

# Improving Provider Awareness on Glucagon- Like Peptide-1 Agonists and Gastric Point of Care Ultrasound Through an Education Tool

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Glucagon-like Peptide-1 (GLP-1) Agonists are utilized for treatment of diabetes and obesity.

**1 in 10** Americans are diagnosed with Type 2 Diabetes Mellitus.



**42%** of the United States Population is categorized as obese.

**54.3 million** GLP-1 prescriptions were administered from October 2019 to April 2022.

## Background

- GLP-1s delay gastric emptying and slow GI motility

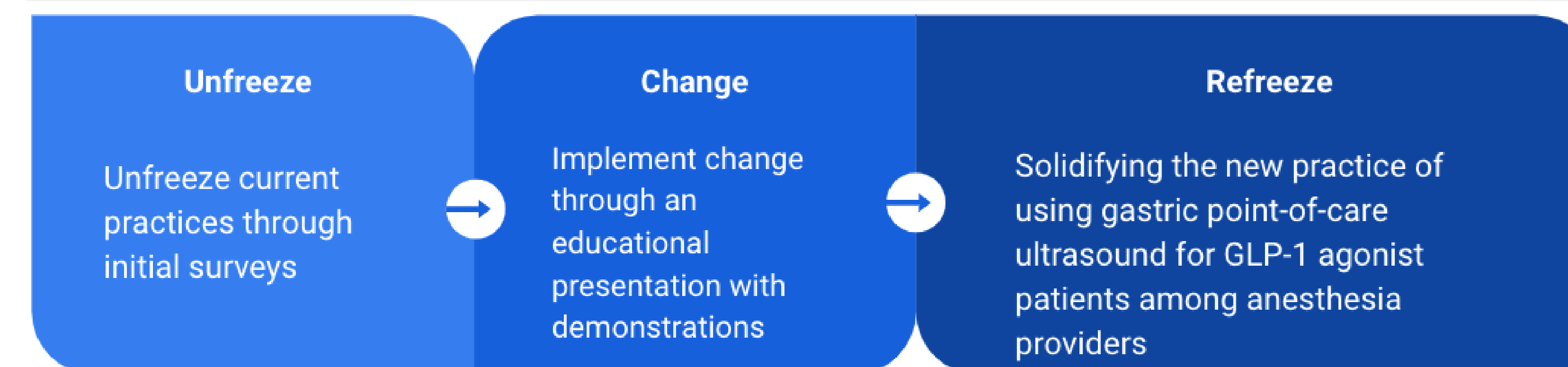
**Most Common Cause of Intubation-Associated Pneumonia**  
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**Aspiration of Oropharynx Contents**

- Fasting guidelines reduce the risk of aspiration, but **specific guidelines do not exist** for patients taking GLP-1s.
- What is the **current standard** for induction/intubation protocol for these patients?
  - **Clinical judgment** by anesthesia provider
- Gastric Point of Care Ultrasound (POCUS) offers an **objective** way to measure gastric volume to form anesthetic plan
  - Providers currently have limited knowledge and confidence performing POCUS.

## Purpose Statement

The purpose of this quality improvement project is to **increase preparedness in the use of gastric point of care ultrasound (POCUS)** among anesthesia providers (certified registered nurse anesthetists and anesthesiologists) at Grandview Medical Center through the **implementation of an evidence-based education bundle**.

## Framework Lewin's Change Model



## Implications and Sustainability

**Short-Term Goal:**  
Increase anesthesia provider knowledge, comfortability, and safety in the management of surgical patients prescribed GLP-1 agonists through the use of gastric POCUS

**Long-Term Outcomes:**  
Gastric POCUS becomes the standard of care in assessing and creating safe intraoperative anesthetic plans for the GLP-1 agonist surgical patient population.

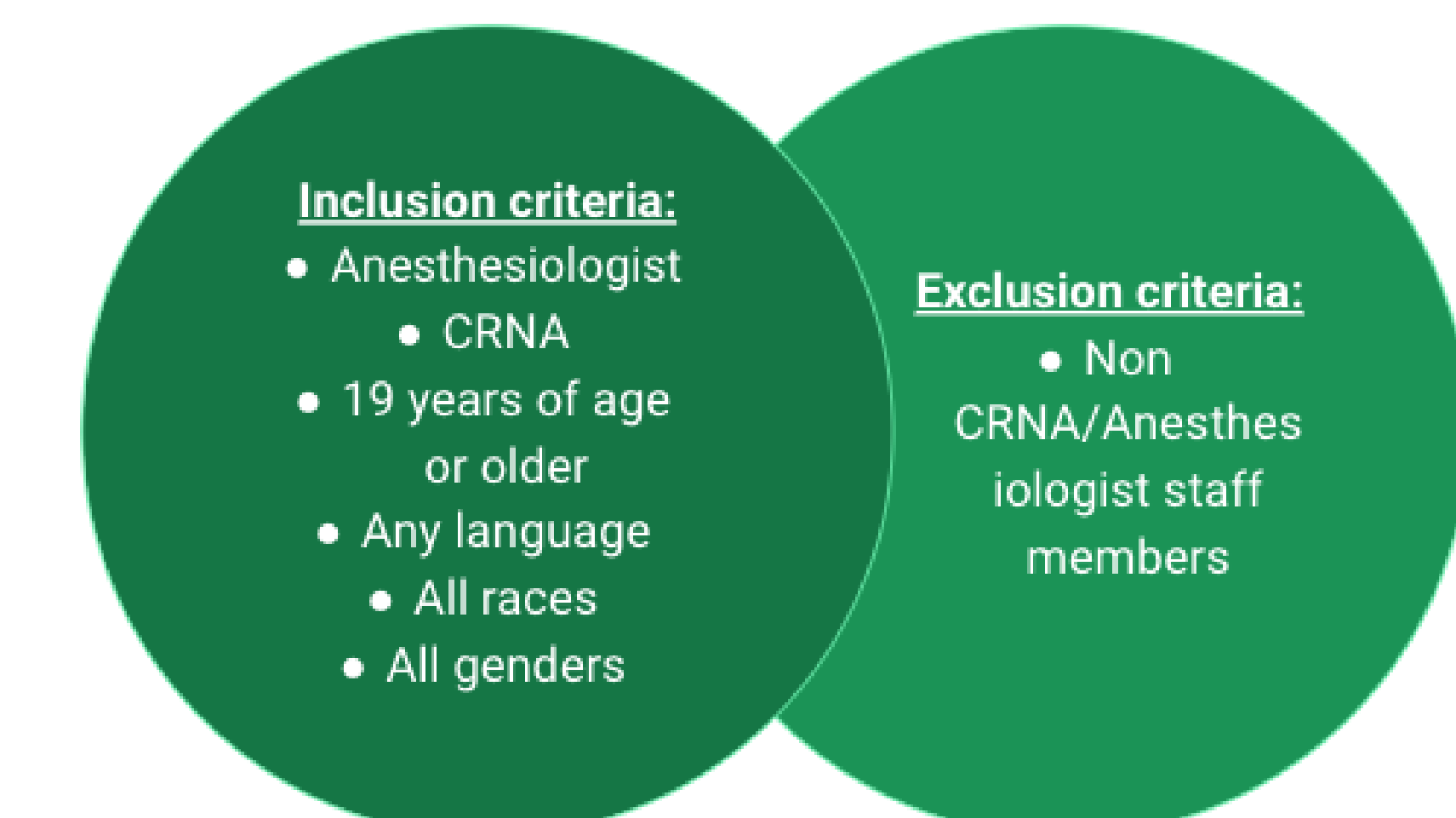
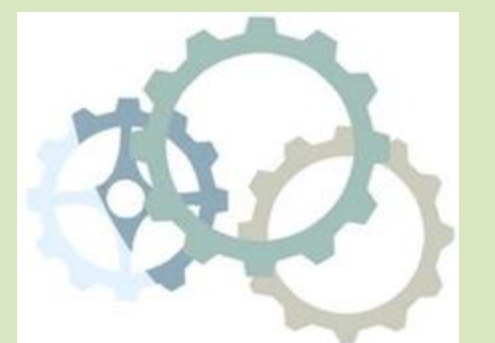
**UAB SCHOOL OF NURSING**

The University of Alabama at Birmingham

This quality improvement project was reviewed and approved by the UAB School of Nursing's QI Project Review Team. It was determined to be a QI activity and not subject to IRB review.

## Methods

- Development of **educational material**
- **Pre-implementation survey**
  - Assess provider's current knowledge of POCUS
  - Assess provider's current use and confidence with POCUS
- **Staff training**
  - POCUS scanning technique
  - Potential findings and results of the scan
  - Implications for anesthesia practice
- **Post-implementation survey**
  - Assess provider's knowledge of POCUS post training.
  - Assess provider's confidence and future use of POCUS post training.
- **Data analysis**



## Results

### Descriptive Statistics:

- **30 Participants**
- Average Age: **37.5 years**.
- Average Anesthesia Experience: **7.4 years**.
- Of the 30 participants, only 6 participants had POCUS experience.

### Inferential Statistics:

- **Paired T-Test** comparing Pre and Post Survey scores.
- Mean Pre-Survey Score: 4.8
- Mean Post-Survey Score: 6.4
- The difference between post- and pre-survey scores was **statistically significant** ( $t_{29} = 5.187$ ,  $p < 0.001$ ).