UNDERSTANDING THE CONNECTION: SUICIDE, OPIOID OVERDOSE, AND OPIOID ABUSE

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Road Map

› Information on suicide:
  › Who is at risk?
  › What do our state-level data say?

› Information on opioid overdose and opioid abuse:
  › Who is at risk?
  › What do our state-level data say?

› Understanding the connection between opioid overdose, opioid abuse, and suicide

› Understanding the implications for prevention
The River

(McKinlay, 1979)
INFORMATION ON SUICIDE
Suicidal Behaviors

9,829,000
Serious Thoughts of Suicide, 2016, Past 12-months (Adults)

1,319,000
Suicide Attempts 2016, Past 12 months (Adults)

47,173
Deaths 2017 (Adults & Youth)

Understanding the connection: suicide and opioid abuse/overdose

(CBHSQ, 2017; CDC, 2016)
Who is at risk for suicide death? Looking at men and women.

Age Adjusted Suicide Death Rate Per 100,000 in US and KY, by Sex. 2012-2016

(CDC, 2016)
Who is at risk for suicide death? Looking at race.

Age Adjusted Suicide Death Rate Per 100,000 in US, by Race, 2016

- White
- Black
- AI/AK
- Asian/PI

(CDC, 2016)
Who is at risk for suicide death? Looking at age.

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Crude Suicide Death Rate Per 100,000 in US and KY, by Age, 2016

KY  US

Note: Unstable values in KY after age 79, rates could not be calculated. (CDC, 2016)
Who is at risk for suicide death? Looking at means.

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National (2016)

KY (2016)

(CDC, 2016)
In summary: Who is at risk for suicide death?

- Men
- Whites and American Indian/Alaskan Natives
- Middle-aged (approx. 26-54)
- Those with access to firearms
Who is at risk for suicide attempts?

- Women are 1.2 times more likely to attempt suicide than men.
- Those aged 18-25 are more likely to attempt suicide than those over the age of 26.
- Adults with a past year substance use disorder.
- Those who made an attempt were more likely to use poisoning or cutting than other methods.
Suicide in Health Care Settings

- 45% of those who died by suicide had contact with primary care providers in the month before death.

- Over 70% of older adults who died by suicide saw primary care provider within 1 month of death.

- In contrast, an estimated 33% of people who died by suicide had contact with mental health services in the month before death.

(Luoma et al., 2002)
INFORMATION ON OPIOID ABUSE AND OVERDOSE
11.8 Million People (≥12) Abused Opioids in 2016

11.5 Million Abused Prescription Opioids
(97.4% of all people who abused opioids)

948,000 Used Heroin
(8% of all people who abused opioids)

641,000 Used Heroin and Abused Prescription Opioids
(5.4% of all people who abused opioids)
Opioid Overdose – Kentucky and US

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Rate of Opioid-Related Overdose Deaths in Kentucky

Age Adjusted Death Rate Per 100,000 Persons

Source: CDC WONDER (NIH, 2018)
Who is at risk for opioid overdose? Looking at men and women.

Age Adjusted Opioid Overdose Death Rate Per 100,000 in US and KY, by Sex. 2012-2016

(Kaiser Family Foundation, 2018)
Deaths of Despair  
(Case & Deaton, 2017)

- ↑ in all-cause mortality of middle-aged white, non-Hispanic men & women (1999-2015)

- ↑ in drug overdoses, suicides, and alcoholic-related liver mortality, especially among those with a high school degree or less

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WHERE TO FIND DATA ON SUICIDE ATTEMPTS, SUICIDE DEATHS, OPIOID ABUSE, AND OPIOID OVERDOSE.
Web-Based Resources from Vital Statistics

- Web-based Injury Statistics Query and Reporting System (WISQARS), and Wide-Ranging Online Data for Epi Research (WONDER)

- National Violent Death Reporting System (NVDRS)
National Surveys

- SAMHSA’s National Survey on Drug Use and Health
- CDC’s Youth Risk Behavior Surveillance System
Real-Time Surveillance: ESSENCE

- Uses free-text categories of chief complaints and discharge diagnoses to monitor overdoses and suicides.

- Can provide a snapshot of dates and times when a particular diagnosis was statistically higher than would be expected.
Exploring the connection between Opioid Abuse, Overdose, and Suicide
Suicide by Method (2015)

Means of Suicide, United States³

- 50% Firearms
- 27% Suffocation
- 15% Poisoning
- 8% Other

Poisoning Suicides by Substance – 27 States (2015)³

- Other
- Opioids
- Antidepressants
- Benzodiazepines
- Antipsychotics

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% Adults (18+) Who Report Having Serious Thoughts of Suicide in the Past Year by Lifetime Nonmedical Prescription Drug (including Opioid) Abuse (2011-2016)\(^1\)

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(CBHSQ, 2017)
From the Research…

- Adults who receive high doses of opioids are at increased risk for suicide.

- Adults who _abuse opioids weekly or more_ are more likely to engage in suicide planning and attempts.

- Adults who _have an opioid use disorder_ are 13x more likely to die by suicide than the general population.

(Ilgen et al., 2016; Ashrafioun et al., 2017; Wilcox et al., 2004)
How does chronic pain fit in the connection between opioids and suicide?

- Chronic pain, which may or may not be treated with opioids, is associated with an increased risk of suicide.

- Some factors may increase suicide risk among chronic pain patients:
  - Pain severity
  - Perceived burdensomeness

(Shim E-Song, 2017; NSSP, 2012)
Opioids and Suicide: Three Possible Links

<table>
<thead>
<tr>
<th>Higher doses of opioids offer increased access to lethal means.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opioids have disinhibiting effects, increasing the likelihood of acting on suicidal impulses.</td>
</tr>
<tr>
<td>People who take higher opioid doses share other characteristics – like pain or depression - that explain the link with suicide.</td>
</tr>
</tbody>
</table>
Limitations to Overdose and Suicide Death Data

When classifying a death as a suicide, a coroner or ME has to determine two things:

1. Did the person know that the dose was likely to be lethal?
2. What was the person’s intent?

This intent question is one of the most challenging aspects of our opioid/suicide death data.
Determining Intent in a Drug-Related Death

Manner of Death (MOD) classification include:

- Homicide
- Natural causes (disease)
- Suicide
- Accident (unintentional)
- Deaths of undetermined intent
- Deaths of unknown causes

Where we really struggle to classify drug-related deaths

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Undercounting of Suicides

• Specific groups may be disproportionately affected by the undercounting of suicides. Suicide undercounting may be more common among:
  
  - Decedents who are Black or Hispanic
  - Younger decedents (ages 15-34)
  - Decedents with lower levels of education (high school diploma or less)
  - Decedents without a history of psychiatric co-morbidity
  - Cases where a suicide note was not present
Implications for Practice

- We are likely underestimating the number of opioid-related deaths that are actually suicides. And this matters because:
  
  - This underestimation is not random – some groups are affected more than others.
  
  - We use data for planning where we direct prevention efforts.
  
  - We use data for evaluating the outcomes of our prevention efforts.
Summary: What do we know about the link between opioid abuse, opioid overdose, and suicide?

- Degree of opioid involvement matters.

- The actual “why and how” connecting opioids and suicide is not well-understood.

- Our understanding on the connection between opioids and suicide is limited because of trouble with our death data.
Opioids and suicide: What we know about risk
Opioid Abuse: Factors that Increase Risk

- Physical health problems
  - Chronic pain
  - Headaches
- Social isolation
- Trauma/Adverse childhood experiences
- Behavioral health problems
  - Depression
  - Anxiety

(Rosenbalum et al., 2007; Tani et al., 2001; Austin et al., 2018)
Suicide: Factors that Increase Risk

• Physical health problems

• Behavioral health problems

• Social isolation

• Trauma
  o Adverse childhood experiences
  o Historical trauma
Shared Factors for Opioid Abuse and Suicidality

Intersection

Opioid Abuse

Physical Health Problems

Behavioral Health Problems

Trauma/Adverse Childhood Experiences

Social Isolation

Suicidality
Shared risk factors in target populations

Adolescents

Service Members and Veterans

Older Adults

Men in the Middle Years
Use the information to coordinate prevention efforts

Benefits to a coordinated approach to suicide and opioid abuse/overdose prevention:

- Focuses on those at highest risk
- Avoids duplication of effort
- Provides good value for prevention dollars
EXAMPLES FROM THE FIELD
Public Health Approach to Prevention

What is needed to lower the rates of opioid overdose and suicide death is a comprehensive approach to prevention with national-level buy-in.
What is a public health approach to prevention?

- Population focus
- Starts and ends with data
- Upstream and downstream prevention efforts
- Aim: reduce morbidity and mortality

The Public Health Model:
- Define the problem
- Identify risk & protective factors
- Develop & test prevention strategies
- Assure widespread adoption
Selected Injury-Related, Age-adjusted Death Rates (2000-2016)

Motor Vehicle Deaths
Suicide
Homicide
Unintentional Drug Poisoning

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Colorado National Collaborative

- A public health approach with the goal of reducing suicide by 20% by 2024, while also tackling opioid overdose and other causes of premature mortality.
- Uses a public facing data dashboard to allow county-level analysis of who is at risk for death by suicide.
- Uses an environmental scan to identify existing activities related to increasing social connectedness, increasing help-seeking, and promoting evidence based treatment.
- Looking at the gaps: Who is at risk and is being missed by current programming? How can we fill those gaps?
Another example: Mystic Valley Public Health Coalition

- Examined data to determine who is at increased risk for premature death – particularly from opioid overdoses.
- Identified and publicized existing services.
- Planned upstream prevention services to reduce suicide and opioid overdose.

42% of all opioid overdose deaths in the Mystic Valley were trades workers.

*2012-2015, includes Melrose, Medford, Malden, Revere, Stoneham and Wakefield*
How can you use this information?
What can health systems do?

- Ensure that pain specialists and primary care providers screen for suicide and opioid overdose risk, using validated screening and assessment tools.
- Facilitate safe care transitions through linking to behavioral health providers, creating a safety plan, and working to reduce access to lethal means.
- Consider non-medication strategies for pain management, including cognitive behavioral therapy and complementary or alternative approaches (yoga, acupuncture).
- Engage partners (employers, faith communities) to get help in increasing awareness of non-medication strategies for pain management.
Other active roles you can play…

- Strengthen access to & delivery of care
- Create protective environments
- Connect people within their communities

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Stone et al., 2017
Other active roles you can play…

- Teach coping and problem solving skills
- Identify and support people at risk
- Prevent future risk

Stone et al., 2017
How Can You Strengthen Community-based Prevention Efforts?

▷ Reach out to existing partners (e.g. clinics, schools, law enforcement)
▷ Engage new partners (faith leaders, universities/schools, local businesses)
▷ Utilize existing community outreach resources on the Action Alliance website (PowerPoint presentations, handouts, talking points)
▷ Help your partners develop a robust opioid response (that incorporates suicide prevention)
More Resources: What Can You Do?

1. Visit the Suicide Prevention Resource Center website: [http://www.sprc.org/](http://www.sprc.org/) to learn more about the warning signs of suicide, suicide prevention efforts in your state, and other helpful resources.

2. Save the National Suicide Prevention Lifeline number: 1-800-273-TALK (8255). The Lifeline provides 24/7, free and confidential support for people in distress, prevention and crisis resources for you or your loved ones, and best practices for professionals. An online chat option is also available: [https://suicidepreventionlifeline.org/chat/](https://suicidepreventionlifeline.org/chat/)

3. Learn about the Action Alliance and its partners’ #BeThere collective messaging effort that provides ways you can take action to support a person who is struggling or in crisis: [http://actionallianceforsuicideprevention.org/bethere](http://actionallianceforsuicideprevention.org/bethere)
Questions and Discussion
References


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- Kaiser Family Foundation r/state-indicator/opioid-overdose-deaths-by-gender/?dataView=2&activeTab=graph&currentTimeframe=0&startTimeframe=4&selectedDistributions= male--female&selectedRows=%7B%22wrapups%22:%7B%22united-states%22:%7B%7D%7D,%22states%22:%7B%22kentucky%22:%7B%7D%7D%7D%22%7D%22 Location%22,%22sort%22:%22asc%22%7D


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