Harm Reduction Strategies for a Public Health Crisis: The Role of Naloxone in Preventing Overdose Deaths

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Overdose is the NUMBER ONE Cause of Injury Death in the U.S.

One death every 9 minutes

Most overdose deaths are preventable, most are witnessed by someone who can help if they have the right tools and knowledge.

*note: a person does not have to be “addicted” to drugs to die of an overdose.
What We Already Know

- We have skyrocketing deaths from opioid overdose. Naloxone quickly and effectively reverses respiratory arrest from opioid overdose, restores breathing and saves lives if administered quickly enough.

- Time is of the essence, particularly with the introduction of high potency/fast-acting fentanyl into the heroin supply.

- Therefore, it is increasingly essential to insure that naloxone is immediately available at the scene of an opioid overdose.

- We have several years of data showing that lay administration of naloxone can be done effectively with a minimum of training.

- Individuals who use illicit drugs, themselves, are the most likely to be already present at the scene of an overdose and therefore should be the highest priority to receive naloxone, if supply is limited.
Allegheny County, Pennsylvania
Accidental Drug Overdose Deaths
2000-2017*

85% of cases include more than one drug

2017-2018: Over 80% of deaths involve Fentanyl and/or analogues

*Data from Allegheny County Medical Examiners Annual Reports. Includes all overdose deaths where these drugs were present at time of death, alone or in combination with other substances.
Ohio Overdose Deaths by Drug

Figure 2. Percentage of Unintentional Drug Overdose Deaths Involving Selected Drugs, by Year, 2010-2016


* Excludes deaths involving fentanyl and related drugs.

** No specific drug was identified.
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<tr>
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Harm Reduction Services

- Providing Sterile Injection Equipment to prevent HIV & Hep C since 1995.
- Testing for HIV and Hepatitis C
- Case Management, assistance to treatment
- Crisis Intervention & Counseling
- Overdose Prevention & Response Training
- Naloxone Distribution since 2005.

- Wound Care Consultation Clinic
- Education on safer injection.
- All Services Free of Charge
- Anonymous/Confidential
- Low Threshold
Deaths from Opioid Overdose are almost entirely preventable if oxygen is maintained through rescue breathing.

In addition, we have a safe, highly effective, very safe antidote, routinely used in Pre-hospital and hospital Setting form many decades.

No psychoactive effects

Keep breathing for them

- Assemble 1 dose (1cc)
- Muscle shot, either
  - Shoulder
  - Butt
  - Thigh

NALOXONE HCL (Narcan® or Ezvio®)
Allegheny County Accidental Drug Overdose Deaths 2000-2017*

85% of cases include more than one drug

*Data from Allegheny County Medical Examiners Annual Reports. Includes all overdose deaths where these drugs were present at time of death, alone or in combination with other substances.
Prevention Point Pittsburgh Naloxone
CUMULATIVE DATA - July 2005- Sept 15 2018

Third Party Implemented

98% of Naloxone Rescues Performed By Individual Who Use Opioids

Total Number of Individuals Who Received Naloxone

Total Number of Overdose Reversals
Prevention Point Pittsburgh Naloxone Distribution Program

- 2005-2015 PPP was only naloxone source, volunteer prescribers wrote individual prescriptions.

- 2012/2013: A small number of medical practices began prescribing naloxone to patients who were prescribed opioids.

- Prevention Point primarily distributes Intramuscular naloxone (Hospira 0.4mg/ml), 2 doses and 2 IM syringes in a kit, additional kits provided on request. Last year we distributed 3746 doses.

- 2015- Act 139 allowed third party prescribing and standing order allowed broader distribution of naloxone in additional community settings. But focus returned to PWUD.
Ideally naloxone in first aid kit of every lay and professional first responder: in police cars, ambulances, homeless shelters, SUD Tx programs, schools, community centers and home first aid kits.

However, NUMBER ONE priority: Put naloxone in the hands of those most likely on the scene and first to respond, individuals who use opioids, themselves.
San Francisco, city of 800,000 keeping overdose rate low through saturation of heroin-using population with naloxone.

“We had 234 reported (fentanyl overdose) reversals by drug users between June-August and only a couple of unfortunate deaths, about which we still have little information. There were two uses of naloxone by law enforcement in the same period and no noticeable uptick in EMS responses to overdoses. Essentially, this was handled expertly by the syringe exchanges and drug users and many, many possible deaths were averted. “

-Eliza Wheeler, the DOPE Project, San Francisco
Harm Reduction Successes:

- Rio Arriba County, New Mexico, population 40,000. Santa Fe Mountain Center provided over 3,300 doses of naloxone (FY2016); documented 752 reversals, and a 30% decrease in the Overdose Deaths; 9% decrease statewide.
- For Allegheny County, similar saturation would require 100,000 doses of naloxone.
Increasing Access to Naloxone

Where Can You Get Naloxone in Pittsburgh?

- 2016 – County and then Statewide Pharmacy Standing Order
- End of 2016 – Allegheny County Jail began providing naloxone on release.
- 2017 – Several Hospital began dispensing naloxone in ED to people who had overdosed.
- 2017 – Health Dept. began dispensing naloxone.
- 2016/2017 – Some SUD Tx program began distributing naloxone
- 2018 – EMS Leave Behind naloxone program
Although 2017 was record year with 735 overdose deaths, the number of deaths have dropped for every quarter since the last quarter of 2016.


PPP reversals have remained fairly constant.

In Allegheny County, there were 737 reported overdose deaths in 2017. That’s a roughly 13 percent increase from 2016 when there were 650. Although overdose deaths have steadily risen each year since 2014, the Allegheny County Medical Examiner’s Office saw the concentration of overdoses by quarter peak in late 2016 and has seen a drop in every quarter since then. County officials attribute the decrease to many factors, including the increased distribution of naloxone — a drug that can reverse an overdose — and efforts by government agencies and community groups to address the opioid epidemic.
Naloxone in the Age of Fentanyl

- Does naloxone work on all types of fentanyl? YES
- Can you overdose from casual contact with fentanyl or with someone who has used fentanyl? NO
- How many doses of naloxone does it take to reverse a fentanyl overdose? Typically 1-2
No evidence of need for large number of doses of naloxone. We give people multiple kits, up to 10 doses, but 93% of OD’s require 1 or 2 doses.

Amount of naloxone used to reverse opioid overdoses outside of medical practice in a city with increasing illicitly manufactured fentanyl in illicit drug supply

Alice Bell, Alex S. Bennett, T. Stephen Jones, Maya Doe-Simkins & Leslie D. Williams

2013 – 3.5% of deaths involved fentanyl, of 213 reversals, 89% used 1 or 2 doses
2016 – 68% of deaths involved fentanyl, of 446 reversals, 93% used 1 or 2 doses
No significant change is number of doses used.
Early Days of the AIDS Epidemic

Doctor says man got AIDS through saliva

Knight News Service

SAN JOSE, Calif. — Anxious federal health officials are conducting exhaustive tests to determine whether an ailing 76-year-old San Bruno man is the nation's first case from the disease to have contracted it from the disease.

AIDS fear cuts blood donations

Some people think you can catch AIDS from a glass.

HIV in the '80s: 'People didn't want to kiss you on the cheek'

by Elizabeth Landau, CNN

Embalmers fear AIDS risk
To effectively address this problem, we need to have a rational public health approach, not a fear-based, knee-jerk response.
The idea: If you know they’re about to inject, snort, smoke or swallow fentanyl, you’ll take smaller doses, avoid using alone, and make sure you have naloxone handy in case of overdose.

Even when someone assumes they have fentanyl, the experience of testing the drugs and seeing positive confirmation that it’s fentanyl has an impact.

It encourages people to use more safely.
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