# High-Fidelity Simulations for First Responders: Addressing Health **Equity Through Enhanced Prehospital Obstetric & Neonatal Care** Catherine Enenbach, MSN, RN, C-EFM, Megan Falke, DNP, APRN, NNP-BC, Lucas Palacio, CCP, MS, Dan Stein, MS, & Linda Spittler MSN, RNC-OB, C-EFM

# Problem

Prehospital obstetrical or neonatal (OB/Neo) calls to emergency medical services (EMS) are more likely among patients in underserved communities and to result in an OB/Neo emergency. Paramedicine faculty have expressed the need for paramedic learners (PML) to increase confidence in these skills to promote health equity and improve maternal and neonatal health outcomes.

# Background

- High-fidelity simulation (HFS) emergency scenarios in prehospital settings improve EMS confidence, especially for high-acuity, low-occurrence events<sup>1</sup>.
- An interprofessional approach is beneficial to EMS learners to prepare for prehospital emergencies<sup>2</sup>.

#### Purpose

Engage PML in interprofessional OB/Neo simulations to support health equity and improved outcomes for maternal and newborn populations.



PML engage in a Neo emergency HFS.





PML engage in an OB/Neo HFS with Nursing and Paramedicine Faculty.

### Methods

- Objectives created for HFS using Zone of Confidence simulation framework
- HFS facilitated by Nursing and Paramedicine faculty covering:
  - Normal vaginal delivery
  - Breech presentation delivery
  - Neonatal resuscitation
  - Handoff communication
- Learners rotated through three 75-minute HFS with group debrief using Gaumard Scientific simulators
- Confidence assessed using a nine-item pre- and post-assessment computer-based survey, using Likert scale items and two open ended questions



Opportunity Zone of Simulation framework<sup>1</sup>

## Results

- 13 PML learners in paramedicine certification program
- 25% response rate (surveyed 2 months post -HFS)
- Some prior exposure to OB/Neo emergencies
- HFS endorsed as beneficial for practice and skill confidence
- Key takeaways:
  - 1. Debriefing highlighted as a valuable tool
  - 2. Highlighted importance of controlling the environment
  - 3. Therapeutic communication with clients





PML engage in an OB emergency HFS.

#### Implications

- Foster collaboration across nursing, neonatal nurse practitioners, and paramedicine programs
- Use collected data to evaluate program outcomes
- Expand HFS offerings tailored to PML training needs

#### Conclusion

Prehospital deliveries, though rare, carry higher risk for complications. Interprofessional simulation—co-led by nursing and paramedicine faculty—provided HFS training to build PML confidence. This immersive experience addressed key gaps in clinical readiness and research, promoted health equity, and aimed to improve maternal and neonatal outcomes in underserved communities.

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Reference list and survey available upon request: CatherineEnenbach@creighton.edu

