

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



School of Medicine
and Public Health

UNIVERSITY OF WISCONSIN-MADISON

Introduction

Wisconsin Opioid Summary

- In 2017, there were 926 opioid-involved overdose deaths in Wisconsin¹
 - 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 2012¹
 - WI providers wrote 52.6 opioid prescriptions per 100 persons
 - Nat'l rate: 58.7 Rx/100 persons

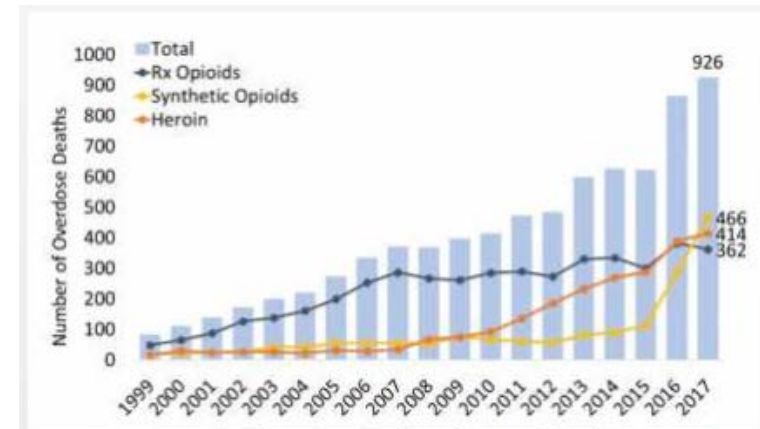


Figure 1. Number of overdose deaths involving opioids in Wisconsin, by opioid category. Drug categories presented are not mutually exclusive, and deaths might have involved more than one substance. Source: CDC WONDER

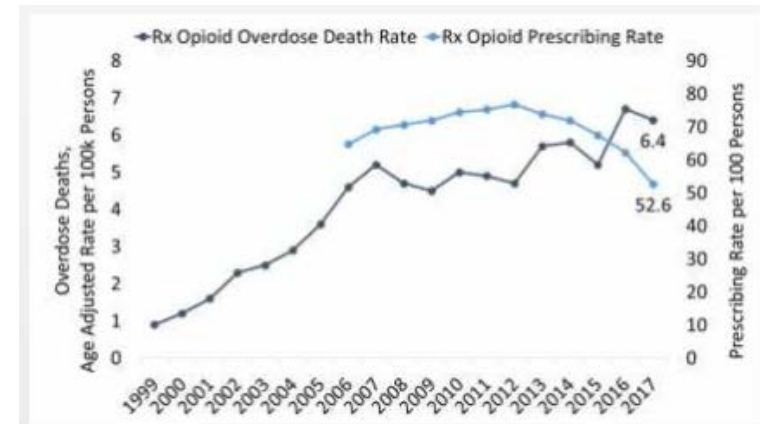


Figure 2. Wisconsin rate of overdose deaths involving prescription opioids and the opioid prescribing rate. Source: CDC and CDC WONDER.



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 naloxone¹
- Co-prescribing naloxone to patients on chronic opioid therapy reduces opioid-related ED visits² and overdose mortality³
 - 2-year non-randomized intervention study (San Francisco, CA; 2013-2014)
 - Systematic review of 22 observational studies using Bradford-Hill criteria (2016)
- 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)⁴
 - US Surgeon General Advisory (2018): “...knowing how to use naloxone and keeping it within reach can save a life.”⁵



Project Objective

Increase naloxone co-prescription among patients at risk for prescription opioid overdose, with a focus on three at-risk patient cohorts identified by CDC guidelines¹:

- Higher opioid dosage (≥ 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^{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 concerns¹
 - 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 patients³
 - Patient-centered
 - Patients may not characterize past opioid -poisoning events as overdoses; language such as “accidental overdose” may increase patient comprehension³
- 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”*

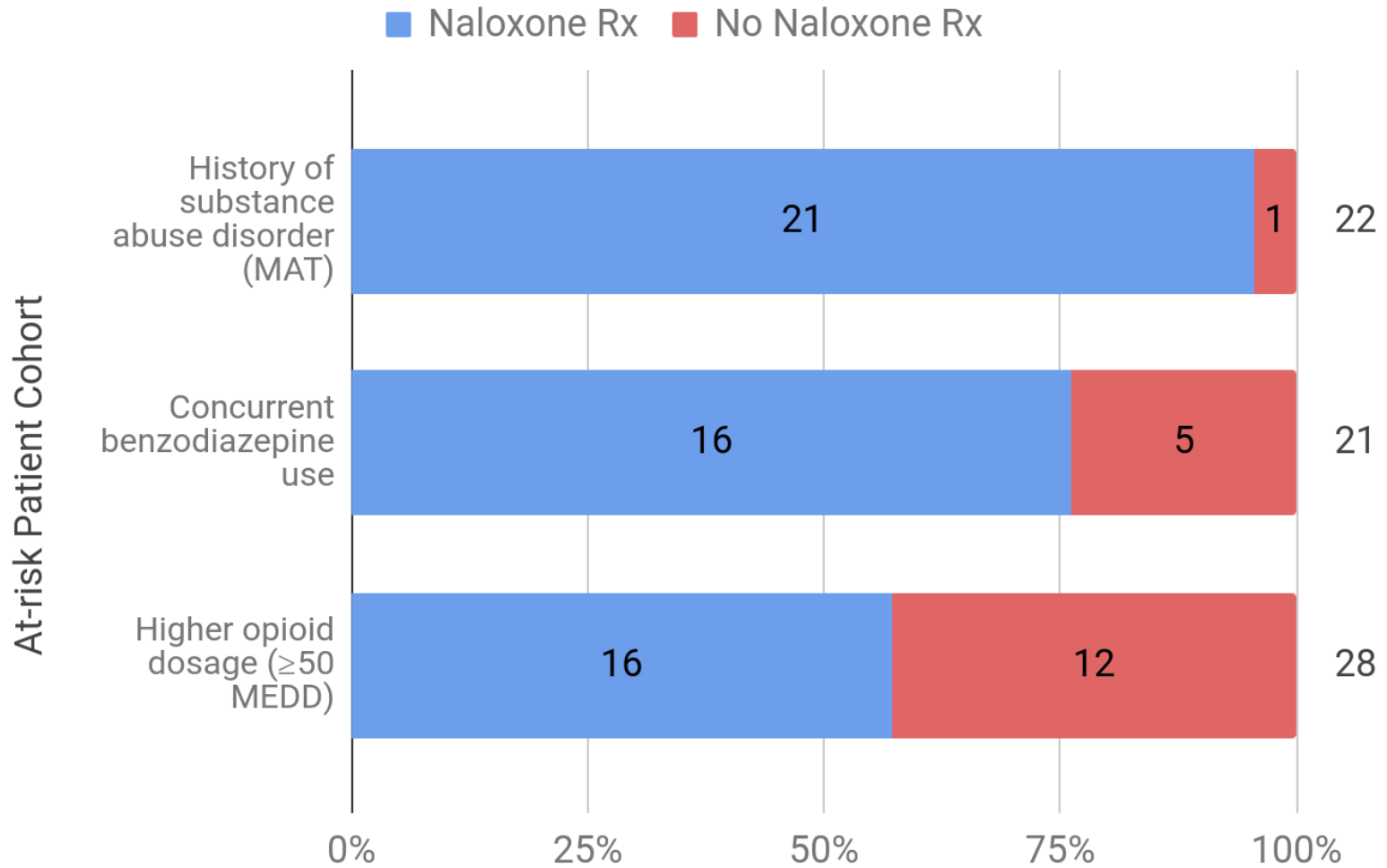
Quality Improvement Initiative

- 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

	Naloxone Rx	No Naloxone Rx	Total	Naloxone co-prescription rate
Total at -risk patients	53	18	71	74.65%
History of substance abuse disorder (MAT)	21	1	22	95.45%
Concurrent benzodiazepine use	16	5	21	76.19%
Higher opioid dosage (≥ 50 MEDD)	16	12	28	57.14%

Results



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

1. National Institute on Drug Abuse (2019, March). Wisconsin Opioid Summary. Retrieved from <https://www.drugabuse.gov/opioid-summaries-by-state/wisconsin-opioid-summary>
2. National Institute on Drug Abuse (2017, March). Naloxone for Opioid Overdose: Life-saving Science. Retrieved from <https://www.drugabuse.gov/publications/naloxone-opioid-overdose-life-saving-science/naloxone-opioid-overdose-life-saving-science>
3. Coffin PO et al. Nonrandomized Intervention Study of Naloxone Coprescription for Primary Care Patients Receiving Long-Term Opioid Therapy for Pain. *Annals of Internal Medicine* 2016 Aug; 165(4): 245-52. doi: 10.7326/M15-2771.
4. McDonald R, Strang J. Are Take-home Naloxone Programmes Effective? A Systematic Review Using Application of the Bradford-Hill Criteria. *Addiction* 2016 Jul; 111(7): 1177-87. doi: 10.1111/add.13326.
5. National Institute on Drug Abuse (2015, November). FDA Approves Naloxone Nasal Spray to Reverse Opioid Overdose. Retrieved from <https://www.drugabuse.gov/news-events/news-releases/2015/11/fda-approves-naloxone-nasal-spray-to-reverse-opioid-overdose>
6. Office of the Surgeon General (2018). Advisory on Naloxone and Opioid Overdose. Retrieved from www.HHS.gov/surgeongeneral/priorities/opioids-and-addiction
7. Behar E, Bagnulo R, Coffin P. Acceptability and Feasibility of Naloxone Prescribing in Primary Care Settings: A Systematic Review. *Journal of Preventative Medicine* 2018 Sep; 114: 79-87.
8. UW Health Family Medicine Clinic Providers and Staff. 5-Why's Exercise on Barriers to Naloxone Coprescription. 2019 May.
9. Centers for Disease Control (2016). Guideline for Prescribing Opioids for Chronic Pain. Retrieved from <https://www.cdc.gov/drugoverdose/prescribing/guideline.html>