REVIVE!

Opioid Overdose Prevention for the Commonwealth of Virginia

Virginia Rural Health Association Webinar
May 21, 2014

Jason Lowe, MSW
Behavioral Health Program Analyst
Office of Substance Abuse Services
Virginia Department of Behavioral Health and Developmental Services

REVIVE!
Opioid Overdose Prevention for the Commonwealth of Virginia
Overview

Today’s webinar will discuss the following topics:

• Opioid overdose deaths in the United States
• Opioid overdose deaths in Virginia
• How opioids work and how an overdose happens
• What is naloxone?
• What is REVIVE!?
• Training lay rescuers to use naloxone
• Next steps for REVIVE!
Opioid Overdose Deaths in the US

U.S. opioid prescribing in 2012

288 million prescriptions

18 billion opioid pills

75

Enough pills to give every American 18 years or older

75 opioid pills in 2012

IMS Health, National Prescription Audit, 2012

REVIVE!

Opioid Overdose Prevention for the Commonwealth of Virginia
Opioid Overdose Deaths in the US

Opioid overdose deaths, sales, and treatment admissions rise in parallel
US, 1999-2010

National Vital Statistics System, DEA’s Automation of Reports and Consolidated Orders System, SAMHSA’s TEDS

REVIVE!
Opioid Overdose Prevention for the Commonwealth of Virginia
Opioid Overdose Deaths in the US

Heroin abuse and dependence is also increasing

SAMHSA NSDUH 2012.

REVIVE!
Opioid Overdose Prevention for the Commonwealth of Virginia
Opioid Overdose Deaths in the US

Opioid Overdose Deaths in the US

Overdose deaths are the tip of the iceberg

For every 1 prescription opioid overdose death in 2010 there were...

- 15 abuse treatment admissions
- 26 emergency department visits
- 115 who abuse/are dependent
- 733 nonmedical users

$4,350,000 in healthcare-related costs

SAMHSA NSDUH, DAWN, TEDS data sets.
Opioid Overdose Deaths in Virginia

- In 2012, 354 people in Virginia died as the result of misuse of fentanyl, methadone, hydrocodone, and/or oxycodone (FMHO).
- In 2011, for the first time ever, drug-related deaths happened at a higher per capita rate than motor vehicle crashes in Virginia (9.6 DRD, 9.4 MVC).
- There has been an increase of over 250% in deaths resulting from the misuse of FMHO between 1999 and 2011.
- Prescription drug-related deaths have dropped, but narcotic-related deaths have increased dramatically.
Opioid Overdose Deaths in Virginia

Total Drug/Poison Deaths by Year, 1999-2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>384</td>
</tr>
<tr>
<td>2000</td>
<td>424</td>
</tr>
<tr>
<td>2001</td>
<td>507</td>
</tr>
<tr>
<td>2002</td>
<td>549</td>
</tr>
<tr>
<td>2003</td>
<td>595</td>
</tr>
<tr>
<td>2004</td>
<td>498</td>
</tr>
<tr>
<td>2005</td>
<td>545</td>
</tr>
<tr>
<td>2006</td>
<td>669</td>
</tr>
<tr>
<td>2007</td>
<td>717</td>
</tr>
<tr>
<td>2008</td>
<td>735</td>
</tr>
<tr>
<td>2009</td>
<td>713</td>
</tr>
<tr>
<td>2010</td>
<td>692</td>
</tr>
<tr>
<td>2011</td>
<td>818</td>
</tr>
<tr>
<td>2012</td>
<td>805</td>
</tr>
</tbody>
</table>
Opioid Overdose Deaths in Virginia

Deaths by Cause, 2007-12

- 2007: 388
- 2008: 450
- 2009: 433
- 2010: 479
- 2011: 505
- 2012: 433

Categories:
- Prescription
- Ethanol
- Ethylene Glycol
- OTC
- Inhalant
- Mixed
- Illegal
- Others
- NOS
Opioid Overdose Deaths in Virginia

Classes of all Drugs Present in Drug Deaths, 2006-12

- Cannabinoids
- Medical
- Anti-Convulsant
- Anti-Psychotic
- Other
- Muscle Relaxant
- Anaglesic
- Sedative/Hypnotic
- Stimulant
- Anti-Histamine
- Alcohol
- Anti-Depressant
- Anti-Anxiety
- Narcotic
## Opioid Overdose Deaths in Virginia

### Drugs Detected in deaths in Virginia, 2012

<table>
<thead>
<tr>
<th>Narcotic</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6-Acetylmorphine (Heroin Metabolite)</td>
<td>163</td>
</tr>
<tr>
<td>Codeine</td>
<td>64</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>52</td>
</tr>
<tr>
<td>Hydrocodone</td>
<td>98</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>30</td>
</tr>
<tr>
<td>Methadone</td>
<td>115</td>
</tr>
<tr>
<td>Morphine</td>
<td>214</td>
</tr>
<tr>
<td>Norpropoxyphene (Propoxyphene Metabolite)</td>
<td>1</td>
</tr>
<tr>
<td>Opiates (unspecified)</td>
<td>9</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>197</td>
</tr>
<tr>
<td>Oxymorphone</td>
<td>73</td>
</tr>
<tr>
<td>Propoxyphene</td>
<td>1</td>
</tr>
</tbody>
</table>

**Percentage of Cases**

- 6-Acetylmorphine (Heroin Metabolite): 5.5%
- Codeine: 2.2%
- Fentanyl: 1.8%
- Hydrocodone: 3.3%
- Hydromorphone: 1.0%
- Methadone: 3.9%
- Morphine: 7.2%
- Norpropoxyphene (Propoxyphene Metabolite): 0.0%
- Opiates (unspecified): 0.3%
- Oxycodone: 6.7%
- Oxymorphone: 2.5%
- Propoxyphene: 0.0%
Opioid Overdose Deaths in Virginia

FMHO Combination Deaths, 2006-12

- Oxycodone/Fentanyl/Hydrocodone
- Oxycodone/Methadone/Hydrocodone
- Oxycodone/Methadone/Fentanyl
- Fentanyl/Hydrocodone
- Methadone/Hydrocodone
- Methadone/Fentanyl
- Oxycodone/Hydrocodone
- Oxycodone/Fentanyl
- Oxycodone/Methadone
- Hydrocodone
- Fentanyl
- Methadone
- Oxycodone
Opioid Overdose Deaths in Virginia

FHMO Deaths by Gender, 2009-12

FHMO Deaths by Health District, 2006-12

REVIVE!
Opioid Overdose Prevention for the Commonwealth of Virginia
What happens when someone uses an opioid?
What happens in an opioid overdose?

- Opioids, in excessive quantities, can inhibit the central nervous system, which controls our ability to breath and keep the heart beating.
- Opioids bind to receptors in the brain, inhibiting communication between neurotransmitters.
- When this communication is interrupted, the central nervous system stops effectively controlling breathing and heart rate.
- Overdose episodes are rarely instantaneous, onset can take 1-3 hours as CNS slowly stops maintaining breathing and heart rate.
What is naloxone?

- Naloxone (Narcan®) is a non-scheduled prescription medication that acts as an opioid agonist.
- Naloxone has a higher affinity for the mu receptors in the brain than opioid, thus kicking off the opioid and binding to the receptor.
- Once this has occurred, the individual experiences immediate resuscitation and may experience immediate withdrawal.
How does naloxone work?

What is an opioid overdose?
The brain has many, many receptors for opioids. An overdose occurs when too much of any opioid, like heroin or OxyContin, fits in too many receptors slowing and then stopping the breathing.

Narcan reversing an overdose
Narcan has a stronger affinity to the opioid receptors than opioids like heroin or Percocet, so it knocks the opioids off the receptors for a short time. This allows the person to breathe again and reverses the overdose.
Is naloxone safe?

- Naloxone is a non-scheduled drug, meaning it has no potential for abuse.
- Naloxone has no affect on a person unless they are experiencing an opioid overdose.
- Accidental administration poses no threat or danger.
- According to the Centers for Disease Control and Prevention, more than 50,000 people in the US have been trained to administer naloxone.
- More than 10,000 opioid overdoses have been reversed with naloxone since 1996.
Naloxone usage in other states

- Nineteen states and the District of Columbia have laws enacted allowing for the distribution and administration of naloxone.
- Some states provide for an open, standing order for the prescribing of naloxone.
- Some states offer criminal amnesty for a person calling 911 to seek assistance for an opioid overdose.
What is REVIVE!?

In response to the severe impact of opioid use and overdose in Virginia, concerned citizens approached Delegate John O’Bannon, R-73, to patron a bill allowing for Good Samaritan protection for the use of naloxone.

Delegate O’Bannon is a neurologist representing portions of Henrico county.
What is REVIVE!?

- House Bill 1672 of the 2013 General Assembly changed the Code of Virginia to:
  - Provide Good Samaritan protection for doctors prescribing naloxone for third party use
  - Provide Good Samaritan protection for individuals administering naloxone to an individual experiencing an opioid overdose
- HB 1672 named DBHDS as the lead agency to conduct pilot programs on the administration of naloxone and report back results to the General Assembly in December 2014
What is REVIVE!? 

2013 SESSION 

VIRGINIA ACTS OF ASSEMBLY — CHAPTER 

An Act to amend and reenact §§ 8.01-225 and 54.1-3408 of the Code of Virginia, relating to naloxone; administration in cases of opiate overdose. 

Approved 

Be it enacted by the General Assembly of Virginia: 

1. That §§ 8.01-225 and 54.1-3408 of the Code of Virginia are amended and reenacted as follows: 

§ 8.01-225. Persons rendering emergency care, obstetrical services exempt from liability. 

11. In good faith and without compensation, administers naloxone in an emergency to an individual who is experiencing or is about to experience a life-threatening opiate overdose shall not be liable for any civil damages for ordinary negligence in acts or omissions resulting from the rendering of such treatment if such administering person is a participant in a pilot program conducted by the Department of Behavioral Health and Developmental Services on the administration of naloxone for the purpose of counteracting the effects of opiate overdose. 

X. Notwithstanding the provisions of § 54.1-3303 and only for the purpose of participation in pilot programs conducted by the Department of Behavioral Health and Developmental Services, a person may obtain a prescription for a family member or a friend and may possess and administer naloxone for the purpose of counteracting the effects of opiate overdose. 

2. That the Department of Behavioral Health and Developmental Services, in cooperation with the Department of Health, the Department of Health Professions, law-enforcement agencies, substance abuse recovery support organizations, and other stakeholders, shall conduct pilot programs on the administration of naloxone to counteract the effects of opiate overdose. The Department of Behavioral Health and Developmental Services shall evaluate, implement, and report results of such pilot programs to the General Assembly by December 1, 2014. 

REVIVE! 

Opioid Overdose Prevention for the Commonwealth of Virginia
Naloxone in Virginia

- Virginia’s laws provide for third-party prescribing, e.g. a doctor prescribing naloxone to someone other than the person who will receive it
- Virginia’s laws provide Good Samaritan protection for the doctor writing the prescription and the person administering the naloxone
- Virginia’s laws DO NOT provide criminal amnesty protection for individuals calling 911
Naloxone in Virginia

• Jurisdictions included in pilot programs:
  o Richmond Metro – City of Richmond, counties of Chesterfield, Henrico and Charles City
  o Southwest Virginia – Cities of Bristol and Norton, counties of Buchanan, Dickinson, Lee, Russell, Scott, Tazewell, Washington and Wise
Implementation of REVIVE!

- General Assembly appropriated $10,000 for program implementation
- DBHDS convened an interagency workgroup with staff from the Departments of Health and Health Professions to discuss obstacles, challenges, and opportunities for implementing pilot programs
- DBHDS held stakeholder meetings with community members in both pilot areas to discuss issues specific to their communities to collaboratively determine the best way to implement REVIVE!
Implementation of **REVIVE!**

- After numerous conversations, it was determined that intranasal administration of naloxone would be the most efficient, effective method for Virginia:
  - Safer to carry and store in any location (no needles)
  - Similar effectiveness to intramuscular administration
  - No issues with needles and drug paraphernalia laws
REVIVE! Training

- While not mandated in legislation, DBHDS determined that a vital part of implementation for REVIVE! would be training individuals in understand opioid overdoses, how they work, how to identify them, understanding who may be at higher risk, and what to do in an opioid overdose emergency

- A curriculum was prepared specifically for use in Virginia
Understanding and Identifying an Opioid Overdose

- Lay rescuers are trained on how to differentiate between someone who is high and someone who has overdosed:

<table>
<thead>
<tr>
<th>Really High</th>
<th>Overdosed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muscles relaxed</td>
<td>Pale, clammy skin</td>
</tr>
<tr>
<td>Speech is slow/slurred</td>
<td>Breathing is infrequent or has stopped</td>
</tr>
<tr>
<td>Sleepy-looking</td>
<td>Deep snoring or gurgling (death rattle)</td>
</tr>
<tr>
<td>Responsive to stimuli such as yelling or sternal rub</td>
<td>Unresponsive to stimuli</td>
</tr>
<tr>
<td>Normal heart rate/pulse</td>
<td>Slow or no heart rate/pulse</td>
</tr>
<tr>
<td>Normal skin tone</td>
<td>Bluish lips and/or fingertips</td>
</tr>
</tbody>
</table>
Risk factors for an Opioid Overdose

- Certain individuals may be at higher risk for an opioid overdose. These include those who have/are:
  - Overdosed in the past
  - Lower tolerance due to abstinence, illness, treatment or incarceration
  - Mixing drugs, e.g. using opioids with alcohol or benzodiazepines
  - Using alone
  - Unexpected reactions due to variations in potency, quantity, or formulation
  - Medical conditions such as chronic lung disease or kidney or liver problems
What **NOT TO DO**
When Responding to an Opioid Overdose

- There are many myths and urban legends about how to respond to an opioid overdose. NONE OF THESE ACTIONS ARE EFFECTIVE:

<table>
<thead>
<tr>
<th>Myth</th>
<th>Why you shouldn’t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Place person in a bath</td>
<td>They may drown</td>
</tr>
<tr>
<td>Induce vomiting or give food</td>
<td>They may choke</td>
</tr>
<tr>
<td>Place person in ice bath or put ice in their orifices</td>
<td>This will further depress their heart rate</td>
</tr>
<tr>
<td>Aggressively stimulate person by physical force</td>
<td>You may cause long-term injury</td>
</tr>
<tr>
<td>Inject saline, milk or other substances</td>
<td>You may expose the person to viral or bacterial infection</td>
</tr>
</tbody>
</table>
Responding to an Opioid Overdose

- Effective response to an opioid overdose emergency includes six steps
  1. Check for responsiveness and breathing
  2. Call 911
  3. Start rescue breathing if the person is not breathing
  4. Administer naloxone
  5. Resume rescue breathing if the person has not started breathing yet
  6. Conduct follow-up assessments and readminister naloxone if needed
Responding to an Opioid Overdose

- Step 1: Check for responsiveness and breathing
  a) Yell.
  b) Give a sternal rub. Make a fist and rake your knuckles hard up and down the front of the person’s sternum (breast bone). This is sometimes enough to wake the person up.
  c) Check for breathing. See if the person’s chest rises and falls and put your ear near the person’s face to listen and feel for breaths.
  d) If the person does not respond or is not breathing, proceed with the steps listed below.
Responding to an Opioid Overdose

• Step 2: Call 911
  a) Quiet down the scene, and speak calmly and clearly. State that someone is unconscious and indicate if the person is not breathing.
  b) You DO NOT have to mention drugs or overdose when calling 911.
  c) Give the exact address and location. If you’re outside, use an intersection or landmark.
  d) When first responders arrive, tell them it is an overdose and what drugs the person may have used.
Responding to an Opioid Overdose

- **Step 2 Addendum: Rescue position**
  If you have to leave the scene to call 911, leave the person in the rescue position:
  a) Roll the person over slightly on the person’s left side.
  b) Bend the top knee.
  c) Put the person’s top hand under the person’s head to support it.
  d) This position should keep the person from rolling onto their stomach or back, so the person does not choke if they vomit.
Step 3: Start rescue breathing if the person is not breathing

- a) Put on latex gloves from naloxone kit.
- b) Check the person’s airway for obstructions and remove any obstructions that can be seen.
- c) Tilt the person’s forehead back and lift chin (see diagram below).
- d) Place breathing mask on person’s face, covering their nose.
- e) Pinch the person’s nose and give normal breaths – not quick or overly powerful breaths.
- f) Give one breath every five seconds.
- g) Continue rescue breathing for approximately 30 seconds.

Image courtesy of the Chicago Recovery Alliance
Responding to an Opioid Overdose

**Step 4: Administer Naloxone**

a) Pull off the cap on the syringe.
b) Screw the spray device onto the syringe.
c) Pull the cap off the vial of naloxone and gently screw it into the bottom of the syringe.
d) Spray half of the vial up one nostril, and spray the other half up the other nostril (see diagram below).
Responding to an Opioid Overdose

- **Step 5: Resume rescue breathing if the person has not started breathing yet**
  - Brain damage can occur as little as three to five minutes without oxygen. The naloxone may not take effect that quickly, so you may have to breathe for the person until the naloxone takes effect.

- **Step 6: Conduct follow-up assessments and readminister naloxone if necessary**
  - Naloxone takes several minutes to kick in and wears off in 30-45 minutes, after which the person may relapse into an overdose state
  - An additional administration of naloxone may be necessary
  - Because of these issues, it is STRONGLY RECOMMENDED that you watch the person for an hour, or until first responders arrive, whichever comes first.
  - Place sticker on person’s clothing
Responding to an Opioid Overdose

- Other issues to be aware of after administration:
  - An overdose victim who is revived may be in withdrawal, which can include abrupt waking up, vomiting, diarrhea, sweating, and agitated or violent behavior. These can be dramatic and unpleasant, but they are not life-threatening. Try to keep the person calm and encourage them to seek medical attention. Depending on how long they were without oxygen, they could need emergency medical assistance.
  - Do not provide the person with food or water until they are fully alert.
  - Do not let the person use more opioids.
Kits include:

- Mucosal atomizer
- Latex-free gloves
- Rescue breathing shield
- Information card (includes naloxone and rescue position graphics)
- Return cards
- Stickers
Next Steps for REVIVE!

- Bags are being produced and filled by Mt. Rogers IDC, a sheltered workshop program in Hillsville, VA
- Delivery of bags will be taken in early and mid-June
- Training of Trainer events will be held in both pilot areas
- Pre-pilot distribution will take place at several locations in both pilot areas
- DBHDS will collaborate with Executive Committees in both pilot areas to assist in implementation
- Program may be expanded once current pilot areas become fully operational
Acknowledgments

REVIVE! has been made possible by the generous assistance of the following:

- Harm Reduction Coalition
- Multnomah County (OR) Health Dept.
- Massachusetts Department of Public Health
- San Francisco Department of Health
- University of Washington Alcohol and Drug Abuse Institute
- Chicago Recovery Alliance
- Project Lazarus
- Virginia Department of Health
- Virginia Department of Health Professions
- Virginia Office of the Chief Medical Examiner
- OneCare of Southwest Virginia
- SAARA Recovery Center of Virginia
- The McShin Foundation
- Delegate John O’Bannon
- Jana Burson, M.D.
Thank you for your interest in this important project!

Your questions are welcome.

Contact information:
Jason Lowe, MSW
jason.lowe@dbhds.virginia.gov
804-786-0464