Anesthesia Staffing models Cost-Benefit Analysis: An Educational Tool to Increase Awareness

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Background & Problem Statement
- Rising healthcare costs have caused hospitals to find ways to decrease cost
- Will SRNA knowledge of CRNA cost-effectiveness and safety increase after intervention

Results
- 11 SRNA Participants took a pretest, participated in the intervention, and took a posttest to determine a change in knowledge
- Statistical analysis showed a significant difference, t=4.632 and p=0.00093, which demonstrates a significant increase in mean test scores after the intervention

Review of Literature
- Studies included produced data about the different anesthesia care teams' costs, particularly those that employ CRNAs, anesthesiologists, or both.
- All articles used were produced between 2010 to 2020

Paired t-test results
- Difference Scores Calculations:
  - Mean: 0.18
  - \( \mu = 0 \)
  - \( S^2 = 0.17/(11-1) = 0.02 \)
  - \( S^2_M = S^2/N = 0.02/11 = 0 \)
  - \( S_M = \sqrt{0} = 0.04 \)
  - T-value calculation:
    - \( t = (M - \mu)/S_M = (0.18 - 0)/0.04 \)
    - \( t = 4.63 \)
- Statistical analysis demonstrates a significant difference in test scores after intervention participation

Project Design and Methods
- A descriptive comparative research study was used along with a pre-intervention test to assess knowledge and post-intervention to assess the increase in knowledge of cost-benefit and safety of different anesthesia delivery models

Interpretation and Discussion
- The SRNAs who participated in this study improved their knowledge of anesthesia provider cost and safety as evidenced by a statistical analysis that compared test scores before and after a presentation on the subject
- Healthcare costs can be decreased utilizing CRNAs