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Executive Summary: Staff Education Project
The Effectiveness of Naloxone Staff Education in Reducing Opioid Overdose Mortality
Among Young Adults in an Outpatient Behavioral Clinic

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Summary

The Naloxone staff education project was initiated within an outpatient behavioral health practice as part of a quality improvement and harm reduction effort to address the critical issue of inadequate staff education regarding Naloxone use in responding to opioid overdoses. Opioid overdoses, particularly among young adults, have emerged as a leading cause of preventable death, with about 108,000 deaths recorded in 2022, of which approximately 82,000 (about 76%) involved opioids, much higher than previous years, and emphasizing the critical need for interventions such as Naloxone education. Nurses were pivotal in delivering timely and effective interventions that could save lives. The project's practice question and primary objective was to assess the impact of Naloxone education on staff reported knowledge, competency, and confidence enhancing healthcare staff responses to opioid overdoses in patients aged 18 to 35, with a specific focus on reducing mortality rates from overdoses. A pre- and post-education assessments, including surveys and interviews, to gauge improvements in staff knowledge, confidence, and readiness in administering Naloxone was used. The outcomes revealed a mean staff competency and confidence score rising from 33% to 92% post-training. The comprehensive training program was completed with educational materials and evaluation tools, which significantly bolstered staff performance. Future recommendations stemming from this project included regular hands-on training sessions, ongoing refresher courses, continuous evaluation of staff preparedness, and expanding similar programs to broader healthcare settings. This initiative highlighted the profound impact of enhancing nursing readiness in responding to opioid crises, directly contributing to improved patient survival rates and advancing public health objectives.

Background

The elements in the background that connected to the reason for the practice change or gap in an outpatient behavioral practice were primarily driven by the escalating opioid crisis and its impact on healthcare systems. Opioid overdoses have become a leading cause of death, claiming over 60,000 lives annually in North America (Razaghizad, 2021). This crisis has revealed that healthcare providers are often underprepared to manage opioid overdose emergencies effectively. A significant issue is that many healthcare professionals historically lacked consistent training on naloxone administration and overdose response (Sandhu et al., 2022). This inadequacy leads to delays in intervention and less effective patient care. Additionally, healthcare providers often struggle to manage patients with complex conditions, such as co-occurring mental health or substance use disorders, without sufficient training. Research underscored the need for practical education in overdose response. Ashrafioun et al. (2016) showed that while healthcare providers may understand Naloxone's theoretical use, they often lack hands-on experience. This gap in practical knowledge leads to hesitation or errors when administering Naloxone, which delays intervention and contributes to preventable deaths. This data highlights the necessity for a practice change to address these gaps, particularly in training staff to handle opioid overdose emergencies effectively.

The practice change focused on ensuring that all healthcare staff in outpatient behavioral health settings received comprehensive, standardized training in opioid overdose management. With this training, I aimed to equip healthcare professionals with up-to-date knowledge about Naloxone administration, emergency response protocols, and the ability to manage complex patient cases. The change was intended to enhance staff

competence and confidence in responding to opioid overdoses, improving patient outcomes and reducing preventable deaths.

The project question was to evaluate the effectiveness of naloxone staff education in enhancing healthcare staff's knowledge, confidence, and competency in administering Naloxone for the goal of reducing mortality rates from opioid overdoses in young adults (18-35 years) in outpatient behavioral health practices. The goal was to assess how education on naloxone administration could influence the mortality rates of opioid overdoses in this age group. I aimed to improve staff competence, reduce preventable overdose deaths, and enhance overall patient care by ensuring that staff were well-trained and equipped with both theoretical and practical knowledge. Evidence from studies by Ashrafioun et al. (2016), Rudisill et al. (2021), and Heavey et al. (2018) supported the importance of comprehensive education and hands-on training in improving staff responses and patient outcomes in opioid overdose situations. After training, clinician willingness to administer Naloxone in opioid overdose situations increased from 77% to 99% (see Mayet et al., 2011). Research showed that overdose education and naloxone distribution programs led to lasting improvements in overdose management knowledge (Stephenson et al., 2023). The evidence was considered moderate to strong, derived from peer-reviewed studies that addressed gaps in staff training and their impact on opioid overdose outcomes.

Staff Education Project Development

Participants in this project included psychiatrists, doctors, physician assistants, nurse practitioners, nurses, medical assistants, behavioral health technicians, and other

frontline staff involved in patient care. The procedures developed and implemented for the project included the following:

1. The project began with a need assessment using a survey and interview to assess staff's current knowledge and confidence levels regarding Naloxone administration and opioid overdose recognition.
2. A comprehensive education program was developed that included theoretical training on opioid overdose, Naloxone use, and overdose recognition, alongside hands-on, practical training in Naloxone administration.
3. Training materials such as handouts, PowerPoint presentations, videos, case scenarios, frequently asked questions (FAQs), and discussion prompts were created to ensure staff could effectively understand and practice the skills needed.
4. After the training sessions, the effectiveness of the education was evaluated through follow-up surveys or assessments to gauge knowledge retention, confidence in administering Naloxone, and their self-reported preparedness.

Data Collection and Analysis of Evidence

The data collection process for evaluating the Naloxone training program included pre-and posttraining assessments, direct observations, and feedback surveys to assess healthcare staff knowledge, confidence, and readiness to administer Naloxone (see Appendix). A baseline pretraining survey was administered to all participating staff members to evaluate their initial understanding of opioid overdoses, confidence in responding, and readiness to use Naloxone. This survey included multiple-choice and Likert-scale questions, where participants rated their agreement with statements like "I

feel that the Naloxone training program will improve my ability to respond to opioid overdoses" on a scale from 1 (Strongly Disagree) to 5 (Strongly Agree). Posttraining, a similar survey was given to measure knowledge, confidence, and skills changes. Additionally, direct observations were conducted during role-played overdose scenarios to assess staff performance, specifically their ability to identify opioid overdose symptoms and correctly administer Naloxone. Feedback surveys were also collected after training to gauge participants' satisfaction and perceived program effectiveness in improving their skills.

Descriptive statistics were used to analyze the collected data due to the small sample size in the outpatient behavioral health practice. The pre- and postassessment results were summarized by calculating the frequency and percentage of participants at each level of knowledge and confidence. For instance, an increase in the rate of staff members who felt "very confident" in administering Naloxone was tracked, showing significant improvement after the training. Staff confidence in responding to opioid overdoses showed a dramatic improvement. See Tables 1 and 2.

Results

The posttraining confidence scores of staff members were analyzed and revealed a mean confidence score of 92%, based on 11 out of 12 participants reporting confidence. The median response was 1.0, indicating that the majority had felt confident following the training. As shown in Table 2, the Naloxone staff education program significantly increased staff confidence, with the mean confidence score rising from 33% pretraining to 92% posttraining, reflecting a 175% improvement. Before the training, 67% of staff reported a lack of confidence in responding to opioid overdoses, as shown in Table 1. In

contrast, after the training, 92% felt confident in their ability to administer Naloxone. The range remained consistent at 1, with no extreme outliers, indicating that the training had effectively addressed confidence gaps across the staff. These results demonstrated the program's success in enhancing staff preparedness and equipping them to manage opioid overdose situations more effectively.

Table 1

Pretraining Confidence (33% confident)

Confidence	Frequency (n)	Percentage (%)
Confident (1)	4	33%
Not confident (0)	8	37%

Table 2

Comparison: Pre- and Posttraining Confidence

Statistic	Pretraining	Posttraining
Mean	0.33 (33%)	0.92 (92%)
Median	0 (not confident)	1 (confident)
Mode	0 (not confident)	1 (confident)
Range	1	1

The postimplementation results of the Naloxone training program have several significant impacts on the organization, particularly in terms of staff preparedness, organizational readiness, and public health outcomes. With 92% of staff now confident in administering Naloxone, the organization is better prepared to handle opioid overdoses. This could result in fewer overdose fatalities in the organization's service areas, thus improving the organization's reputation and trust. It also might attract more stakeholders, including funding bodies, healthcare partners, and community organizations focused on public health and harm reduction. Empowering staff through education and training

programs can significantly boost job satisfaction (Iqbal et al., 2024; Shiri et al., 2023).

Staff who feel confident in their roles and supported by their organization are more likely to stay in their positions, reducing turnover and associated costs. These outcomes suggested long-term benefits, including sustained preparedness, reduced risks, and a foundation for expanding training into other critical areas, reinforcing the organization's commitment to community well-being and public health advocacy.

The limitations of the Naloxone Staff Education Project included time constraints, which limited the frequency of training sessions and reduced the ability to reach all staff members, particularly in larger or more decentralized organizations. Additionally, some staff reported a need for more specific training related to handling patients with co-occurring conditions, which impacted the comprehensiveness of their preparedness. These limitations affected the depth of knowledge and confidence for specific situations, potentially reducing the overall effectiveness in managing complex overdose cases. There was also variability in staff engagement, with some members less committed to the training, which could impact the consistent application of naloxone protocols across the organization.

The Naloxone Staff Education Project is important beyond the local site because opioid overdoses are a national public health crisis, and improving staff preparedness can help reduce fatalities on a larger scale. Educating healthcare staff on naloxone administration not only saves lives but also supports a broader public health strategy aimed at combating the opioid epidemic. Research has shown that widespread naloxone access and training significantly reduce overdose deaths, making this initiative vital to community health on a national level (Bohnert & Ilgen, 2019; Razaghizad et al., 2021).

Furthermore, the project could be a model for other organizations to adopt similar practices, fostering a coordinated, widespread response to the opioid crisis.

Conclusions

The Naloxone training project has had a substantial impact on the organization by dramatically increasing staff confidence in responding to opioid overdoses. Prior to the training, only 33% of staff felt confident in administering Naloxone, but posttraining, this figure rose to 92%. This shift not only improved staff preparedness but also ensured faster, more effective responses in emergency situations, increasing the likelihood of saving lives and improving patient outcomes. The project also contributed to the organization's enhanced ability to manage opioid overdose emergencies. With a greater number of trained and confident staff members, the organization is now better equipped to handle overdose situations consistently and competently. This preparedness directly supports public health goals by reducing the risk of fatalities and ensuring that overdose patients receive timely and appropriate care. Additionally, the program positively impacted staff morale and organizational culture. The training empowered staff, boosting job satisfaction and improving retention rates. It also fostered a culture of safety and competence, encouraging collaboration and teamwork, while enhancing the organization's reputation as a responsible and proactive entity in addressing the opioid crisis. This staff education program could foster more vigorous community outreach.

Recommendations included implementing regular refresher courses to update staff on naloxone knowledge, expanding training to cover diverse scenarios like co-occurring mental health conditions, investing in digital tools for accurate naloxone usage tracking, creating a peer support network for staff, increasing community partnerships for

broader training outreach, and monitoring outcomes to evaluate program effectiveness and secure future support. During implementation procedures, I recommend assessing current knowledge gaps through surveys, developing a comprehensive curriculum covering overdose response and naloxone administration, conducting interactive training sessions, monitoring staff progress, and evaluating outcomes through pre- and postassessments and ongoing feedback sessions. These measures aimed to ensure staff confidence and competence in managing opioid emergencies while fostering continuous improvement in the program's impact.

The Naloxone staff education project enhances nursing practice by equipping nurses with the skills and confidence to respond to opioid overdoses. Nurses become key players in improving patient outcomes, ensuring timely and effective interventions, and contributing to a culture of safety and competence. This empowerment can also improve job satisfaction and retention, fostering a more competent and confident nursing workforce. The project promotes social change by actively addressing the opioid crisis, reducing overdose fatalities, and improving public health outcomes. It contributes to the broader goal of harm reduction, encourages a shift toward more proactive, life-saving interventions, and helps mitigate the long-term social impact of the opioid epidemic, particularly in vulnerable communities. The project promoted equity by providing all staff with the same high-quality training, ensuring that responses to opioid overdoses were consistent and inclusive, regardless of a patient's background or demographic. Additionally, community outreach may help address healthcare access and education disparities, supporting more equitable healthcare delivery. Overall, the project has

strengthened the organization's ability to address the opioid crisis, improving both patient care and community well-being.

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Appendix

Pretest Questions: Knowledge Assessment Session

Please rate the following statements based on your agreement. (Scale: 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree):

1. I am confident in identifying the signs of an opioid overdose.
2. I am familiar with the administration process of Naloxone.
3. I am comfortable responding to an opioid overdose situation.
4. I am knowledgeable about the side effects of Naloxone.
5. I believe Naloxone training is essential for all healthcare staff.
6. I feel prepared to educate others about Naloxone and opioid overdose.
7. I am knowledgeable about how to properly store Naloxone to maintain its effectiveness.
8. I am familiar with the differences between intranasal and intramuscular Naloxone administration.
9. I understand the importance of calling emergency services after administering Naloxone.
10. I feel that the Naloxone training program will improve my ability to respond to opioid overdoses.

Posttest Questions: Knowledge Assessment Session

Please rate the following statements based on your agreement. (Scale: 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree):

1. I am confident in identifying the signs of an opioid overdose.

2. I am familiar with the administration process of Naloxone.
3. I am comfortable responding to an opioid overdose situation.
4. I am knowledgeable about the side effects of Naloxone.
5. I believe Naloxone training is essential for all healthcare staff.
6. I feel prepared to educate others about Naloxone and opioid overdose.
7. I am knowledgeable about how to properly store Naloxone to maintain its effectiveness.
8. I am familiar with the differences between intranasal and intramuscular Naloxone administration.
9. I understand the importance of calling emergency services after administering Naloxone.
10. I feel that the Naloxone training program has improved my ability to respond to opioid overdoses.