



## **I. Purpose**

The purpose of this agreement is to provide access to emergency medication that will reverse opioid-induced overdoses.

### **Background**

Overdoses involving heroin and/or pharmaceutical opioids (e.g. Vicodin, OxyContin, and methadone) in King County increased from 125 to 195 between 1997 and 2008, an increase in the rate from 7.4 to 10.4 per 100,000.<sup>1</sup> Deaths involving pharmaceutical opioids continue to increase and far surpass any other substances in overdose deaths.<sup>2</sup>

Pharmaceutical opioid use, misuse and abuse have increased substantially over the last decade and indicators suggest that some users are transitioning to heroin, and that heroin use may be expanding across the State. In a May 2009 survey at King County syringe exchange sites, 39% of heroin users reported they were “hooked on prescription-type opiates” before they began using heroin.

Naloxone distribution programs exist in several other cities and states, including San Francisco, Chicago, Baltimore, New Mexico, New York, and Massachusetts.<sup>3</sup>

### **911 Good Samaritan Overdose Prevention Law**

On June 10, 2010, Washington state enacted the “911 Good Samaritan” law (ESB 5516), which provides immunity from drug possession charges in drug overdose situations and expands access to naloxone, a prescription drug that reverses overdoses caused by opioids.<sup>4</sup> The law authorizes any person to obtain and use naloxone, given the fulfillment of certain requirements, and authorizes any person to administer naloxone to a qualifying third party.

## **II. Procedure**

### **Program Description**

Before obtaining naloxone, patients must be provided overdose intervention educational materials similar to that provided in Section V. Appendix 2 and have the opportunity to ask questions of a pharmacist about opiate overdoses and naloxone administration. Patients will undergo a counseling/training session similar to the outline in Section V. Appendix 3. Patients must be able to understand and be willing to learn the essential components of overdose response, and naloxone administration.

Education content will include overdose prevention, OD risk co-factors, OD signs and symptoms, calling 911, airway and breathing assessment, rescue breathing and recovery position, naloxone storage and administration, and post-overdose follow-up and care. This information is summarized in the education flier in Appendix 1.

The pharmacist will dispense naloxone kits, which contain the following, at a minimum:

- Two 2ml luer-lock syringes prefilled with naloxone (concentration 2mg/2ml) &
- Two mucosal atomization devices

OR

- Naloxone HCl 0.4mg/mL: 1 x 10 mL as one flip-top vial OR 2x1mL single dose vials &
- Intramuscular syringe, 23-27G, 3cc, 1-1<sup>1/2</sup> inch

### **Pharmacist Training**

For pharmacists to participate in the protocol they must review and understand the patient education materials. Additional education information and materials are available at [www.stopoverdose.org](http://www.stopoverdose.org). Participating pharmacists must also read this protocol completely. A general outline for pharmacist training may be found in Section V. Appendix 3.

### **Documentation, Quality Assurance and Reporting**

Pharmacists will enter and maintain patient demographic and prescription-related information in the pharmacy management system.

On a quarterly basis, the authorizing prescriber and the pharmacist will perform a quality assurance review of the prescribing decisions according to mutually acceptable criteria. Pharmacists will also submit required documentation to the prescriber named in the CDTA for quality control evaluation after dispensing has concluded. General Pharmacy Policies and Procedures are outlined in Section V. Appendix 1.

## **III. Medication**

### **Complete or Partial Reversal of Opioid Depression**

Naloxone prevents or reverses the effects of opioids including respiratory depression, sedation and hypotension. Naloxone is an essentially pure opioid antagonist, i.e., it does not possess the “agonistic” or morphine-like properties characteristic of other opioid antagonists. When administered in usual doses and in the absence of opioids or agonistic effects of other opioid antagonists, it exhibits essentially no pharmacologic activity.

Naloxone has not been shown to produce tolerance or cause physical or psychological dependence. In the presence of physical dependence on opioids, naloxone may produce withdrawal symptoms. Opioid withdrawal symptoms may appear within minutes of naloxone administration and subside in about 2 hours. The severity and duration of the withdrawal syndrome are related to the dose of naloxone and to the degree and type of opioid dependence. Naloxone antagonizes opioid effects by competing for the  $\mu$ -opioid

receptor site in the brain.

### **Indications and Usage for Naloxone**

Naloxone is indicated for the complete or partial reversal of severe opioid depression, including severe respiratory depression, **inability to protect their airway** or unresponsiveness. Opioids are natural and synthetic compounds, including propoxyphene, methadone and certain mixed agonist-antagonist analgesics: nalbuphine, pentazocine, butorphanol, and cyclazocine.

### **Naloxone Dosage and Administration**

Intranasal administration via mucosal atomizer device (MAD) has similar bioavailability to IV administration.<sup>5,6,7,8</sup> The nasal mucosal route is optimal for: direct absorption via the vascular plexus of the nose, into the CSF, directly entering the circulation and avoiding the portal circulation; avoidance of destruction by digestive enzymes in the stomach and small intestine.

Intramuscular administration has a slightly slower onset of action compared to intravenous administration and a more rapid response than intra-nasal administration<sup>9</sup>. Intramuscular administration produces a more prolonged effect than intravenous administration.

### **Contraindications**

Naloxone is contraindicated in patients known to be hypersensitive to naloxone.

### **Warnings**

#### **Repeat Administration**

The patient who has satisfactorily responded to naloxone should be kept under continued surveillance for 2 – 3 hrs after the last dose. Repeated doses of naloxone may be necessary, since the duration of action of some opioids may exceed that of naloxone.

#### **Respiratory Depression due to Other Drugs**

Naloxone is not effective against respiratory depression due to non-opioid drugs. Reversal of respiratory depression by super potent opioids such as fentanyl or by partial agonists or mixed agonist/antagonists, such as buprenorphine and pentazocine, may be inadequate or require higher doses of naloxone. If an incomplete response occurs, respirations should be mechanically assisted as clinically indicated.

### **Precautions**

## **General**

In addition to naloxone, other resuscitative measures such as maintenance of an open airway, artificial ventilation, cardiac massage, and vasopressor agents may be required to counteract some effects of acute, severe opioid poisoning.

## **Drug Interactions**

Large doses of naloxone may be required to antagonize buprenorphine since the latter has a long duration of action due to its slow rate of binding and subsequent slow dissociation from the opioid receptor. Buprenorphine antagonism is characterized by a gradual onset of the reversal effects and a decreased duration of action of the normally prolonged respiratory depression.

## **Use in Pregnancy**

### **Teratogenic Effects: Pregnancy Category C**

Teratology studies conducted in mice and rats demonstrated no embryotoxic or teratogenic effects due to naloxone. There are, however, no adequate and well-controlled studies in pregnant women.

### **Non-teratogenic Effects**

Risk-benefit must be considered before naloxone is administered to a pregnant woman who is known or suspected to be opioid-dependent since maternal dependence may often be accompanied by fetal dependence. Naloxone crosses the placenta, and may precipitate withdrawal in the fetus as well as in the mother.

## **Geriatric Use**

Reported clinical experience has not identified differences in responses between the elderly and younger patients.

## **Adverse Reactions**

Abrupt reversal of opioid effects in persons who are physically dependent on opioids may precipitate an acute opioid withdrawal syndrome. The acute opioid withdrawal syndrome may include: body aches, fever, sweating, runny nose, sneezing, piloerection, yawning, weakness, shivering or trembling, nervousness, restlessness or irritability, diarrhea, nausea or vomiting, abdominal cramps, increased blood pressure, tachycardia.

A patient who develops a suspected adverse reaction to naloxone should call the pharmacy to report it. Pharmacists can recommend symptom management of the reaction, and/or patient referral. Development of life-threatening symptoms should be immediately referred to the closest emergency room or urgent care clinic. Pharmacists should then report the adverse reaction to the FDA at MedWatch, found online at <https://www.accessdata.fda.gov/scripts/medwatch/medwatch-online.htm> or 1-800-FDA-

1088. Patients can also report suspected adverse drug reactions directly to the FDA at MedWatch.

#### IV. References

1. Public Health-Seattle and King County (2009). Drug-caused death data. Data analyzed by Caleb Banta-Green, University of Washington, Alcohol and Drug Abuse Institute, Seattle, WA.
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3. Drug Policy Alliance (2009). Preventing Overdose, Saving Lives: Strategies for Preventing a National Crisis.  
<http://www.drugpolicy.org/docUploads/OverdoseReportMarch2009.pdf>
4. Washington State Engrossed Senate Bill 5516. Drug Overdose Prevention (2010). <http://apps.leg.wa.gov/documents/billdocs/2009-10/Pdf/Bills/Session%20Law%202010/5516.SL.pdf>
5. Barton, E. D., Ramos, J., Colwell, C., Benson, J., Baily, J., Dunn,W (2002). Intranasal administration of naloxone by paramedics. Prehospital Emergency Care, 6, 54–58.
6. Hussain, A., Kimura, R., Huang C., and Kashihara, T. (1984). Nasal absorption of naloxone and buprenorphine in rats. International Journal of Pharmaceutics, 21 (2) 233-237.
7. Loimer N., Hofmann P., Chaudhry H. R. Nasal administration of naloxone is as effective as the intravenous route in opiate addicts. Int J Addict 1994; 29: 819–27.
8. Loimer N., Hofmann P., Chaudhry H. R. Nasal administration of naloxone for detection of opiate dependence. J Psychiatr Res 1992; 26: 39–43.
- 8.9. Kelly, A., Kerr, D., Koutsogiannis, Z., Dietze, P., Patrick, I. and Walker, T. *Randomised trial of intranasal versus intramuscular naloxone in prehospital treatment for suspected opioid overdose.* Med J Australia 2005; 182: 24-27.

## **V. Appendix 1: General Pharmacy Policies and Procedures**

1. Pharmacists will undergo training sessions.
2. Prior to Prescribing and Dispensing, the Pharmacist will perform an in person counseling session to assess the patient's need for take-home naloxone and determine whether the patient meets protocol criteria.
3. All patient interactions resulting in a prescribing and dispensing event will be documented in the pharmacy management system.
4. The Naloxone Training Checklist (Appendix 4) will be initialed by the patient and prescribing pharmacist and attached to the prescription as a part of the permanent prescription record.
5. Prescriptions dispensed under this protocol will be readily identifiable by Pharmacist National Provider Identifiers and Naloxone National Drug Codes in the pharmacy management database.
6. Pharmacy staff will be available to answer patient questions during regular business hours and will direct patients to call 911 if they have any questions or concerns outside of business hours.

## Appendix 2: Training Materials

### Naloxone for Overdose Prevention

\_\_\_\_\_  
 patient name  
 \_\_\_\_\_  
 date of birth  
 \_\_\_\_\_  
 patient address  
 \_\_\_\_\_  
 patient city, state, ZIP code  
 \_\_\_\_\_  
 \_\_\_\_\_  
 prescriber name  
 \_\_\_\_\_  
 prescriber address  
 \_\_\_\_\_  
 prescriber city, state, ZIP code  
 \_\_\_\_\_  
 prescriber phone number  
**Naloxone HCl 0.4 mg/mL (Narcan)**  
 1 x 10 mL as one flip-top vial (NDC 0409-1219-01) OR  
 2 x 1 mL single dose vials (NDC 0409-1215-01)  
 Refills: \_\_\_\_\_  
 Intramuscular (IM) syringe, 23 G, 3cc, 1 inch  
 Qty: \_\_\_\_\_ Refills: \_\_\_\_\_  
**Sig:** For suspected opioid overdose,  
 inject 1mL IM in shoulder or thigh.  
 Repeat after 3 minutes if no or minimal response.  
 \_\_\_\_\_  
 prescriber signature  
 \_\_\_\_\_  
 date



#### Are they breathing?

Signs of an overdose:

- Slow or shallow breathing
- Gaspings for air when sleeping or weird snoring
- Pale or bluish skin
- Slow heartbeat, low blood pressure
- Won't wake up or respond (rub knuckles on sternum)

#### How to Avoid Overdose

- Only take medicine prescribed to you
- Don't take more than instructed
  - Call a doctor if your pain gets worse
- Never mix pain meds with alcohol
- Avoid sleeping pills when taking pain meds
- Dispose of unused medications
- Store your medicine in a secure place
- Learn how to use naloxone
- Teach your family + friends how to respond to an overdose



#### Call 911 for help

All you have to say:  
 "Someone is unresponsive and not breathing."  
 Give clear address and location.



#### Airway

Make sure nothing is inside the person's mouth.



#### Rescue breathing

Oxygen saves lives. Breathe for them.  
 One hand on chin, tilt head back, pinch nose closed.  
 Make a seal over mouth & breathe in  
 1 breath every 5 seconds  
 Chest should rise, not stomach



#### Evaluate

Are they any better? Can you get naloxone and prepare it quickly enough that they won't go for too long without your breathing assistance?



#### Prepare naloxone

- Remove cap from naloxone and uncover needle
- Insert needle through rubber plug, with bottle upside down
- Pull back on plunger and take up 1 cc into the syringe
- Don't worry about air bubbles (they aren't dangerous in muscle injections)



#### Muscular injection

inject 1cc of naloxone into a big muscle (shoulder or thigh)

For More Info  
[PrescribeToPrevent.com](http://PrescribeToPrevent.com)



#### Evaluate + support

- Continue rescue breathing
- Give another shot of naloxone in 3 minutes if no or minimal breathing or responsiveness
- Naloxone wears off in 30-90 minutes
- Comfort them; withdrawal can be unpleasant
- Get them medical care and help them not use more opiate right away
- Encourage survivors to seek treatment if they feel they have a problem

Poison Center  
 1-800-222-1222  
 (free & anonymous)

# Naloxone for Overdose Prevention

patient name \_\_\_\_\_

date of birth \_\_\_\_\_

patient address \_\_\_\_\_

patient city, state, ZIP code \_\_\_\_\_

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**Rx** \_\_\_\_\_ prescriber name

prescriber address \_\_\_\_\_

prescriber city, state, ZIP code \_\_\_\_\_

prescriber phone number \_\_\_\_\_

**Naloxone HCl 1 mg/mL**  
 2 x 2 mL as pre-filled Luer-Lock needled syringe  
 (NDC 0548-3369-00)

Refills: \_\_\_\_\_

2 x Intranasal Mucosal Atomizing Device (MAD 300)

Refills: \_\_\_\_\_

For suspected opioid overdose, spray 1mL in each nostril.  
 Repeat after 3 minutes if no or minimal response.

Pharmacist: Call 1-800-788-7999 to order MAD 300.

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prescriber signature \_\_\_\_\_

date \_\_\_\_\_

**How to Avoid Overdose**

- Only take medicine prescribed to you
- Don't take more than instructed

- Call a doctor if your pain gets worse
- Never mix pain meds with alcohol
- Avoid sleeping pills when taking pain meds

- Dispose of unused medications
- Store your medicine in a secure place
- Learn how to use naloxone

- Teach your family + friends how to respond to an overdose

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**Are they breathing?** → Call 911 for help

Signs of an overdose:

- Slow or shallow breathing
- Gaspng for air when sleeping or weird snoring
- Pale or bluish skin
- Slow heartbeat, low blood pressure
- Won't wake up or respond (rub knuckles on sternum)

All you have to say:  
 "Someone is unresponsive and not breathing."  
 Give clear address and location.



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**Airway** → Rescue breathing

Make sure nothing is inside the person's mouth.

Oxygen saves lives. Breathe for them.  
 One hand on chin, tilt head back, pinch nose closed.  
 Make a seal over mouth & breathe in  
 1 breath every 5 seconds  
 Chest should rise, not stomach



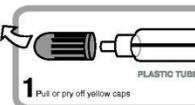
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**Prepare Naloxone**

Are they any better? Can you get naloxone and prepare it quickly enough that they won't go for too long without your breathing assistance?



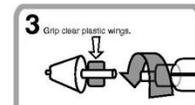
**1** Pull or pry off yellow cap



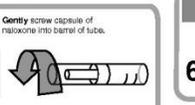
**2** Pry off red cap



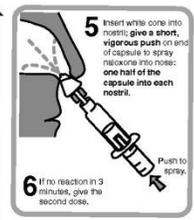
**3** Grip clear plastic wings.



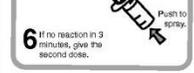
**4** Gently screw capsule of naloxone into barrel of tube.



**5** Insert white cone into nostril; give a short, vigorous push on end of capsule to spray naloxone into nose; one half of the capsule into each nostril.



**6** If no reaction in 3 minutes, give the second dose.



**Evaluate + support**

- Continue rescue breathing
- Give another 2 sprays of naloxone in 3 minutes if no or minimal breathing or responsiveness
- Naloxone wears off in 30-90 minutes
- Comfort them; withdrawal can be unpleasant
- Get them medical care and help them not use more opiate right away
- Encourage survivors to seek treatment if they feel they have a problem

Poison Center  
 1-800-222-1222  
 (free & anonymous)

For More Info  
[PrescribeToPrevent.com](http://PrescribeToPrevent.com)

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## Appendix 3: Training Outline

1. What is an overdose?
  - a. Opioids = stop breathing
  - b. Stimulants = heart stops, seizures, stroke
2. Risk factors for opioid OD
  - a. Loss of tolerance
    - i. Period of sobriety
    - ii. Physical health (sick/weight loss)
    - iii. Prevention: know your tolerance
  - b. Mixing drugs
    - i. Benzodiazepines
    - ii. Speedballs
    - iii. Prevention: one at a time, don't mix highest risk
  - c. Variation in strength/quality
    - i. Prevention: Test shots, release tourniquet, know your supply
  - d. Using alone
    - i. Prevention: use with friends, leave door unlocked, make OD plan
3. Difference between deep nod and OD?
  - a. Unresponsive to yelling or stimulation
  - b. Slow or no breathing
  - c. Snoring/gurgling
  - d. Turning blue (especially lips and fingernails)
  - e. Slow heartbeat/pulse
4. Steps for responding to an opioid OD
  - a. Stimulation/responsiveness (noise, sternum rub)
  - b. Check breathing and respond (open airway)
  - c. Recovery position
  - d. Check for pulse
  - e. Call for help
  - f. Administer Narcan
    - i. Nasal administration option
    - ii. How much Narcan?
  - g. Rescue breathing
  - h. Aftercare
5. Good Samaritan Law
6. Storage
7. Logistics
  - a. Prescription and refills

## Appendix 4: Naloxone Patient Training Checklist

Initials  
Patient RPh

		<p><b>OD Risk factors</b> Tolerance, Abstinence (jail, detox), Mixing drugs, Using alone, Variation in strength/quality, Prior overdose</p>
		<p><b>OD prevention techniques</b> – educate those you use with and make a plan! Purity testing, tie-released gradual injecting, know the source, keep naloxone next to you, don't use alone, control own high, Know your tolerance, Risks of Mixing Drugs</p>
		<p><b>Signs of Overdose:</b> Unresponsive to yelling or stimulation, slow or no breathing, snoring/gurgling/chocking sounds or turning blue</p>
		<p><b>A &amp; B of Life: airway and breathing</b> Airway: remove gum, food, anything in mouth Breath: if stopped or slowed breathing, you must breathe for them (rescue breathing) If you must leave the person, call 911 and place in recovery position</p>
		<p><b>Call for help</b> 911 / Yell! Good Samaritan law</p>
		<p><b>Rescue Breathing</b> On back, tip chin into air to open airway, clear mouth and pinch off nose, Seal mouth over theirs, Two breaths to begin, then one every five seconds</p>
		<p><b>Street myths</b></p>
		<p><b>Naloxone</b> Store away from light and at room temperature, Keep Narcan with your works, tell people you get high with where it is, Spray about half up each side of the nose, Breathe for them until it starts working, Give 2<sup>nd</sup> dose in 2-5 minutes, If second dose doesn't work in five minutes, something else is wrong, call 911</p>
		<p><b>Return of Overdose</b> naloxone last 30-90 minutes Heroin overdose may last 2 hours, Methadone overdose may last 24 hours – call 911, Multi-drug OD (alcohol, benzos, cocaine) could be more dangerous - get to a hospital</p>