Development and Evaluation of an Evidence-Based Practice Pain Algorithm Tool: Assisting Nurses with better Pain Management in Hospitalized Patients

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BACKGROUND

- The medical and economic cost of pain is estimated between $560 billion and $635 billion annually.
- Approximately 10 million individuals are affected by chronic and acute pain each year
- 2.1 million dependencies on prescription opioids
- More than half of hospitalized patients treated with opioids
- Pain management knowledge and utilizing the right tools play a significant role for healthcare workers, primarily nurses.

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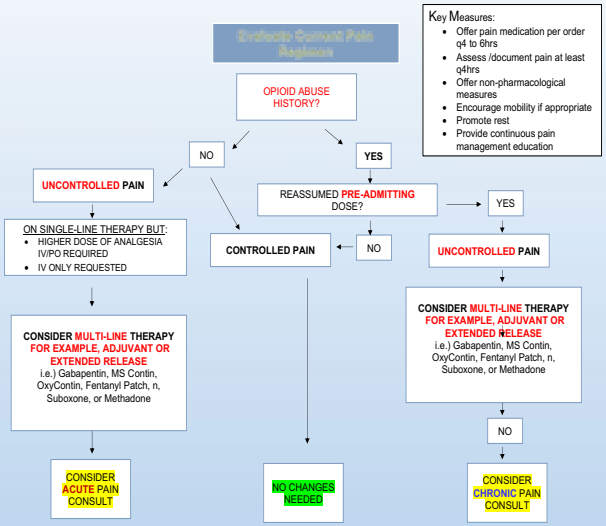
LITERATURE REVIEW

- The opioid crisis was declared a national public health emergency by the President of the United States (U. S.) in October 2017.
- Studies revealed the main lack of knowledge and inappropriate practice focusing on differentiating acute and chronic pain is due to a Lack of multidimensional pain assessment tools.
- The nurse should select an appropriate guideline based on the organization's policy and the patient's condition.
- Most nurses assess their patient's pain; however, 4 % of nurses use an appropriate assessment tool.

PROJECT OBJECTIVES

- Implement an evidence-based pain assessment protocol for nurses to initiate pain management consults for patients continuing to endorse pain, despite the current pain regimen ordered by hospital providers.
- Administer an education seminar for nurses to improve their knowledge and compliance with the new pain assessment protocol.
- Improve the nurses' compliance, proper adherence to the protocol, and documentation of patients' pain scores in the EMR.
- Evaluate nursing compliance with the protocol with a goal of at least 50% compliance on assessing patient's pain scores and protocol documentation in the EMR within a 4-week time frame.
- Demonstrate a 20% increase in general nursing knowledge and understanding of pain management, as evidenced by an increase in test scores from the pre- to the post-test.

THE PAIN REGIMEN ALGORITHM



RESULTS

Figure1: The Nurses' Educational Scores Results

The Wilcoxon test tells us that the probability of a sample median change score greater than 20 (or less than -20) is $p = 0.002$.

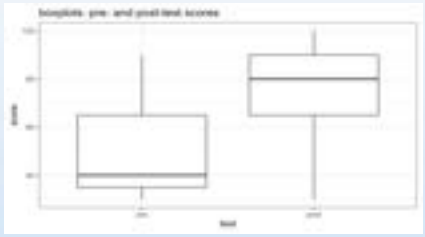
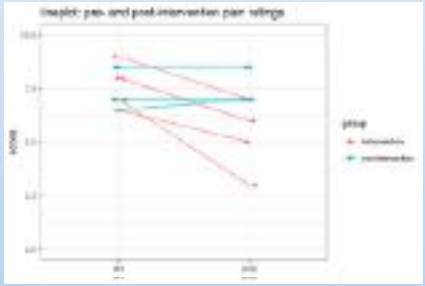


Figure2:Pre-post Intervention Pain Rating

Improved pain score of 5 out of 10 eligible patients following algorithm implementation. The remaining 5 patients' pain scores either remain constant or worsen.



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CONCLUSION

- Continued education on pain assessment is needed for all nurses to boost their confidence and enhance their communication.
- The introduction of algorithms developed by nurses can assist with improving gaps in education.
- Sustainability of the project, including, but not limited to, incorporating the PowerPoint into the educational website to be disseminated to all nurses and all multidisciplinary team.
- This project will successfully sustain changes by modifying the algorithm to a shortened version.
- To improve the dissemination and validation of the algorithm would be implemented in all units, such as recovery, preop, and oncology units.