

BACKGROUND

- Airway Management is defined as “the assessment, planning, and series of medical procedures required to maintain or restore an individual’s ventilation or breathing” (Syed).
- Without an organized plan and educated staff members, life-threatening low blood oxygen levels can arise in critical situations requiring airway management.
- Acknowledging our current workflow, our team joined together and quickly begin noting areas of airway management that needed improvement.
- With the help of our Nursing Education Specialist, Patti Tickle, MSN, RN, we were able to be in communication with Dr. John Champion, MD at Vanderbilt University.
- Dr. Champion is an Emergency Medicine Specialist and agreed to come to Vanderbilt Bedford to support us during this process improvement.
- With Dr. Champion’s arrival to Bedford, we were able to host a mock airway drill to note issues faced during rapid intubations and ways to improve our process in these critical situations.

METHODS

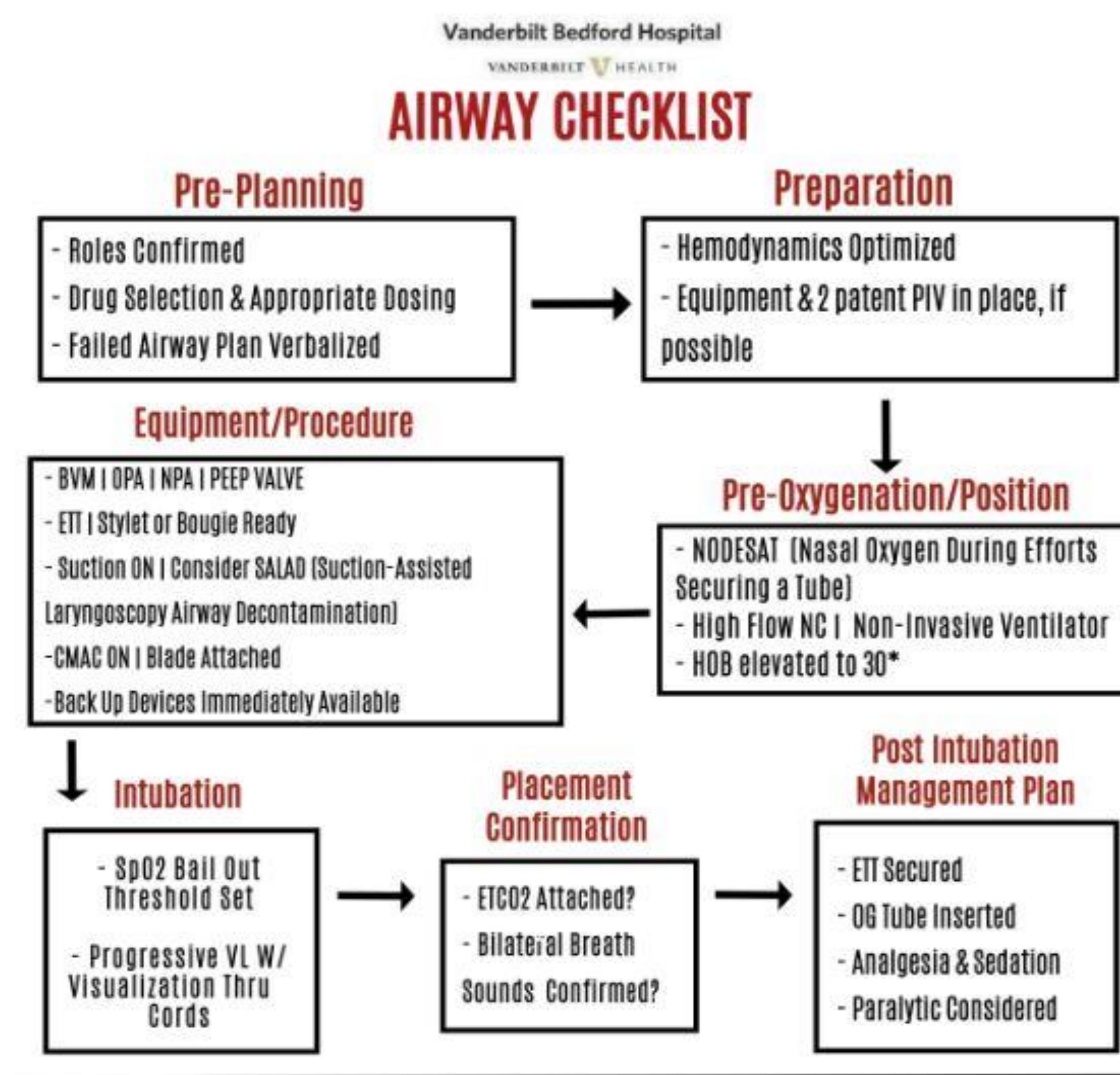
- During the Mock Airway Drill, Dr. Champion presented Vanderbilt’s Airway Checklist. The Airway Checklist is utilized in every rapid sequence intubation he faces.
- Dr. Champion also brought an “Airway Mat” utilized at Vanderbilt containing names and pictures of all items needed during an intubation.
- A very in depth education drill was initiated starting with indications for respiratory intervention and intubation.

Indications for respiratory intervention and intubation

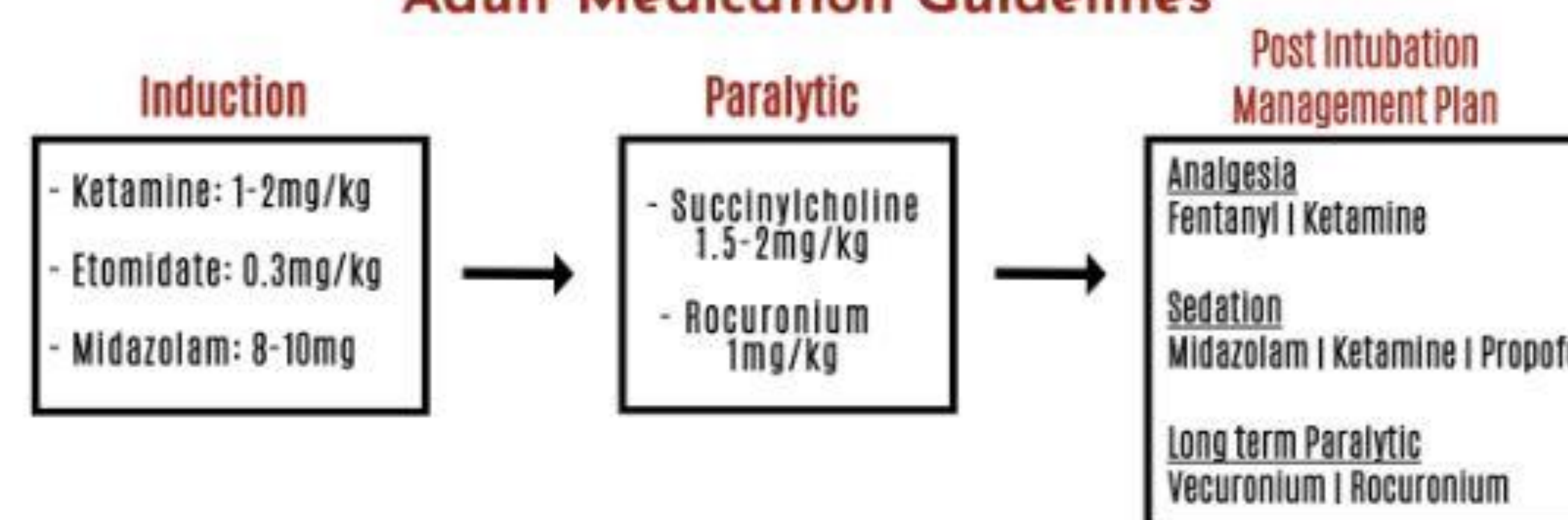
- Airway Protection**
 - AMS, GCS < 8, Loss of airway protective reflexes (gag), inability to handle secretions.
 - Examples: Stroke, encephalopathy, oversedation, aspiration, angioedema, deep space neck infections, trauma w/ bleeding, hematoma
 - PE: Vomiting, choking, unresponsive
- Structural Airway Compromise**
 - Glottic/supraglottic edema, infection trauma
 - Examples: angioedema, deep space neck infection, expanding hematoma
 - PE: Stridor, tongue swelling, neck swelling
- Inability to Oxygenate**
 - Hypoxia, low SpO₂, PaO₂
 - Examples: PNA, COPD
- Inability to Ventilate**
 - Hypercarbia, elevated end-tidal, PaCO₂
 - Examples: Obstruction (COPD), neuromuscular disease w/ respiratory muscle weakness (myasthenia gravis), obesity hypoventilation
 - PE: AMS 2/2 hypercapnia, tachypnea, accessory muscle use
- Anticipated Clinical Course**
 - Examples: unstable patient going to OR, Pre-transport with airway concern

- Notes were given on Airway assessment utilizing the “LEMON” Airway Assessment Tool and how to assess for a difficult intubation using the 3-3-2 Rule.
- We discussed all equipment and supplies needed and made note of items we currently did not keep in stock.
- Hands on education for the insertion of OPAs and NPAs was completed for all members attending the drill.
- Patient positioning and best practice BVM ventilation was taught utilizing the teach-back method on a human mannequin.
- To complete the education, discussions about crowd control, noise control, and the roles of the staff were completed with all members.

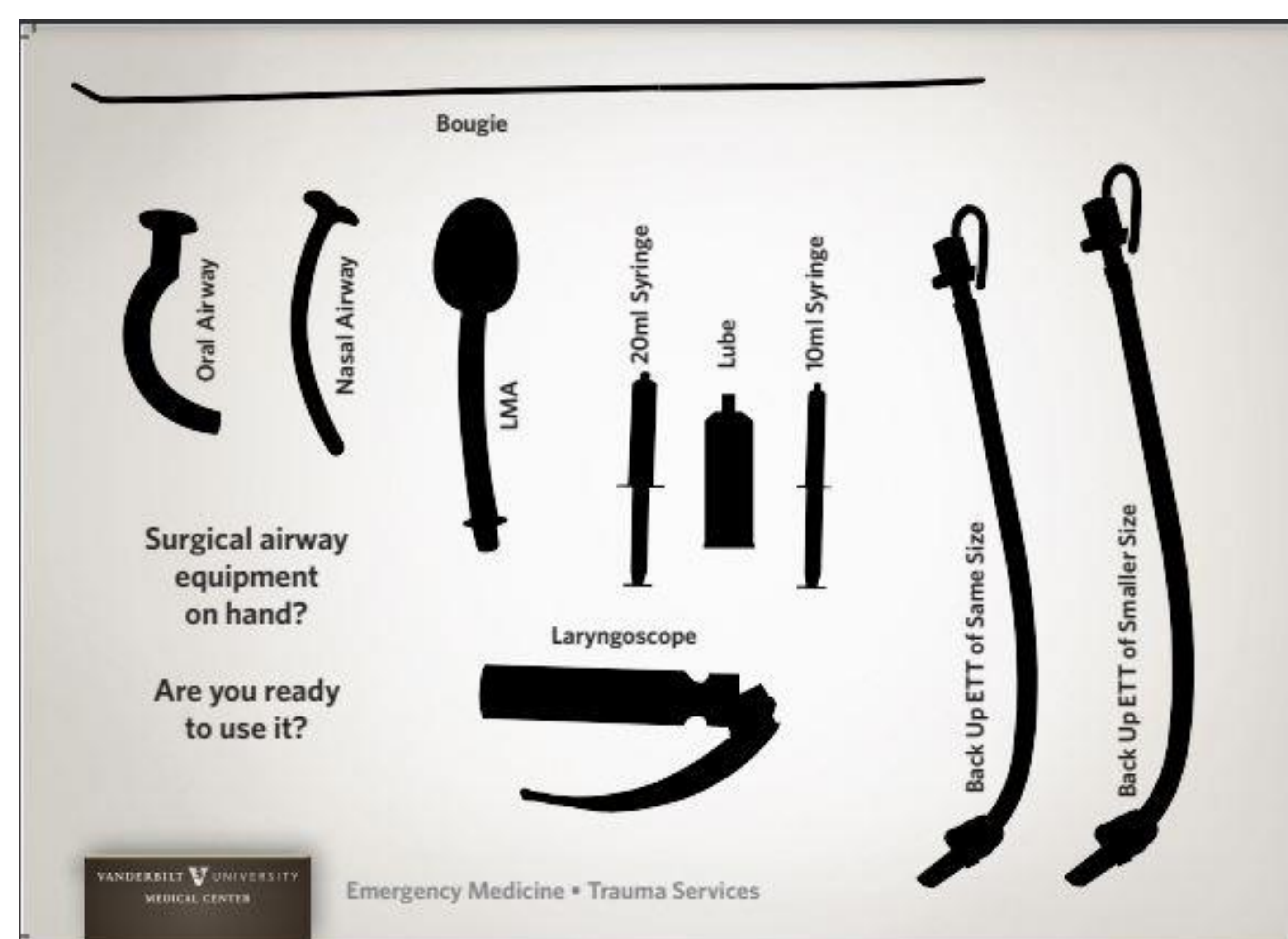
AIRWAY CHECKLIST



Adult Medication Guidelines



AIRWAY MAT



RESULTS

- Once the Airway Drill was complete, Megan Walker, Director of Inpatient Services, Jarylin Bishop, ICU Assistant Nurse Manager, Patti Tickle, Nursing Education Specialist, and Tracy Foster, Director of Respiratory Services joined together to recreate the information presented during the Mock Airway Drill.
- Slideshows of the education were emailed or presented to all staff members that participate in Airway Management at VBCH.
- With the help of Material Management’s Lead Tech, Amanda Dye, items that were not currently stocked, such as oropharyngeal and nasopharyngeal airways, are now stocked daily by Materials Management and are also located in the RSI Cart in ICU.
- Patti Tickle, Nursing Education Specialist, was able to order the Airway Mat utilized at Vanderbilt Bedford and it is now kept on the RSI Cart located in CCU.
- Each CCU room now has Dr. Champion’s Airway Checklist printed on a large posterboard at the head of the bed.

CONCLUSION

- Following up from these process improvements, it has been noted that Rapid Sequence Intubations have improved tremendously.
- Huddles after RSIs and Codes have had many discussions of improvement of Team Roles and Responsibilities.
- The RSI Cart has had all items needed to maintain an airway.
- Nursing staff state an improved knowledge on maintaining these patients and a better understanding of nursing interventions leading up to an intubation.

REFERENCES

Syed, A. (n.d.). *Airway management: What is it, when it is required, and more - osmosis*. Retrieved March 21, 2023, from <https://www.osmosis.org/answers/airway-management>