

Methodology

Project Design

This Quality Improvement project will include a pre-test post-test design. A presentation will be delivered to educate providers on alternatives to neuraxial anesthesia for labor analgesia. The educational presentation will be given using PowerPoint, and it will be created with the most recent literature on remifentanil and its use in labor analgesia. It will be presented to key stakeholders, including obstetrical anesthesia providers, obstetricians, residents, and pharmacists at a Level 3 Perinatal Center in Central Illinois, at a specific time and location provided by my key stakeholder. At the end of the presentation, providers will be able to address any questions or concerns to the presenter.

Participants' knowledge will be assessed before and after the live PowerPoint presentation. Qualtrics will be used to deliver the pre-test and post-test in an online format. The same questions will be utilized in both pre-test and post-test to compare knowledge gained after the implementation of the educational session. Questions will be constructed as multiple-choice or True/False, and descriptive statistics will be utilized to compare the pretest and post-test results. The intended outcome will be a 20% increase of correct responses from pretest to post-test.

The investigator will also survey stakeholders' buy-in for utilizing remifentanil PCA at the facility. The median through which this will occur will be Qualtrics. A Likert scale will survey provider perceptions about remifentanil and its use in labor analgesia. Open-ended questions will be added to the end of the survey to explore the frequency of the need for alternatives to neuraxial techniques, current methods utilized as alternatives, and potential barriers to implementation of a remifentanil protocol. Provider's concerns and questions will

also be addressed by investigator after completion of live PowerPoint presentation. Buy-in will be assessed by 75% of participants who agree or strongly agree that remifentanil PCA is a feasible alternative to neuraxial anesthesia.

After all participants have completed the assessment and surveys, results will be compiled and made accessible to the primary investigator via Qualtrics, maintaining the anonymity of individual participant results.

Goals and Objectives

This project aims to educate obstetrical anesthesia providers, obstetricians, residents, and pharmacists on remifentanil patient-controlled analgesia (PCA) for laboring parturients as an alternative to neuraxial analgesia for this subset of parturients. The objectives are to assess participants' knowledge and buy-in following implementation. An evidenced-based remifentanil PCA dosing regimen will also be recommended. **Stakeholders**

The implementation of this project will occur at a tertiary care facility in Central Illinois. The intended audience for this project includes OB anesthesia providers, including CRNAs and anesthesiologists, obstetricians, residents, and pharmacists at this facility. Securing buy-in from these medical professionals is integral if a remifentanil PCA protocol would be adopted and implemented at a level 3 perinatal center in Central Illinois. External stakeholders and mentors involved in the development and implementation of this presentation include the project lead, content expert, and the lead OB CRNA at this tertiary care facility.

IRB

This project will be submitted to Southern Illinois University's IRB committee for approval. The project is a quality improvement project and does not include human subject

experimentation. Due to the nature of this proposed project, IRB exemption is expected for this project.