

# Opioid Use Disorder in Adolescents & Young Adults

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Rhode Island Department of Health

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Rhode Island American Academy of Pediatrics

# DISCLOSURES

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I have no financial conflicts of interest to disclose

I am an emergency physician, not a pediatrician

# OUTLINE

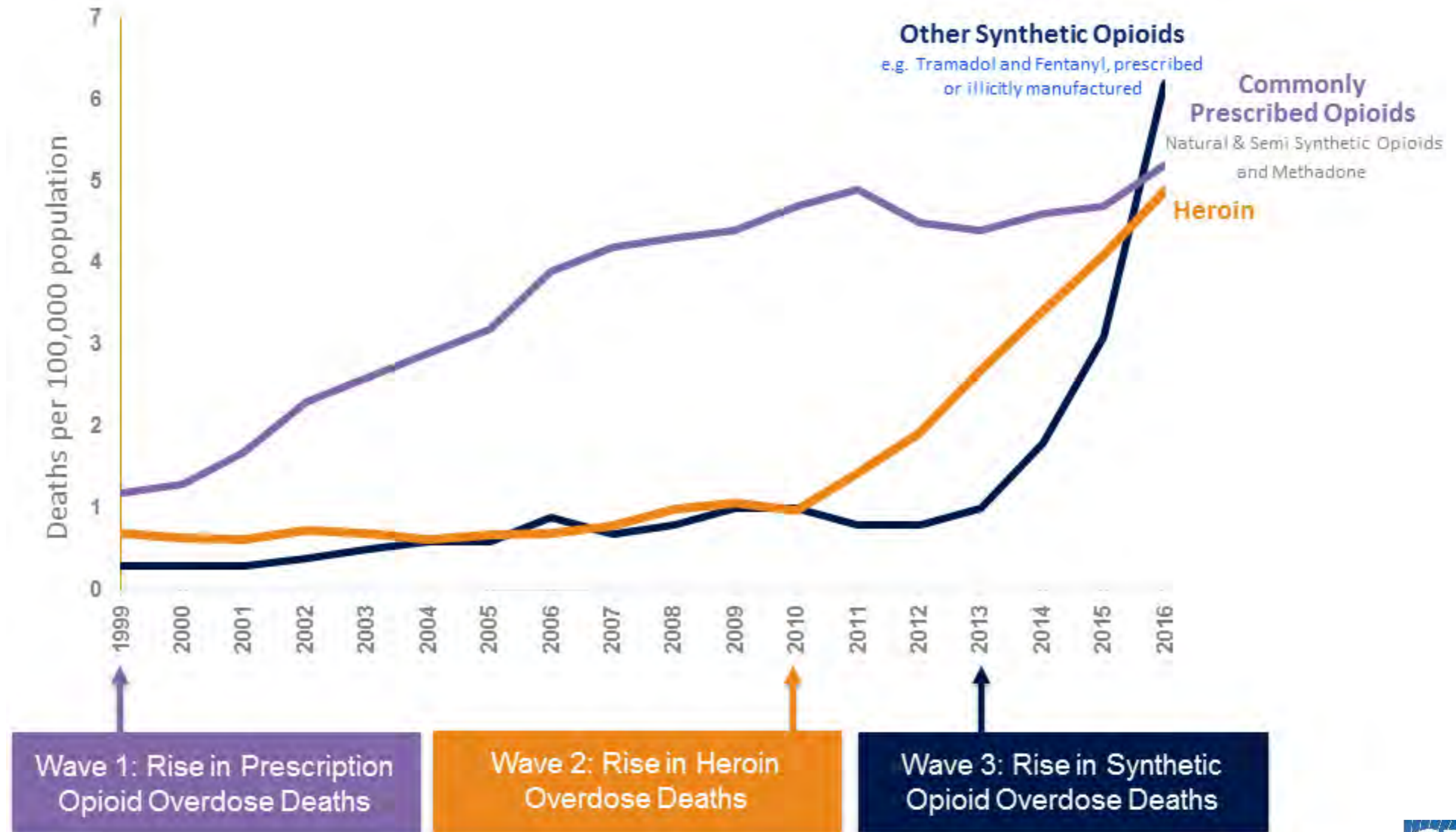
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1. Opioid use & overdose trends
2. Opioid use disorder
3. Prevention
4. Treatment
5. Harm Reduction
6. Rhode Island Strategic Pla



# RISING OVERDOSE DEATHS

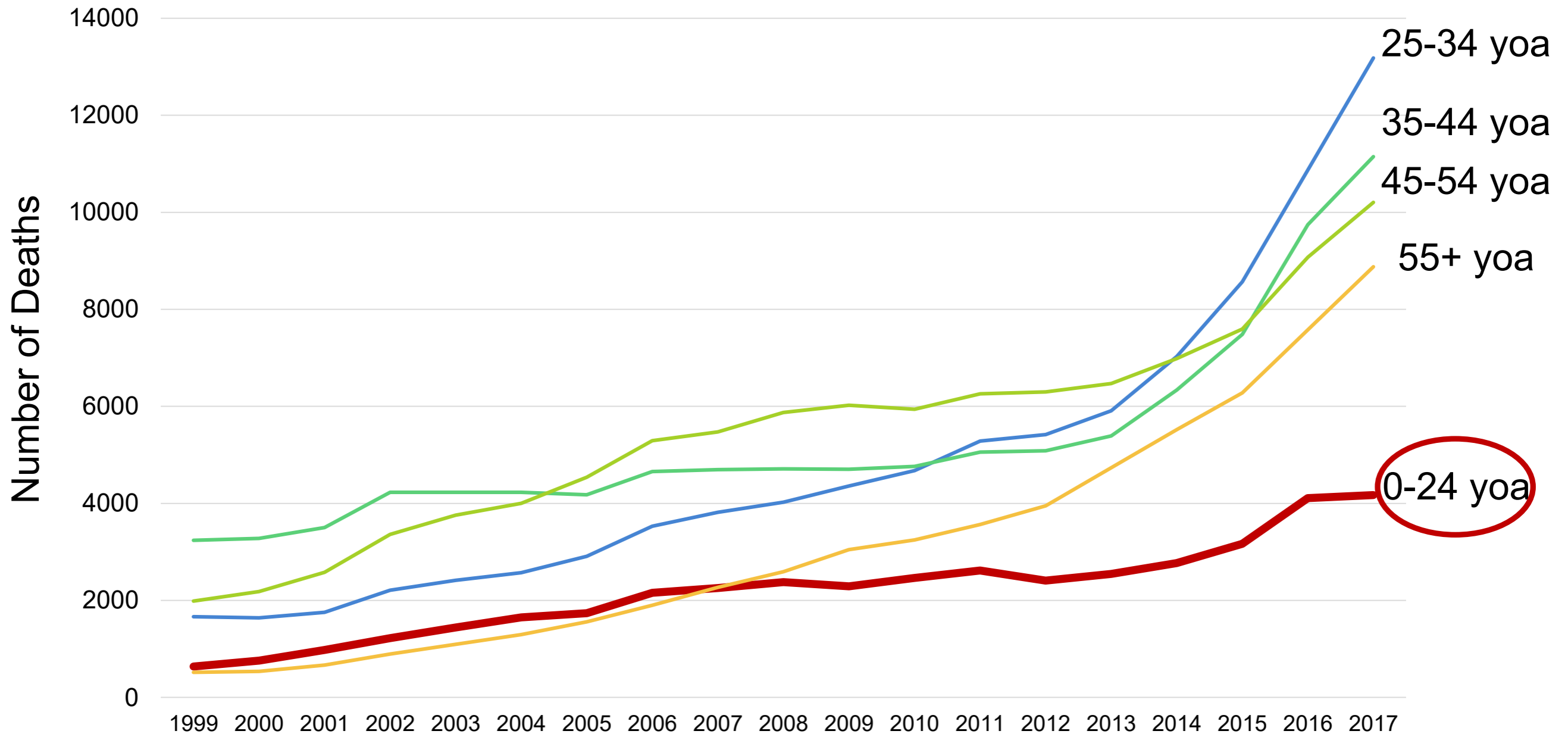
## 3 Waves of the Rise in Opioid Overdose Deaths



SOURCE: National Vital Statistics System Mortality File.

# RISING OVERDOSE DEATHS

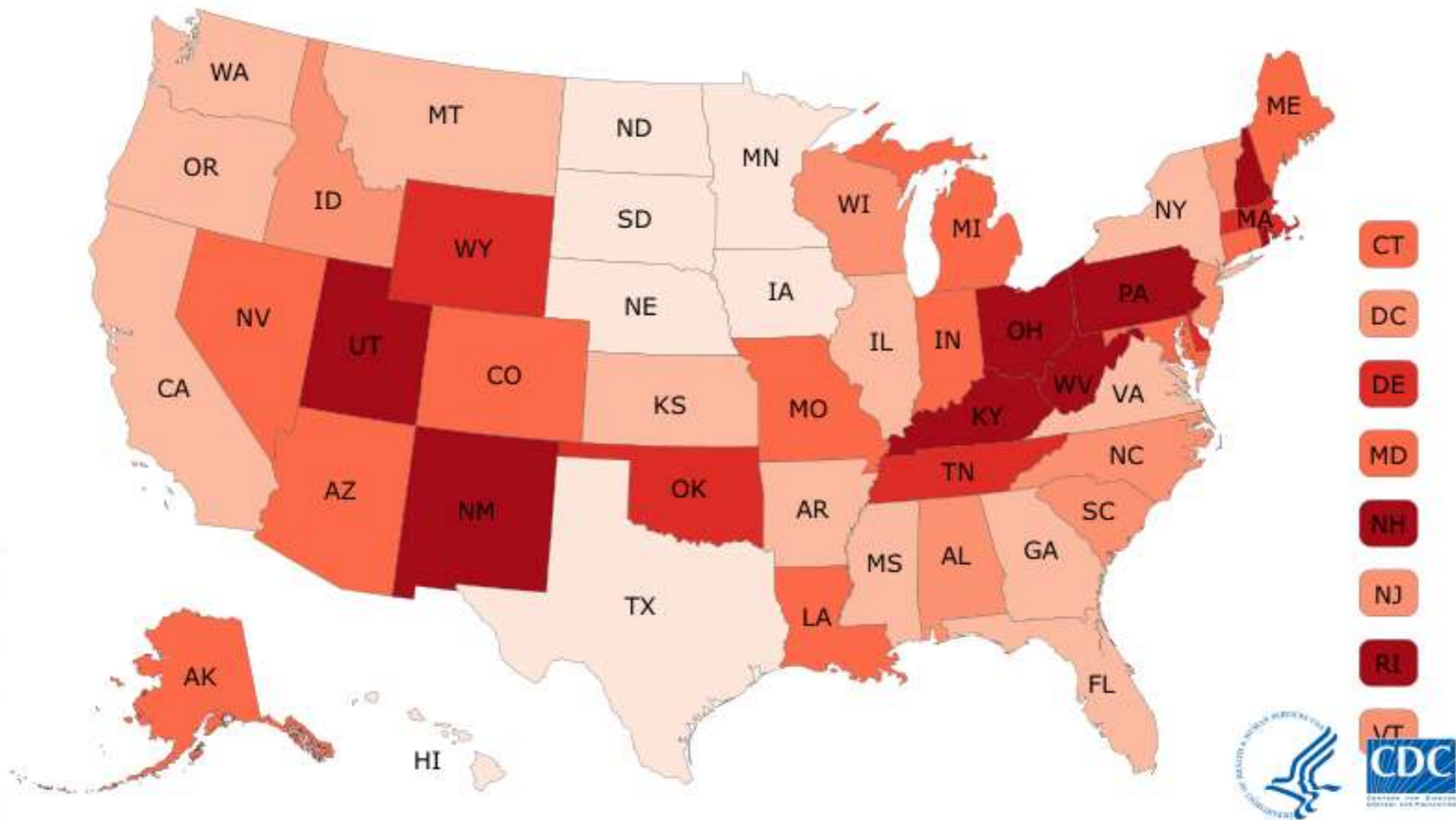
## Opioid overdose deaths by age, 1999-2017



# RISING OVERDOSE

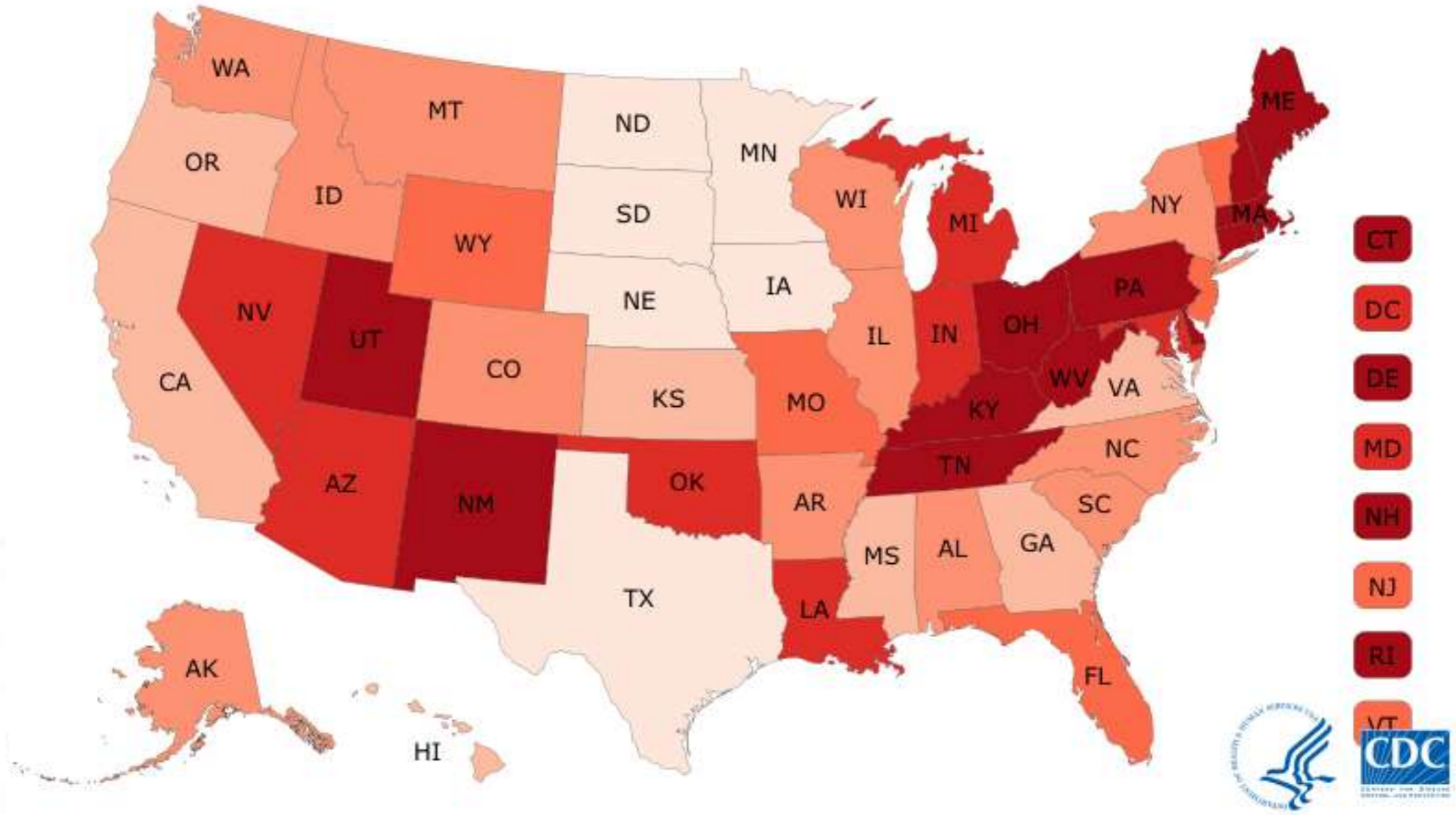
## DEATHS

2014



# RISING OVERDOSE

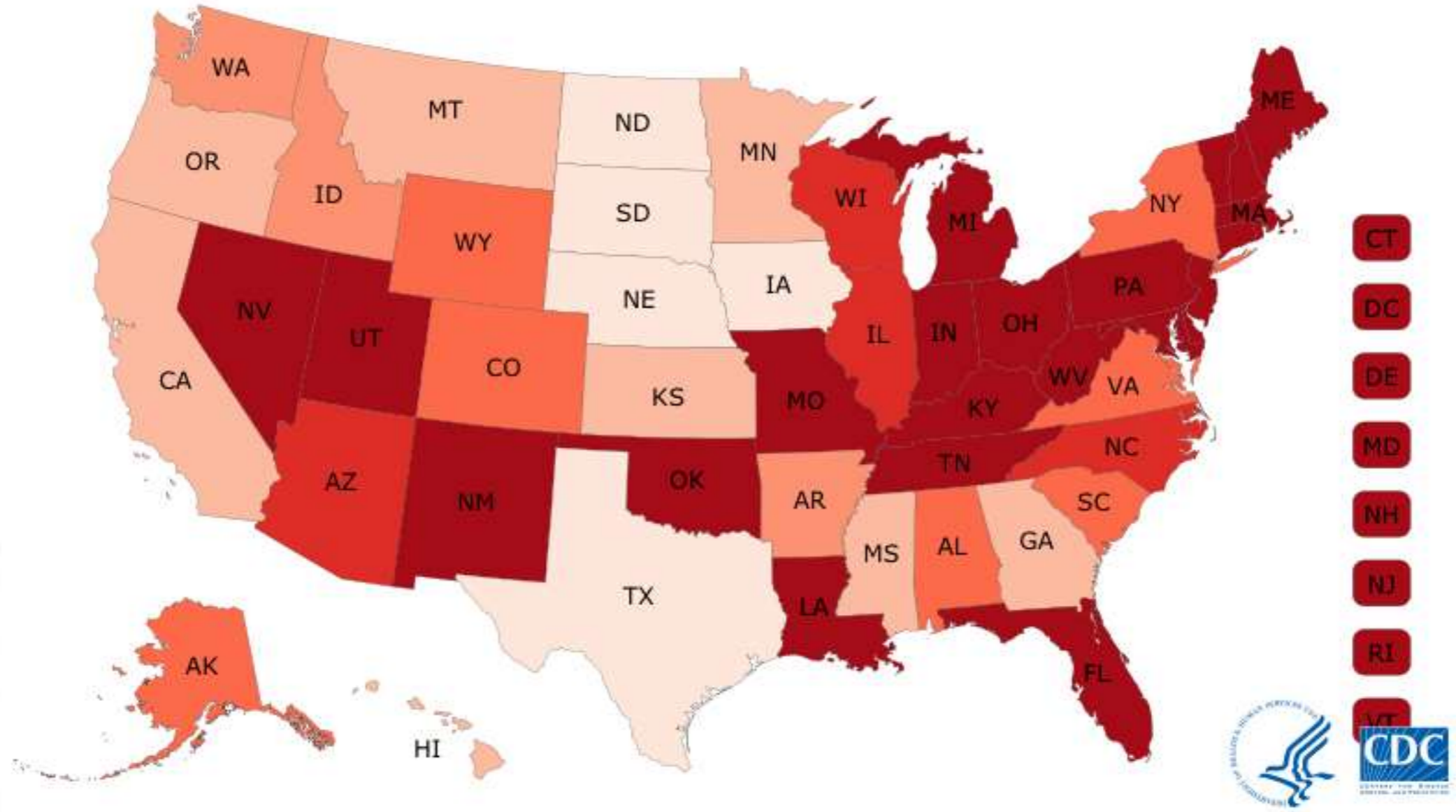
## DEATHS 2015



# RISING OVERDOSE

## DEATHS

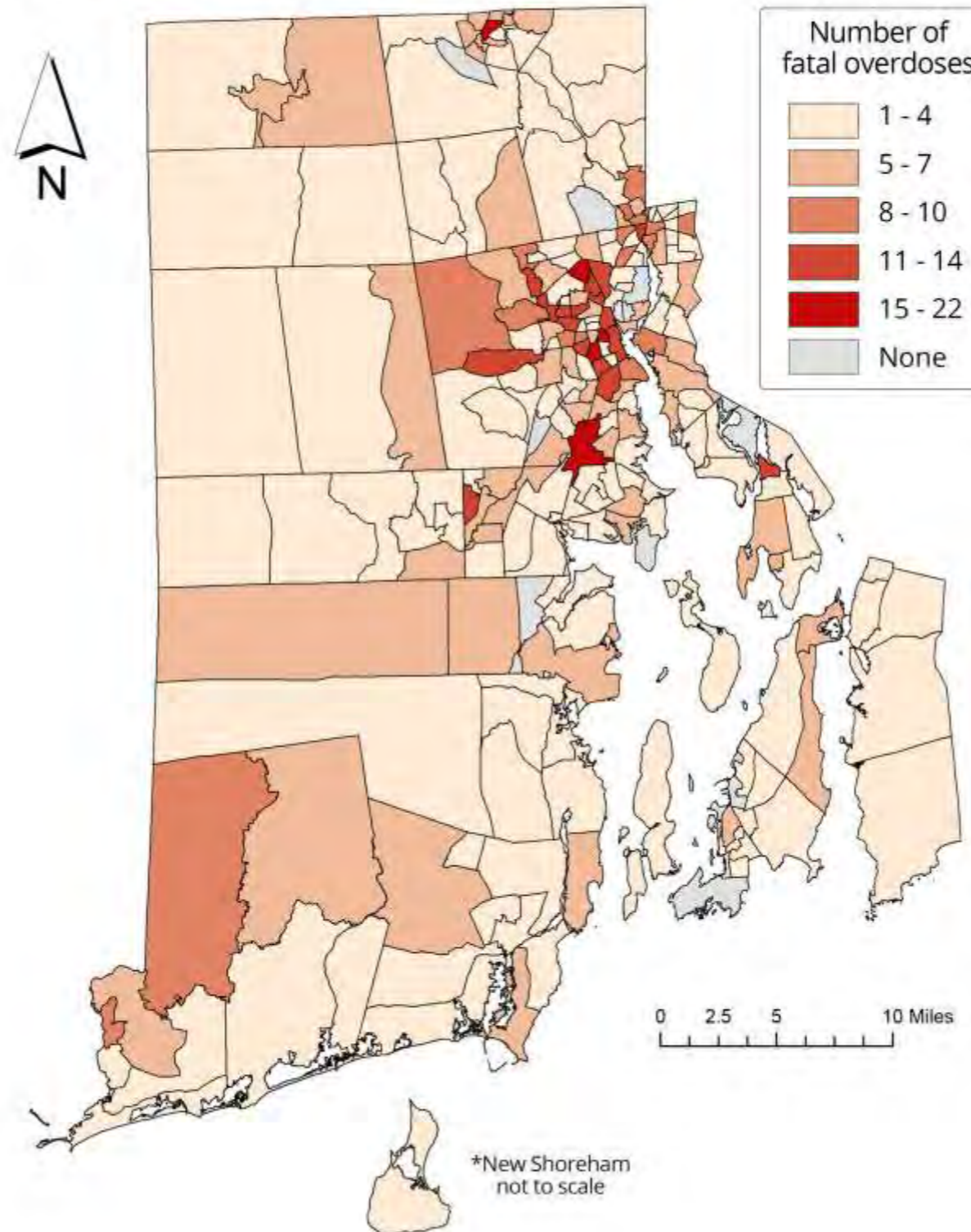
2016





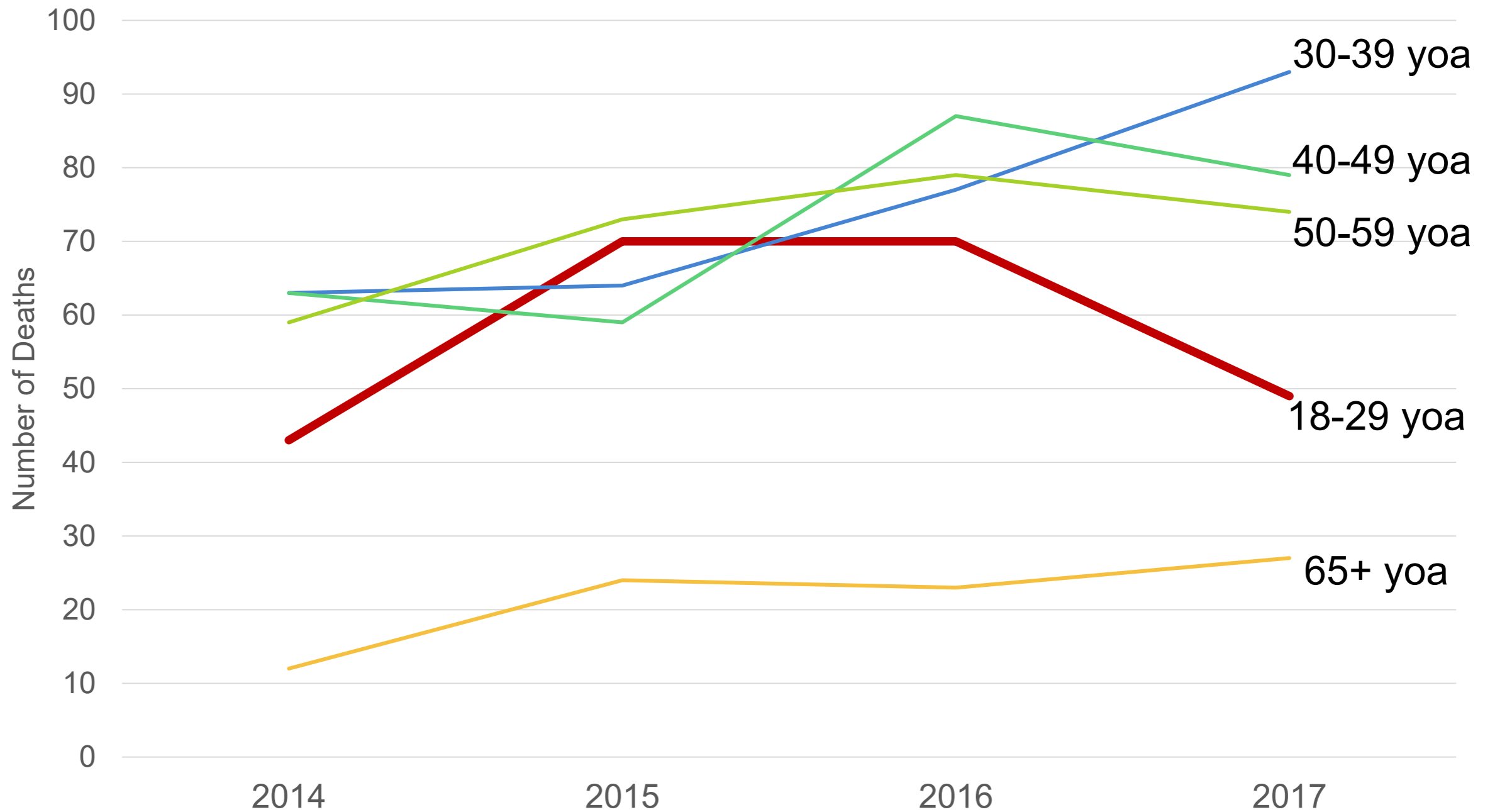
# RI OVERDOSE DEATHS

**Drug-related overdose fatalities, by census tract**  
Rhode Island, 2014 to 2017



# RI OVERDOSE DEATHS

RI Opioid Overdose Deaths by Age, 2014-2017



# RISING ED OD VISITS

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↑ 30%

Opioid overdoses went up 30% from July 2016 through September 2017 in 52 areas in 45 states.

↑ 70%

The Midwestern region saw opioid overdoses increase 70% from July 2016 through September 2017.

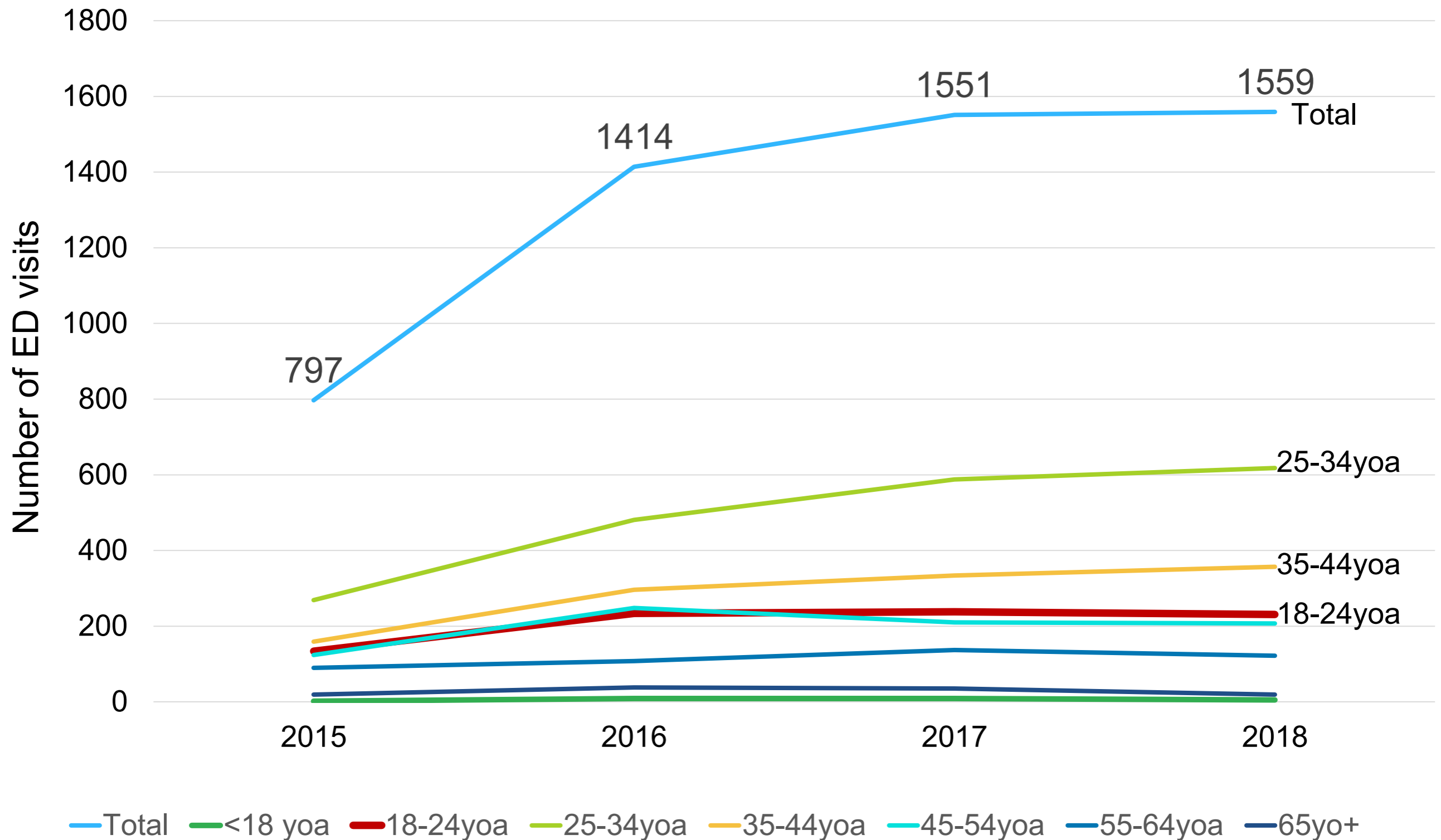
↑ 54%

Opioid overdoses in large cities increased by 54% in 16 states.

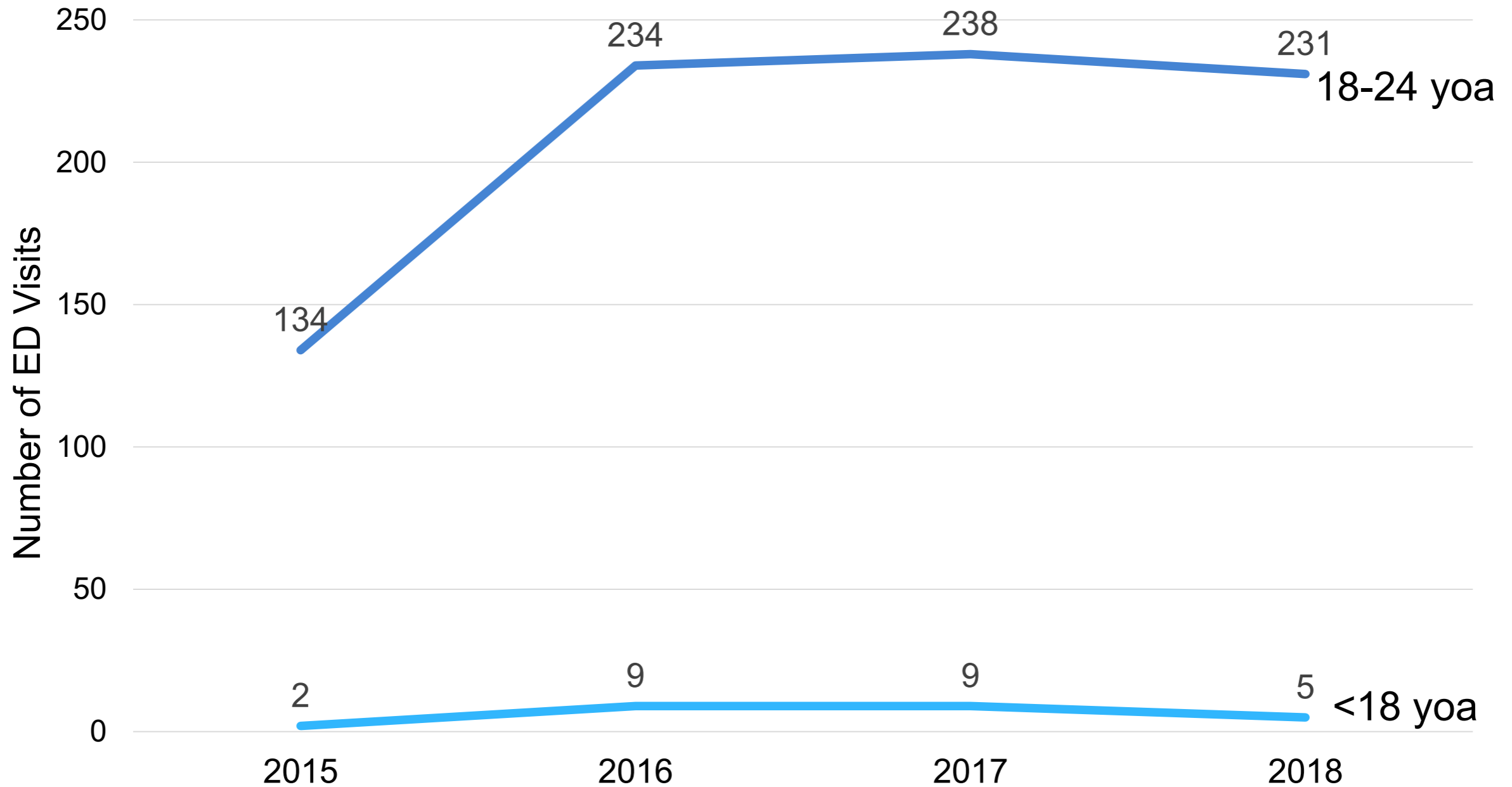
Vivolo-Kantor AM, Coordinating Clinical and Public Health Responses to Opioid Overdoses Treated in Emergency Departments, Vital Signs Town Hall Teleconference and COCA Call, March 13, 2018.

Vivolo-Kantor AM, Seth P, Gladden RM, et al. Vital Signs: Trends in Emergency Department Visits for Suspected Opioid Overdoses - United States, July 2016-September 2017. *MMWR Morb Mortal Wkly Rep.* 2018;67(9):279-285.

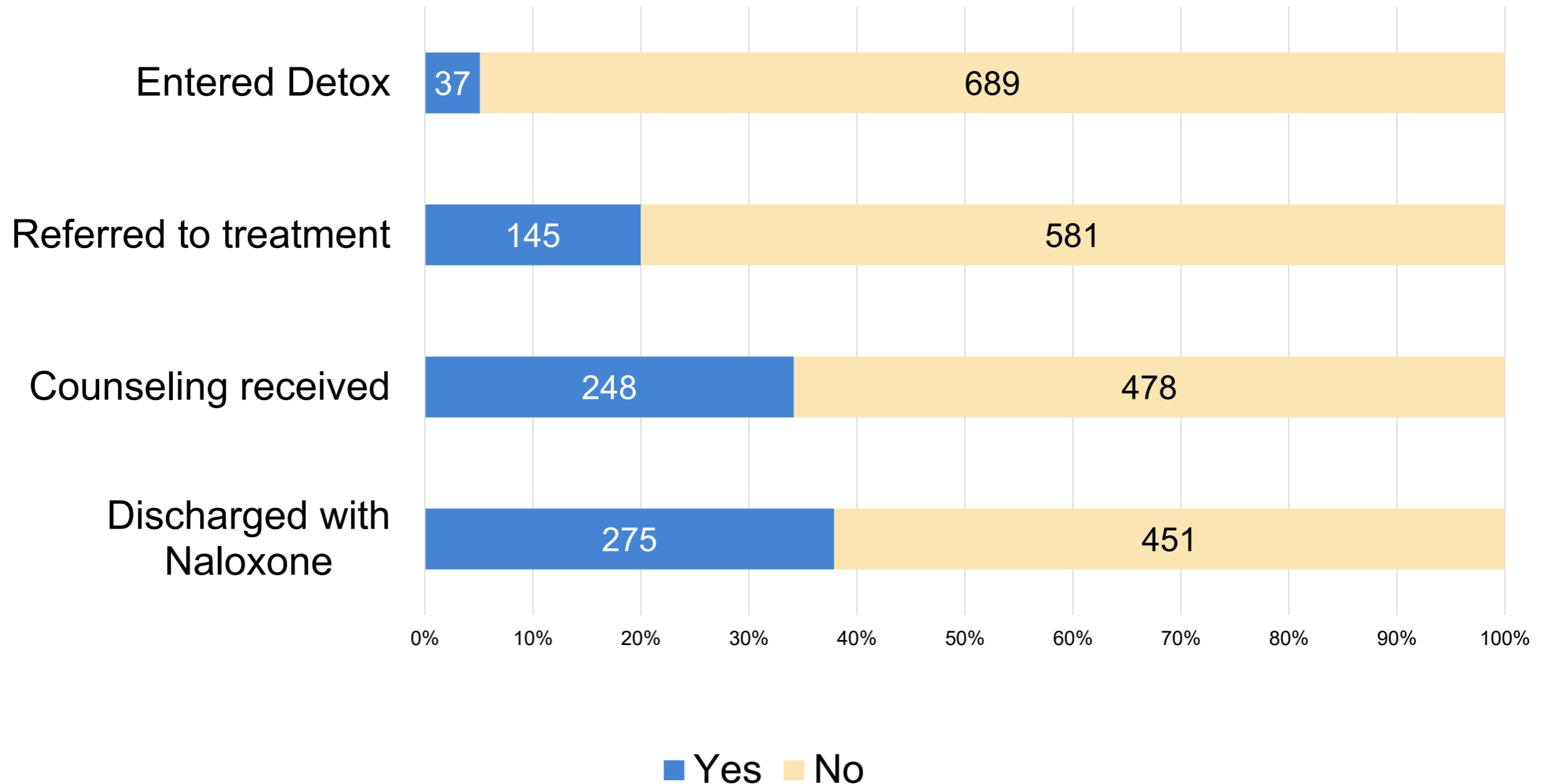
# Non-fatal RI ED opioid overdose visits by age, 2015-2018



# RI adolescent non-fatal opioid overdose ED visits, 2014-2018



# RI ED treatment for opioid overdose for discharged patients <24 years of age, 2016-2018



# Opioid Use Disorder

# DEFINING OPIOID USE DISORDER

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No Use

Mild Use

Use limited to predictable times (weekends, social situations);  
no related problems

Moderate  
Use

High-risk use resulting in problems (e.g., fighting, criminal offenses, or suspension) or use to regulate emotions or relieve stress.

Meets 2-5 of the DSM-5 criteria for SUD

Severe  
Use

High-risk use; losing control or an inability to stop using substances.

Meets  $\geq 6$  of the DSM-5 criteria for an SUD.

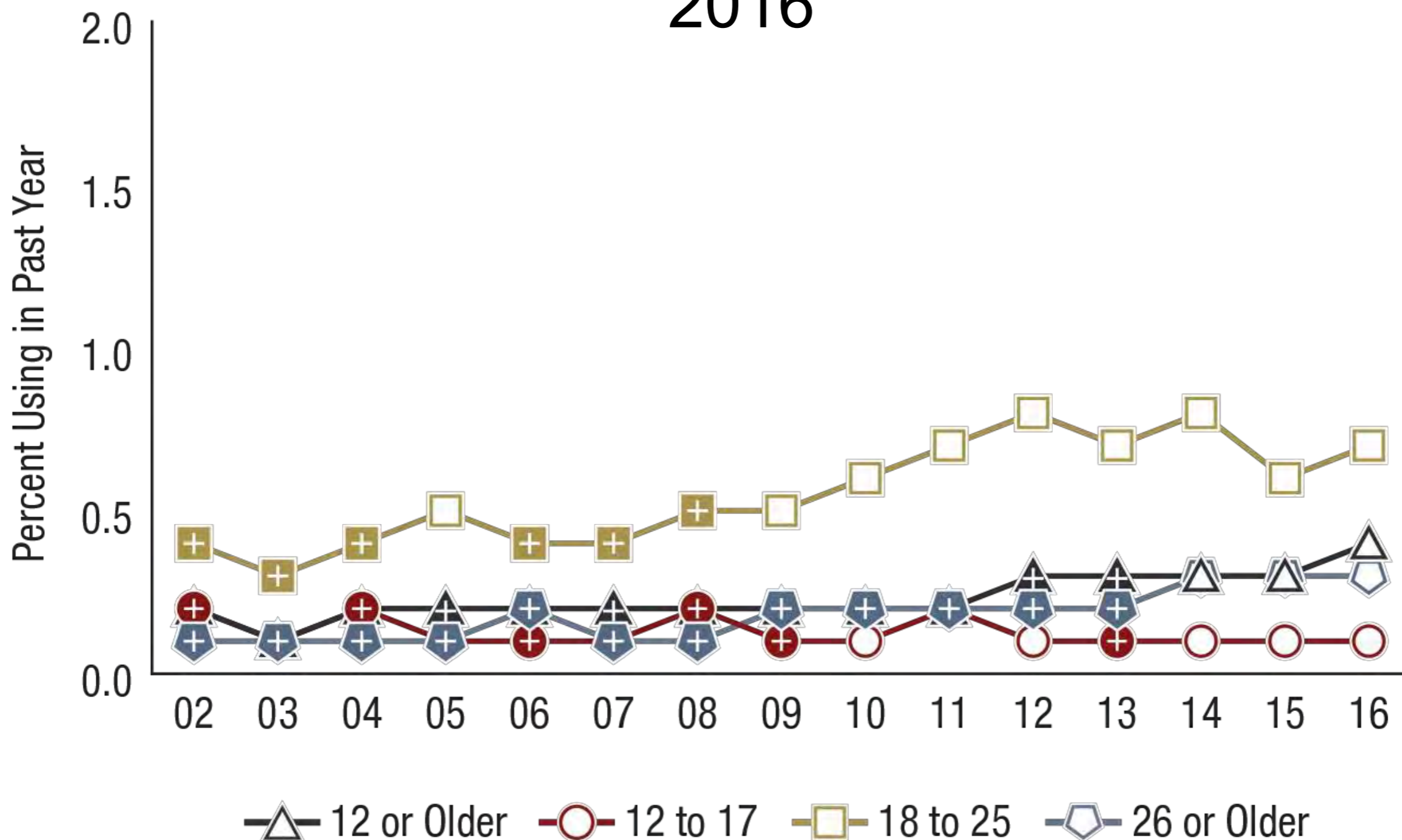


# ADOLESCENT OUD SCREENING

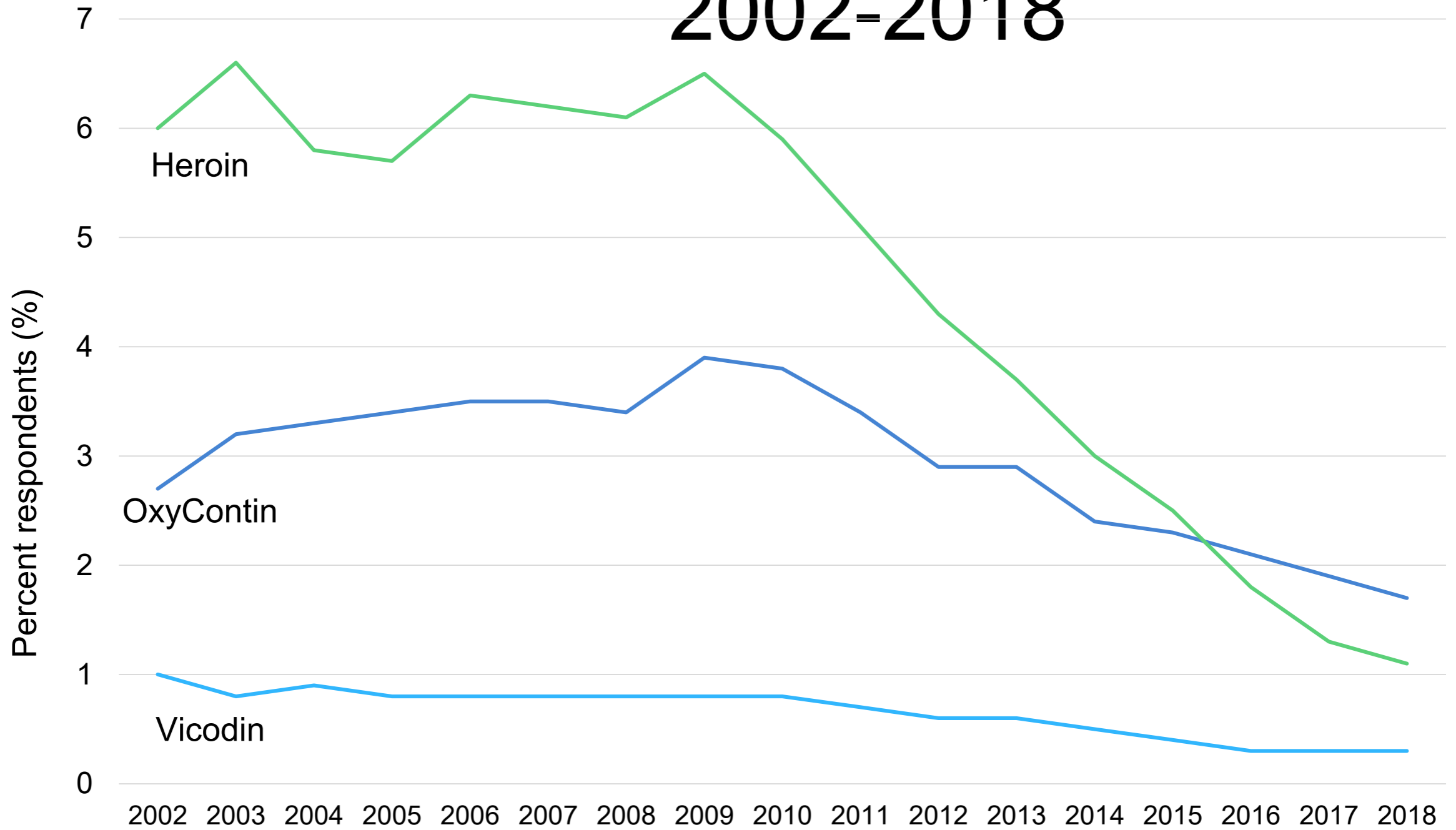
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NAME	TIME	ADMIN. METHOD	FORMAT	SCREENS FOR	# Qs
CRAFFT	5 min	Asked or Self-administered	Print	Alcohol & drug use	9
Brief Screener for Alcohol, Tobacco, and Other Drugs (BSTAD)	5–10 min	Asked and Self-administered	Print or Electronic	Alcohol & drug use tobacco use	3
Screening to Brief Intervention (S2BI)	5 min	Asked or Self-administered	Electronic	Alcohol & drug use tobacco use	3–7
APA Adapted NIDA Modified ASSIST Tools	5–10 min	Self-administered	Print	Alcohol & drug use other mental health concerns	25

# Past year heroin use among people aged 12 or older, by age group: percentages, 2002-2016



# Annual prevalence of opioid use among 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders, 2002-2018



# Prevention



# Harm Reduction



# Treatment



Prevention

# PREVENTION

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1. Prescribing
2. Drug take backs
3. School-based initiatives



# PRESCRIBING

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Rhode Island  
Prescription Drug Monitoring Program

Support: 1-844-474-4767

## Log In

Email

Password

[Reset Password](#)

[Log In](#)

[Create an Account](#)

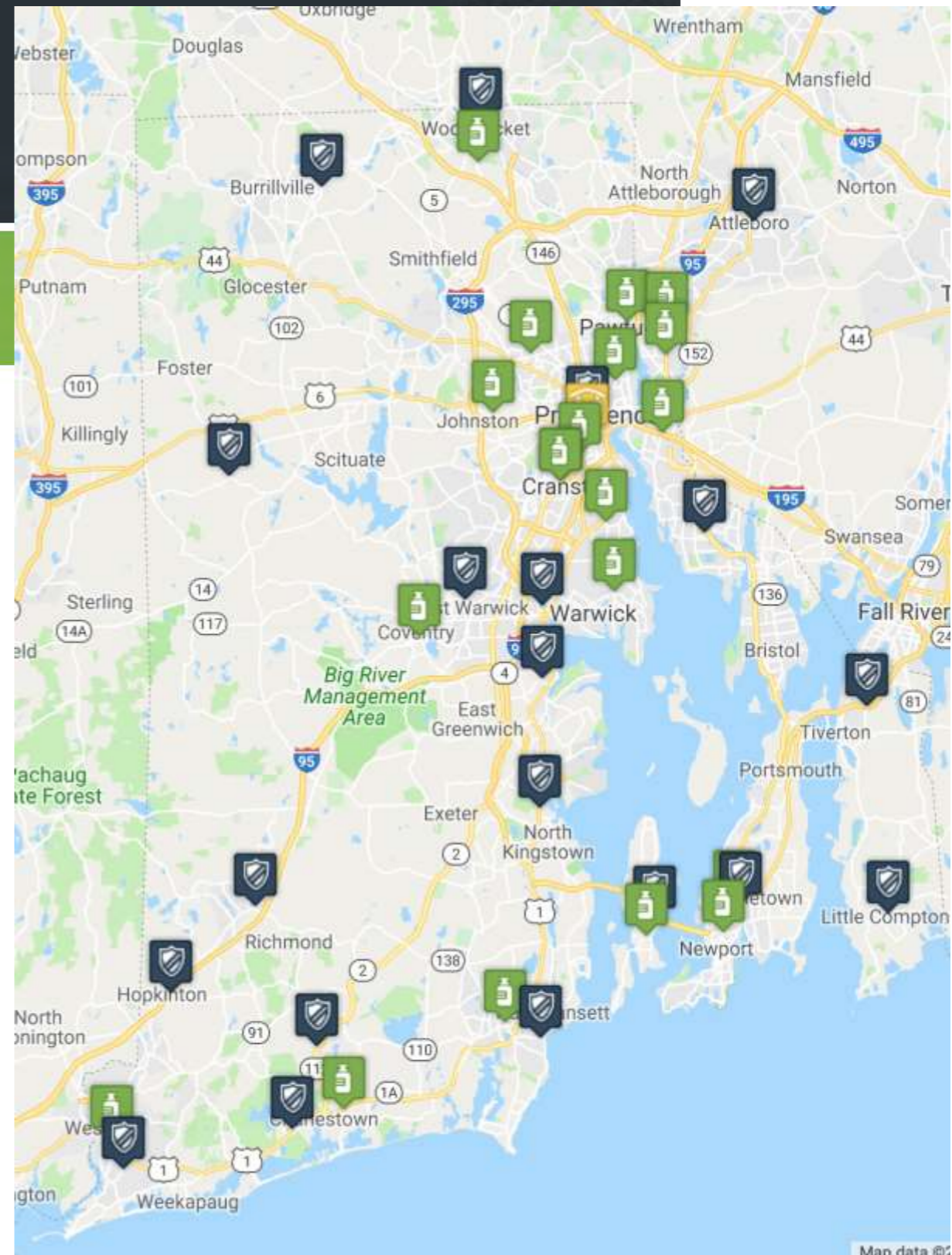
[Need Help?](#)

# DRUG TAKE BACKS



HOME ABOUT PREVENT OVERDOSE SEE THE DATA

- LEARN ABOUT FENTANYL »
- LEARN ABOUT OPIOIDS
- RESPOND TO OVERDOSE
- SAFER DRUG USE PRACTICES »
- HELP A LOVED ONE
- GET NALOXONE »
- GET RID OF MEDICATIONS SAFELY



[www.preventoverdoseri.org](http://www.preventoverdoseri.org)



# SCHOOL-BASED

## INITIATIVES

### Review

November 2015

# Independent Evaluation of Middle School-Based Drug Prevention Curricula A Systematic Review

Anna B. Flynn, MHS<sup>1</sup>; Mathea Falco, JD<sup>2</sup>; Sophia Hocini, MPH<sup>2</sup>

» [Author Affiliations](#)

*JAMA Pediatr.* 2015;169(11):1046-1052. doi:10.1001/jamapediatrics.2015.1736



**Cochrane**  
**Library**

**Cochrane** Database of Systematic Reviews

**Universal school-based prevention for illicit drug use (Review)**

Faggiano F, Minozzi S, Versino E, Buscemi D

**DARE<sup>®</sup>**

TEACHING STUDENTS DECISION MAKING  
FOR SAFE & HEALTHY LIVING



# SCHOOL-BASED INITIATIVES

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Social competence  
+ Social influence

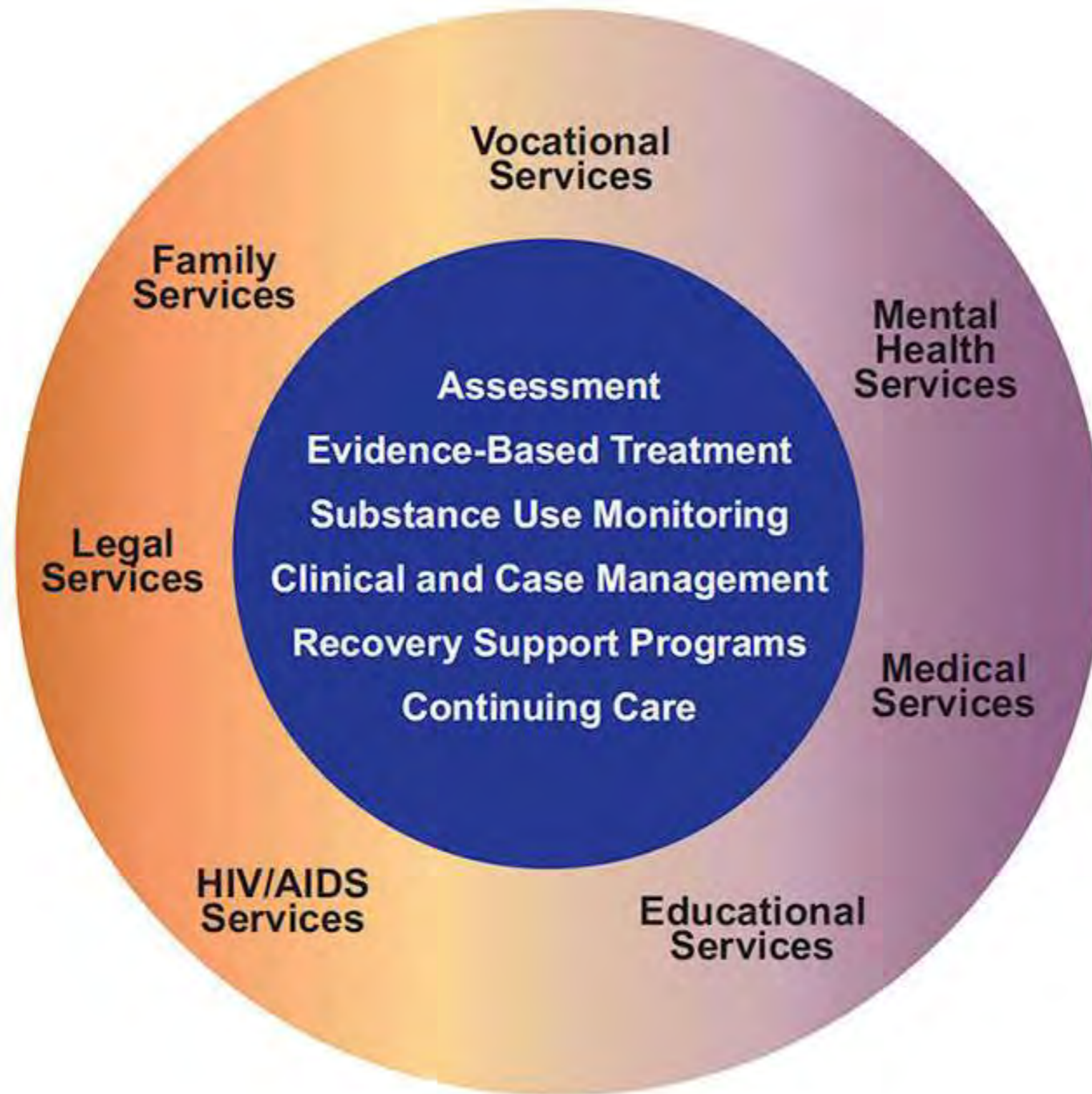


Small, protective effects  
in preventing drug use



Treatment

# NIDA components of comprehensive substance use treatment



# Evidence-Based Treatments

## Behavioral Treatment

Group therapy  
Adolescent Community Reinforcement  
Approach (A-CRA)  
Cognitive-Behavioral Therapy (CBT)  
Contingency Management (CM)  
Motivational Enhancement Therapy (MET)

## Family-Based Treatment

Brief Strategic Family Therapy (BSFT)  
Family Behavior Therapy (FBT)  
Functional Family Therapy (FFT)  
Multidimensional Family Therapy  
(MDFT)  
Multisystemic Therapy (MST)

## Recovery Support Services

Peer Supports  
Recovery High School

## Medication for OUD

Methadone  
Buprenorphine  
Naltrexone

# RECOVERY SUPPORT

## SERVICES

### HIGH SCHOOL-AGE TREATMENT PROGRAMS

#### RECOVERY HIGH SCHOOL

A HIGH SCHOOL SPECIFICALLY DESIGNED FOR STUDENTS RECOVERING FROM A SUBSTANCE ABUSE DISORDER



- ✓ Location: Local
- ✓ Students live: At home
- ✓ Affiliation: Generally an educational institution
- ✓ Availability: Any student in recovery that meets state requirements

#### THERAPEUTIC BOARDING SCHOOL

A BOARDING SCHOOL THAT OFFERS AN EDUCATIONAL PROGRAM TOGETHER WITH SPECIALIZED STRUCTURE AND SUPERVISION FOR STUDENTS



- ✓ Location: Remote
- ✓ Students live: On-site
- ✓ Affiliation: Generally a treatment center
- ✓ Availability: Generally based on ability to pay

#### TREATMENT CENTER SCHOOL

A TREATMENT CENTER THAT FOCUSES ON SUBSTANCE ABUSE AND PROVIDES EDUCATIONAL INSTRUCTION

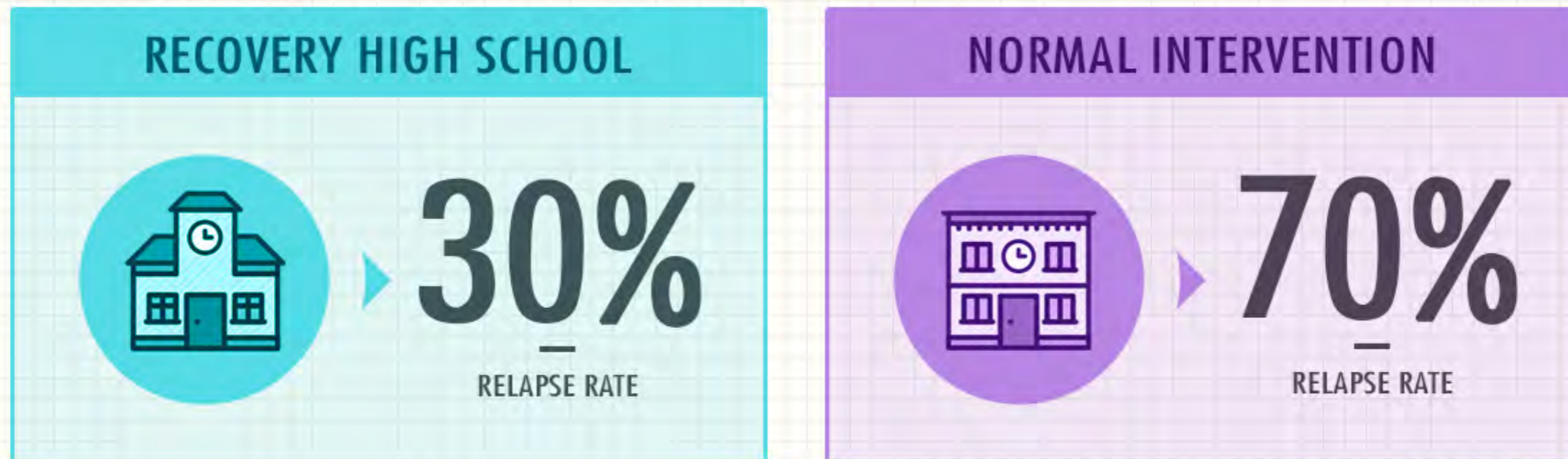


- ✓ Location: Varies
- ✓ Students live: Residential and outpatient
- ✓ Affiliation: Generally a treatment center
- ✓ Availability: Generally based on ability to pay

# RECOVERY SUPPORT SERVICES

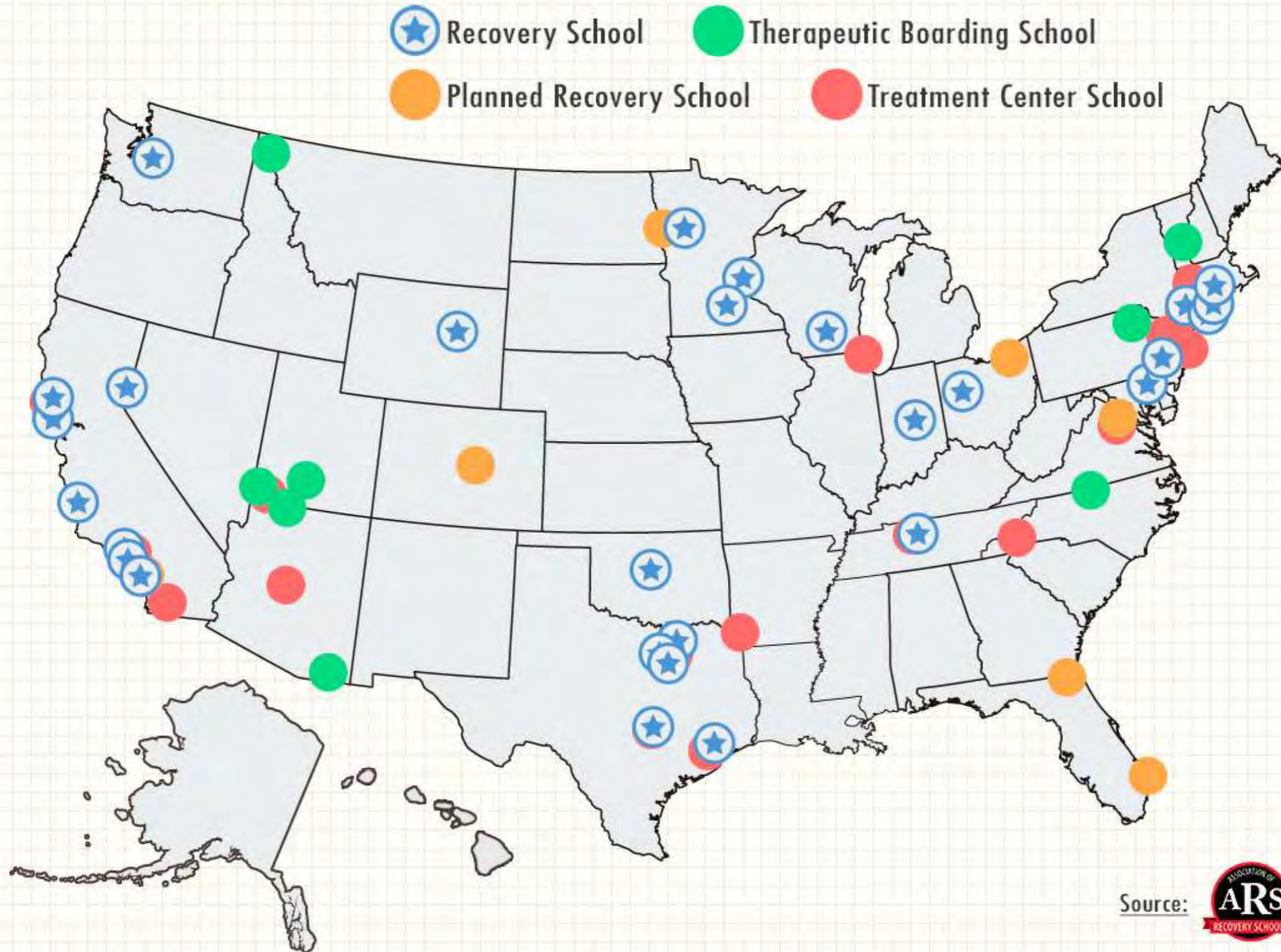
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## EFFECTIVENESS OF RECOVERY HIGH SCHOOLS





# RECOVERY SCHOOLS IN THE U.S.



Source: 



***Creating Futures  
and New Beginnings.***

520 Hope Street

Providence, RI 02906

Phone: 401.432.7279

Fax: 401.276.4015

Email: [info@anchorlearningacademy.org](mailto:info@anchorlearningacademy.org)

## How OUD Medications Work in the Brain



**Methadone**



*Full agonist:  
generates effect*

**Buprenorphine**



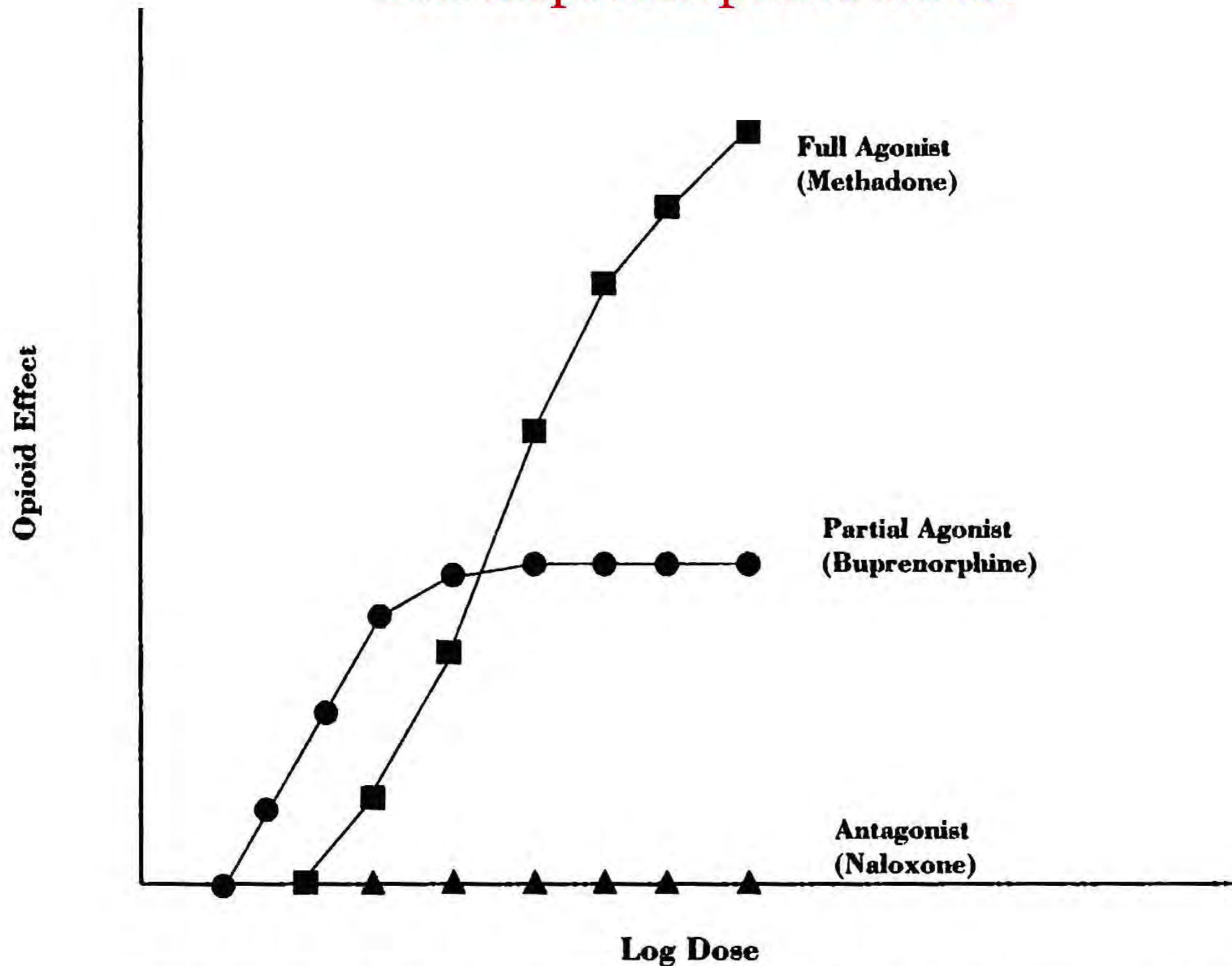
*Partial agonist:  
generates limited effect*

**Naltrexone**



*Antagonist:  
blocks effect*

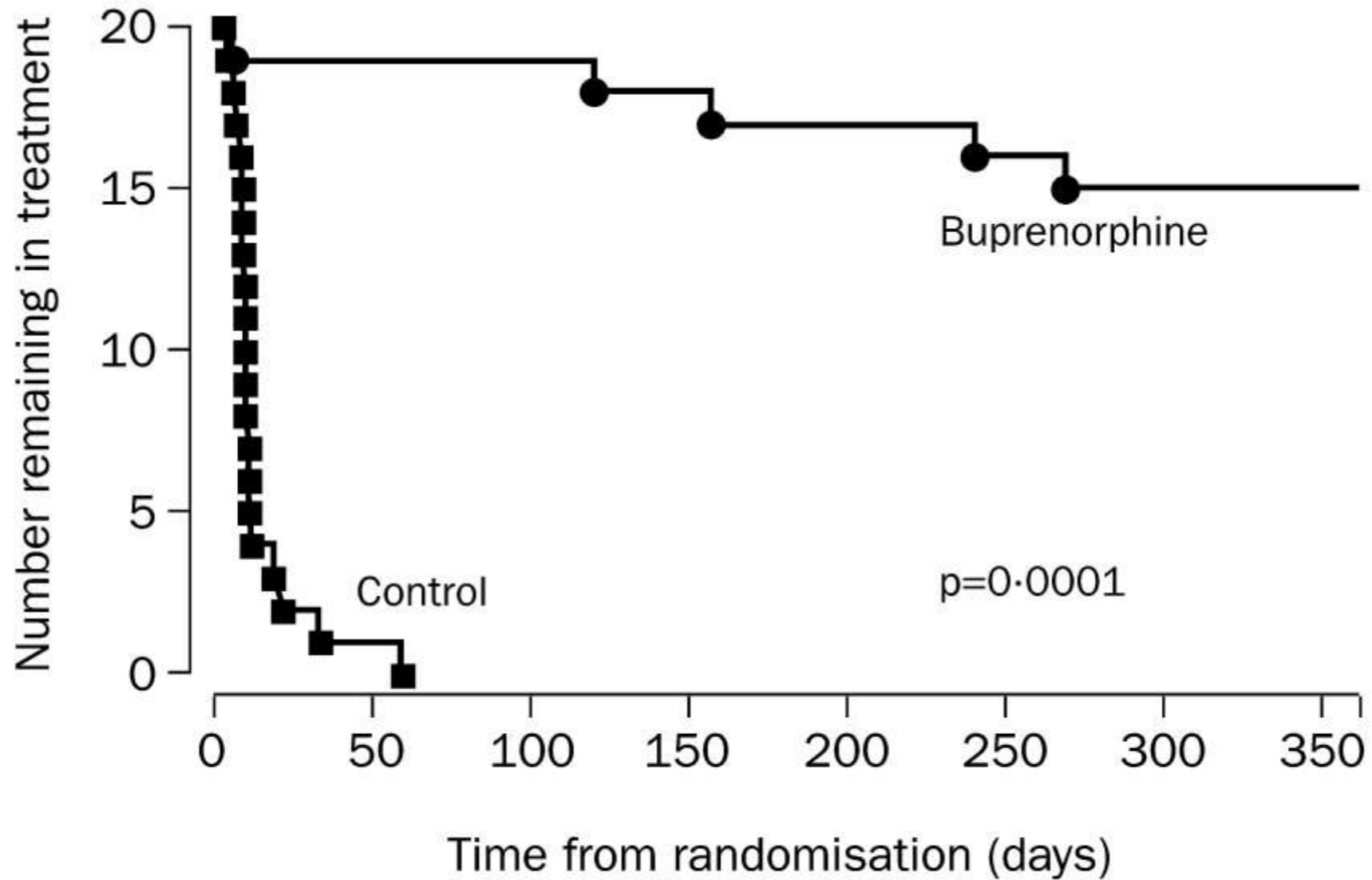
# The Buprenorphine Effect



SAMHSA chart shows how buprenorphine works to ease withdrawal while producing less euphoric opioid effects

# Buprenorphine vs Placebo

## Kaplan-Meier curve of cumulative retention in treatment



### Number at risk

20	19	18	17	17	16	15	15
20	1	0	0	0	0	0	0

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

Mattick RP, Breen C, Kimber J, Davoli M

## Buprenorphine maintenance compared with methadone maintenance for opioid dependence

**Patient or population:** People with opioid dependence.

**Settings:** Inpatient and outpatient

**Intervention:** Buprenorphine maintenance at high doses (16 mg)

**Comparison:** Placebo

Outcomes	Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
Retention in treatment	RR 1.82 (1.15 to 2.90)	1001 (5)	⊕⊕⊕⊕ high	Greater retention in buprenorphine group.
Morphine-positive urines	SMD -1.17 (-1.85 to -0.49)	729 (3)	⊕⊕⊕○ moderate	Fewer morphine-positive urines in buprenorphine group.
Benzodiazepine-positive urines	SMD -1.65 (-4.94 to 1.65)	336 (2)	⊕⊕⊕○ moderate	No difference.

\*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; RR: Risk Ratio; SMD: standardised mean difference

GRADE Working Group grades of evidence

**High quality:** Further research is very unlikely to change our confidence in the estimate of effect.

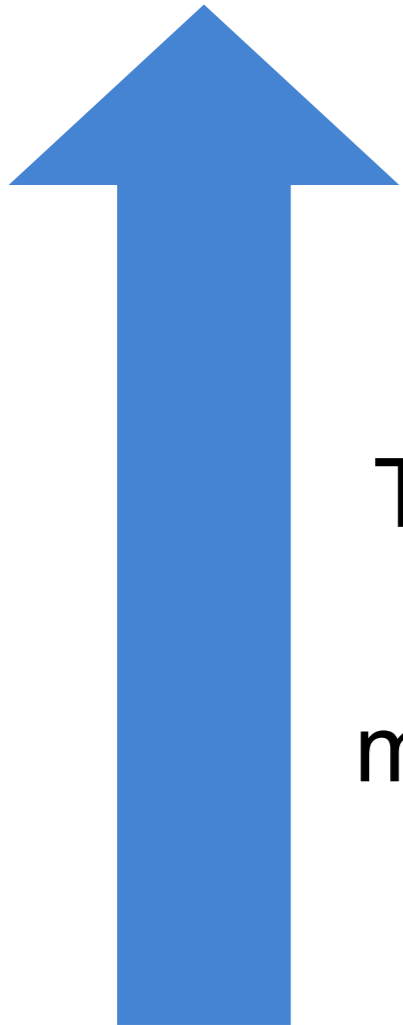
**Moderate quality:** Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.

**Low quality:** Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.

**Very low quality:** We are very uncertain about the estimate.

# MEDICATION FOR OUD

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Survival  
Treatment Retention  
Ability to gain &  
maintain employment  
Birth outcomes

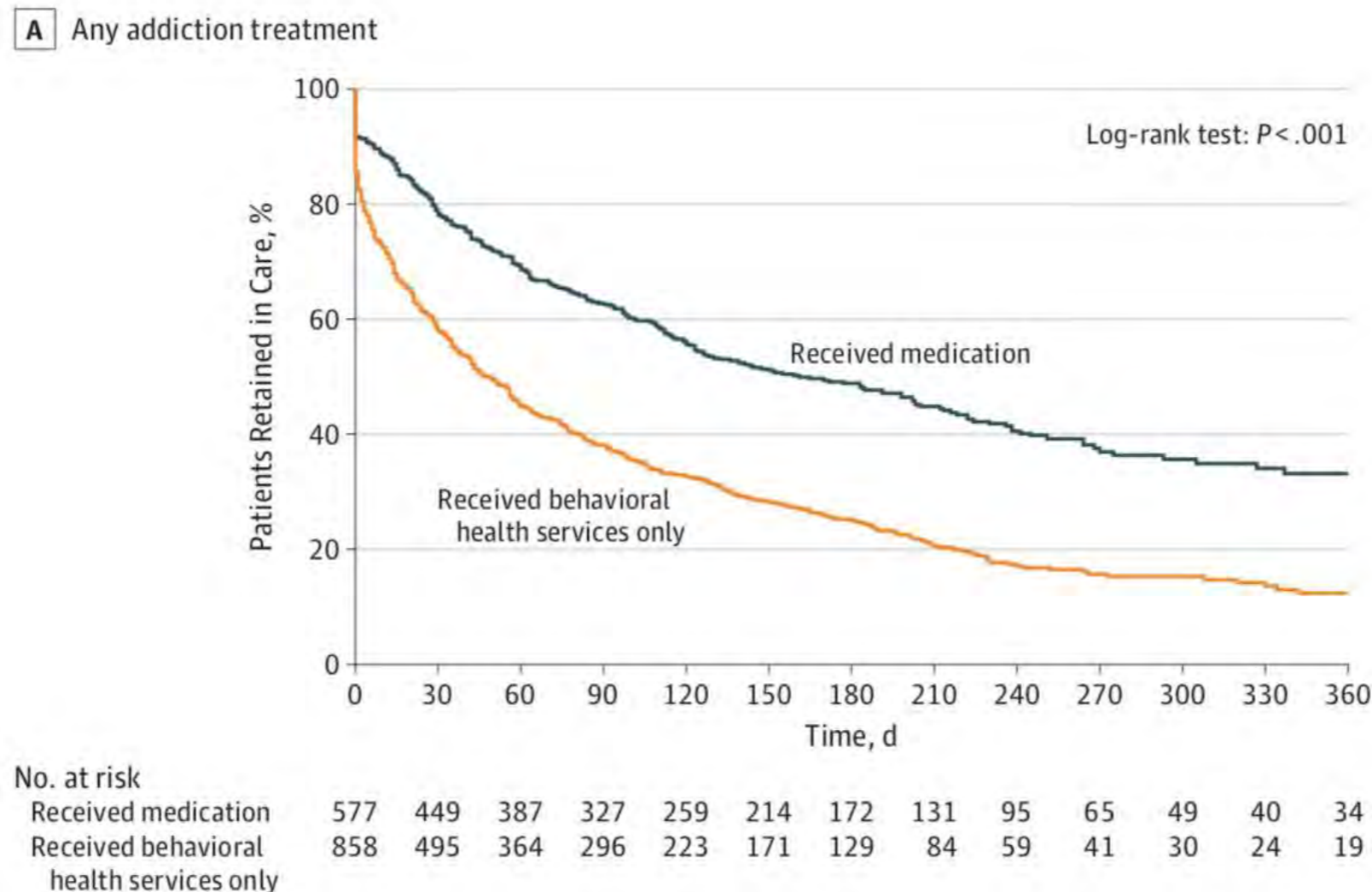


Overdose  
Mortality  
HIV & HCV  
Infections  
Crime

# Receipt of Timely Addiction Treatment and Association of Early Medication Treatment With Retention in Care Among Youths With Opioid Use Disorder

Scott E. Hadland, MD, MPH, MS; Sarah M. Bagley, MD, MSc; Jonathan Rodean, MPP; Michael Silverstein, MD, MPH; Sharon Levy, MD, MPH; Marc R. Larochelle, MD, MPH; Jeffrey H. Samet, MD, MA, MPH; Bonnie T. Zima, MD, MPH

**Figure. Retention in Care According to Timely Receipt of Opioid Use Disorder Medication Within 3 Months of Diagnosis Among Youths**





**for opioid use disorder**

# Medication ~~Assisted Treatment~~ of Adolescents With Opioid Use Disorders

COMMITTEE ON SUBSTANCE USE AND PREVENTION

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1. Increase resources for medication for OUD (MOUD).
2. Pediatricians should offer MOUD to adolescent and young adult patients with severe OUD and/or refer to other providers.
3. Further research focus on developmentally appropriate OUD treatment in adolescents and young adults, including primary and secondary prevention, behavioral interventions, and medication treatment.

American Academy  
of Pediatrics

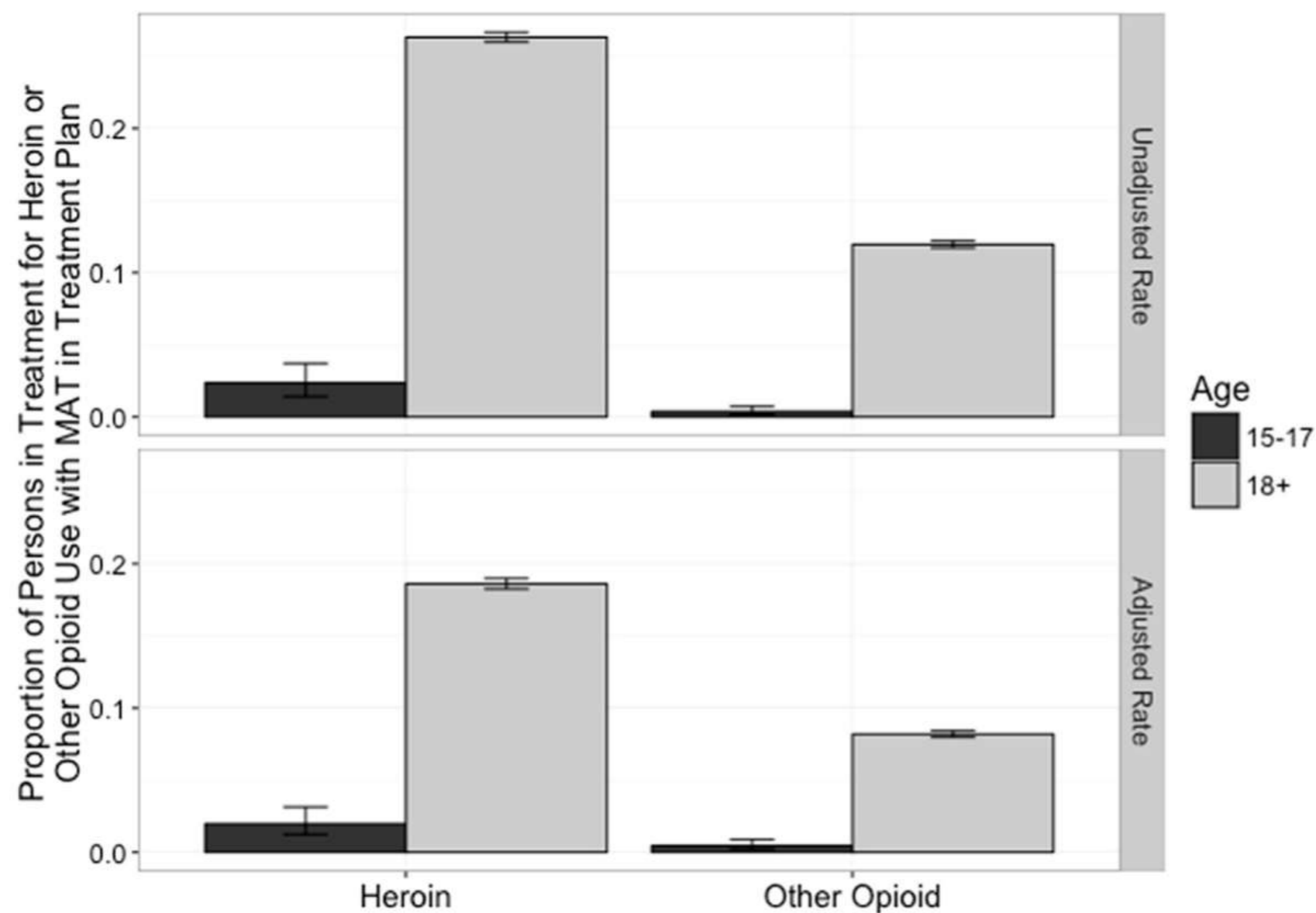


DEDICATED TO THE HEALTH OF ALL CHILDREN™

# Medication-Assisted Treatment for Adolescents in Specialty Treatment for Opioid Use Disorder

Kenneth A. Feder\*, Noa Krawczyk, and Brendan Saloner, Ph.D.

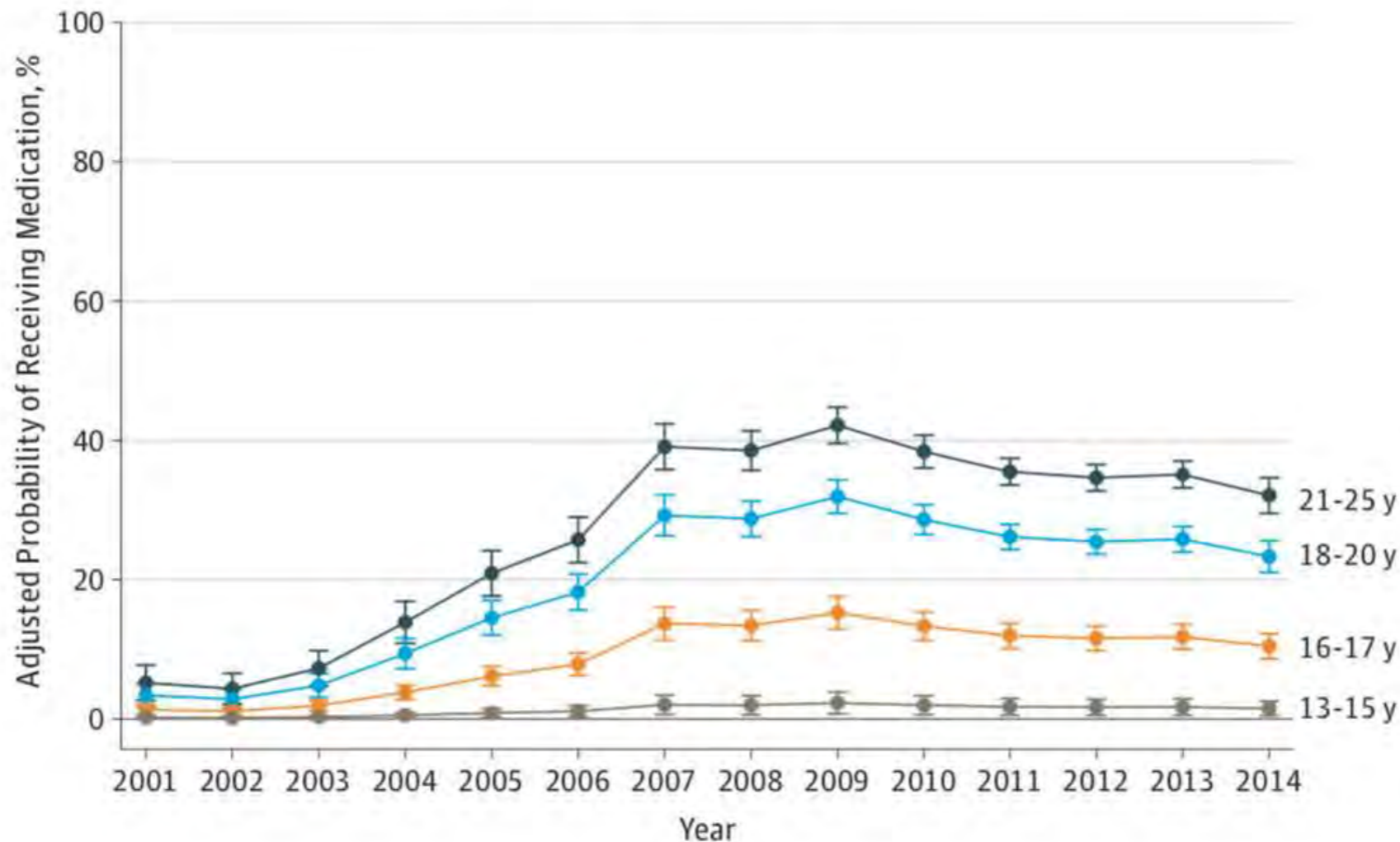
*Department of Mental Health, Johns Hopkins Bloomberg School of Public Health, Johns Hopkins University, Baltimore, Maryland*



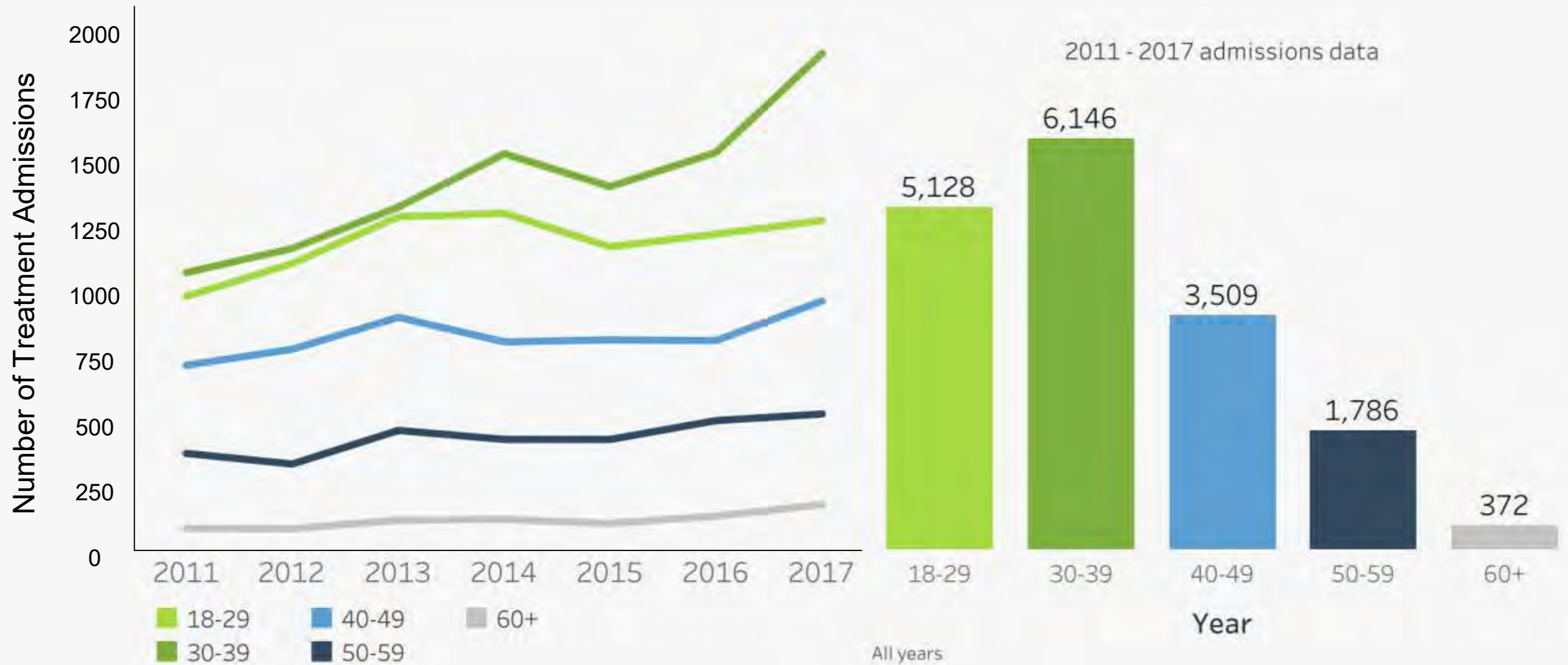
# Trends in Receipt of Buprenorphine and Naltrexone for Opioid Use Disorder Among Adolescents and Young Adults, 2001-2014

Scott E. Hadland, MD, MPH, MS; J. Frank Wharam, MB, BCh, BAO, MPH; Mark A. Schuster, MD, PhD; Fang Zhang, PhD; Jeffrey H. Samet, MD, MA, MPH; Marc R. Larochelle, MD, MPH

Figure 3. Proportion of Youth With a Claim Containing an Opioid Use Disorder Diagnosis Who Were Dispensed Any Buprenorphine or Naltrexone According to Age at First Diagnosis

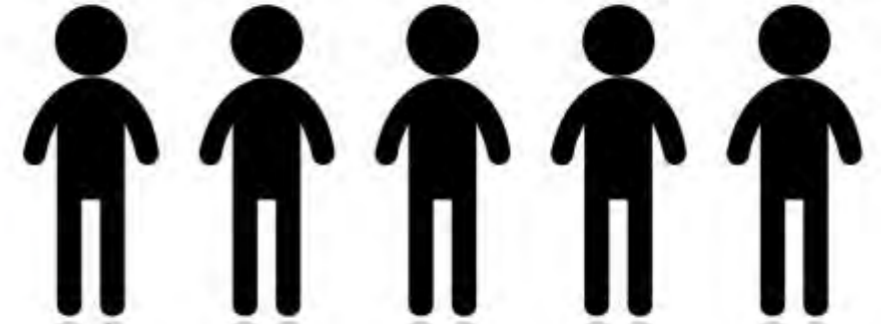
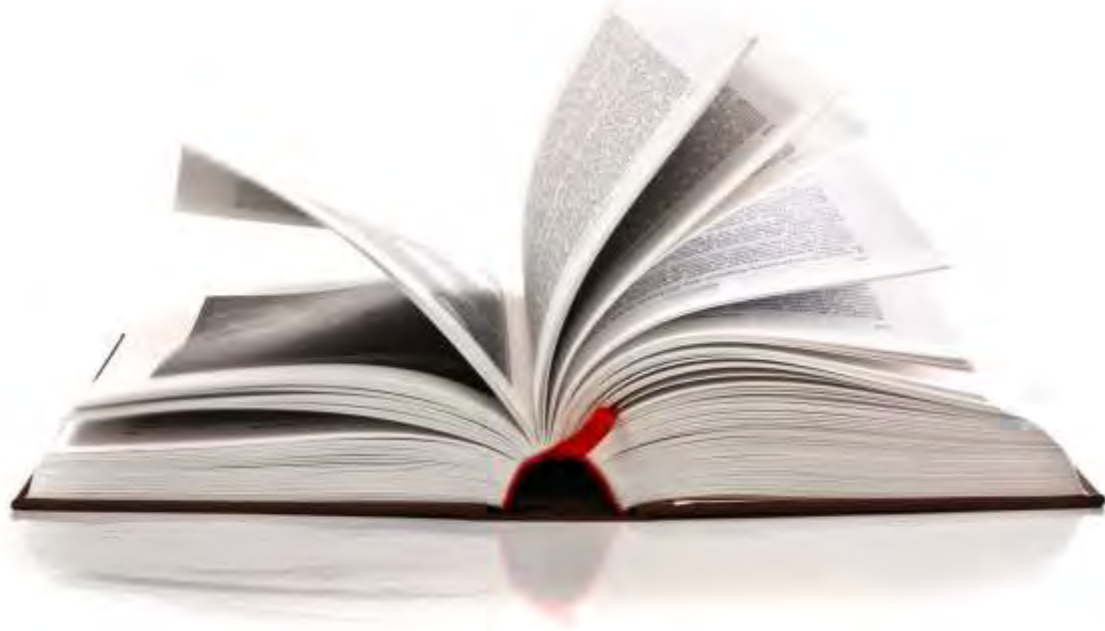


# RI admissions to opioid treatment programs by age, 2011-2017



# BARRIERS

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January							February						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	8	9	10	11	12	13	14
15	16	17	18	19	20	21	22	23	24	25	26	27	28
29	30	31					29	30	31				

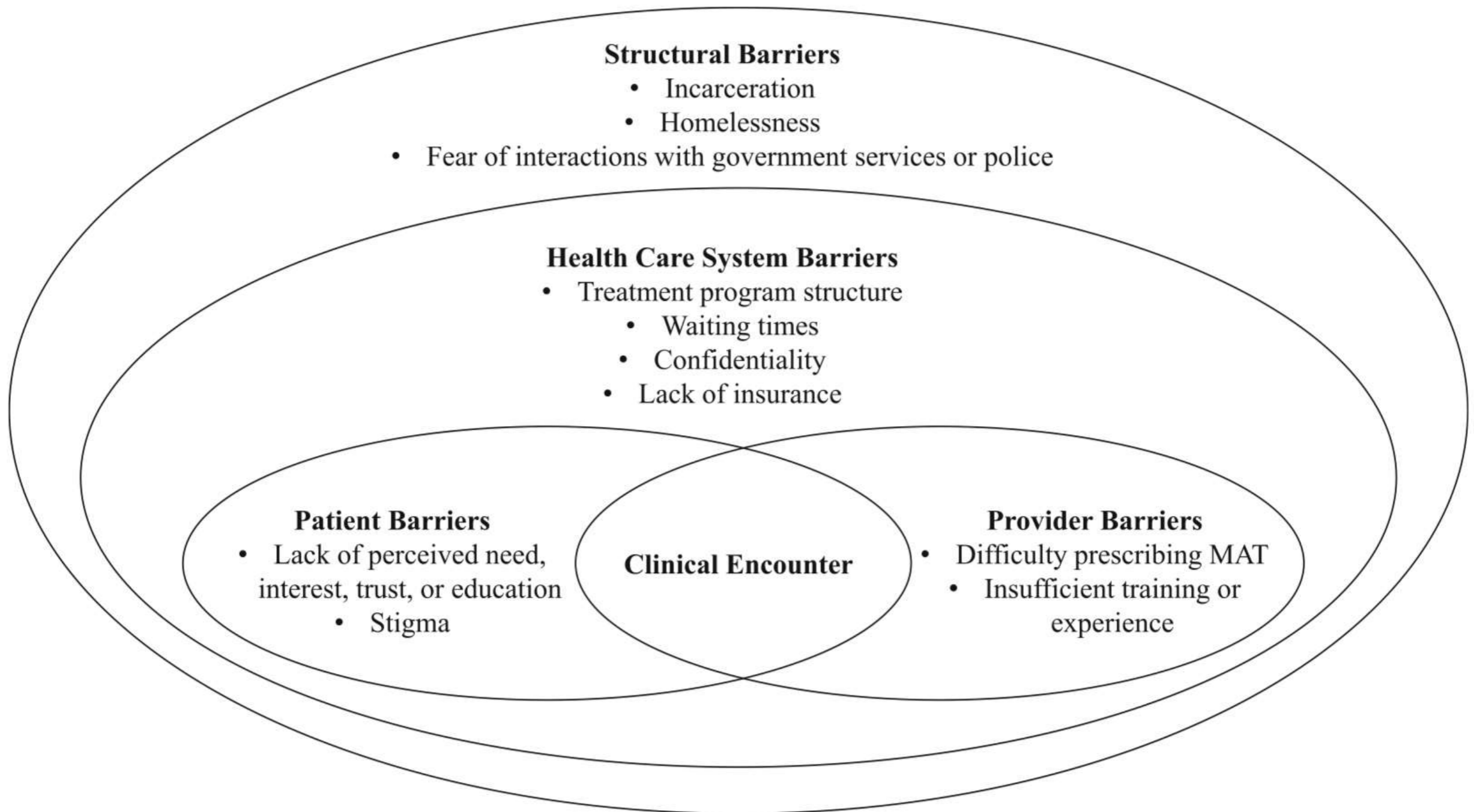
to **JANUARY 1**

THURSDAY, DEC. 29	363/2	FRIDAY, DEC. 30	364/1	SATURDAY, DEC. 31	365/0
7		7		7	
:15		:15		:15	
:30		:30		:30	
:45		:45		:45	
8		8		8	
:15		:15		:15	
:30		:30		:30	
:45		:45		:45	
9		9		9	
:15		:15		:15	
:30		:30		:30	
:45		:45		:45	
10		10		10	
:15		:15		:15	
:30		:30		:30	
:45		:45		:45	
11		11		11	



# BARRIERS

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# PRESCRIBING MOUD

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Providers  
Clinical Support  
System

NEWS

CALENDAR

NEWS SIGN UP

CONTACT



ABOUT

EDUCATION & TRAINING

MAT WAIVER

MENTORING

RESOURCES

Home / Overview of Medication Assisted Treatment /

## Waiver Training for Physicians

<https://learning.pcssnow.org/p/onlinematwaiver>

American Academy  
of Pediatrics



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[www.aap.org/mat](http://www.aap.org/mat)



# Bradley Outpatient Services

Lifespan > Centers And Services > Bradley Outpatient Services > Co-Occurring Disorders Program

## Co-occurring Disorders Program

The Co-occurring Disorders Program (CDP) at Bradley Hospital is an intensive outpatient service that provides integrated care to adolescents who struggle with a wide variety of mental health as well as substance use issues. As leaders in addiction treatment and research, we are committed to providing adolescents and their families with the best available evidence-based therapies as well as access to clinical trials of innovative behavioral and pharmacological interventions.

Several evidence-based treatment modalities, including motivational enhancement and cognitive behavioral therapies, are integrated and tailored to meet the individuals needs of each youth.

### What the Program at Bradley Hospital Offers

The CDP offers three hours of comprehensive care three days per week from a multidisciplinary team. This approach provides youth with intensive treatment while affording them the ability to attend school and practice newly acquired skills in their daily lives. In addition, this level of care provides youth and families with frequent access to a



Contact the Co-occurring Disorders Program

For more information or to make an appointment call us at **401-432-1695**

Bradley Outpatient Services

Outpatient Services for Children, Teens and Families

Our Outpatient Team

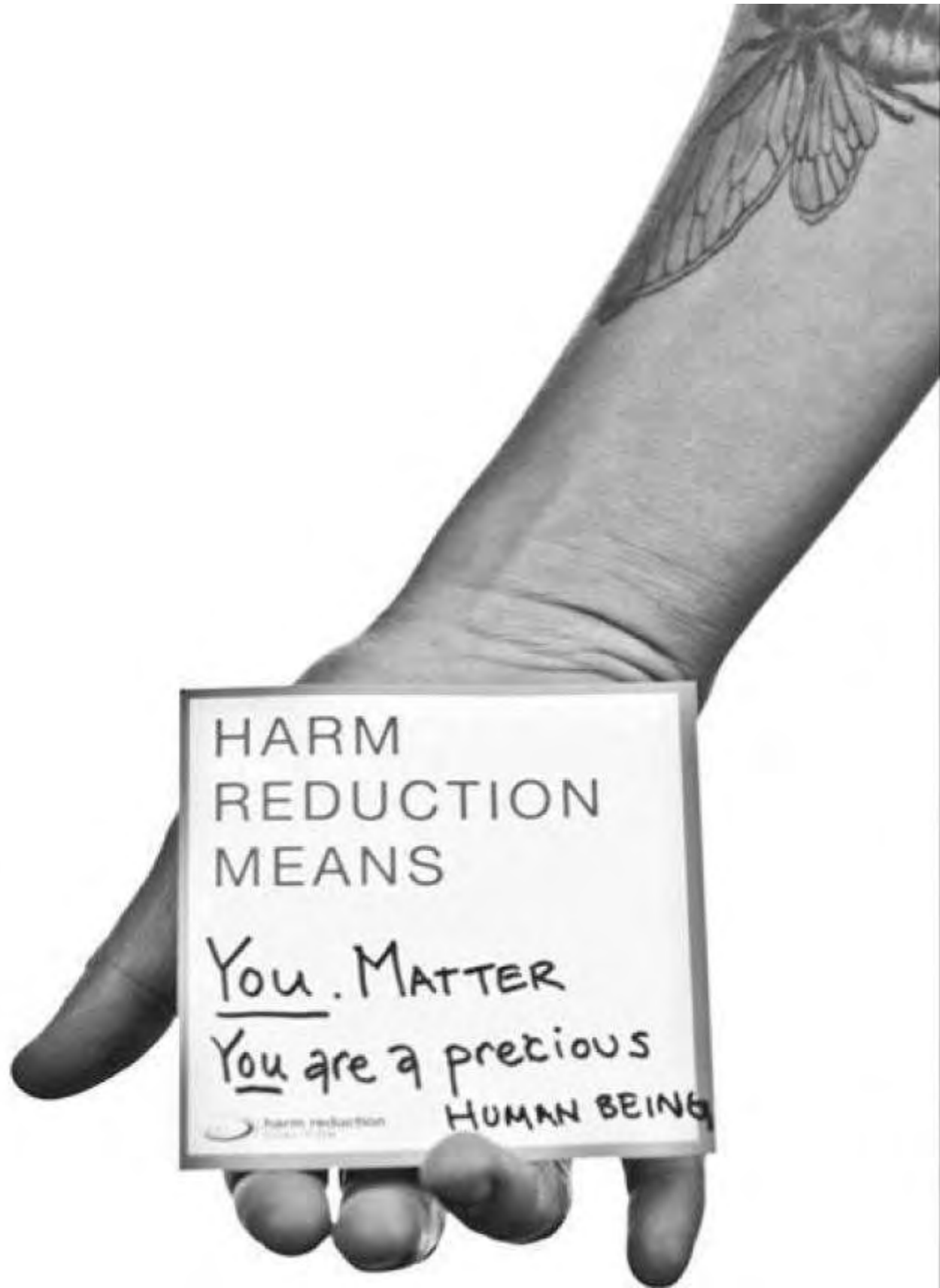
Child and Adolescent Behavioral Health in Newport

**Co-occurring Disorders Program**

Our Team



# Harm Reduction



This is Kate.

Kate's our designated driver.  
She takes my phone so I don't drunk text my ex.

Kate also carries **Naloxone**.  
If one of us overdoses on heroin or prescription drugs,  
Kate has our back.  
One day it could save my life- or hers.

In 2015, drug overdose claimed more lives than motor vehicle crashes.  
Get naloxone now. Ask the pharmacy today



# NALOXONE



## How to Respond to an Overdose



### Try to wake the person up

Call their name and rub the middle of their chest with a closed fist.

### Call 911

The Good Samaritan law protects you from arrest for possession of drugs.



### Give naloxone

Follow the directions for nasal or intra-muscular naloxone kits.

### Start rescue breathing


Make sure their mouth is not blocked, pinch their nose, and breathe every 5 seconds.



### Recovery position

If you can't stay to wait for help, put the person on their side supported by a bent knee.

We all have a role to play in ending the overdose crisis. **What's yours?**  
Find out at [PreventOverdose.RI.gov](http://PreventOverdose.RI.gov)

Prevent Overdose RI 

# PUBLICLY ACCESSIBLE NALOXONE

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**RHODE ISLAND**



Check out our  
companion site

[visit site](#)



Resources for community members, health departments, community-based organizations and collaborations



Opioid safety and overdose prevention resources for prescribers and pharmacists



## Welcome to [PrescribeToPrevent.org](#)

Here you will find information you need to start prescribing and dispensing naloxone (Narcan) rescue kits, including some useful resources containing further information about this life-saving medicine. We are prescribers, pharmacists, public health workers, lawyers, and researchers working on overdose prevention and naloxone access. We compiled these resources to help health care providers educate their patients to reduce overdose risk and provide naloxone rescue kits to patients.

# Syringe Services Programs: Vital Part of Efforts to Combat Opioid, HIV, and Hepatitis Epidemics

**What is an SSP?** A community-based program that provides key pathway to services to prevent drug use, HIV, and viral hepatitis



Free sterile needles and syringes



Safe disposal of needles and syringes



Referral to mental health services



Referral to substance use disorder treatment, including medication-assisted treatment



HIV and hepatitis testing and linkage to treatment



Overdose treatment and education



Hepatitis A and B vaccination



Other tools to prevent HIV and hepatitis, including counseling, condoms, and PrEP (a medicine to prevent HIV)



**SSPs DON'T** increase illegal drug use or crime  
**but DO** reduce HIV hepatitis risk.

Syringe services programs: <http://bit.ly/2dhkAsq> Find an SSP: <http://bit.ly/2dhktgB>

**HIV diagnoses are down among PWID.  
More access to SSPs could help reduce HIV and hepatitis further.**

PWID - People who inject drugs

SOURCE: Vital Signs, December 2016

# SYRINGE SERVICES/EXCHANGE

## PROGRAMS

### SSPs Increase Entry Into Substance Use Disorder Treatment:

SSPs reduce drug use. People who inject drugs (PWID) are 5 times as likely to enter treatment for substance use disorder and more likely to reduce or stop injecting when they use an SSP.



### SSPs Reduce Needlestick Injuries:

SSPs reduce needlestick injuries among first responders by providing proper disposal. One in three officers may be stuck with a needle during their career. Increasing safe disposal also protects the public from needlestick injuries. SSPs do not increase local crime in the areas where they are located.



### SSPs Reduce Overdose Deaths:

SSPs reduce overdose deaths by teaching PWID how to prevent and respond to drug overdose. They also learn how to use naloxone, a medication used to reverse overdose.



### 3,600 HIV Diagnoses Among PWID In 2015:

SSPs reduce new HIV and viral hepatitis infections by decreasing the sharing of syringes and other injection equipment. About 1 in 3 young PWID (aged 18–30) have hepatitis C.



### Prevention Saves Money:

SSPs save health care dollars by preventing infections. The estimated lifetime cost of treating one person living with HIV is more than \$400,000. Testing linked to hepatitis C treatment can save an estimated 320,000 lives.



**SSPs DON'T INCREASE DRUG USE OR CRIME.**



# SYRINGE SERVICES/EXCHANGE PROGRAMS

---

1. Purchased at any pharmacy
2. AIDS Care Ocean State's ENCORE
  - 557 Broad Street, Providence
  - Mobile team
  - Free syringe delivery: 401-781-0665
3. Project Weber/RENEW
  - 640 Broad Street, Providence

# FENTANYL TEST STRIPS

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## How to **stay safe with fentanyl**



### Have naloxone

Overdose happens fast. Make sure you and your friends carry naloxone.



### Don't use alone

Make sure someone is around. They can give naloxone if you overdose.



### Call 911

If you think it's an overdose, call 911. They have more naloxone.

We all have a role to play in ending the overdose crisis. **What's yours?**

Prevent Overdose RI 

# How to use a fentanyl test strip to help prevent overdose



A deadly opioid called **fentanyl** is being added to drugs like **heroin, cocaine, and pills.**

Fentanyl test strips can tell you whether or not you have fentanyl in your drugs. You can follow these steps to use a fentanyl test strip to prevent overdose.

## Step 1 - Add water

Testing residue



Add 10 drops of sterile water to your cooker after you have drawn your shot and stir well.

Testing pills or powder



Add water to an empty bag with residue in it and mix well. If you have pills, break a piece off and stir it into water.

## Step 2 - Test



Hold the blue end of your test strip and dip it into the water for 15 seconds. Be sure you only dip up to the wavy lines.

## Step 3 - Wait




Wait two minutes until you can see lines show up in the middle.

## Step 4 - Results



1 line - Positive for fentanyl 



2 lines - Use caution 

Read your test results. One line means that your drugs have fentanyl in them. **No drugs are 100% safe.**

## What can I do after I get my test result?

1. I can have naloxone with me
2. I can have someone with me who can call 911 and give me naloxone if I overdose
3. I can go slow and use less

# Rhode Island Strategy

RHODE ISLAND GOVERNOR'S OVERDOSE PREVENTION AND INTERVENTION TASK FORCE



**Rhode Island's Strategic Plan  
on Addiction and Overdose**

Four Strategies to Alter the Course of an Epidemic

## ▶ Prevention



Help doctors protect their patients by using safe prescribing practices.

### Fact

It's time to change how we treat pain — opioids don't need to be the first line of defense.

## ▶ Treatment



Make sure everyone who needs it can get medication-assisted treatment (MAT), like methadone or buprenorphine.

### Fact

MAT lowers the risk of both relapse and death.

## ▶ Rescue



Make sure everyone has access to naloxone.

### Fact

Nearly every opioid overdose death is preventable with naloxone.

## ▶ Recovery



Expand peer recovery services and treatment options that help people start recovery.

### Fact

We're making sure that all patients treated for addiction have a long-term recovery plan.

Levels of Care for Rhode Island  
Emergency Departments and Hospitals  
for Treating Overdose and Opioid Use Disorder

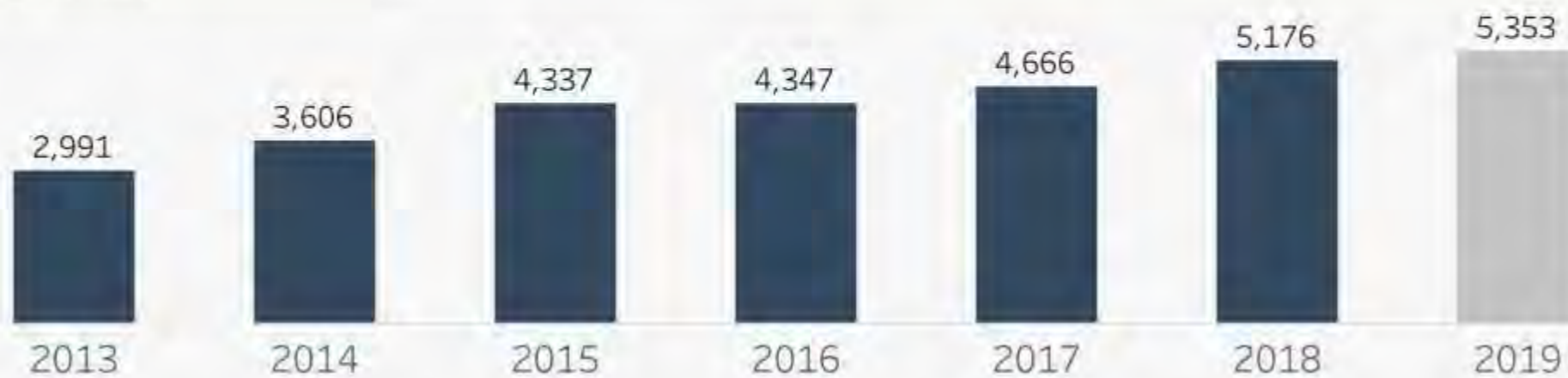




**Treatment Strategy:** Increase the number of people receiving medication-assisted treatment each year.

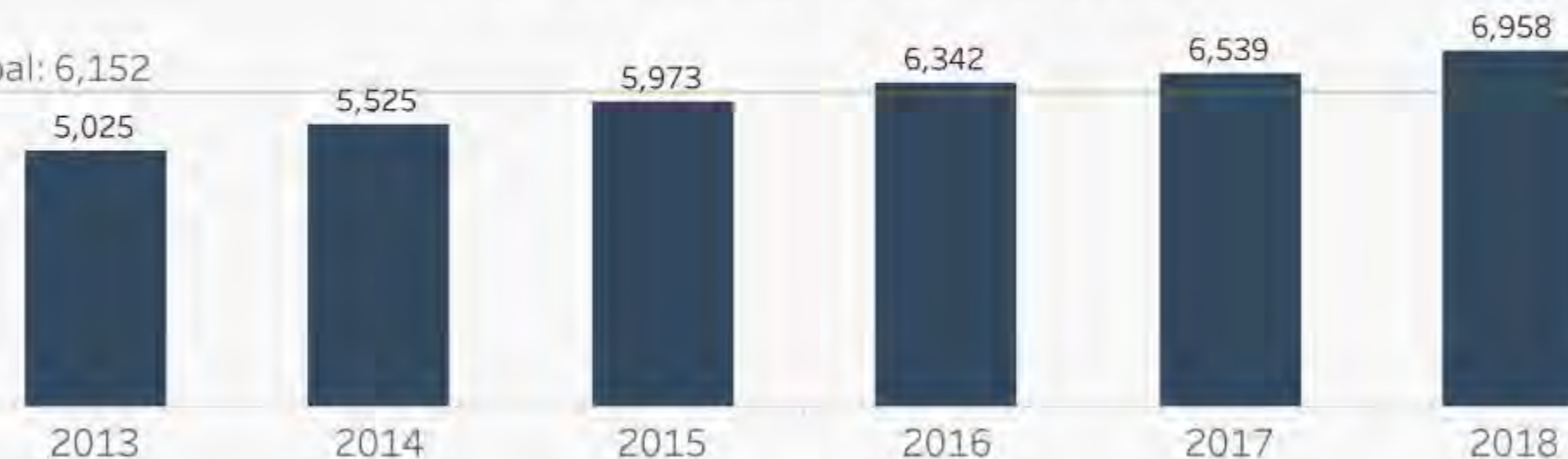
Monthly average number of people receiving  
**buprenorphine** (2013 - February 2019)

Goal: 6,500



Annual cumulative number of people receiving  
**methadone** (2013 - December 2018)

Goal: 6,152

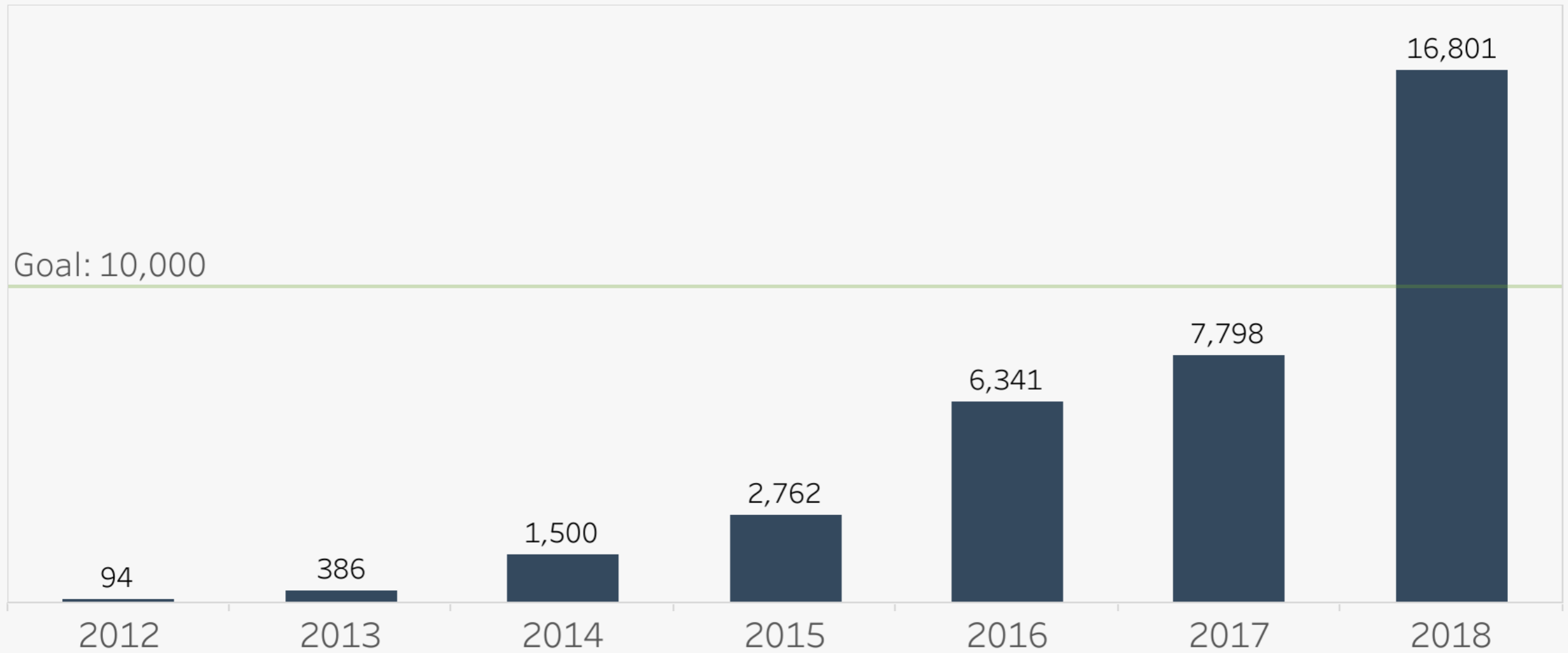






**Rescue Strategy:** Increase the number of naloxone kits distributed in the community each year.

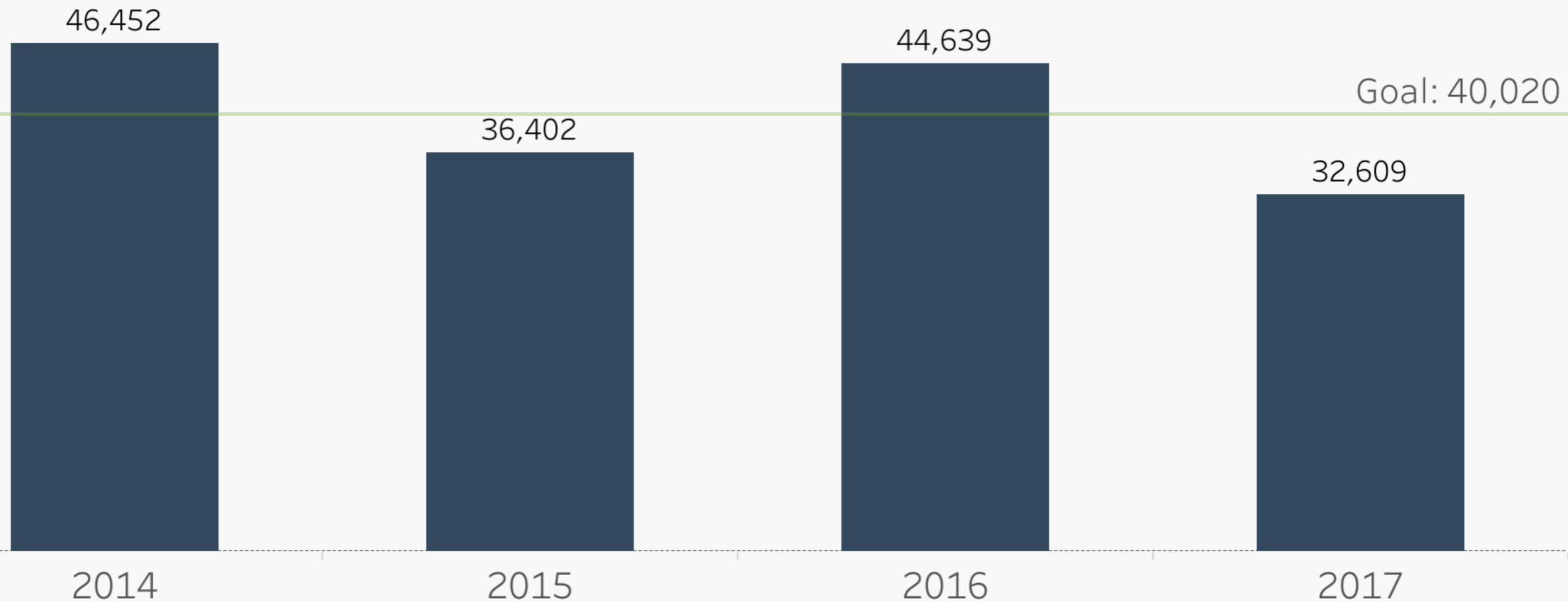
Estimated annual number of naloxone kits distributed statewide (2014 - 2018)





**Prevention Strategy:** Decrease the number of patients receiving opioid/benzodiazepine prescriptions.

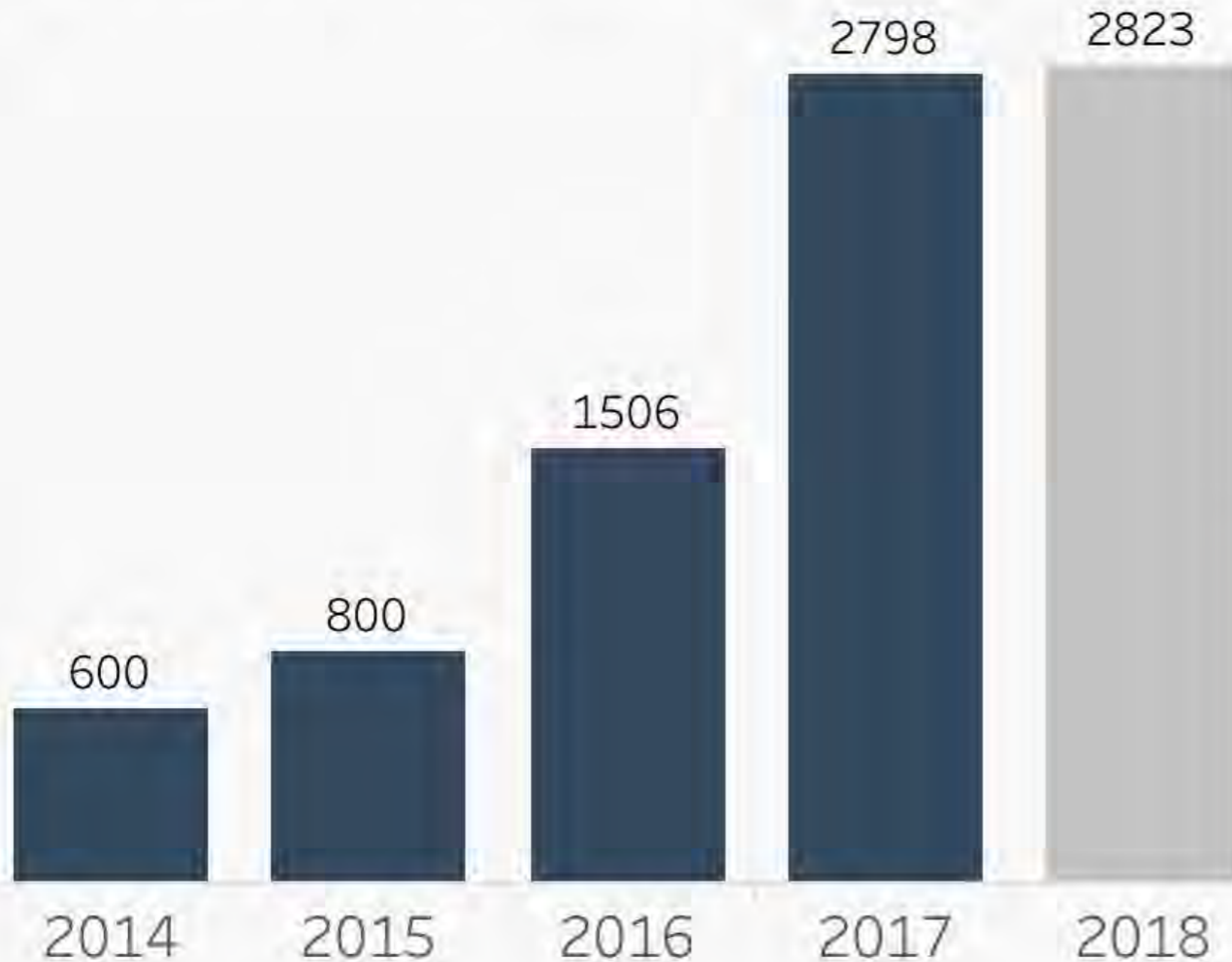
Number of patients who received an opioid and benzodiazepine co-prescription within 30 days (2014 - 2016)





**Recovery Strategy:** Increase the number of peer recovery coaches and contacts each month.

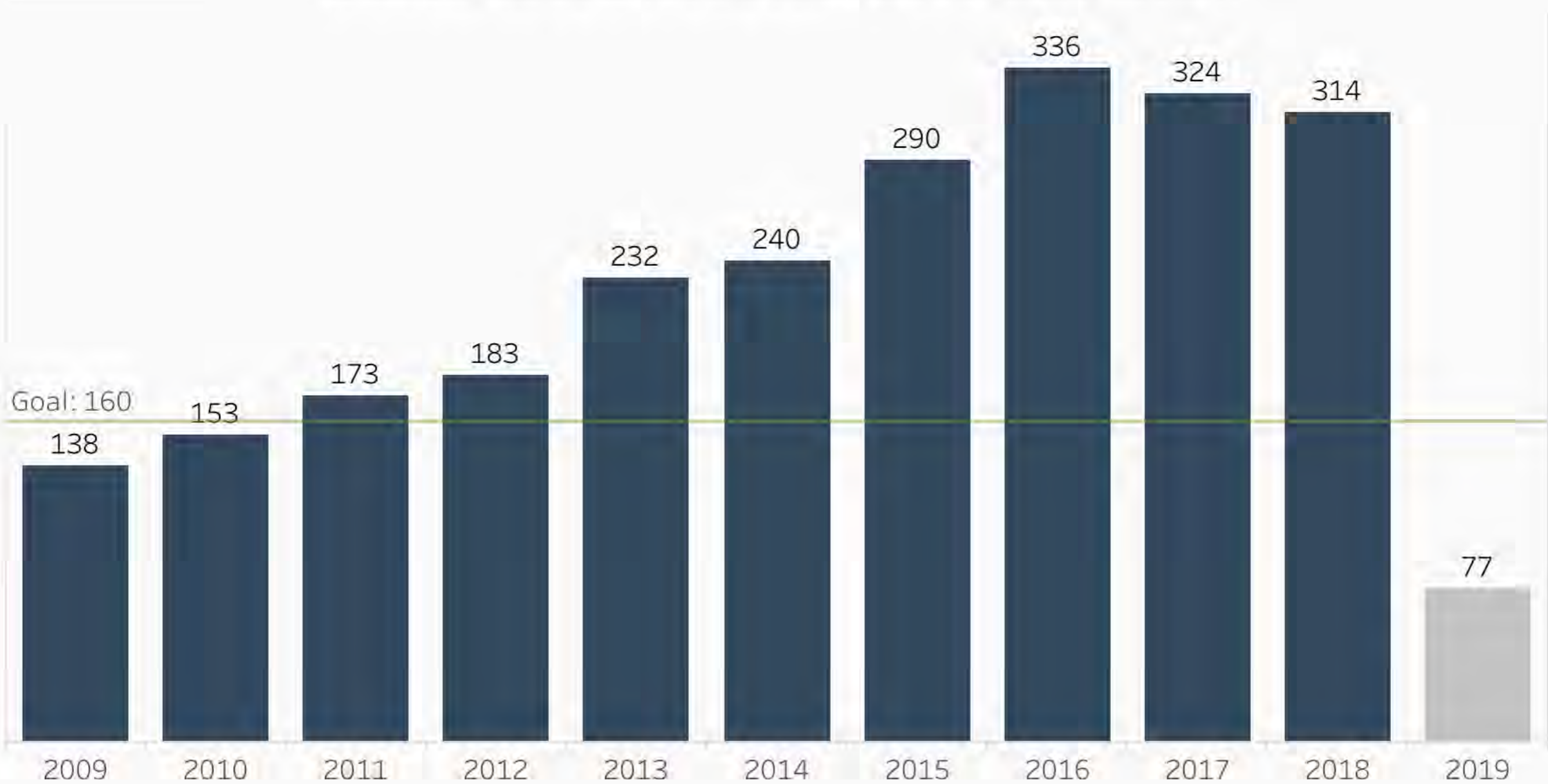
New client enrollments in peer recovery specialist services (2014 - December 2018)



Number of newly trained peer recovery specialists (2014 - December 2018)



## Number of Overdose Deaths ( 2009 - May 2019 )



# TAKE HOME POINTS

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- Rising opioid overdoses in young adults
- Insufficient initiation of and access to treatment
- Medication for opioid use disorder is gold standard of care
- Concurrent mental health treatment is essential
- Initiation of treatment can occur in primary care or specialty settings
- Need for more resources and recommendations specific to adolescents and young adults

# RESOURCES

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- American Academy of Pediatrics Opioid Epidemic Resources:  
<https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Substance-Use-and-Prevention/Pages/opioid-epidemic-resources.aspx>
- Brief Screener for Alcohol and Other Drugs:  
<https://www.drugabuse.gov/ast/bstad/#/>
- NIDA Adolescent Substance Use Screening Tools:  
<https://www.drugabuse.gov/adolescent-substance-use-screening-tools>
- PreventOverdoseRI.org – Up-to-date Information about opioid overdose, harm reduction and treatment resources in RI.
- Prescribetoprevent.org – information about prescribing and distributing naloxone
- Providers Clinical Support System – <https://pcssnow.org> – Information about medication for opioid use disorder, free online waiver training, adolescent-specific webinars

ThintKo Buznyg TapadhLeabh TapadhLeat Köszönöm Murakoze aDank Grazzi Nouari Grazie  
 Blagodaram AsanteSana Waita Takk Enkosi Bedankt Zikomo Dhanyavaad BarakAllahufiik Mési Chokrane Kiitos  
 Matondo Mercé TesekkurEderim Wala Rahmat Faaletailava Ngiyabonga Grazi Mési Chokrane Kiitos  
 Terimakasih Welalin Mamnun Dhanyavad Sukriya Dhanyavad BarakAllahufiik Mési Chokrane Kiitos  
 Dakujem Barka Tanemirt Vinaka Tenki Gracías Dziakuju Maururu GoRaibhMaithAgal Mochchakkeram  
 Grandmercé Dhanyavadalu Sulpáy Anikie Dankie Aciü KopKhunKrap Tau Nanni  
 Najistuke Nandri Hvala Arigato Spas KamSahHamnida CamOn Gracie KopKhunKha  
 Faleminderit Efharisto Merzi Akun Hvala Arigato Spas KamSahHamnida CamOn Gracie KopKhunKha  
 Obringado Diky TakkiYri Salam Saha Miigwetch CamOn Gracie KopKhunKha  
 Najistuke Merzi Akun Hvala Arigato Spas KamSahHamnida CamOn Gracie KopKhunKha  
 Najistuke Merzi Akun Hvala Arigato Spas KamSahHamnida CamOn Gracie KopKhunKha

# REFERENCES

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1. AAP Committee on Substance Use and prevention. Medication-assisted treatment of adolescents with opioid use disorders. *Pediatrics*. 2016;138(3):e20161893
2. AAP Committee On Substance Use and Prevention. Substance Use Screening, Brief Intervention, and Referral to Treatment. *Pediatrics*. 2016;138(1).
3. American Society of Addiction Medicine. Advancing access to addiction medications: implications for opioid addiction treatment. 2013. Available at: [https://www.Asam.Org/docs/default-source/advocacy/aaam\\_implications-for-opioid-addiction-treatment\\_final](https://www.Asam.Org/docs/default-source/advocacy/aaam_implications-for-opioid-addiction-treatment_final).
4. Bruneau J, Ahamad K, Goyer ME, et al. Management of opioid use disorders: a national clinical practice guideline. *CMAJ*. Mar 5 2018;190(9):e247-e257.
5. Caudarella A, Dong H, Milloy MJ, Kerr T, Wood E, Hayashi K. Non-fatal overdose as a risk factor for subsequent fatal overdose among people who inject drugs. *Drug alcohol depend*. May 1 2016;162:51-55.
6. Faggiano F, Minozzi S, Versino E, Buscemi D. Universal school-based prevention for illicit drug use. *Cochrane database of systematic reviews* 2014, issue 12. Art. No.: Cd003020. Doi: 10.1002/14651858.Cd003020.Pub3.
7. Feder KA, Krawczyk N, Saloner B. Medication-Assisted Treatment for Adolescents in Specialty Treatment for Opioid Use Disorder. *J Adolesc Health*. 2017;60(6):747-750.
8. Flynn Ab, Falco M, Hocini S. Independent evaluation of middle school-based drug prevention curricula: A systematic review. *JAMA Pediatr*. 2015;169(11):1046-1052. Doi:10.1001/jamapediatrics.2015.1736
9. Jordan AE, Blackburn NA, Des Jarlais DC, Hagan H. Past-year prevalence of prescription opioid misuse among those 11 to 30 years of age in the United States: A systematic review and meta-analysis. *Journal of Substance Abuse Treatment*. 2017;77:31-37.
10. Kakko J, Svanborg KD, Kreek MJ, Heilig M. 1-year retention and social function after buprenorphine-assisted relapse prevention treatment for heroin dependence in Sweden: a randomised, placebo-controlled trial. *Lancet*. 2003;361(9358):662-668.
11. Kampman K, Jarvis M. American society of addiction medicine (ASAM) national practice guideline for the use of medications in the treatment of addiction involving opioid use. *Journal of Addiction Medicine*. Sep-oct 2015;9(5):358-367.
12. Liebling EJ, Yedinak JL, Green TC, Hadland SE, Clark MA, Marshall BD. Access to substance use treatment among young adults who use prescription opioids non-medically. *Subst Abuse Treat Prev Policy*. 2016;11(1):38.
13. Marsch LA, Bickel WK, Badger GJ, et al. Comparison of pharmacological treatments for opioid-dependent adolescents: a randomized controlled trial. *Arch Gen Psychiatry*. 2005;62(10):1157-1164.
14. Matson SC, Hobson G, Abdel-Rasoul M, Bonny AE. A retrospective study of retention of opioid-dependent adolescents and young adults in an outpatient buprenorphine/naloxone clinic. *J Addict Med*. 2014;8(3):176-182.
15. Mattick RP, Breen C, Kimber J, Davoli M. Buprenorphine maintenance versus placebo or methadone maintenance for opioid dependence. *Cochrane database of systematic reviews* 2014, issue 2. Art. No.: Cd002207. Doi: 10.1002/14651858.Cd002207.Pub4.
16. Miech RA, Schulenberg JE, Johnston LD, Bachman JG, O'Malley PM, Patrick ME. National Adolescent Drug Trends in 2018. Monitoring the Future. <http://www.monitoringthefuture.org>. Published December 17, 2018. Accessed May 29, 2019.
17. NIDA. Adolescent Substance Use Screening Tools. <https://www.drugabuse.gov/adolescent-substance-use-screening-tools>. Accessed May 28, 2019.
18. Nielsen s, Iarance b, degenhardt I, gowing I, kehler c, lintzeris n. Opioid agonist treatment for pharmaceutical opioid dependent people. *Cochrane database syst rev*. 2016;9(5):cd011117.
19. Platt L, Minozzi S, Reed J, et al. Needle and syringe programs and opioid substitution therapy for preventing HCV transmission among people who inject drugs: findings from a Cochrane review and meta-analysis. *Addiction*. 2018;113(3):545-563.
20. Substance Abuse and Mental Health Services Administration. (2017). Key substance use and mental health indicators in the United States: Results from the 2016 National Survey on Drug Use and Health (HHS Publication No. SMA 17-5044, NSDUH Series H-52). Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. Retrieved from <https://www.samhsa.gov/data/>
21. Vivolo-kantor AM, Seth P, Gladden RM, Et Al. Vital signs: trends in emergency department visits for suspected opioid overdoses - United States, July 2016-September 2017. *MMWR*. 2018;67(9):279-285.



# Questions?

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