get the same effect that you did when you first started taking it?
11. When you reduced or stopped using, did you have withdrawal symptoms or felt sick when you cut down or stopped using? (aches, shaking, fever, weakness, diarrhea, nausea, sweating, heart pounding, difficulty sleeping, or feel agitated, anxious, irritable, or depressed)?

Moderate Opioid Use Disorder: 4-5 symptoms

Severe Opioid Use Disorder: 6 or more symptoms

Clinical Opiate Withdrawal Scale

For each item, circle the number that best describes the patient's signs or symptom. Rate on just the apparent relationship to opiate withdrawal. For example, if heart rate is increased because the patient was jogging just prior to assessment, the increase pulse rate would not add to the score...

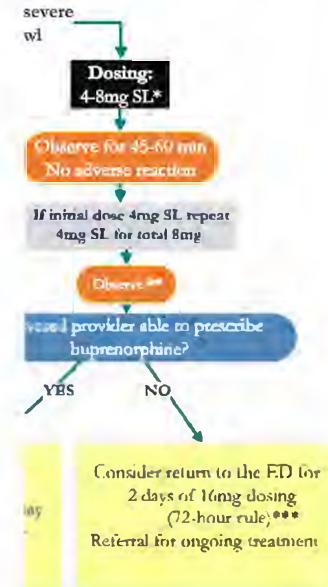
Date: -- :: Time (military)

| | |
|--|--|
| Resting Pulse Rate: _____ beats/minute <ul style="list-style-type: none"> Measured after patient is sitting or lying for 1 minute 0... pulse rate 80 or below 1... pulse rate 81-100 2... pulse rate 101-120 4... pulse rate greater than 120 | GI Upset: <ul style="list-style-type: none"> Over last 1/2 hour 0... no GI symptoms 1... stomach cramps 2... nausea or loose stool 3... vomiting or diarrhea 5... multiple episodes of diarrhea or vomiting |
| Sweating: <ul style="list-style-type: none"> Over past 1/2 hour not accounted for by room temperature or patient activity 0... no report of chills or flushing 1... subjective report of chills or flushing 2... flushed or observable moistness on face 3... beads of sweat on brow or face 4... sweat streaming off face | Tremor: <ul style="list-style-type: none"> Observation of outstretched hands 0... No tremor 1... tremor can be felt, but not observed 2... slight tremor observable 4... gross tremor or muscle twitching |
| Restlessness: <ul style="list-style-type: none"> Observation during assessment 0... able to sit still 1... reports difficulty sitting still, but is able to do so 3... frequent shifting or extraneous movements of legs/arms 5... Unable to sit still for more than a few seconds | Yawning: <ul style="list-style-type: none"> Observation during assessment 0... no yawning 1... yawning once or twice during assessment 3... yawning three or more times during assessment 4... yawning several times/minute |
| Pupil size: 0... pupils pinned or normal size for room light 1... pupils possibly larger than normal for room light 2... pupils moderately dilated 5... pupils so dilated that only the rim of the iris is visible | Anxiety or Irritability: 0... none 1... patient reports increasing irritability or anxiousness 2... patient obviously irritable anxious 4... patient so irritable or anxious that participation in the assessment is difficult |
| Bone or Joint aches: <ul style="list-style-type: none"> If patient was having pain previously, only the additional component attributed to opiates withdrawal is scored 0... not present 1... mild diffuse discomfort 2... patient reports severe diffuse aching of joints/muscles 4... patient is rubbing joints or muscles and is unable to sit still because of discomfort | Gooseflesh skin: 0... skin is smooth 3... piloerection of skin can be felt or hairs standing up on arms 5... prominent piloerection |
| Runny nose or tearing: <ul style="list-style-type: none"> Not accounted for by cold symptoms or allergies 0... not present 1... nasal stuffiness or unusually moist eyes 2... nose running or tearing 4... nose constantly running or tears streaming down | <ul style="list-style-type: none"> The total score is the sum of all 11 items... |

Total Score:

ne

72 hours after last use



the CDC indicating
 July 2016 -
 only stigmatized
 chronic disease
 off for outpatient
 similar treatment

OPPORTUNITY



Embrace science based treatments

Engage emergency physicians

Change the trajectory of the opioid epidemic



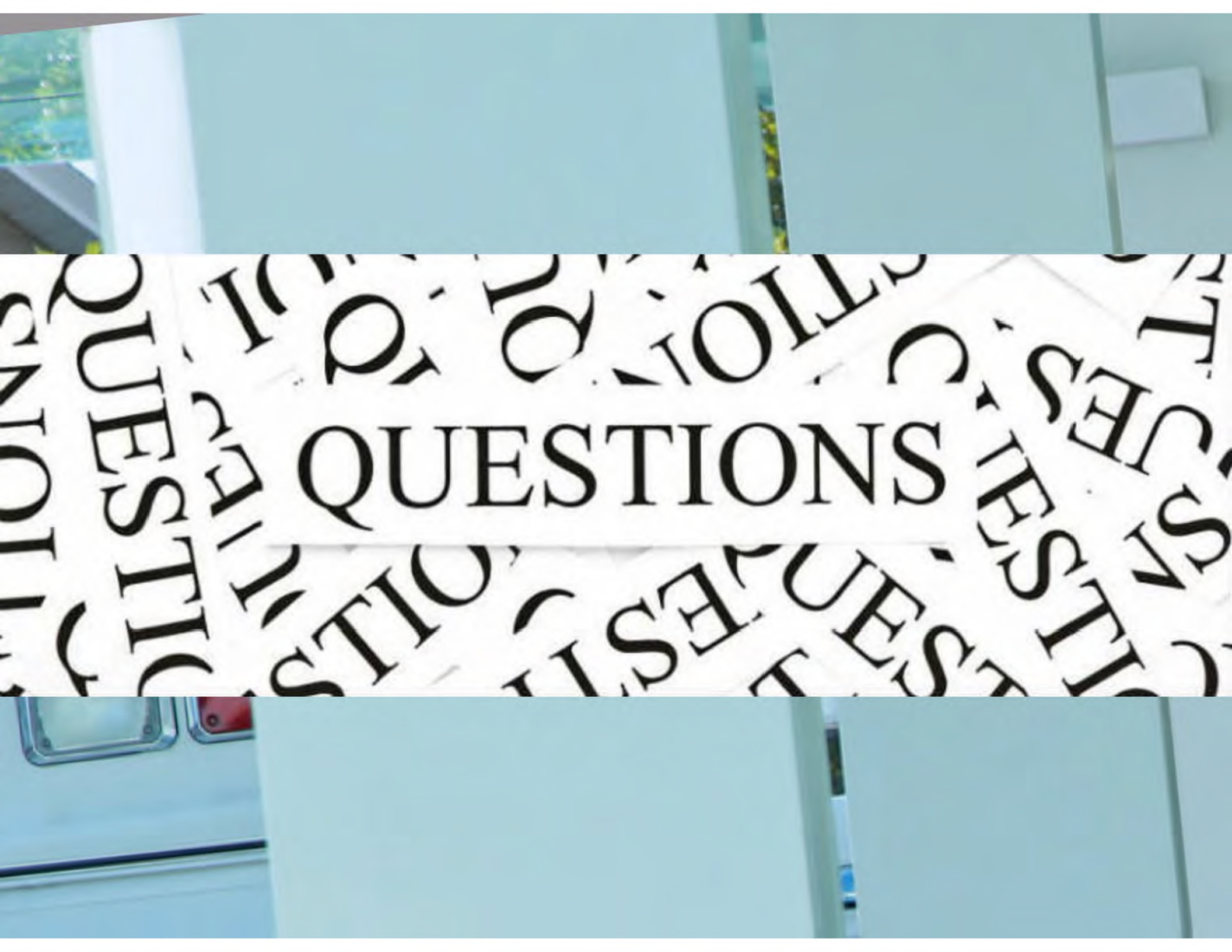
And Lets Change

*The way we **THINK** about addiction*

*The way we **TALK** about addiction*

*The way we **TREAT** addiction*

CORE, 2016



QUESTIONS

Resources:

Videos

<https://www.aetna.com/health-care-professionals/patient-care-programs/impact-of-opioid-use-disorder.html>

Yale SBIRT website: <https://medicine.yale.edu/sbirt/>

Yale DAHRS website: <https://medicine.yale.edu/dahrs/>

More Beds or More Chairs? Using a Science-Based Approach to Address the Opioid Epidémie

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