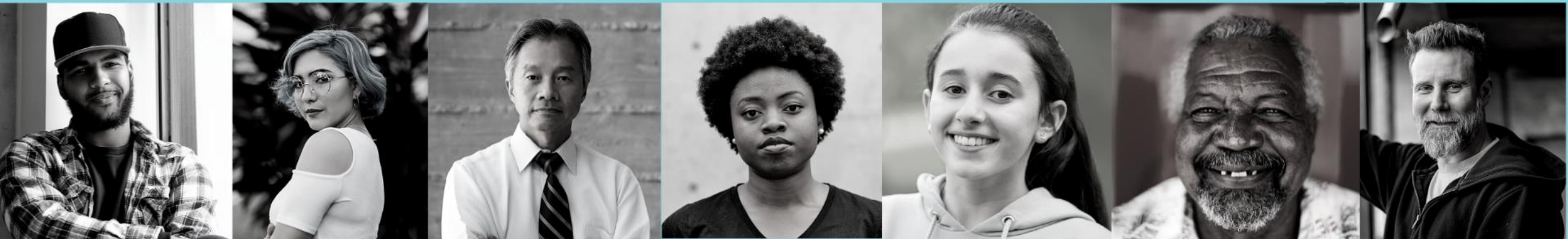




opioids & opiates

Alex Sirotzki, MPH
Public Health Educator
Washington Poison Center



Content warning

A discussion of Washington Poison Center data with opioids requires acknowledgement and discussion of self-harm/suicide

Overview/Agenda

The Washington Poison Center

Opioid/opiate overview

Concerns with opioids/opiates

WAPC data

Dependence & addiction

Prevention & harm reduction





**The
Washington
Poison Center**

Washington Poison Center services



Preventing & reducing harm for
over 60 years

- Poison Helpline
- Public Health Education



(800) 222-1222

24/7/365

Free

Confidential

260+ Languages

Washington Poison Center staff

- Specialists in Poison Information (SPIs): expert-level nurses, pharmacists, and poison information providers
- On-call Board Certified Medical Toxicologists

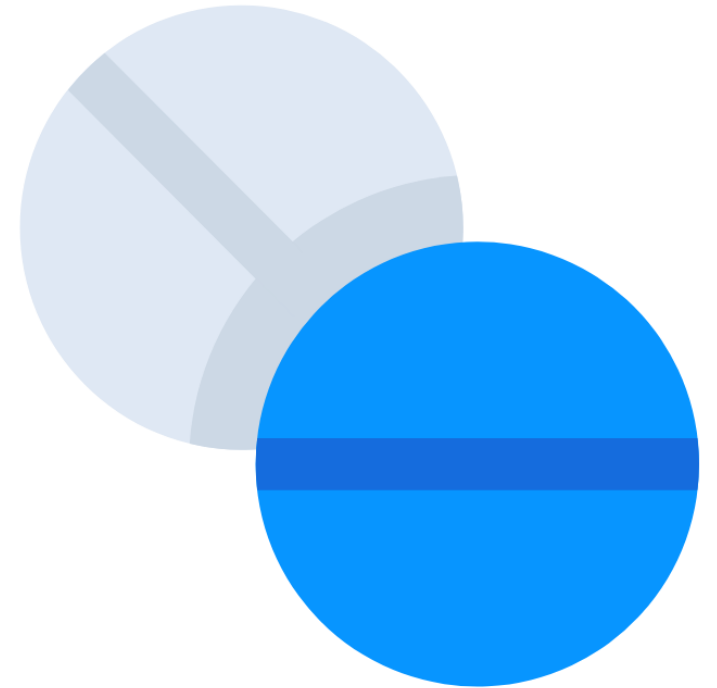


The background features a repeating pattern of small, light blue triangles. Overlaid on this are four stylized white pills and capsules. Two are capsules with a vertical score line, one is positioned above and one below the text. Two are round tablets with a horizontal score line, one is positioned above and one below the text.

Opioids & Opiates

What are opioids?

- A class of drugs that interact with opioid receptors on nerve cells in the body and brain
- Include:
 - Drugs prescribed by healthcare providers
 - Prescriptions misused/illicitly taken
 - Other illegal substances
- All opioids interact with the *same* receptors



Opiate	Opioid	
	Semi-synthetic	Synthetic
<ul style="list-style-type: none"> ● Any drug derived from opium (or other natural sources) <ul style="list-style-type: none"> ○ Morphine ○ Codeine ○ Heroin 	<ul style="list-style-type: none"> ● Attach to the same receptors as opiates ● Derived from an opiate <ul style="list-style-type: none"> ○ Oxycodone ○ Hydrocodone ○ Hydromorphone 	<ul style="list-style-type: none"> ● Attach to the same receptors as opiates ● Completely lab made <ul style="list-style-type: none"> ○ Methadone ○ Fentanyl ○ Tramadol ○ Naloxone

All opiates and opioids attach to the same receptors and can have similar risks!

Prescription opioids



- Used to treat moderate to severe pain
- Often prescribed following surgery or injury, for certain health conditions (like cancer), and end-of-life care
- Increase in use for treatment of chronic pain (ex: back pain, osteoarthritis)
 - Despite known risks & limited evidence about long-term effectiveness

Common prescription opioids

- Opioids can be prescribed in multiple settings:
 - Primary care provider
 - Specialty care
 - Dentist



- Hydrocodone (Vicodin)
 - 60% of prescriptions currently
- Oxycodone (OxyContin)
 - Most prescribed RX in history
- Oxymorphone (Opana)
- Morphine
- Tramadol
- Methadone

Opioids: fentanyl

- **Synthetic opioid** – 100x more potent than morphine
- Approved for treating severe pain – typically advanced cancer pain
- Prescribed routes of administration: **patch or lozenge**



Fentanyl, continued

- Most recent fentanyl cases of harm, overdose, & death are linked to illegally-made fentanyl
- Commonly adulterated into other drugs
- Many analogs of fentanyl; different strengths & effects



Image source: Public Health – Seattle & King County

Counterfeit pills

- Sold online and on the street
- Commonly blue, greenish, or pale colored
 - Oftentimes look like oxycodone or Percocet pills
- Taken orally, smoked, or injected
- Can contain filler + fentanyl
 - Cannot see, smell, or taste fentanyl
 - Amount of fentanyl varies (even within the same batch)



M30 (*most common*)



V48

A215

K9

Image source: Public Health – Seattle & King County

Opioids: carfentanil

- **Synthetic opioid** – analog of fentanyl
- **Extremely potent**
 - 100x more potent than fentanyl
 - 10,000x more potent than morphine
- Often adulterated into heroin or counterfeit oral painkillers
- Difficult to reverse overdose



Fatal Doses Compared
Image source: New Hampshire State Police Forensic Lab

Opioids: heroin

- Opiate
 - Specifically derived from morphine
- Schedule 1 substance = “no currently accepted medical use and a high potential for abuse” – DEA
- Generally snorted or injected (IV or SC)
 - Poison Helpline ingestion cases
- Black tar heroin is most common in WA
- Can be laced with fentanyl or other substances



A large, light-colored warning sign with a black exclamation mark inside a triangle is centered on the page. The sign is semi-transparent, allowing the background pattern to be seen through it. The background is a solid orange color with a repeating pattern of small, darker orange triangles pointing downwards.

Concerns with Opioids

Overdose

- **Overdose:** injury or poisoning to the body that happens when a drug is taken in excessive amounts
- Overdose can be **fatal** or **nonfatal**
- Overdose can be **intentional** or **unintentional**



Acute effects from opioids

- Analgesia (absence of feeling pain)
- Euphoria (feels very good)
- Nausea
- Dry mouth
- Warm flushing of the skin
- Constricted pupils
- Drowsiness
- Heavy extremities
- Respiratory depression (trouble breathing)
- Cardiac arrhythmias (heart rhythm problems)
- Unconsciousness
- Seizures
- Muscle/chest wall rigidity

Acute effects depend on the individual (tolerance & metabolism), the substance, the amount, potency, route of administration, and more

Opioids and chronic pain

Annals of Internal Medicine

REVIEW

The Effectiveness and Risks of Long-Term Opioid Therapy for Chronic Pain: A Systematic Review for a National Institutes of Health Pathways to Prevention Workshop

Roger Chou, MD; Judith A. Turner, PhD; Emily B. Devine, PharmD, PhD, Sean D. Sullivan, PhD; Ian Blazina, MPH; Tracy Dana, MLS; Christina Bo

Background: Increases in prescriptions of opioid medications for chronic pain have been accompanied by increases in opioid overdoses, abuse, and other harms and uncertainty about long-term effectiveness.

Purpose: To evaluate evidence on the effectiveness and harms of long-term (>3 months) opioid therapy for chronic pain in adults.

Data Sources: MEDLINE, the Cochrane Central Register of Controlled Trials, the Cochrane Database of Systematic Reviews, PsycINFO, and CINAHL (January 2008 through August 2014); relevant studies from a prior review; reference lists; and ClinicalTrials.gov.

Study Selection: Randomized trials and observational studies that involved adults with chronic pain who were prescribed long-term opioid therapy and that evaluated opioid therapy versus placebo, no opioid, or nonopioid therapy; different opioid dosing strategies; or risk mitigation strategies.

Data Extraction: Dual extraction and quality assessment.

Data Synthesis: No study of opioid therapy versus no opioid therapy evaluated long-term (>1 year) outcomes related to pain, function, quality of life, opioid abuse, or addiction. Good- and

fair chronic opioid dysregulation and risk mitigation strategies is limited.

Limitations: Non-English-language articles were excluded, meta-analysis could not be done, and publication bias could not be assessed. No placebo-controlled trials met inclusion criteria, evidence was lacking for many comparisons and outcomes, and observational studies were limited in their ability to address potential confounding.

Conclusion: Evidence is insufficient to determine the effectiveness of long-term opioid therapy for improving chronic pain and function. Evidence supports a dose-dependent risk for serious harms.

Primary Funding Source: Agency for Healthcare Research and Quality.

Ann Intern Med. doi:10.7326/M14-2559

www.annals.org

For author affiliations, see end of text.

This article was published online first at www.annals.org on 13 January 2015.

Conclusion: Evidence is insufficient to determine the effectiveness of long-term opioid therapy for improving chronic pain and function. Evidence supports a dose-dependent risk for serious harms.

Routes of administration

Route	Time to enter bloodstream
Ingestion	20-30 min (generally)
Contact absorption	Intraocular (through the eye) – varies Lingual – varies Transdermal (through the skin) – varies
Injection	Seconds to minutes
Mucosal absorption	Varies
Inhalation	7-10 sec

What to do for an opioid overdose



- Call 911
- Check for signs of overdose
 - Not breathing, or very slow breathing
 - Can't wake them up
 - Cold clammy skin, or blue skin
- Administer naloxone

Naloxone (Narcan®)

- Synthetic opioid
- Used to reverse an opiate/opioid overdose
- **Safe to administer even with no overdose**
- Routes of administration:
 - Spray (Narcan®)
 - Injection (IM or IV)
- Limitations
 - Processed faster than many opiates/opioids
 - May need multiple doses to counter **synthetics**



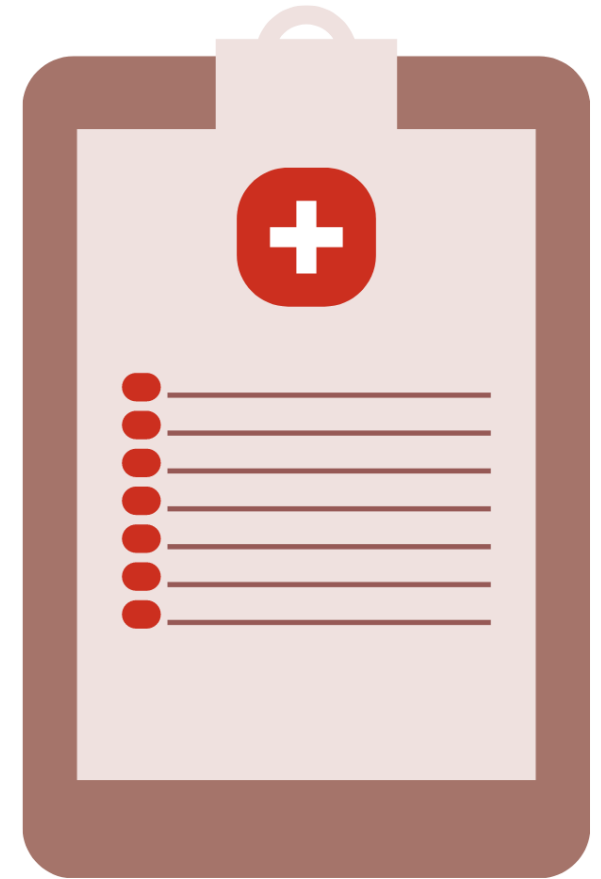
What to do for an opioid overdose, cont.

- Do rescue breathing or chest compressions
- Administer a second dose if they are not awake after 2-5 minutes
- Stay with them until help arrives



Prevent overdose

- Read the label and follow instructions closely
- Never take prescription opioids in greater amounts or more often than prescribed
- Always let your doctor know about any side effects or concerns
 - Tell your doctor if a medication is not working
- Have Naloxone in your home/carry it with you



Concerns beyond overdose: interactions

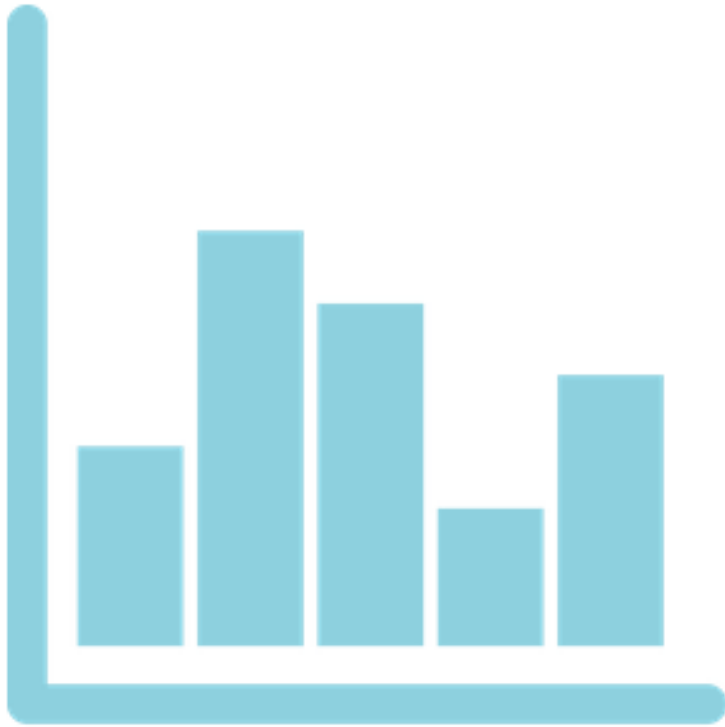


- It can be dangerous to combine opioids with other substances, especially those that cause drowsiness:
 - Alcohol
 - Benzodiazepines (e.g. Xanax, Valium)
 - Muscle relaxants (Soma, Flexeril)
 - Hypnotics (Ambien, Lunesta)
 - Other prescription opioids



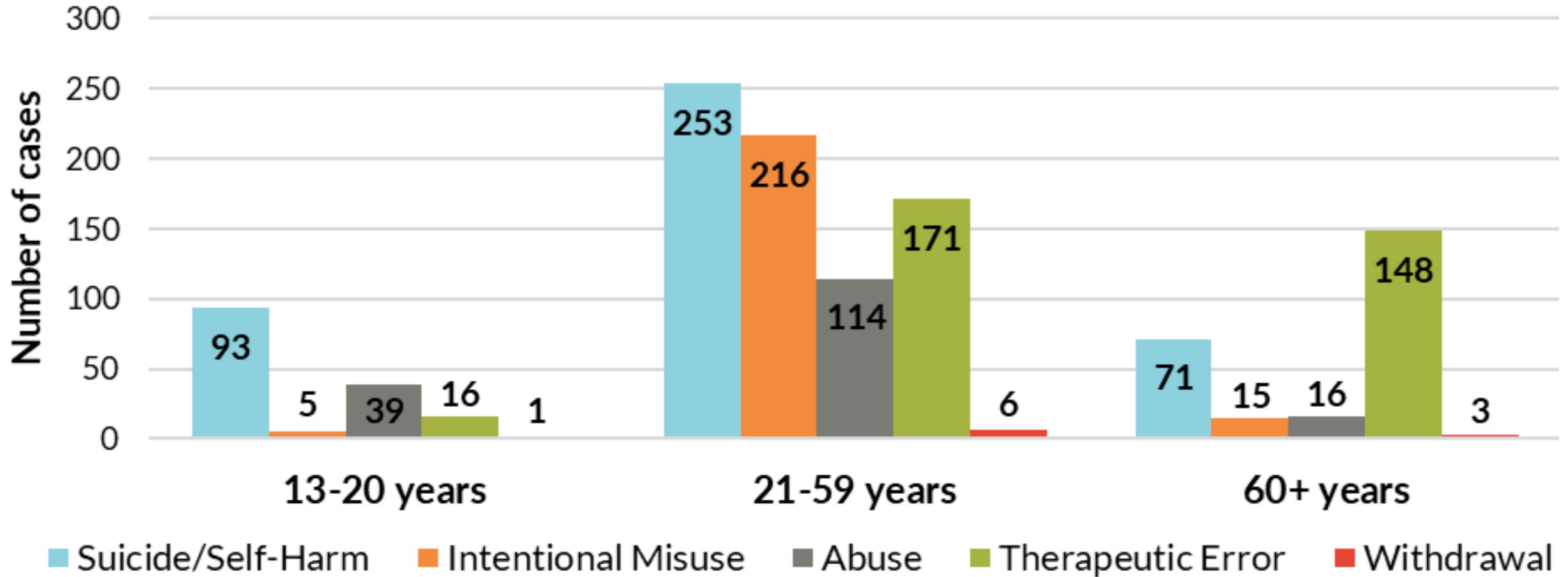
WAPC data

Poison Center data

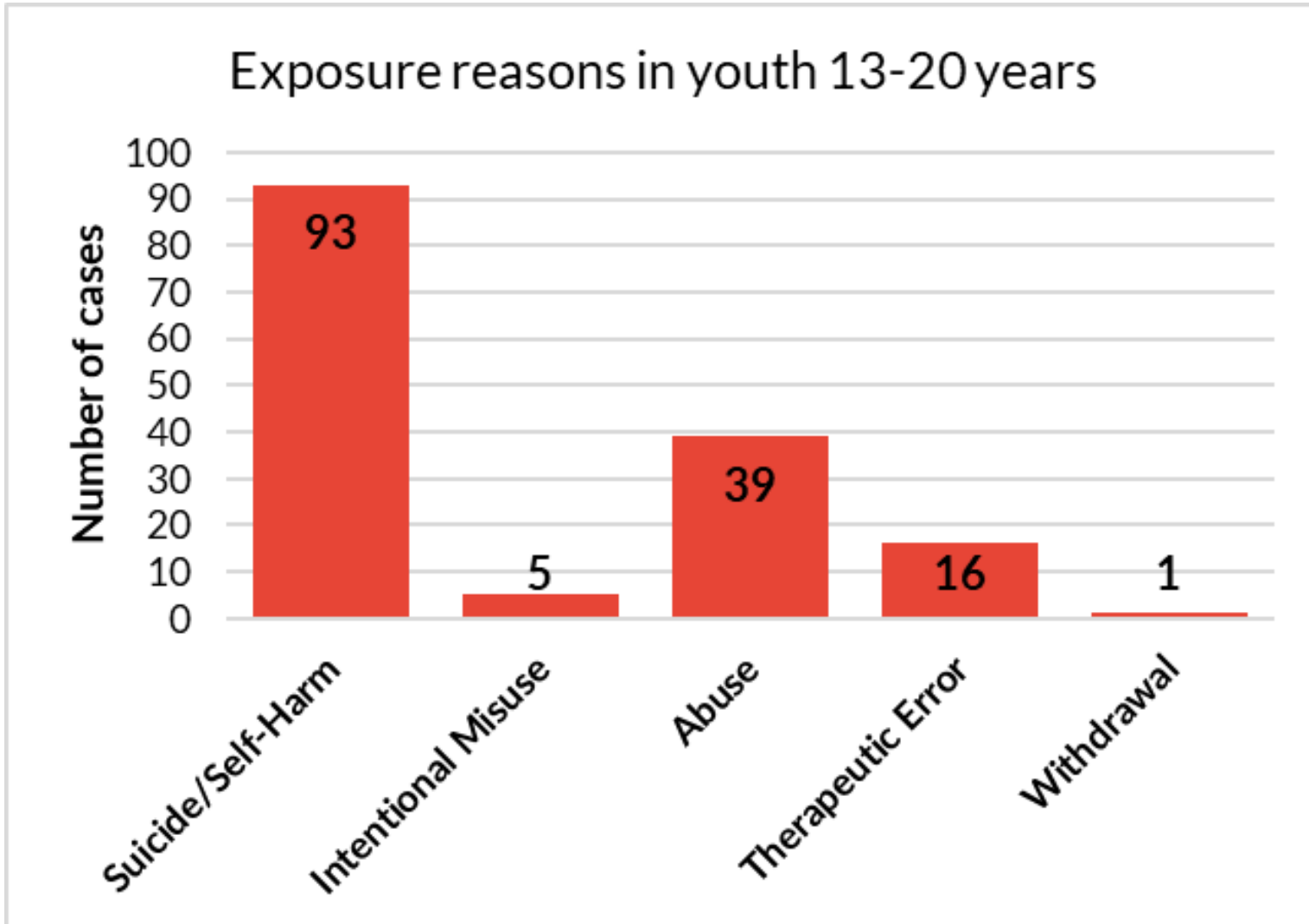


- No mandate = underrepresentation of WA exposures
- Our data tells many possible stories
 - Changing awareness of poison centers
 - Changing access to or awareness of a substance
 - Large-scale stressors or traumas

Opioid Exposures by Reason & Age (2020)

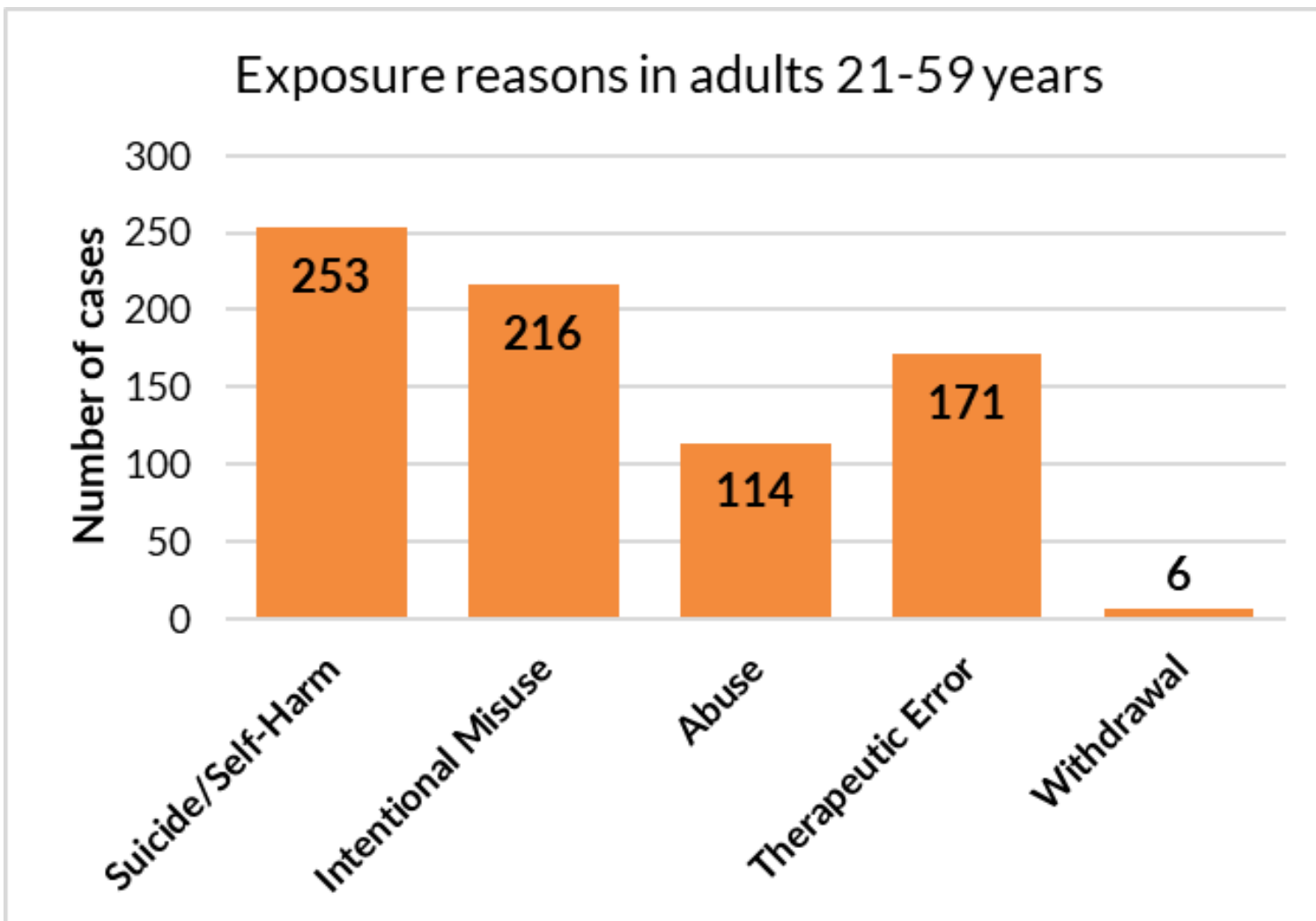


Youth/young adult exposures (2020)



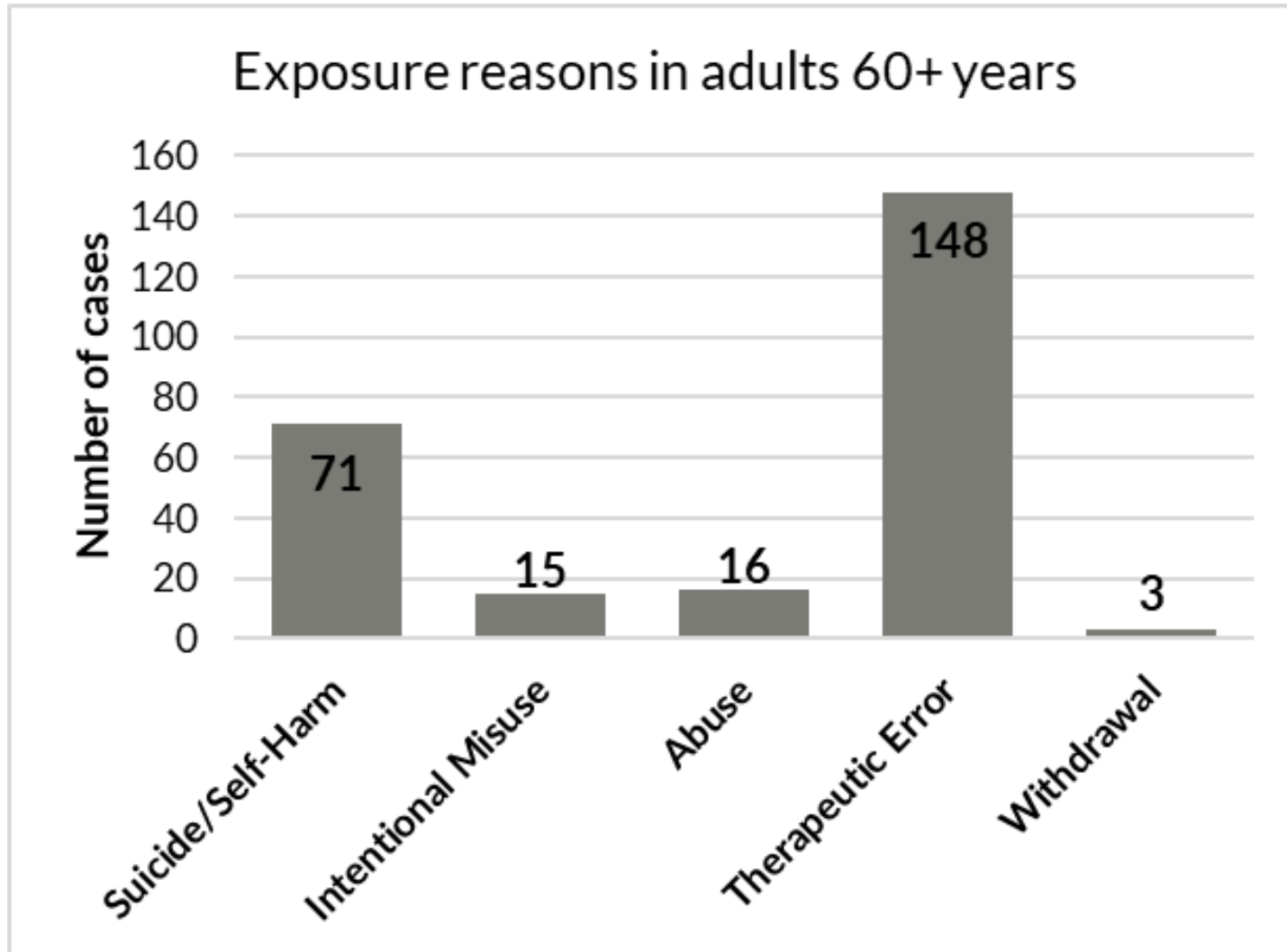
57% of cases were due to suicide/self-harm

Adult exposures (2020)



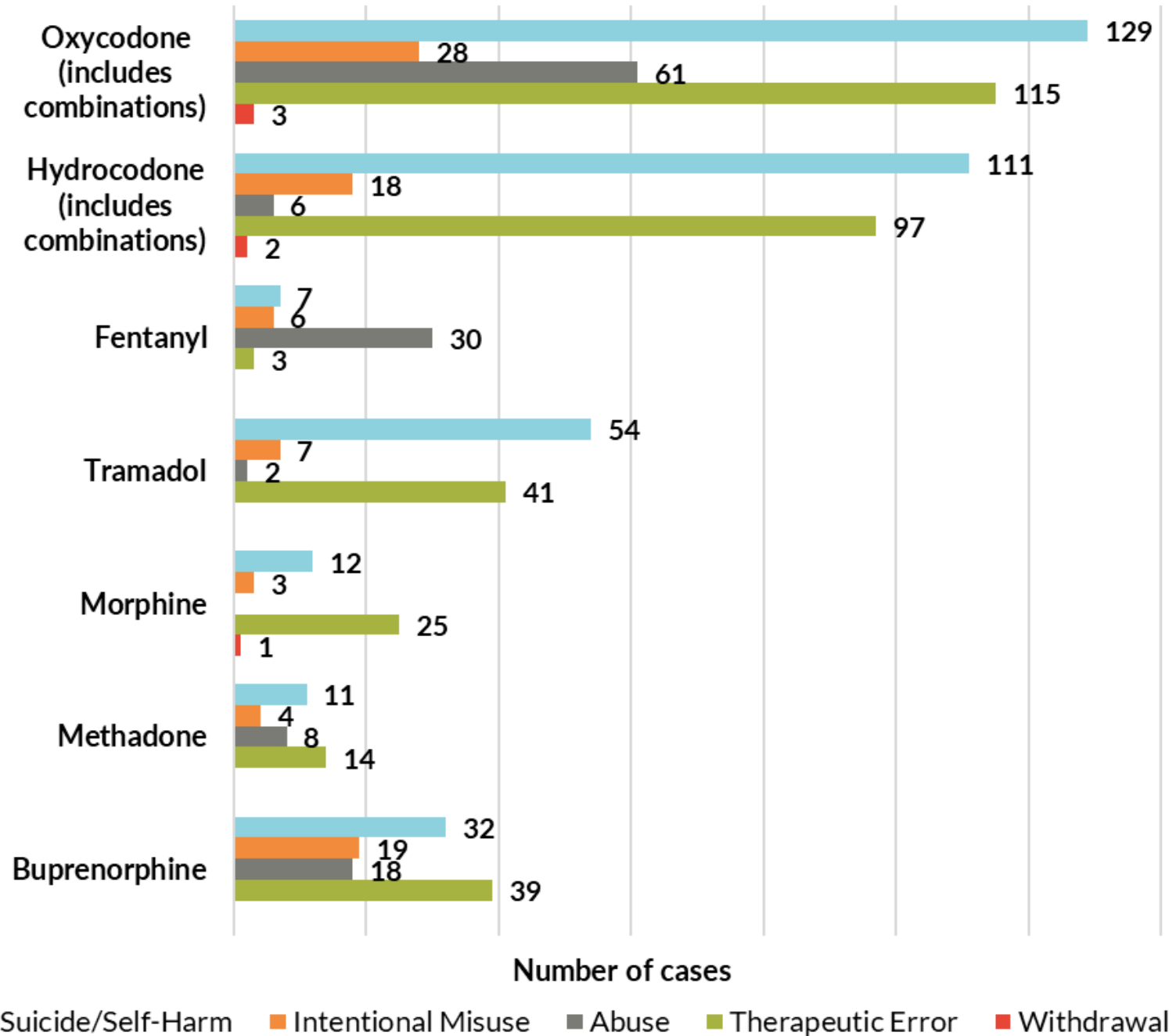
28% increase in abuse cases from 2019 to 2020

Older adult exposures



51% of cases were due to therapeutic errors

Opioid exposures by substance (2020)



Medical outcomes with fentanyl exposures

	Number of cases	
Medical Outcome	2019	2020
Minor effect	7	8
Moderate effect	9	13
Major effect	6	15
Death	0	2
Other or not followed outcome	15	21
Total	37	59



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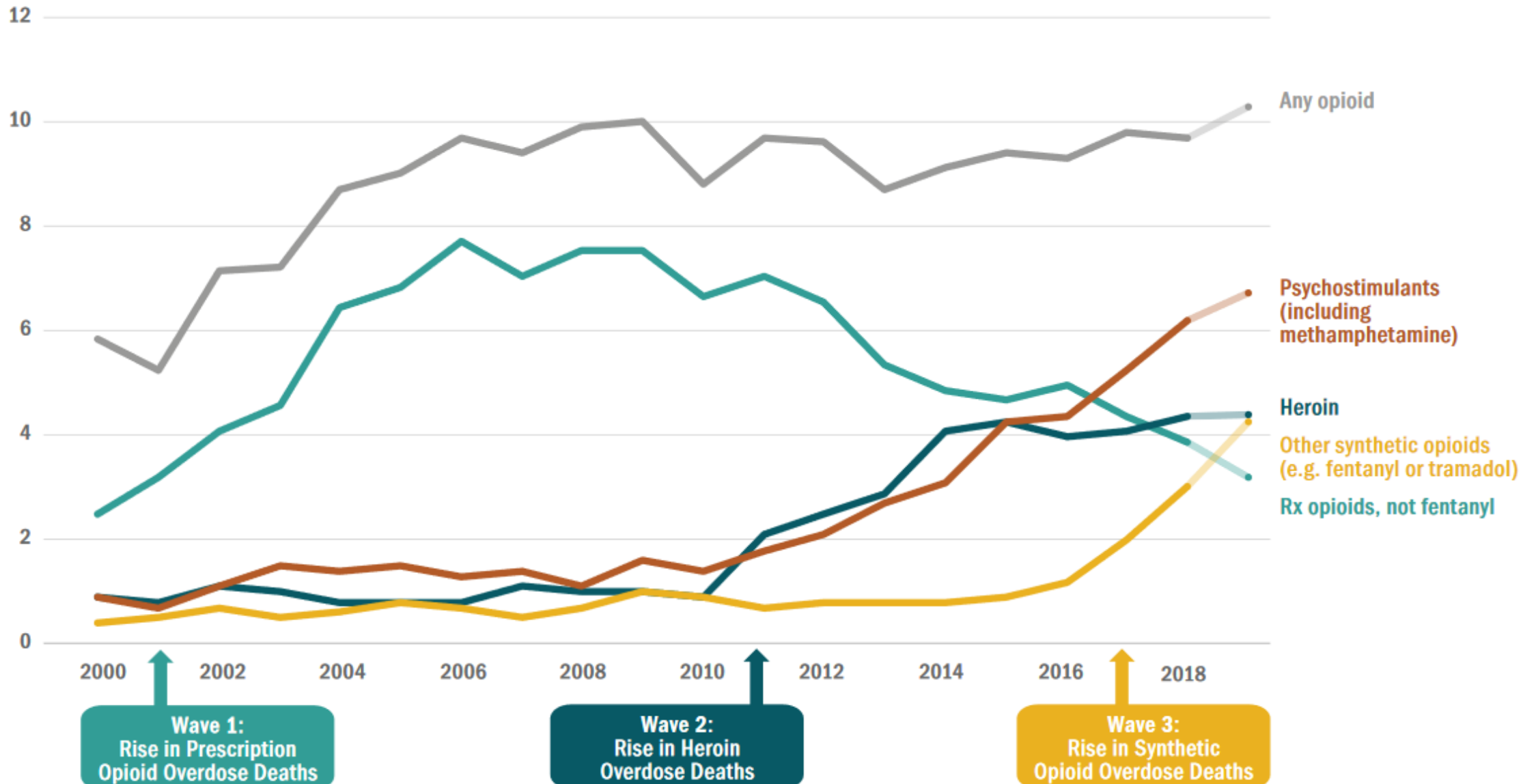
Free

Confidential

260+ Languages

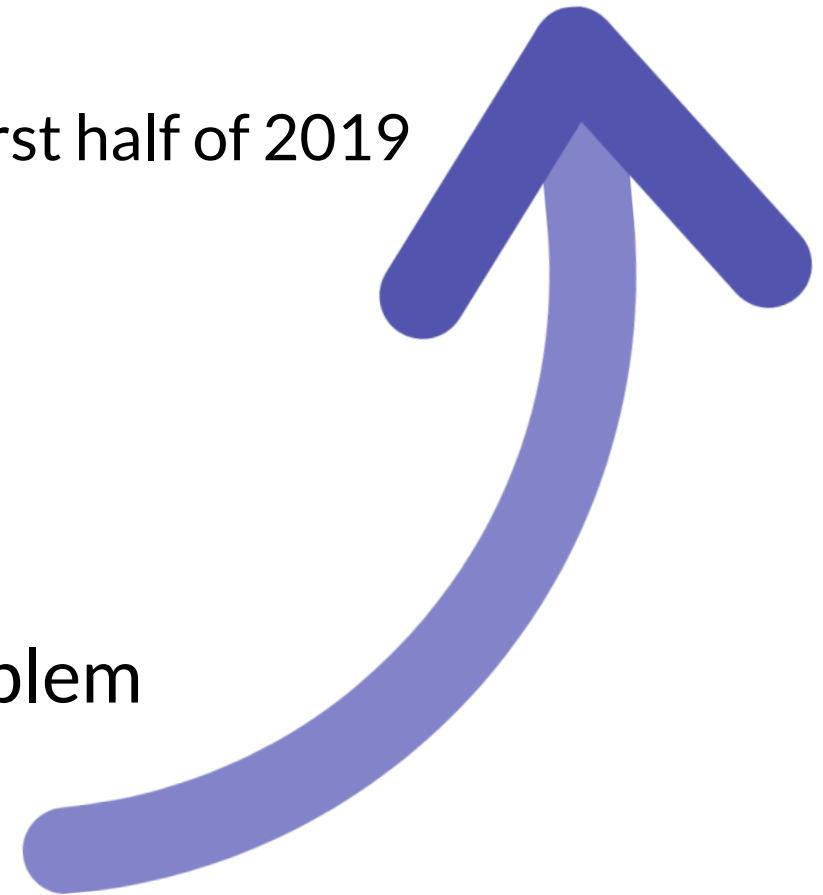
Washington opioid overdose deaths, 2000-2019

Age-adjusted overdose death rate per 100,000



Washington data

- In the first half of 2020:
 - Overdose deaths increased 38% compared to first half of 2019
 - Most of the increase = deaths involving fentanyl
 - Fentanyl deaths more than doubled
- COVID impacts?
 - More use
 - Less access to treatment and support
- Overdose deaths are only 1 part of the problem
 - Non-fatal overdose events
 - Misuse of prescription opioids
 - Use of non-prescription opioids



Dependence, Addiction, & Treatment



Dependence & addiction

- **(Physical) dependence** occurs when the body/brain begins to rely on an external substance to maintain normal function
 - **Tolerance:** needing ever-increasing doses to maintain normal function
 - With dependence, reducing/quitting the substance leads to **withdrawal** (range of symptoms)
- **Addiction:** when dependence becomes disruptive to other aspects of life (dependence is a symptom of addiction)

Opioid (physical) dependence

Opioids trigger a release of dopamine

- Produces feelings of pleasure and euphoria → reinforces behavior → dependence
- With enough opioid use, the most primal part of the brain can see opioids as necessary for survival



Substance “abuse”

- **Substance abuse** – *“A maladaptive pattern of substance use leading to clinically significant impairment or distress”* – DSM-IV
 - Widely used term
 - Complex connotations and stigma
 - No longer in Diagnostic and Statistical Manual of Mental Disorders
- General shift toward **“substance use disorder”**

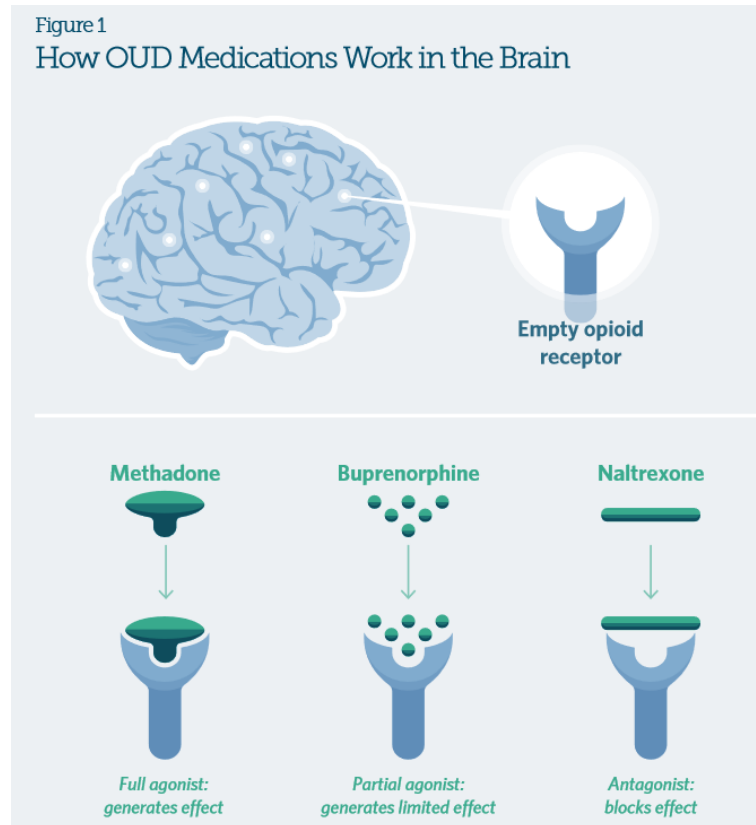
11 criteria for opioid use disorder (DSM-V)

1. More use than intended (amount or time)
2. Persistent desire/unsuccessful effort to reduce use
3. Great deal of time spent obtaining/using opioid or recovering from effects
4. Craving/desiring/urging opioids
5. Recurrent use → failure to fulfill obligations (home, work, school, etc.)
6. Continued use despite problems (social or interpersonal)
7. Important activities given up due to use
8. Continued use in situations that are physically hazardous
9. Continued use despite knowledge of physical or psychological issues linked to opioids
10. Tolerance
11. Withdrawal

Varying degrees of severity: *mild, moderate, severe*

Medication-assisted treatment (MAT)

The use of medications in combination with counseling and behavioral therapies for the treatment of substance use disorders



Other forms of treatment

- Medication is not the only treatment route available
- Other approaches can work in tandem with medication:
 - Motivational interviewing
 - Cognitive behavioral therapy





**Prevention &
Harm Reduction**

Destigmatize & discuss

- Start conversations about drug use *without stigma* and *with empathy*
 - Stop Overdose: www.stopoverdose.org
 - Starts With One: <https://getthefactsrx.com/>
 - Harm Reduction Coalition: <https://harmreduction.org/about-us/principles-of-harm-reduction/>
- Parents:
 - Start Talking Now: <https://starttalkingnow.org/>
 - Partnership to End Addiction: <https://drugfree.org/>

Good Samaritan Law

- Overdose victims and responders have legal protections in WA
- The key to saving a life from overdose is to get professional medical help as fast as possible
- If you witness an overdose, call 911 and request an ambulance
- Remind yourself & others



Medication management challenges



- Side effects can make it hard to take medications safely
 - Sleepiness
 - Dizziness
 - Confusion
 - Impaired vision
 - Impaired attention
 - Lessened coordination
- Always let your doctor know about any side effects or concerns

Create a system to know when you have taken your medication

Use a medication calendar

WASHINGTON POISON CENTER
(800) 222 1222

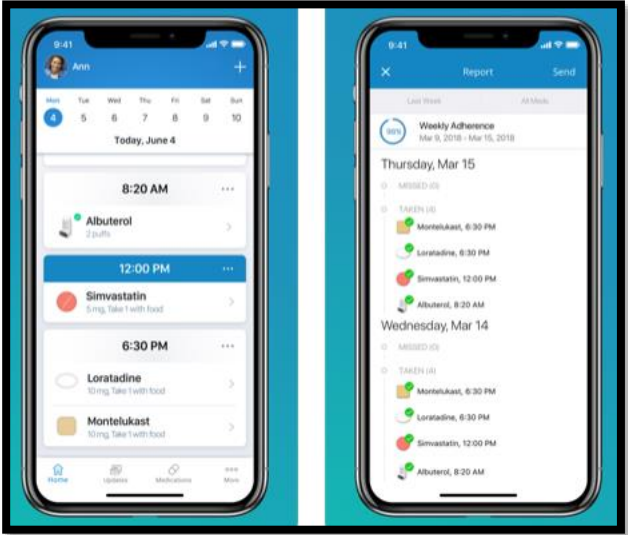
Medication Calendar

Emergency Contact Name: _____
Phone Number: _____

Name: _____

Medication & Dosage	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	Date: _____ <input type="checkbox"/> Breakfast <input type="checkbox"/> Lunch <input type="checkbox"/> Dinner <input type="checkbox"/> Bedtime	Date: _____ <input type="checkbox"/> Breakfast <input type="checkbox"/> Lunch <input type="checkbox"/> Dinner <input type="checkbox"/> Bedtime	Date: _____ <input type="checkbox"/> Breakfast <input type="checkbox"/> Lunch <input type="checkbox"/> Dinner <input type="checkbox"/> Bedtime	Date: _____ <input type="checkbox"/> Breakfast <input type="checkbox"/> Lunch <input type="checkbox"/> Dinner <input type="checkbox"/> Bedtime	Date: _____ <input type="checkbox"/> Breakfast <input type="checkbox"/> Lunch <input type="checkbox"/> Dinner <input type="checkbox"/> Bedtime	Date: _____ <input type="checkbox"/> Breakfast <input type="checkbox"/> Lunch <input type="checkbox"/> Dinner <input type="checkbox"/> Bedtime	Date: _____ <input type="checkbox"/> Breakfast <input type="checkbox"/> Lunch <input type="checkbox"/> Dinner <input type="checkbox"/> Bedtime

For medical advice on medication errors, dosing, and interactions, call the Washington Poison Center at 1-800-222-1222.
Nurses and pharmacists are available 24/7. All calls are free and confidential.
To download and print additional forms, visit wasp.org



Use a pill organizer




Use a medication list

- Include prescriptions, over-the-counter medications, vitamins/supplements, & any other substances
- Minimum information:
 - Name
 - Dose
 - Time
 - Special instructions
- Take to every healthcare appointment

PRESCRIPTION MEDICATION LIST		Date Updated: _____	Name: _____
Medication name & strength (Example: Simvastatin 10 mg)			
What I take it for (Example: Cholesterol)			
How much I take & at what time (Example: 1 pill at bedtime)			
How do I take it? (Example: by mouth)			
Special instructions (Examples: take with food; avoid eating grapefruit)			
What it looks like (Example: pink, oval, imprinted with H, 17)			
Start & stop date (Example: June 1, 2017 - present)			
Who prescribed it (Example: Dr. Smith)			
Where I get it filled (Example: Safeway 2nd St)			

For additional copies, visit www.wapc.org. In case of a medication question or error, call the Washington Poison Center at **1-800-222-1222**. In case of emergency, always call **911**.



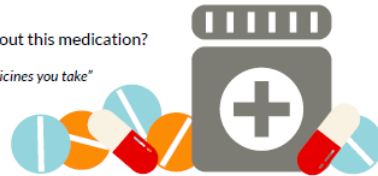
WASHINGTON
POISON CENTER
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Understand the medication

10 MEDICATION QUESTIONS to ask a provider or pharmacist

1. What is the name of the medication?
2. What is this medication for?
 - How does it help my condition or symptom?
3. How do I take this medication?
 - How much?
 - How often?
 - Does this medication need to be taken at a specific time?
 - If it's a once-a-day dose, is it best to take it in the morning or at night?
 - Should I take this medication with or without food?
 - What foods, drinks, other medicines, or activities should I avoid while taking this medication?
 - Are there any other special instructions for this medication?
4. How long will I take this medication?
 - Will I need a refill?
5. What side effects can I expect? What should I do if they occur?
6. What should I do if I miss a dose?
7. Does this new prescription mean I should stop taking any other medicines I'm taking now?
8. Will this medication work safely with my other medications, including other prescription medications, over-the-counter medications, vitamins, and other supplements? (Provide medication list as reference)
9. When should I expect the medication to begin to work, and how will I know if it's working?
10. Is there any additional information I should know about this medication?

Adapted from BeMedWise.org "10 questions to ask about the medicines you take"



Prevent “wrong person” accidents

- Store medications separate from those of other household members & pets
- Or, use colored identification bands or pill organizers



Safe storage

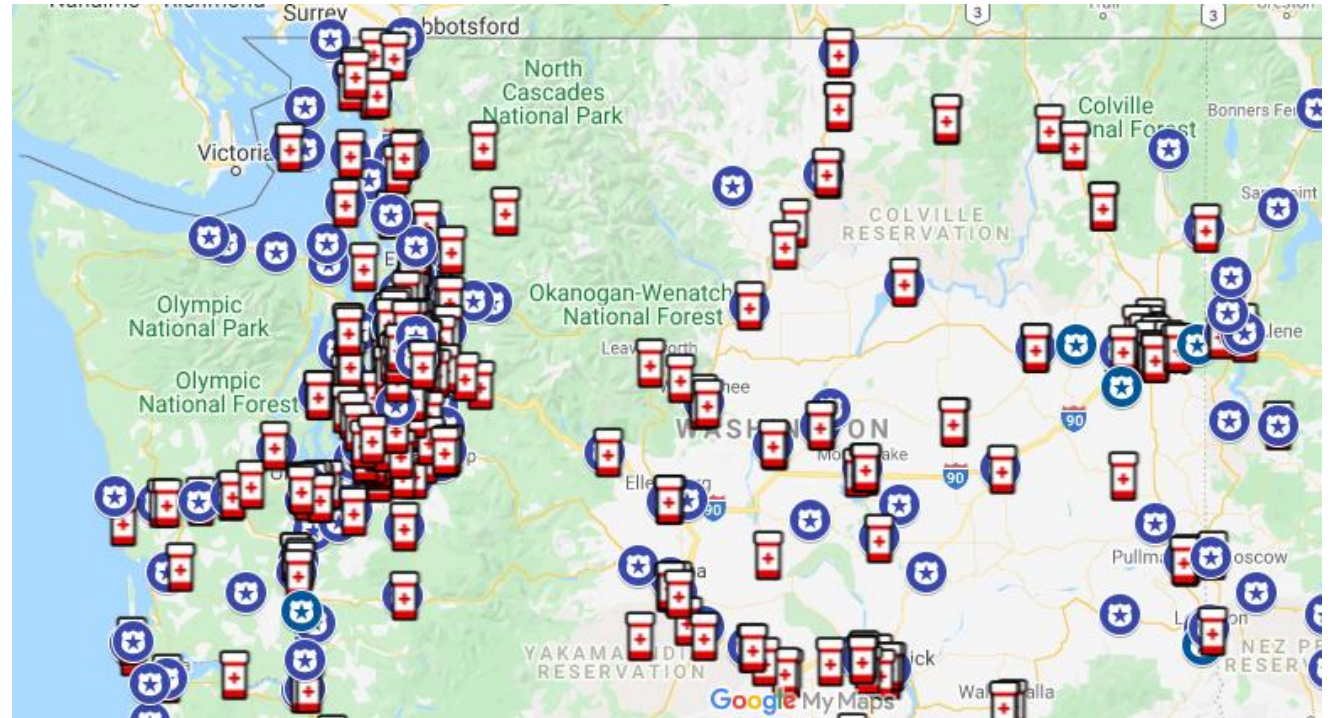
- 2020: 116 accidental exposures in children ages 0-5 years
- Store medications up high, out of reach, and out of sight
- Lock up medications
 - Keep 7 days out, if necessary
 - Durable, combination lock
 - No external facing latch



Prevent intentional (& accidental) use by others

- Never sell or share your prescription opioids
- Safely dispose of any leftover opioids

takebackyourmeds.org



Carry Naloxone!

Who should carry?

- People who use opioids regularly
- Friends and family of people who use opioids regularly
- Everyone!



How to obtain Naloxone



STANDING ORDER TO DISPENSE NALOXONE

Authority: This standing order is issued in accordance with RCW 69.41.095(5), which allows for “[t]he secretary or the secretary’s designee [to] issue a standing order prescribing opioid overdose reversal medications to any person at risk of experiencing an opioid-related overdose or any person or entity in a position to assist a person at risk of experiencing an opioid-related overdose.” The Secretary of Health has designated the State Health Officer to issue a standing order under RCW 69.41.095(5).

Purpose: The purpose of this standing order is to facilitate wide distribution of the opioid antagonist naloxone so people in Washington can provide assistance to persons experiencing an opioid-related overdose.

Authorization: This standing order shall be considered a naloxone prescription for an eligible person or entity. This standing order authorizes any eligible person or entity in the State of Washington to possess, store, deliver, distribute or administer naloxone.

Any pharmacy or wholesaler licensed in the State of Washington may dispense and deliver naloxone to an eligible person or entity under this standing order.

An eligible person or entity is any person at risk of experiencing an opioid-related overdose or any person or entity in a position to assist a person at risk of experiencing an opioid-related overdose. These could include a natural person, such as an individual at risk of an opioid-related overdose or a family member, friend or acquaintance of that individual; or a legal person, such as an ambulance service, police department, or school or other educational institution that could be in a position to assist a person at risk of experiencing an opioid-related overdose.

Terms and Conditions: Any person or entity distributing naloxone to eligible persons or entities, as defined above, must provide written instructions on the proper response to an opioid-related overdose, including instructions on the role of naloxone, recognizing a potential opioid-related overdose, verifying unresponsiveness, calling 911 and administering naloxone, starting rescue breathing, administering a second dose of naloxone if needed, and providing post-overdose care. Written instructions for lay responders are available at: www.doh.wa.gov/naloxoneinstructions

Pharmacies and other entities are strongly encouraged to provide in-person training, allow hands-on practice with a demonstration kit, and/or show training videos to persons receiving naloxone for the first time. A training video on responding to an opioid-related overdose and administering naloxone can be found at: <https://www.doh.wa.gov/YouandYourFamily/DrugUserHealth/OverdoseandNaloxone>

Entities seeking to use this standing order to receive and dispense naloxone must notify the Washington State Department of Health by sending an email to naloxoneprogram@doh.wa.gov. The Department of Health will maintain a list of entities using the order and contact these entities if any changes are made to the order. Individuals using the standing order do not need to notify the department.

- Ways to obtain
 - Prescription (doctor, pharmacy)
 - Washington standing order
 - Syringe exchange programs
 - Local coalitions, organizations, public health departments
- Take an online course:
 - [Washington Department of Health](#)
 - [Red Cross](#)
 - [Narcan](#) website

Self-harm resources



- [Crisis Text Line](#): text "HOME" to 741741 for a 24/7, free, confidential crisis counselor
- Teens: call, chat, or text with [Teen Link](#)
- [Understand the risk factors and watch for the warning signs](#)
- University of Washington [Forefront](#)



Thank you!

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