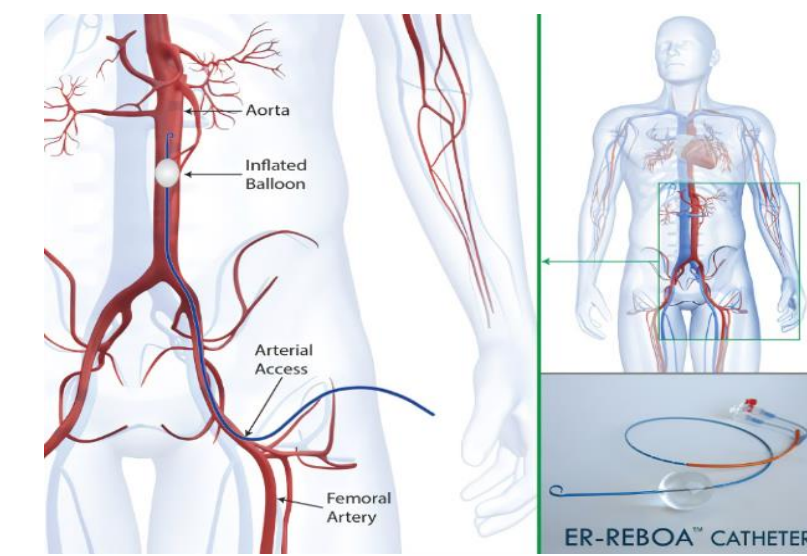


## Background

- Hemorrhage is the leading cause of preventable death in trauma patients (Moore et al., 2015).
- Gaining hemorrhage control in a trauma patient is routinely done by resuscitative thoracotomy (RT) with aortic cross-clamping, which is highly invasive, and survival rates remain low, between 8% and 31% (Cheema et al., 2018)
- A less invasive alternative is resuscitative endovascular balloon occlusion of the aorta (REBOA) (Sambor, 2018).



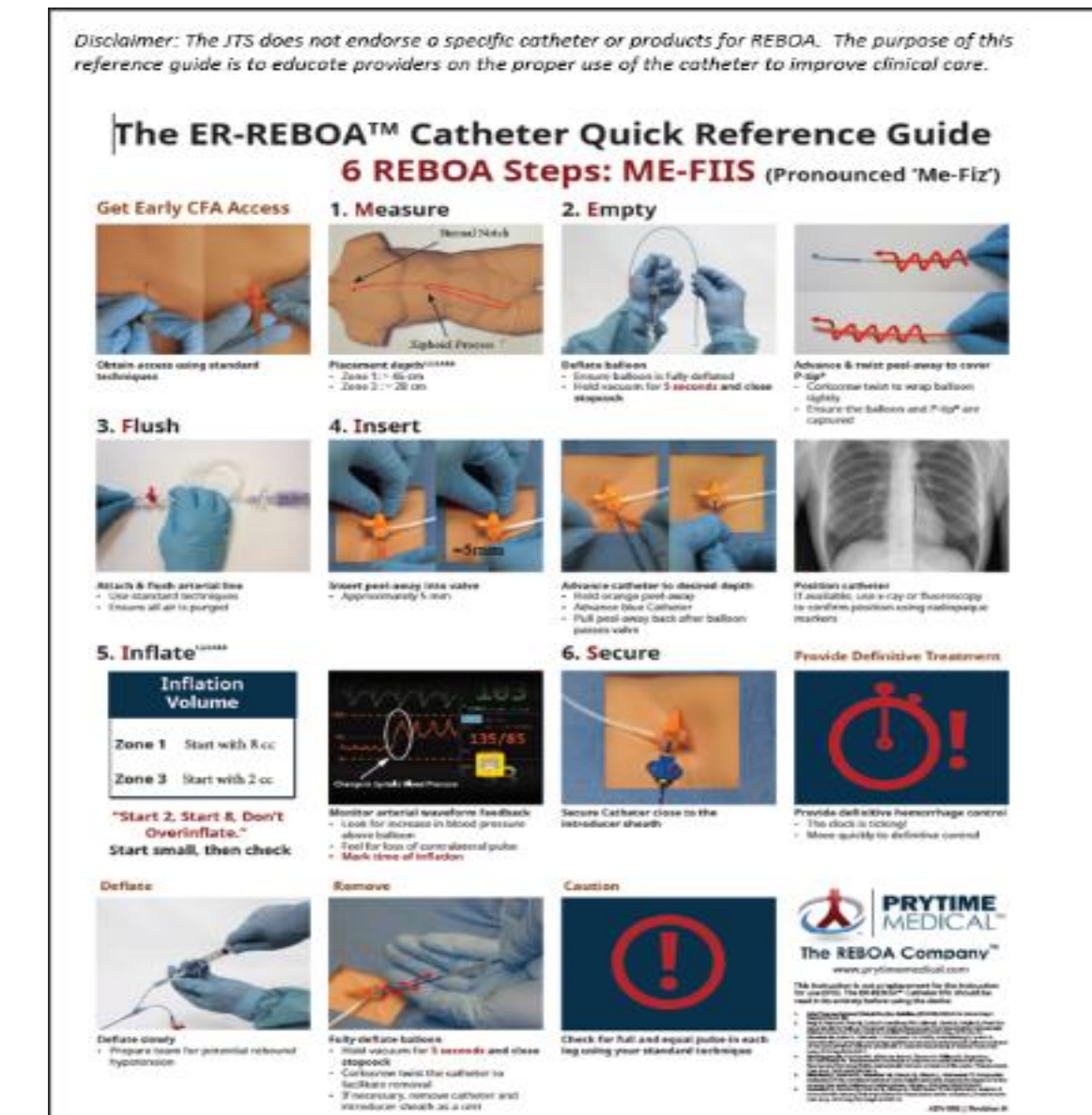
- REBOA catheter can be used in ruptured abdominal aneurysms, penetrating injury to the abdomen or pelvis, blunt trauma without severe chest injury but with a positive FAST (Focused Abdominal Sonography) or a suspected pelvic fracture, complex retroperitoneal hemorrhage, lower extremity trauma with impending cardiovascular collapse, and morbidly adherent placenta (Cheema et al., 2018; Manzano-Nunez et al., 2018; Ordonez et al., 2017).

## Goals

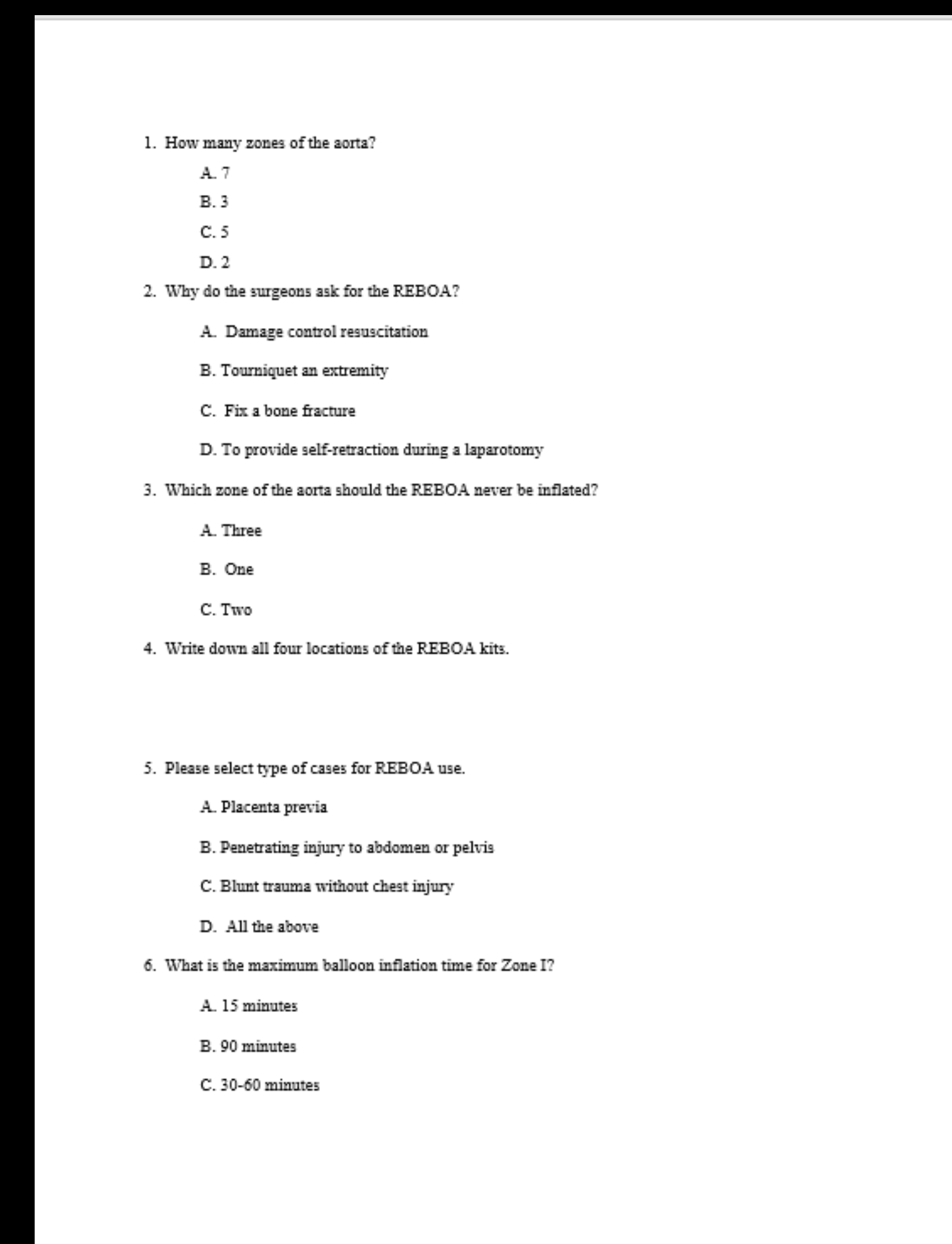
- Random survey was conducted to determine staffs' baseline knowledge
  - 66% did not know the reason for REBOA use
  - 73% did not know where OR location for REBOA kit
  - 90% did not know where additional REBOA kits are kept in the hospital.
- Learning objectives include
  - REBOA catheter and supplies
  - Knowledge of the procedure
  - Accurate documentation and assessment
  - Closed-loop communication

## Methods

- Five training sessions were conducted over two weeks to familiarize Operating Room staff with the REBOA kits.
- Sessions covered the location and contents of the kits, the purpose of REBOA, the procedure steps, safety precautions, and proper documentation of the insertion and inflation/deflation times.

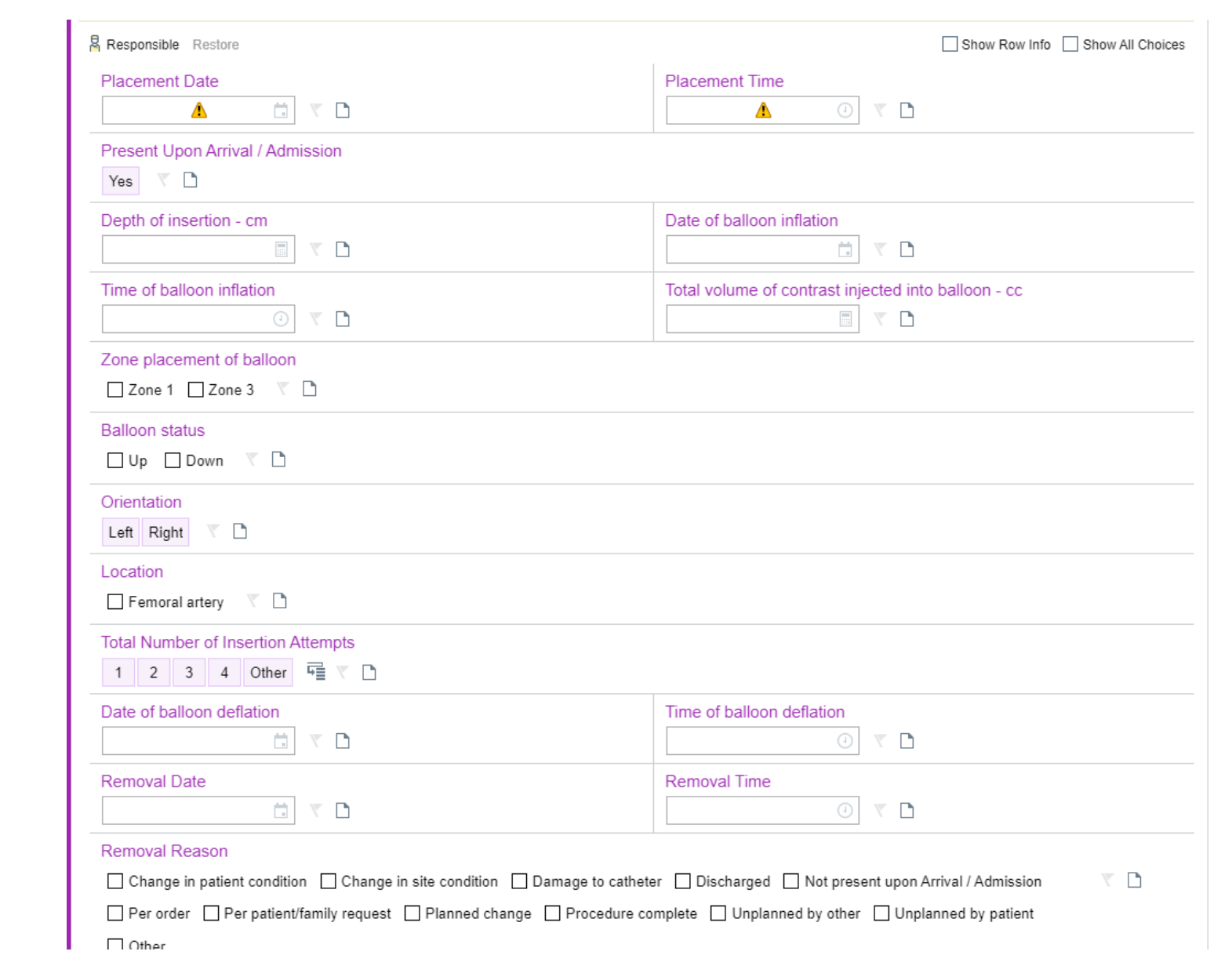


## Evaluation



## Results

- 100% success rate on staff stating the purpose, location, maximum balloon inflation times, procedural steps, and proper documentation.



## Significance/Conclusion

- Nurses in the OR need to understand the REBOA equipment, indications for REBOA placement, and proper charting.
- REBOA education continues every six months for new and current staff to increase understanding and comfort.
- Our trauma surgeons are now actively involved in staff education for REBOA.

## References

Cheema, F., Garcia, C., Rivera, A., & Chao, E. (2018). The use of resuscitative endovascular balloon occlusion of the aorta in treating hemorrhagic shock from severe trauma. *American Journal of Nursing*, 118(10), 22-25. Doi: 10.1097/01.NA.0000546376.73926.5b

Fojut, R. (2018, February). Endovascular trauma: training physician and staff. *Trauma System News - Trauma Leadership and Management*. Retrieved from www.trauma-news.com/2018/02/endovascular-trauma-training-physician-nursing-staff

Manzano-Nunez, R., Escobar-Vidarte, M.F., Orlas, C.P., Herrera-Escobar, J.P., Galvagno, S.M., Melendez, J.J., Ordonez, C.A. (2018). Resuscitative endovascular balloon occlusion of the aorta deployed by acute care surgeons in patients with morbidly adherent placenta: a feasible solution for two lives in peril. *World Journal of Emergency Surgery*, 13(44), 1-6. Doi: 10.1186/s13017-018-0205-2

Moore, L.I., Brenner, M., Kozar, R.A., Pasley, J., Wade, C.E., Baranik, M.S., Holcomb, J.B. (2015). Implementation of resuscitative endovascular balloon occlusion of the aorta as an alternative to resuscitative thoracotomy for noncompressible truncal hemorrhage. *Journal of Trauma and Acute Care Surgery*, 79(4), S23-S32. Doi: 10.1097/TA.0000000000000809

Miller, J. & Jones, A. (2014). A progressive format for annual disciplinary education featuring high-risk obstetric simulation. *Journal of Obstetrics, Gynecology, & Neonatal Nursing*, 43(1), 9-10. Doi: 10.1111/1552-6909.12373

O'Brien, B., Andrews, T., & Savage, E. (2018). Anticipatory vigilance: a ground theory study of minimizing risk with perioperative setting. *Journal of Clinical Nursing*, 27(2), 247-256. Doi: 10.1111/jocn.13881

Ordonez, C.A., Manzano-Nunez, R., Parra, M.W., Rasmussen, T.E., Nieto, A.J., Herrera-Escobar, J.P., Escobar-Vidarte, M.F. (2018). Prophylactic use of resuscitative endovascular balloon occlusion of the aorta in women with abnormal placenta: a systematic review, meta-analysis, and case series. *Journal of Trauma and Acute Care Surgery*, 84(5), 809-816. Doi: 10.1097/TA.0000000000001621

Rodgers, L. (2017). Trigger films and simulation educating nurse anesthesia students (Doctoral Dissertation). Retrieved from CINAHL database. (Accession No. 130383144)

Sambor, M. (2018). Resuscitative endovascular balloon occlusion of the aorta for hemorrhage control in trauma patients: an evidence-based review. *Journal of Trauma Nursing*, 25(1), 33-37. Doi: 10.1097/JTN.0000000000000339