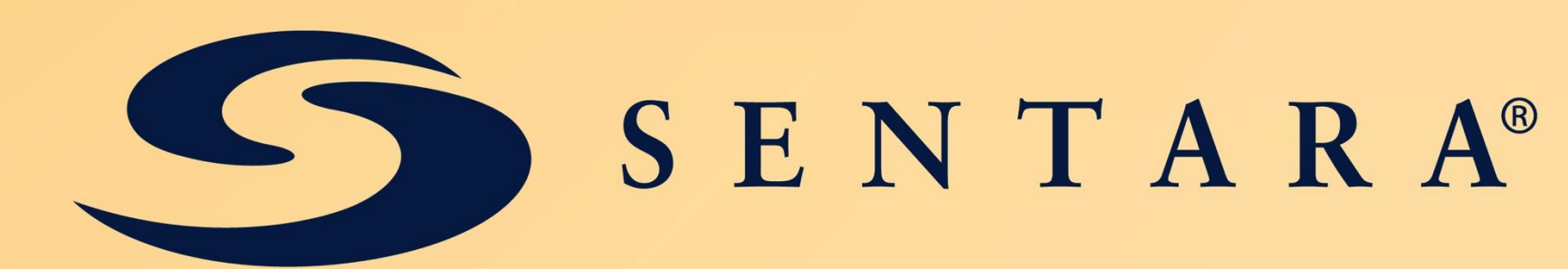




Improving the Skill and Confidence of the Critical Care Respiratory Therapist Applying Heliox Therapy in Noninvasive and Mechanically Ventilated Patients Utilizing Simulation.

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Objective Statement:

To Improve the skill and confidence of the critical care Respiratory Therapist applying Heliox therapy in noninvasive and in mechanically ventilated patients utilizing simulation.

Significance & Background:

Positive outcomes when treating a patient during Status Asthmaticus is often largely dependent on the synergy and high quality interrelated performance of an interdisciplinary team, including a Confederate Physician and Registered Nurse. Smooth and efficient collaboration during this stressful situation is essential to timely application of Heliox to the patient and avoid further deterioration. Simulation provides an environment in which the respiratory therapist can “practice” the skills of the application of Heliox therapy for the intubated and mechanically ventilated patient in a safe environment and receive timely feedback on performance of key skills that will be essential when applied to real patients.

Purpose:

In January, 2017 the Clinical Respiratory Specialist identified that the Respiratory therapists could benefit from review and practice in the application of Heliox therapy to patients in Status Asthmaticus. Knowing that ultimately the prevention of progression to intubation for these patients relied largely on a high-functioning Respiratory Therapy team Clinical Respiratory Specialist collaborated with Simulation Specialist and created an educational opportunity utilizing simulation for the Respiratory Therapy staff.

Intervention:

Based on feedback from the SLH Respiratory Therapy Staff, in January, 2017 the Clinical Respiratory Specialist and the Simulation Specialist collaborated to design a Status Asthmaticus Heliox class that was intended to be incorporated into Sentara Leigh Hospital (SLH) annual Respiratory Therapy Skills Day and was implemented March, 2017. This provided an opportunity for those respiratory therapists that respond to patients in the Intensive Care Unit and Emergency Department to further develop skills that would enable them to confidently assess and apply heliox therapy for patients in Status Asthmaticus.

Participants in the Simulation Lab



Left to right Bea Barajas-Williams, Divena Hundley, Valarie Moiser, Maria Astudillo, Betsy Ryland

Conclusion and Implications:

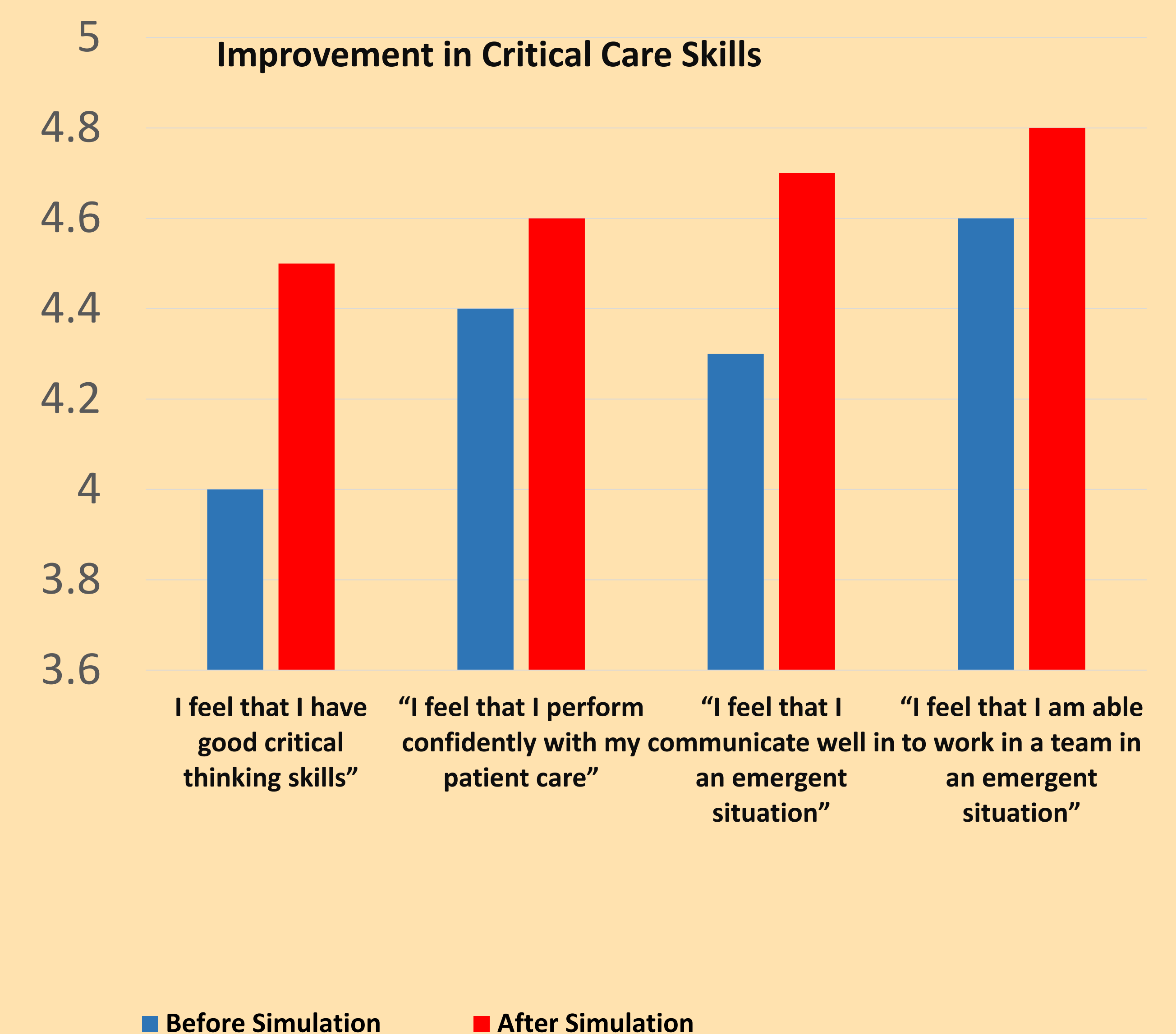
Following the Asthma-Heliox simulation education the Respiratory Therapist's reported that the skills they practiced greatly improved their confidence and ability to apply Heliox therapy for intubated, mechanically ventilated Asthmatics and to communicate and work as a team in emergent situations.

The design of Skills Day for Respiratory Therapists was overwhelmingly positive. The Respiratory Therapists reported that the patient simulation education provided experience that will assist with airway management and application of Heliox with real patients, critical opportunity to practice effective communication by incorporating repeat back and asking clarifying questions in an emergent situation and the ability to test out critical thinking and decision-making skills in a controlled environment. Improvement in all categories of feedback indicated that the respiratory therapists felt more prepared to apply Heliox therapy for Asthmatic patients in a real-time patient situation.

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