Overdose prevention in community and medical practice

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Figure 1. Age-adjusted rates for drug-poisoning deaths, by type of drug: United States, 2000–2013

NOTES: The number of drug-poisoning deaths in 2013 was 43,362, the number of drug-poisoning deaths involving opioid analgesics was 16,235, and the number of drug-poisoning deaths involving heroin was 6,257. A small subset of 1,342 deaths involved both opioid analgesics and heroin. Deaths involving both opioid analgesics and heroin are included in both the rate of deaths involving opioid analgesics and the rate of deaths involving heroin. Access data table for Figure 1 [PDF - 86KB].
Why a surge in overdoses?

- Prescription opioids for pain
- Transitioning to heroin
- Erratic and more deadly heroin supply
- Polysubstance use
  - polypharmacy
## Intervention and Findings

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Findings</th>
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<tbody>
<tr>
<td><strong>State legislation</strong></td>
<td>Low evidence quality from 3 states where multiple efforts in place at the same time with inadequate controls</td>
</tr>
<tr>
<td>• Pill Mills, Doctor Shopping, and Good Samaritan laws</td>
<td>No clear effects on total opioid prescribing or health outcomes. Data only up through 2008. Impact of proactive reporting or provider mandates not known</td>
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<td><strong>Prescription drug monitoring programs</strong></td>
<td>Low evidence quality because lack of comparison groups, short-term follow-up and inadequate statistical testing</td>
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<tr>
<td><strong>Insurance and pharmacy benefits manager</strong></td>
<td>Extremely low evidence quality from lack of baseline data and comparison groups, small sample size, short-term follow-up, health outcomes not assessed and inadequate controls</td>
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<tr>
<td><strong>Safe storage and disposal</strong></td>
<td>Low evidence quality from lack of baseline data and comparison groups, small sample size, short-term follow-up and inadequate controls</td>
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<tr>
<td><strong>Clinical guidelines</strong></td>
<td>Low evidence quality from lack of baseline data and comparison groups, small sample size, short-term follow-up and inadequate controls</td>
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<td><strong>Education: Patient and Providers</strong></td>
<td>Moderate to low evidence quality. Few studies of patient education. Studies of providers find some adoption of safer prescribing, but less impact on patient outcomes</td>
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<tr>
<td><strong>Naloxone distribution</strong></td>
<td>Some evidence of effectiveness in reducing opioid overdose death rates, but overall low evidence quality. Data based on people who inject heroin</td>
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</table>

## Overdose deaths decrease when agonist treatments increase

**Methadone and Buprenorphine in Baltimore:**

Schwartz et al. AIPH 2013.

**Methadone in Norway:**

Clausen et al. Addiction 2009

![Graph showing overdose deaths decrease when agonist treatments increase](image)
Enrollment locations: 2008-2014

- Using, In Treatment, or In Recovery
- Non Users (family, friends, staff)

Program data from people with location reported: Users: 19,694  Non-Users: 10,250

Currently > 31,000 enrollees (16 per day) and
> 4000 overdose rescues documented (4 per day)
Opioid Overdose Related Deaths: Massachusetts 2004 - 2006

Fatal opioid overdose rates reduced where OEND implemented

Naloxone coverage per 100K

Opioid overdose death rate

The AMA has been a longtime supporter of increasing the availability of Naloxone for patients, first responders and bystanders who can help save lives and has provided resources to bolster legislative efforts to increase access to medication in Utah.

“APhA supports the pharmacist’s role in selecting appropriate therapy and dosing and initiating and providing education about the proper use of opioid reversal agents to prevent opioid-related deaths due to overdose.”

“Naloxone has been proven to be an effective, fast-acting, inexpensive and non-addictive opioid antagonist with minimal side effects... Naloxone can be administered quickly and effectively by trained professional and lay individuals who observe the initial signs of an opioid overdose reaction.”

That the MMS will educate physicians about current law allowing for the prescription and dispensing of nasal naloxone and encourage appropriate prescription for patients at risk for opioid overdose.

- MMS House of Delegates, 12/1/12

The MMS will advocate for the appropriate education of at-risk patients and their caregivers in the signs and symptoms of opioid overdose, and the use of nasal naloxone.

- MMS House of Delegates, 5/19/12
Challenges for community programs

- Naloxone cost is increasing, funding is minimal
- Missing people who don’t identify as drug users, but have high risk
- Agencies are CBOs which target IDU, people w/ substance use disorders, HIV prevention

Opportunities for prescription naloxone

- Co-prescribe naloxone with opioids for pain
- Co-prescribe with methadone/buprenorphine for addiction
- Insurance should fund this
- Increase patient, provider & pharmacist awareness
- Universalize overdose risk

Models for Prescribing Naloxone

**Prescriber writes prescription**
- Patient fills at pharmacy

**Pharmacy provides naloxone directly to customer**
- Setting: clinic with insured patients
- Pharmacies alerted to prescribing plans
- May need to have atomizers on-site for intranasal formulation
- Consider providing informational brochure

Without prescriber contact under a collaborative practice agreement (CPA) or standing order
- Encourage naloxone co-prescribing
How to prescribe naloxone

• Three formulations

1. Injectable
   • Dispense:
     – 2x Naloxone 0.4mg/ml single dose vial or 1x 0.4mg/ml 10ml vial
     – 2x IM syringe (3ml 25g 1” syringes recommended)
   • Directions: For opioid overdose, inject 1ml IM in shoulder or thigh. Repeat after 3 minutes, if no or minimal response

2. Nasal (off-label)
   • Dispense:
     – 2x Naloxone 2mg/2ml prefilled luer-lock syringe
     – 2x Mucosal Atomizer Device nasal adapter
   • Directions: For opioid overdose, spray 1ml in each nostril. Repeat after 3 minutes, if no or minimal response


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Go to prescribetoprevent.org
What prescribers can do

• Prescribe safely
• Talk to patients (ie screen and monitor) patients for addiction and overdose risk
• Prescribe naloxone rescue kits
• Provide addiction treatment
  – methadone, buprenorphine, naltrexone

Thank you – awalley@bu.edu