

# Removing Barriers to Practice: Achieving CRNA Autonomy through Education, Engagement, and Policy Change

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## Background

- Certified Registered Nurse Anesthetists (CRNAs) are advanced practice registered nurses (APRNs) educated and trained to provide all types of anesthesia in all settings to all types of patients.
- The practice of anesthesia includes multiple competing practice models, including services delivered by anesthesiologists, independent practice by certified registered nurse anesthetists (CRNAs), and team-based approaches incorporating anesthesiologist supervision or direction of CRNAs.
- Despite data demonstrating very low risk of death and complications associated with anesthesia, debate among professional societies and policymakers persists over the superiority or equivalence among these models.
- The American Nurses Association (2022) defines scope of practice (SOP) as “the services that a qualified health professional is deemed competent to perform and permitted to undertake—in keeping with the terms of their professional license”.
- In current practice, APRNs are not utilized at the maximum potential of their license and face restrictions to use their full SOP.
- For instance, restrictions in Medicare reimbursement, as well as a lack of uniformity in SOP across states, have posed a great challenge for CRNAs.
- CRNAs have the potential to improve the access to and quality of patient care. Shortages of physicians and an increased demand for anesthesia services require APRNs to practice at their full certification to meet the needs of patients.
- With a national emphasis to use CRNAs at full SOP to meet the demands in healthcare today, resistance to this goal creates a roadblock to meet the needs of all patients.
- **PICO Question:** In the state of Pennsylvania, does the implementation of a health policy toolkit discussing the evidence behind CRNA independent practice increase legislative support and active engagement for policy change ?

## Objectives

- To examine CRNA practice and SOP policy by evaluating published research related to patient outcomes and safety, anesthesia provider distribution and supply, cost structure, access to anesthesia services, and factors influencing state opt-out.
- To highlight research findings that support CRNA full scope of practice and compile evidence into a health policy toolkit that consists of pamphlet, website, and live webinar.
- To disseminate the health policy toolkit to legislators, health administrators, CRNAs, and Student Registered Nurse Anesthetists (SRNAs) to increase knowledge of CRNA anesthetic care delivery and support for legislative changes related to CRNA full scope of practice.

### SMART Goals

1. 50% of participants will agree or strongly agree in the post presentation survey that they have an increased understanding of patient outcomes as it relates to CRNA care delivery and practice in PA.
2. 50% of participants will agree or strongly agree in the post presentation survey that they have an increased understanding of the practice role CRNA play within the healthcare delivery system in the state of PA.
3. 50% of participants will agree or strongly agree in the post presentation survey that they have a better understanding of the cost-effective measures that CRNA expanded practice and autonomy will provide in the state of PA.
4. 50% of participants will agree or strongly agree in the post presentation survey that CRNA autonomy and expanded practice will help to increase access to care and fulfill shortages in anesthesia services.
5. 50% of participants will agree or strongly agree in the post presentation survey that the health policy toolkit will increase their active engagement in helping to support legislation that will advance the role of CRNAs and allow independent practice.

## Methodology

- Needs assessment and collaboration conducted with anesthesia advocacy groups, anesthesia professional organizations, along with institutional anesthesia stakeholders, coordinators, and department leaders
- Literature search through two nursing and medical databases : the Cumulative Index of Nursing and Allied Health Literature (CINAHL) and PubMed. One non-medical database search was also conducted utilizing Google Scholar.
- Advanced search settings included: linked full text, published date 2010 to 2023, peer reviewed, and English language.
- Key terms: CRNA practice standards, CRNA autonomy, CRNA full scope of practice, nurse anesthetist AND cost-effectiveness, anesthesia care model, CRNA AND patient safety, and patient care outcomes, surgery, AND anesthesia, CRNA AND access to anesthesia care.
- Search yielded 718 results from all databases and a total of 7 publications were chosen due to their relevancy to the PICO question.
- Rogers’ Diffusion of Innovation Theory of Evidence Based Practice, a dissemination and implementation theoretical model, was selected to guide this project.
- Educational module: 3 part health policy toolkit consisting of trifold double-sided pamphlet, 2 separate live session webinar utilizing PowerPoint and Microsoft teams, and a published website compiling the most up to date research supporting CRNA full scope of practice.
- Pre test/Post test survey design based on a Likert scale to compare participants’ attitudes, knowledge, and perceptions towards CRNA practice, CRNA utilization, care outcomes, and legislative changes to support CRNA full scope of practice.
  - Pre test: 6 questions
  - Post test: 10 questions
- All Pre and Post survey questions were tied directly to SMART goals (Specific, Measurable, Achievable, Relevant, and Time-Bound) for more streamlined data analysis.
- Implemented over 1 month from February 1, 2023 through February 28, 2023 to permit adequate time to hold 2 webinar sessions, view website, disseminate pamphlet, and for participants to complete surveys.
- In total, 25 participants attended one of the two webinar sessions with 21 responding to both pre and post survey.

## Translation

- Six of the questions were identical for both the pre and post survey questionnaire. These questions were examined for statistical significance. An additional four questions were developed specific to the post survey.
- A paired t-test was used to assess the difference between the pre and post survey scores for each question since the data was collected from two dependent groups. Data was analyzed by SPSS to compare pre- and post webinar education changes in self perception and attitudes toward CRNAs and SOP expansion in Pennsylvania.
- A 95% confidence level ( $p = 0.05$ ) was selected to evaluate the significance of the results.
- Six of the pre and post survey questions were tested for statistical significance to identify if the health policy toolkit increased the understanding the role CRNAs play in their profession, cost efficiency of a CRNAs, the safety of CRNA practice, CRNA educational requirements, and current gaps in healthcare coverage in the state of Pennsylvania.
- Each individual question identified that there was a **statistically significant difference** between the pre and post survey once the health policy toolkit was introduced to the participants ( $p < 0.05$ ).
- The pre test average mean was 4.58 (N=21) and the post test mean was 4.89 (N=21).
- The final four post survey questions were averaged to assess the health policy toolkit and its use for engagement in healthcare policy changes. All 21 participants either agreed or strongly agreed with statements surrounding support of CRNA expanded SOP after introduction of the health policy toolkit and research supporting the benefits of CRNA full SOP.
- Each question associated with the SMART goals received a strongly agreed or agreed answer. This indicated that each SMART goal was achieved
- **Ultimately:** participants supported the use of a health policy toolkit for engaging in legislative activities, to better understand the CRNA profession, and will become more active in legislation regarding CRNA independent practice

## Recommendations for Practice

- Whether in collaborative care teams or working independently, CRNAs practicing in their full SOP can reduce the burdens on the U.S. healthcare system, in the same way Nurse Practitioners (NPs) did for primary care physicians and help meet the needs of healthcare today.
- Although empirical studies or data-based studies have revealed important findings on patient outcomes when patients are under the care of CRNAs, research examining patient preferences and self-reported outcomes may contribute an important and compelling voice to influence SOP policy.
- Objective measures of patient outcomes are helpful to give a strong basis for the evidence; however, at the core of nursing research is the need to examine subjective measures of patient outcomes, such as patient satisfaction, to build on the existing facts.
- Specifically, studying patients’ satisfaction with care in surgical facilities in states where CRNAs practice independently could offer new insight and strengthen empirical evidence.
- Studying patient outcomes and evaluating access to care in the states that have opted out of physician supervision and granted full SOP to CRNAs could strongly influence other states to lift restrictions.
- With higher numbers of CRNAs in rural regions a focus on CRNA practice and patient outcomes in rural areas is a starting point to strengthen evidence favoring full SOP for CRNAs.

## Conclusions

- To promote change in policy, CRNAs need to continue to be leaders on interdisciplinary teams to strengthen the knowledge base of the profession. Gaps in healthcare, such as lack of access to care, can be mitigated by implementing full SOP for CRNAs.
- Data analysis and literature review demonstrate there is a need for the health policy toolkit, to increase the awareness surrounding CRNA practice and how full SOP could increase access to anesthesia-related care, elimination of anesthesia provider shortage, savings of \$2.9 billion annually in provider salary cost with CRNA alone model (Cintina et al., 2018), and decreased cost of care.
- An increase in average test scores between the pre and post test after reviewing the health policy toolkit infers that participants’ knowledge of CRNAs and engagement in support of CRNA expanded SOP legislation increased after viewing the data in the toolkit.

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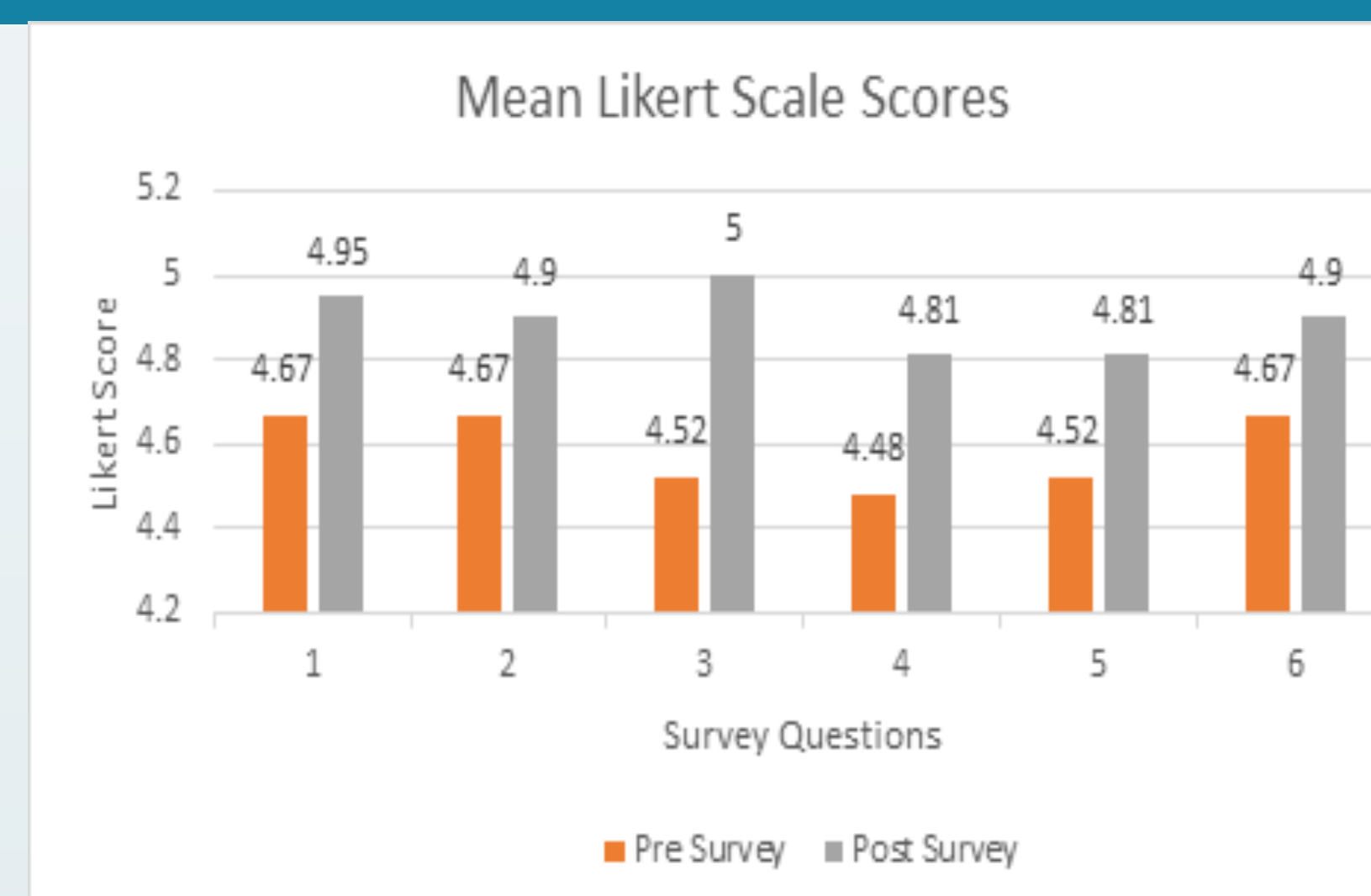


Figure 1: Mean Likert scale scores before and after webinar

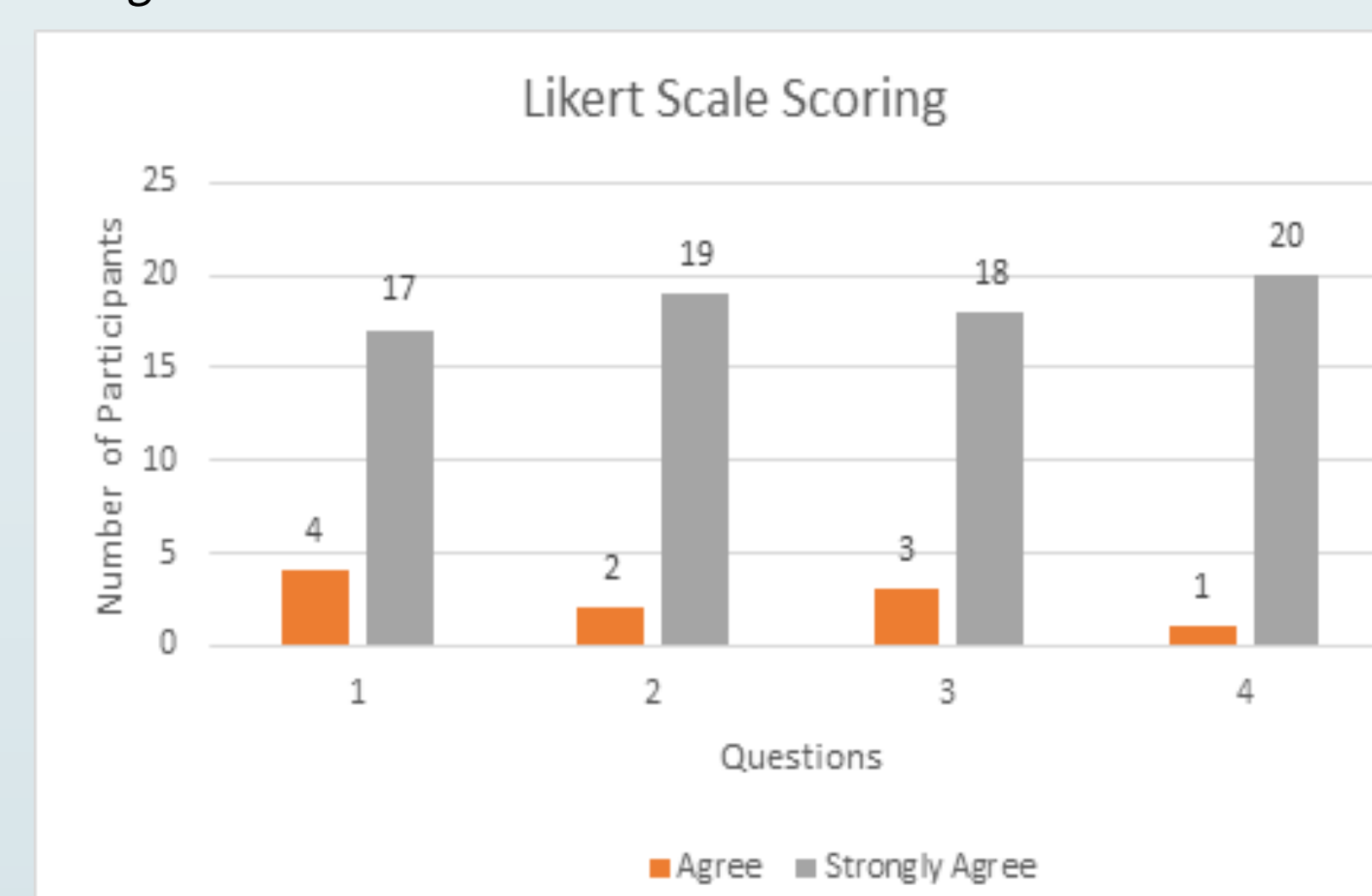


Figure 2: Likert scale scoring of the additional four post survey questions