

Obstetrical Emergencies in the Field: First Responder Training

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Introduction

In the San Antonio area, first responders undergo training on emergency deliveries in the field. Fewer than 10% of 400 emergency medical personnel engage in annual refresher courses at the Southwest Texas Regional Advisory Council (STRAC) conference¹ and most have not received targeted obstetrical instruction since their initial training and certification. First responders expressed a desire for further training in this area.

Unplanned births outside of the hospital are uncommon, but present a vulnerable situation for women and neonates. The most common complications that arise in the field are maternal hemorrhage and neonatal hypothermia, demanding rapid assessment and action from responders². In addition, lack of prenatal care increases neonatal morbidity and mortality³. Because women with poor prenatal care encompass a high percentage of patients who deliver outside of the hospital, first responders must be prepared for complications during delivery³.

The purpose of this project was to devise a supplemental training program for first responders to provide more hands-on experience for emergency deliveries with the goal of improving knowledge and confidence regarding obstetrical management.

Materials and Methods

- Senior medical students received simulation instructor training by experienced obstetric faculty
- Offered training to 25 San Antonio area fire stations
- Training sessions consisted of a previously developed 30-minute presentation⁴ on:
 - Normal vaginal delivery
 - Breech delivery
 - Umbilical cord prolapse
 - Shoulder dystocia
 - Maternal hemorrhage and bimanual massage
 - Practice questions
- Hands-on simulation experience utilizing the Gaumard™ obstetrical birth simulator
- Skills included normal vaginal birth, breech delivery, elevating presenting part in umbilical cord prolapse, and bimanual uterine massage for hemorrhage
- Participants completed pre- and post-surveys of confidence and knowledge

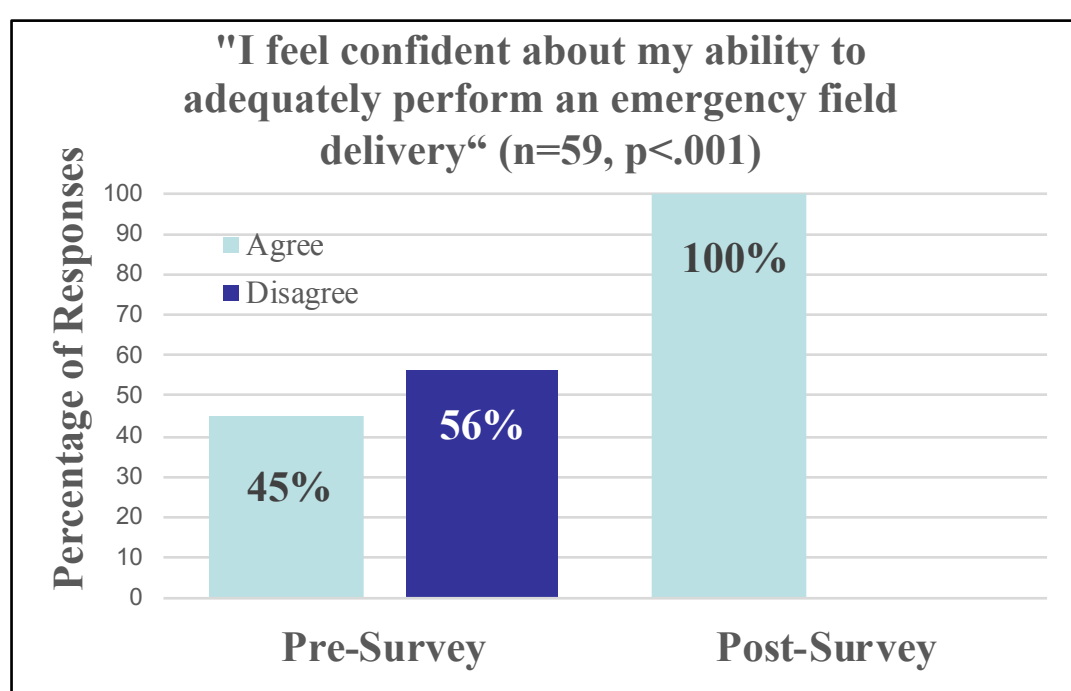
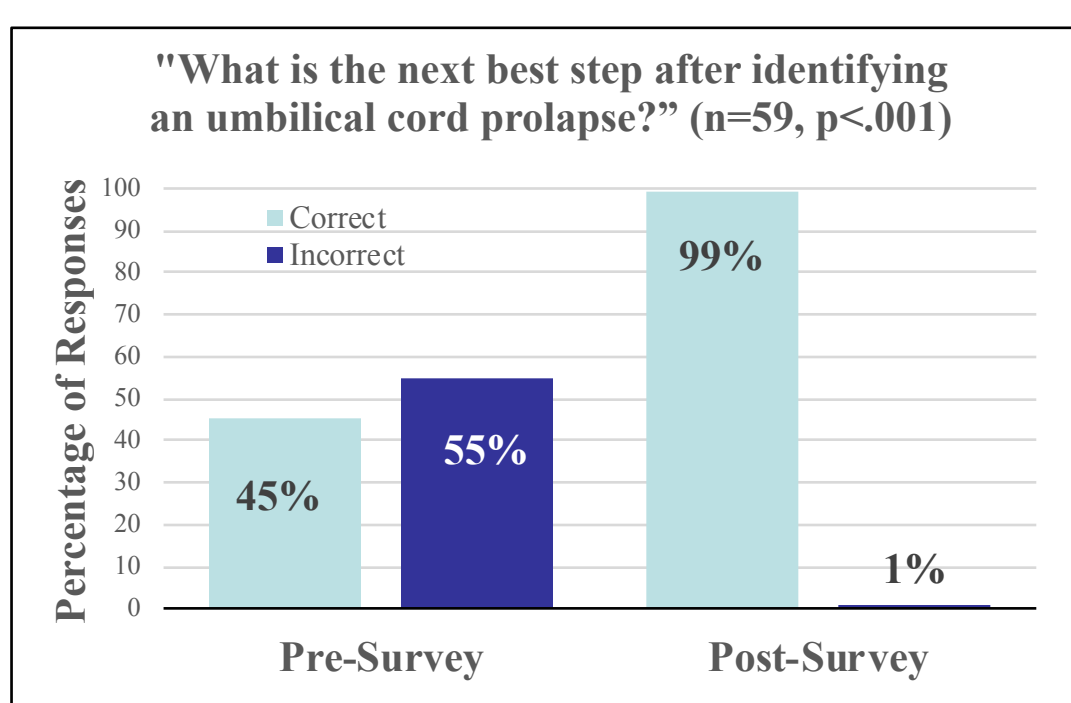
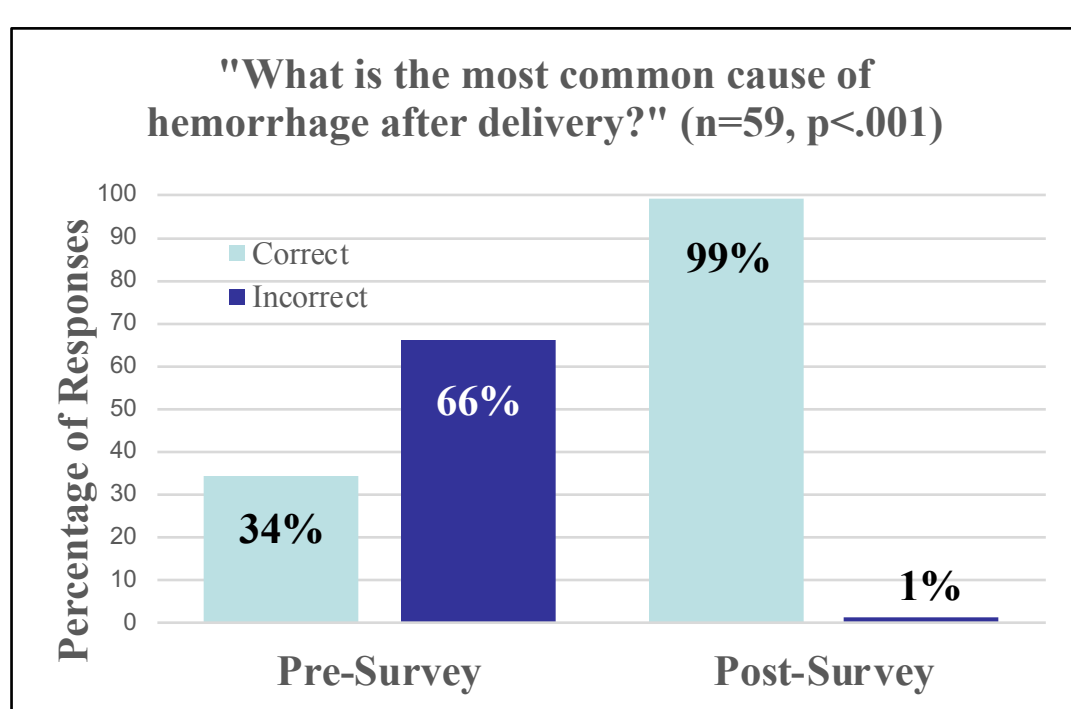
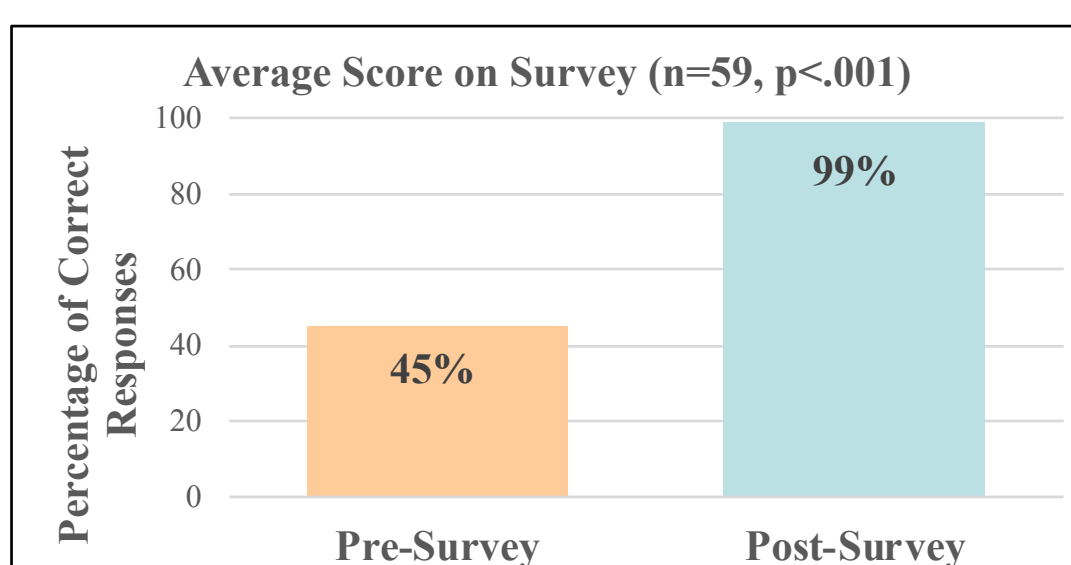


Article Extras

- Nicholas Stansbury, MD @stansburyobgyn
- EMS World Magazine-Training EMS for Emergency Deliveries in the Field Article
- <https://www.emsworld.com/article/1224403/training-ems-emergency-childbirth-deliveries>
- EMS World Magazine-Training EMS for Emergency Deliveries in the Field Podcast
- <https://soundcloud.com/user-688587176/emergency-deliveries-in-the-field>

Results

- 59 emergency medical personnel participated in 10 training sessions
- 59 (100%) surveys were completed



Conclusions

- The session yielded evidence of multifaceted improvement for participants.
- First responders improved in their responses to our survey questions regarding obstetrical management and self-reported confidence in their ability to perform in emergency field delivery scenarios.
- General feedback from the participants indicated that the hands-on simulation and practice questions were the most instrumental in their success upon completion of the course. The future direction of this project will be to develop a formal curriculum so that medical students can continue this educational partnership with San Antonio First Responders in years to come. Additionally, there is potential to incorporate medical students into the formal education at local fire stations in order to increase the number of first responders reached by the program.
- Although this project was created to establish a refresher course on obstetrical emergencies in the field, future efforts should be directed towards evaluating long-term retention of participants' knowledge and tracking patient outcomes from first responders receiving this supplemental training.

References

1. City of San Antonio. "Emergency Medical Services."
2. McLelland GE, Morgans AE, McKenna LG. Involvement of emergency medical services at unplanned births before arrival to hospital: a structured review. *Emergency Medicine Journal* 2014;31:345-350.
3. Moscovitz HC, Magriples U, Keissling M, Schriver JA. Care and outcome of out-of-hospital deliveries. *Academic Emergency Medicine* 2000;7(7):757-761.
4. Page-Ramsey SM, Pescador J, Riggs V, Stansbury N, Ali A, Murphy L, Bergen M, Nguyen M, Seeker B, Tips N, Yaghi A. EMS to Hospital: Managing Delivery Emergencies in the Field. South Texas Regional Advisory Council, Regional Emergency Healthcare Systems Conference, San Antonio, TX, May 2019