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# Naloxone Administration: An Educational Video

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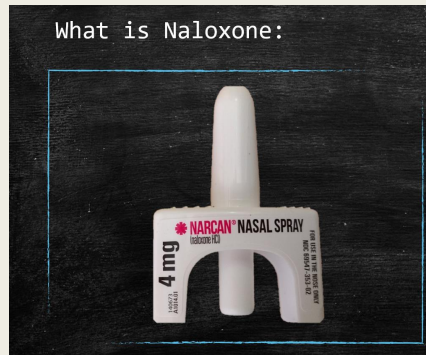
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# NALOXONE ADMINISTRATION: AN EDUCATIONAL VIDEO



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Family Medicine Clerkship: May 14-June 14, 2018

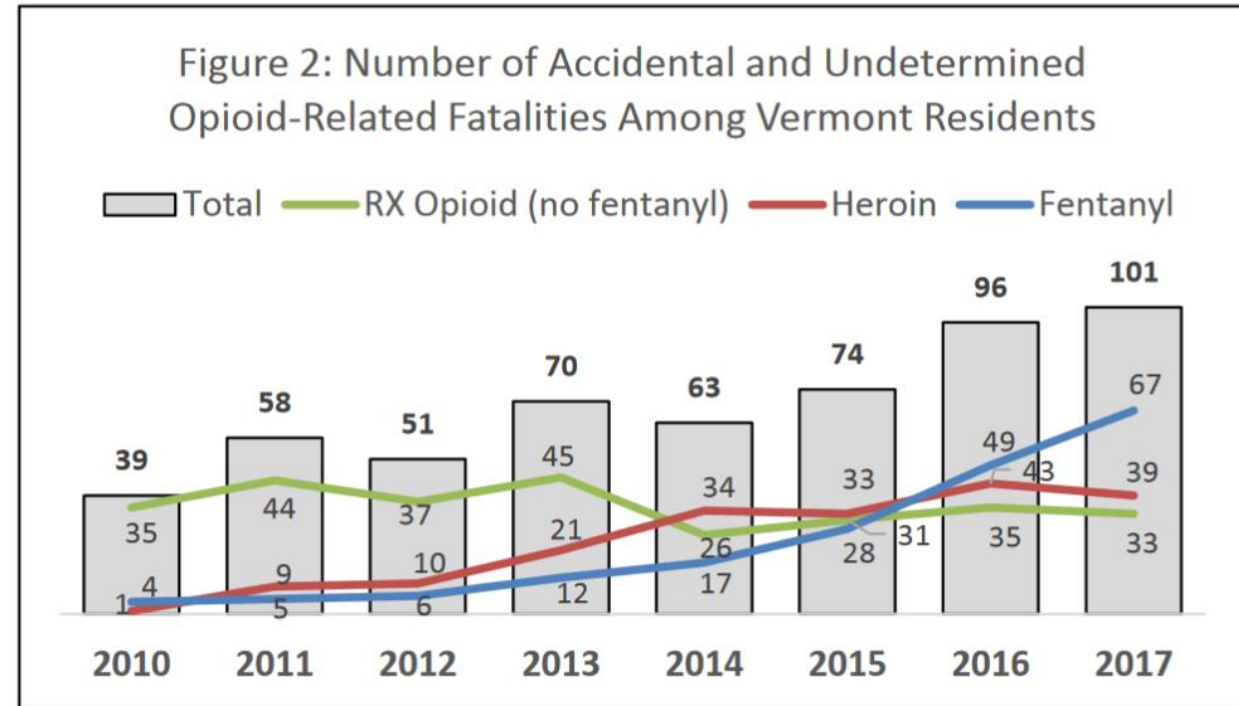
Mad River Valley Health Center

Project Mentor: Theresa Vezina

# Problem Identification

- Nationally, 5 people die every hour from opioid overdose. <sup>1</sup>
- In 2017, 101 Vermonters died from opioid overdose\* (16.2 fatalities per 100,000 residents). This rate increased 5% from the previous year, and has more than doubled since 2010. <sup>2</sup>
- 12 of these deaths occurred in Washington County. <sup>2</sup>
- Preliminary data indicate 3 people died from opioid-related causes in Washington County in the first two months of 2018. <sup>2</sup>

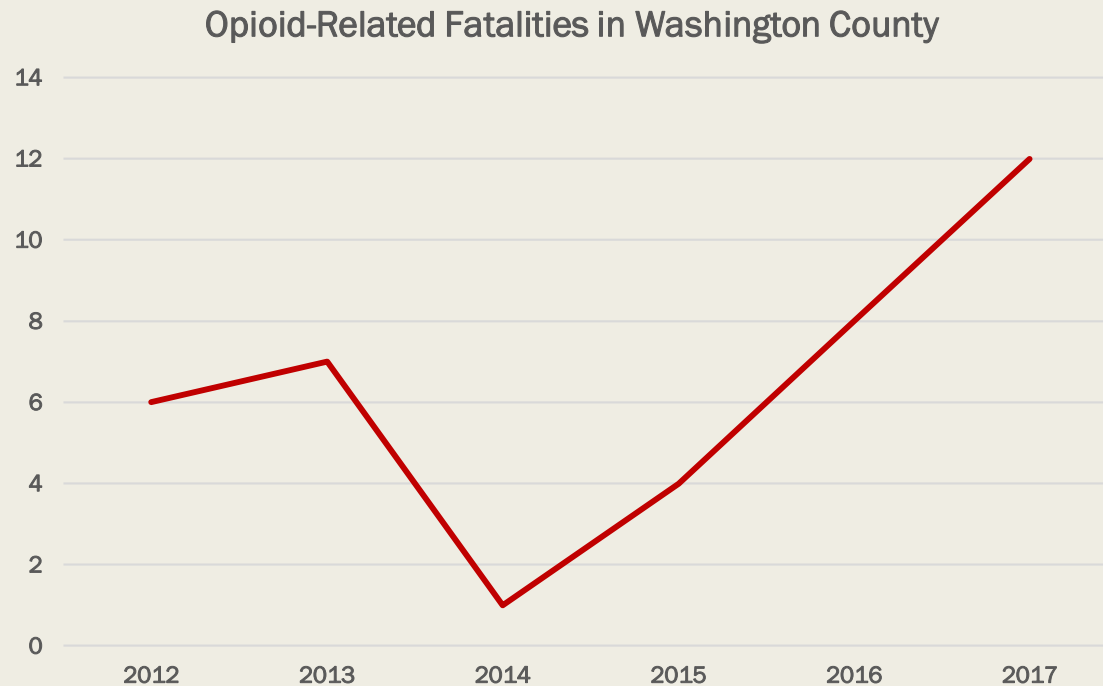
*\*Defined as accidental or undetermined opioid-related fatality (excludes suicides).*



From the Vermont Department of Health: *Opioid-Related Fatalities Among Vermonters.*

1. Centers for Disease Control (2018). *Opioid Basics: Understanding the epidemic.*
2. Vermont Department of Health. (2018). *Opioid-Related Fatalities Among Vermonters.*

# Description of need



Data from the Vermont Department of Health: *Opioid-Related Fatalities Among Vermonters*.

- The Central Vermont Medical Center Community Health Needs Assessment for 2016 identified addressing drug abuse as a priority health need. <sup>3</sup>
- There were 1,361 EMS responses for potential overdose in Vermont in 2015. <sup>4</sup>
- Naloxone is an effective, low risk, and easy to use reversal agent for opioid overdose. 95% of Vermonters who reported using naloxone for a potential overdose said that it reversed the overdose. <sup>5</sup>
- According to a recent survey of syringe exchange clients in Vermont, 68% were interested in potentially receiving more training on overdose reversal. <sup>6</sup>

3. Central Vermont Medical Center. (2016). *Community Health Needs Assessment*.

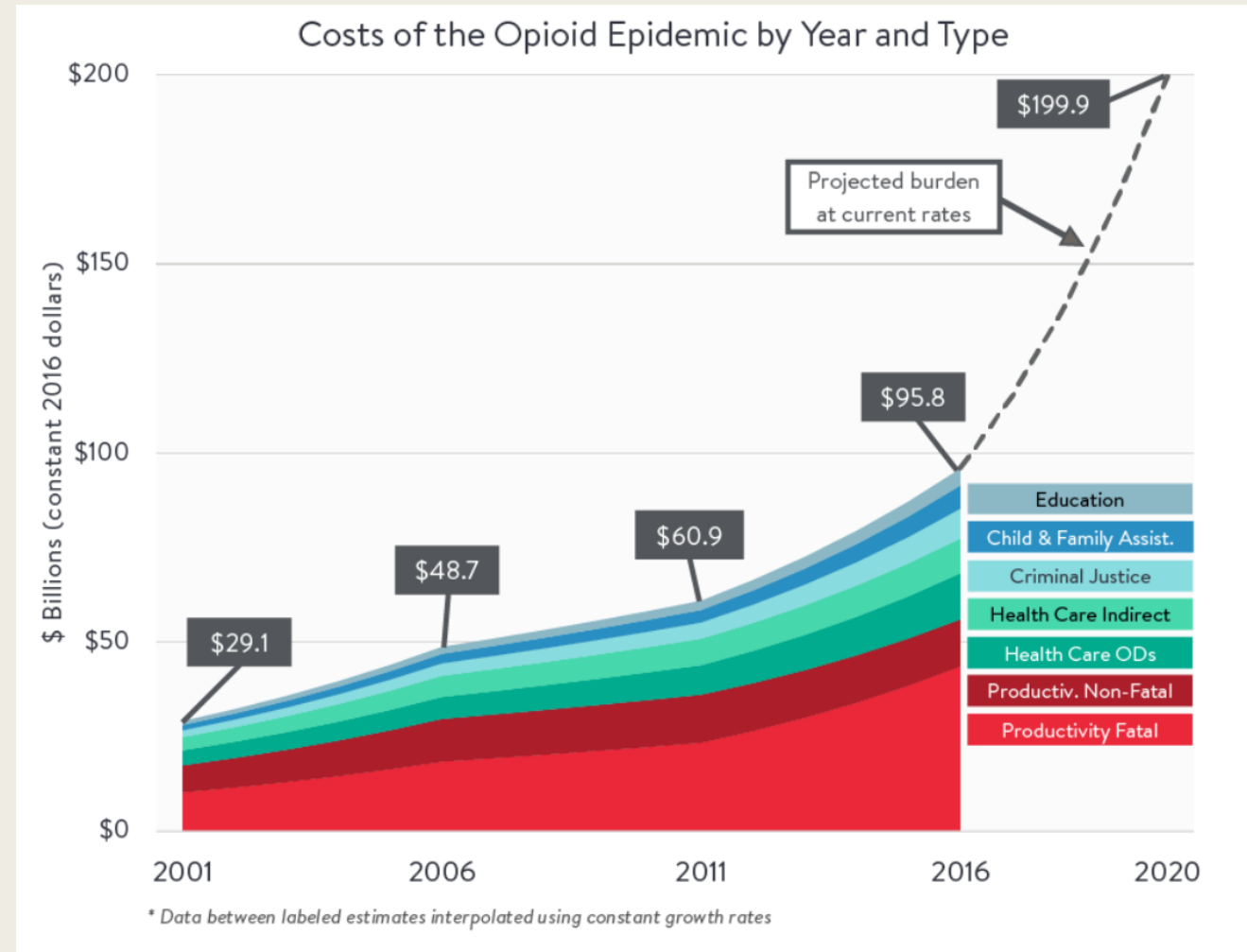
4. VanDonsel, et al. (2016). *Opioids in Vermont: Prevalence, Risk, and Impact*.

5. Vermont Department of Health. (2018). *Naloxone Distribution and Administration in Vermont- Data Brief*.

6. Bakhtyari, et al. (2018). *Barriers Encountered by Syringe Exchange Clients in VT*.

# Public health cost

- The opioid epidemic has cost the U.S. over a trillion dollars since 2001, with the majority of that cost coming from lost earnings and productivity due to overdose deaths. <sup>7</sup>
- The average cost to treat overdose patients admitted to hospital intensive care units is \$92,408. <sup>8</sup>
- Naloxone distribution through syringe exchange services has been shown to provide good overall value for money invested. <sup>9</sup>



From Altarum: *Economic Toll of Opioid Crisis in U.S. Exceeded \$1 Trillion*

7. Altarum. (2018). *Economic Toll of Opioid Crisis in U.S. Exceeded \$1 Trillion Since 2001*.

8. Stevens, J., et.al. (2017). *Critical care crisis among opioid overdoses*.

9. Uyei, J., et al. *Effects of naloxone distribution.....a cost-effectiveness modelling study*.

# Unique cost considerations in host community

- The Vermont Department of Health provides naloxone kits to local organizations free of cost for distribution to at-risk Vermonters.
  - *The cost of a two-dose kit for the Department of Health is \$75 \**
- In 2017 Vermont CARES distributed 240 naloxone kits and provided 15-30 minutes of individual client education for each kit given out. <sup>\*</sup>
  - *This amounts to a total of 60-120 hours of staff time spent on naloxone training.*
- Clients reported 40-55 overdose reversals attributed to the use of those kits. <sup>\*</sup>
- The cost per life saved is \$325- \$450



Moseley Covered Bridge in Northfield.  
*Image by Jerrye & Roy Klotz, courtesy of Wikimedia commons.*

\* P. Jacobsen, personal communication, June 5<sup>th</sup>, 2018)

# Community Perspective on Issue and Support for Project

Vermont CARES is the largest and longest standing AIDS Service Organization in the state of Vermont. Available client services include substance abuse support, such as clean needles & safe injection supplies, mobile exchanges, free syringe disposal, overdose prevention education, overdose reversal kits (naloxone), and treatment option counseling<sup>10</sup>

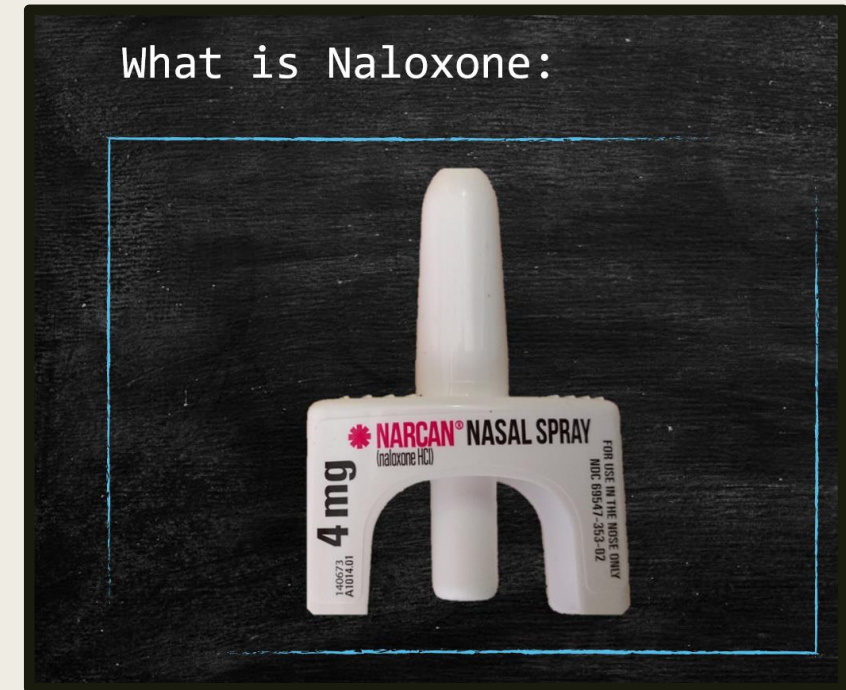


- Regarding the education currently provided to clients when they receive a naloxone kit, Peter Jacobsen (executive director) explained that Vermont CARES staff provide a “thorough and thoughtful training including the steps in how to identify an overdose, what to do, how to administer the naloxone itself, and how to follow up with paramedics to ensure follow up care.”
- Theresa Vezina (assistant director) shared that, in addition to the in-person training “...the Department of Health kit has an information handout with it, but few clients read it. What we’d really like to incorporate next is a video on how to use naloxone that could be distributed, put on people’s phones, and shown to friends”.
- Having a short video available would also give the option of pulling it up on a tablet and showing it to small groups of people, allowing questions and answers to be generated in a group environment, according to Mr. Jacobsen.

10. Vermont Cares. (2018). *Vermont Cares Story*.

# Intervention and Methodology

- Syringe exchange clients were selected as the target for intervention as drug related fatalities involving heroin have increased in Vermont over the past 5 years (fatalities related to prescription opioids have been stable).<sup>11</sup>
- Vermont CARES community partners were interviewed and education surrounding naloxone was identified as a need in the local community.
- Specifically, a brief four to five minute video presentation was identified as a need to supplement existing education; currently education is provided in a 1:1 format and take-home materials are print only.
- Existing training guidelines used by Vermont CARES for naloxone education were reviewed and the content which needed to be covered was noted.
- Educational videos on naloxone use currently available online were found and viewed to determine if anything already in existence met this need.





# Intervention and Methodology

## What to do next

Breathing: Recovery position



Not breathing: CPR



## Making sure your kit works when you need it

Store at room temperature.



- Primary goals for the video:
  - *Easy to understand (grade 4-5 reading level per national recommendations for patient educational material)*
  - *Comprehensive; should cover all educational content in existing training*
  - *Engaging*
  - *Format that would be easily accessible on phones*
- A draft of the video presentation and script was prepared and subsequently reviewed by the community partner for content, format, and any potentially biased language
- The video presentation was created using VideoPad Video Editor®. Audio was recorded and edited in Audacity® 2.2.2. Final product was saved in mp4 file format.

# Results/Response



The final product was a four minute video covering the information provided in the existing Vermont CARES training on naloxone.

- Vermont CARES will use the video as part of its naloxone training for clients.
- Theresa Vezina : “I can’t tell you how much I absolutely love this video, and how helpful it is going to be for our clients and our staff!”

# Evaluation of effectiveness

**Goal:** Video presentation is easy to understand.

**Evaluation:** Appropriate reading of level for script\* confirmed via online Lexile analysis

*\*drug names were removed from script for analysis*

**Additional Proposed Evaluation:**

Assess client response to the following before and after viewing the video presentation:

*Are you comfortable identifying the signs of and opioid overdose and administering naloxone if needed? Yes/No*

**Goal:** Video covers all educational content in existing training.

**Evaluation:** Final product was compared to existing training material from Vermont CARES and coverage of all content was verified.

**Goal:** Video presentation is easily accessible on phones.

**Evaluation:** Presentation was accessed without difficulty on both Android and iOS phones.

# Limitations

- Direct client perspective on the issue was difficult to obtain due to the inability to guarantee anonymity for interviewees.
- Time limitations prevented a thorough assessment of client education gaps and preferences in educational materials prior to production.
- Time and budget limitations affected the production quality of the video presentation.
- Distribution through the Vermont CARES program primarily reaches individuals who use intravenous substances. Vermonters at risk of overdose from oral or prescription opioids are less likely to benefit.



# Recommendations for future interventions/projects

- Consider uploading presentation to YouTube to reach a broader audience; assess any potential liability prior to doing so.
- Vermont CARES currently provides fentanyl test kits and training in their use; another brief video could be created to provide education on this topic.
- Contacting medical personnel is an important part of caring for someone suffering from a drug overdose; clients may be hesitant to do so for various reasons. Vermont CARES has expressed interest in assessing if clients are reluctant to contact the paramedics and if so, why. A qualitative survey could be created to address this question.



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