



**USE OF CHECKLISTS FOR TRAUMA ANESTHESIA STANDARDIZATION:
PROTOCOL FOR TRAUMA PREPAREDNESS**
Created by: Angel Jones, BSN, SRNA

PURPOSE

- A checklist was created to standardize the way anesthesia providers prepare the trauma operating rooms at an 800+ bed Level 1 Trauma Center in Southeastern United States.
- A “grab-and-go” Trauma Medication Box was also prepared with relevant trauma medications to improve satisfaction scores.

**BACKGROUND &
RESEARCH**

- The trauma patient population arrives to the operating room with short notice and each patient has different levels of severity and complexity.
- Level 1 Trauma Centers are dedicated facilities that are equipped and staffed to manage the most critical trauma patients at any given time (Lendrum & Lockey, 2013).
- The use of checklists has been used in high-risk industries for decades, any time when human lives are put in jeopardy (Jelacic et al., 2019).



Anesthesia Adult Trauma Box (3)
Location: Main Pyxis

- 2 - Calcium gluconate 1g/100ml
- 4 - Calcium Chloride (100 mg/mL) syringe
- 1 - Potassium Chloride 20 mEq IV bag
- 1 - Potassium Chloride 10 mEq IV bag
- 2 - Magnesium Sulfate 2g/50 ml
- 8 - Sodium Bicarbonate 8.4% (1mEq/mL) bristojet
- 4 - Epinephrine 1 mg/10ml bristojet
- 2 - Tranexamic Acid 1g vials
- 1 - Norepinephrine 4 mg vial (to make 16 mcg/ml 250ml bag)
- 4 - Epinephrine (1 mg/mL) vials (to constitute drip 4 mg/250ml)

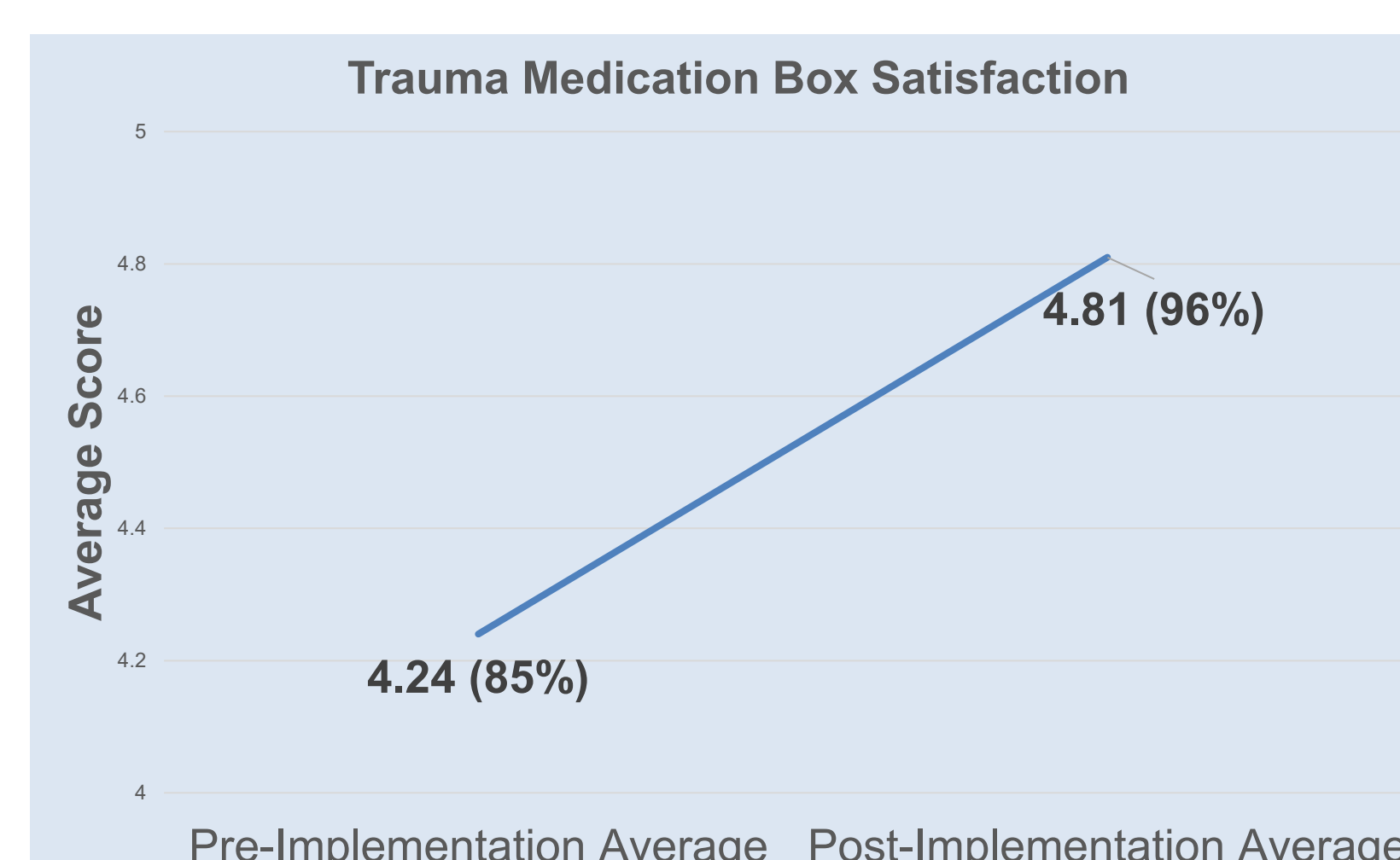
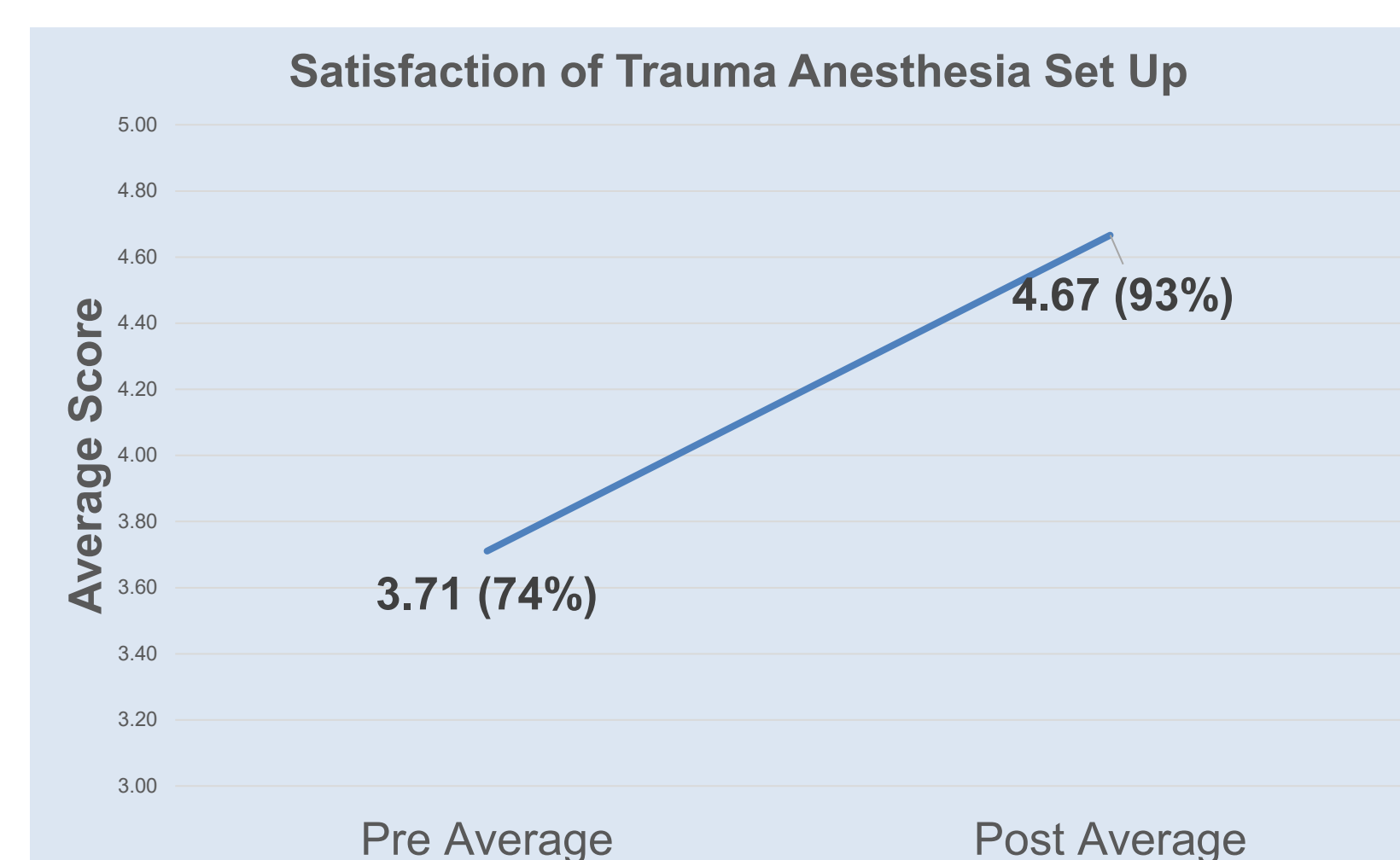
*All Vials to make drips are kept in their own bag to reduce risk of medication error and mixing.

METHOD

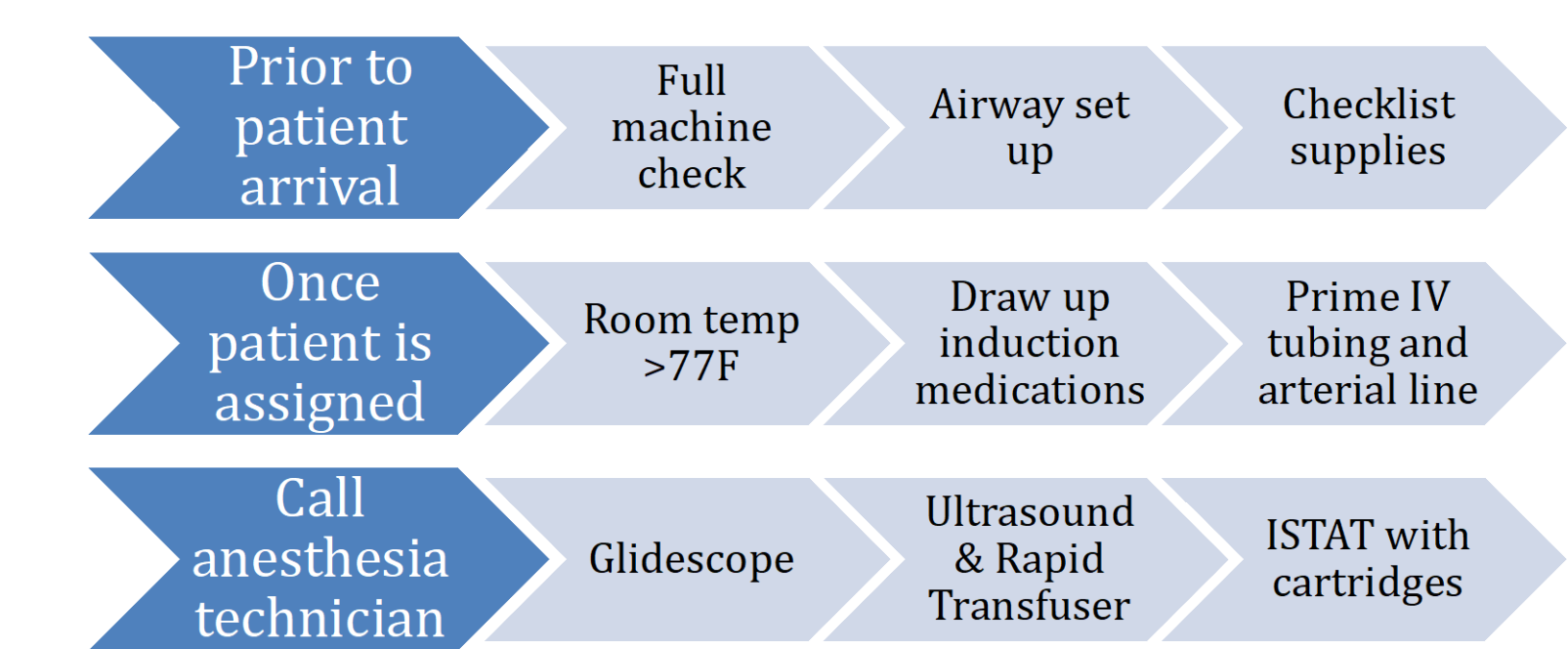
- Confidence levels, satisfaction scores, and compliance of checklist use were measured.
- Data was collected using pre surveys and post surveys that utilized a Likert scale.

RESULTS

- Confidence in trauma operating room set up increased by 15%.
- Satisfaction of the trauma room set up increased by 19%.
- Satisfaction with the Trauma Medication Box increased by 11%.



Trauma Anesthesia Set Up Checklist/ Standardization Protocol



Airway Set Up Checklist

- Ambu Bag
- Bougie
- Suction on & ready
- Tongue depressor
- Oral Airway (90 and 100)
- 2 laryngoscope handles
- 2 Blades: MAC 4 and Miller 2
- ETT with stylet and syringe (7.0 and 7.5)
- Eye tape & tube tape ready
- Esophageal core temp probe
- OGT
- BIS

Supply Checklist

- IV start kit
- A-line bundle
- Fluid warmer
- Blood tubing
- CVL kit
- 4 IV pumps
- EKG monitor/cable with electrodes
- O2 saturation & A-line cables
- Ear O2 saturation probe
- Underbody & upper body bair hugger
- Fluid drawer: 4 Plasmalyte or Normosol-R fluid bags

CONCLUSIONS

- Standardization of trauma anesthesia room set up helps improve confidence levels of anesthesia providers to care of a trauma patient.
- Standardization using a setup checklist also improves satisfaction scores of anesthesia providers.

References

Jelacic, S., Bowdle, A., Nair, B. G., Togashi, K., Wu, C., Boorman, D. J., Cain, K. C., Lang, J. D., & Dellinger, E. P. (2019). The effects of an aviation-style computerised pre-induction anaesthesia checklist on pre-anaesthetic set-up and non-routine events. *Anaesthesia*, 74(9), 1138–1146. <https://doi.org/10.1111/anae.14707>

Lendrum, R. A., & Lockey, D. J. (2013). Trauma system development. *Anaesthesia*, 68(s1), 30–39. <https://doi.org/10.1111/anae.12049>