Improving Opioid Safety in Primary Care: A Quality Improvement Project on Naloxone Co-Prescribing

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NURS 703B, DNP Project Planning

Winter Term, 2025

Submitted to: Jonathan Soffer, DNP, FNP-Chair

Abstract

Harm reduction interventions, such as naloxone access and co-prescribing practices within primary care, can improve opioid safety and reduce harmful patient outcomes. This quality improvement project aimed to enhance naloxone co-prescribing practices through an educational intervention. The intervention occurred from December 2024 to January 2025 at a Federally Qualified Healthcare Center in Jackson County, Oregon. Providers with prescribing privileges completed an anonymous pre-survey via Qualtrics. Those who completed the pre-survey participated in a voluntary 10-minute educational presentation. One month later, they completed an anonymous post-survey. Thirty-four providers completed the pre-survey and participated in the intervention. Twelve providers of the original 34 completed the post-survey. Results showed an 18% increase in providers co-prescribing 40-50% of the time, suggesting a shift toward more consistent co-prescribing practices. There was an 11% increase in providers who strongly agreed that naloxone prevents harmful outcomes. Forty-two percent of providers expressed improved confidence in identifying eligible patients (up from 35%). However, barriers such as the belief that patients aren't at risk (25%) and uncertainty about insurance coverage (25%) persisted, indicating the need for further training and support. The educational intervention positively impacted naloxone co-prescribing practices, increasing provider confidence and consistency. Addressing persistent barriers and integrating naloxone co-prescribing into routine practice is essential for further reducing opioid-related harm.

Improving Opioid Safety in Primary Care: A Quality Improvement Project on Naloxone Co-Prescribing

Problem Description

Opioid-related deaths have increased from 21,088 in 2010 to nearly 70,000 in 2020, primarily due to a spike in heroin use, synthetic opioids, and inconsistent opioid prescription practices (Gomes et al., 2023; Upp & Waljee, 2020). It is estimated that 1 in 100 adults in the United States has an active opioid-use disorder, and each day, 116 people die from opioid-related overdose (Hornberger & Chhatwal, 2021; Nelson et al., 2022).

In the state of Oregon, 628 unintentional opioid-related overdose deaths occurred during 2023, and the number of opioid overdose visits to emergency departments and urgent care centers was the highest it has been since 2019 (Oregon Health Authority [OHA], 2024). Jackson County, located in Southern Oregon, has the fifth-highest rate of opioid-related deaths in the state, with an average of 53.8 deaths a year (OHA, 2021). Young adults aged 35-44 remain disproportionately affected by opioid-related overdoses, with men accounting for 70.5% of deaths compared to women at 29.5% (Centers for Disease Control and Prevention [CDC], 2024; Gomes et al., 2023).

Harm reduction interventions, including access to naloxone, an opioid antagonist that quickly works to reverse the undesirable side effects of opioids, could decrease fatal opioid overdoses in the population by 38% (Hornberger & Chhatwal, 2021; Nelson et al., 2022). Co-prescription is the practice of prescribing naloxone alongside opioid medications to patients who are at high risk for potential opioid overdoses (Nelson et al., 2022; Stein et al., 2021). Currently, the CDC, U.S. Food and Drug Administration (FDA), and U.S. Office of the Surgeon General all endorse the practice of co-prescription of naloxone to patients at risk for opioid overdose (FDA, 2020; Nelson et al., 2022). Furthermore, the Oregon Pain Guidance (OPG) endorses that naloxone co-prescription should be a part of routine prescribing practices for all providers to prevent unintentional opioid overdoses within the population (OPG, 2022).

Available Knowledge

A literature review was conducted on naloxone co-prescription within the primary care setting. PubMed, CINAHL, and Google Scholar databases were used to search for English-language articles published between 2019 and the present. The range of dates was expanded to 2017 to include two seminal studies from 2017 and 2018. Search keywords included *primary care, naloxone, naloxone co-prescription, provider, barriers, and education.*

In 2022, the CDC published updated practice guidelines regarding opioid prescription practices. Their recommendations for the co-prescribing of naloxone for at-risk patients include those with a history of overdose or substance use disorder, concurrent opioid-benzodiazepine use, individuals at risk of returning to high-dose opioids to which they have lost tolerance (e.g., those who have been institutionalized, such as prisoners or those undergoing dose tapering), and those taking greater than or equal to 50 morphine milligram equivalents per day (MME/day) (CDC, 2022).

Primary care often serves as the first point of contact in healthcare for patients, making it an ideal environment for identifying at-risk individuals and facilitating access to naloxone through co-prescription practices. However, the prescribing and dispensing of naloxone remain low in primary care settings; in 2018, primary care providers wrote only 1.5 naloxone prescriptions for every 100 high-dose opioid prescriptions (CDC, 2022). Additionally, rural counties in the United States were found to be three times less likely to dispense naloxone compared to more metropolitan areas (CDC, 2022).

Barriers to naloxone co-prescription cited by providers include lack of knowledge around prescribing naloxone, lack of understanding around patient education, uncertainty of which patients would benefit from naloxone co-prescription, time constraints, and fear of offending patients (Behar et al., 2017; Martino et al., 2020). In a cross-sectional mixed-method study addressing naloxone prescribing barriers, 66% of provider participants self-reported that they had never received formal training regarding naloxone prescribing and counseling (Martino et al., 2020). Furthermore, studies addressing

harm reduction knowledge among providers found overreaching themes in the lack of knowledge concerning overdose education and naloxone distribution (Gugala et al., 2022).

An academic detailing intervention conducted by the U.S Department of Veterans Affairs targeting provider knowledge gaps of naloxone prescribing reported a 53% increase in provider willingness to prescribe naloxone after receiving educational training, 82% of providers indicated an increased knowledge of naloxone use in the outpatient setting, and 86% of primary care providers included in the intervention indicated an improvement in naloxone prescribing knowledge (Bounthavong et al., 2021). Behar et al. (2018) found that providers were 11 times more likely to prescribe naloxone to their patients after receiving an educational intervention when compared to the control arm.

Research remains limited on the benefits of naloxone co-prescription in the primary care setting. However, educational interventions that focus on increasing provider knowledge show promising results in addressing knowledge gaps that contribute to naloxone co-prescription barriers. These interventions may lead to an increase in safer opioid prescribing practices for providers and patients in the primary care setting.

Rationale

This project was guided by the Institute for Healthcare Improvement (IHI) Model for Improvement (MFI). The IHI MFI is a two-part model; the first part consists of three fundamental questions to set the aim, establish measures, and select an intervention (IHI, 2023). The second part of the model is the Plan-Do-Study-Act (PDSA) cycle for implementation, guidance, and improvement within the care setting (IHI, 2023). This model supported this project's aim by providing structure, guidance, and feedback during the formation and implementation of the project.

During the root cause analysis and the creation of a cause-and-effect diagram (Appendix A), it was found that primary care providers lacked formal education about naloxone co-prescription in the primary care setting. A literature review was conducted on the barriers and facilitators of naloxone co-

prescription in primary care, identifying several key barriers, including a lack of provider knowledge about naloxone and naloxone co-prescription, uncertainty about which patients would benefit from naloxone co-prescription, and patient counseling regarding naloxone. Research on naloxone co-prescription in primary care remains limited. However, educational interventions have demonstrated promising results in reducing knowledge-based barriers, potentially leading to an increase in naloxone co-prescription rates.

Aim

Between December 3rd and January 7th, 100% (n=34) of primary care providers at the Health Care Center would report a 40% increase in naloxone co-prescription rates for patients who met the following criteria: patients with a history of opioid overdose, a history of SUD or current SUD, patients taking opioids with known sleep-disordered breathing, patients prescribed opioids greater than or equal to 50 MME/day, and patients taking concurrent benzodiazepines with opioids. To accomplish the primary aim of this quality improvement project, 100% of providers would complete both an initial and follow-up provider survey on naloxone co-prescription.

Context

This quality improvement project was implemented at the Health Care Center, a Federally Qualified Health Center located in Jackson County, Oregon. The Health Care Center is part of a larger organization of clinics, which will be referred to as the Organization. The Organization provides healthcare services to approximately 30,000 patients within Jackson County. Sixty-five percent of the patients cared for in 2022 were below the 200% federal poverty level, 56% were Medicaid-insured, 14% were uninsured, 9% had Medicare, and 21% had private insurance. Of the patients seen within the Organization, 33% are Latino, 67% are non-Latino, and the largest age group being served is those aged 18-65 years, which accounts for 65% of patients seen.

The Health Care Center is comprised of family physicians, family nurse practitioners, physician associates, and pharmacists. Comprehensive health services are provided at the Health Care Center, including primary care, mental health services, and medication-assisted treatment (MAT). Naloxone prescription rates for patients receiving MAT are consistently perceived as high; however, naloxone co-prescription rates for patients not receiving MAT who are prescribed opioids are perceived as low among providers, most likely due to a lack of knowledge surrounding best practices of naloxone co-prescription.

Intervention

The primary intervention in this quality improvement project was to increase provider knowledge regarding naloxone co-prescription, thus increasing naloxone co-prescribing within the Health Care Center. The intervention included a 10-minute presentation followed by a group discussion, during which providers asked questions and provided feedback to the presenter.

An anonymous pre-survey named The Provider Survey on Naloxone Co-Prescription (Appendix B) was administered before the intervention to providers via a Qualtrics survey link. The survey was created to evaluate the provider's current prescribing practices of naloxone within the Health Care Center and barriers regarding naloxone prescribing, knowledge, attitudes, and beliefs. To be eligible to complete the survey, providers must currently work within the Health Care Center and have prescribing privileges. A one-month post-survey called The Provider Survey on Naloxone Co-Prescription (Appendix C) was administered via an anonymous Qualtrics survey link to evaluate changes to naloxone co-prescription practices following the intervention.

Upon completing the post-survey, provider responses related to co-prescription were compiled in an Excel spreadsheet for analysis and interpretation. Given the limited time available at the Health Care Center, a single plan-do-study-act (PDSA) cycle was conducted.

Study of the Intervention

To evaluate the impact of the intervention on naloxone co-prescribing practices within the Health Care Center, a pre-survey was administered prior to the intervention and one-month post-intervention. Likert scales are simple to construct and are likely to produce a highly reliable scale; they are easy to read and complete by respondents (Taherdoost, 2019). Both the pre- and post-surveys employed a Likert scale and closed-ended questions to assess providers' baseline naloxone co-prescribing practices, their knowledge about naloxone co-prescribing, and their comfort level with prescribing naloxone to patients. The drawbacks of a Likert scale in consideration of this project included limited reproducibility and the possibility of a central tendency bias (Taherdoost, 2019).

Data gathered from both the pre-and post-surveys was compared and analyzed to assess whether the educational intervention was associated with any impactful changes in the provider's prescribing practices, knowledge, and comfort level regarding naloxone co-prescription.

Measures

The primary measure of the quality improvement project was a 40% increase in naloxone co-prescription for eligible patients within the Health Care Center. Process measures included the number of providers who completed the pre-and post-intervention surveys. The balancing measure was increased provider burden due to workflow demands related to changes in prescribing practices. To assess for and monitor the accuracy of the data that was gathered during the time the project was implemented, the Doctor of Nursing Practice student was responsible for the facilitation of survey implementation, and the contact person at the Health Care Center was utilized for assistance in administering the Qualtrics survey links.

Analysis

After the primary PDSA cycle was completed, pre- and post-survey data were analyzed. Both quantitative and qualitative data were extrapolated from the completed survey responses and evaluated for any statistically significant trends or themes.

Ethical Considerations

This project was approved by the Institutional Review Board at OHSU (Appendix D) and deemed non-human research prior to implementation. Participation in the quality improvement project was voluntary. All collected survey data remained anonymous. The educational intervention was scheduled in advance to prevent any interference with clinical functions. Providers were not required to share any identifying information, and there was no need to disclose HIPAA-protected information.

Results

Thirty-four providers, including nurse practitioners, physicians, physician associates, and pharmacists, responded to the pre-survey and participated in the educational intervention. Before the intervention's implementation, the pre-survey data (Appendix E) revealed varying frequencies of naloxone co-prescription among providers. Approximately 28% of respondents reported co-prescribing naloxone 0-10% of the time, while another 28% prescribed naloxone 90-100% of the time. A smaller percentage of providers co-prescribed naloxone in the following ranges: 17% in the 60-70% range, 10% in the 80-90% range, 7% in the 30-40% range, and 3% in the 70-80%, 20-30%, and 10-20% ranges. When asked about their belief in naloxone’s effectiveness in preventing harmful health outcomes, 81% of providers strongly agreed, while 10% either somewhat agreed or strongly disagreed. Additionally, 55% of providers strongly believed they were knowledgeable about which patients should be prescribed naloxone, followed by 35% who somewhat agreed, and 3% of providers in each category indicating they neither agree nor disagree, somewhat disagree, and strongly disagree. Regarding co-prescribing barriers, 44% of providers did not feel their patients were at risk for an accidental overdose, 24% cited a lack of

time, 20% were unsure about insurance coverage, and 12% indicated a need for further training. Despite these barriers, 67% of providers indicated they were extremely likely to co-prescribe naloxone in the future, 17% were extremely unlikely, 13% were somewhat likely, and 3% were neither likely nor unlikely.

The post-survey (Appendix F) had a 35% response rate, with only 12 of the original 34 respondents providing insight into their co-prescribing practices one-month post- intervention. The low response rate was due to scheduling conflicts surrounding the provider's monthly meeting. Within the last month, 27% of providers reported co-prescribing naloxone 90-100% of the time, while another 27% reported co-prescribing 0-10%, 18% reported co-prescribing 40-50%, with 9% of providers co-prescribing in the 60-70%, 30-40%, and 20-30% ranges. In terms of beliefs, 92% of providers strongly agreed that naloxone co-prescription could prevent harmful health outcomes, an increase from pre-survey results, while 8% of providers somewhat agreed. There was an improvement in knowledge in identifying which patients should receive naloxone, with 50% of providers somewhat agreeing, 42% strongly agreeing, and only 8% strongly disagreeing. In terms of barriers to naloxone co-prescribing, 25% of providers cited the following reasons: a need for more training, a belief that the patient was not at risk for overdose, and uncertainty regarding insurance coverage. An additional 13% of providers reported a lack of time and discomfort in discussing accidental overdoses with patients as barriers. The likelihood of future naloxone co-prescriptions was as follows: 50% of providers were extremely likely to co-prescribe naloxone, 33% were somewhat likely, and 17% were extremely unlikely.

Summary

This project intended to increase naloxone co-prescribing rates within the Health Care Center by 40% following an educational intervention. Thirty-four providers participated in the pre-survey and educational intervention, with 12 completing the one-month post-survey. The results from the pre-and post-surveys showed significant variation in co-prescribing practices at the Health Care Center. Due to poor participant retention, the statistical significance of increased naloxone co-prescribing post-

intervention cannot be definitively determined. There was no demonstrable 40% increase in co-prescribing practices within the same response categories. However, the post-survey data did indicate a positive trend toward prescribing behaviors and beliefs.

Interpretation

The intervention did demonstrate a positive shift in prescribing behaviors and provider beliefs. Notably, the percentage of providers co-prescribing at 40–50% of their eligible patients increased from 0% to 18%, and fewer providers remained in the lowest (0–10%) prescribing range. Provider intention to prescribe showed improvement with a combined 83% of providers indicating they were either extremely likely or somewhat likely to co-prescribe naloxone in the future. The 17% who indicated they were extremely unlikely to co-prescribe naloxone remained consistent across both surveys, suggesting that there may be other systemic challenges that require further evaluation.

Provider beliefs regarding naloxone co-prescribing changed positively. Ninety-two percent of providers, compared to 81% in the pre-survey, strongly agreed that naloxone co-prescribing can prevent harmful health outcomes, suggesting that the intervention may have reinforced the importance of naloxone co-prescribing in reducing opioid overdose risks. Furthermore, providers' self-reported knowledge of which patients should be co-prescribed naloxone also improved slightly, with 42% of respondents somewhat agreeing with this statement in the post-survey compared to 35% in the pre-survey.

Despite the positive shifts in prescribing behaviors and provider beliefs, barriers to co-prescribing naloxone continued to persist post-intervention. In both surveys, the most common reasons for not co-prescribing naloxone were the assumption that the patient was not at risk for overdose (44% in the pre-survey vs. 25% in the post-survey), uncertainty regarding insurance coverage (20% vs. 25%), and lack of time (24% vs. 13%). Thirteen percent of providers in the post-survey also reported discomfort

with discussing accidental overdoses, an issue not seen in the pre-survey, which may warrant further training or communication strategies to help providers feel more comfortable discussing these topics.

Results from this intervention reveal persistent barriers and knowledge gaps similar to those noted in the literature on naloxone distribution in primary care. Providers frequently cite a lack of formal training for naloxone co-prescribing and counseling, uncertainty in identifying eligible patients, time constraints, fear of upsetting patients, and structural challenges, such as navigating health insurance (Behar et al., 2017; Martino et al., 2020). Research on the long-term benefits of naloxone co-prescribing remains limited, highlighting the need for ongoing education, structural solutions, and strategies to better support providers in harm reduction efforts (Behar et al., 2017; Martino et al., 2020).

Limitations

Several limitations impacted this project and data interpretation. The most significant impact was the low post-survey response, with only 35% of providers completing the post-survey. This limitation limits the generalizability of the results and potentially introduces response bias. Additionally, the short follow-up period of one month makes it challenging to assess the full extent of behavioral changes, as providers may require a longer period to fully integrate changes to their prescribing practices. Lastly, all data regarding prescribing practices was self-reported, making it challenging to gather accurate quantitative data both at baseline and post-intervention.

Conclusion

Although this project did not achieve its intended aim, the outcomes of this quality improvement initiative underscore the ongoing need for education about naloxone co-prescribing in the primary care setting. Further evaluation is needed to address the barriers and limitations that providers encounter when prescribing naloxone, including specialized training targeting specific identified barriers, policies, and enhanced system support. Additional follow-up over a longer period of time may help identify needs and create more sustainable changes in practice.

References

Behar, E., Bagnulo, R., & Coffin, P. O. (2018). Acceptability and feasibility of naloxone prescribing in primary care settings: A systematic review. *Preventive Medicine*, *114*, 79–87. https://doi.org/10.1016/j.ypmed.2018.06.005

Behar, E., Rowe, C., Santos, G.-M., Santos, N., & Coffin, P. O. (2017). Academic detailing pilot for naloxone prescribing among primary care providers in San Francisco. *Family Medicine.*, *49*(2), 122–126. https://www.stfm.org/FamilyMedicine/Vol49Issue2/Behar122

Bounthavong, M., Christopher, M. L., Veenstra, D. L., Basu, A., & Devine, E. B. (2021). Exploring providers' perception to naloxone education for opioid overdose after receiving academic detailing at the U.S. Department of Veterans Affairs. *Journal of Pharmacy Practice*, *36*(3), 514–522. https://doi.org/10.1177/08971900211053282

Center for Drug Evaluation and Research. (2020, July 23). *New recommendations for naloxone*. U.S. Food and Drug Administration. https://www.fda.gov/drugs/drug-safety-and-availability/new-recommendations-naloxone

Centers for Disease Control and Prevention. (2022, November 3). *CDC Clinical Practice Guideline for prescribing opioids for pain*. Centers for Disease Control and Prevention. https://www.cdc.gov/mmwr/volumes/71/rr/rr7103a1.htm?s_cid=rr7103a1_w

Centers for Disease Control and Prevention. (2024, February 26). *Sudors dashboard: Fatal overdose data*. Centers for Disease Control and Prevention. https://www.cdc.gov/drugoverdose/fatal/dashboard/index.html

Gomes, T., Ledlie, S., Tadrous, M., Mamdani, M., Paterson, J. M., & Juurlink, D. N. (2023). Trends in opioid toxicity–related deaths in the US before and after the start of the COVID-19 pandemic, 2011-2021. *JAMA Network Open*, *6*(7), 1-7. https://doi.org/10.1001/jamanetworkopen.2023.22303

Gugala, E., Briggs, O., Moczygemba, L. R., Brown, C. M., & Hill, L. G. (2022). Opioid harm reduction: A scoping review of physician and system-level gaps in knowledge, education, and practice. *Substance Abuse*, *43*(1), 972–987. https://doi.org/10.1080/08897077.2022.2060423

Hornberger, J., & Chhatwal, J. (2021). Opioid misuse: A global crisis. *Value in Health*, *24*(2), 145–146. https://doi.org/10.1016/j.jval.2020.12.003

Institute for Healthcare Improvement. (2023). *Science of Improvement: How to improve*. Institute for Healthcare Improvement. https://www.ihi.org/resources/Pages/HowtoImprove/ScienceofImprovementHowtoImprove.aspx

Martino, J. G., Smith, S. R., Rafie, S., Rafie, S., & Marienfeld, C. (2019). Physician and pharmacist: Attitudes, facilitators, and barriers to prescribing naloxone for home rescue. *The American Journal on Addictions*, *29*(1), 65–72. https://doi.org/10.1111/ajad.12982

Nelson, S. D., McCoy, A. B., Rector, H., Teare, A. J., Barrett, T. W., Sigworth, E. A., Chen, Q., Edwards, D. A., Marcovitz, D. E., & Wright, A. (2022). Assessment of a naloxone coprescribing alert for patients at risk of opioid overdose: A quality improvement project. *Anesthesia & Analgesia*, *135*(1), 26–34. https://doi.org/10.1213/ane.0000000000005976

Oregon Health Authority. (2021). *Oregon injury data*. Oregon Health Authority. https://oregoninjurydata.shinyapps.io/overdose/

Oregon Health Authority. (2024, January 22). *Opioid overdose public health surveillance update*. Oregon Health Authority. https://www.oregon.gov/oha/PH/PREVENTIONWELLNESS/SUBSTANCEUSE/OPIOIDS/Documents/quarterly_opioid_overdose_related_data_report.pdf

Oregon Pain Guidance. Oregon Pain Guidance. (2022, March 12). https://www.oregonpainguidance.org/guideline/other-considerations/

Stein, B. D., Smart, R., Jones, C. M., Sheng, F., Powell, D., & Sorbero, M. (2021). Individual and community factors associated with naloxone co-prescribing among long-term opioid patients: A retrospective analysis. *Journal of General Internal Medicine*, *36*(10), 2952–2957. https://doi.org/10.1007/s11606-020-06577-5

Taherdoost, H. (2019, May 27). *What is the best response scale for survey and questionnaire design; review of different lengths of rating scale / Attitude Scale / Likert scale*. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3588604

Upp, L. A., & Waljee, J. F. (2020). The opioid epidemic. *Clinics in Plastic Surgery*, *47*(2), 181–190. https://doi.org/10.1016/j.cps.2019.12.005

Appendix A

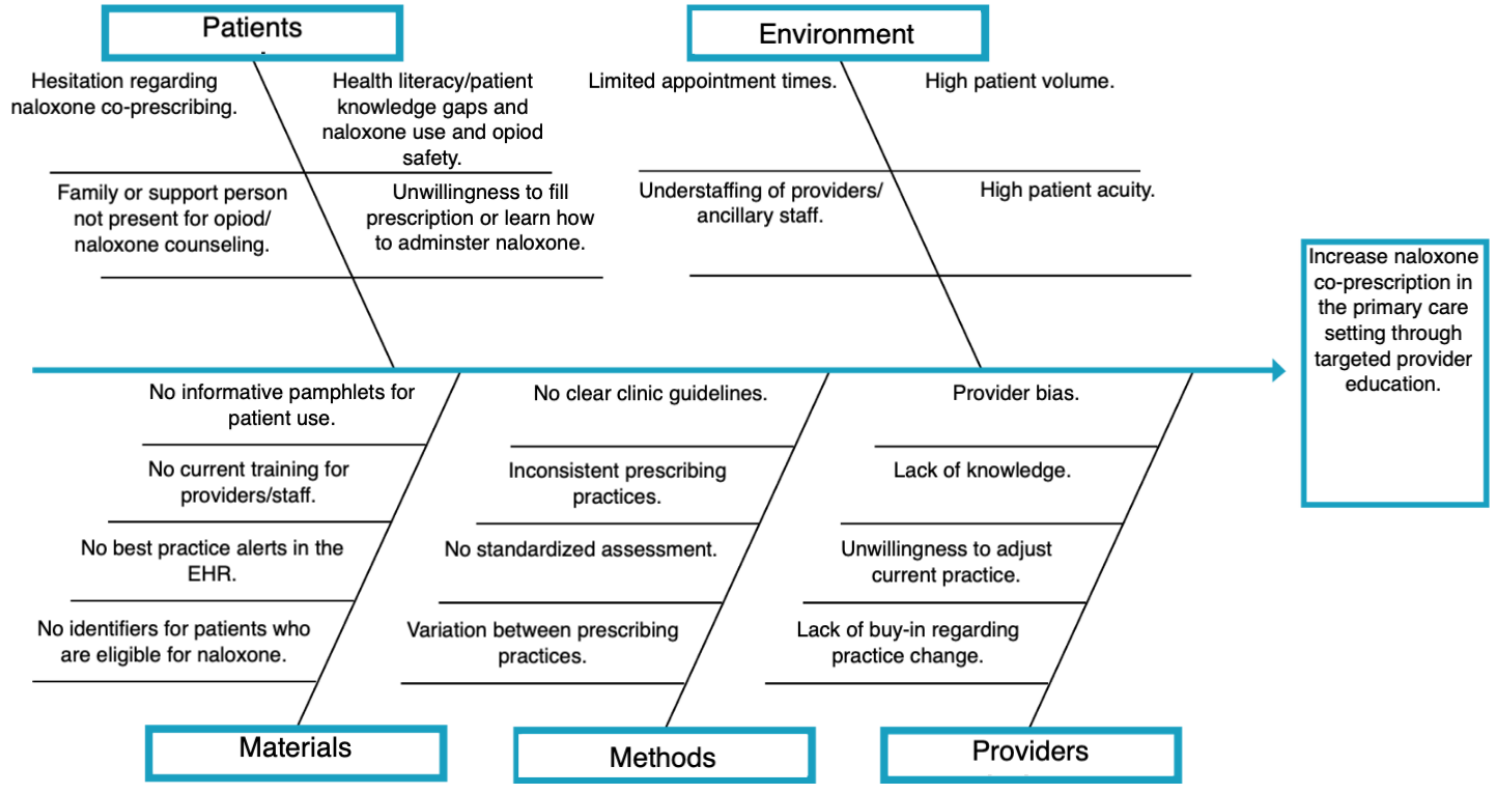
Root Cause Analysis

Template: Cause and Effect Diagram

Team: Sophia Giacomelli

Project: Improving Opiod Safety in Primary Care: A Quality Improvement Project on Naloxone Co-Prescribing

1) Input the effect you'd like to influence.
2) Input categories of causes for the effect (or keep the classic five).
3) Input causes within each category.



Appendix B: Pre-Survey

The Provider Survey on Naloxone Co-Prescription

1. Of the patients you treated in the past month who were prescribed opioids, what percentage did you co-prescribe naloxone to?

0-10%
10-20%
20-30%
30-40%
40-50%
50-60%
60-70%
70-80%
80-90%
90-100%

2. I believe naloxone co-prescription can prevent harmful health outcomes.

Strongly Agree
Somewhat Agree
Neither agree or disagree
Somewhat Disagree
Strongly disagree

3. I am knowledgeable about which patients should be co-prescribed naloxone.

Strongly Agree
Somewhat Agree
Neither agree or disagree
Somewhat Disagree
Strongly disagree

4. If you decided not to co-prescribe naloxone, which selection below best reflects the reason behind your decision?

Lack of time
I need more training to prescribe naloxone
I am not comfortable discussing accidental overdoses with patients
I did not believe the patient was at risk for an accidental overdose
Uncertainty regarding insurance coverage

5. How likely are you to co-prescribe naloxone to patients in the future?

Somewhat likely
Extremely likely
Neither likely or unlikely
Somewhat unlikely
Extremely unlikely

Appendix C: Post Survey

The Provider Survey on Naloxone Co-Prescription

1. Of the patients you treated in the past month who were prescribed opioids, what percentage did you co-prescribe naloxone to?

0-10%
10-20%
20-30%
30-40%
40-50%
50-60%
60-70%
70-80%
80-90%
90-100%

2. I believe naloxone co-prescription can prevent harmful health outcomes.

Strongly Agree
Somewhat Agree
Neither agree or disagree
Somewhat Disagree
Strongly disagree

3. I am knowledgeable about which patients should be co-prescribed naloxone.

Strongly Agree
Somewhat Agree
Neither agree or disagree
Somewhat Disagree
Strongly disagree

4. If you decided not to co-prescribe naloxone, which selection below best reflects the reason behind your decision?

Lack of time
I need more training to prescribe naloxone
I am not comfortable discussing accidental overdoses with patients
I did not believe the patient was at risk for an accidental overdose
Uncertainty regarding insurance coverage

5. How likely are you to co-prescribe naloxone to patients in the future?

Somewhat likely
Extremely likely
Neither likely or unlikely
Somewhat unlikely
Extremely unlikely

Appendix D

IRB MEMO

Research Integrity Office
3181 SW Sam Jackson Park Road - L106RI
Portland, OR 97239-3098
(503)494-7887 irb@ohsu.edu

NOT HUMAN RESEARCH

August 16, 2024

Dear Investigator:

On 8/16/2024, the IRB reviewed the following submission:

Title of Study:	Improving Opioid Safety in Primary Care: A Quality Improvement Project on Naloxone Co-Prescribing
Investigator:	Jonathan Soffer
IRB ID:	STUDY00027588
Funding:	None

The IRB determined that the proposed activity is not research involving human subjects. IRB review and approval is not required.

Certain changes to the research plan may affect this determination. Contact the IRB Office if your project changes and you have questions regarding the need for IRB oversight.

If this project involves the collection, use, or disclosure of Protected Health Information (PHI), you must comply with all applicable requirements under HIPAA. See the HIPAA and Research website and the Information Privacy and Security website for more information.

Sincerely,

The OHSU IRB Office

Appendix E

Pre-Survey Response Rate

Of the patients you treated in the past month who were prescribed opioids, what percentage did you co-prescribe naloxone to? 29

Q1 - Of the patients you treated in the past month who were prescribed opioids, what percentage did you co-prescribe naloxone to?	Percentage	Count
0-10%	28%	8
10-20%	3%	1
20-30%	3%	1
30-40%	7%	2
60-70%	17%	5
70-80%	3%	1
80-90%	10%	3

I believe naloxone co-prescription can prevent harmful health outcomes. 31

Q2 - I believe naloxone co-prescription can prevent harmful health outcomes.	Percentage	Count
Strongly agree	81%	25
Somewhat agree	10%	3
Strongly disagree	10%	3

I am knowledgeable about which patients should be co-prescribed naloxone. 31

Q3 - I am knowledgeable about which patients should be co-prescribed naloxone.	Percentage	Count
Strongly agree	55%	17
Somewhat agree	35%	11
Neither agree nor disagree	3%	1
Somewhat disagree	3%	1
Strongly disagree	3%	1

If you decided not to co-prescribe naloxone, which selection below best reflects the reason behind your decision? 25

Q4 - If you decided not to co-prescribe naloxone, which selection below best reflects the reason behind your decision?	Percentage	Count
Lack of time	24%	6
I need more training to prescribe naloxone	12%	3
I did not believe the patient was at risk for an accidental overdose	44%	11
Uncertainty regarding insurance coverage	20%	5

How likely are you to co-prescribe naloxone to patients in the future? 30

Q5 - How likely are you to co-prescribe naloxone to patients in the future?	Percentage	Count
Extremely unlikely	17%	5
Neither likely nor unlikely	3%	1
Somewhat likely	13%	4
Extremely likely	67%	20

Appendix F

Post-Survey Response Rate

Of the patients you treated in the past month who were prescribed opioids, what percentage did you co-prescribe naloxone to? 11

Q1 - Of the patients you treated in the past month who were prescribed opioids, what percentage did you co-prescribe naloxone to?	Percentage	Count
0-10%	27%	3
20-30%	9%	1
30-40%	9%	1
40-50%	18%	2
60-70%	9%	1
90-100%	27%	3

I believe naloxone co-prescription can prevent harmful health outcomes. 12

Q2 - I believe naloxone co-prescription can prevent harmful health outcomes.	Percentage	Count
Somewhat agree	8%	1
Strongly agree	92%	11

I am knowledgeable about which patients should be co-prescribed naloxone. 12

Q3 - I am knowledgeable about which patients should be co-prescribed naloxone.	Percentage	Count
Strongly disagree	8%	1
Somewhat agree	50%	6
Strongly agree	42%	5

If you decided not to co-prescribe naloxone, which selection below best reflects the reason behind your decision? 8

Q4 - If you decided not to co-prescribe naloxone, which selection below best reflects the reason behind your decision?	Percentage	Count
Lack of time	13%	1
I need more training to prescribe naloxone	25%	2
I am not comfortable discussing accidental overdoses with patients	13%	1
I did not believe the patient was at risk for an accidental overdose	25%	2
Uncertainty regarding insurance coverage	25%	2

How likely are you to co-prescribe naloxone to patients in the future? 12

Q5 - How likely are you to co-prescribe naloxone to patients in the future?	Percentage	Count
Extremely unlikely	17%	2
Somewhat likely	33%	4
Extremely likely	50%	6

Appendix G

Letter of Support from Clinical Agency

Date: *[08/01/2024]*

Dear *Sophia Giacomell]*,

This letter confirms that I, *Dr. Fondell*, allow *Sophia Giacomelli* (OHSU Doctor of Nursing Practice Student) access to complete her DNP Final Project at our clinical site. The project will take place from approximately *December 2024* to *January 2025*.

This letter summarizes the core elements of the project proposal, already reviewed by the DNP Project Preceptor and clinical liaison (if applicable):

- **Project Site(s)**: *La Clinica Birch Grove Health Center 910 S Central Ave, Medford, OR 97501*
- **Project Plan: Use the following guidance to describe your project in a brief paragraph.**
    - **Identified Clinical Problem:** *Naloxone co-prescription in primary care.*
    - **Rationale:** *Educational interventions that focus on increasing provider knowledge show promising results in addressing knowledge gaps that contribute to naloxone co-prescription barriers.*
    - **Specific Aims:** *Between the dates of December 2024 and January 2025, 100% of primary care providers at The Health Care Center will report a 40% increase in naloxone co-prescription rates for patients who meet the following criteria, patients with a history of opioid overdose, a history of SUD or current SUD, patients taking opioids with known sleep-disordered breathing, patients prescribed opioids greater than or equal to 50 MME/day, and patients taking concurrent benzodiazepines with opioids. To accomplish the primary aim of this quality improvement project, 100% of providers will complete both an initial and follow-up provider survey on naloxone co-prescription.*
    - **Methods/Interventions/Measures:** *The primary measure of the quality improvement project will be a 40% increase in naloxone co-prescription for eligible patients within The Health Care Center. Process measures include the number of providers who complete pre- and post-intervention surveys. The balancing measure is increased provider burden due to workflow demands related to changes in prescribing practices. To assess for and monitor the accuracy of the data that will be gathered during the time the project is implemented, the DNP student will be responsible for the facilitation of survey implementation, and the DNP contact person at The Health Care Center will be utilized for assistance in administering and gathering data from the anonymous provider surveys completed via Zoom.*
    - **Data Management:** *All data will be collected anonymously using Zoom polls and transferred into an Excel spreadsheet.*
    - **Site(s) Support:** *The intervention will be conducted at a monthly provider meeting with a pre-survey given anonymously to providers to complete over Zoom, and the post-survey will be administered 1-month post-intervention via Zoom during the next monthly provider meeting.*

During the project implementation and evaluation, *Sophia Giacomelli* will provide regular updates and communicate any necessary changes to the DNP Project Preceptor.

Our organization looks forward to working with this student to complete their DNP project. If we have any concerns related to this project, we will contact *Sophia Giacomelli* and *Jonathan Soffer* (student's DNP Project Chairperson).

Regards,

DNP Project Preceptor (Name, Job Title, Email, Phone): _____
Nat Fondell, MD - Medical Director at Birch Grove Health Center
nfondell@laclinicahealth.org
541-618-1380

___Nat Fondell_____ ____8-1-24_____
Signature Date Signed