Increasing Naloxone Co-prescription Among Patients at Risk for Prescription Opioid Overdose in a Rural Family Medicine Clinic

Sean Mortenson, M2
University of Wisconsin School of Medicine and Public Health

Faculty Mentor: Jensena Carlson, MD
Assistant Professor of Family Medicine
University of Wisconsin School of Medicine and Public Health
Wisconsin Opioid Summary

• In 2017, there were 926 opioid-involved overdose deaths in Wisconsin\(^1\)
  – 16.9 deaths per 100,000 persons
    • Nat’l rate: 14.6 deaths/100K persons
  – Greatest increase due to synthetic opioids (eg Fentanyl)

• In 2017, there were 362 deaths involving prescription opioids -- a 30% increase from 2012\(^1\)
  – WI providers wrote 52.6 opioid prescriptions per 100 persons
    • Nat’l rate: 58.7 Rx/100 persons
Introduction

• Naloxone saves lives
  – Reverses the effects of opioid drugs, restoring normal respiration
  – From 1994-2014, at least 26,500 opioid overdoses in the US were reversed by laypersons using naloxone

• Co-prescribing naloxone to patients on chronic opioid therapy reduces opioid-related ED visits and overdose mortality
  – 2-year non-randomized intervention study (San Francisco, CA; 2013-2014)

• Increasing access to naloxone is a national health priority
  – HHS recognizes expanded distribution and use of naloxone as a priority for reducing opioid use disorder and overdose (2015)
  – US Surgeon General Advisory (2018): “...knowing how to use naloxone and keeping it within reach can save a life.”
Increase naloxone co-preservation among patients at risk for prescription opioid overdose, with a focus on three at-risk patient cohorts identified by CDC guidelines:\(^1\):

- Higher opioid dosage (\(\geq 50\) MEDD)
- Concurrent benzodiazepine use
- History of substance abuse disorder (MAT)
Methods

• Exploring barriers to naloxone co-prescription
  – Literature review
  – Interviews with clinic staff

• Analysis of patient registries
  – Chart review

• Three-part quality improvement initiative
  – Pre-visit interventions
  – Provider education and training
  – Patient education and training
Barriers to Naloxone Co-prescription

• Provider concerns\textsuperscript{1,2}
  – Lacking knowledge to prescribe (eg dose, administration, safety, etc.)
  – Identifying at-risk patients
  – Educating patients
  – Fear of offending patients
  – Fear of appearing to condone opioid misuse
  – Liability

• Patient concerns\textsuperscript{1}
  – Cost (insurance coverage, co-pays, etc.)
  – Stigma, feeling judged, negative perceptions
  – “...it won’t happen to me…”
  – Increased risk-taking
Patient Education

• Use strategic educational messaging that is:
  – Empowering
    • Study results suggest patients had little prior knowledge of naloxone, and that the majority felt an increased sense of security after receiving a prescription$^{1,2}$
  – Non-judgemental
    • Naloxone prescription as “universal precaution” for all at-risk patients$^3$
  – Patient-centered
    • Patients may not characterize past opioid-poisoning events as overdoses; language such as “accidental overdose” may increase patient comprehension$^3$

• Frame naloxone use in “worst-case scenarios”$^3$
  – Seatbelt/fire extinguisher analogies -- naloxone as safety precaution for unexpected situations
    • “You don’t plan on getting in an accident, but if you do it’s good to have the seat belt”
Quality Improvement Initiative

• Pre-visit interventions
  – Identify candidates for co-prescription
  – Modifications to the rooming process
  – Automated best-practice advisory in EHR

• Provider education/training
  – Academic detailing
  – Peer-to-peer coaching
  – Monthly data review

• Patient education/training
  – Best practices from literature
## Results

<table>
<thead>
<tr>
<th></th>
<th>Naloxone Rx</th>
<th>No Naloxone Rx</th>
<th>Total</th>
<th>Naloxone co-prescription rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total at -risk patients</strong></td>
<td>53</td>
<td>18</td>
<td>71</td>
<td>74.65%</td>
</tr>
<tr>
<td>History of substance abuse disorder (MAT)</td>
<td>21</td>
<td>1</td>
<td>22</td>
<td>95.45%</td>
</tr>
<tr>
<td>Concurrent benzodiazepine use</td>
<td>16</td>
<td>5</td>
<td>21</td>
<td>76.19%</td>
</tr>
<tr>
<td>Higher opioid dosage (≥50 MEED)</td>
<td>16</td>
<td>12</td>
<td>28</td>
<td>57.14%</td>
</tr>
</tbody>
</table>
Results

At-risk Patient Cohort

- History of substance abuse disorder (MAT): 21 Naloxone Rx, 1 No Naloxone Rx
  - Total: 22

- Concurrent benzodiazepine use: 16 Naloxone Rx, 5 No Naloxone Rx
  - Total: 21

- Higher opioid dosage (≥50 MEDD): 16 Naloxone Rx, 12 No Naloxone Rx
  - Total: 28
Results

• Increase in naloxone co-prescription from 49% to 75%
  – 12 new naloxone prescriptions (May - Sep 2019)
    • Higher opioid dosage (6); ↑33%
    • Concurrent benzodiazepine use (5); ↑45%
    • History of substance abuse (1); ↑9%
  – 1 refusal (cost)

• Pre-existing clinic focus on tapering and/or transitioning away from opioids for chronic pain management acted as synergistic factor
  – 12 patients no longer have active opioid prescriptions
  – 11 patients tapered to <50 MEDD
Conclusions

- Strategies cited in literature to increase naloxone co-prescription in urban/suburban primary care settings also work in rural primary care settings.

- Success attributable, in part, to:
  - Improvements to clinic processes (eg BPA, Rx pending)
  - Increased provider awareness of at-risk criteria
  - Strategic messaging (eg “universal precaution”)

- More research is necessary to understand how often naloxone prescriptions are filled by patients and how healthcare providers in rural areas can collaborate with community partners to increase access to this life-saving drug.
Acknowledgments

• Thank you to the following individuals for their invaluable support of this project:

  – Jensena Carlson, MD
  – Jeff Berry, MD
  – Anna Helwig, RN
  – Wen-Jan Tuan, MS, MPH
References


8. UW Health Family Medicine Clinic Providers and Staff. 5-Why’s Exercise on Barriers to Naloxone Co-prescription. 2019 May.