Nevada Rural Opioid Overdose Reversal (NROOR) Program Overview and Update

Chris Marchand, M.P.H.
NROOR Program Director/Project ECHO Coordinator
University of Nevada School of Medicine
cmarchand@medicine.nevada.edu

5th Annual Rural Preparedness Summit
June 22, 2016
NROOR PROGRAM OVERVIEW

- HRSA Funding Opportunity Number: HRSA-15-146
- Very Competitive – Only 13 States Funded – 18 Total Programs
- Funding Period: August 31st, 2015 to August 31st, 2016
- Program Goal: To reduce the morbidity and mortality of opioid overdoses in Nevada through improved access to naloxone.

- Statewide Partnership:
  - Lead Applicant: Desert View Hospital, Pahrump Nevada
  - NROOR Program Leadership: University of Nevada School of Medicine
  - NROOR Program Evaluation: School of Community Health Sciences, UNR
  - EMS Naloxone Training: Nevada State EMS, Nevada Department of Health and Human Services
  - Fiscal Management Services: Nevada Rural Hospital Partners
NROOR PROGRAM COMPONENTS

• Statewide Training for EMS Personnel on the Administration of Naloxone
• Provide Initial Stock of Naloxone to Select EMS Basic Services
• Deliver Prescriber Training via Project ECHO-Nevada Platform
• Provide Nasal Narcan Supply to Participating Rural Hospitals

• NROOR Program Components Integrated with SB459:
  • Two hours of mandatory CME on the misuse and abuse of prescription drugs.
  • Train EMTs (formerly EMT Basic) on the administration of naloxone based on new legislative authorization.
  • Utilize new legislation that authorizes pharmacists to furnish naloxone without a prescription.
NROOR PROGRESS REPORT

- Nevada State EMS:
  - Train statewide EMS personnel on administration of naloxone: COMPLETE
  - Administer Pre/Post surveys to naloxone-trained EMTs: Complete
  - Order pre-filled naloxone syringes to stock select EMS formularies: COMPLETE
  - Order Nasal Narcan for NROOR Program participating hospitals: COMPLETE

- NROOR Program Activities:
  - Administer prescriber training via Project ECHO: PENDING
  - Develop and order educational materials to accompany Nasal Narcan kits: PENDING

- Evaluation Activities:
  - Develop Pre/Post survey for EMT training: COMPLETE
  - Analyze survey results: COMPLETE
  - Identify State EMS and health outcome data points to measure program impact: COMPLETE
  - Collect program impact data for evaluation: PENDING
  - Perform analysis of program impact data: PENDING
State of the science and best practices around expanded naloxone access to prevent opioid overdose death

Karla D. Wagner, Ph.D.
School of community health sciences
university of Nevada, Reno
karlawagner@unr.edu

5th Annual Rural Preparedness Summit
June 22, 2016
Learning Objectives

By the end of this presentation, attendees will be able to:

- describe national and local trends in opioid overdose death
- identify factors that elevate patients’ risk for opioid overdose
- understand how overdose education and expanded naloxone access can impact health outcomes
Definitions and disclaimers

- **Naloxone**, not suboxone or naltrexone
  - Opioid antagonist used to treat opioid overdose
  - Safe, effective, routine clinical use since 1970s

- **Unintentional overdose**, not suicide

- **Opioid overdose**, not other drugs

- *I am a public health scientist with 10 years of experience doing research in this area, not a lawyer or a clinician*
Trends in overdose death rates

- “More persons died from drug overdoses in the United States in 2014 than during any previous year on record”

- 1.5x more drug overdose deaths than motor vehicle crash deaths

- Driven by natural and semi-synthetic opioids
  - 9% increase in 2014

- Heroin deaths tripled 2010-2014

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6450a3.htm
FIGURE 2. Drug overdose deaths* involving opioids,†,§ by type of opioid.†

- Drug overdose deaths involving opioids
- Natural and semisynthetic opioids
- Synthetic opioids excluding methadone
- Methadone
- Heroin

**Source:** National Vital Statistics System, Mortality file.
2013 National Vital Statistics data place Nevada in the highest quartile of overdose death rates in the US.

FIGURE 2. Number* and location of local drug overdose prevention programs providing naloxone to laypersons, as of June 2014, and age-adjusted rates† of drug overdose deaths§ in 2013 — United States

* Total N = 644; numbers on map indicate the total number of programs within each state.
† Per 100,000 population.
§ CDC, National Center for Health Statistics; Compressed Mortality File 1999–2013 on CDC WONDER Online Database, released January 2015.
Drug Related Unintentional and Undetermined Intent Deaths Among Nevada Residents, 1999 - 2013

Data were obtained from the CDC Wonder database. http://wonder.cdc.gov/cmft-icd10.html Query was selected for all races, genders, ethnicities, and ages and included ICD-10 codes: X40-44 & Y10-14

6/22/16
State EMS naloxone administration, 2014
Rate per 100,000

Opioid overdose prevention requires a comprehensive response

- Opioid use for clinical or non-clinical purposes
- Opioid abuse
- Unintentional Overdose
- Overdose prevention education and naloxone prescription
- Death

Overdose prevention Education
What are the models for expanded naloxone access?

- **Community based programs**
  - Long history (1996)
  - Existing models and best practices

- **Clinical settings**
  - ED discharge
  - Primary care
  - Specialty clinics

- **Criminal justice settings**
  - Education and naloxone upon release

- **First responders**
  - EMTs, law enforcement, etc.
Community based programs

- First US program: 1996 in Chicago, IL
- As of June 2014:
  - 644 OEND sites providing naloxone kits to laypeople
  - 152,283 laypersons received naloxone kits
  - 26,463 overdose reversals reported

FIGURE 2. Number* and location of local drug overdose prevention programs providing naloxone to laypersons, as of June 2014, and age-adjusted rates† of drug overdose deaths§ in 2013 — United States

* Total N = 644; numbers on map indicate the total number of programs within each state.
† Per 100,000 population.
§ CDC, National Center for Health Statistics; Compressed Mortality File 1999–2013 on CDC WONDER Online Database, released January 2015.

Source: CDC MMWR (2015) 64(23)
Effects of Community Based Programs

- Wilkes County, North Carolina (2009-2010) – Opioid overdose death rate dropped from 46.6 per 100K in 2009 to 14.4 per 100K in 2011 after implementation of a comprehensive overdose prevention program including naloxone distribution (Albert et al. 2011, Haegerich et al. 2014)


- California (1999-2010) – Rate of increase in overdose death rates significantly reduced in counties that distribute naloxone (Davidson & Wagner Under Review)
Fundamentals of Overdose Education and Naloxone Distribution

1. Identify patients at risk
2. Educate
3. Prescribe or Dispense
1. Identify

- Known or suspected history of substance abuse, dependence, or non-medical use of opioids
- Taking chronic high doses of prescription opioids, particularly for long-term management of chronic pain
- Receiving rotating opioid medication regimens (and thus at risk for incomplete cross-tolerance)
- Discharged from ER following overdose
- Completing mandatory opioid detox or abstinence program
- Recently released from incarceration and history of opioid use
- Friend, family member, or contact of someone who is at risk

Risky situations and risky medications/drugs

NOT risky people
2. Educate

A. Risk Factors/Prevention:
   – Change in dose/tolerance
   – Polypharmacy (including other opioids, CNS depressants, benzodiazepines)
   – Alcohol use
   – Using alone

B. Recognize:
   – Blue/not breathing, difficulty responding

C. Respond:
   – Sternum rub
   – 911
   – Naloxone + rescue breathing/CPR
### 3. Prescribe or dispense naloxone

<table>
<thead>
<tr>
<th></th>
<th>Intransal w/ MAD</th>
<th>Intranasal “branded” NARCAN</th>
<th>Injectable generic</th>
<th>Auto injector “Evzio”</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDA approved</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Strength</td>
<td>2mg/2ml</td>
<td>4mg/0.1ml</td>
<td>0.4mg/ml</td>
<td>0.4mg/0.4ml</td>
</tr>
<tr>
<td>Cost</td>
<td>$$</td>
<td>$$</td>
<td>$</td>
<td>$$$</td>
</tr>
</tbody>
</table>


6/22/16
3. Prescribe or dispense naloxone

<table>
<thead>
<tr>
<th></th>
<th>Intranasal + MAD</th>
<th>Intranasal “branded” NARCAN</th>
<th>Injectable generic</th>
<th>Auto injector “Evzio”</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDA approved</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Strength</td>
<td>2mg/2ml</td>
<td>4mg/0.1ml</td>
<td>0.4mg/ml</td>
<td>0.4mg/0.4ml</td>
</tr>
<tr>
<td>Cost</td>
<td>$$</td>
<td>$$</td>
<td>$</td>
<td>$$ $$</td>
</tr>
</tbody>
</table>

6/22/16

Clinical Settings

- Referral of overdose patients from ED to case manager for education/naloxone (e.g., Rhode Island)

- Integration into primary care, bill for education under Screening, Brief Intervention, Referral to Treatment (SBIRT) codes (e.g., San Francisco)

- Group education sessions in Co-Occurring Disorder clinic (e.g., San Diego)

- Integration into substance abuse treatment services (e.g., Veteran’s Affairs, Massachusetts)

- Integration into HIV/STI clinic services (e.g., San Francisco, New York, Pittsburgh, North Carolina)

- Education and naloxone for individuals being discharged from drug treatment
Criminal justice settings

- Opioid users are at elevated risk for overdose death in the period immediately following release from incarceration
  - Odds are elevated 7x to 13x

- In research among 137 long-term opiate users involved in the Rhode Island criminal justice system
  - 53% had overdosed at least once (mean = 4 times)
  - 64% had been released from an institutional setting (incl. prison) within 1 month preceding overdose

Criminal Justice Settings

In research with 573 people who inject drugs in San Diego

- 41.5% ever experienced a heroin/opioid overdose - 45 (8%) in past 6 months

- Being arrested for drug possession was associated with increased odds of overdose (AdjOR 5.17, 95% CI 2.37-11,24, p<0.001)

Criminal Justice Settings

- People at risk for overdose are coming into contact with clinical and criminal justice systems

- We could use these venues to deliver OEND services before people die from an overdose
  - Since 2009, Scotland has been distributing naloxone to prisoners upon release
  - In 2011, this became Scottish national policy
  - Post-release program in Rhode Island since 2013

Green, T.C. et al. (2013). Patient Simulation for Assessment and Reinforcement of Layperson Management of Opioid Overdose with Intranasal Naloxone in a Recently Released Prison Inmate Cohort (Submission #66). *Simulation in Healthcare, 8*(6), 538.
Law Enforcement Officers

- As of January 2016, over 669 law enforcement agencies in 31 states were carrying naloxone

- Rationale:
  - In some communities, LEOs arrive on scene before EMS
  - LEOs can be partners in public health efforts (Beletsky et al., 2011; Beletsky et al., 2008; Silverman et al., 2012), and this might have beneficial effect on community relations
Law Enforcement Naloxone Program
Pilot Results

- 81 Deputy Sheriffs trained in 1 week in 2014
- Command station selected based on most frequently reporting arriving on scene before paramedics
- State law is similar to NV’s SB459
- 30 minute training with slides and hands-on practice during regular shift briefings
- Content included:
  - Overdose recognition
  - Response techniques
  - Department protocols

Deputies administered naloxone 11 times in first 4 months

- 9/11 victims survived
- 3/9 attended at least one visit to substance abuse treatment center as result of Deputy referral
Mum [of the victim] was surprised at first but when I got talking to her she was very thankful and very pleased that we were there and saved her son’s life – she said “thank you for saving his life”, that’s what she said to me.

In a lot of cases where we’re first at a scene and are providing first aid we never find out what happens to the person after EMS or FD [the fire department] cart them away….Did they die or survive? Did I save that guy’s life or not? Whereas with naloxone you get to see the result immediately, and you know what happened to that person.
EMTs

▪ NROOR funded in 2014
  – Purchase naloxone and train EMTs and BLS providers in 5 communities (Esmeralda, Eureka, Lincoln, Lyon, Mineral, Nye, White Pine)
  – Purchase naloxone for distribution to overdose victims upon hospital discharge
Information for prescribers, pharmacists, treatment providers, etc.

- CEUs
- Education materials
- Implementation toolkits
- Naloxone prescribing and dispensing instructions

www.prescribetoprevent.org
SAMHSA Toolkit on Opioid Overdose Prevention

Includes information for prescribers on:

– Legal and liability concerns
– Claims coding and billing
– Additional resources

http://store.samhsa.gov/product/SMA13-4742
https://www.bjatraining.org/tools/naloxone/Naloxone-Background
Conclusion

- Expanded access to naloxone has the potential to save lives
- **Multiple models exist:**
  - Community based programs
  - Clinical practice
  - Criminal justice settings
  - Uniformed first responders
- A comprehensive approach should integrate these models with other evidence-based prevention methods and tailor for local capacity and need
Resources

News + research on overdose prevention:
- Overdosepreventionalliance.org

Opioid overdose prevention education:
- Prescribetoprevent.org
- Stopoverdose.org
- getnaloxonenow.org

Law enforcement-based naloxone programs:

Overview of legal reform
- https://www.networkforphl.org/resource_collection/2015/05/15/396/resource_legal_interventions_to_reduce_overdose_mortality

Implementation toolkits:
- store.samhsa.gov/product/Opioid-Overdose-Prevention-Toolkit/SMA13-4742

CEU’s:
- web.uri.edu/pharmacy/2014/02/14/opioidsaddiction
- www.opioidprescribing.com/naloxone_module_1-landing
Karla D. Wagner, Ph.D.
Assistant Professor
School of Community Health Sciences
University of Nevada, Reno
karlawagner@unr.edu