Overdose Prevention and Intervention
Task Force
September 13, 2017

CO-CHAIRS:

DIRECTOR NICOLE ALEXANDER-SCOTT, MD, MPH, RHODE ISLAND DEPARTMENT OF HEALTH
DIRECTOR REBECCA BOSS, MA, RHODE ISLAND DEPARTMENT OF BEHAVIORAL HEALTHCARE, DEVELOPMENTAL DISABILITIES, AND HOSPITALS
Levels of Care Designation
Level 3 Facility
South County Health
South County Health
Department of Emergency Medicine

William Sabina, MD, FACEP
Medical Director, Department of Emergency Medicine
Regional Director, TeamHealth Emergency Medicine
SCH and the Opioid Epidemic

2015: Began tracking Opiate related deaths AND activity as it related to the DOH mandate.

2016: Automated daily report to ED Manager, ED Director and Clinical Leaders, for audit and forwarding to DOH.

2016-2017: Collected and analyzed the data and began to tie it in with other SCH projects that deal with BH.

Financial Impact of BH on SCH ED - 2015/2016 YTD

Actual Charges

- Depression
  - 2015: $481,931
  - 2016: $219,588

- Alcoholic Intoxication
  - 2015: $193,958
  - 2016: $415,824

- Drug Overdose
  - 2015: $289,162

- Alcohol Withdrawal
  - 2015: $170,864

- Alcohol Abuse
  - 2015: $99,085

- Acute Alcoholic Intoxication
  - 2015: $243,594
  - 2016: $102,840

- Acute Anxiety
  - 2015: $145,807

- Acute Psychosis
  - 2015: $240,538

- Alcohol Intoxication
  - 2015: $173,127

- Agitated Depression
  - 2015: $102,840

- Suicidal Ideation
  - 2015: $99,085

- Withdrawal Symptoms, Alcohol
  - 2015: $415,824

- Psychosis
  - 2015: $240,538
SCH and Our Partners

- Partnership with Outside Agencies to accomplish mission
- South Kingstown Police Department
  - Medical Direction and supply through SKEMS (Dr Sabina, Medical Director).
- Narragansett Police
  - Current supply through North Providence Police grant, can update to self-supply in future through Narragansett Fire/EMS (Dr Sabina, Medical Director).
- RI State Police Fusion Center – trends in narcotic use and usage
- South Kingstown Partnership for Prevention
  - Pamphlets, Blue Bags, posters for ED, Web site, Social Media
- Community Health Teams – RI
  - BH and Substance abuse counseling/detox referral for at risk patients identified through ED
- Healthy Bodies/Healthy Minds Task Force – led by SCH
  - First Responders, Teachers were educated in Mental Health First Aid
- Anchor ED
  - Substance abuse coaches/counseling and outpatient follow up
DOH Data - Overdoses at South County Health
Demographics

Age/Gender Distribution of Overdoses at SCH

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-29</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>30-39</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>40-49</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>50-59</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Overdoses by Town of Presentation

<table>
<thead>
<tr>
<th>Town</th>
<th>Number of Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Kingst</td>
<td>11</td>
</tr>
<tr>
<td>South Kings</td>
<td>11</td>
</tr>
<tr>
<td>Narraganset</td>
<td>2</td>
</tr>
<tr>
<td>Newport</td>
<td>2</td>
</tr>
<tr>
<td>Warwick</td>
<td>10</td>
</tr>
<tr>
<td>West Warwick</td>
<td>2</td>
</tr>
</tbody>
</table>

Geographic Distribution of OD Cases at SCH

<table>
<thead>
<tr>
<th>City of Residence</th>
<th>Number of Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providence</td>
<td>1</td>
</tr>
<tr>
<td>Narraganset</td>
<td>1</td>
</tr>
<tr>
<td>North Kingst</td>
<td>1</td>
</tr>
<tr>
<td>Newport</td>
<td>2</td>
</tr>
<tr>
<td>South Kingst</td>
<td>10</td>
</tr>
<tr>
<td>Warwick</td>
<td>1</td>
</tr>
</tbody>
</table>

DOH Data on Overdoses at South County Health ED

Was naloxone administered, prior to ED arrival?

<table>
<thead>
<tr>
<th>Naloxone Administered, Prior to ED Arrival</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Records</td>
<td>20</td>
<td>11</td>
</tr>
</tbody>
</table>

Was naloxone administered at the ED?

<table>
<thead>
<tr>
<th>Naloxone Administered at the ED</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Records</td>
<td>20</td>
<td>11</td>
</tr>
</tbody>
</table>

Survival Rate of ODs at SCH

<table>
<thead>
<tr>
<th>Patient Outcome</th>
<th>Number of Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient did not survive</td>
<td>3</td>
</tr>
<tr>
<td>Patient was admitted to opioid detox program</td>
<td>2</td>
</tr>
<tr>
<td>Patient was discharged</td>
<td>2</td>
</tr>
<tr>
<td>Patient was transferred to ICU</td>
<td>2</td>
</tr>
</tbody>
</table>

Were follow-up treatment/recovery services provided?

<table>
<thead>
<tr>
<th>Follow-up Treatment/Recovery Services Provided</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Records</td>
<td>10</td>
<td>6</td>
</tr>
</tbody>
</table>

Data includes dates of service: 10/1/15 - 7/27/16
Emergency Physicians

What my friends think I do

What my Mom thinks I do

What society thinks I do

What the government thinks I do

What I think I do

What I really do
Thank You
Naloxone Administration Data
2015 - Present

September 13, 2017
Overdose Prevention Epidemiologist
Meghan McCormick, MPH
The Naloxone Workgroup increased the 2018 goal from 5,000 to 10,000 kits per year.

Find more naloxone data at www.PreventOverdoseRI.org.
Reports of Naloxone Administration by Laypeople

Data source: Rhode Island Department of Health Opioid Overdose Reporting System
Geographic Distribution

Data source: Rhode Island Department of Health Opioid Overdose Reporting System

Data source and maps: www.PreventOverdoseRI.org
Preliminary Outcome Data by Prior Naloxone Administration

Discharge Status, 1/1/2015 - 8/31/2017

- No Naloxone Prior to ED Arrival:
  - Discharged: 55%
  - Not Discharged: 45%

- Naloxone Administered Prior to ED Arrival:
  - Discharged: 64%
  - Not Discharged: 36%

Data source: Rhode Island Department of Health Opioid Overdose Reporting System
Preliminary Outcome Data by Prior Naloxone Administration

Discharge Status, 1/1/2015 - 8/31/2017

Naloxone Administration by EMS and/or Police
- Discharged: 63%
- Not Discharged: 37%

Naloxone Administration by Layperson
- Discharged: 74%
- Not Discharged: 26%

*Naloxone may be administered by more than one source.

Data source: Rhode Island Department of Health Opioid Overdose Reporting System
Abbie Steinberg
Naloxone Rescue
Naloxone Community Distribution Models
Michelle McKenzie, MPH
- Activate emergency response system (if not already done) after 2 minutes.
- Continue rescue breathing; check pulse about every 2 minutes. If no pulse, begin CPR (go to “CPR” box).
- If possible opioid overdose, administer naloxone if available per protocol.

By this time in all scenarios, emergency response system or backup is activated, and AED and emergency equipment are retrieved or someone is retrieving them.
From where?
NaloxBox: Going Beyond 1:1 Distribution
NALOXBOX

Geoff Capraro, MD, MPH
University Emergency Medicine Foundation
Department of Emergency Medicine
Hasbro Children’s Hospital- Rhode Island Hospital- Lifespan
Brown University Alpert School of Medicine
Fentanyl-related overdoses are on the rise

Fentanyl, a highly potent opioid, poses a great threat and worsens our overdose crisis. The number of overdose deaths related to fentanyl has increased by almost 20-fold since 2009. In 2016, over 50% of overdose deaths have involved fentanyl.

Source (RIDOH)  Learn more about Fentanyl

Overdose Deaths due to Fentanyl (2009 to 2016)

Note: Data updated biannually

Source: PreventOverdoseRI.org
NaloxBox Design

- No Lock
- "Analog" or "Smart function" latch
- 2-4 doses of naloxone
- Intramuscular/intranasal
- Gloves and mask for rescue breathing
- Instructions
- Training
- Messaging
Partners

Health Equity Zone
West Warwick

McAuley Ministries
622 Elmwood Ave.
Providence, RI 02907

House of Hope
Community Development Corporation

Pawtucket Housing Authority

Lucy’s Hearth

Rhode Island Department of Health

Amos House
rhode island coalition for the homeless

9 Yards

Open Doors
NaloxBoxes

What are NaloxBoxes?

NaloxBoxes are a new resource for helping someone who might have accidentally overdosed.

The NaloxBox includes naloxone, a medicine that reverses the overdose, and a mask so that you can give rescue breaths until emergency help arrives. The NaloxBox stores these life-saving tools in public places and community organizations, that means bystanders can give naloxone right away. Learn more about NaloxBox in the news, and visit their page to become a NaloxBox.

For information about NaloxBox, visit: PreventOverdoseri.org/naloxboxes/
NaloxBox Locations in Rhode Island
<table>
<thead>
<tr>
<th>Title</th>
<th>Category</th>
<th>Address</th>
<th>Description</th>
</tr>
</thead>
</table>
| Amos House (Main Building)     | NaloxBox     | 460 Pine St. Providence, RI 02907 | **Phone:** 401-338-6320  
Social services work station, first floor left off  
entrance, public space 6-6, locked overnight  
Second floor staff room, Key access  
room/staff only  
Basement carpentry classroom, Open 8-5,  
key-locked closed hours |
| Amos House (Women's Shelter)   | NaloxBox     | 446 Pine St. Providence, RI | **Phone:** 401-339-1356  
Second floor office/staff only/, locked |
| Amos House (Reunification Program Building) | NaloxBox | 419 Friendship St Providence, RI | **Phone:** 401-338-1740  
First floor, kitchen, public shared space |
| Amos House (Men's Shelter)     | NaloxBox     | 414 Friendship St. Providence, RI | **Phone:** 401-440-5661  
First floor entrance office/ staff only |
| McAuley House                  | NaloxBox     | 622 Elmwood Ave Providence, RI |                                                                                   |
Amos House (Reunification Program Building)
419 Friendship St Providence, RI
**Phone:** 401-338-1740
First floor, kitchen, public shared space
[Get directions]
Future Plans

• Conduct installations and trainings:
  – high-risk populations
  – public-facing locations
• Extend Initiative
• Seek funding
• Obtain training
Please partner, please help!

Email: NaloxBoxProject@gmail.com
Twitter: @NaloxBox
Web: www.NaloxBox.org
NALOXONE AND OVERDOSE PREVENTION EDUCATION PROGRAM OF RHODE ISLAND

We Are The Help Until Help Arrives
Opioids and Overdose in Rhode Island

- Of concern are both illicit opioids (e.g., heroin) and misuse of prescription opioids (oxycodone, hydrocodone).

- In Rhode Island, prescription overdose deaths have remained relatively stable over the past five years. Illicit overdose deaths have quadrupled in this time period.
# Opioids and Overdose in Rhode Island

![Opioids and Overdose in Rhode Island](source: PreventOverdoseRI.org)

## Total Overdose Deaths vs. Fentanyl Deaths

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Overdose Deaths</th>
<th>Fentanyl Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>138</td>
<td>7</td>
</tr>
<tr>
<td>2010</td>
<td>153</td>
<td>8</td>
</tr>
<tr>
<td>2011</td>
<td>173</td>
<td>7</td>
</tr>
<tr>
<td>2012</td>
<td>183</td>
<td>&lt;5</td>
</tr>
<tr>
<td>2013</td>
<td>232</td>
<td>25</td>
</tr>
<tr>
<td>2014</td>
<td>240</td>
<td>84</td>
</tr>
<tr>
<td>2015</td>
<td>290</td>
<td>136</td>
</tr>
<tr>
<td>2016</td>
<td>336</td>
<td>195</td>
</tr>
<tr>
<td>2017</td>
<td>71</td>
<td>47</td>
</tr>
</tbody>
</table>

Source: PreventOverdoseRI.org
Overdose Deaths by Age Group (2014-2016)

- While illicit drug use is most common in young adults, the highest rates of fatal overdoses occur in men, between 30 and 60 years old.

- Most overdose fatalities in women occur in this age range as well. Women currently make up one quarter of overdose deaths in all age ranges, but this gap is RAPIDLY closing.
Overdose Deaths by Age Group (2014-2016)

Source: PreventOverdoseRI.org
Harm Reduction

- Overdose prevention education and naloxone distribution are feasible and cost effective methods that have been shown to reduce fatal overdose in communities and increase enrollment in drug treatment.

- Lay responders armed with knowledge, skills, and resources are willing and able to identify an overdose and administer naloxone, resulting in lives saved.
Naloxone distribution and other harm reduction programs are not the solution to the opioid addiction epidemic; they help keep individuals alive so that they can work towards recovery.
Opioids, Tolerance, and Naloxone
<table>
<thead>
<tr>
<th>STRONG OPIOID AGONISTS</th>
<th>MODERATE OPIOID AGONISTS</th>
<th>OTHER OPIOID AGONISTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Morphine</td>
<td>• Codeine</td>
<td>• Tramadol (Ultram®)</td>
</tr>
<tr>
<td>• Fentanyl</td>
<td>• Hydrocodone</td>
<td>• Dextromethophasan</td>
</tr>
<tr>
<td>• Methadone</td>
<td>(Vicodin®*)</td>
<td></td>
</tr>
<tr>
<td>• Heroin</td>
<td></td>
<td>*contains acetaminophen (Tylenol)</td>
</tr>
<tr>
<td>• Hydromorphone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Dilaudid®)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Oxycodone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Oxycontin®, Percocet®)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Meperidine (Demerol®)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Opioids

MIXED OPIOID AGONIST-ANTAGONISTS

- buprenorphine
- Buprenorphine + naloxone
  (Suboxone®)
- butorphanol
- nalbuphine
- pentazocine

OPIOID ANTAGONISTS

- naloxone (Narcan™)
- naltrexone
Tolerance

- Opioids bind at opioid receptors causing a spectrum of therapeutic, pleasurable, and potentially dangerous effects.

- Repeated exposure to opioids (for any reason) desensitizes opioid receptors and leads to a decrease in their number and density.

- It will now take more opioids to cause the same effect (i.e., tolerance).
Tolerance

- When opioid receptors are not exposed to opioids for any period of time, the number and density of receptors returns to baseline.
- It will now take less opioid to cause the same effect.
- If the same amount of opioid is given, it will cause a stronger reaction.
Tolerance

• Individuals develop tolerance to the pleasurable effects of opioids (e.g. pain relief, feelings of euphoria, a “high”).

• There is VERY LITTLE tolerance to the respiratory depression and hypoxia caused by increased doses of opioids.
Tolerance

- Therefore, as an individual increases the amount they are taking (or as the amount prescribed increases in order to achieve a therapeutic goal), the risk of overdose and death increases.

- Overdose is especially likely in those where the amount needed to get “high” is very close to the amount that causes them to stop breathing.
Naloxone (Narcan®) is an opioid antagonist that is used to treat acute opioid overdose. It has a stronger affinity for opioid receptors than opioids and therefore reverses and blocks their effects.
Naloxone (Narcan®)

- A non-scheduled, non-addictive, prescription drug that is not effective orally.
- Administered by injection (IM) or as a nasal spray (IN), or intravenously (IV)
- Effect has an onset of 3-5 minutes and a duration of 30-90 minutes. Most opioids have a longer half life.
Naloxone (Narcan®)

- Reverses the effects of opioids.

- It only works for opioid overdose (heroin, pain killers), not for other kinds of drugs (cocaine, meth).

- There are no adverse effects if naloxone is given to someone who is not overdosing on opioids, so when in doubt, give it.

  - only contraindication is known sensitivity, which is very rare
Naloxone (Narcan®)

- Naloxone starts working in 2-4 minutes and lasts for 30-90 minutes.
  - If there is no improvement in 2-4 minutes, give a second dose.
  - If the first dose wears off and they start to “re-overdose”, give another dose.

- IN naloxone dosage same for children
Overdose Risk Factors, Signs, and Symptoms
An overdose occurs when a toxic amount of a drug or a toxic combination of drugs overwhelms the body.

Opioid overdose is characterized by inadequate breathing (respiratory depression).

This leads to a lack of oxygen in the body (hypoxia) which will lead to death if no intervention is made.
Overdose Risk Factors

There is an increased likelihood of overdose when any of the following factors are present:

• **Decreased tolerance due to recent abstinence**
  • hospitalization
  • imprisonment
  • detox/rehab

• **Solo opioid use/Social Isolation**
  • using in the absence of anyone who can recognize and respond to an overdose
Overdose Risk Factors

• Mixing of opioids with other...
  • Opioids
  • Alcohol
  • Benzodiazepines
  • Prescription meds
  • Other known or unknown substances (e.g., fentanyl)
Overdose Risk Factors

- Acute or chronic illness
  - Hepatitis C
  - HIV/AIDS
  - Pneumonia
  - Sleep apnea
- Other liver or respiratory conditions
Overdose Recognition/Assessment

Overdose can happen right after using, and usually occurs within **1-2 hours**.
A person who overdoses will have some or all of the following symptoms:

<table>
<thead>
<tr>
<th>Can't be woken up (pressure point, earlobe pinch)</th>
<th>Pale/Ashen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slow or no breathing (labored )</td>
<td>Fingernails or lips turning blue</td>
</tr>
<tr>
<td>Unable to speak or incoherent</td>
<td>Vomiting or gurgling noises</td>
</tr>
<tr>
<td>Limp Body</td>
<td>Pinpoint Pupils</td>
</tr>
</tbody>
</table>
Assessment and Response
Overdose Response

- If an individual is found unresponsive, attempt arousal. (call their name/shoulder shake /pressure point/ear lobe/sterno rub)

- If you can’t wake someone up or they aren’t breathing, call 911.
  - Tell them someone is not breathing.

- If there is ANY indication that ANY drug has been taken, administer one dose of naloxone (Narcan®), if you have it.
Overdose Response

- Check for pulse. If no pulse, initiate CPR. If pulse is present, begin rescue breathing.

- Keep rescue breathing/CPR until the naloxone starts to work. If no improvements in 2-5 minutes, give another dose.

- Once the individual begins to breathe independently, place in the rescue position.
Intranasal Naloxone

1. Remove both yellow caps from the ends of the syringe
2. Twist the nasal atomizer onto the tip of the syringe
3. Remove the purple cap from the naloxone vial
4. **Twist** the naloxone into the bottom of the syringe until you feel resistance
Narcan® Nasal Spray
Narcan® Nasal Spray

• Remove the device from the package. Hold with thumb on the bottom of the plunger with your first and middle fingers on either side of the nozzle.

• Tilt the person’s head back and provide support to the neck then insert the tip of the nozzle into nostril until your fingers are against the person’s nose.

• Press the plunger firmly to give the dose.
Injectable (IM) Naloxone

1. Remove cap from the naloxone vial and the syringe
2. Insert needle through rubber plug
3. Pull back on plunger until there is 1cc in the syringe (4mg)
4. Inject into a large muscle (thigh or upper arm)
Rescue Breathing

- Opioid overdose causes respiratory failure.
- Respiratory failure leads to hypoxia and death.
- The primary treatment for opioid overdose is OXYGEN and VENTILATION.
Rescue Breathing

- Rescue breathing by any means available (i.e., mouth-to-mouth, mouth-to-mask, bag-valve-mask) is the primary treatment of overdose and should be performed:
  - Immediately - while someone calls 911 and gets naloxone
  - After giving naloxone - until the person can breathe independently.
  - If you don’t have naloxone – rescue breathe until rescue arrives.
Rescue Breathing

- Tilt the person’s head back.
- Pinch nose.
- Seal your mouth over theirs.
- Use a barrier device.
- Give 1 breath every 5 seconds.
- Continue until help arrives or the person starts breathing independently.
Rescue Position

Hand supports head

Knee stops body from rolling onto stomach

First Responder Training / MADPH
How does a person respond to Narcan®?

Scenario:
1. Gradually improves breathing and becomes responsive within 2-4 minutes
2. Immediately improves breathing, responsive, and is in withdrawal
3. Starts breathing within 2-4 minutes but remains unresponsive
4. Does not respond to first dose and naloxone must be repeated in 2-4 minutes (keep rescue breathing)
What are the side effects of naloxone?

Naloxone reverses opioid overdose and causes withdrawal. The most common symptoms of withdrawal are pain, nausea, vomiting, sweating, and anxiety. Less common are agitation, seizures, or irregular heartbeat. While opioid withdrawal can be dramatic and unpleasant, it is not life threatening.
Can people have violent reactions after naloxone administration?

It is possible an individual will become agitated and combative after going into withdrawal due to naloxone administration, however, this is not likely with the relatively small dose used by lay-responders. Also, administration of intranasal naloxone seems to provide a more gentle reversal with less acute withdrawal symptoms. The City of Boston did not report ANY violent reactions in over 500 administrations of nasal naloxone by non-medical personnel.
Does naloxone work on cocaine, methamphetamine, benzodiazepines, or alcohol?

No. Naloxone only works on opioids (i.e., heroin, morphine, fentanyl, methadone). It will not have any effect on someone overdosing on another type of drug. However, if someone is overdosing on opioids AND another drug, naloxone could reverse the opioid part of the overdose and potentially help the person.
What if naloxone is given to someone who doesn't have any opioids in their system?

There are no adverse effects if someone is given naloxone who doesn't need it. If someone looks like they may be overdosing on opioids (i.e., showing signs of being unconscious, slow or no breathing), they should be given naloxone. If opioids are present, it will help. If opioids aren't present, it won't hurt to give naloxone.
What is the shelf-life of naloxone?

When manufactured, naloxone has approximately a two-year shelf life. Most of the naloxone that is being distributed has an expiration date 12-18 months in the future. Always check the expiration date on your naloxone (found on the end of the box and on the vial) and follow your department's procedure for exchanging expired or near-to-expiration medications. The atomizers also have an expiration date after which they are no longer considered sterile. This is usually in the four to five year range.
Frequently Asked Questions

How should naloxone be stored?

Naloxone must be kept at room temperature (59-86°F or 15-30°C). It should never be stored in a refrigerator. It must also be stored out of direct light. If the only naloxone that you have is expired or has been stored improperly - and no other naloxone is immediately available- it may be given to a person experiencing an overdose. It may not be as effective, but it will not cause harm.
Naloxone and Overdose Prevention Education
Program of Rhode Island

Email: EMcDonough@ridmat.org
Web: www.nopeRI.org
www.riresponds.org
PUBLIC COMMENT