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

I have no financial conflicts of interest to disclose

I am an emergency physician, not a pediatrician
1. Opioid use & overdose trends
2. Opioid use disorder
3. Prevention
4. Treatment
5. Harm Reduction
6. Rhode Island Strategic Plan
RISSING OVERDOSE DEATHS

3 Waves of the Rise in Opioid Overdose Deaths

- Wave 1: Rise in Prescription Opioid Overdose Deaths
- Wave 2: Rise in Heroin Overdose Deaths
- Wave 3: Rise in Synthetic Opioid Overdose Deaths

Other Synthetic Opioids: e.g., Tramadol and Fentanyl, prescribed or illicitly manufactured
Commonly Prescribed Opioids: Natural & Semi Synthetic Opioids and Methadone

Opioid overdose deaths by age, 1999-2017

RISING OVERDOSE DEATHS

2014

Legend
- 6.9 to 11.0
- 11.1 to 13.5
- 13.6 to 16.0
- 16.1 to 18.5
- 18.6 to 21.0
- 21.1 to 52.0

Source: CDC Wonder
RI S I N G O V E R D O S E D E A T H S
2015

Legend
- 6.9 to 11.0
- 11.1 to 13.5
- 13.6 to 16.0
- 16.1 to 18.5
- 18.6 to 21.0
- 21.1 to 52.0

Source: CDC Wonder
RI OVERDOSE DEATHS

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

Number of fatal overdoses
- 1 - 4
- 5 - 7
- 8 - 10
- 11 - 14
- 15 - 22
- None

*New Shoreham
not to scale
RI OVERDOSE DEATHS

RI Opioid Overdose Deaths by Age, 2014-2017

Number of Deaths

- 18-29 yoa
- 30-39 yoa
- 40-49 yoa
- 50-59 yoa
- 65+ yoa

Year
- 2014
- 2015
- 2016
- 2017
RISING ED OD VISITS

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

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

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

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

Number of ED visits

- Total
- <18 yoa
- 18-24 yoa
- 25-34 yoa
- 35-44 yoa
- 45-54 yoa
- 55-64 yoa
- 65 yo+

2015: 797
2016: 1414
2017: 1551
2018: 1559

Number of visits by age group:

- Total: 797 -> 1559
- <18 yoa: 35
- 18-24 yoa: 18
- 25-34 yoa: 25
- 35-44 yoa: 400
- 45-54 yoa: 600
- 55-64 yoa: 800
- 65 yo+: 1000
RI adolescent non-fatal opioid overdose ED visits, 2014-2018

Number of ED Visits

2015 2016 2017 2018

<18 yoa

0 2 9 9 5

18-24 yoa

134 234 238 231
RI ED treatment for opioid overdose for discharged patients <24 years of age, 2016-2018

- Entered Detox: 37 Yes, 689 No
- Referred to treatment: 145 Yes, 581 No
- Counseling received: 248 Yes, 478 No
- Discharged with Naloxone: 275 Yes, 451 No
Opioid Use Disorder
# DEFINING OPIOID USE DISORDER

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
<th>Criteria</th>
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<tbody>
<tr>
<td>No Use</td>
<td>Use limited to predictable times (weekends, social situations); no related problems</td>
<td></td>
</tr>
<tr>
<td>Mild Use</td>
<td>Use limited to predictable times (weekends, social situations); no related problems</td>
<td></td>
</tr>
<tr>
<td>Moderate Use</td>
<td>High-risk use resulting in problems (e.g., fighting, criminal offenses, or suspension) or use to regulate emotions or relieve stress.</td>
<td>Meets 2-5 of the DSM-5 criteria for SUD</td>
</tr>
<tr>
<td>Severe Use</td>
<td>High-risk use; losing control or an inability to stop using substances.</td>
<td>Meets ≥6 of the DSM-5 criteria for an SUD</td>
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<tr>
<td>NAME</td>
<td>TIME</td>
<td>ADMIN. METHOD</td>
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<tr>
<td>-------------------------------------------</td>
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<td>-----------------------------</td>
</tr>
<tr>
<td>CRAFFT</td>
<td>5 min</td>
<td>Asked or Self-administered</td>
</tr>
<tr>
<td>Brief Screener for Alcohol, Tobacco, and Other Drugs (BSTAD)</td>
<td>5–10 min</td>
<td>Asked and Self-administered</td>
</tr>
<tr>
<td>Screening to Brief Intervention (S2BI)</td>
<td>5 min</td>
<td>Asked or Self-administered</td>
</tr>
<tr>
<td>APA Adapted NIDA Modified ASSIST Tools</td>
<td>5–10 min</td>
<td>Self-administered</td>
</tr>
</tbody>
</table>
Past year heroin use among people aged 12 or older, by age group: percentages, 2002-2016
Annual prevalence of opioid use among 8th, 10th, and 12th graders, 2002-2018

- Heroin
- OxyContin
- Vicodin
Prevention

Harm Reduction

Treatment
Prevention
PREVENTION

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

Rhode Island Prescription Drug Monitoring Program
Support: 1-844-474-4767

Log In

Email

Password

Reset Password

Log In

Create an Account

Need Help?
November 2015

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

Anna B. Flynn, MHS¹; Mathea Falco, JD²; Sophia Hocini, MPH²

Author Affiliations


Cochrane Library

Cochrane Database of Systematic Reviews

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

Faggiano F, Minozzi S, Versino E, Buscemi D
SCHOOL-BASED INITIATIVES

Social competence + Social influence → Small, protective effects in preventing drug use

Botvin LifeSkills® Training
Treatment
NIDA components of comprehensive substance use treatment

- Assessment
- Evidence-Based Treatment
- Substance Use Monitoring
- Clinical and Case Management
- Recovery Support Programs
- Continuing Care

- Vocational Services
- Mental Health Services
- Medical Services
- Educational Services
- HIV/AIDS Services
- Legal Services
- Family Services
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

https://www.recovery.org/learn/sober-high/
RECOVERY SUPPORT SERVICES

EFFECTIVENESS OF RECOVERY HIGH SCHOOLS

RECOVERY HIGH SCHOOL

30% RELAPSE RATE

NORMAL INTERVENTION

70% RELAPSE RATE

https://www.recovery.org/learn/sober-high/
RECOVERY SCHOOLS IN THE U.S.

- Recovery School
- Therapeutic Boarding School
- Planned Recovery School
- Treatment Center School

Source: Recovery.org

https://www.recovery.org/learn/sober-high/
Creating Futures and New Beginnings.

520 Hope Street
Providence, RI 02906
Phone: 401.432.7279
Fax: 401.276.4015
Email: info@anchorlearningacademy.org
How OUD Medications Work in the Brain

Empty opioid receptor

Methadone
- Full agonist: generates effect

Buprenorphine
- Partial agonist: generates limited effect

Naltrexone
- Antagonist: blocks effect

© 2016 The Pew Charitable Trusts
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

## 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

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

*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

- 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
Medication-Assisted Treatment of Adolescents With Opioid Use Disorders

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.
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

Structural Barriers
- Incarceration
- Homelessness
- Fear of interactions with government services or police

Health Care System Barriers
- Treatment program structure
  - Waiting times
  - Confidentiality
  - Lack of insurance

Patient Barriers
- Lack of perceived need, interest, trust, or education
  - Stigma

Clinical Encounter

Provider Barriers
- Difficulty prescribing MAT
- Insufficient training or experience

PREScribing Moud

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

Waiver Training for Physicians

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

American Academy of Pediatrics
www.aap.org/mat
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
Harm Reduction
Harm reduction means:

You matter.
You are a precious human being.
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
PUBLICLY ACCESSIBLE NALOXONE

medical reserve corps
RHODE ISLAND
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.

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

PWID - People who inject drugs

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
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?
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

---

**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

Find out more at PreventOverdoseRI.org
Rhode Island Strategy
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.

Rescue
Make sure everyone has access to naloxone.

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

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

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

Fact
Nearly every opioid overdose death is preventable with naloxone.

Fact
MAT lowers the risk of both relapse and death.

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)

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<tbody>
<tr>
<td>Goal</td>
<td>6,500</td>
<td>2,991</td>
<td>3,606</td>
<td>4,337</td>
<td>4,347</td>
<td>4,666</td>
<td>5,176</td>
</tr>
</tbody>
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Annual cumulative number of people receiving methadone (2013 - December 2018)

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</thead>
<tbody>
<tr>
<td>Goal</td>
<td>6,152</td>
<td>5,025</td>
<td>5,525</td>
<td>5,973</td>
<td>6,342</td>
<td>6,539</td>
<td>6,958</td>
</tr>
</tbody>
</table>
Rescue Strategy: Increase the number of naloxone kits distributed in the community each year.

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

- 2012: 94
- 2013: 386
- 2014: 1,500
- 2015: 2,762
- 2016: 6,341
- 2017: 7,798
- 2018: 16,801

Goal: 10,000
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)

- 2014: 46,452
- 2015: 36,402
- 2016: 44,639
- 2017: 32,609

Goal: 40,020
Recovery Strategy: Increase the number of peer recovery coaches and contacts each month.

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

- 2014: 600
- 2015: 800
- 2016: 1506
- 2017: 2798
- 2018: 2823

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

Goal: 168

- 2014: 75
- 2015: 83
- 2016: 124
- 2017: 146
- 2018: 157
TAKE HOME POINTS

- 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


- Brief Screener for Alcohol and Other Drugs: [https://www.drugabuse.gov/ast/bstad/#/](https://www.drugabuse.gov/ast/bstad/#/)

- NIDA Adolescent Substance Use Screening Tools: [https://www.drugabuse.gov/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](https://pcssnow.org) – Information about medication for opioid use disorder, free online waiver training, adolescent-specific webinars
Thank You
REFERENCES


Questions?
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@LizSamuels