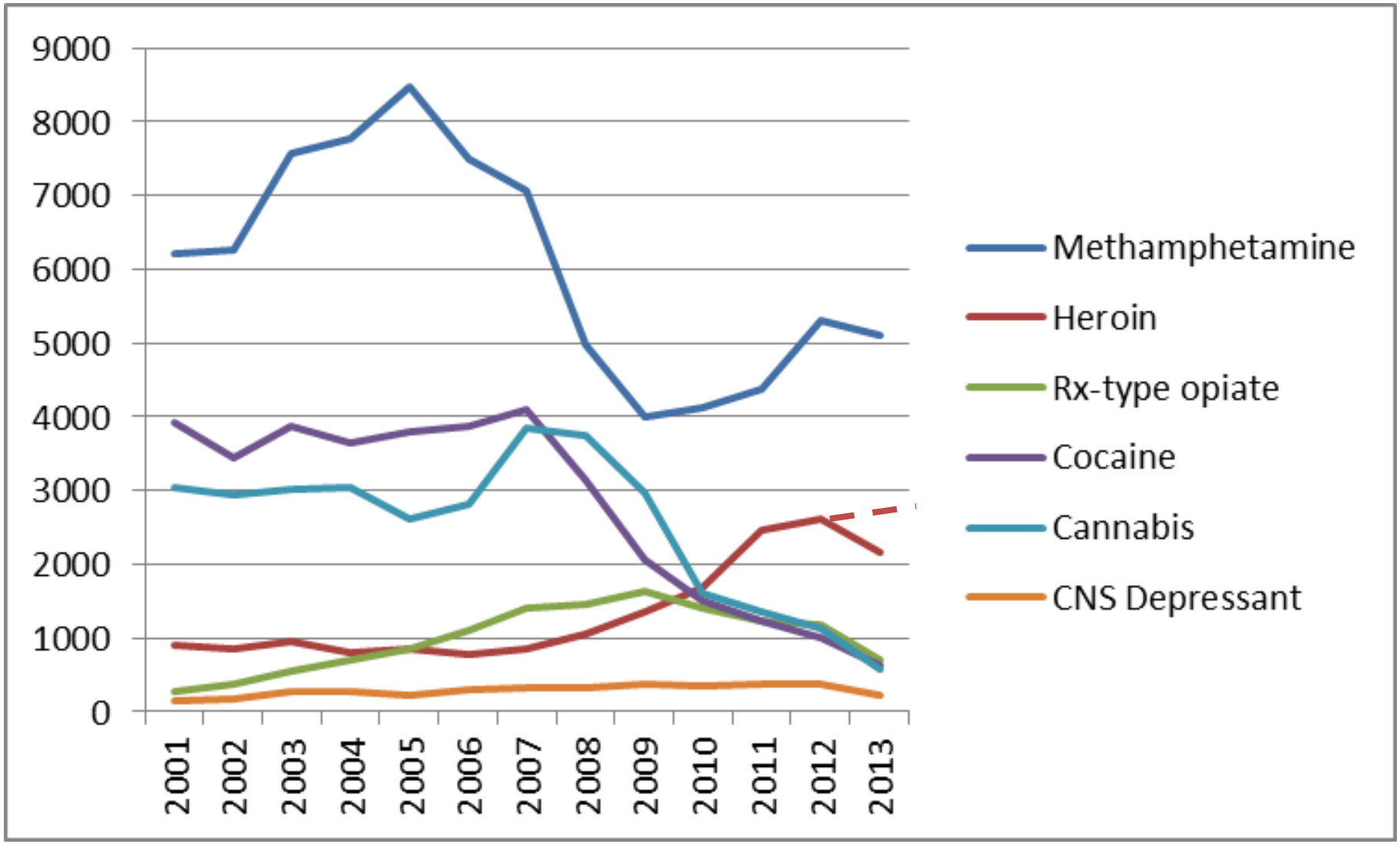
Opiate Morbidity & Mortality: What's the Problem & What Can You Do About It?

Caleb Banta-Green PhD MPH MSW
Senior Research Scientist- Alcohol and Drug Abuse Institute
Affiliate Associate Professor- School of Public Health
Affiliate Faculty- Harborview Injury Prevention & Research Center
University of Washington
calebbg@uw.edu

Outline

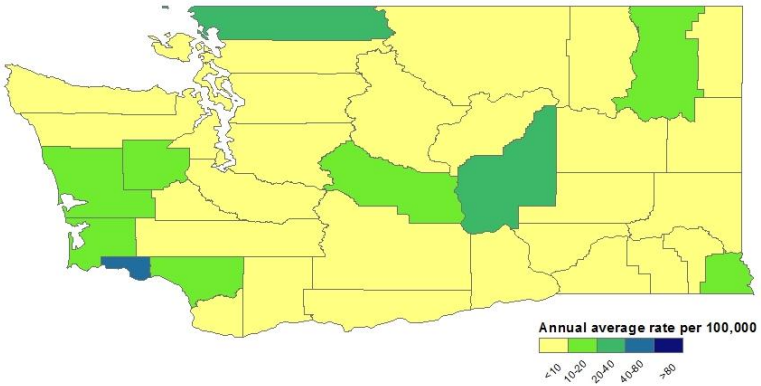
- Drug trends
- Young heroin injectors
- Prescription opioids
- Transition from Rx to Heroin
- Overdose prevention
  - Methadone/buprenorphine
  - Naloxone + OD education (training)

Police Evidence
WA State- Preliminary

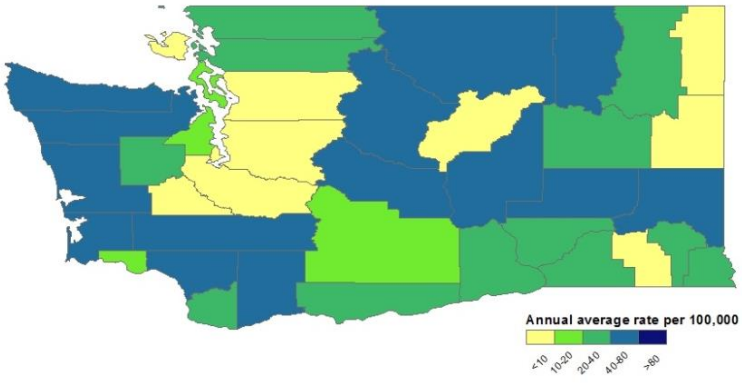


Trends in Police Evidence for Heroin and Rx-type opiates

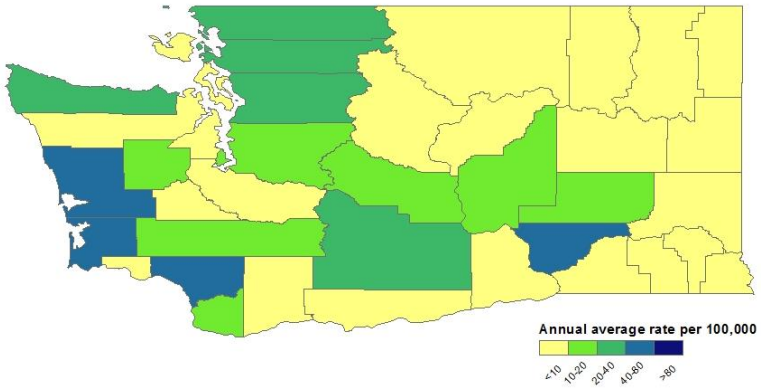
Rx-Type Opiates in Police Evidence
Annual Average 2001-2002



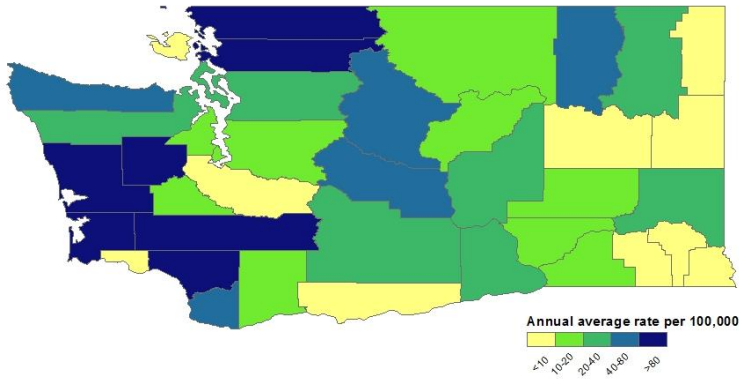
Rx-Type Opiates in Police Evidence
Annual Average 2011-2012



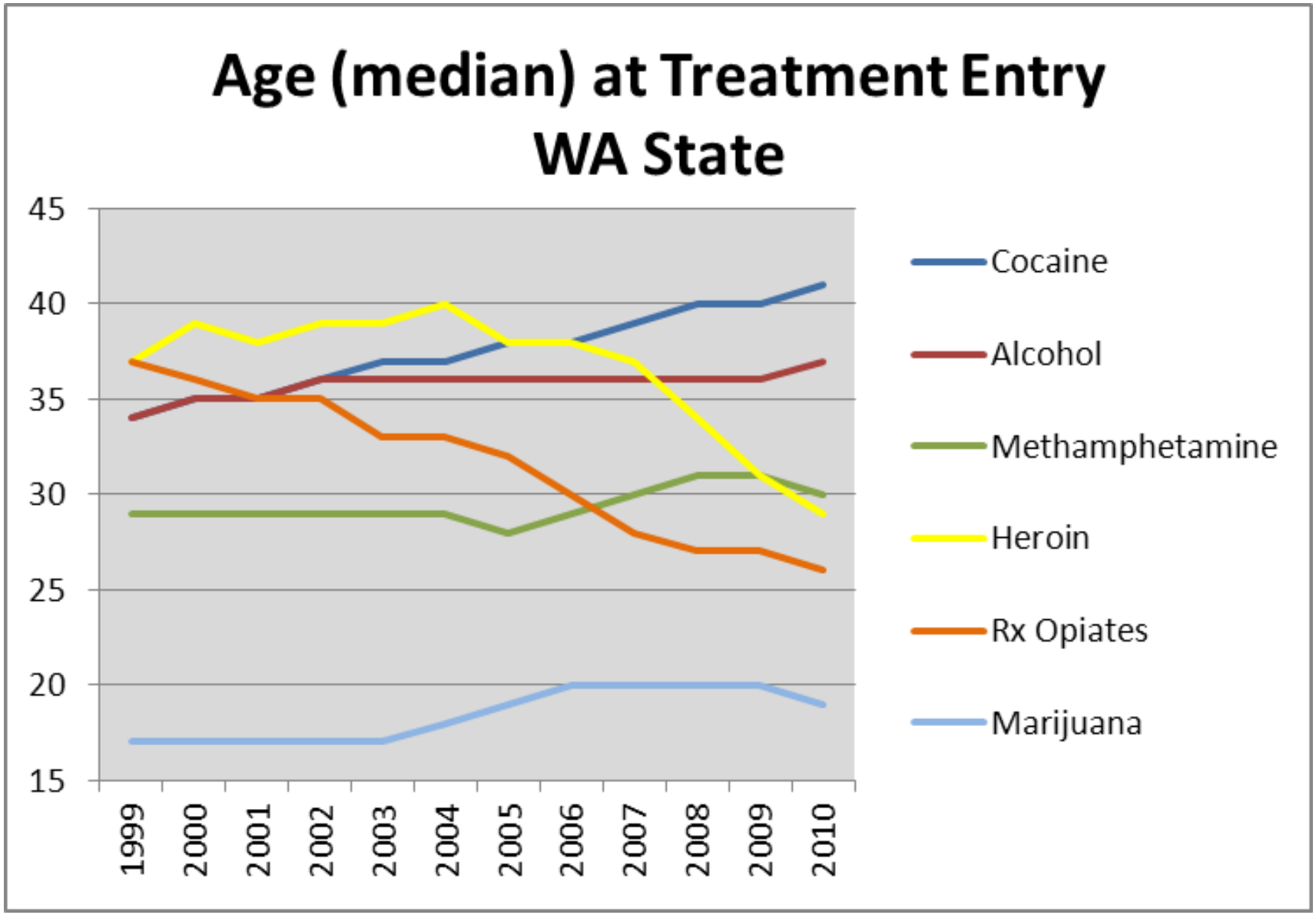
Heroin in Police Evidence
Annual Average 2001-2002



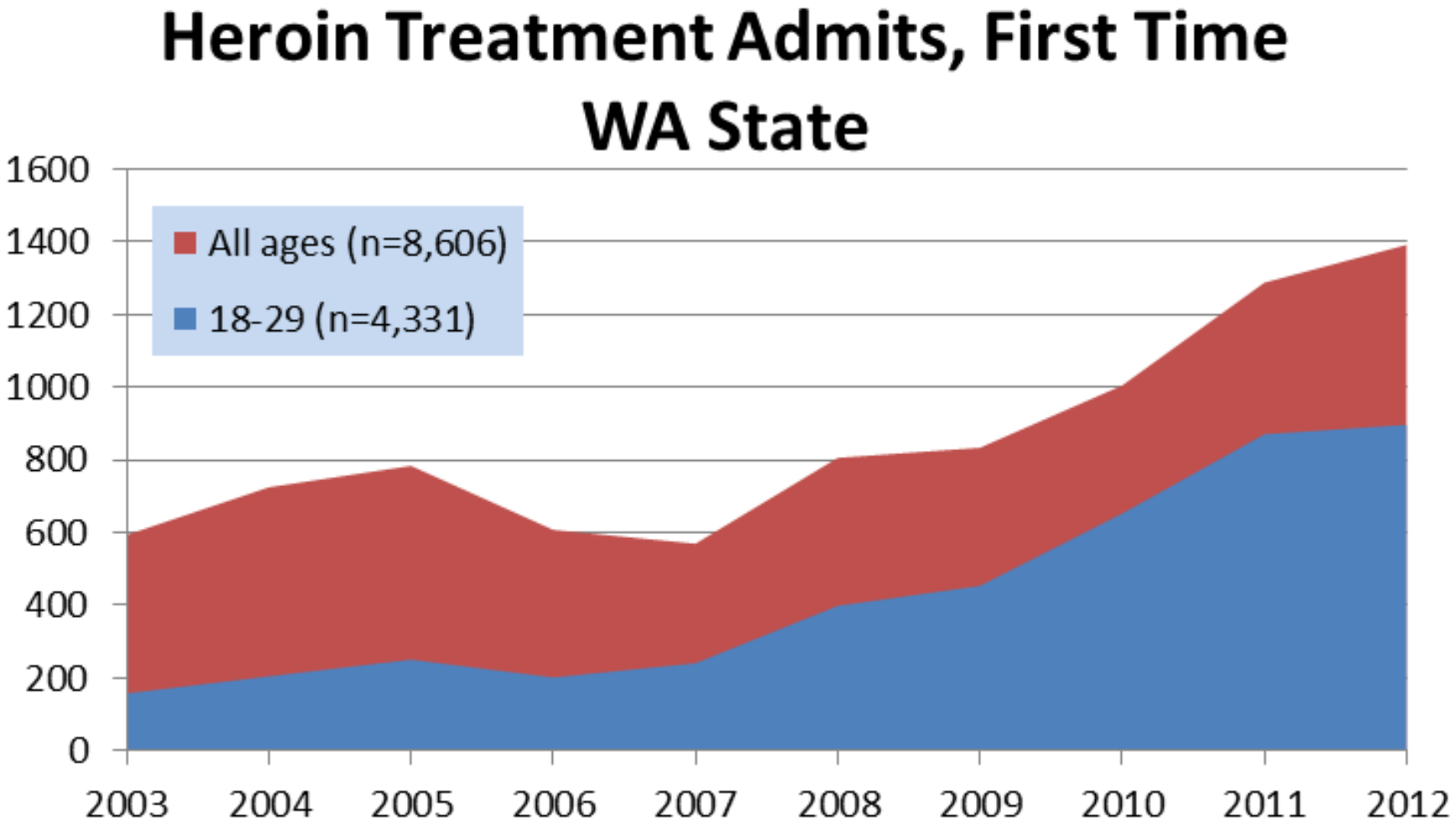
Heroin in Police Evidence
Annual Average 2011-2012



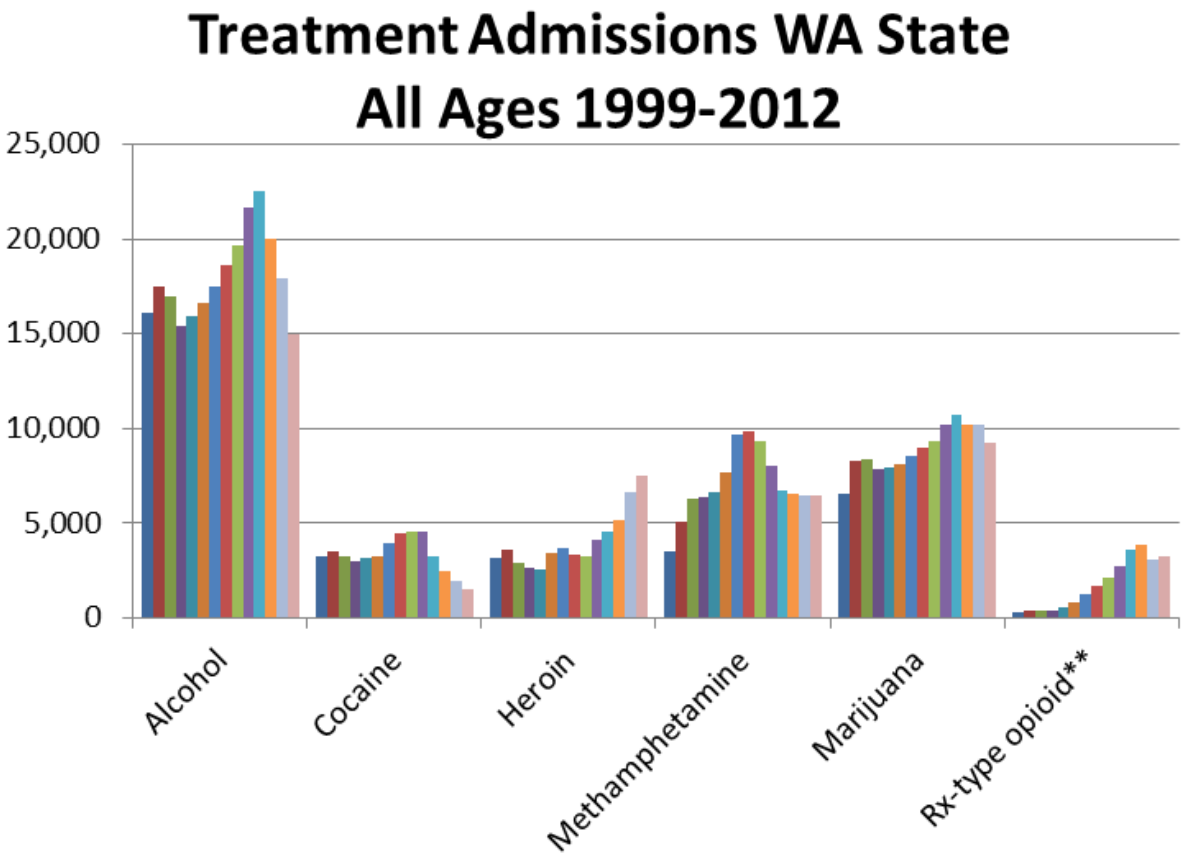
Data source: Washington State Patrol, Crime Lab, NFLIS data set
Data analysis and mapping: Caleb Banta-Green, University of Washington



Source: TARGET



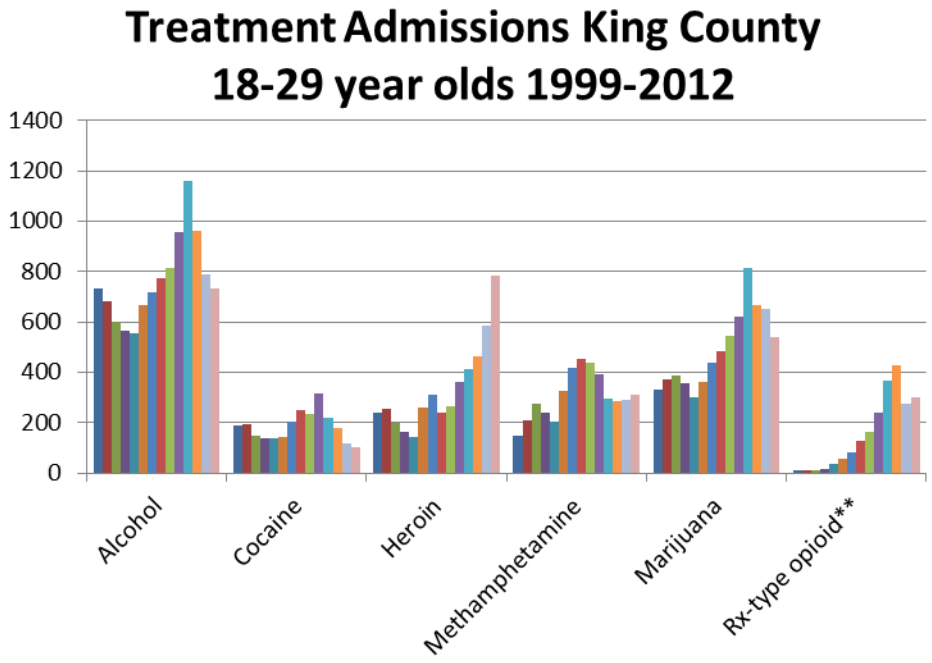
Two-thirds are injectors, remainder are smokers (who will likely transition to IDU)

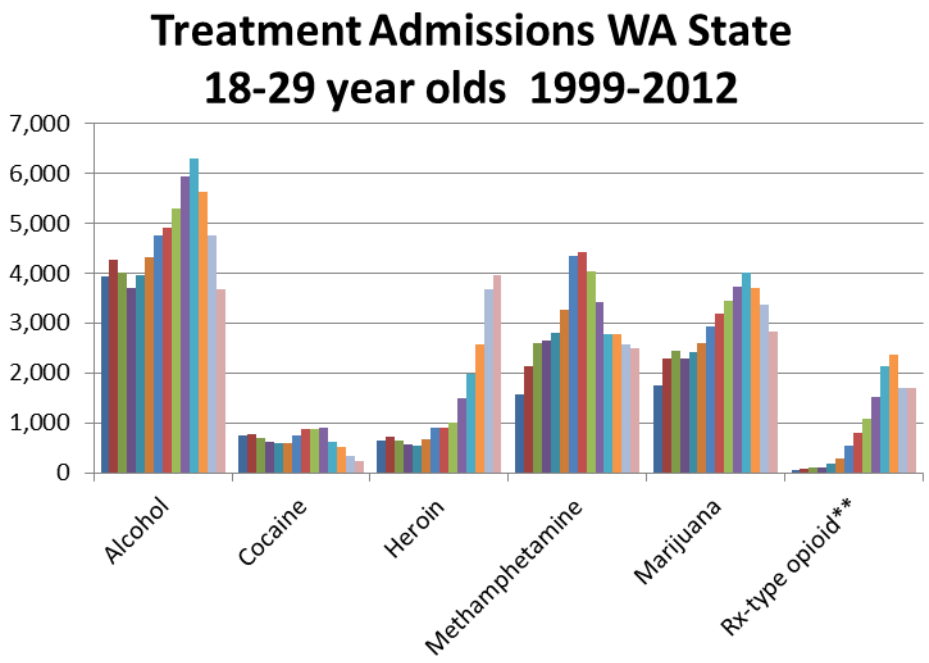


- Publicly funded admissions to Inpatient, Outpatient and MMT
- Treatment admits strongly influenced by funding and capacity, as well as demand
- Overall impact of capacity expansion in mid-2000's can be seen
- Heroin increased substantially
- Rx Opioids down a bit in 2012 from peak

Treatment Admissions

Measure of service utilization, duplicated

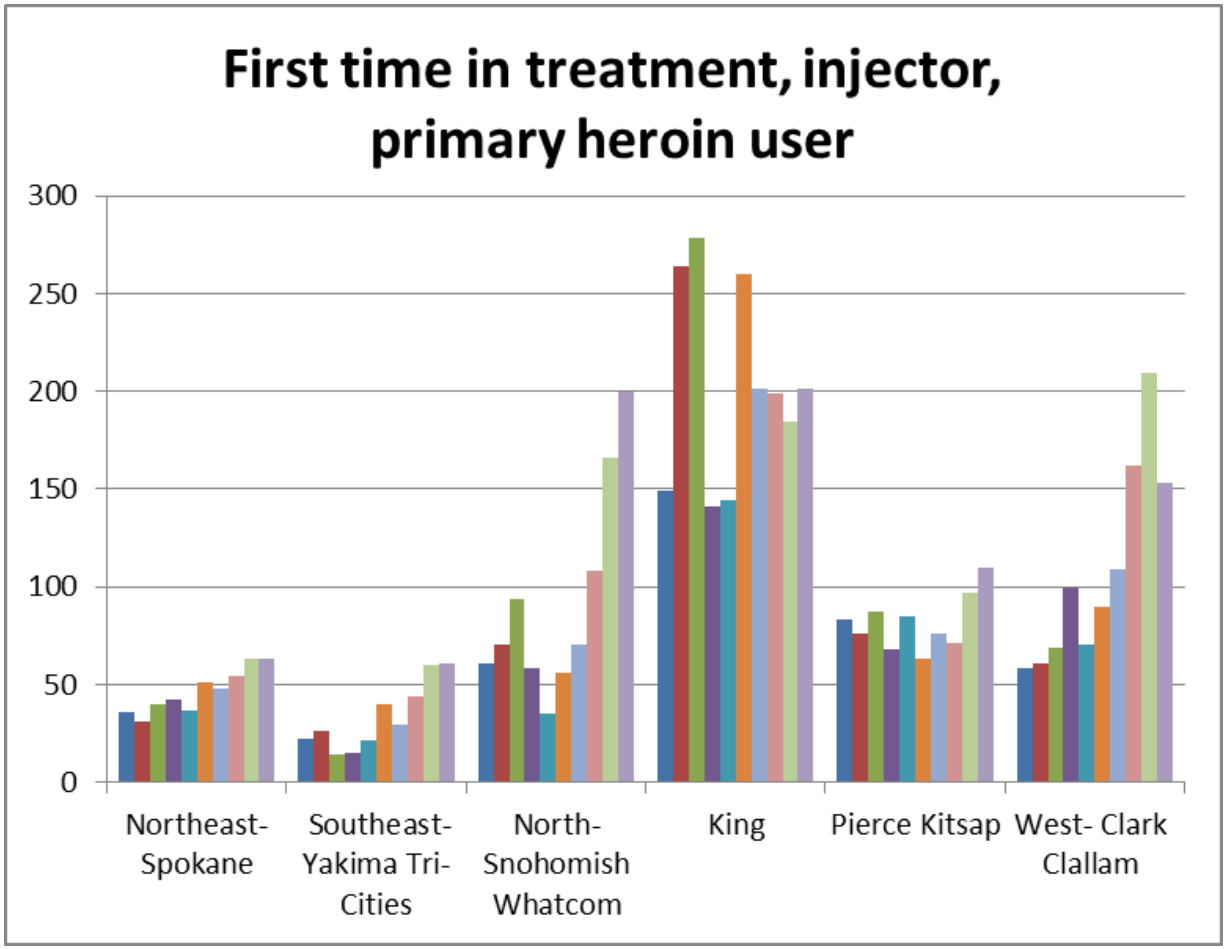




As every other substance declined,

- Heroin increased 224% in King
- 512% Statewide among 18-29 year olds
- Heroin is the #1 drug in this age group

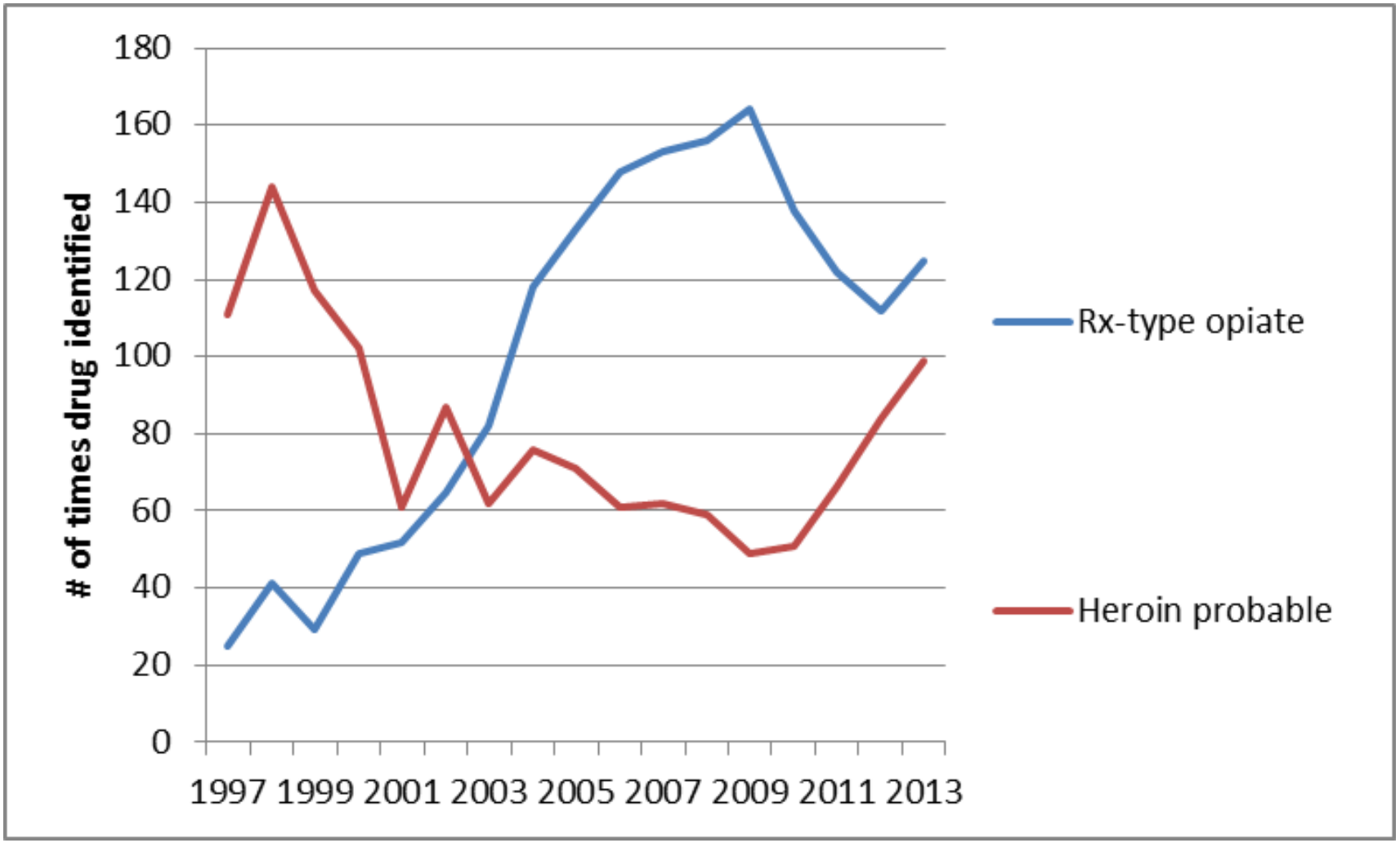
2,189 caseload for buprenorphine/Suboxone for 18-29 years olds (March 2012 per DOH PMP)



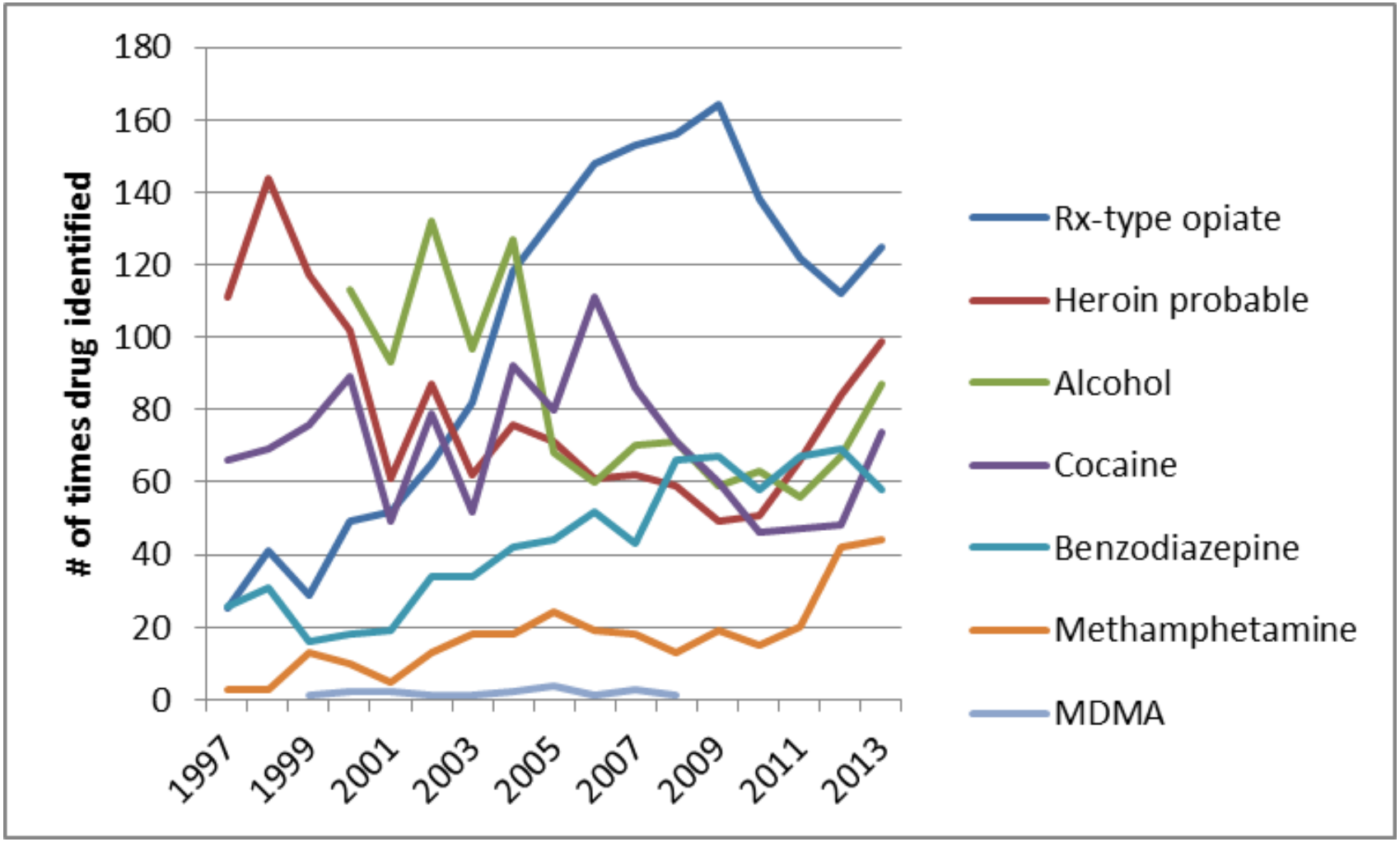
N=5,649 total

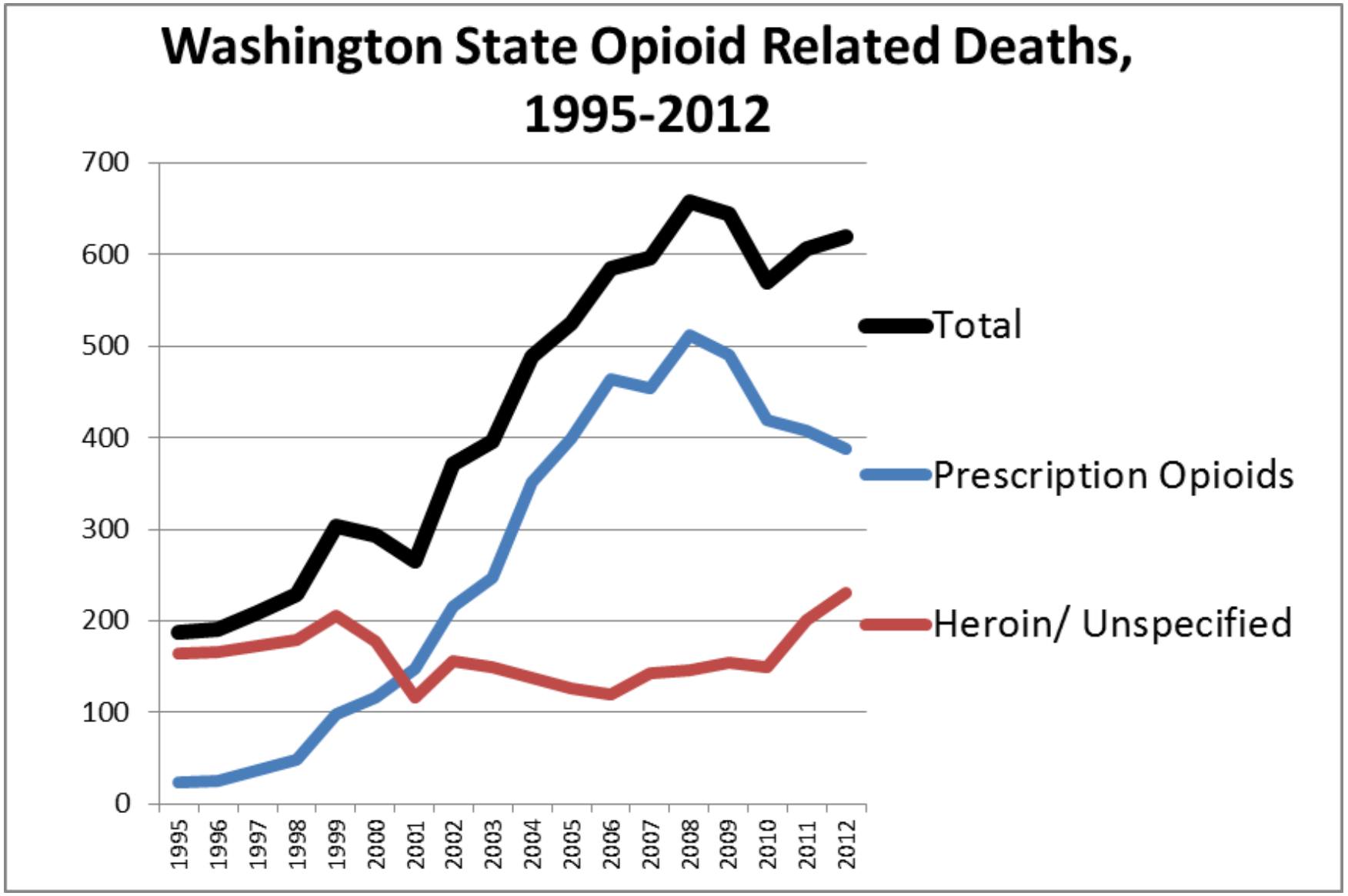
	Northeast- Spokane	Southeast- Yakima Tri- Cities	North- Snohomish Whatcom	King	Pierce Kitsap	West- Clark Clallam	STATE
2012 Rate per 100,000	7.5	9.7	18.0	10.5	10.6	13.6	11.8
% change 2003-2012	75%	177%	228%	35%	33%	164%	92%

Drug Caused Deaths, King County



Drug Caused Deaths, King County





Center for Health Statistics, Washington State Department of Health, December 12, 2013.

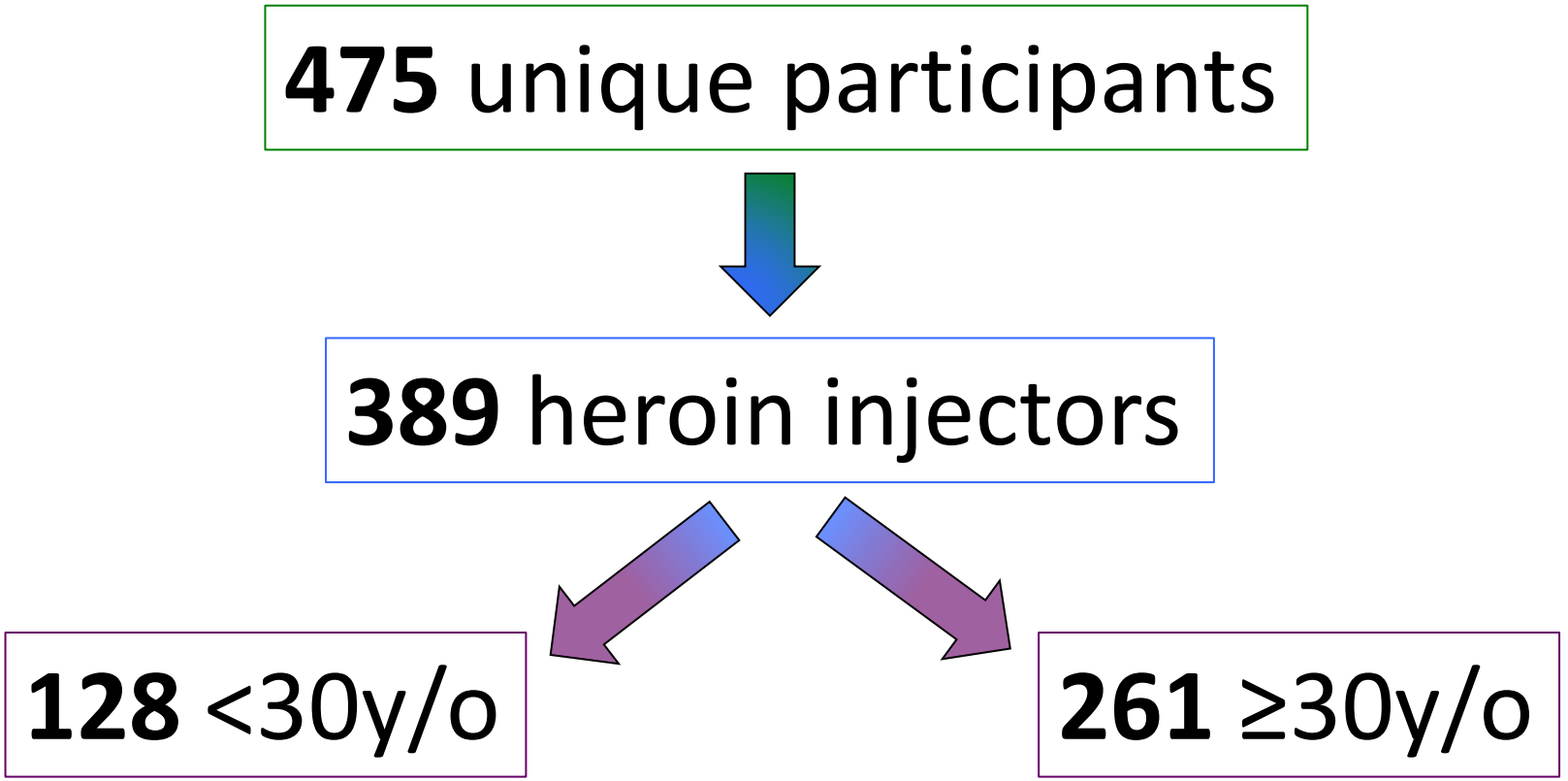
Health Risks Of The Emergent Young Population Of Heroin Injectors In The Seattle Area

Emily Cedarbaum

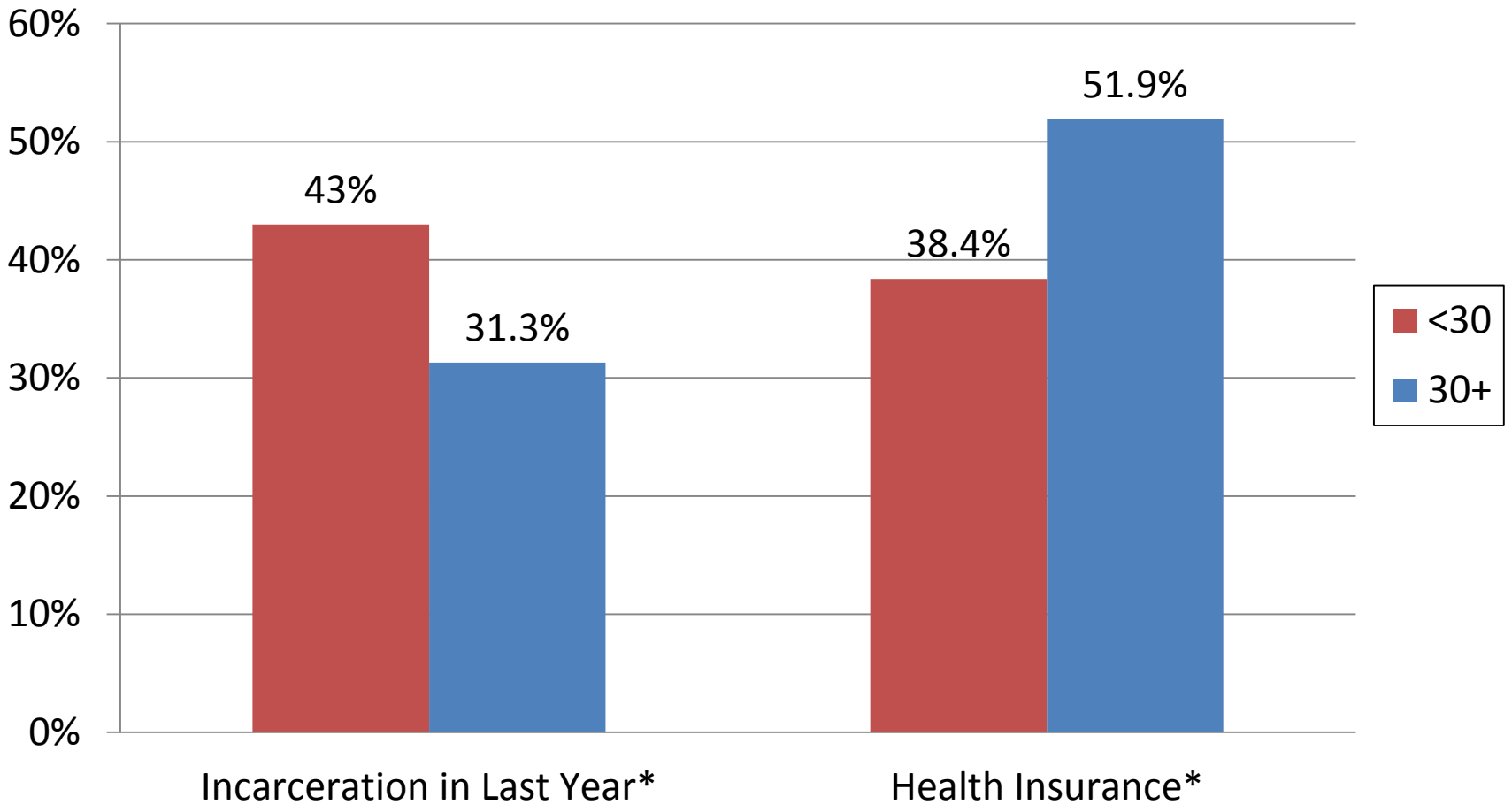
MD/MPH Candidate

Methods

- Survey administered at PHSKC syringe exchange facilities in July 2013

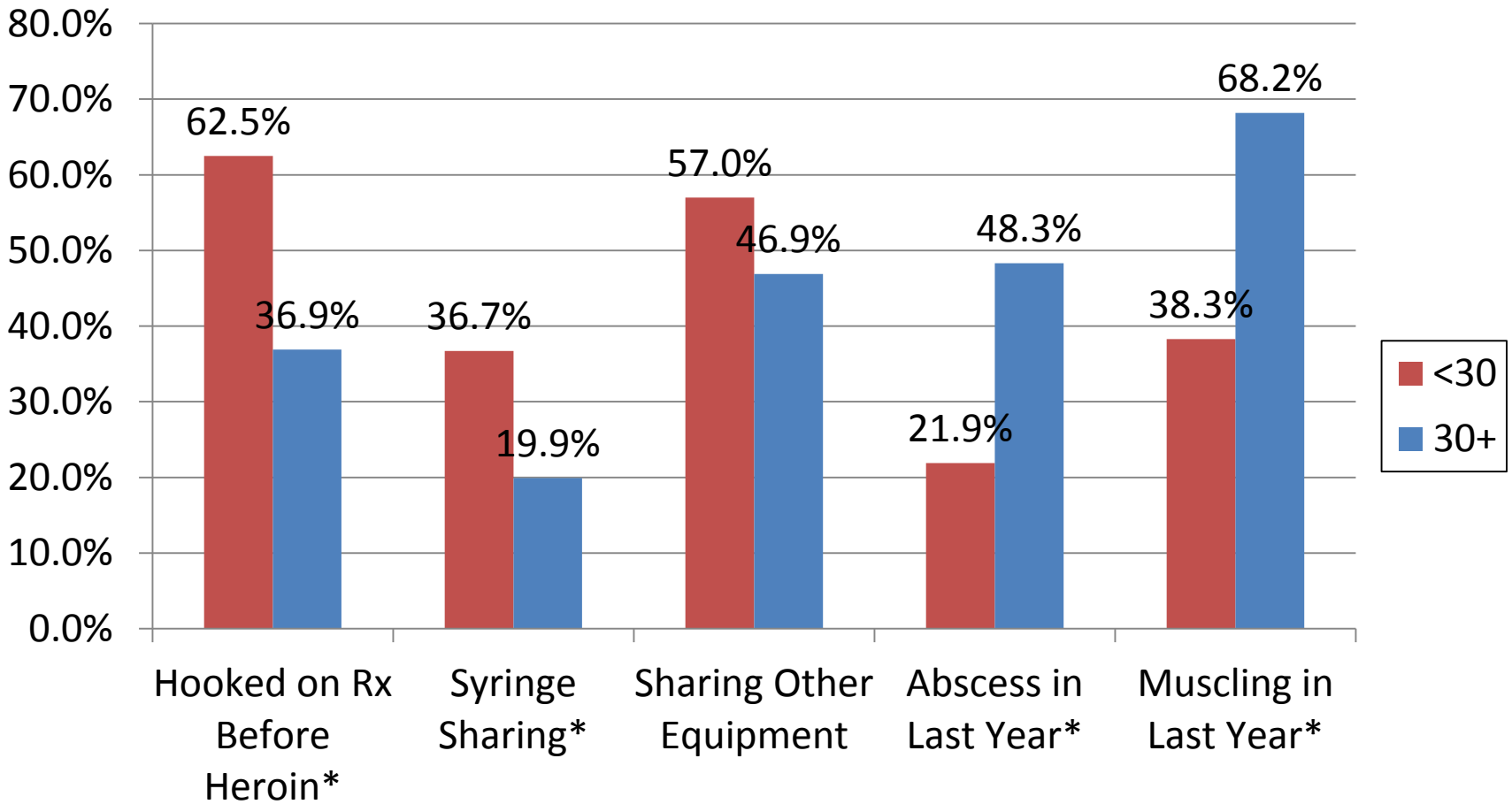


Key Findings: Demographics



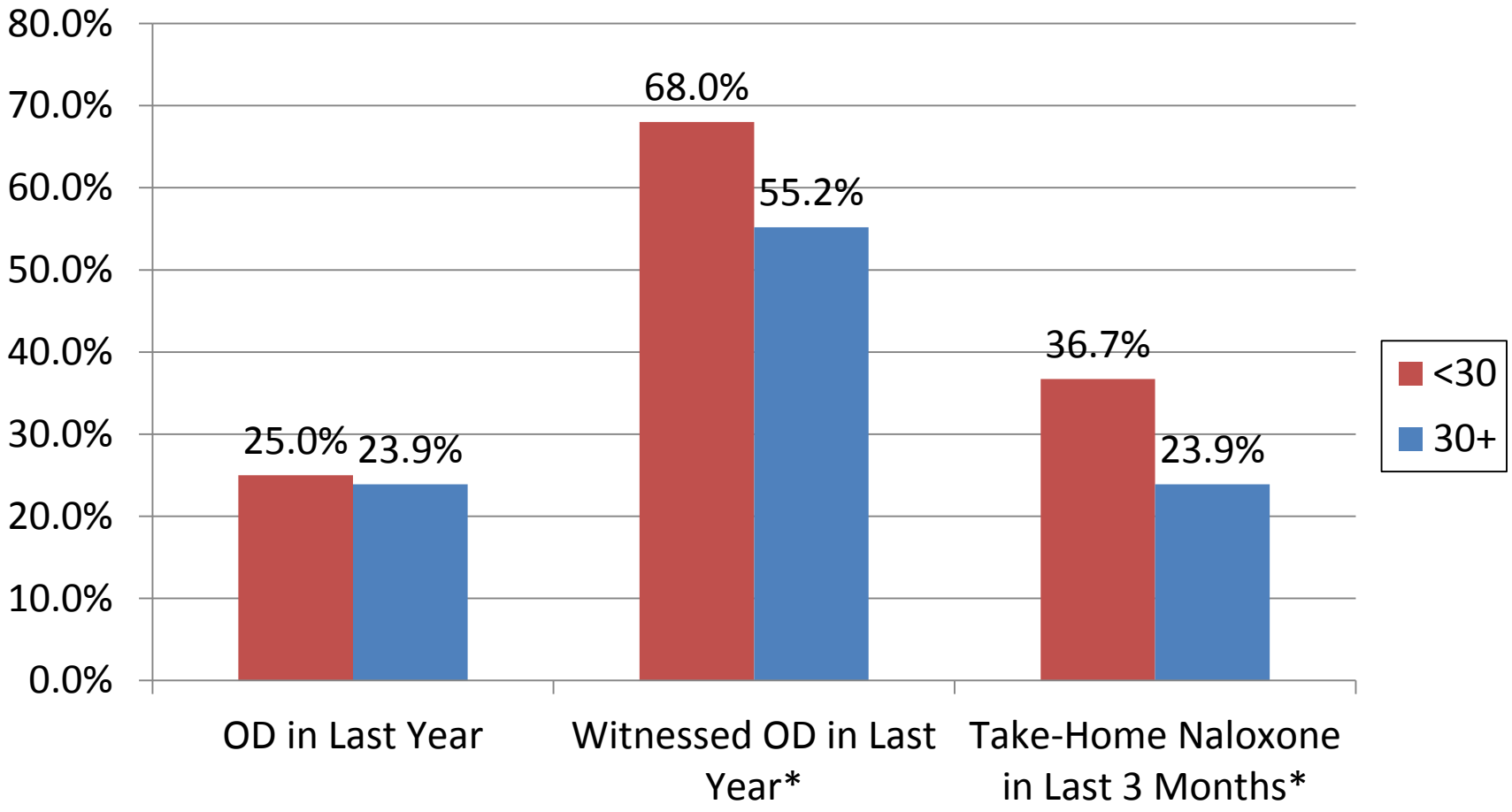
**Statistically significant*

Key Findings: Injection Characteristics



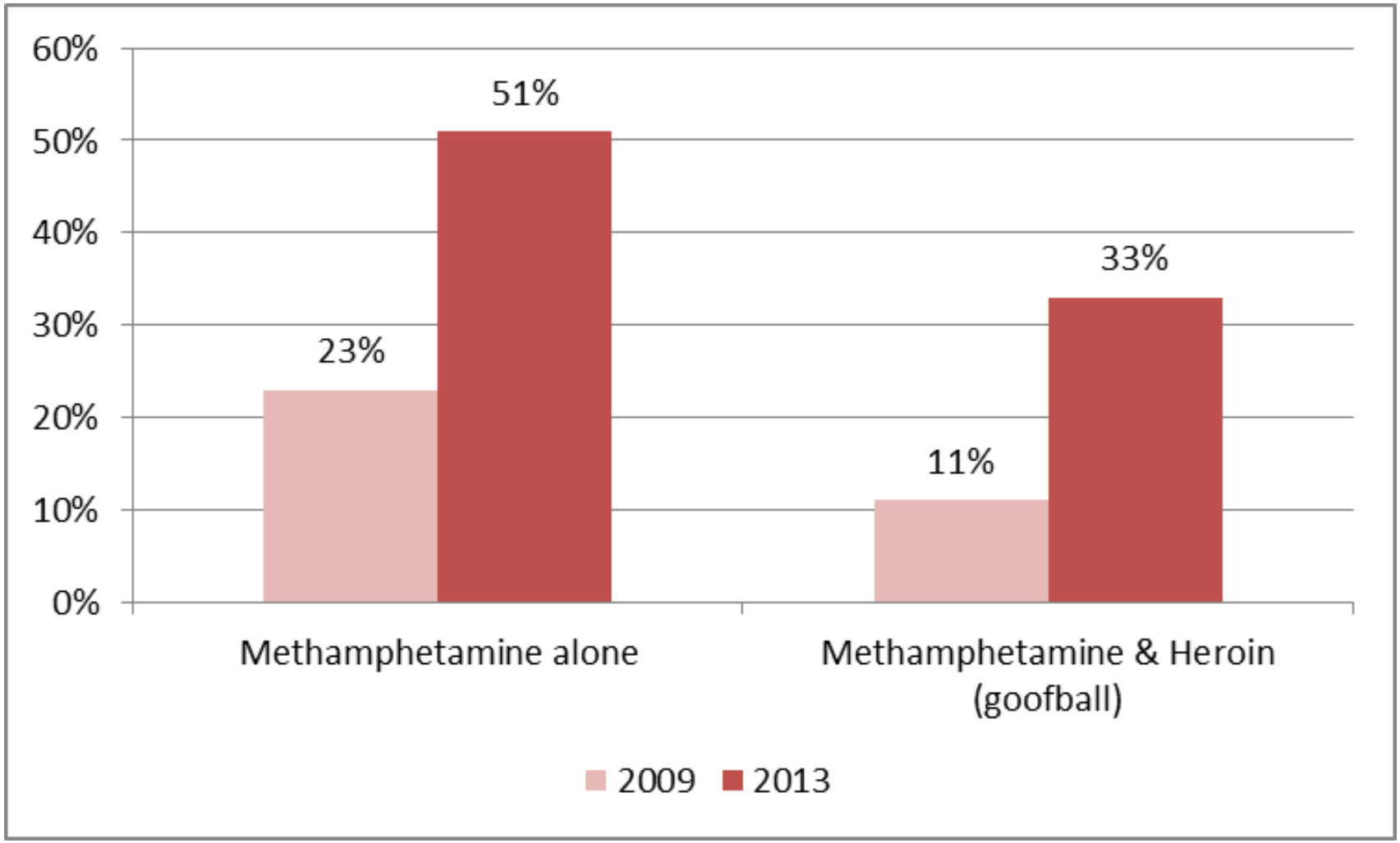
**Statistically significant*

Key Findings: Injection Consequences

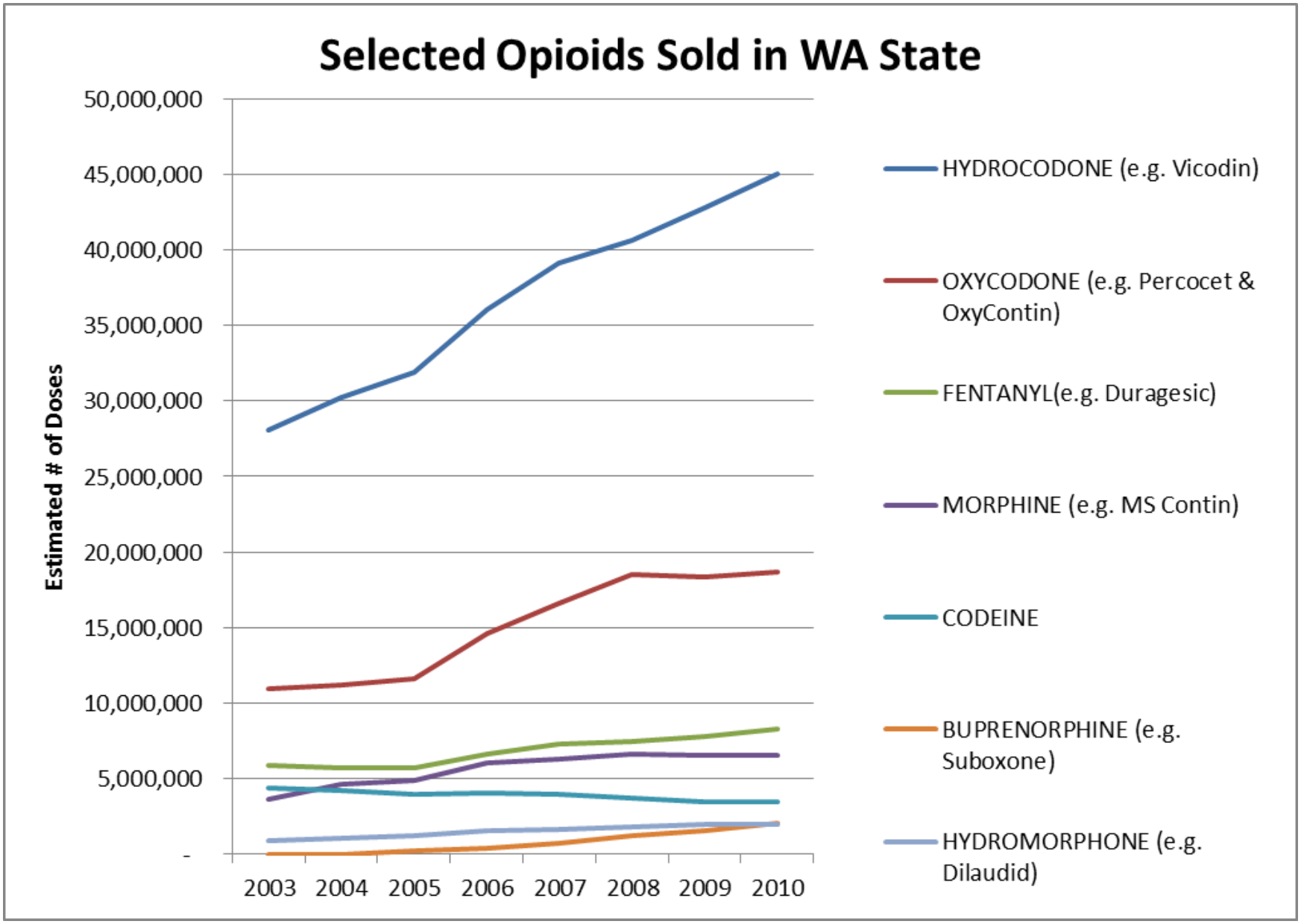


**Statistically significant*

Methamphetamine Use Among Heroin Users- Syringe Exchange Survey



Rx opiates


Selected Opioids Sold in WA State
Estimated # of Doses
50,000,000
45,000,000
40,000,000
35,000,000
30,000,000
25,000,000
20,000,000
15,000,000
10,000,000
5,000,000
-
2003
2004
2005
2006
2007
2008
2009
2010
HYDROCODONE (e.g. Vicodin)
OXYCODONE (e.g. Percocet & OxyContin)
FENTANYL(e.g. Duragesic)
MORPHINE (e.g. MS Contin)
CODEINE
BUPRENORPHINE (e.g. Suboxone)
HYDROMORPHONE (e.g. Dilaudid)

?

Try

Like

Use

Use

Use

Use more

Snort

Inject

Heroin

Access issues

- Most teens get Rx opiates from
- Own Rx (33%)
- A friend (28%)
- Family gave (10%)
- Took from a home (9%)

Try

- Don’t accept unneeded Rx’s
- Dispose of unneeded medicines
- Lock up medications that are needed

Motivation & "Liking"

- Motivation issues
- Social-peers
- Sensation seeking- high/euphoria/fun
- Physical pain- Emotional pain- stress/trauma/escape
- Family norms- Health beliefs/stress/medication beliefs

- Set & Setting
- A teen sharing their Oxy at a kegger is different than short term opiates for severe acute injury

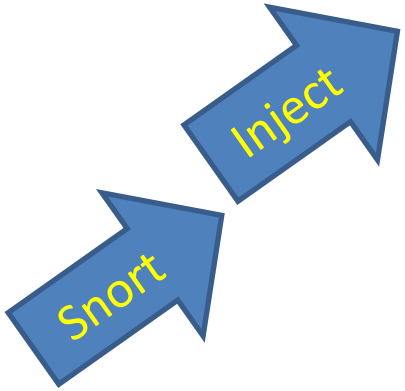
- Liking- averise and reinforcing properties of the drug
- Biological- energized vs sleepy; genetics/metabolization
- Psychological- feel "normal" vs agitated

Parents should reflect on their own use of alcohol/medication/drugs
Consider what messages they are sending
Determine if they are the messages they want to be sending
Consider their youths' situation- e.g. trauma
Be explicit about reasons for their use and expectations for youth
This may be hard and involve the adult seeking help

Tolerance and Withdrawal

- Repeated use of opiates leads to <u>tolerance</u>
- Which leads to <u>needing more</u> to get the same effect
- Stopping use leads to <u>withdrawal</u>, which feels terrible (not fatal)
- So you <u>continue to use</u>

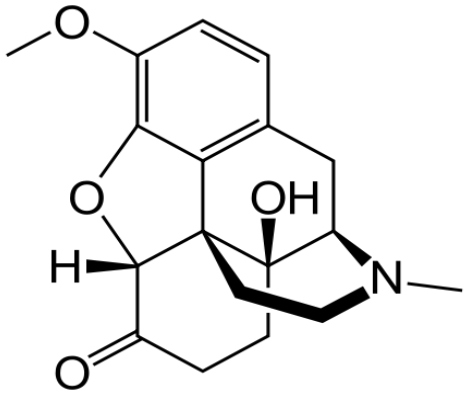
Changing route of ingestion



- Seeking euphoria- snorting and injecting are more intense highs
- Shorter more intense highs can also lead to quicker cycles of highs and lows and reinforce use
- Social situations, new “friends” may be using opiates in different ways and contexts

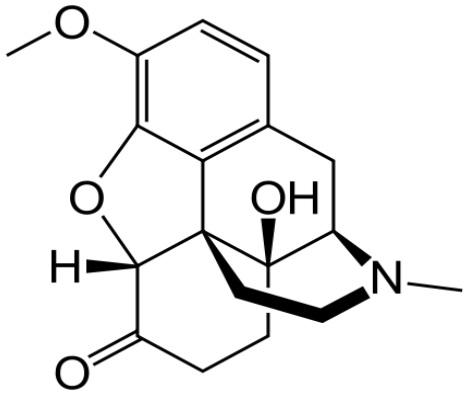
?

OXYCODONE



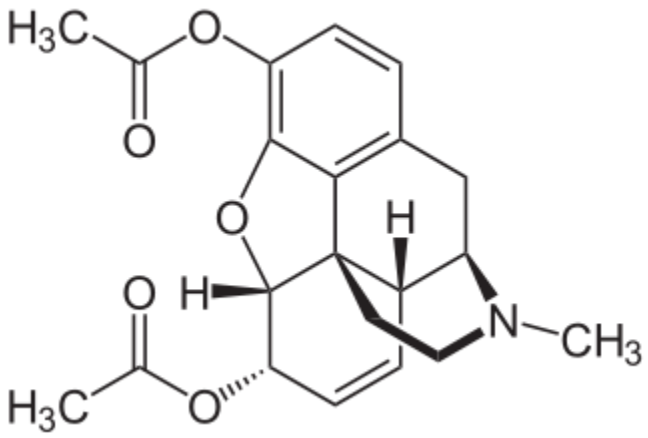
Heroin

OXYCODONE

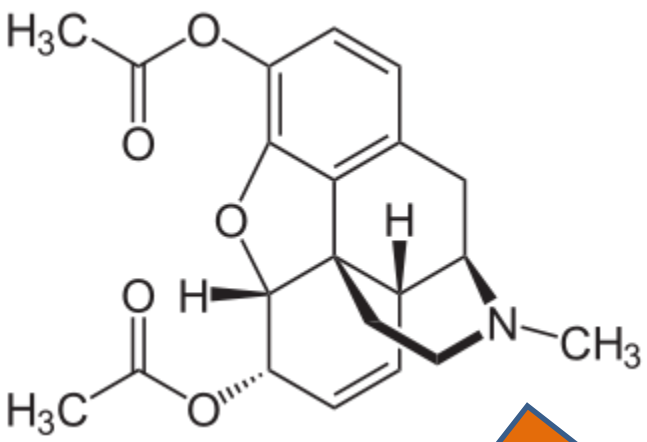


Heroin

HEROIN

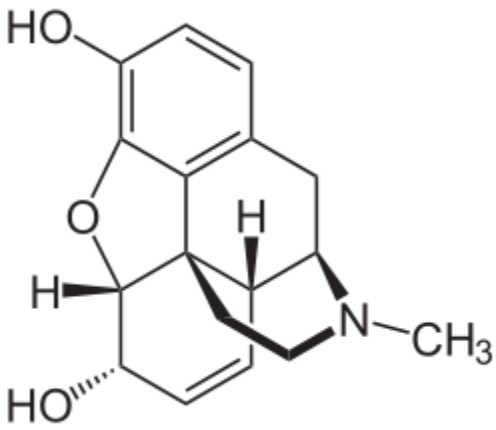


HEROIN



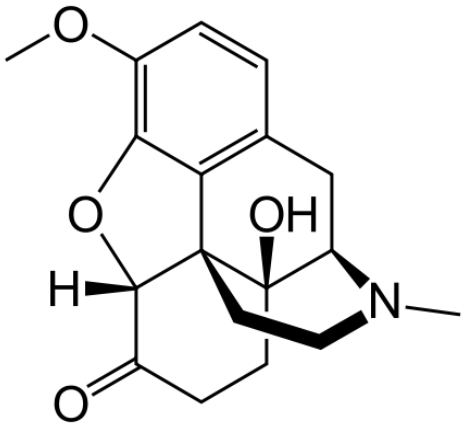
Heroin

MORPHINE

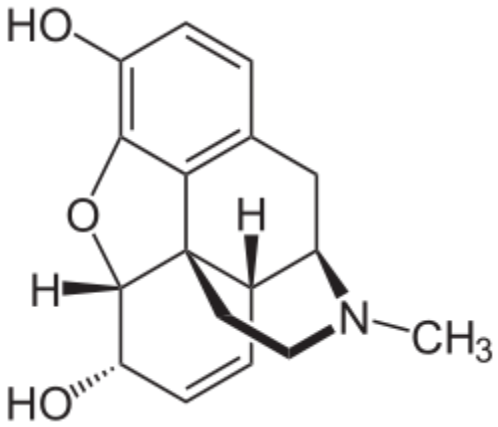


Heroin

OXYCODONE

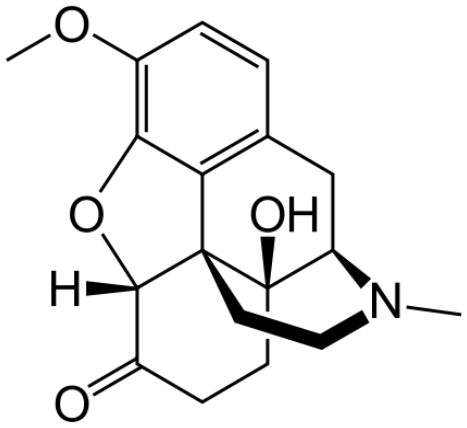


MORPHINE



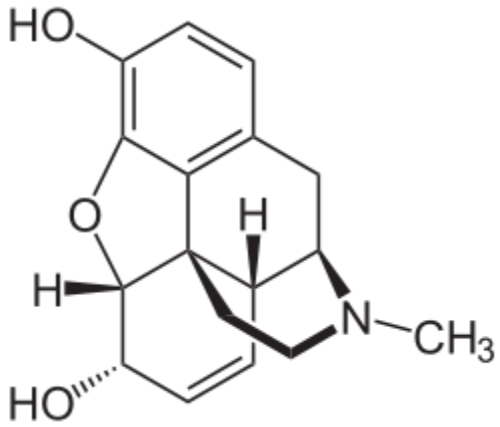
Heroin

OXYCODONE



$80

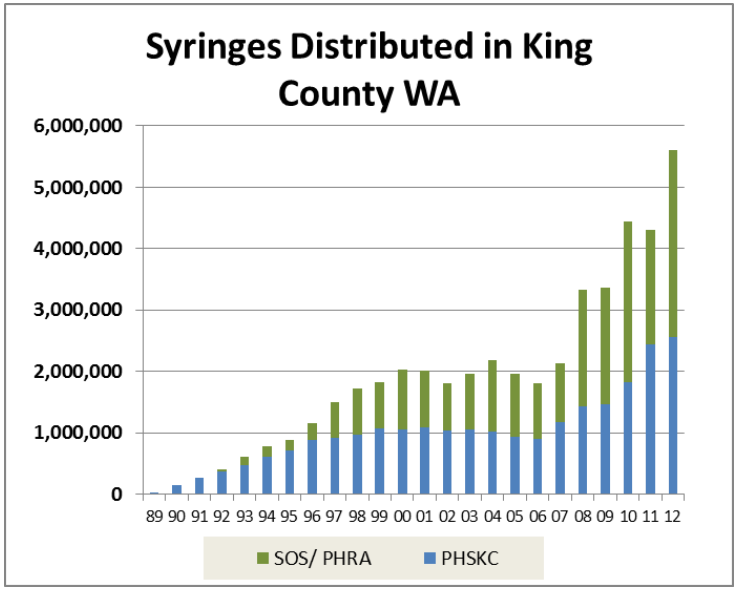
MORPHINE



$10

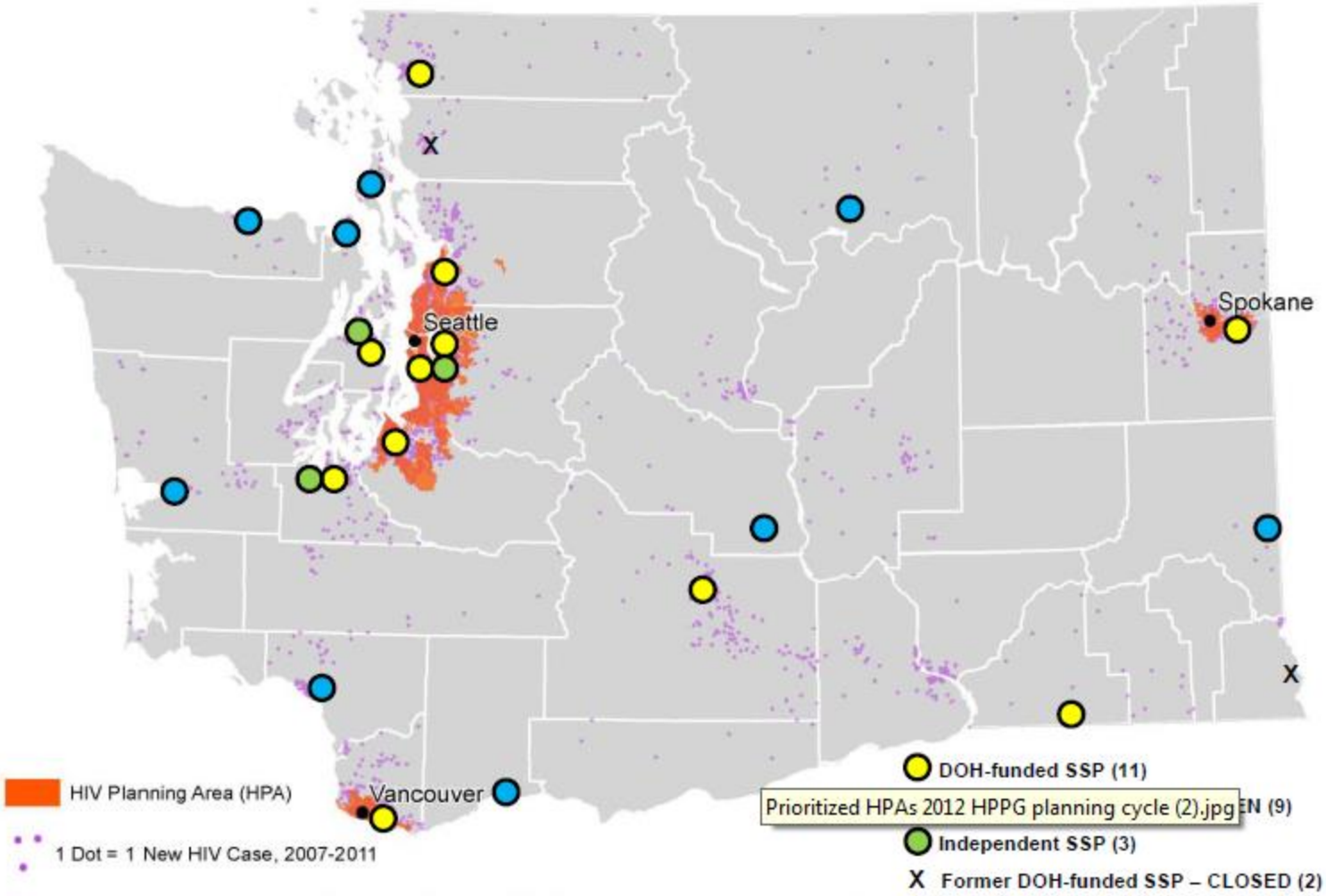
Preventing Infectious Disease

- Anyone who has injected drugs whether currently using or not needs to learn about infectious disease prevention, particularly around HIV and HCV
- Need to use a new needle each time



Washington State Department of Health

HIV Planning Areas (n=14) Covering Three Largest HIV Epicenters in Washington, Washington State HIV Prevention Planning Group, 2012



Data reported to the Department of Health as of October 31, 2012. Dots are randomized within U.S. Census Tracts to protect patient privacy.

Preventing & Responding to Overdose

Anyone who is a regular user of opioids or lives with someone who is should:

- Get overdose education
- Have take-home-naloxone
- Know about the Good Samaritan Overdose law passed in 2010, with alcohol added in 2013
- Law enforcement are essential partners

StopOverdose.org

Opioid overdoses can be prevented and reversed!

- Home / Opioid OD Education
- Where to Get Naloxone / FAQ
- Sources for Help
- Law Enforcement
- Evaluation of WA Law
- Pharmacy/Prescribers
- Other Drugs and Overdose
- Resources
- News

Law Enforcement

More than one fatal overdose occurs in WA every day. More Washingtonians die every year from overdoses than from car crashes. Most drug overdoses involve a prescription medication used with other drugs or alcohol. Most of these deaths can be prevented with fast medical help.

- If you think you're witnessing a drug overdose and seek medical help, **you will receive immunity from criminal charges of drug possession**. The overdose victim you're helping is protected, too. **Call 911.**
- The law also expands access to Narcan™ (generic name *naloxone*), an opioid antagonist that reverses the effect of overdose from opioids.

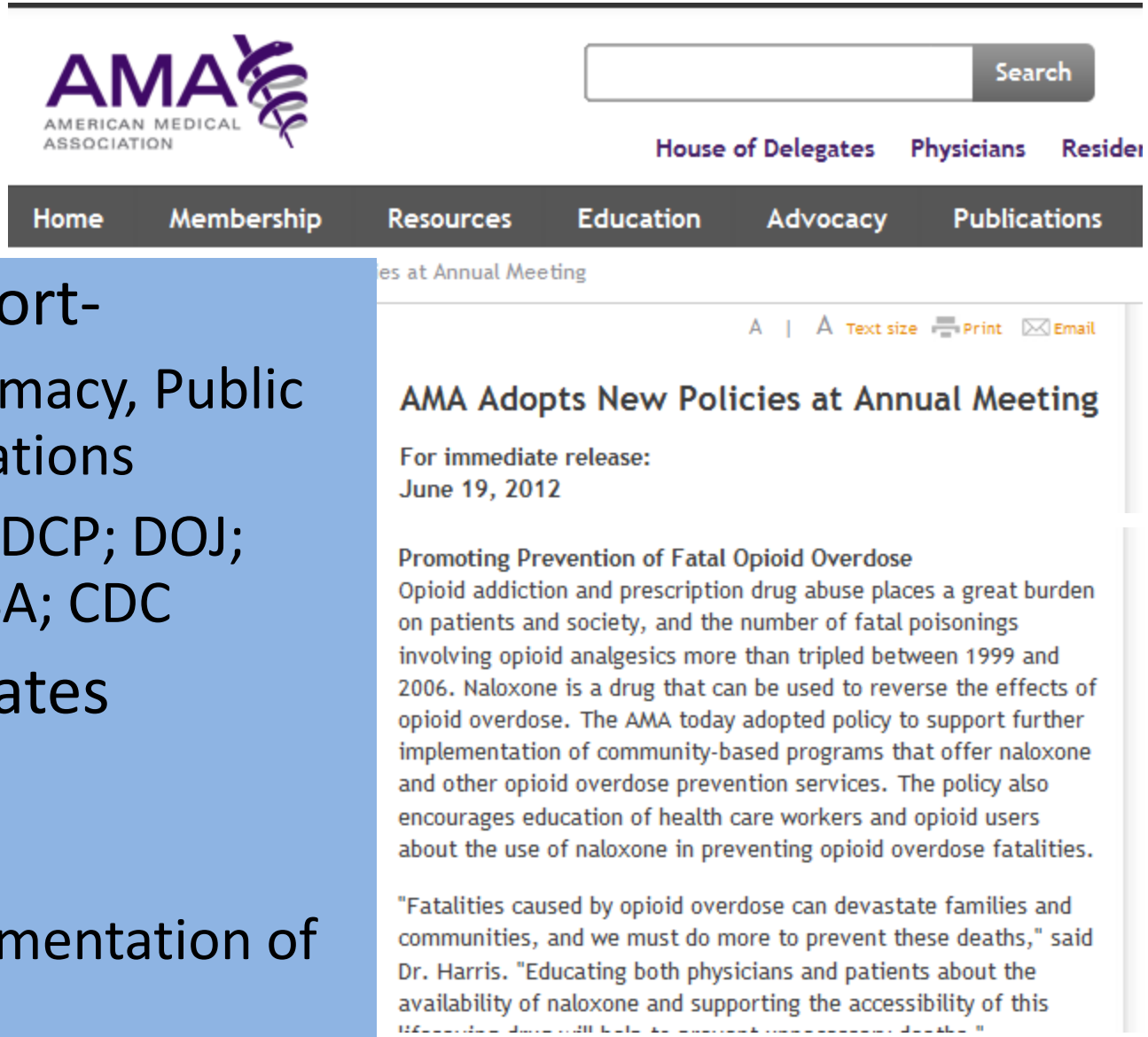
Under the Washington state 911 Good Samaritan Drug Overdose Law, immunity *does not* extend to outstanding warrants, probation or parole violations, drug manufacture or delivery, controlled substances homicide, or crimes other than drug possession.

What is naloxone (Narcan®)?

- It is a prescription medicine that reverses an opioid overdose. It cannot be used to get high and is not addictive.
- Naloxone is safe and effective; emergency medical professionals have used it for decades.
- It is typically administered into a muscle, vein, or intra-nasally

Evidence and Support for Overdose Education & Naloxone

- National support-
  - Medical, Pharmacy, Public Health associations
  - Drug Czar/ONDCP; DOJ; DHHS/SAMHSA; CDC
- Research indicates
  - Saves lives
  - Cost effective
  - Limited implementation of laws to date



BMJ

BMJ 2013;346:f174 doi: 10.1136/bmj.f174 (Published 31 January 2013)

RESEARCH

Opioid overdose rates and implementation of overdose education and nasal naloxone distribution in Massachusetts: interrupted time series analysis

Alexander Y Walley *assistant professor of medicine, medical director of Massachusetts opioid overdose prevention pilot*[1 3], Ziming Xuan *research assistant professor*[2], H Holly Hackman *epidemiologist*[3], Emily Quinn *statistical manager*[4], Maya Doe-Simkins *public health researcher*[1], Amy Sorensen-Alawad *program manager*[1], Sarah Ruiz *assistant director of planning and development*[3], Al Ozonoff *director, design and analysis core*[5 6]

[1]Clinical Addiction Research Education Unit, Section of General Internal Medicine, Boston University School of Medicine, Boston, MA, USA; [2]Department of Community Health Sciences, Boston University School of Public Health, USA; [3]Massachusetts Department of Public Health, USA; [4]Data Coordinating Center, Boston University School of Public Health, USA ; [5]Design and Analysis Core, Clinical Research Center, Children's Hospital Boston, USA ; [6]Department of Biostatistics, Boston University School of Public Health, USA

Reduction in population death rate when 150/100,000 population were trained

THE JOURNAL OF FAMILY PRACTICE

Diagnosing and treating opioid dependence

The surge in opioid abuse highlights the importance of questioning patients about their use of prescription analgesics—and knowing when and how to intervene.

Kevin P. Hill, MD, MHS; Lindsay S. Rice, BA; Hilary S. Connery, MD, PhD; Roger D. Weiss, MD

Division of Alcohol and Drug Abuse, McLean Hospital, Belmont, Mass (Drs. Hill, Connery, and Weiss, and Ms. Rice); Harvard Medical School, Boston (Drs. Hill, Connery, and Weiss)

khill@mclean.harvard.edu

The authors reported no potential conflict of interest relevant to this article.

PRACTICE RECOMMENDATIONS

› *Ask all patients about the inappropriate use of substances, including prescription opioids.* (A)

› *Recommend pharmacotherapy for patients entering treatment for opioid dependence.* (A)

› *Warn patients who are opioid dependent about the risk of accidental fatal overdose, particularly with relapse.* (A)

CASE► Sam M, age 48, is in your office for the first time in more than 2 years. He has gained a considerable amount of weight and appears a bit sluggish, and you wonder whether he's depressed. While taking a history, Sam reminds you that he was laid off 16 months ago and had been caring for his wife, who sustained a debilitating back injury. When you saw her recently, she told you she's back to work and pain-free. So you're taken aback when Sam asks you to refill his wife's oxycodone prescription for lingering pain that often keeps her up at night.

If Sam were your patient, would you suspect opioid dependence?

Dependence on opioid analgesics and the adverse consequences associated with it have steadily increased during the past decade. Consider the

Annals of Internal Medicine | ORIGINAL RESEARCH

Cost-Effectiveness of Distributing Naloxone to Heroin Users for Lay Overdose Reversal

Phillip O. Coffin, MD, and Sean D. Sullivan, PhD

Background: Opioid overdose is a leading cause of accidental death in the United States.

Objective: To estimate the cost-effectiveness of distributing naloxone, an opioid antagonist, to heroin users for use at witnessed overdoses.

Design: Integrated Markov and decision analytic model using deterministic and probabilistic analyses and incorporating recurrent overdoses and a secondary analysis assuming heroin users are a net cost to society.

Data Sources: Published literature calibrated to epidemiologic data.

Target Population: Hypothetical 21-year-old novice U.S. heroin user and more experienced users with scenario analyses.

Time Horizon: Lifetime.

Perspective: Societal.

Intervention: Naloxone distribution for lay administration.

Outcome Measures: Overdose deaths prevented and incremental cost-effectiveness ratio (ICER).

Results of Base-Case Analysis: In the probabilistic analysis, 6% of overdose deaths were prevented with naloxone distribution; 1 death was prevented for every 227 naloxone kits distributed (95% CI, 71 to 716). Naloxone distribution increased costs by $53 (CI, $3 to $156) and quality-adjusted life-years by 0.119 (CI, 0.017 to 0.378) for an ICER of $438 (CI, $48 to $1706).

Results of Sensitivity Analysis: Naloxone distribution was cost-effective in all deterministic and probabilistic sensitivity and scenario analyses, and it was cost-saving if it resulted in fewer overdoses or emergency medical service activations. In a "worst-case scenario" where overdose was rarely witnessed and naloxone was rarely used, minimally effective, and expensive, the ICER was $14 000. If national drug-related expenditures were applied to heroin users, the ICER was $2429.

Limitation: Limited sources of controlled data resulted in wide CIs.

Conclusion: Naloxone distribution to heroin users is likely to reduce overdose deaths and is cost-effective, even under markedly conservative assumptions.

Primary Funding Source: National Institute of Allergy and Infectious Diseases.

Ann Intern Med. 2013;158:1-9. www.annals.org
For author affiliations, see end of text.

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doi:10.1007/s11524-013-9814-y

Police Officers' and Paramedics' Experiences with Overdose and Their Knowledge and Opinions of Washington State's Drug Overdose–Naloxone–Good Samaritan Law

Caleb J. Banta-Green, Leo Beletsky, Jennifer A. Schoeppe, Phillip O. Coffin, and Patricia C. Kuszler

ABSTRACT *Opioid overdoses are an important public health concern. Concerns about police involvement at overdose events may decrease calls to 911 for emergency medical care thereby increasing the chances than an overdose becomes fatal. To address this concern, Washington State passed a law that provides immunity from drug possession charges and facilitates the availability of take-home-naloxone (the opioid overdose antidote) to bystanders in 2010. To examine the knowledge and opinions regarding opioid overdoses and this new law, police (n=251) and paramedics (n=28) in Seattle, WA were surveyed. The majority of police (64 %) and paramedics (89 %) had been at an opioid overdose in the prior year. Few officers (16 %) or paramedics (7 %) were aware of the new law. While arrests at overdose scenes were rare, drugs or paraphernalia were confiscated at 25 % of the most recent overdoses police responded to. Three quarters of officers felt it was important they were at the scene of an overdose to protect medical personnel, and a minority, 34 %, indicated it was important they were present for the purpose of enforcing laws. Police opinions about the immunity and naloxone provisions of the law were split, and we present a summary of the reasons for their opinions. The results of this survey were utilized in public health efforts by the police department which developed a roll call training video shown to all patrol officers. Knowledge of the law was low, and opinions of it were mixed; however, police were concerned about the issue of opioid overdose and willing to implement agency-wide training.*

Current OD Education
&
Take-home-naloxone distribution

- U District Syringe exchange [March 2010]
  - Peoples Harm Reduction Alliance
- PHSKC Robert Clewis Center [Feb 2012]
- Kelley-Ross Pharmacy [Oct 2012]
- (UW ADAI Study- HMC and ETS) [Jan 2013]
- Muckleshoot tribe [2013]
- OD Study @ HMC [Jan 2013]
- Online www.stopoverdose.org [June 2013]
- Kent Jail [Spring 2014]
- PHSKC Mobile Van South County [Spring 2014]
- HMC Madison Clinic [July 2014]
- Bellgrove Pharmacy- Woodinville [Sept 2014]

StopOverdose.org

Opioid overdoses can be prevented and reversed!

Download & share!

[Revised May 2014]

Opioid Overdose Prevention Education

Learn how you can save a life:
WATCH a video, REVIEW the steps, then TAKE A QUIZ.

A community health worker expains overdose prevention and demonstrates how to administer intra-nasal naloxone (Narcan™) in an overdose. Also in Spanish and Russian. Alternate version shows use of intra-muscular naloxone. Produced by New York City Department of Health.

A doctor teaches patients, their families and friends, what to do in case of overdose from prescription opioids, including how to administer the opioid antidote naloxone (Narcan™). Produced by Project Lazarus.

Review: Overdose and Good Samaritan Law

1. Rub to wake.

2. Call 911.

Treatment

- Need to match to individual and drug(s)
- Family involvement is essential
- Counseling is an integral component
- Mental health issues are very common
- Opioid medications can be important, particularly if the substance use disorder involves opiates

Medication Assisted Treatment

Buprenorphine/Suboxone

Methadone

Compared to those receiving buprenorphine or methadone:

"…mortality rates were 75 percent higher among those receiving drug-free treatment,

and more than twice as high among those receiving no treatment,

Health Aff August 2011 vol. 30 no. 8 1425-1433

- Saves lives
- Is cost effective
- Availability- geographic & financial varies greatly

To conclude, you can…

- Educate people about hazards of opioids, treatment of problem use, OD prevention
- Work with buprenorphine prescribers and methadone programs
- Refer to OD education & naloxone
- Help educate the community about addiction, stigma, medical condition with medical responses available

No other addiction/drug has such a well proven medication assisted treatment or available antidote

Video


http://www.stopoverdose.org/
StopOverdose.org - Opioid ...
Suggested Sites
Get more Add-ons
StopOverdose.org
Opioid overdoses can be prevented and reversed!
Home / Opioid OD Education
Where to Get Naloxone / FAQ
Sources for Help
Law Enforcement
Evaluation of WA Law
Pharmacy/Prescribers
Other Drugs and Overdose
News
Opioid Overdose Prevention Education
Naloxone (Narcan®) is a legal medicine that YOU can give to reverse an opioid overdose and prevent an overdose death.
Naloxone has been used safely by health care workers and first responders for decades.
Where to get naloxone in Washington state.
In Washington, the law provides some protections if you call 911 during an overdose.
Learn how you can save a life: WATCH a video, REVIEW the steps, TAKE a QUIZ!
Watch: Videos illustrate techniques used to prevent drug overdoses and the proper use of the opioid antagonist naloxone (Narcan®).
A community health worker talks to those concerned about their risk of drug overdose. Produced by the New York City Department of Health. Also available in Spanish and Russian.
A doctor teaches patients who are prescribed opioid medications, as well as their family and friends, what to do in case of overdose. Produced by Project Lazarus.
Review: Overdose and Good Samaritan Law
1. Rub to wake.
2. Call 911.

1. Rub to wake.

- Rub your knuckles on the bony part of the chest (sternum) to try to get them to wake up and breathe.

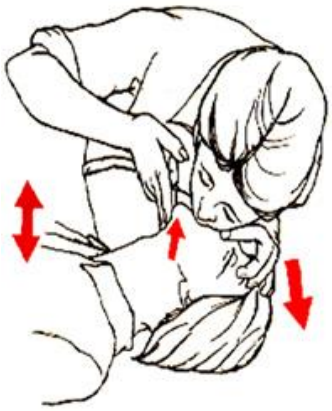
2. Call 911.

All you need to say is:

- The address and where to find the person
- A person is not breathing
- When medics come, tell them what drugs the person took if you know
- Tell them if you gave naloxone

3. If the person stops breathing, give breaths mouth-to-mouth or use a disposable breathing mask.

- Put them on their back.
- Pull the chin forward to keep the airway open; put one hand on the chin, tilt the head back, and pinch the nose closed.
- Make a seal over their mouth with yours and breathe in two breaths. The chest, not the stomach, should rise.
- Give one breath every 5 seconds.



4. Give naloxone.

- **For injectable naloxone:** Inject into the arm or upper outer top of thigh muscle, 1 cc at a time. Always start from a new vial.
- **For intranasal naloxone:** Squirt half the vial into each nostril, pushing the applicator fast to make a fine mist.
- Discard any opened vials of naloxone within 6 hours

5. Stay with the person and keep them breathing.

- Continue giving mouth-to-mouth breathing if the person is not breathing on their own.
- Give a second dose of naloxone after 2-5 minutes if they do not wake up and breathe more than about 10-12 breaths a minute.
- Naloxone can spoil their high and they may want to use again. Remind them naloxone wears off soon and they could overdose again.

6. Place the person on their side.

- People can breathe in their own vomit and die. If the person is breathing, put them on their side. Pull the chin forward so they can breathe more easily. Some people may vomit once they get Naloxone; this position will help protect them from inhaling that vomit.

7. Convince the person to follow the paramedics' advice.

- If the paramedics advise them to go to the Emergency Room, health care staff will help:
- Relieve symptoms of withdrawal
- Prevent them from overdosing again today
- By having an observer who can give more naloxone when the first dose wears off
- Assess and treat the person for other drug overdoses. Naloxone only helps for opioids.

8. What if police show up?

- The Washington State *911 Good Samaritan Drug Overdose Law* (RCW 69.50.315) lets bystanders give naloxone if they suspect an overdose.
- The law protects the victim and the helpers from prosecution for drug possession. The police can confiscate drugs and prosecute persons who have outstanding warrants from other crimes.

WATCH Seattle Police training video about Washington's 911 Good Samaritan law and Narcan.

Naloxone access

- **Q. Who can be prescribed naloxone?**
- A. A prescriber can prescribe take-home naloxone to anyone who is at risk for opioid overdose.
  - WA state explicitly allows for the prescription of take-home naloxone to persons at risk for witnessing an overdose.
- **Q. Where can naloxone be obtained?**
- A. Naloxone availability varies by city/town. Generally very limited.
  - To locate overdose education & prevention and naloxone programs http://hopeandrecovery.org/locations/
  - Current efforts to get in community based pharmacies

Questions?

QUIZ

- 1. Which of these drugs should bystanders give in a suspected opioid overdose? (Select all that apply.)

- 2. These drugs will reverse an opioid overdose - true or false?

- It is legal for users or bystanders to carry naloxone (Narcan®) and a syringe.
- □True □ False

- Persons who help someone during an overdose cannot be arrested for any reason.
  □True □ False

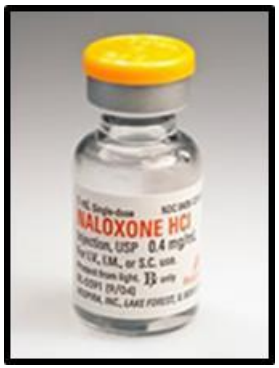
Which of these are signs of an opioid overdose? (Select all that apply.)

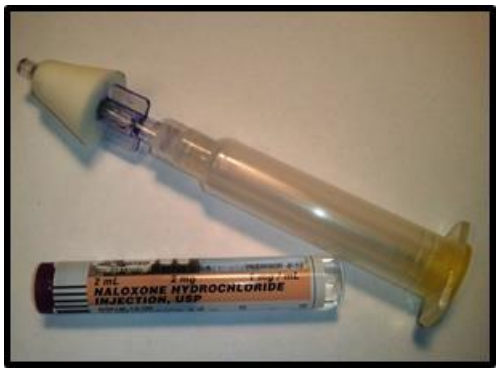
- □ Breathing that is slowing and shallow.
- □ A person who can't be woken up.
- □ Scratching and seeing bugs.
- □ Hyper, restless, speedy movements.
- □ Hallucinations.

What should you do if you think someone is overdosing? (Select all that apply.)

- □ Try to wake them up; rub their chest hard.
- □ Make them vomit.
- □ Give NoDoz or other stimulants.
- □ Call 911.
- □ Do mouth-to-mouth rescue breathing if needed.
- □ Give naloxone(Narcan).
- □ Put them in the recovery position when they start breathing.

- Which form of naloxone (Narcan®) can you squirt up someone's nose?





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September 6

Public health relevance of WA's overdose law and implementation thus far http://fridayletter.aspph.org/article_view.cfm?FLE_Index=261&FL_Index=6

ASPPH Friday Letter #6 - 06 September 2013
fridayletter.aspph.org

Opioid overdose – from heroin or pharmaceuticals – is an epidemic in the U.S., but fear of police is a common barrier to calling 911. In 2010, Washington became the second state to pass a Good Samaritan law providing immunity from drug possession charges for victims or

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Stopoverdose.org shared a link.
September 4

Remember: WA's Good Samaritan law applies to all drugs & www.stopoverdose.org has information about stimulant/hallucinogen overdoses

Electric Zoo Festival Cut Short by Two Deaths

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Stop Overdose .org

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Overdoses can be prevented. Educational information on laws, policy, public health, health care and treatment.
WA State · stopoverdose.org

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