

## Introduction

Nontechnical skills (NTS), cognitive and interpersonal abilities that supplement clinical and technical expertise, are critical to excellence in anesthesia practice.<sup>1-3</sup> Breakdowns in NTS contribute to an estimated 70-80% of medical and anesthesia errors.<sup>2,4</sup> Poor execution of NTS can cause clinical practice to fall below acceptable levels, resulting in errors.<sup>4-6</sup> Effective teamwork is essential in high-risk, safety-critical environments, because care delivery often involves healthcare practitioners of varying expertise levels.<sup>4</sup> Certified Registered Nurse Anesthetist (CRNA) clinical instructors working with Student Registered Nurse Anesthetists (SRNAs) are excellent examples of practitioners with varying levels of anesthesia expertise working together to deliver safe patient care in the operating room.

## Objective

The primary goal of this scholarly project was to provide CRNA clinical instructors with nontechnical skills (NTS) and tools to improve the quality and consistency of SRNA clinical instruction, which has the potential to enhance patient safety through the reduction of errors in the clinical environment. This was accomplished by educating CRNA clinical instructors on nontechnical skills, communication tools, and a common language, based on Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS)<sup>®</sup>, for use when providing instruction to SRNAs.

## Methodology

The TeamSTEPPS<sup>®</sup> Coaching, Leading Teams, Situation Monitoring, and Mutual Support Modules were adapted and transformed into the pilot study modules for this scholarly project.<sup>5,7,8</sup> Participants completed a pre-intervention survey, four narrated Microsoft PowerPoint TeamSTEPPS<sup>®</sup> NTS modules, an immediate post-intervention survey, and a 1-month post-intervention survey. CRNA clinical instructor reactions, learning, and behavior were assessed with online Qualtrics pre- and post-intervention surveys.

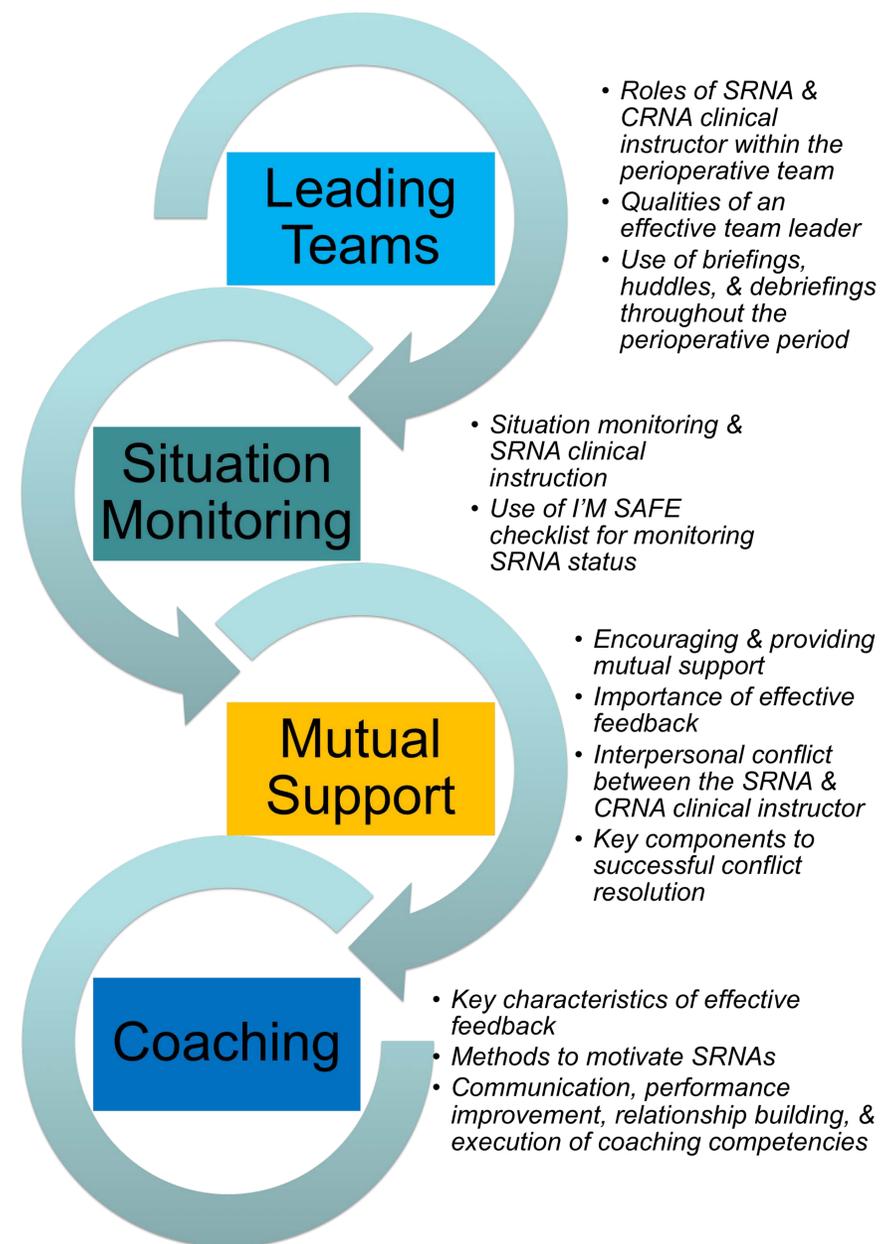


Figure 1. Conceptual Model of Microsoft<sup>®</sup> PowerPoint TeamSTEPPS<sup>®</sup> NTS Modules<sup>8</sup>

## Results

Attitudes and perceptions mean scores in the team structure, situational monitoring, mutual support, communication, and satisfaction with SRNA communication domains increased while leadership attitudes and perceptions mean scores decreased between pre- and immediate post-intervention data. The majority of CRNA clinical instructor participants (87.5%) scored 80% or higher on the 10 post-intervention educational module knowledge assessment questions. Behavior mean scores in the communication, situational monitoring, mutual support, and communication tools domains increased between the pre- and 1-month post-intervention data.

## Conclusion

The results of this scholarly project demonstrate the potential for a simple, cost effective educational intervention to alter the attitudes, perceptions, and behaviors of CRNA clinical instructors related to NTS utilization when working with SRNAs. It illustrates the ability of TeamSTEPPS<sup>®</sup> to function as a framework for NTS education for CRNAs. While the pilot nature of the project precluded analysis to demonstrate statistical significance, it may inspire future research that focuses on SRNA educational objectives and performance as a primary outcome. Future studies may also include direct measures of CRNA clinical instructor NTS behaviors while teaching SRNAs.

## References

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