Naloxone to reduce risk of death from opioid overdose

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Clinical question

How can we reduce the risk of death from overdose in patients taking opioid medications (prescription or street) or heroin?

Recommendations

Naloxone is an opioid antagonist that may be used to reverse the symptoms of opioid overdose (including respiratory depression) after a known or suspected opioid overdose. In the same way that epinephrine is used for anaphylaxis and glucagon for hypoglycemia, naloxone can be used in a suspected opioid overdose to reduce the risk of death and serious morbidity.

- Naloxone should be prescribed to patients who are on chronic opioid therapy ≥ 40 mg MED per day or have other risk factors * for opioid overdose. Naloxone can also be prescribed to the family members of patients on COT, or to any layperson who may witness an opioid overdose in another person. Note: Naloxone must be prescribed by a provider who has a therapeutic relationship with the individual receiving the prescription.

  * Risk factors for opioid overdose include but are not limited to:
    - Suspected or confirmed history of substance use disorders, illicit opioid use, or misuse of prescription medications
    - Concomitant use of drugs that increase the risk of respiratory depression (e.g., benzodiazepines, skeletal muscle relaxants, alcohol)
    - History of opioid overdose

- Naloxone should be given whenever an opioid overdose is suspected.
  Naloxone does not cause harm if given to a person who is not experiencing an opioid overdose. If a patient does not respond to naloxone, it may be that the patient:
    - Is taking a partial agonist or mixed agonist/antagonist such as buprenorphine,
    - Has overdosed on another substance or mixture of substances, or
    - Is having a different medical emergency, such as a heart attack.

- Naloxone does not replace emergency medical care.
  Patients experiencing an opioid overdose must always receive medical attention even after receiving a naloxone product, due to the possible return of respiratory and/or central nervous system depression, which may occur if the opioid has a longer half-life than naloxone.

- Prescribing naloxone
  Group Health’s preferred naloxone product is Narcan nasal spray. Another product, a naloxone IM auto-injector (Evzio), is available at a higher cost.
Naloxone nasal spray (Narcan) is formulary/Tier 2.
- Naloxone auto-injector (Evzio) is non-formulary/Tier 3.
- Group Health will cover Narcan nasal spray for any Group Health member, regardless of whether they are the patient at risk or a family member.

How could this change my practice?
When initiating or continuing patients on ≥ 40 mg MED of chronic opioid therapy, provide counseling and a prescription for Narcan nasal spray. Through increased access to naloxone, we hope to decrease the number of deaths from opioid overdose in our communities.

Why did we choose this topic?
Even patients taking their opioid medication exactly as prescribed can overdose. This can be due to decreased respiratory drive (e.g., sleep apnea, obesity-related hypoventilation) or to the use of other substances (e.g., benzodiazepines, muscle relaxers, alcohol) in combination with the opioid.
According to the Centers for Disease Control and Prevention (CDC), more than 165,000 people died from overdose related to prescription opioids from 1999 to 2014. While serious opioid-related risks increase sharply with higher doses (see figure below), even patients taking lower doses can overdose. **Approximately 1 overdose in 7 is fatal.**

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Risk of overdose

<table>
<thead>
<tr>
<th>Opioid dose (mg MED)</th>
<th>1-19 (ref)</th>
<th>20-49</th>
<th>50-99</th>
<th>100+</th>
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<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1.5</td>
<td>4</td>
<td>9</td>
</tr>
</tbody>
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It is important to provide education to reduce opioid-related risks, and then document this advice in the patient's record.

Evidence summary
It is well known that naloxone is safe and effective in reversing overdose symptoms. While the CDC (Dowell 2016) could not find any published studies on the effectiveness of prescribing naloxone for overdose prevention among patients prescribed opioids for pain, the CDC guideline states that "most experts agreed that clinicians should consider offering naloxone when prescribing opioids to patients at increased risk for overdose."

Several community-based programs have shown a reduction in overdose death associated with making naloxone available (Clark 2014). Most of these programs relied on trained bystanders to administer the naloxone and were used in opiate users who had overdosed on heroin.

In a recent nonrandomized intervention study (Coffin 2016), co-prescription of naloxone was encouraged for COT patients who were at risk for overdose. Implemented in six safety-net primary care clinics in San Francisco, the program trained providers and clinical staff to educate patients on how and when to administer naloxone. Naloxone prescriptions were given to 38.2% of the 1,985 study participants. In the following 6 months, there were 47% fewer opioid-related emergency department visits among the patients who received a naloxone co-prescription compared to those who did not. After 1 year, the co-prescription group had 63% fewer ED visits than the comparison group.

References


Resources

Patient information
- Opioid overdose prevention education: www.stopoverdose.org

Clinical guidelines
- Group Health Safety Guideline for Patients on Chronic Opioid Therapy for Chronic Non-Cancer Pain
- CDC Guideline for Prescribing Opioids for Chronic Pain—United States, 2016
- Agency Medical Directors' Group Interagency Guideline on Prescribing Opioids for Pain

Other media
- Turn the Tide Rx The surgeon general's call to end the opioid crisis
- Seattle Times, 9/2/2016 Article on the Seattle Police Department's use of Narcan to treat overdoses

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