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Increasing Opioid Pain Pre-assessment and Reassessment Documentation Rate in Medical-Surgical Units

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Abstract

Problem The fifth vital sign, pain, requires proper pain management in hospital settings, often involving opioids with significant risks of adverse reactions. Appropriate pain assessment and management is vital to ensure safe medication administration and mitigate potential adverse reactions. **Context** This quality improvement (QI) project aimed to enhance opioid assessment and documentation rate above 90% compliance in two medical-surgical units, with a focus on bedside nurses. Nurses play a key role in administering and documenting pain assessments, a practice crucial to managing patient safety and effective pain management specific to opioid use. **Intervention** A baseline survey provided nurses' understanding on compliance criteria and assessment timing. Interventions included visual reminders, informational posters, and instructions on how to access individual self-compliance reports. **Measures** A post-intervention survey assessed effectiveness and gathered feedback from nurses. April quarterly quality report data will be used to measure compliance rates for pain pre- and post-assessment documentation and compared with pre-intervention February quality report data. Alternatively, manual auditing of the electronic health record (EHR) for both units was performed to obtain preliminary post-intervention compliance data. **Results** Post-intervention results from April reports exhibited a decline of 7% in compliance rate for pre-assessment in unit A, but an increase by 0.5% for post-assessment documentation. Conversely, unit B displayed a 6.3% increase in pre-assessment documentation compliance and a 3.5% increase in post-assessment documentation rate. **Conclusion** Usage of visual aids to prompt pain assessment and reassessment documentation, coupled with enhanced nurse education on extracting self-compliance reports, have potential for enhancing nurse documentation compliance rates within medical-surgical units.

Keywords: *pain assessment, reassessment, documentation, medical-surgical, opioids*

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As healthcare continues to combat the opioid epidemic, optimal pain management remains essential to addressing the underlying crisis to prevent misuse or overuse of opioids. Opioid medications prevail as the primary pharmacological intervention for pain management in in-patient settings, requiring close surveillance of adverse reactions such as unintended advancing sedation and respiratory depression (Jarzyna et al., 2011). In efforts to improve pain management with safe opioid prescribing guidelines, The Joint Commission (TJC) released a set of revised standards related to pain assessment and management in 2018. These standards mandate hospitals to establish protocols and quality metrics for pain assessment and management, ensuring proper evaluation and treatment of pain while minimizing associated risks (The Joint Commission, 2017). While TJC lacks a standardized criteria for pain assessment and management, research indicates that many hospitals commonly implement protocols for pre- and post-assessment of pain following opioid administration that have been established by an interdisciplinary team. Despite potential variations in the hospital policies, it remains the nurses' duty and responsibility to conduct proper and complete pain assessment prior to opioid administration and reassess patients to mitigate any potential adverse effects.

Problem Description

At a 244-licensed bed hospital in Northern California, two medical-surgical units illustrated suboptimal patient pre-assessment and reassessment documentation compliance. Unit A's exhibited a pre-assessment rate of 68.5% and a reassessment rate of 89.1% and unit B revealed a pre-assessment rate of 70.4% and a reassessment rate of 85.2% on the February 2024 quarterly report- failing to meet Hospital X's acceptable compliance rate of 90%. Upon

observation and investigation of gaps to pain pre- and post- assessment documentation, registered nurses (RN) have expressed barriers such as high workload, insufficient time, and knowledge gaps within the pain pre-assessment and reassessment policy.

Upon reviewing Hospital X's pain management policy to identify further gaps, it became apparent that the four essential documentation criteria (pain level, oxygen saturation, opioid sedation level, and respiratory rate) were clearly outlined, and pain reassessment time frames were provided based on the route of administration: within 60 minutes for oral (PO) and within 30 minutes for intravenous (IV) or intramuscular (IM). However, the policy failed to specify assessment time frames for pre-assessment, and the confusing verbiage of the four required criteria for pre-assessment was stated under the reassessment policy. The lack of clarity in the policy regarding pre-assessment criteria may have contributed to the suboptimal pain pre-assessment documentation rate.

Lastly, the data extracted from the quarterly quality reports remained ambiguous. For pre-assessment, observation revealed that some RNs bypassed the four required criteria in the Medical Administration Record (MAR) but inputted the data in the flowchart because reassessment documentations were charted under the flowsheet tab of Epic, the electronic health record (EHR) platform. Clarification regarding where and how to document pain pre-assessment and reassessment in Epic was crucial, and proper dissemination of pain pre- and post- assessment documentation workflow was deemed essential.

Available Knowledge

PICOT Question

After the initial assessment of the problem, identification of gaps, and review of literature, the following PICOT (patient, intervention, comparison, outcome, and time) question

was generated as the foundation of the QI project: For nurses on a medical-surgical unit (P), does education about best practices for opioid medication assessment and documentation (I), compared with no education (C), lead to increased documentation (O) over two months (T)?

Search Methodology

A comprehensive peer-reviewed literature review was conducted throughout February of 2024 using PubMed and Cumulative Index to Nursing and Allied Health (CINAHL) databases. The search criteria encompassed search terms of "pain assessment", "pain documentation", "pain reassessment", "pain assessment documentation", "opioid reassessment", and "documentation compliance." The search was narrowed down to 10 years between the years of 2014 to 2024. As shown on Appendix A, ten research articles were reviewed for critical appraisal using the Johns Hopkins Nursing Evidence Based Practice methodology to assess evidence level and quality (Dang & Dearholt, 2018). Of the 10 articles reviewed and integrated, two studies were randomized controlled trials (Level I), one study was quasi-experimental (Level II), four studies were qualitative, non-experimental and mixed-method non-experimental (Level III), and three studies were quality improvement (Level V). With a multitude of types and quality of studies incorporated into evidence, it provides a strong foundation for implementing education about best practices for opioid medication assessment and documentation to increase pain pre- and post- assessment documentation rate.

Literature Review

Throughout the review process of literature, three important themes emerged to shape the implementation process of improving pain pre-assessment and reassessment documentation rate upon opioid administration.

Education as an Intervention

A retrospective pre-post intervention study conducted by Philips et al., (2018) indicated that the educational presentation developed by an interdisciplinary committee regarding pain reassessment time frames for each route of opioid administration increased pain reassessment documentation within the specified time frame from 32.9% to 37.1. A total of 320 patients' medical records were collected and separated into two groups of 160 records for control and intervention (education) groups. Moreover, Philips and colleagues utilized the time frame protocol of 6 to 15 minutes for intravenous (IV), 15 to 30 minutes for intramuscular (IM), and 30 to 60 minutes for oral (PO). The weaknesses and limitations of this literature remain that there was no distinction between immediate and extended-release formulation of pain medication when given the reassessment time frame education. However, the findings ultimately support the effectiveness of education in pain reassessment time frame guidelines in increasing pain reassessment documentation rate.

Moreover, Morris et al., (2021) asserts that nurses' perception of pain assessment may be altered by the opioid dosage regimen as shown by the low documentation rate of 20.6% of pain reassessment within one-hour of opioid administration. In other words, higher dosage of opioid regimens was associated with a lower frequency of pain reassessment documents. Upon extracting 345 medical charts from ICU admissions from five hospitals and performing a linear regression with the descriptive statistics, the descriptive-correlational retrospective study suggests the following barriers for pain assessment documentation: lacking a systematic approach to pain assessment, limited resources, and insufficient staff training. Morris and colleagues' suggestion of undermining the barriers and its correlation to low pain assessment documentation rates support the barriers such as lack of time and high amount of workload.

Dang and Stafseth (2023), proves the effectiveness of education and reminders in increasing pain assessment documentation in an observational study with a pre- and post-intervention. Through the 45 minute teaching sessions given to nurses and four weeks of pain assessment reminders at the bedside, pain assessment documentation increased from 81.4% to 91.4%. Dang and Stafseth examined 304 patient data and compared the documentation rate before and after the utilization of teaching sessions and placing reminders at the bedside, but the limitation of only delivering teaching sessions twice over two weeks failed to capture all nurses for educational intervention. Overall, this literature proved the effectiveness of education and reminders in increasing documentation rate, and it also affirmed an improvement in overall pain management as shown by patient satisfaction surveys at the end of the study.

Similarly, Wissman et al., (2020) validates the effectiveness of daily audits in addition to education and reminders in increasing pain reassessment documentation rates in a pre- and post- interventional study. Pain reassessment documentation rate improved from 36.2% to 62.3% after daily auditing of individual nurses with positive reinforcement and feedback, sending weekly newsletter reminders of available resources for pain reassessment, and educating the importance of pain assessment. Wissman and colleagues seized the issue of low pain assessment documentation rates through the usage of multiple interventions and sets literature precedence for future interventions.

Drake and de C Wiliams (2017) argues that lecture-based education does not ensure learning, thus other educational modalities such as didactics, practical skills training, group discussions, role plays, and performance feedback is significantly more effective in pain management and documentation from a systematic review of 12 studies from 10 different countries. Out of the 12 studies, eight studies used educational materials such as a booklet or a

compact disc as a supplement to education when assessing nursing education for pain assessment and its outcomes. The authors state that behavior change such as assessing pain more frequently requires effective education and power, highlighting interactive learning as the educational modality of choice. Although this systematic review lacked literature on nurses' motivation levels, it was a strong review and analysis of effective educational modality.

On the other hand, Grommi et al., (2021) refutes the effectiveness of education as an implementation in increasing pain assessment documentation as education had no significant changes in nurses' documentation quality. The randomized controlled trial study consisting of an intervention group that received a 45-minute PowerPoint lecture and a control group with no intervention, displayed unanticipated results as the pain assessment documentation rate decreased for the intervention group and increased in the control group. Despite the contradicting results, the study suggests that nurses' pain management knowledge levels do not necessarily transfer to the compliance of documenting pain assessment thus indicating a need for further intervention. Additionally, Grommi and colleagues suggest that one education session in the form of lecture may not be a suitable intervention for a behavior change of pain assessment documentation compliance.

Subsequently, Gunnarsdottir et al., (2017) argues the practicality of employing Pain Resource Nurses (PRN) in the unit for improving pain assessment documentation rates. In the randomized controlled trial study, the group with PRN displayed an increase in documentation rate from 13% to 25%, while the control group without PRN decreased by 5%. The intervention group consisted of PRNs that educated nurses about pain, and served as pain management resources for nurses to utilize, resulting in improved patient satisfaction regarding pain management, and patients reporting pain. The PRN program examined in this study may serve as

evidence that effective utilization of the education in addition to pain resources staff can positively influence nurses' behavior to follow standardized policies.

Visibility of Pain Assessment Chart

Purser et al., (2014) asserts that accessibility and visibility of the pain assessment chart significantly influences documentation rates. The study introduced two versions of pain documentation to explore the significance of visibility. Both versions of pain assessment were transferred from the back of the chart and placed alongside patient observations. Version one (V1) required nurses to plot pain scores on a graph with temperature records, while version two (V2) had boxes for nurses to document along an icon of the early warning score. Results presented a significant preference for V2 where the assessment located next to the early warning scores captured more attention, thus increasing the pain assessment documentation rate from 15 to 96%. This pre- and post- interventional study supports the usage of placing pain assessment documentation next to eye capturing icons or values to increase documentation rate.

Standardization of Pain Assessment Criteria

Song et al., (2015) identifies barriers to ineffective pain management such as lack of standardization of pain reassessment documentation in the descriptive cross-sectional design study. 230 nursing pain documentations were reviewed for 37 adults on an oncology unit and each documentation was assigned a score based on the delivery of evidence-based pain management (EBPM). Furthermore, the EBPM indicators included pain assessment, care plan, pharmacologic and nonpharmacologic interventions, monitoring and treatment of analgesic side effects, communication with physicians, and patient education. Upon review of documentations, 90% of the EBPM indicators were documented, but pain reassessment documentations were incomplete or fragmented. The suboptimal pain reassessment documentation indicated the need

to standardize a pain reassessment protocol to keep all charting consistent. This study successfully highlights the suboptimal pain reassessment rate as it took apart the EBPM components to visualize which areas were inadequate.

Rationale/Framework

Lippit's seven-stage change theory serves as the framework for behavioral change in this QI project of increasing pain pre- and post-assessment documentation rate. Expanding on Lewin's change theory of unfreezing, moving, and refreezing, Lippitt includes four elements that are closely interrelated to the nursing process of assessment, planning, implementation, and evaluation (Mitchell, 2013). The steps are as follows: diagnose the problem, assess the motivation and capacity to change, assess the change agent's motivation and resources, select change objectives, choose an appropriate change agent role, maintain the change through feedback, and terminate the helping relationship of the change agent (King et al., 2018). Beginning with the initial assessment and observation of the two medical-surgical units' workflow, culture, and nurses' attitudes towards change, Lippit's first three steps were completed. Through observation and pre-intervention survey collection, resistance to change was evident in unit A as leadership and staff expressed indifferent levels of participation and uncooperative attitude. In contrast, staff and leadership from unit B showed enthusiasm to participate in surveys and willingness to improve. Therefore, when selecting change objectives and choosing an appropriate change agent role, gaining buy-in from unit A and B's managers was crucial to involve an established leadership figure to partake in the QI project. Upon a brief meeting and presentation of the interventions with the unit managers, the managers agreed to have the charge nurse or nurse leaders to participate in disseminating pain pre- and post- assessment documentation reminders. Maintaining change through feedback was implemented by creating a post-intervention survey to identify opportunities for improvement, and stopping the huddle blurbs dissipated by the charge nurses indicate the phase of terminating the helping relationship of the

change agent. As Lippitt's theory places strong emphasis on change agents, it was crucial to gather profound data, gain buy-in from stakeholders, and constantly restructure after evaluating the outcome and feedback from staff.

Ethical Considerations

This project meets the guidelines for an evidence-based quality improvement project. An IRB review was not required. A statement of non-research determination (SONRD) form was completed to validate this quality improvement initiative (Appendix B) followed by a review and approval by University of San Francisco School of Nursing and Health Professions clinical faculty. The project described received no funding and the project group members declare no conflict of interest for the project.

According to the American Nurses Association (ANA) Code of Ethics Provision 4, nurses must be accountable and responsible for making nursing decisions, taking action to promote patient health, and provide optimal care by adhering to state practice acts, regulations, and standards of care (American Nurses Association, 2015). This provision is applicable to the project as nurses must follow the policy dictated by the hospital to provide safe and optimal care by managing and monitoring patients' pain.

Furthermore, the Jesuit value and the University of San Francisco's mission of humbly contributing to the global communities with one's intellectual talent is incorporated in this QI project by implementing a workflow improvement in a microsystem to ensure that the vulnerable population is protected and taken care of.

Project AIM

The aim of this QI project was to improve the documentation rate of nurses' pain pre-and post-assessments by implementing education and reminders, aiming to achieve Hospital X's target compliance rate of 90% or higher. Upon initial observations and survey data collection on

pain assessment and reassessment, a need for education to emphasize the four mandatory components of pain assessment within a specified time frame according to Hospital X's policy was discovered. Feedback collected during survey collection was integrated into the development of the interventions. The ultimate purpose for improving pain pre- and post-assessment documentation upon opioid administration is to ensure patient safety and adequate pain management. Maintaining optimal documentation of pain assessments and reassessments facilitates thorough patient evaluation before administering opioids and continuous monitoring for any adverse medication effects or inadequate pain control. Furthermore, documenting pain assessment and reassessment enables the interdisciplinary team to track patients' progress and make necessary adjustments to ongoing care plans.

Methods

Context

Microsystem Assessment

To evaluate the microsystem, a comprehensive 5P assessment was conducted, covering purpose, patients, professionals, process, and patterns. This assessment aimed to analyze existing problems, identify gaps, understand the microsystem's culture, assess workflow, and evaluate pre-intervention performance. Medical-surgical unit's main purpose involves treating acute or chronic patients that require stabilization, monitoring patients prior to or after surgery, and improving existing health conditions. Therefore, pain assessment and re-assessment play a vital role in this microsystem because opioids are administered to control moderate to severe pain. Patients admitted to the medical-surgical units present with a spectrum of illnesses and conditions. Notably, unit A focuses on cardiac conditions, being a telemetry floor, and unit B focuses on renal and metabolic disorders. The professionals involved in this microsystem include

staff nurses, unit leaders, charge nurses, physicians, case managers, physical therapists, respiratory therapists, certified nursing assistants (CNA), unit secretaries, pharmacists, X-ray and lab technicians, and occupational therapists. Moreover, the processes within this microsystem encompass nursing assessment, nursing judgment, education, vital signs monitoring, mobility assistance, patient advocacy, medication administration, pain management, wound care, and discharge planning to ensure holistic and comprehensive care. The patterns observed that characterized the medical-surgical unit functioning were interdisciplinary communication, workflow, policies and procedures, patient-nurse ratios, staff cultures, staffing, and systems training.

Following the primary microsystem assessment, a pre-intervention survey was conducted among RNs across two units to identify gaps within the microsystem, particularly in relation to the subpar rates of pain pre-assessment and reassessment documentation (see Appendix H). The questions were designed to determine whether these deficiencies stemmed from knowledge gaps, insufficient training, or workflow issues. A total of 50 responses were collected from unit A and unit B. The survey results revealed multiple barriers to successfully completing pain pre- and post-assessments including time constraints, heavy workloads, extensive charting requirements, and challenges in tracking reassessment times across multiple patients.

Timeline

At the initial planning phase of the project, a Gantt chart was devised as a time management tool to map out and illustrate the project's timeline (see Appendix C). The Gantt chart was formatted based on the objectives of the Plan, Do, Study, Act (PDSA) cycle. Throughout the project, adjustments were made to the Gantt chart in response to emerging issues

or scheduling conflicts with other resources. This QI project began at the end of January 2024 and ended at the beginning of May 2024.

Cause and Effect Diagram

To identify the possible changes that can be made in unit A and B at Hospital X to improve pain pre- and post-assessment documentation rate, a cause-and-effect diagram (see Appendix D) was utilized to explore all possible causes contributing to a suboptimal documentation rate. Upon analysis, six different categories of causes to the problem were identified: people, culture, environment, education, methods, and policy or procedure. Notable causes included minimal leadership involvement, distractions that interfere with pain re-assessment, high workload, ambiguous policy guidelines, lack of a standardized workflow for pain assessment documentation, inadequate emphasis of policy within the microsystem.

Cost Benefit Analysis (CBA)

CBA was conducted to evaluate the financial benefits of the proposed recommendations and its potential to yield substantial cost savings while also decreasing sentinel events (see Appendix F). The projected cost of implementing pain assessment and reassessment measures is approximately $23,473. However, upon analysis of the cost avoidance resulting from the reduction in code blue incidents through regular pain assessment and reassessment after opioid administration, the net savings amount to approximately $419,241 annually.

Plan, Do, Study, Act (PDSA) Cycle

A PDSA cycle served as the framework for this QI project to model the execution of a process improvement (see Appendix G). The first phase of the PDSA cycle involved project planning, including identifying key criteria for ensuring compliance in pain assessment and reassessment, aligning hospital policies with existing workflow, and extracting data from quality

reports to pinpoint areas for improvement. During this phase, a PICOT question was formulated, and an aim statement was drafted. In the subsequent phase of the PDSA cycle, pre-intervention surveys were collected and analyzed to identify barriers to achieving compliant pain assessment documentation. Additionally, RNs were observed during opioid medication administration, and intervention deliverables were proposed to the nurse educator. Approval for these interventions was secured from unit managers, and visual reminders were refined based on feedback received during meetings, setting the stage for the intervention phase. Transitioning to the third phase of the PDSA cycle, pain pre- and post-assessment data from quality reports were compared with physical observations. Previous projects related to pain assessment and reassessment within the hospital organization were reviewed, and input was sought from a nurse who had previously completed a similar QI project. Further research was conducted to explore relevant literature and incorporate the latest evidence-based practices to enhance and support the interventions. The final phase of the PDSA cycle involved implementing education and supplementary reminders, comparing pain pre- and post-assessment documentation data with baseline February data, collecting feedback from stakeholders, and evaluating the effectiveness of interventions through a post-intervention survey.

Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis

A SWOT analysis was performed to assess the current state of Hospital X's medical-surgical microsystem in relation to this QI project (see Appendix E). Notable strengths included previous projects aimed at improving pain assessment and reassessment documentation, the establishment of a dedicated internal pain committee, generation of a red reassessment reminder in Epic upon reassessment noncompliance, and a user-friendly Epic interface. Conversely, weaknesses were noted, such as resistance to change, inadequate leadership, difficulty accessing

quality reports, confusion surrounding pain assessment documentation workflows, and limited involvement from the quality department. Opportunities were recognized, given Hospital X's status as a magnet institution emphasizing education and development, alongside TJC's revisions of standards to bolster pain management through improved assessment and documentation, thereby mitigating opioid-related sentinel events. Lastly, the primary threats were attributed to unclear policies regarding pre-assessment time frame criteria at Hospital X and inconsistent dissemination of quality reports to the RNs in the units.

Intervention

To implement evidence-based practice, various deliverables were employed as part of the intervention to educate and remind nurses about pain pre-assessment and re-assessment. Small cards that included the four required criteria for pain assessment (respiratory rate, oxygen saturation, pain level, and sedation level) with a QR code linking to the comprehensive poster were laminated, cut, and affixed to all computers at the nursing stations and workstations on wheels on both medical-surgical units as visual reminders (see Appendix I). Additionally, flyers featuring the same information, as well as the designated workflow for documenting pre- and post- assessment and specific time frames outlined in the policy, were posted in break rooms, bathrooms, and nursing stations (see Appendix J). Each unit received a comprehensive poster outlining the project, including February's pain assessment documentation compliance rates, project goals, workflow guidelines, the four essential criteria, an analysis of Hospital X's opioid administration pain assessment policy, instructions for accessing self-compliance reports, and workflow tips for nurses (see Appendix K). In addition to the visual reminders and education, charge nurses on each unit delivered a brief huddle blurb during daily huddles for both day and night shifts throughout the intervention phase to reinforce key reminders.

Study of the Intervention

To collect feedback and gather subjective responses regarding the implemented interventions, a brief four-questionnaire post-intervention survey was conducted (see Appendix L). This survey aimed to assess the opinion of the primary stakeholders, RNs, regarding their performance in pain pre-assessment and reassessment documentation, as well as to determine the effectiveness of the education provided on accessing self-compliance reports via Epic. Nurses were approached individually with an iPad and asked to respond honestly regarding the project and its impact on their pain assessment and reassessment performance.

Outcome Measures

Two outcome measures were conducted to evaluate the effectiveness of the interventions in improving the documentation rate for pain pre-assessment and post-assessment, with the quarterly quality report presenting as the most reliable and objective outcome measure.

Chart Audits

During the first two weeks of April, designated as the intervention phase, manual audits were conducted on both medical-surgical floors for opioid pain assessments and reassessments. All opioid medication administration on each unit were recorded, categorizing them as compliant or non-compliant for both pre- and post-assessments. Non-compliance was noted if any of the four required criteria – respiratory rate, oxygen saturation, pain level, and sedation level – were not documented in the MAR at the time of pain medication administration. For post-assessment, the flowsheet was examined for compliance if the four criteria were documented within the specified time frame as advertised on the hospital policy and the deliverable interventions. If a CNA documented any of the four criteria, the assessment was deemed non-compliant. Moreover, the compliance rates were calculated by averaging the data from the entire 24-hour medication

administration documented in the MAR. Chart audits facilitated a real-time observation of changes in the documentation compliance rate.

Quarterly Quality Report

Through a third-party analyst, Hospital X obtains monthly pain pre-assessment and post-assessment documentation compliance reports on a quarterly basis for all units in the hospital. These reports, extracted and generated from data in Epic, calculates an average rate to assess each unit's performance at Hospital X. As the issue within the microsystem was initially identified via quality reports, the effectiveness of the intervention will be evaluated using the same objective measurement tool.

Results

Chart Audits

The manual chart audits revealed a positive trend in pre-assessment documentation rates but a decline in post-assessment documentation rates (see Appendix M). Unit A demonstrated an average pre-assessment compliance rate of 71%, while unit B showed a compliance rate of 81%. These figures makred significant progress from the baseline data reported in February of 2024, which stood at 68.5% and 70.4% respectively. However, post-assessment rates saw a decrease in both units, with unit A reporting an average compliance rate of 80% and unit B at 81%. Despite the improvement in pre-assessment documentation, neither unit met the targeted 90% goal for either pain pre- or post-assessments.

Quarterly Quality Report

The April quality report presented the objective data, revealing improvements in post-assessment rates for both units and in pre-assessment rates for unit B. However, unit A experienced a decrease in pre-assessment rates (see Appendix N). Specifically, unit A averaged a

pre-assessment documentation rate of 61.5% and a post-assessment documentation rate of 89.6%. Moreover, unit B averaged a pre-assessment documentation rate of 76.7% and a post-assessment documentation rate of 88.7%.

In other words, unit A's post-intervention pre-assessment documentation compliance rate decreased by 7%, while its post-assessment documentation compliance rate increased by 0.5%. Conversely, unit B saw an increase in pre-assessment documentation compliance rate by 6.3% and in post-assessment documentation compliance rate by 3.5%.

Discussion

Summary

The suboptimal pain assessment and reassessment rates observed in units A and B at Hospital X, particularly concerning pre-assessment rates, presented potential risks for sentinel events such as respiratory depression or inadequate pain management. With increased efforts to adhere to safe opioid prescribing guidelines by TJC, it became imperative for both medical-surgical units to enhance their pain pre- and post-assessment documentation compliance. To identify and gain insight into the units' workflow, an initial microsystem assessment was conducted through observation, pre-intervention surveys, and policy reviews.

In efforts to pursue Hospital X's targeted compliance rate of 90%, an extensive literature review underscored the effectiveness of visual reminders, educational initiatives, and self-assessment audits in increasing pain assessment documentation rates (Dang & Stafseth, 2023; Wissman et al., 2020). Subsequently, a PICOT question was formulated alongside an aim statement, guiding the initiation of the PDSA cycle through implementation of visual reminders outlining pain assessment and reassessment criteria, educational posters explaining standardized workflows, and daily huddle blurb reminders.

Although Hospital X's targeted compliance rate of 90% was not attained for both medical-surgical units, there were notable improvements in unit B's pre-assessment documentation rate and in both units' post-assessment rates. This suggests the potential efficacy of visual reminders, education, self-compliance reports, and huddle blurbs in enhancing pain pre-assessment and reassessment documentation rates.

Limitations

Several limitations emerged throughout the QI project. First, limited communication with the third-party data analyst impeded the ability to clarify how data was extracted from the HER, as well as compliance criteria for both pre- and post-assessment. Clarification on the time frame preceding opioid medication administration was particularly elusive, highlight the need for third-party involvement to delineate compliance time frames accurately. Collaboration with the quality department to clarify and produce a standardized workflow for pre-assessment, whether within the MAR or flowsheet, could have streamlined initial assessment procedures prior to medication administration. Additionally, significant resistance from nurses on unit A, compounded by a lack of leadership involvement, likely hindered positive progress. Effective change initiation and sustainability relies heavily on leadership engagement to inspire and motivate nurses within the microsystem. Finally, inconsistencies in Hospital X's pain assessment and reassessment policy led to confusion regarding the specific criteria capture in quality reports, thus impacting data accuracy and interpretation.

Conclusion

Assessing pain prior to opioid administration and after administration is critical to avoid potential sentinel events. Given the heightened emphasis on safe opioid prescription and administration, nurses must diligently document their assessments in accordance with specified

guidelines or policies. This QI project implies the efficacy of employing visual and verbal reminders, educating staff on a standardized workflow, and providing access to self-compliance reports to enhance compliance rates for pain assessment and reassessment documentation. To maintain an optimal pain pre-and post-assessment documentation rate, it is recommended to institute an annual chart audit to monitor the unit's progress and identify any emerging barriers. Improving communication with third-party data analysts can aid in clarifying workflow criteria for data entry in the EHR. Additionally, informatics improvement such as implementing a hard stop in the MAR upon opioid administration to ensure completion of all required criteria before medication administration can be beneficial. All in all, consistent reminders, thorough education on policy criteria, and a streamlined workflow are essential components in meeting and sustaining Hospital X's targeted pain pre- and post-assessment documentation rate of 90% or higher.

References

American Nurses Association. (2015). *Code of ethics for nurses*. American Nurses Publishing.

Dang, D., & Dearholt, S.L. (2018). Johns Hopkins nursing evidence-based practice: Model & guidelines (3rd ed). Sigma Theta Tau International.

Dang, H., & Stafseth, S. K. (2023). Documentation for assessing pain in postoperative pain management pre- and post-intervention. *Journal of PeriAnesthesia Nursing*, *38*(1), 88–95. https://doi.org/10.1016/j.jopan.2022.05.079

Drake, G., & de C Williams, A. C. (2017). Nursing education interventions for managing acute pain in hospital settings: A systematic review of clinical outcomes and teaching methods. *Pain Management Nursing*, *18*(1), 3–15. https://doi.org/10.1016/j.pmn.2016.11.001

Grommi, S., Voutilainen, A., Vaajoki, A., & Kankkunen, P. (2021). Educating registered nurses for pain knowledge and documentation management: A randomized controlled trial. *International Journal of Caring Sciences*, *14*(2), 919–929. https://doi.org/10.1186/isrctn81992130

Gunnarsdottir, S., Zoëga, S., Serlin, R. C., Sveinsdottir, H., Hafsteinsdottir, E. J., Fridriksdottir, N., Gretarsdottir, E. T., & Ward, S. E. (2017). The effectiveness of the Pain Resource Nurse Program to improve pain management in the hospital setting: A cluster randomized controlled trial. *International Journal of Nursing Studies*, *75*, 83–90. https://doi.org/10.1016/j.ijnurstu.2017.07.009

Jarzyna, D., Jungquist, C. R., Pasero, C., Willens, J. S., Nisbet, A., Oakes, L., Dempsey, S. J., Santangelo, D., & Polomano, R. C. (2011). American Society for Pain Management nursing guidelines on monitoring for opioid-induced sedation and respiratory depression. *Pain Management Nursing*, *12*(3), 118–145. https://doi.org/10.1016/j.pmn.2011.06.008

King, C. R., Gerard, S., & Rapp, C. G. (Eds.). (2018). *Essential knowledge for CNL and APRN nurse*

leaders. Springer Publishing Company, Incorporated.

Mitchell, G. (2013). Selecting the best theory to implement planned change. Nursing Management, 20(1), 32–37. https://doi.org/10.7748/nm2013.04.20.1.32.e1013

Morris, J. L., Bernard, F., Bérubé, M., Dubé, J. N., Houle, J., Laporta, D., Morin, S. N., Perreault, M., Williamson, D., & Gélinas, C. (2021). Determinants of pain assessment documentation in intensive care units. Déterminants de la documentation de l'évaluation de la douleur dans les unités de soins intensifs. *Canadian Journal of Anaesthesia = Journal Canadien D'anesthesie*, *68*(8), 1176–1184. https://doi.org/10.1007/s12630-021-02022-1

Phillips, M. E., Gilmore, R. A., Sheffield, M. C., & Phan, S. V. (2018). Pain assessment documentation after opioid administration at a community teaching hospital. *Journal of Pharmacy Practice*, *32*(2), 179–185. https://doi.org/10.1177/0897190017751207

Purser, L., Warfield, K., & Richardson, C. (2014). Making pain visible: An audit and review of documentation to improve the use of pain assessment by implementing pain as the fifth vital sign. *Pain Management Nursing*, *15*(1), 137–142. https://doi.org/10.1016/j.pmn.2012.07.007

Shoqirat, N., Mahasneh, D., Dardas, L., Singh, C., & Khresheh, R. (2019). Nursing documentation of postoperative pain management. *Journal of Nursing Care Quality*, *34*(3), 279–284. https://doi.org/10.1097/ncq.0000000000000372

Song, W., Eaton, L. H., Gordon, D. B., Hoyle, C., & Doorenbos, A. Z. (2015). Evaluation of evidence-based nursing pain management practice. *Pain Management Nursing*, *16*(4), 456–463. https://doi.org/10.1016/j.pmn.2014.09.001

The Joint Commission. (2017). Joint Commission enhances pain assessment and management requirements for accredited hospitals. *The Joint Commission Perspectives, 37,* 2-4.

Wissman, K. M., Cassidy, E., D'Amico, F., Hoy, C., Vissari, T., & Baumgartner, M. (2020). Improving pain reassessment and documentation rates: A quality improvement project in a teaching hospital's emergency department. *Journal of Emergency Nursing*, *46*(4), 505–510. https://doi.org/10.1016/j.jen.2019.12.008

Appendix A

Johns Hopkins Evidence Appraisal Table

Journal #	Citation	Evidence Type	Sample, Sample Size, Setting	How Does Article Address Problem?	Quality of Evidence	Other Highlights from Article (consider including limitations & outcomes)
1	Dang, H., & Stafseth, S. K. (2023). Documentation for assessing pain in postoperative pain management pre- and post-intervention. *Journal of PeriAnesthesia Nursing*, *38*(1), 88–95. https://doi.org/10.1016/j.jopan.2022.05.079	Observational study with a pre-post intervention	N=304 patient data from November 2020 to February 2021 Setting: Norwegian Radium Hospital, Oslo University Hospital (both are educational hospital specializing in cancer care)	Educational interventions can effectively improve pain assessment documentation & reduce opioid consumption. Reminders to perform basic systematic pain assessment increased the number of pain assessment documentation. Nurses with more experience in the same unit often documented pain assessments more frequently. Both educational intervention and reminders were effective and improved nurses' documentation of postoperative pain at the time of discharge.	Level V – A/B	Outcomes: Education in the form of teaching sessions increased pain assessment documentation from 81.4% to 91.4%. Systematic pain assessment after education showed increased documentation and increased patient's opioid consumption and the overall pain management. *Teaching sessions and posting reminders were effective in increasing pain assessment documentation. This study shows that education is an effective intervention to increasing pain assessment documentation rate. Strengths: Data were collected 3 weeks before the study was announced, allowing the collection of what the standard care is. Limitations: The educational session was 45 minutes long and only delivered twice in two weeks so not everyone was able to receive the education.
2	Drake, G., & de C Williams, A. C. (2017). Nursing education interventions for managing acute pain in hospital settings: A	Systematic review	12 studies from 10 different countries, mainly in surgical wards. Keywords used in abstract and title: nursing education OR staff training OR staff education	A didactic teaching component was included in all of the studies reviews, with an emphasis on the misconception about pain along with the current best practice recommendations with skills training using the assessment tool.	Level III- B	Outcomes: Education was effective as all the studies (except for one) reported improvement in pain assessment documentation frequency after the educational intervention. *Effective education includes group discussions, practical

	systematic review of clinical outcomes and teaching methods. *Pain Management Nursing*, *18*(1), 3–15. https://doi.org/10.1016/j.pmn.2016.11.001		OR education program OR health education AND pain OR pain assessment OR pain management OR analgesia AND acute pain OR acute disease OR postoperative pain OR surgical pain OR postsurgical pain. Search was limited to English and 2002-2015	8 studies used an educational material such as a booklet that nurses can carry, a compact disc, or web-support. Effective education interventions: group discussions, practical skills training, role-plays, feedback on performance		skills training, role-plays, feedback on performance. Interactive education is an effective implementation according to this study. Limitations: Nurse's motivation level were absent from the studies, which can be a confound variable that led to behavior change. For this meta-analysis, there was a language limit and the lack of qualitative data on patient's pain management experience.
3	Grommi, S., Voutilainen, A., Vaajoki, A., & Kankkunen, P. (2021). Educating registered nurses for pain knowledge and documentation management: A randomized controlled trial. *International Journal of Caring Sciences*, *14*(2), 919–929. https://doi.org/10.1186/isrctn81992130	RCT	N= 32 RNs 16= intervention group 16= control group 4 groups (surgical ward 1,2,3, and vice staff personnel) divided into two groups of intervention vs control	Implementation of education took place on a single day for the intervention group. The Postoperative Pain Knowledge Test was given prior and after the intervention. Documentation audit conducted retrospectively in spring and summer 2018, while intervention took place in April 2017.	Level I – B	Outcomes: Postoperative Pain Knowledge Test scores improved for the intervention group after education from 11 to 12.5 out of 21. However, study found that the intervention group displayed a greater short-term knowledge retention than the control group, but there were no significant retention past 3 months. Education had no significant changes in nurses' documentation quality. Surprisingly, the education decreased documentation effectiveness. *One day education or education that is purely lecture based, may not be sufficient for a change in pain documentation rate. Limitations: This study lacked clarity in writing, and implementation of the education was only one day long. Education was just a lecture-based face-to-face intervention. Sample size was small.
4	Gunnarsdottir, S., Zoëga, S., Serlin, R. C.,	RCT	N=23 surgical/medical inpatient units	PRN program was created to function as peer resources for pain management on the floors.	Level I- A/B	Outcomes: Pain assessment documentations were improved as a result of the PRN program as it increased

	Sveinsdottir, H., Hafsteinsdottir, E. J., Fridriksdottir, N., Gretarsdottir, E. T., & Ward, S. E. (2017). The effectiveness of the Pain Resource Nurse Program to improve pain management in the hospital setting: A cluster randomized controlled trial. *International Journal of Nursing Studies*, *75*, 83–90. https://doi.org/10.1016/j.ijnurstu.2017.07.009		12 units= Pain Resource Nurse program 11 units= control group Setting: 650-bed university hospital in Iceland	Implementation of the PRN program has shown positive results with increased education about pain for patients, fewer patients reporting pain, and improved patient satisfaction. This study aims to test the effectiveness of the PRN program using a cluster randomized controlled trial. PRN program includes educational materials such as presentations and clinical cases.		from 13% to 25%, but the control group's documentation rate decreased from 21% to 16%. No other outcomes including nurses' knowledge and attitudes, patient participation in decision-making, patient satisfaction, or adequate pain management improved. *Having a pain resource nurse on the floor increased pain assessment documentation rate. This may indicate that a resource nurse on the floor can encourage documentation compliance. Limitation: Not sufficient time for a behavioral change to occur upon implementing the PRN program. The PRN program was targeted towards just nurses, which could have impacted the patient outcome since healthcare requires an interdisciplinary team.
5	Morris, J. L., Bernard, F., Bérubé, M., Dubé, J. N., Houle, J., Laporta, D., Morin, S. N., Perreault, M., Williamson, D., & Gélinas, C. (2021). Determinants of pain assessment documentation in intensive care units. Déterminants de la documentation de l'évaluation de la douleur dans les unités de soins intensifs. *Canadian Journal of Anaesthesia* =	Descriptive-correlational retrospective	N= 345 medical charts from Quebec ICU admissions from 5 teaching hospitals between 2017-2019 Nurse ratios of 1 to 2, 2 physicians, 1 pharmacist, 5-6 respiratory therapist staffed each day	Underassessment and lack of pain assessment documentation are correlated with negative patient outcomes. There must be a systematic approach to pain assessment to yield to more frequent documentation. One potential barrier to implementing pain assessment tools is the lack of resources, staff training, and on-going clinical support. Higher total morphine equivalent dose and/or receiving a greater opioid regimen were associated with a lower frequency of pain assessment documentation.	Level III- B	Outcomes: Only 20.6% of opioid doses had a pain re-assessment documentation within the one-hour time frame. The pain assessment documentation rates were significantly different between the 5 hospitals. 30.4% charts had no pain assessment documentations, 53.6% charts had three or less documented pain assessments. *Although there may be guidelines that suggest a time frame for pain reassessment, there seems to be a gap where nurses are having difficulty re-assessing within an hour upon opioid administration. Strengths: large sample size, good representation of typical patients in ICUs.

	Journal Canadien D'anesthesie, *68* (8), 1176–1184. https://doi.org/10.1007/s12630-021-02022-1					Limitations: Due to its retrospective design, not all the data needed were consistently recorded in the medical charts.
6	Phillips, M. E., Gilmore, R. A., Sheffield, M. C., & Phan, S. V. (2018). Pain assessment documentation after opioid administration at a community teaching hospital. *Journal of Pharmacy Practice*, *32*(2), 179–185. https://doi.org/10.1177/0897190017751207	Retrospective Pre-post intervention study	N = 320 patients (160 patients per group each month) Data was collected in April 2014, education was given in September 2014, and post-intervention data was collected in October 2014. Setting: 400 bed hospital	The nurses were educated using a presentation developed by an interdisciplinary committee regarding the reassessment time frames depending on the route of opioid medication, where to document the are-assessment, and which parameters to utilize. There were no literature yielding a consistent recommendation to the pain reassessment time frame for various opioids. Thus a group of pharmacists, nurse managers, educators, and administrators came up with a general guideline: 6-15 minutes for IV, 15-30 minutes for IM, and 30-60 minutes for PO. For documentation to be considered complete, vital signs were defined as BP, HR, temperature, RR, respiratory status, and sedation level.	Level V- A	Outcomes: 32.9% of opioid administrations had a pain score documented within the reassessment time frame (pre-intervention), whereas 37.1% of post-intervention opioid administrations had proper reassessment documentation within the time frame. Education and mandatory modules were effective in increasing the reassessment documentation rates. *Utilization of mandatory education in the form of modules can teach and remind nurses to increase their pain assessment documentation compliance. Limitations: There were no distinction between immediate and extended release formulations when given the reassessment time frame education.
7	Purser, L., Warfield, K., & Richardson, C. (2014). Making pain visible: An audit and review of documentation to improve the use of pain assessment by implementing pain as the fifth vital sign. *Pain Management Nursing*, *15*(1), 137–142. https://doi.org/1	Pre-post intervention study	N= 8 surgical and 5 medical wards During stage 2: V1= 23 patients V2= 37 patients During stage 3: N=253 patient's charts Setting: a large teaching hospital in Northwest of England.	Three stage audit: 1. Evaluation of current pain assessment practice: 2. Two versions of a form: V1 required pain scores on movement to be documented on a graph along with temperature. V2 had boxes to document pain at rest and on movement which was placed along early warning score. 3. The preferred version (V2) was introduced to the hospital	Level II- A	Outcomes: 85% of the patients did not have documented pain assessment. 15% had pain assessment documented. 10% had pain assessment documented more than once. Average number of assessments performed on the patients who had assessments documented were 3.4 times. V2 was preferred because the documentation was next to the EWS sign. After V2 was implemented into the hospital, 96% of the patients had at least one pain score documented. This was a

	0.1016/j.pmn.2012.07.007			After 8 months of introduction of the new chart, audited pain documentation in nurses' charts. Moving the pain assessment information to the front of the patient observation chart to make it more clear to nurses. Clinical utility was an important factor where placing the pain assessment scale next to EWS magnified the visibility of the documentation.		big increase in documentation rate from 15% to 96%. Frequency of documentation also increased to 83% of documents having pain assessment documented more than three times. *The layout and accessibility of the charting in the electronic medical record played a significant role in documentation compliance. A vivid warning sign that stands out can capture the nurses' attention and remind them to assess pain levels and document.
8	Shoqirat, N., Mahasneh, D., Dardas, L., Singh, C., & Khresheh, R. (2019). Nursing documentation of postoperative pain management. *Journal of Nursing Care Quality*, *34*(3), 279–284. https://doi.org/10.1097/ncq.0000000000000372	Qualitative retrospective research study	N=720 nursing records that included morning, evening, and night shifts over 3 days (including paper records and EMR) Setting: 200-bed capacity teaching hospital in southern Jordan	Quality nursing documentation is crucial for cohesive communication between caregivers to ensure effective pain management practices. The challenge in translating pain knowledge into nursing practice such as nursing documentation is difficult. Documentations lacked pain scores, medication administration details, and objective pain assessment data.	Level III A/B	Outcomes: 350 out of 720 nursing records lacked a goal of care in relation to pain management. There were no measurable or specification of time to achieve the goal of care. Nursing documentation lacked clear specifics to the opioid given such as the dose, route, and frequency of administration. Nurses did not have a proactive or systematic approach for pain assessment and management. No current protocol on pain assessment documentation *A standardized pain assessment tool can allow critical aspects of pain assessment to be included in the documentation. Limitations: This study may be more relevant to countries that still use hand-written charting system. This study also was limited to one hospital and retrospective chart audits.
9	Song, W., Eaton, L. H., Gordon,	Descriptive cross-	-22 nurses that voluntarily participated	Evidence-based pain management (EBPM) improves pain management,	Level III -B	Outcomes: Pain reassessment documentation was inadequate as it did not specify pain

	D. B., Hoyle, C., & Doorenbos, A. Z. (2015). Evaluation of evidence-based nursing pain management practice. *Pain Management Nursing*, *16*(4), 456–463. https://doi.org/10.1016/j.pmn.2014.09.001	sectional design	-37 participating patients -total of 230 pain management nursing documentations -setting: medical-surgical oncology 28-bed unit	decreases length of hospital stays, decreases resource utilization, and increases patient satisfaction. EBPM includes pain assessment and reassessment, and non-pharmacological interventions. Failure to document pain management despite pain interventions being done interferes and poses as a barrier to interprofessional communication between the care team.		location, severity, and character. A detailed pain reassessment documentation can determine the pharmacologic interventions effectiveness to make necessary changes in the care plan. Absence of pharmacological pain reassessment documentation can possibly indicate inadequate pharmacologic intervention to pain. Limitation: -A convenient sample was used. Many nurses who did not volunteer to be included in the study may have felt that their pain documentation was deficient. -Using pain assessment documentation in the EMR as the only primary source of evaluating nurses' practice of EBPM does not provide a comprehensive review.
10	Wissman, K. M., Cassidy, E., D'Amico, F., Hoy, C., Vissari, T., & Baumgartner, M. (2020). Improving pain reassessment and documentation rates: A quality improvement project in a teaching hospital's emergency department. *Journal of Emergency Nursing*, *46*(4), 505–510. https://doi.org/1	Pre-post interventional study	N=581 patient encounters over 8-months in ED -57 nurses in pre-intervention period -52 nurses in intervention period -59 nurses in post-intervention period -37 nurses who were present throughout the entire pre, intra, and post intervention period Created 6 focus groups containing an average of 3 nurses to identify barriers	Proper pain management can address the crisis of opioid abuse epidemic. One of the challenges in patient care is providing adequate pain management. Proper pain assessment and reassessment allows for continuous provision of pain.	Level V -A/B	Outcomes: Pain reassessment baseline scores improved from 36.2% to 62.3% after educating the nurses, implementing daily audits of individual nurses and sending weekly newsletter reporting the pain reassessment documentation rates. *Daily audits and accountability from a third party may change behavior to reassess pain and document it in a timely manner. Limitations: 8 months may not be sufficient time to analyze long-term behavior of pain assessment and documentation. A high turnover rate of nurses creates limitation on collecting data of pain reassessment.

	0.1016/j.jen.2019.12.008					

Appendix B

Statement of Non-Research Determination

UNIVERSITY OF SAN FRANCISCO | School of Nursing and Health Professions

Project: Statement of Determination and Non-Research Determination Form

Student Name: Hae Rim (Helen) Hwang

Title of Project: Improving Opioid Pain Assessment and Reassessment Documentation in Medical-Surgical Units

Brief Description of Project

- **Data that Shows the Need for the Project**
  Patient assessment and reassessment documentation compliance rates for two medical-surgical units at a 244-licensed-bed hospital in Northern California prompted a need for improvement from the February 2024 quarterly report indicating a pre-assessment documentation rate of 68.5% for unit A and 70.4% for unit B, and a post-assessment documentation rate of 89.1% for unit A and 85.2% for unit B. With the acceptable compliance rate at 90%, current pain assessment and reassessment compliance data remained inadequate.

- **Aim Statement**
  By April 30, 2024, our mission is to improve nurses' pain pre and post-reassessment documentation on the medical-surgical floor, which will increase to reach a total of 90% compliance.

- **Description of Intervention(s)**
  - ❖ Surveys on the current knowledge of pain assessment and reassessment of hospital policy
  - ❖ Investigating current policy and whether it aligns with current practice
  - ❖ Monthly newsletter - Include education on how to check their own compliance
  - ❖ Workflow wisdom pearls & shout outs for excellent compliance

- ❖ Pain assessment reminders during huddles, as well as display of posters and physical reminders on workstations

- **Desired Change in Practice**

The desired change in practice would include increased pain assessment and reassessment documentation. Specifically, both units of the medical-surgical floors would have a satisfactory rate of 90% or greater for both pre-and post-pain assessment. In addition, the nurses would be more aware of the four specific criteria of oxygen saturation, pain level, respiratory rate, and sedation level that are needed to fulfill the assessment requirement.

- **Outcome measurement(s):**

After the intervention phase of educating nurses with a standardized workflow, posting reminders on computers and bathrooms, and adding reminders to huddle blurbs, the Quality Improvement (QI) team aims to manually audit pain pre-assessment and post-assessment documentation performance in April to assess whether a productive change in chart documentation for pre- and post-assessment was made. The quarterly results of pain pre- and post-assessment documentation rates from quality would be the objective result of the interventions implemented.

Beginning of Abstract:

This Quality Improvement (QI) project aims to address the suboptimal pain assessment and reassessment documentation compliance rates in two medical-surgical units of a 244-licensed-bed hospital in Northern California. The February 2024 quarterly report highlighted the inadequacy, with rates falling below the acceptable 90% threshold. This project will be accomplished by April 30, 2024, focusing on implementing a multifaceted intervention plan. This plan involves conducting surveys to gauge current knowledge, assessing policy alignment with practice, and providing education on updated policies and workflow. The education will be disseminated through small reminders posted on computers used for charting, flyers in the bathroom and break rooms, and a comprehensive poster highlighting the workflow process. Physical reminders from the charge nurses during huddles will also be utilized to optimize these efforts. The desired change encompasses achieving and sustaining a 90% or greater for pre- and post-pain assessments. The project's success will be measured through quarterly report cards, evaluated by the nurse educator at the end of April, to determine the effectiveness of the interventions and the achievement of productive changes in chart documentation.

To qualify as an Evidence-based Change in Practice Project, rather than a Research Project, the criteria outlined in federal guidelines will be used: (http://answers.hhs.gov/ohrp/categories/1569)

☐ This project meets the guidelines for an Evidence-based Change in Practice Project as

outlined in the Project Checklist (attached). Student may proceed with implementation.

☐This project involves research with human subjects and must be submitted for IRB approval before project activity can commence.

Comments:

EVIDENCE-BASED CHANGE OF PRACTICE PROJECT CHECKLIST *

UNIVERSITY OF SAN FRANCISCO | School of Nursing and Health Professions

Instructions: Answer YES or NO to each of the following statements:

Project Title:	**YES**	**NO**
The aim of the project is to improve the process or delivery of care with established/ accepted standards, or to implement evidence-based change. There is no intention of using the data for research purposes.	YES	
The specific aim is to improve performance on a specific service or program and **is a part of usual care**. ALL participants will receive standard of care.	YES	
The project is **NOT** designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control). The project does **NOT** follow a protocol that overrides clinical decision-making.	YES	
The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does **NOT** develop paradigms or untested methods or new untested standards.	YES	
The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does **NOT** seek to test an intervention that is beyond current science and experience.	YES	
The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP. The project has **NO** funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.	YES	

The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., **not** a personal research project that is dependent upon the voluntary participation of colleagues, students and/ or patients.	YES	
If there is an intent to, or possibility of publishing your work, you and supervising faculty and the agency oversight committee are comfortable with the following statement in your methods section: *"This project was undertaken as an Evidence-based change of practice project at X hospital or agency and as such was not formally supervised by the Institutional Review Board."*	YES	

ANSWER KEY: If the answer to **ALL** of these items is yes, the project can be considered an Evidence-based activity that does NOT meet the definition of research. **IRB review is not required. Keep a copy of this checklist in your files.** If the answer to ANY of these questions is **NO**, you must submit for IRB approval.

*Adapted with permission of Elizabeth L. Hohmann, MD, Director and Chair, Partners Human Research Committee, Partners Health System, Boston, MA.

UNIVERSITY OF SAN FRANCISCO | School of Nursing and Health Professions

STUDENT NAME (Please print):

Hae Rim (Helen) Hwang

Signature of Student:  **DATE: 03/08/2024**

SUPERVISING FACULTY MEMBER NAME (Please print):

Jennifer Zesati

Signature of Supervising Faculty Member

Jennifer Zesati

DATE: 03/21/2024

Appendix C

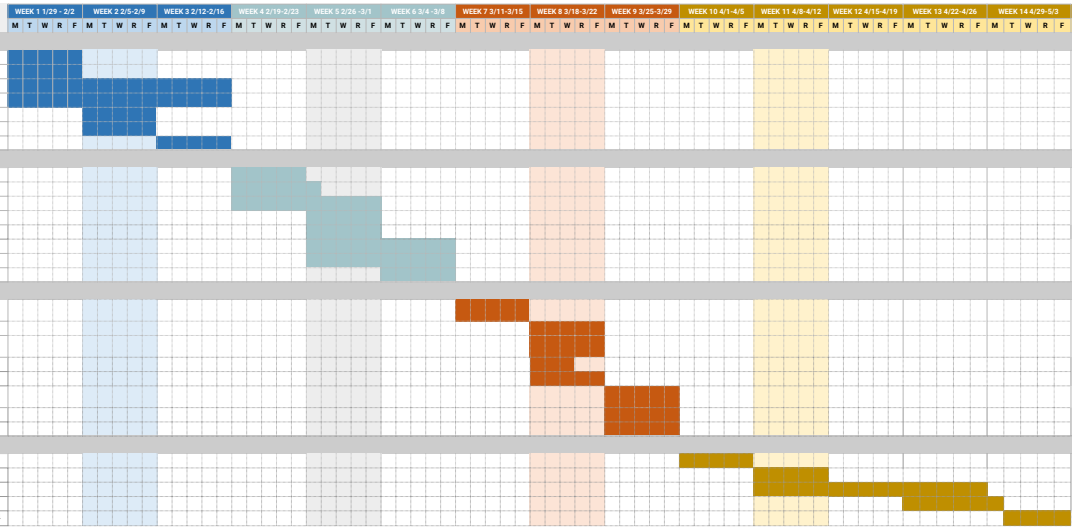
GANTT Chart

GANTT CHART

PROJECT TITLE: Increasing Opioid Pain Pre-assessment and Reassessment Documentation Rate in Med-Surg Units

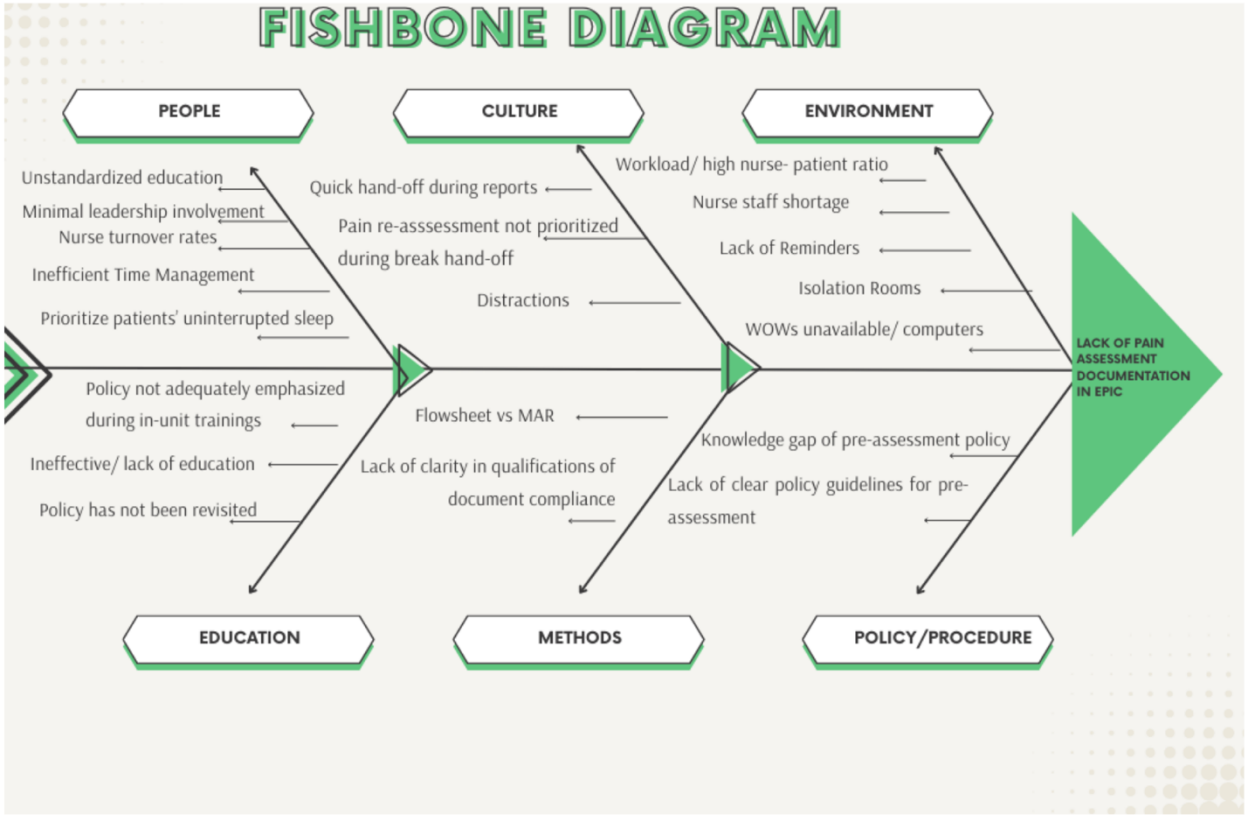
PROJECT TIMELINE: 1/29/24 - 5/3/24

Task Title	Start Date	Due Date
Project Initiation		
Scheduling	1/31/24	
5 Ps	2/1/24	2/4/24
Microsystem analysis	1/31/24	2/16/24
Address stakeholders	1/31/24	2/16/24
Guidelines (policy & procedure)	1/31/24	2/9/24
AIM/ PICO Statement	2/8/24	2/11/24
Gantt chart	02/12/24	2/18/24
Project Planning		
Analyzing obtained data	2/19/24	2/23/24
Evidence appraisal table	2/19/24	2/26/24
Literature review	2/19/24	3/3/24
Budget planning	2/26/24	3/1/24
Fishbone analysis	2/26/24	3/3/24
Structuring education training	2/26/24	3/8/24
Supplementary teaching aids	2/26/24	3/8/24
Statement of nonresearch determination		3/8/24
Project Implementation		
Conduct a meeting w/ clinical instructor to approve the educational/ training material	3/11/24	3/15/24
Providing education to the staff nurses	3/18/24	3/22/24
Utilizing the crafted materials on the unit floor	3/18/24	3/22/24
Project Performance evaluation	3/18/24	3/20/24
Paper draft #1	3/18/24	3/24/24
Microsystem reassessment (staff feedback/questions)	3/25/24	3/29/24
PDSA Cycle	3/25/24	3/29/24
Project updates from the educator	3/25/24	3/29/24
Project Evaluation and Synthesis		
Chart auditing reassessment	4/1/24	4/5/24
Paper draft #2	4/8/24	4/14/24
Poster submission	4/8/24	4/24/24
Final paper	4/22/24	4/28/24
Poster presentations	4/29/2024	04/30/2024



Appendix D

Cause and Effect Diagram



Appendix E

SWOT Analysis

Appendix F

Budget Analysis

Implementation Cost		
Description		**Total**
Supplies	Includes survey flyers, tape, 2 poster boards	$73.04
CNL Cost	$90/hr (average CNL salary) x 1.3 (hrs + benefits) x 200 hr (preparation & implementation)	$23,400.00
Cost for med-surg x to remain at 90% compliance (per year)	(390 [average number of pts with opioid administration cencus per year x 0.10 [10% non-compliance rate]) x 366 (cost of code blue) x 12 (months in one year)	$171,288
Cost for med-surg y to remain at 90% compliance (per year)	(450 [average number of pts with opioid administration cencus per year x 0.10 [10% non-compliance rate]) x 366 (cost of code blue) x 12 (months in one year)	$197,640
Total Cost of Implementation		**$23,473.04**

Benefit/Savings		
Description		**Total**
Cost of Code Blue	$366	
Cost for med-surg x to remain at average 78% compliance (per year)	(390 [average number of pts with opioid administration cencus per year x 0.22 [22% non-compliance rate]) x 366 (cost of code blue) x 12 (months in one year)	$376,834
Cost for med-surg y to remain at average 78% compliance (per year)	(450 [average number of pts with opioid administration cencus per year x 0.22 [22% non-compliance rate]) x 366 (cost of code blue) x 12 (months in one year)	$434,808
Total Cost for both med-surg units to remain at 78% compliance (per year)		$811,642
Total Cost for both med-surg units to remain at 90% non-compliance (per year)		$368,928
Cost Avoidance	$811,642 (Cost for med-surg units to remain at average 78% comliance) - $368,928 (Cost of med-surg units to remain at average 90% compliance)	**$442,714**
Net Savings	Cost Avoidance - Cost of Implementation	**$419,241**

Appendix G

PDSA

Appendix H

Pre-Intervention Survey

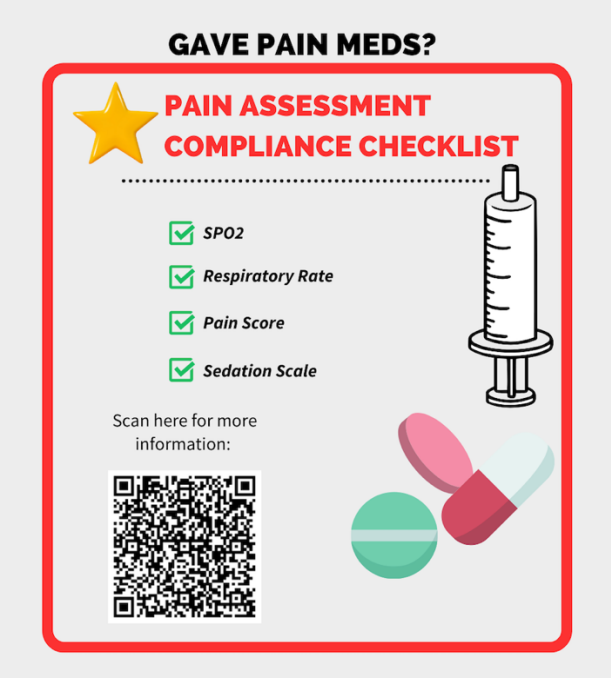
Pain Assessment and Reassessment

Documentation in Epic Survey

1. When was the last time you reviewed the policy for pain assessment and reassessment?
    - Only upon hire/new-hire orientation
    - 2+ years ago
    - 1-2 years ago
    - 6-12 months ago
    - 1-6 months ago
2. Which required fields must be filled out when charting pain assessments and reassessments according to the policy?
    - Respiratory Rate
    - O2 Saturation
    - Sedation Scale
    - Pain Scale Used
    - Other _____
3. When should reassessment be conducted for PO opioid pain medication?
    - Within 15 minutes
    - Within 30 minutes
    - Within 60 minutes
    - There is no time limit
4. When should reassessment be conducted for IV/IM opioid pain medication?
    - Within 15 minutes
    - Within 30 minutes
    - Within 60 minutes
    - There is no time limit
5. Do you find the current pain assessment and reassessment policy efficient and reasonable?
    - Yes
    - No
    - Not familiar with current policy
6. What are the barriers to completing the pain assessment/reassessment in a timely manner? (ex: lack of time, lengthy charting)
    - _____
7. Please provide any suggestions to improve pain assessment/reassessment in your unit.
    - _____

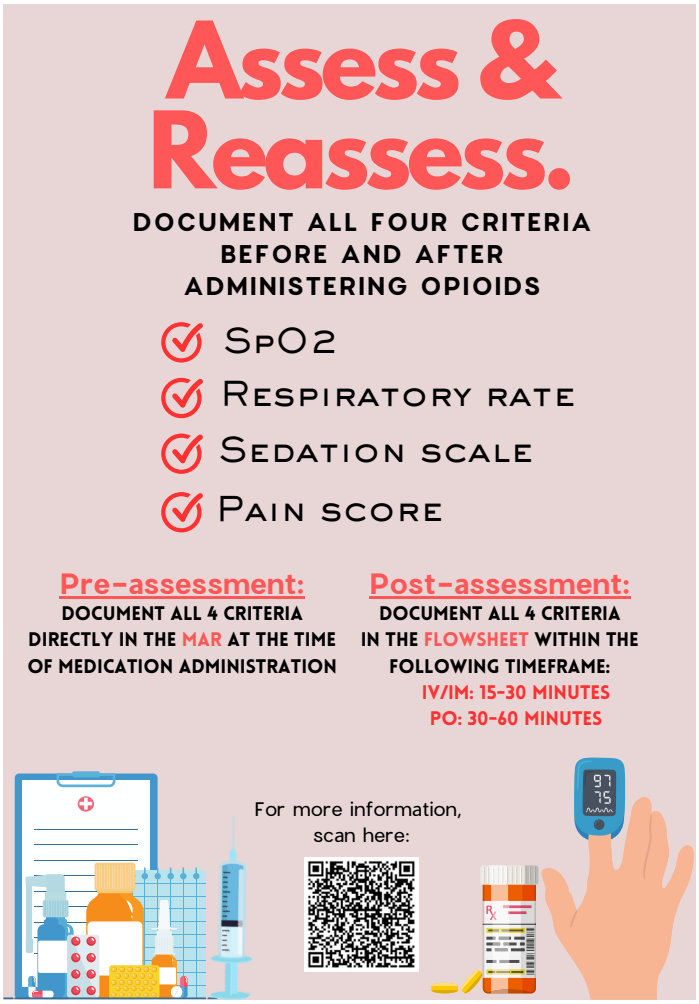
Appendix I

Small Cards on Computers



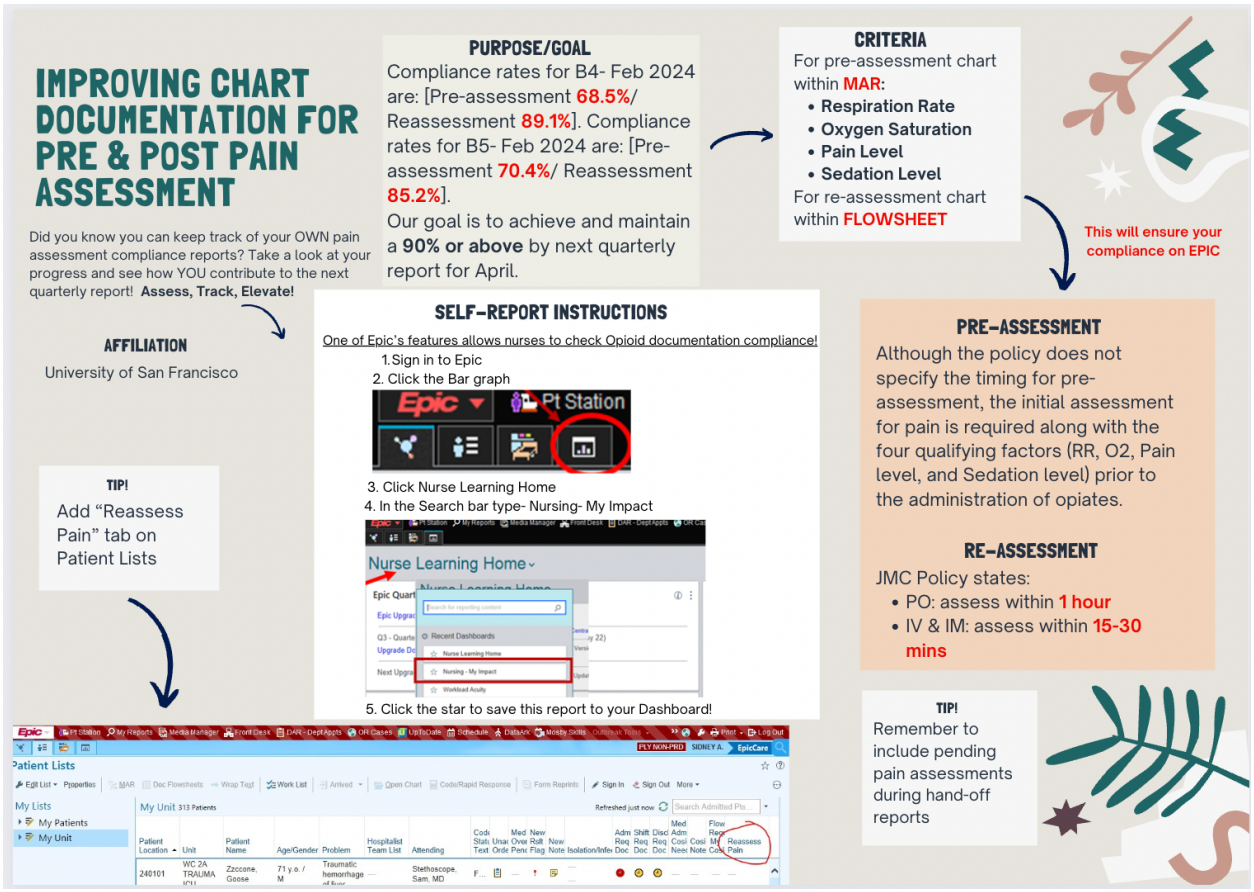
Appendix J

Flyers



Appendix K

Poster



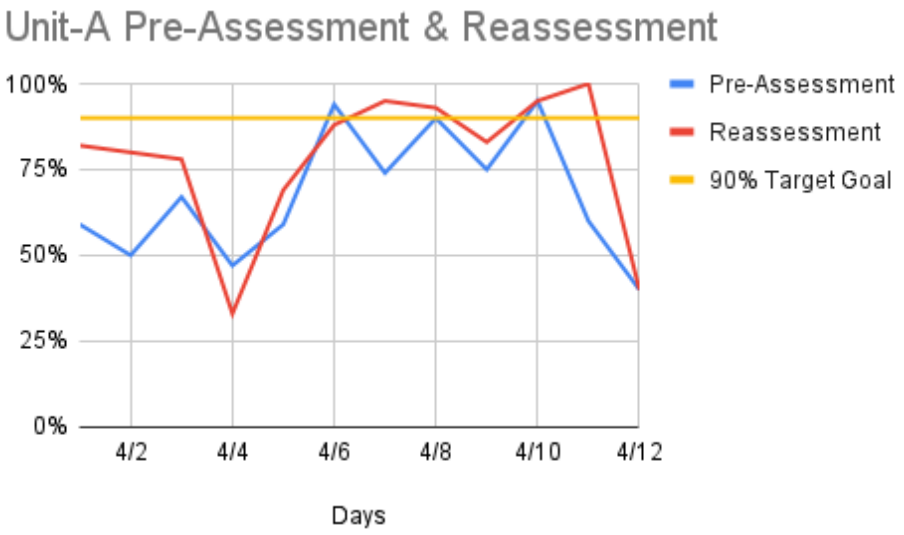
Appendix L

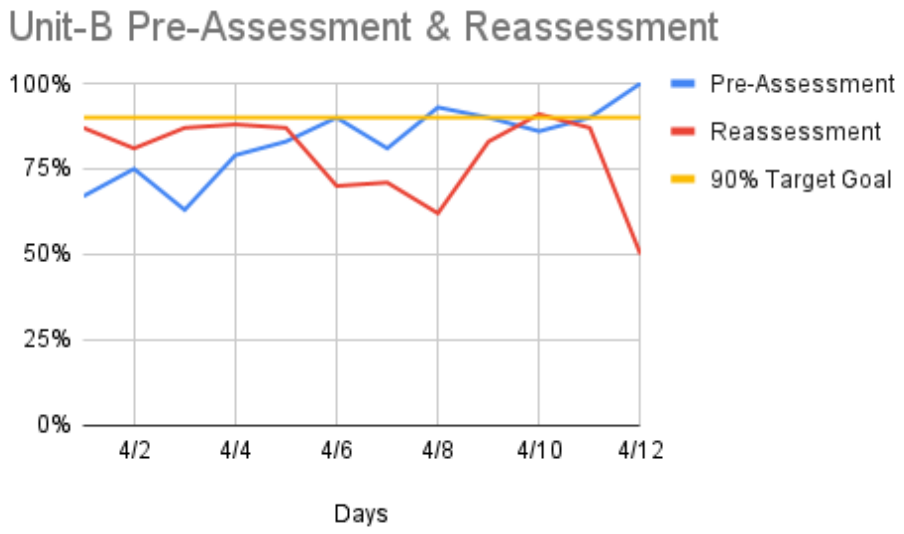
Post-Intervention Survey

1. Did you find the pain assessment and reassessment reminders helpful?
    - Yes
    - No
    - I was unaware of this material
2. Which reminds did you find the most helpful?
    - Small cards on the working stations
    - Flyers in the bathrooms
    - Poster board in the break room
    - Shift huddle announcement
3. Were you able to access your own pain compliance report following the poster board instructions?
    - Yes
    - No
    - The instructions were not clear
4. Do you have any feedback on how to improve pain assessment and reassessment documentation compliance?
    - _____

Appendix M

Manual Chart Audit Results

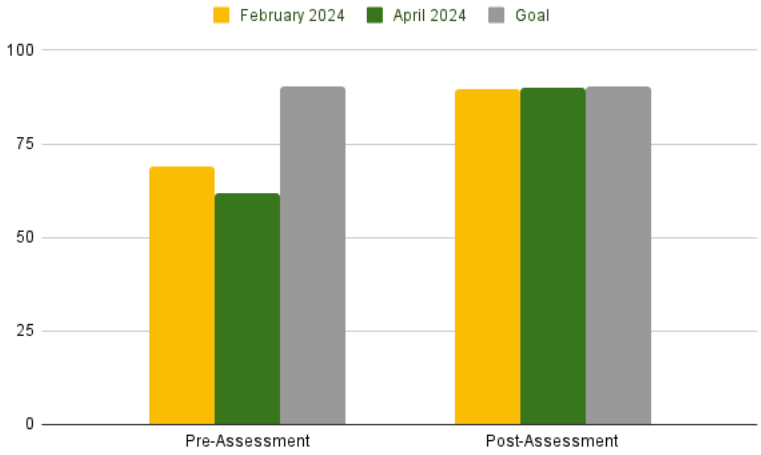




Appendix N

Post-Intervention Results

Unit A Results



Unit B Results