

Optimizing Safety in People with Addictions

Alex Walley

CRIT/FIT/JFIT/AFIT – April 2018

Morning Report Case

– *She doesn't want anything*

- You are called to admit a 29 yo woman with polydrug overdose, complicated by aspiration, and a left arm cellulitis. She was found unresponsive in the bathroom of a restaurant with a syringe, cooker and filters.
 - Works as a waiter
 - Injecting heroin daily since age 23.
 - Uses cocaine on the weekends and drinks alcohol after work
 - Trades sex for drugs, when money is short
 - Prescribed clonazepam, clonidine and gabapentin for panic disorder and mood stabilization
 - Treated with methadone and buprenorphine in the past when pregnant
 - Intends to use again on discharge
- Despite your best brief intervention and motivational interviewing...
- ***She is not interested in treatment at this time.***

Learning objectives

At the end of this session, you should be able to:

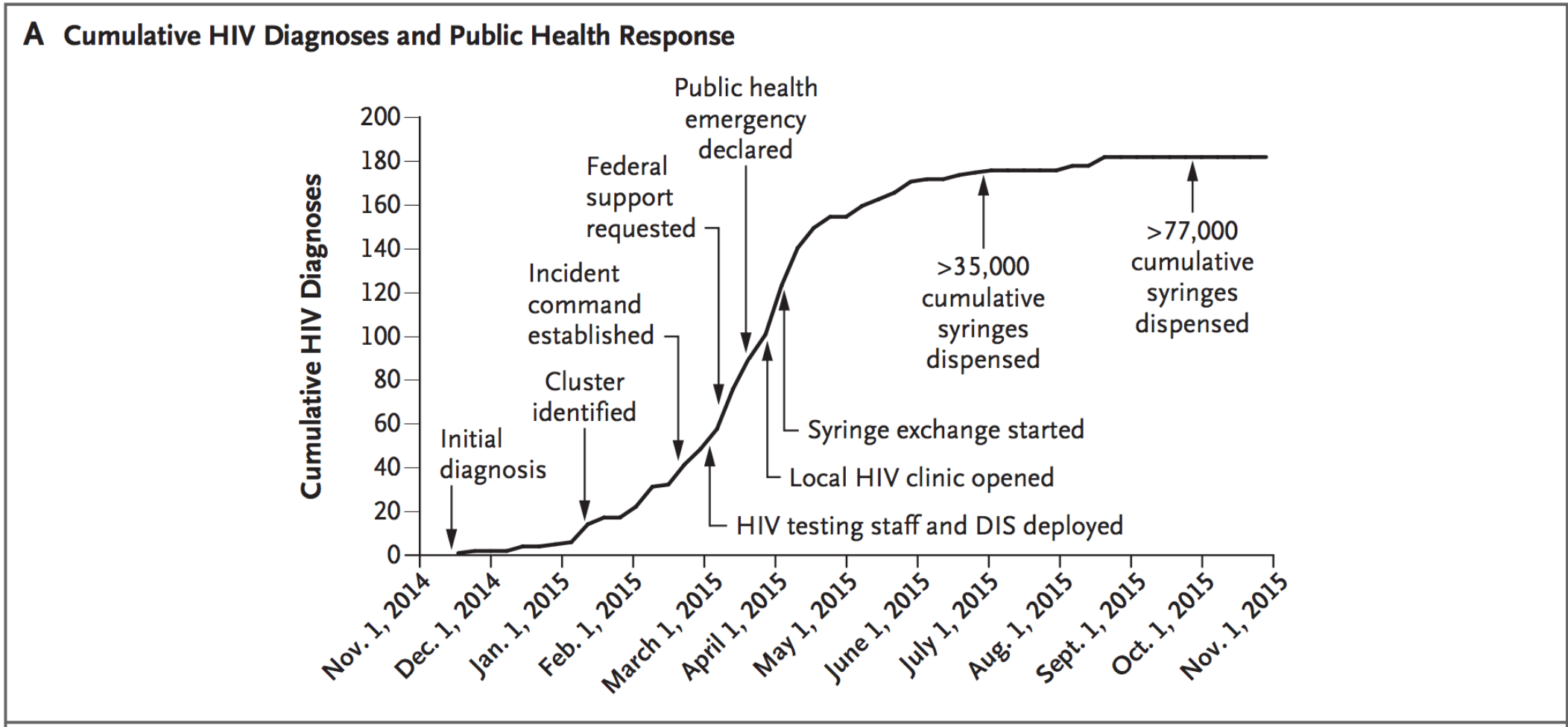
1. Define harm reduction and apply it to public health
2. Explain the rationale and evidence for:
 - a. needle syringe access
 - b. supervised injection facilities and
 - c. naloxone rescue kits for overdose prevention



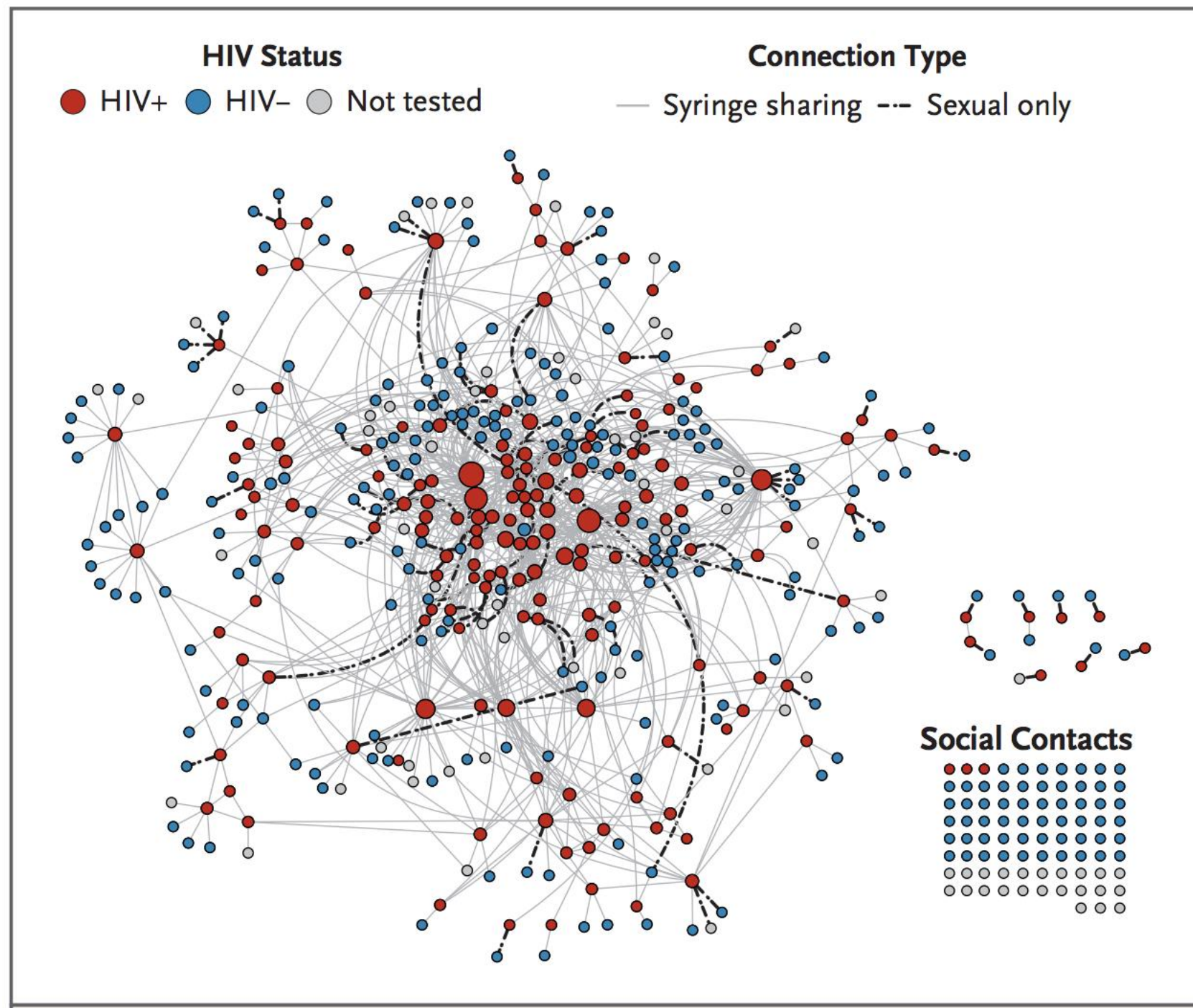
Scott County, IN HIV oxymorphone outbreak

-> Jan 2016 federal funding ban ended

2014 2015



Scott County, IN HIV outbreak, 2014-2015



HIV is surging in Lawrence and Lowell. The CDC wants to know why



Lawrence and Lowell, MA
HIV outbreak,
2017



SUZANNE KREITER/GLOBE STAFF/FILE 2016

In 2017, 52 new HIV cases were reported in the state's northeast region, up from 32 in 2016.

By Felice J. Freyer | GLOBE STAFF APRIL 05, 2018



HIV decreases with and increases without needle-syringe programs

	Cities with NSPs	Cities without NSPs
All cities	-5.8% per year	+5.9% per year
Cities with seroprevalence <10%	-1.1% per year	+16.2% per year

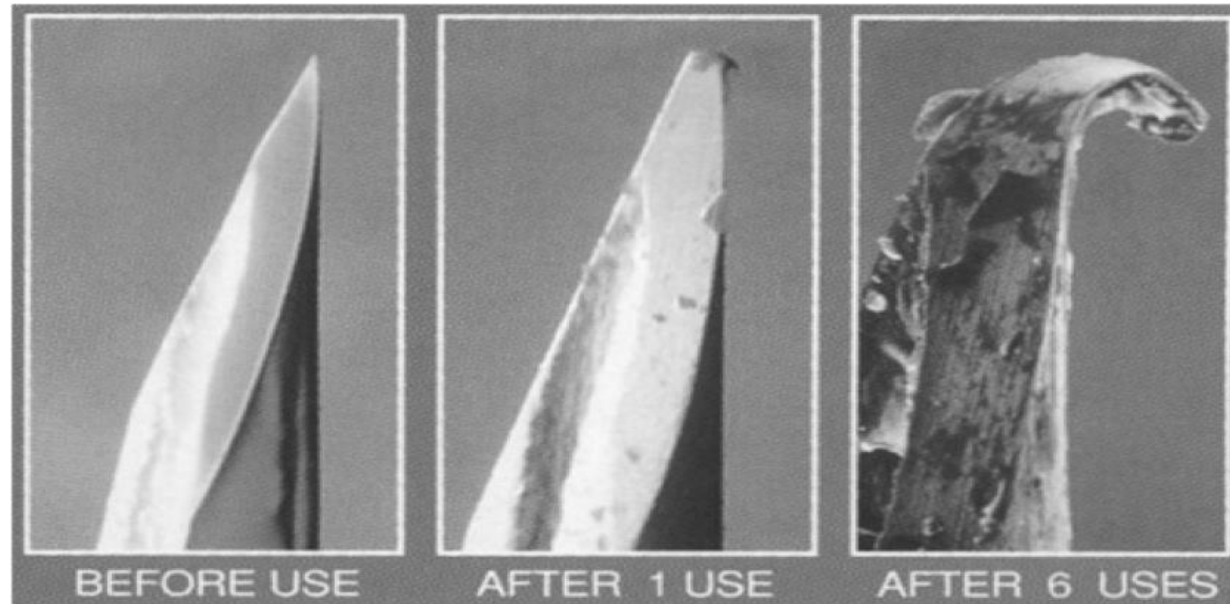
Filters

- Used to trap particulate matter
- Cotton balls, Q tip, tampon, cigarette filter
- Require manipulation with fingers
- Contamination with skin flora
- Ideal filter small, preformed (dental pellet)



Slide from Sarah Wakeman

Syringes and needles



- New needle and syringe each injection
- Needle dulls with each use
- Bleach is option
- Don't use syringe to divide dose or mix heroin

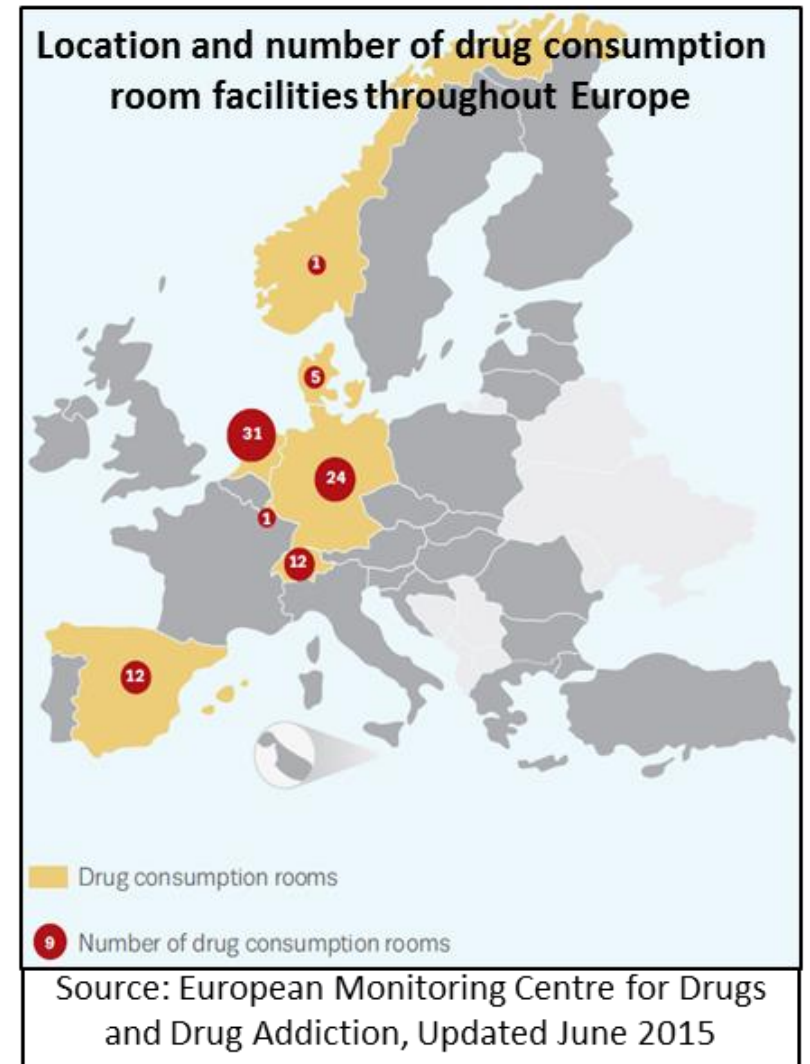
Supervised Injection Facilities

- Legal facilities where people can inject pre-obtained drugs under supervision
- Objectives: Public Health + Public Safety
 - Reduce overdose
 - Reduce injection-related infections
 - Improve access to substance use disorder treatment
 - Reduce public drug use
 - Improve neighborhood security
- Existing Facilities
 - 86 facilities throughout Europe
 - Vancouver, Canada
 - Sydney, Australia



BOSTON HEALTH CARE *for*
the HOMELESS PROGRAM

Slide(s) courtesy of Jessie Gaeta



Legal and Logistical Barriers to SIF



1. **Federal** crack house statutes make it a crime to maintain a facility for the purpose of using substances
2. **State** laws would have to shield programs from local and state law enforcement
3. **Local** law enforcement, neighborhoods, and business community would need to support it
4. Adequate **funding** is needed to ensure the program is implemented correctly
5. An **empowered group of people who use drugs** is needed to ensure this works

Bathrooms are injection facilities: How to make them safer?

Outfit bathrooms with:

- Secure biohazard boxes
- Good lighting
- Mirrors
- Doors that open out
- Call button
- Intercomm system
- Timer with monitor
 - 10min? 5min? 2min?
- Safer injection equipment
- Naloxone rescue kit



1 IN 5 OVERDOSE DEATHS HAPPEN
IN PUBLIC BATHROOMS

CHECK YOUR RESTROOMS
YOUR ACTIONS COULD HELP SAVE A LIFE

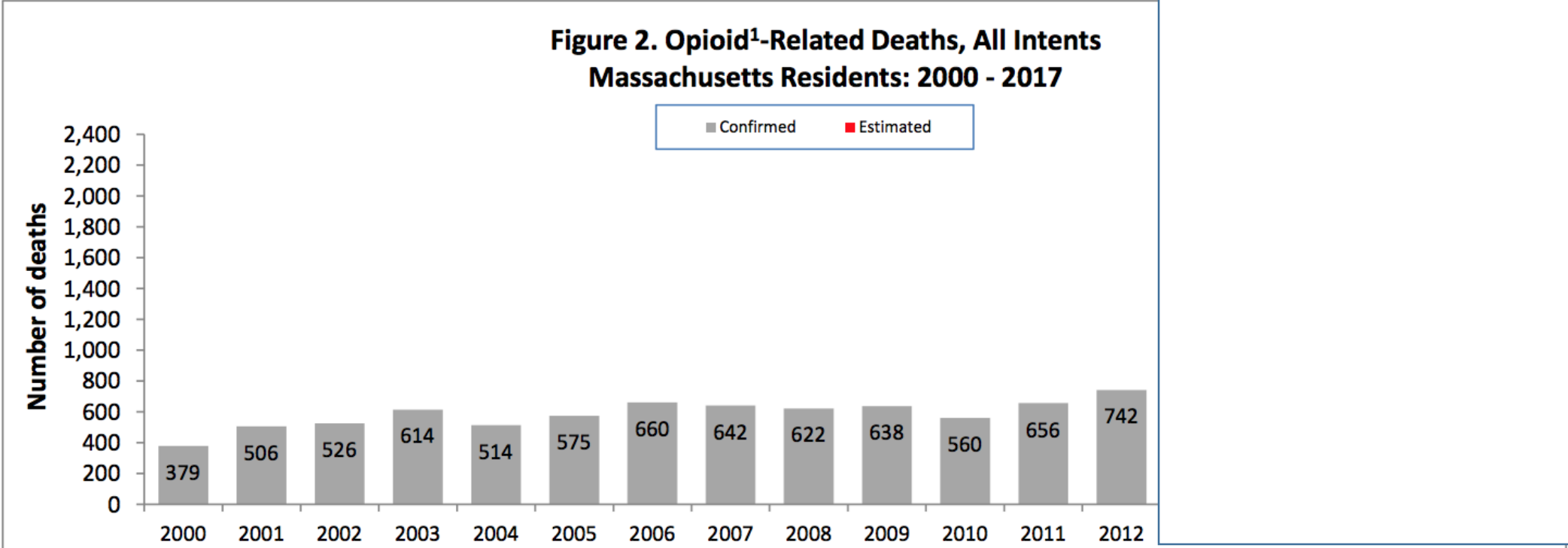
KNOW WHAT TO LOOK FOR	KNOW WHAT TO DO
- Unresponsive	- Call 911 immediately
- Slow breathing	- Perform rescue breathing
- Lack of breathing	- Administer Narcan
- Blue lips/fingertips	



For more information visit
www.bphc.org/ahope

BOSTON
PUBLIC
HEALTH
COMMISSION

Opioid deaths in Massachusetts



Romney Care
Naloxone via public health programs
Expansion of buprenorphine treatment

Police/Fire naloxone
Safe opioid education mandated

Pharmacy SO



3 priority areas to tackle the opioid crisis

US Department of Health and Human Services March 26, 2015

Safer opioid prescribing

- Prescription monitoring programs
- Prescription drug safe storage & disposal
- Safe opioid prescribing training

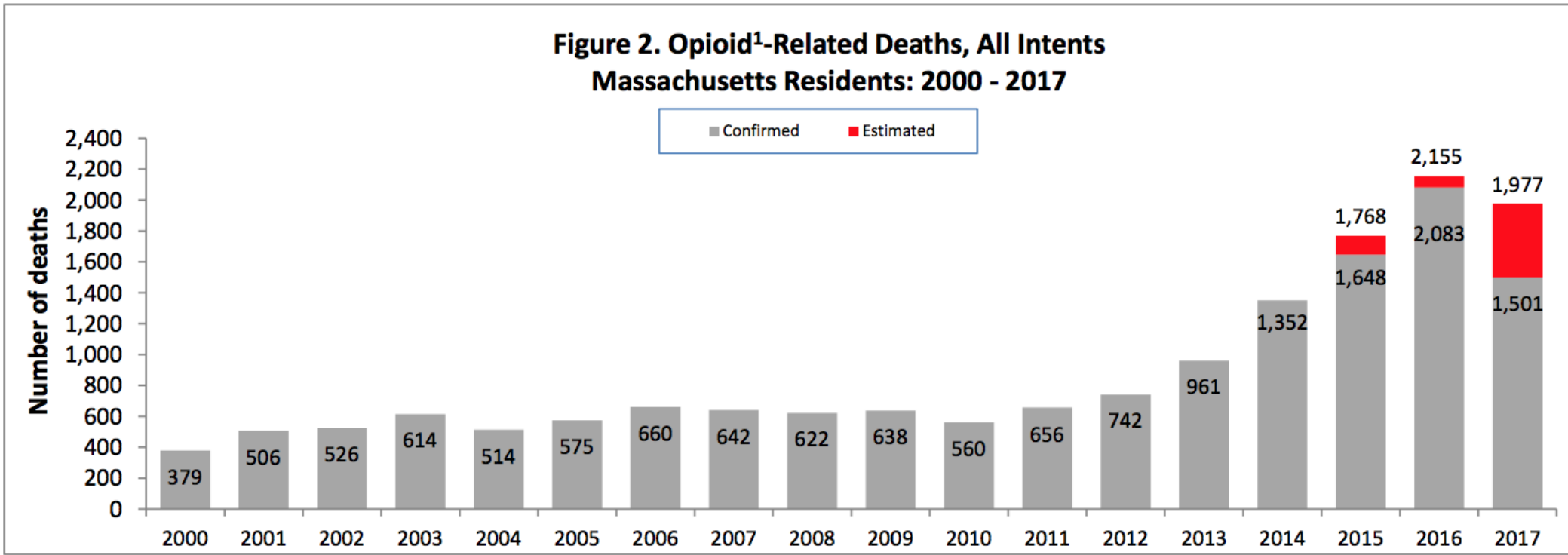
Increase access to naloxone

- Overdose Education and Naloxone for people who use opioids
- For family and social networks
- For first responders

Medication for opioid use disorder

- Methadone, buprenorphine, naltrexone
- Integration into primary care
- Initiation during inpatient medical care
- Low barrier access clinic

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Why a Surge in Overdoses?

- Prescription opioids for pain
- Transitioning to heroin and illicitly-made fentanyl
- Erratic and more deadly heroin and fentanyl supply
 - *Overdose response window has shrunk from minutes to hours to seconds to minutes*
- Polysubstance use (including polypharmacy)

DEA Official Blames Fentanyl-Heroin Mixture from Mexico for Recent Fatal Overdoses

The fentanyl-laced dope plaguing the northeastern United States is being made south of the border, according to officials.

Addressing fentanyl overdose deaths



03:57



As Opioid Epidemic Rages On, Massachusetts Medical Society Backs Supervised Injection Rooms



A comprehensive

1. Fentanyl
2. Adversely
3. Enhance

April 29, 2017

By [Martha Bebinger](#)

[Share](#)

... using illicit opioids, and



“So, now it's stronger. And once rather than they [people] they can't

... the fentanyl to make it use of the fentanyl at pain and simple. You know, I they don't realize that

Characteristics of Fentanyl Overdose — Massachusetts, 2014–2016

Nicholas J. Somerville, MD^{1,2}; Julie O'Donnell, PhD^{1,3}; R. Matthew Gladden, PhD⁴; Jon E. Zibbell, PhD⁴; Traci C. Green, PhD⁵; Morgan Younkin, MD⁶; Sarah Ruiz, MSW²; Hermik Babakhanlou-Chase, MPH²; Miranda Chan, MPH²; Barry P. Callis, MSW²; Janet Kuramoto-Crawford, PhD¹; Henry M. Nields, MD, PhD⁷; Alexander Y. Walley, MD^{2,5}





Case for overdose education and naloxone distribution (OEND)

- Most opioid users do not use alone
- Known risk factors:
 - Mixing substances, abstinence, using alone, unknown source
- Opportunity window:
 - Opioid overdoses take minutes to hours and is reversible with naloxone
 - For fentanyl, the window is seconds to minutes
- Bystanders are trainable to recognize and respond to overdoses
- Fear of public safety



[Patient education videos and materials at prescribetoprevent.org](https://prescribetoprevent.org)

Evaluations of Overdose Education and Naloxone Distribution Programs

Feasibility

- Piper et al. *Subst Use Misuse* 2008; 43: 858-70.
- Doe-Simkins et al. *Am J Public Health* 2009; 99: 788-791.
- Enteen et al. *J Urban Health* 2010;87: 931-41.
- Bennett et al. *J Urban Health*. 2011; 88; 1020-30.
- Walley et al. *JSAT* 2013; 44:241-7. (Methadone and detox programs)

Increased knowledge and skills

- Green et al. *Addiction* 2008; 103;979-89.
- Tobin et al. *Int J Drug Policy* 2009; 20; 131-6.
- Wagner et al. *Int J Drug Policy* 2010; 21: 186-93.

No increase in use, increase in drug treatment

- Seal et al. *J Urban Health* 2005;82:303-11.
- Doe-Simkins et al. *BMC Public Health* 2014 14:297.
- Jones et al. *Addictive Behaviors* 2017;71:104-6

Reduction in overdose in communities

- Maxwell et al. *J Addict Dis* 2006;25; 89-96.
- Evans et al. *Am J Epidemiol* 2012; 174: 302-8.
- Walley et al. *BMJ* 2013; 346: f174.
- Coffin et al. *Ann Intern Med* 2016; 1-8.

Cost-effective
 \$438 (best)
 \$14,000 (worst)
 quality-adjusted
 gained per
 life year

Coffin and Sullivan. *Ann Intern Med*. 2013 Jan 1;158(1):1-9.



How to Respond in an Overdose

Steps to teach patients, family, friends, caregivers

Recognize overdose

1

Call 911 for help

2

Administer naloxone
as soon as it is available

3

4

**Rescue breathe/
chest compressions**
per rescuer's level of training

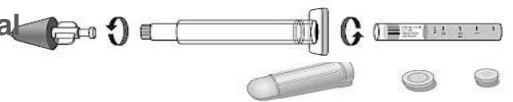


5


Stay until help arrives
Place in recovery
position if breathing




Multi-step nasal spray




Intramuscular injection



Auto-injector (EVZIO®)



Single-step nasal spray (NARCAN®)



Making a risk reduction plan

- ***Ask your patients:***
 - How do you protect yourself against overdose?
 - How do you keep your medications safe at home?
- ***And their loved ones:***
 - What is your plan if you witness an overdose in the future?
 - Have you received training to prevent, recognize, or respond to an overdose

Risk Compensation and Moral Hazard

->> Narcan Party Urban Legend = Fake News

'Drug dealers are throwing Narcan parties'

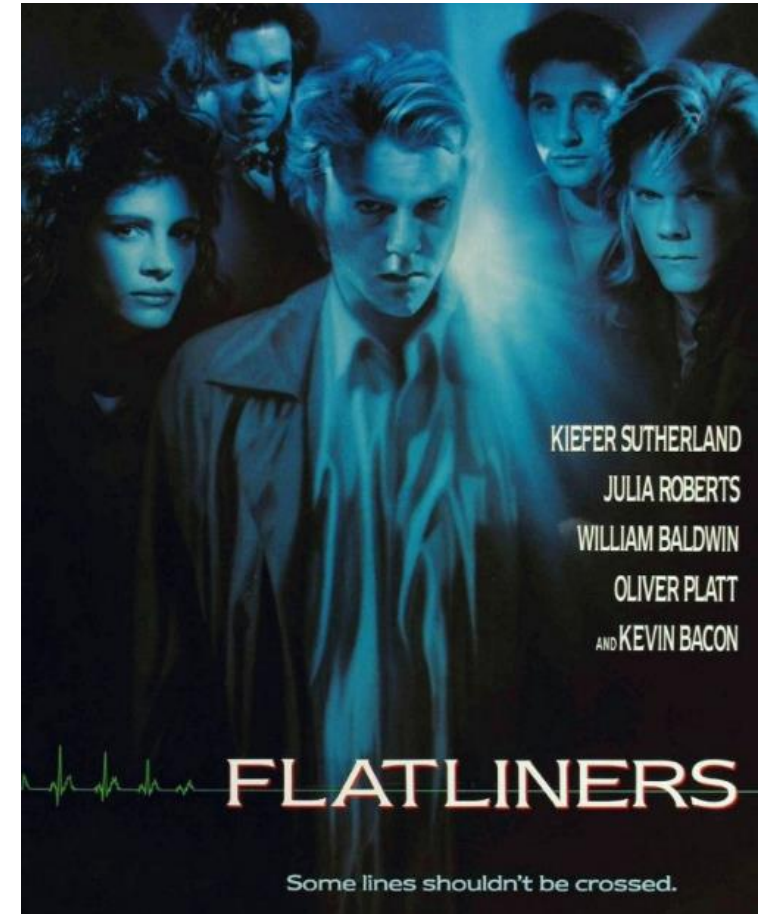
- Aug. 2016 previous assertions by two legislators in PA:
 - <http://www.upgruv.com/lawmakers-hesitant-to-expand-narcan-access-1957206979.html>
- The TV story March 2017 in PA:
 - <http://www.wgal.com/article/police-raising-concerns-about-narcan-parties-offering-drugs-and-antidote-to-users/9165193>

Naloxone distribution does *not* increase drug use

- Maxwell et al., Journal of Addictive Diseases, 2006;
- Seal et al., Journal of Urban Health, 2005;
- Wagner et al., 2010 International Journal of Drug Policy;
- Doe-Simkins et al, BMC Public Health, 2014
- Jones et al. Addictive Behaviors 2017:71:104-6

Similar examples:

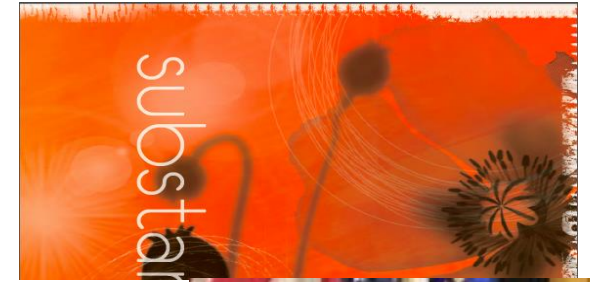
- Seat belts do not cause more motor vehicle deaths, but reduce them
- Syringe distribution does not increase HIV transmission, but reduces
- Vaccinations & condoms do not increase sexually transmitted infections
- Fire extinguishers do not cause fires, but reduce their consequences





“The AMA has been a longtime

NATIONAL DRUG CONTROL STRATEGY



Surgeon General’s Advisory on Naloxone and Opioid Overdose

April 5, 2018



*I, Surgeon General of the United States Public Health Service, VADM Jerome Adams, am emphasizing the importance of the overdose-reversing drug naloxone. For patients currently taking high doses of opioids as prescribed for pain, individuals misusing prescription opioids, individuals using illicit opioids such as heroin or fentanyl, health care practitioners, family and friends of people who have an opioid use disorder, and community members who come into contact with people at risk for opioid overdose, **knowing how to use naloxone and keeping it within reach can save a life.***



BE PREPARED. GET NALOXONE. SAVE A LIFE.

to overdose”

www.pharmacist.com/policy/controlled-substances-and-other-medications-potential-abuse-and-use-opioid-reversal-agents-2

quickly and effectively by trained professional and lay individuals who observe the initial signs of an opioid overdose reaction.”

www.asam.org/docs/public-policy-statements/1naloxone-1-10.pdf



Morning Report Case

– *She doesn't want anything*

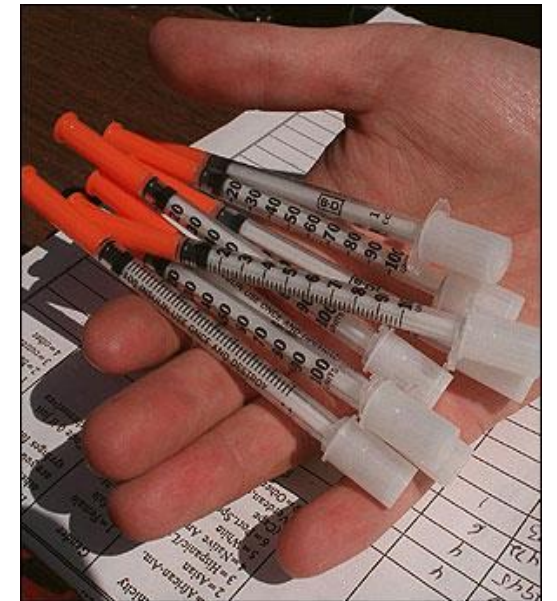
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- Despite your best brief intervention and motivational interviewing...
- ***She is not interested in treatment at this time.***

Case

1. Remind her of her treatment options for when she is ready
 - Residential treatment, intensive outpatient, pharmacotherapy, 12-step groups
2. Review her injection and other drug use routine for knowledge and readiness
 - Educate/ re-enforce safer use strategies
 - NSP, keeping substances safe from others, not using alone, tester shots, PrEP
3. Ask her about her overdose experience
 - Make a plan with her to reduce her own overdose risk and how to respond to others
 - Prescribe naloxone rescue kit if available
4. Options to reduce sexual risk
 - Condoms
 - PEP and PrEP
5. Screen her for interpersonal violence.
 - Offer IPV and sex worker services info
5. Express concern about her polypharmacy and discuss strategies to reduce
 - Speak to her prescribers (with her permission) about whether they are aware of the overdose
 - Encourage closer monitoring and a risk-benefit analysis for safety

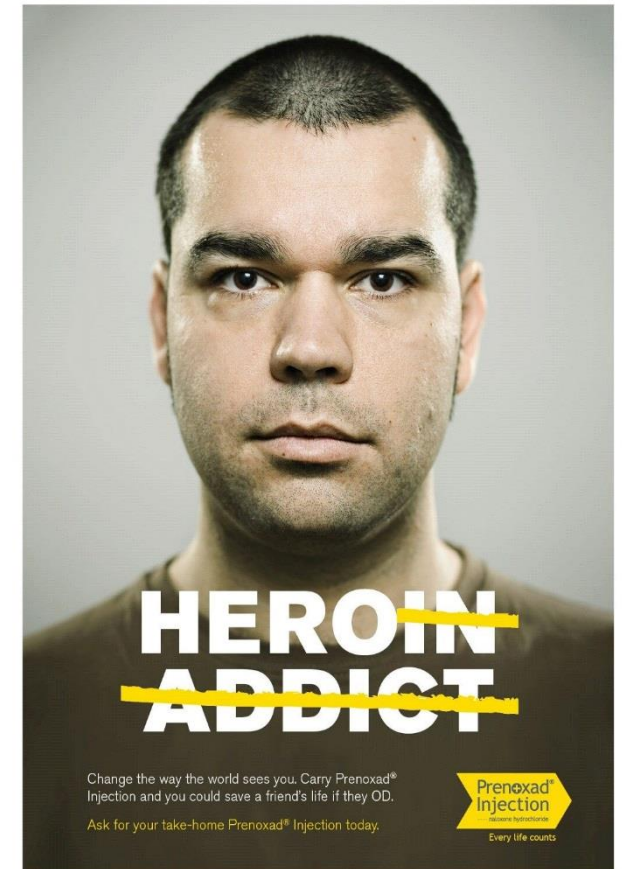
What is Harm Reduction?

- Practical strategies and ideas to reduce substance use consequences
 - A movement for social justice built on a belief in, and respect for, the rights of people who use substances
 - Harmreduction.org
- ◆ Interventions guided by risk-benefit analysis
 - ◆ Abstinence is not a prerequisite to care



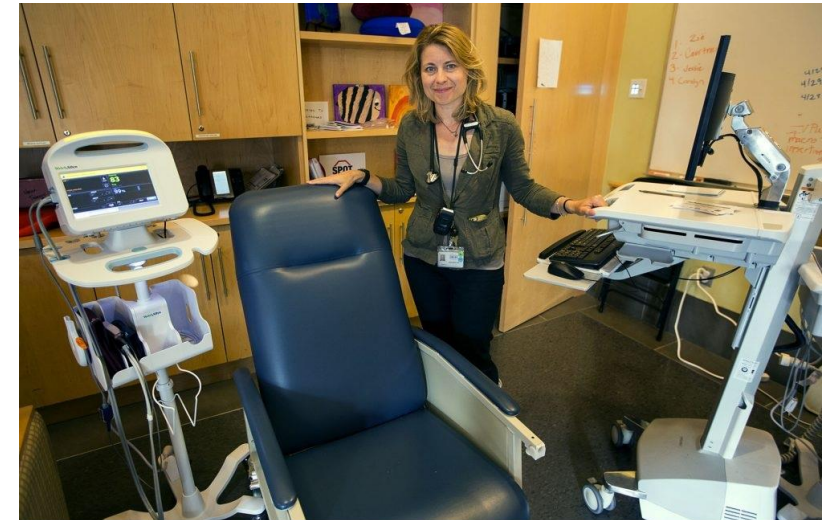
Harm Reduction Interventions

- ◆ Opioid agonist treatment to reduce HIV and mortality
 - ◆ Treatment continuity post-incarceration
 - ◆ Injectable opioid therapy (diacetylmorphine or hydromorphone)
- ◆ Needle-syringe programs to reduce HIV and injection risk
 - ◆ Pharmacy access needles and syringes
- ◆ Drug consumption rooms for injection risk and overdose mortality
- ◆ Naloxone rescue kits for opioid overdose mortality
- ◆ Pre and Post exposure prophylaxis
- ◆ Housing first programs
- ◆ Shelter-based alcohol administration
- ◆ Bad date sheets



New strategies for overdose and HIV prevention

- Pharmacy interventions
- Supervised consumption spaces
- Safe spaces for oversedation
- Bathroom safety
- Injectable opioid agonist treatment
 - diacetylmorphine, hydromorphone
- On-call recovery coaches
- Knock and Talk outreach
- Public health-public safety surveillance and rapid response



Credit: Jesse Costa, WBUR

Learning objectives

At the end of this session, you should be able to:

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- Slow breathing	- Perform rescue breathing
- Lack of breathing	- Administer Narcan
- Blue lips/fingertips	



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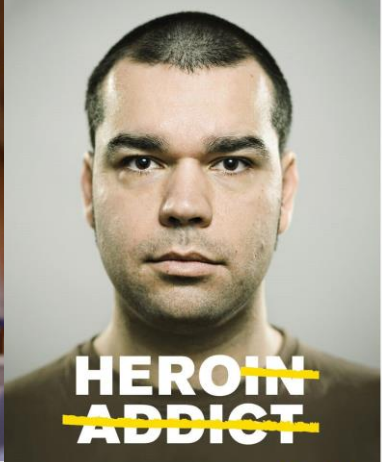
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Patient Education Videos

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Welcome to PrescribeToPrevent.org



REMEMBER YOUR
NARCAN!!

TAKE UPON
DISCHARGE
PLEASE

BOSTON MEDICAL CENTER

DO YOU OR SOMEONE YOU KNOW TAKE OPIOIDS?

NALOXONE (NARCAN) RESCUE KITS ARE AVAILABLE

Opioids include hydrocodone, oxycodone, codeine, hydromorphone, morphine, fentanyl, buprenorphine, methadone, oxymorphone, and heroin.

Someone who has overdosed will be unresponsive, have trouble breathing, and can die without immediate help.

If someone overdoses, call for help and use Narcan.

SAVE A LIFE.
Visit the BMC Shapiro Pharmacy today at 725 Albany St. for a NARCAN kit.

I NARCANNED YOUR HONOR STUDENT




Thank you awalley@bu.edu



Successful strategies for HIV/AIDS and parallel opportunities for overdose reduction

Treatment ←-----→ Prevention

Successful strategies for HIV/AIDS

- HIV testing and risk reduction counseling
- Needle-syringe distribution
- Targeted outreach /peer-driven interventions
- Supervised injection facilities
- Anti-retroviral therapy and opioid agonist treatment
- Comprehensive, collaborative, longitudinal care for individuals with HIV infection
- Coordinated prevention and treatment strategy across public health and the healthcare system
- Major funding across public health and the healthcare system of evidence-based interventions

Parallel opportunities for overdose reduction

- Overdose risk assessment and reduction counseling
- Naloxone rescue kit distribution
- Targeted outreach /peer-driven interventions
- Supervised injection facilities
- Medication for opioid use disorders
- Comprehensive, collaborative, longitudinal care for individuals with addictions
- Coordinated prevention and treatment strategy across criminal justice, law enforcement, public health and healthcare systems
- Major funding across criminal justice, law enforcement, public health and healthcare systems of evidence-based interventions

Naloxone formulations



Nasal with atomizer
 “Multi-step”*
 1 dose = **2mg/2ml**
 IN
 \$\$



NEW: Nasal Spray
 “Single-Step”
 1 dose = **4mg/0.1ml** IN
 \$\$



Auto-injector*
 1 dose = **2mg** IM
 \$\$\$\$



Intramuscular Injection
 1 dose = **0.4mg/1ml** IM
 \$

The Addiction Crisis

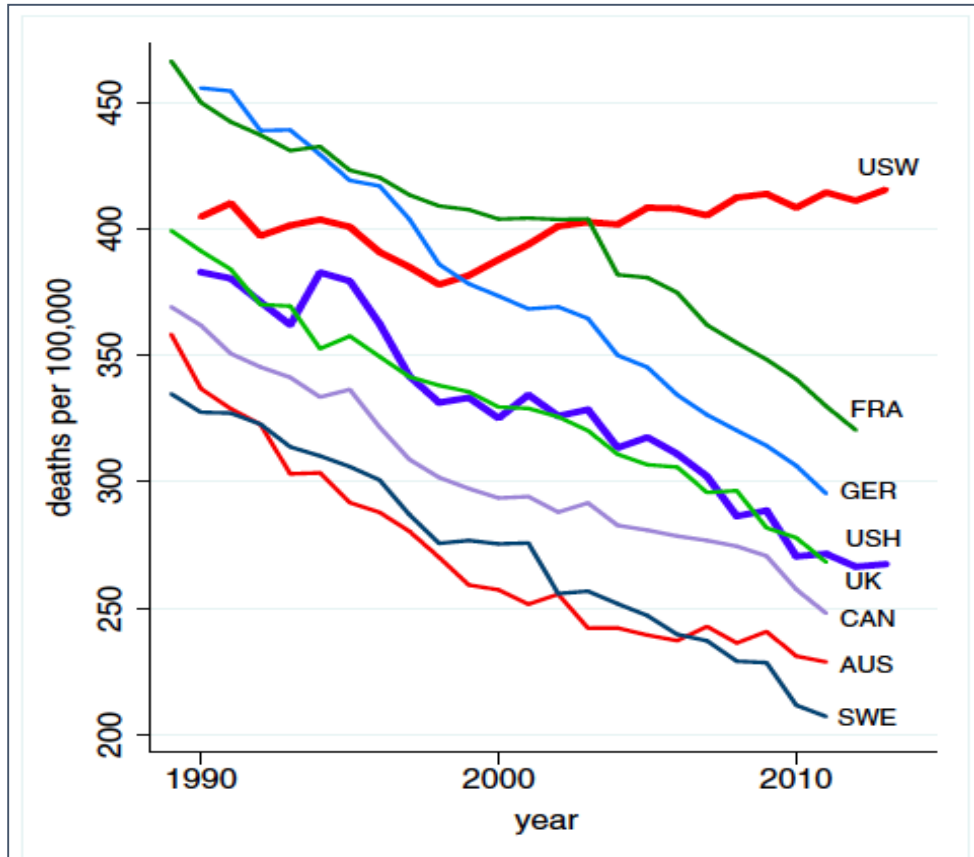


Fig. 1. All-cause mortality, ages 45–54 for US White non-Hispanics (USW), US Hispanics (USH), and six comparison countries: France (FRA), Germany (GER), the United Kingdom (UK), Canada (CAN), Australia (AUS), and Sweden (SWE).

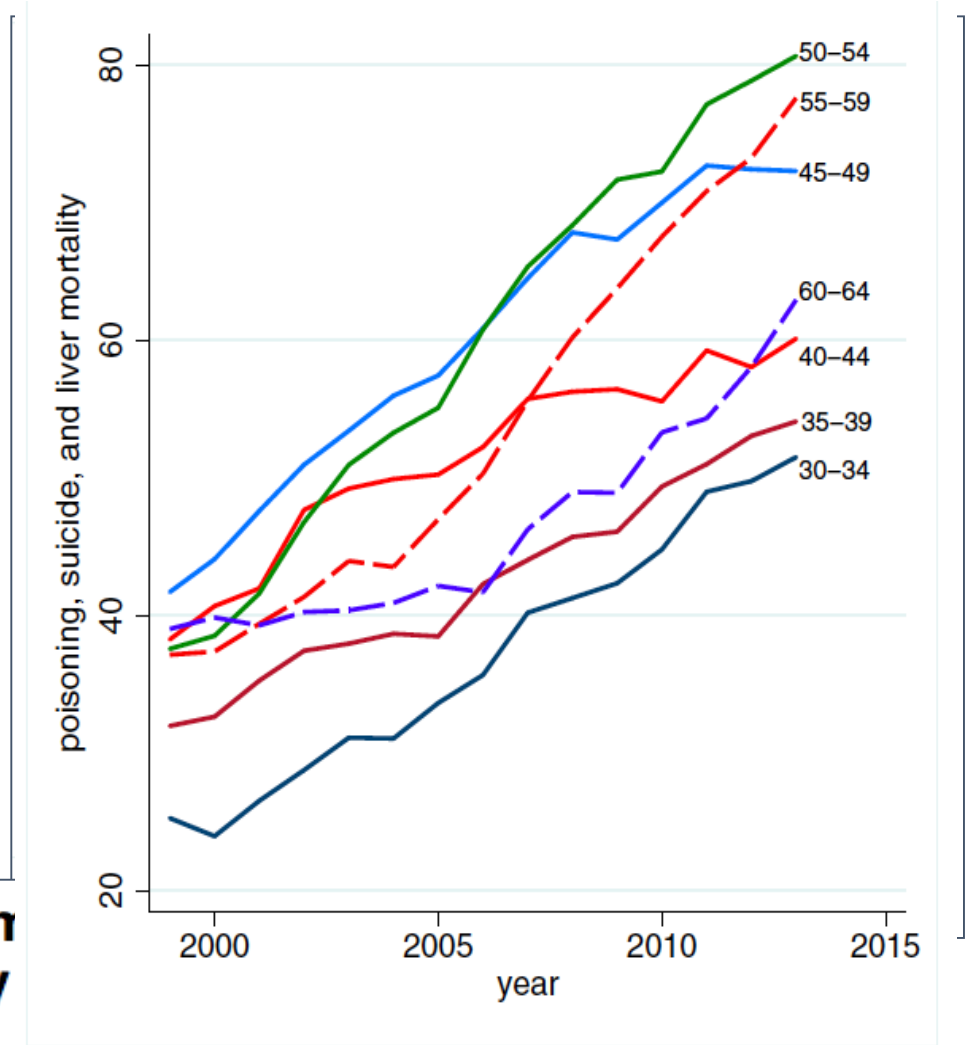


Fig. 4. Mortality by poisoning, suicide, chronic liver disease, and cirrhosis, white non-Hispanics by 5-y age group.

Rising morbidity and mortality in midlife among non-Hispanic Americans in the 21st century

Anne Case¹ and Angus Deaton¹

Woodrow Wilson School of Public and International Affairs and Department of Economics, Princeton University, Princeton, NJ

Contributed by Angus Deaton, September 17, 2015 (sent for review August 22, 2015; reviewed by David Cutler, Jon Skinner)

This paper documents a marked increase in the all-cause mortality of middle-aged white non-Hispanic men and women in the United States between 1999 and 2013. This change reversed decades of progress in

the United Kingdom (UK), Canada (CAN), Australia (AUS), and Sweden (SWE). The comparison is similar for other Organisation for Economic Co-operation and Development countries.



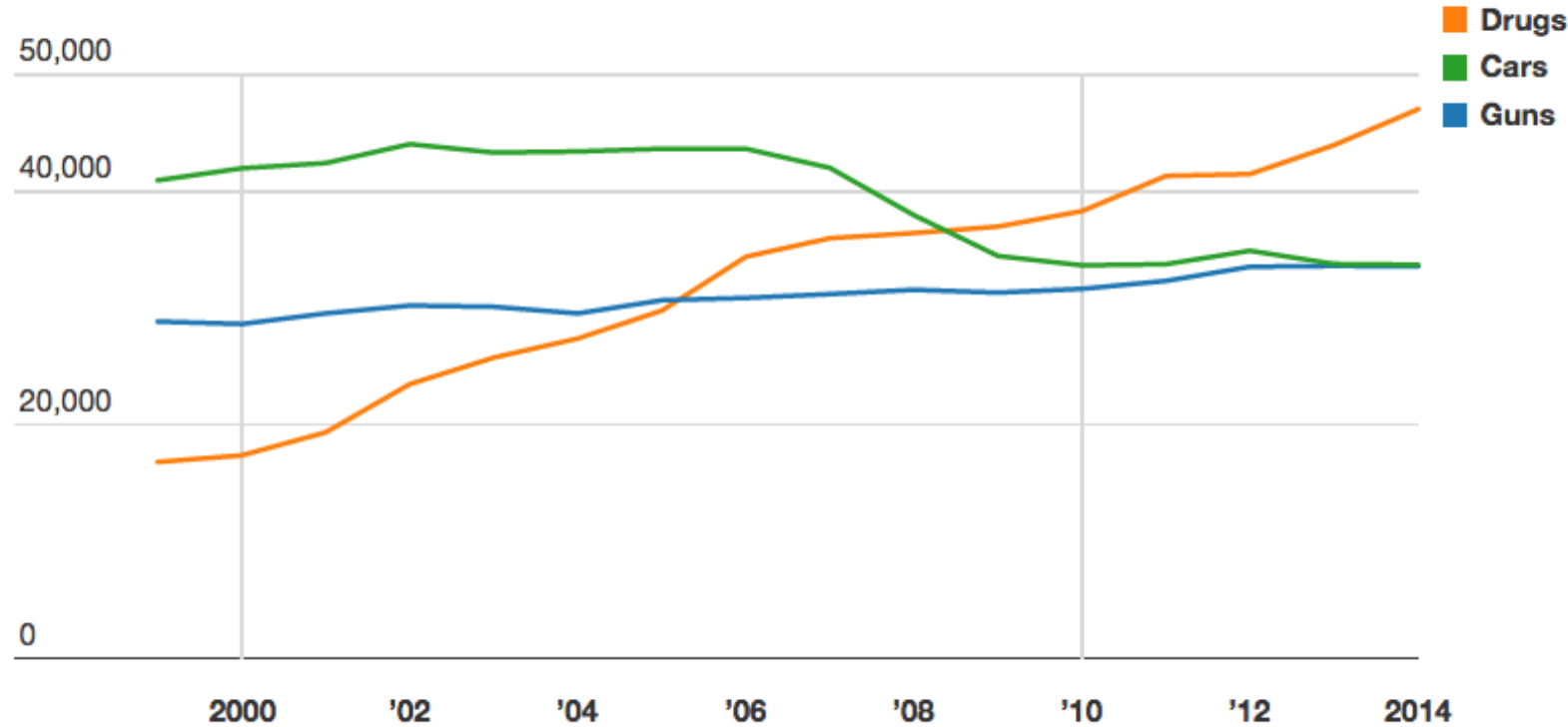
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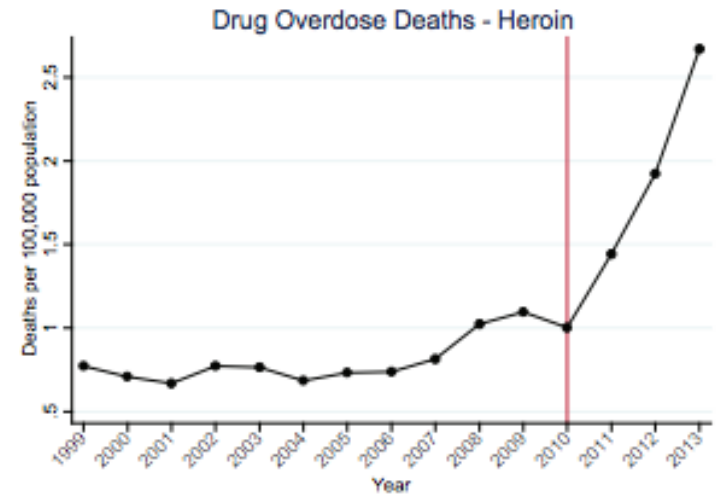
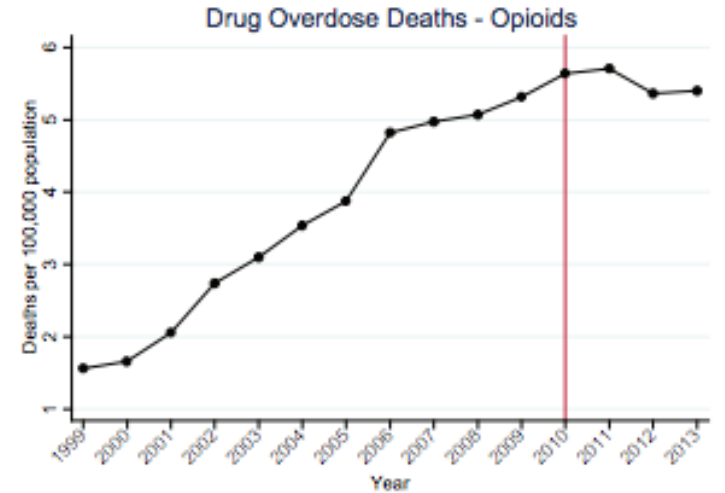


Deaths From Drug Overdoses, Car Accidents, and Gun Violence

From 1999 to 2014



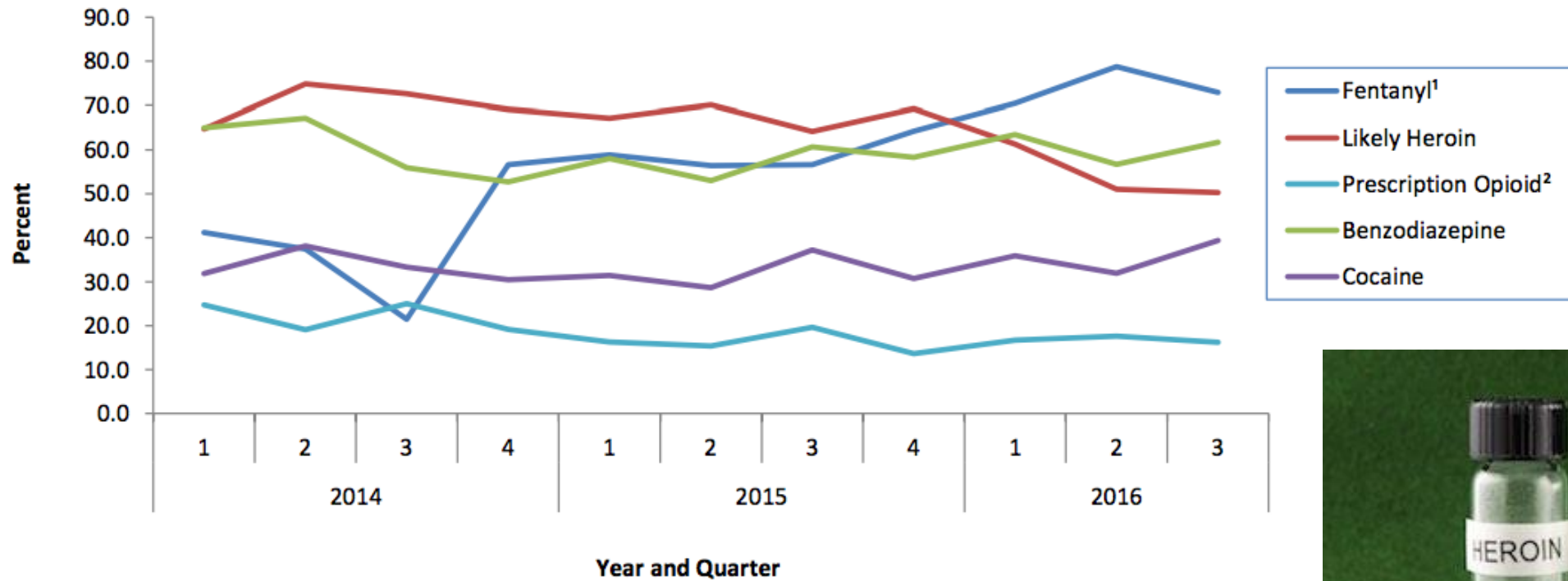
Source: Centers for Disease Control and Prevention [Get the data](#)



Alpert A, Powell D, Pacula RL. Supply-Side Drug Policy in the Presence of Substitutes: Evidence from the Introduction of Abuse-Deterrent Opioids. National Bureau of Economic Research; 2017 Jan 5.



Percent of Opioid Deaths with Specific Drugs Present MA: 2014-2016



1. This is most likely illicitly produced and sold, **not** prescription fentanyl
2. Prescription opioids include: hydrocodone, hydromorphone, oxycodone, oxymorphone, and tramadol



New Hampshire State Police Forensic Lab



Interdisciplinary Leaders in Substance Use Education, Research, Care and Policy

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40th AMERSA Conference

November 3-5, 2016
Washington, DC

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What Is AMERSA

The Association for Medical Education and Research in Substance Abuse (AMERSA), founded in 1976, is a non-profit professional organization whose mission is to improve health and well-being through interdisciplinary leadership in substance use education, research, clinical care and policy.

Our Impact

Leadership, collaboration, mentorship, and networking for health professionals working in the fields of substance use and addiction medicine.

Go to AMERSA.ORG

Travel award deadline: May 13, 2016

Workshop, poster, and oral deadline: May 20, 2016



SIFs Reduce Overdose Mortality

Methods: Population-based overdose mortality rates were examined in the 500m surrounding the SIF before and after its opening and compared with before and after rates in the rest of the city of Vancouver.

Results: In the area around the SIF overdose mortality **decreased 35%**, compared with a 9.3% reduction in the rest of the city.



BOSTON HEALTH CARE for
the HOMELESS PROGRAM

Slide courtesy of Jessie Gaeta

	ODs occurring in blocks within 500 m of the SIF*		ODs occurring in blocks farther than 500 m of the SIF*	
	Pre-SIF	Post-SIF	Pre-SIF	Post-SIF
Number of overdoses	56	33	113	88
Person-years at risk	22 066	19 991	1 479 792	1 271 246
Overdose rate (95% CI)*	253.8 (187.3–320.3)	165.1 (108.8–221.4)	7.6 (6.2–9.0)	6.9 (5.5–8.4)
Rate difference (95% CI)*	88.7 (1.6–175.8); p=0.048	..	0.7 (-1.3–2.7); p=0.490	..
Percentage reduction (95% CI)	35.0% (0.0%–57.7%)	..	9.3% (-19.8% to 31.4%)	..

SIF—supervised injection facility. Pre-SIF period—Jan 1, 2001, to Sept 20, 2003. Post-SIF period—Sept 21, 2003, to Dec 31, 2005. *Expressed in units of per 100 000 person-years.

Table 2: Overdose mortality rate in Vancouver between Jan 1, 2001, and Dec 31, 2005 (n=290), stratified by proximity to the SIF

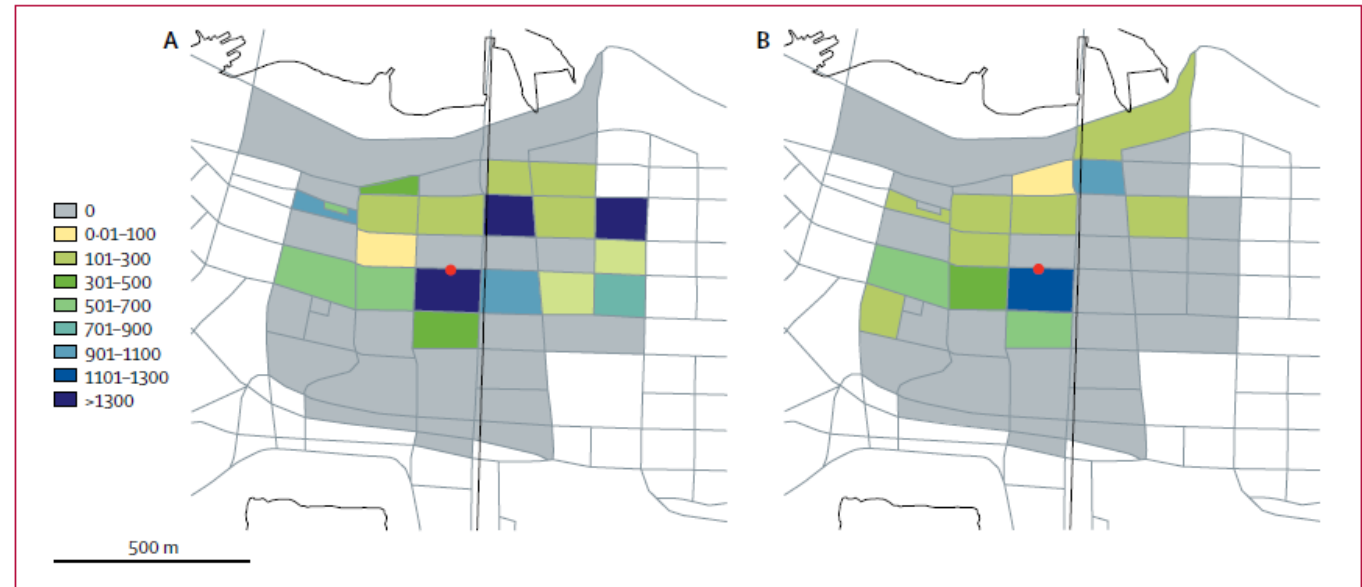


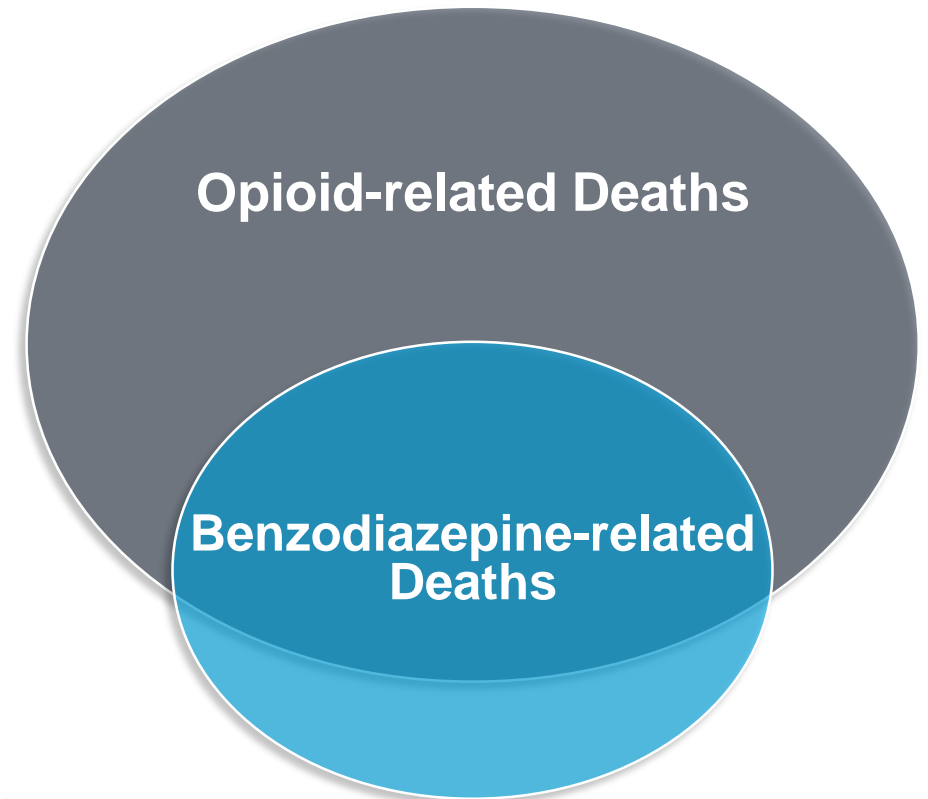
Figure 2: Fatal overdose rates before (A) and after (B) the opening of Vancouver's SIF (shown in red) in city blocks located within 500 m of the facility. Rates are given in units of 100 000 person-years and were calculated by aggregating the locations of death to the dissemination block level as shown.

Marshall, B. et al. (2011). Reduction in overdose mortality after the opening of North America's first medically supervised safer injecting facility: a retrospective population-based study. *Lancet*, 377(9775):1429-37.

Benzodiazepines and Opioids

Jointly contribute to overdose deaths

- Benzodiazepines are present in 31% of opioid-related overdose deaths
- Opioids are present in 75% of benzodiazepine-related overdose deaths¹
- Among people prescribed opioids, the risk of overdose deaths is 3.8 times higher for people prescribed benzos also²
- 8/31/16– FDA announced black box warning for opioid pain and cough meds and benzodiazepines regarding risk of the combined use of opioids and benzos



1. Jones CM and McAninch JK. Am J Prev Med. 2015 Oct;49(4):493-501.
2. Park TW, et al. BMJ. 2015 Jun 10;350:h2698.
3. <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm518697.htm>

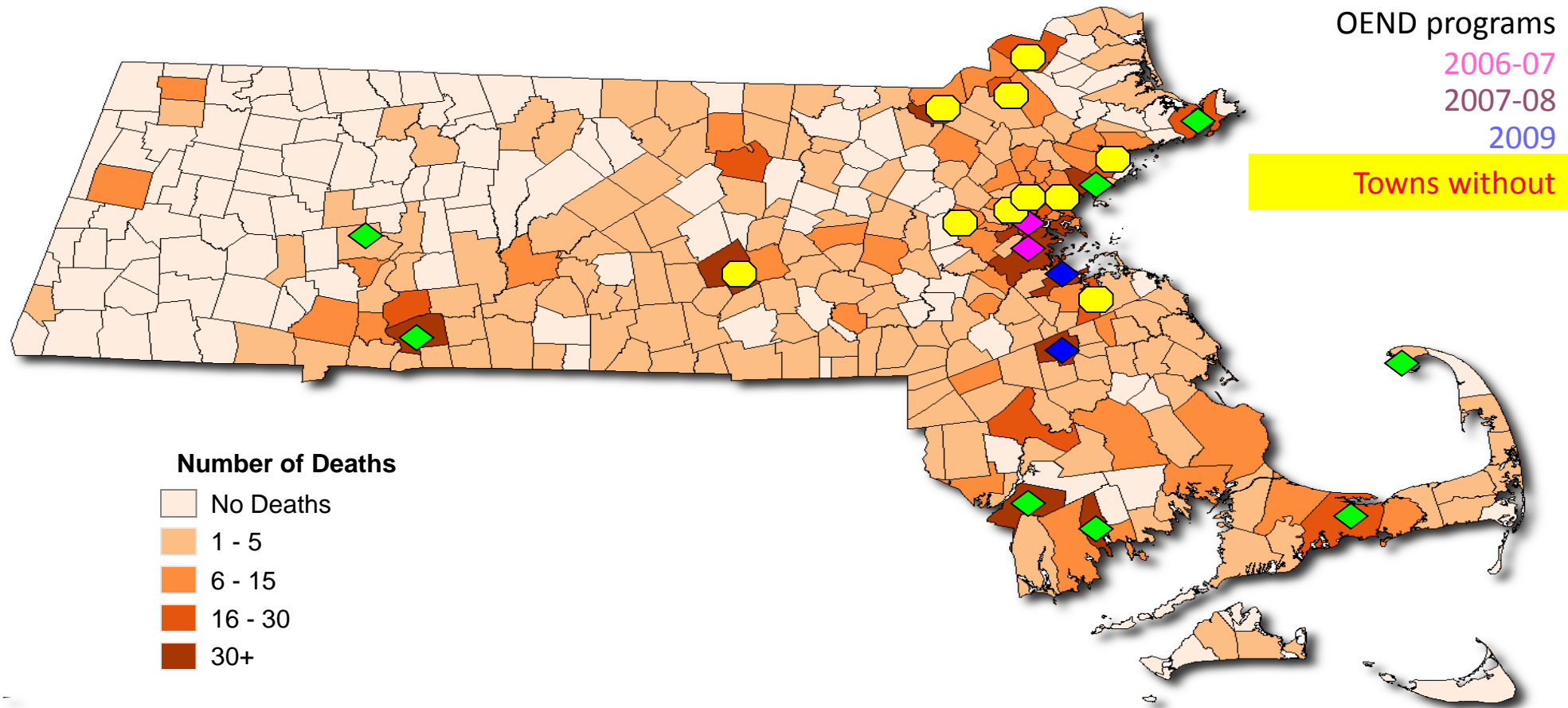
“Street pills”

- Benzodiazepines
 - Clonazepam (Klonopin)
 - Alprazolam (Xanax)
 - Diazepam (Valium)
 - Also Z drugs –ambien and lunesta

- Clonidine (Catapres)
- Promethazine (Phenergan)
- Quetiapine (Seroquel)
- Gabapentin (Neurontin)
 - Pregabalin (Lyrica)
- Bupropion (Wellbutrin)

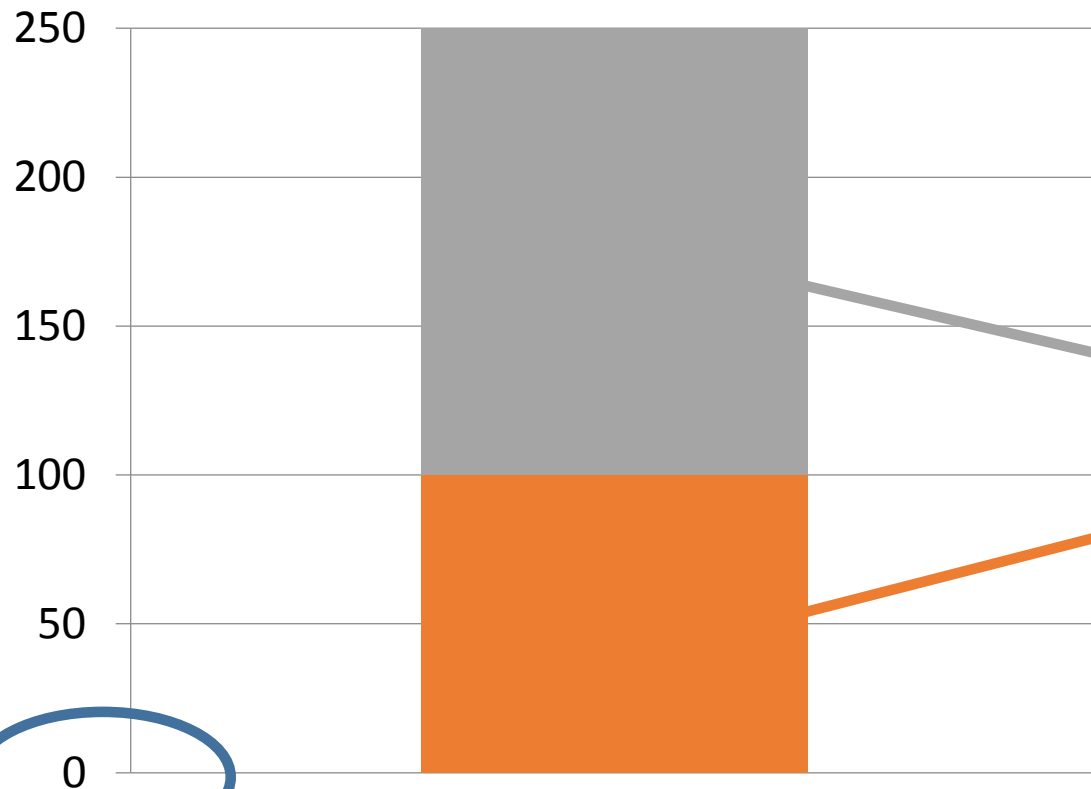


Opioid Overdose Related Deaths: Massachusetts 2004 - 2006

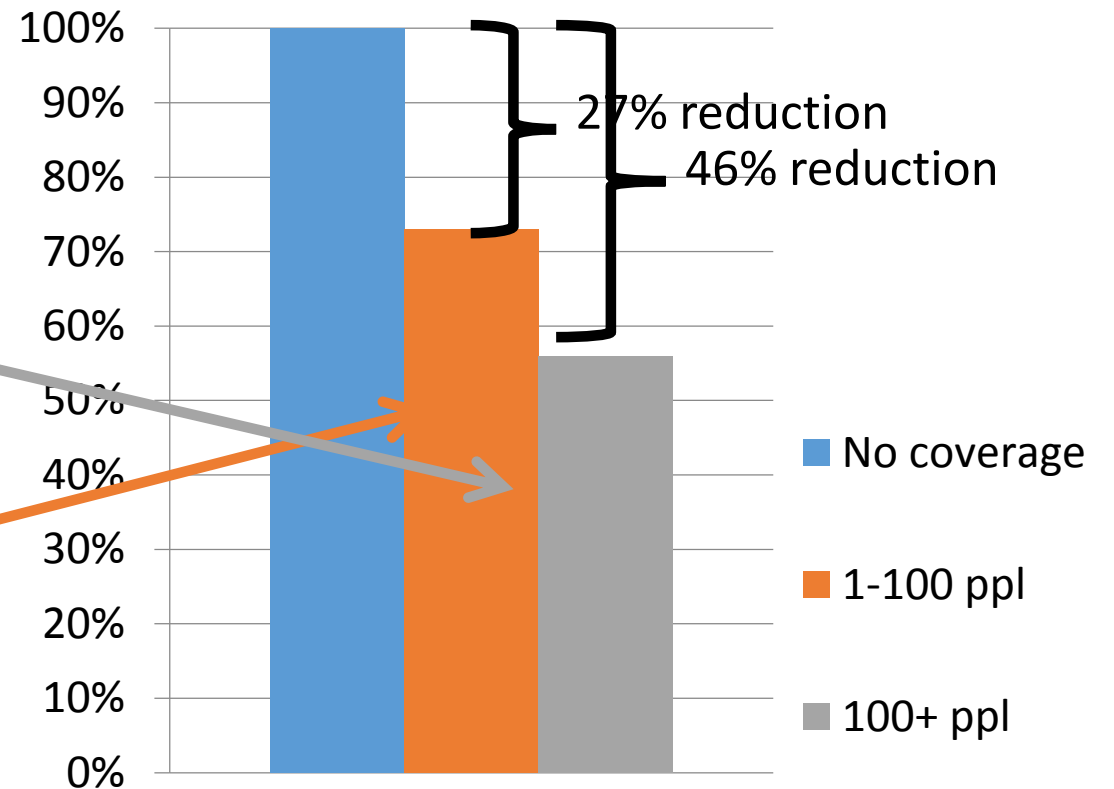


Fatal opioid OD rates by OEND implementation

Naloxone coverage per 100K

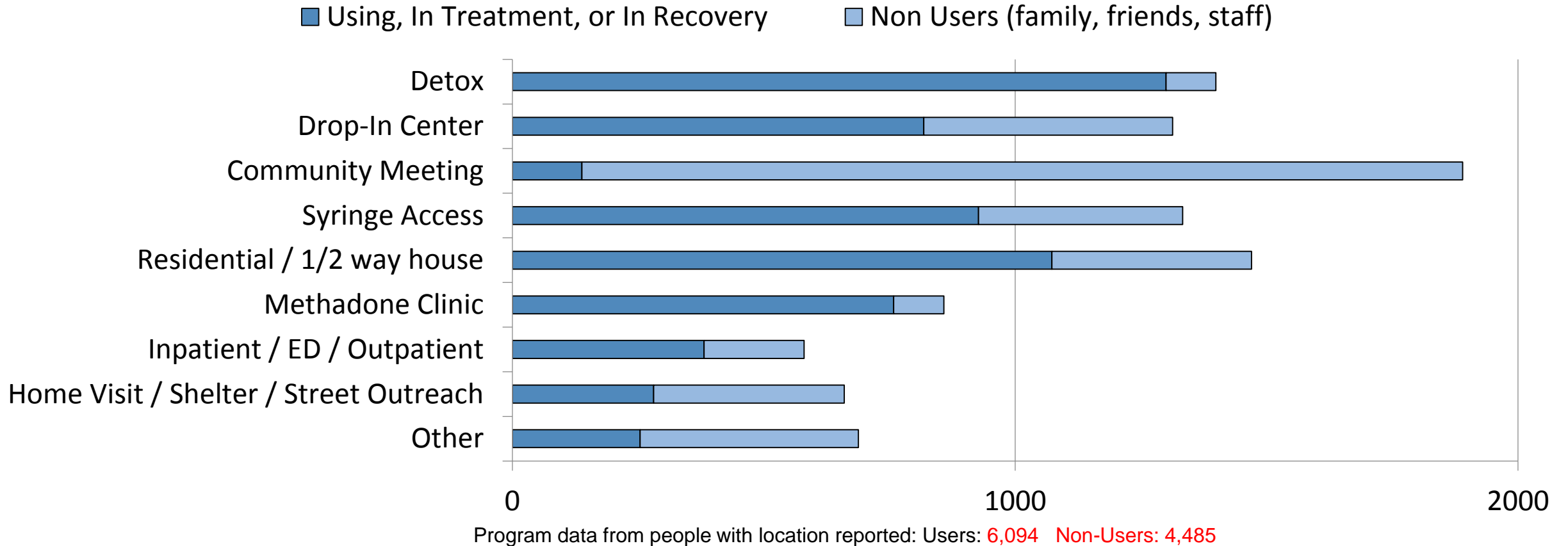


Opioid overdose death rate



Walley et al. *BMJ* 2013; 346: f174.

Enrollment locations: 2015 data only



Since 2007 > 52,000 enrollees

> 8,700 overdose rescues documented

In first half of 2016: 6999 enrollees

1527 overdose rescues



Successful strategies for HIV/AIDS and parallel opportunities for overdose reduction

Successful strategies for HIV/AIDS

- HIV testing and risk reduction counseling
- Needle-syringe distribution
- Targeted outreach /peer-driven interventions
- Supervised injection facilities
- Anti-retroviral therapy and opioid agonist treatment
- Comprehensive, collaborative, longitudinal care for individuals with HIV infection
- Coordinated prevention and treatment strategy across public health and the healthcare system
- Major funding across public health and the healthcare system of evidence-based interventions

Parallel opportunities for overdose reduction

- Overdose risk assessment and reduction counseling
- Naloxone rescue kit distribution
- Targeted outreach /peer-driven interventions
- Supervised injection facilities
- Medication for opioid use disorders
- Comprehensive, collaborative, longitudinal care for individuals with addictions
- Coordinated prevention and treatment strategy across criminal justice, law enforcement, public health and healthcare systems
- Major funding across criminal justice, law enforcement, public health and healthcare systems of evidence-based interventions

Treatment ←-----→ Prevention

Nonrandomized Intervention Study of Naloxone Coprescription for Primary Care Patients Receiving Long-Term Opioid Therapy for Pain

Phillip O. Coffin, MD, MIA; Emily Behar, MA; Christopher Rowe, MPH; Glenn-Milo Santos, PhD, MPH; Diana Coffa, MD; Matthew Bald, MD; and Eric Vittinghoff, PhD

- **Objective:** To evaluate the feasibility and effect of implementing naloxone prescription to patients prescribed opioids for chronic pain at 6 safety-net primary care clinics
- **Results**
 - 38% of 1985 patients receiving long term opioids co-prescribed naloxone rescue kits
 - Patients with higher opioid doses and previous opioid-related ED visits were more likely to be prescribed naloxone kits
 - Opioid-related ED visits were reduced by 47% at 6 months and 63% at 12 months among those who were co-prescribed naloxone, compared with those who were not
 - No change was detected in the net prescribed opioid doses for patients who were co-prescribed naloxone

Naloxone formulations



Nasal with atomizer
 “Multi-step”*
 1 dose = **2mg/2ml**
 IN
 \$\$




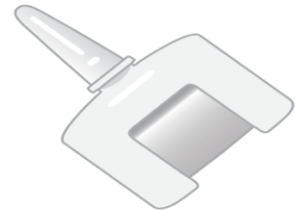



NEW: Nasal Spray
 “Single-Step”
 1 dose = **4mg/0.1ml** IN
 \$\$


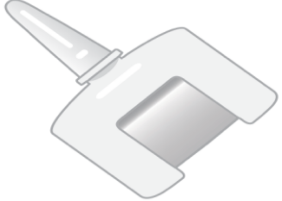





Auto-injector*
 1 dose = **0.4mg/1ml** IM
 \$\$\$\$



Intramuscular Injection
 1 dose = **0.4mg/1ml** IM
 \$

	Injectable (and intranasal- IN) generic ¹	Intranasal branded ²	Injectable generic ³	Injectable generic	Auto-injector branded
Brand name		Narcan Nasal Spray			Evzio Auto-Injector
Product comparison					
					
FDA approved Labeling includes instructions for layperson use	X (for IV, IM, SC)	X X	X	X	X X
Layperson experience	X		X		X
Assembly required	X		X	X	
Fragile	X				
Can titrate dose	X		X	X	
Strength	1 mg/mL	4 mg/0.1 mL	0.4 mg/mL OR 4 mg/10 mL	0.4 mg/mL	0.4 mg/0.4mL
Total volume of kit/package	4 mg/4 mL	8 mg/ 0.2 mL	0.8 mg/2 mL OR 4 mg/10 mL	0.8 mg/2 mL	0.8 mg/0.8 mL
Storage requirements (All protect from light)	Store at 59-86 °F Fragile: Glass.	Store at 59-77 °F Excursions from 39-104 °F	Store at 68-77 °F Breakable: Glass.	Store at 68-77 °F Breakable: Glass.	Store at 59-77 °F Excursions from 39-104 °F
Cost/kit⁴	\$\$	\$\$	\$	\$	\$\$\$ ⁵

	Injectable (and intranasal- IN) generic ¹	Intranasal branded ²	Injectable generic ³	Injectable generic	Auto-injector branded
Brand name		Narcan Nasal Spray			Evzio Auto-Injector
Product comparison					
					
Prescription variation					
Refills	Two	Two	Two	Two	Two
Rx and quantity	#2 2 mL Luer-Jet™ Luer-Lock needleless syringe plus #2 mucosal atomizer devices (MAD-300)	#1 two-pack of two 4 mg/0.1 mL intranasal devices	#2 single-use 1 mL vials OR #1 10mL multidose vial PLUS #2 3 mL syringe w/ 23-25 gauge 1-1.5 inch IM needles	#2 single-use 1 ml vials PLUS #2 3 mL syringe w/ 23-25 gauge 1-1.5 inch IM needles	#1 two-pack of two 0.4 mg/0.4 mL prefilled auto-injector devices
Sig. (for suspected opioid overdose)	Spray 1 ml (1/2 of syringe) into each nostril. Repeat after 2-3 minutes if no or minimal response.	Spray 0.1 mL into one nostril. Repeat with second device into other nostril after 2-3 minutes if no or minimal response.	Inject 1 mL in shoulder or thigh. Repeat after 2-3 minutes if no or minimal response.	Inject 1 mL in shoulder or thigh. Repeat after 2-3 minutes if no or minimal response.	Inject into outer thigh as directed by English voice-prompt system. Place black side firmly on outer thigh and depress and hold for 5 seconds. Repeat with second device in 2-3 minutes if no or minimal response.
Ordering information					
How supplied	Box of 10 Luer-Jet™ prefilled glass syringes	Two-pack of single use intranasal devices	Box of 10 single-dose flip-top vials (1 ml) OR Case of 25 multi-dose flip-top vials (10 ml)	Box of 10 single-dose flip-top vials	Two pack of single use auto-injectors + 1 trainer
Web address	Amphastar.com Teleflex.com	Narcannasalspray.com	Hospira.com	Mylan.com	Evzio.com



Active overdose prevention advocacy efforts

- Pharmacy access to naloxone rescue kit
- Insurance coverage for naloxone rescue kits regardless of opioid using status
- Integrating naloxone training into Basic Life Support education
- Integration of addiction treatment and harm reduction education into the curriculum
- Safe spaces, drug consumption rooms, supervised injection facilities, heroin maintenance

Law that limits liability and promotes help-seeking, third party prescribing Massachusetts - August 2012:

Good Samaritan provision:

- Protects people who overdose or seek help for someone overdosing from being charged or prosecuted for drug possession
 - Protection does not extend to trafficking or distribution charges

Patient protection:

- A person acting in good faith may receive a naloxone prescription, possess naloxone and administer naloxone to an individual appearing to experience an opiate-related overdose.

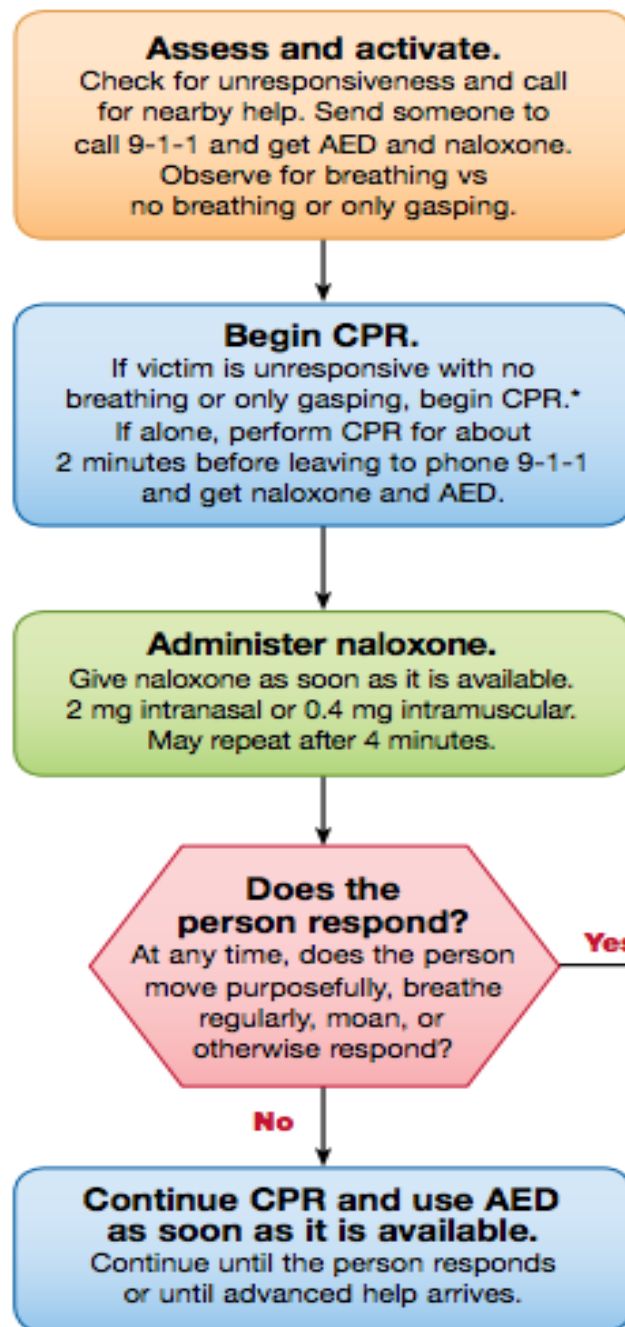
Prescriber protection:

- Naloxone or other opioid antagonist may lawfully be prescribed and dispensed to a person at risk of experiencing an opiate-related overdose or a family member, friend or other person in a position to assist a person at risk of experiencing an opiate-related overdose. For purposes of this chapter and chapter 112, any such prescription shall be regarded as being issued for a legitimate medical purpose in the usual course of professional practice.

Updated Opioid-Associated Life Threatening Emergency (ADULT) Algorithm

American Heart Association Guidelines October 2015

<https://eccguidelines.heart.org/wp-content/uploads/2015/10/2015-AHA-Guidelines-Highlights-English.pdf>



*CPR technique based on rescuer's level of training.

Overdose Education and Naloxone Rescue

What people need to know:

1.Prevention - the risks:

- Mixing substances
- Abstinence- low tolerance
- Using alone
- Unknown source
- Chronic medical disease
- Long acting opioids last longer

2.Recognition

- Unresponsive to sternal rub with slowed breathing
- Blue lips, pinpoint pupils



3.Response - What to do

- Call for help
- Rescue breathe
- Administer naloxone, continue breathing
- Recovery position
- Stay until help arrives



Patient education videos and materials at
prescribetoprevent.org

Strategies to address opioid use and overdose

- **Prescription monitoring programs**
 - Paulozzi et al. Pain Medicine 2011
- Prescription drug take back events
 - Gray et al. Arch Intern Med 2012; 172: 1186-87
- Safe opioid prescribing education
 - Albert et al. Pain Medicine 2011; 12: S77-S85
- Opioid agonist treatment
 - Clausen et al. Addiction 2009;104;1356-62
- Supervised injection facilities
 - Marshall et al. Lancet 2011;377;1429-37
- Overdose Education and Naloxone Distribution

Massachusetts Department of Public Health

MA PMP
99 Chauncy Street
Boston, MA 02111
855-562-4767

Home RxSearch User Profile Help Log Out PMP AWARxE

RxSearch Patient Alerts Patient Request Bulk Patient Search Requests History MyRx

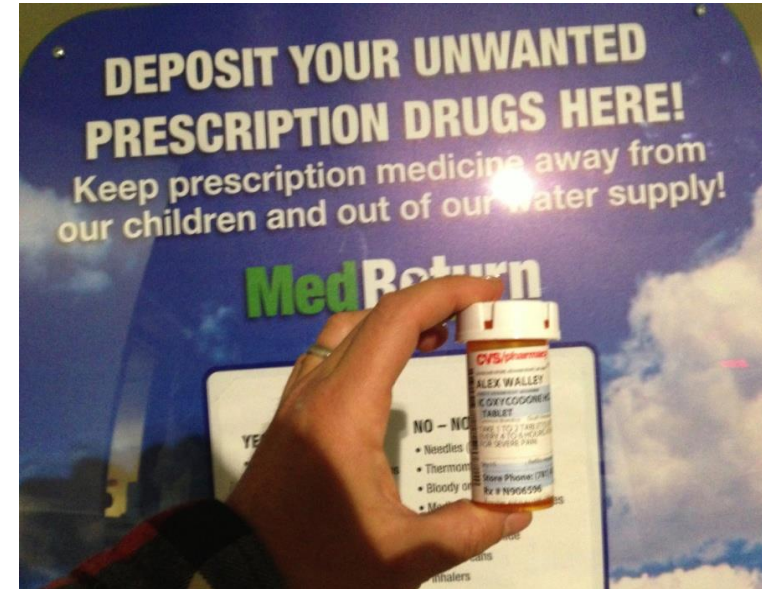
Patient Request

[Patient Rx Request Tutorial](#) [Get Adobe Acrobat Reader](#)

Patient Info	Patient Location	PMP Interconnect Search
First Name* <input type="checkbox"/> Partial spelling <input type="text"/>	City <input type="text"/>	<input type="checkbox"/> Connecticut
Last Name* <input type="checkbox"/> Partial spelling <input type="text"/>	State/Province State Select	<input type="checkbox"/> Rhode Island
DOB* mm/dd/yyyy <input type="text"/>	Zip Code <input type="text"/>	<input type="checkbox"/> Vermont
Phone Number <input type="text"/>	Prescription Fill Dates From*	

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www.scopeofpain.com

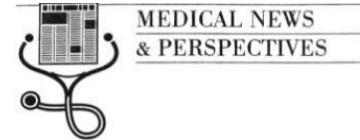
www.opioidprescribing.com

www.pcass-o.org



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Methadone Treatment Marks 40 Years

Bridget M. Kuehn

FORTY YEARS AND COUNTLESS POLITICAL firestorms after it was first introduced, methadone maintenance for the treatment of opioid addiction remains a standard therapy in the field of addiction treatment.

The publication on August 23, 1965, of positive results from a small clinical trial of methadone as a treatment for heroin addiction in *JAMA* marked a sea change in the treatment of addiction (Dole and Nyswander. *JAMA*. 1965; 193:646-650). The study, conducted at Rockefeller University in New York City by Vincent P. Dole, MD, and the late Marie E. Nyswander, MD, suggested that a medication could be used to control the cravings and withdrawal that often lead to relapse in individuals with opioid addiction who attempt to quit.

The work, along with subsequent research by Dole, an endocrinologist, Nyswander, a psychiatrist, and colleagues established the concept of opioid addiction as a chronic disease, similar to diabetes, that as such required

now head of the Laboratory of the Biology of Addictive Diseases at Rockefeller University, explained that work conducted by the group in 1964 and published in 1966 established that methadone blocked the effects of heroin and stabilized patients, who prior to treatment oscillated between feeling

done treatment, the ap always struggled for accep the forces of public opini tics. "There is a stigma a; tions, addicts, and—sadly providers," said Kreek, a; supporter of the methado

"THE FARM"

Methadone maintenance resented a reversal of the t approach to treating dru said David F. Musto, MD turer at Yale and expert policy. A 1919 Supreme sion had established th; alone did not justify phys; ing addicts with opioids. B; cision, some physicians ha acting opioids to treat indi opioid addiction.

The Drug Enforcement tion, in fact, considered D; illegal and had threatened him prior to the 1965 pub defy the US government wa litical courage," said Jeron who became the first natio



Ingbert Gröbner/The Rockefeller University

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Distribution

Boston Globe – December 27, 2015

EDITORIAL | CRISIS PROPORTIONS

Massachusetts needs safe injection sites








AFP/GETTY IMAGES

A client of the Insite supervised injection Center in Vancouver, Canada, collected her kit in 2011.

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Brand name		Narcan Nasal Spray			Evzio Auto-Injector
Product comparison					
					
FDA approved Labeling includes instructions for layperson use	X (for IV, IM, SC)	X X	X	X	X X
Layperson experience	X		X		X
Assembly required	X		X	X	
Fragile	X				
Can titrate dose	X		X	X	
Strength	1 mg/mL	4 mg/0.1 mL	0.4 mg/mL OR 4 mg/10 mL	0.4 mg/mL	0.4 mg/0.4mL
Total volume of kit/package	4 mg/4 mL	8 mg/ 0.2 mL	0.8 mg/2 mL OR 4 mg/10 mL	0.8 mg/2 mL	0.8 mg/0.8 mL
Storage requirements (All protect from light)	Store at 59-86 °F Fragile: Glass.	Store at 59-77 °F Excursions from 39-104 °F	Store at 68-77 °F Breakable: Glass.	Store at 68-77 °F Breakable: Glass.	Store at 59-77 °F Excursions from 39-104 °F
Cost/kit⁴	\$\$	\$\$	\$	\$	\$\$\$ ⁵

Community Outbreak of HIV Infection Linked to Injection Drug Use of Oxymorphone — Indiana, 2015

Caitlin Conrad¹, Heather M. Bradley², Dita Broz², Swamy Buddha¹, Erika L. Chapman¹, Romeo R. Galang^{2,3}, Daniel Hillman¹, John Hon¹, Karen W. Hoover², Monita R. Patel^{2,3}, Andrea Perez¹, Philip J. Peters², Pam Pontones¹, Jeremy C. Roseberry¹, Michelle Sandoval^{2,3}, Jessica Shields⁴, Jennifer Walthall¹, Dorothy Waterhouse⁴, Paul J. Weidle², Hsiu Wu^{2,3}, Joan M. Duwve^{1,5} (Author affiliations at end of text)

MMWR / May 1, 2015 / Vol. 64 / No. 16

- > March 26, 2015 – Gov. Pence issued emergency order permitting needle-syringe distribution
- > May 2015 – Indiana law passed allowing needle-syringe distribution in communities with an HIV epidemic
- > Jan 2016 federal funding ban ended

- Injection partners range from 1 to 6