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Impact of Postpartum Simulation on Nurse Response & Confidence in Emergencies

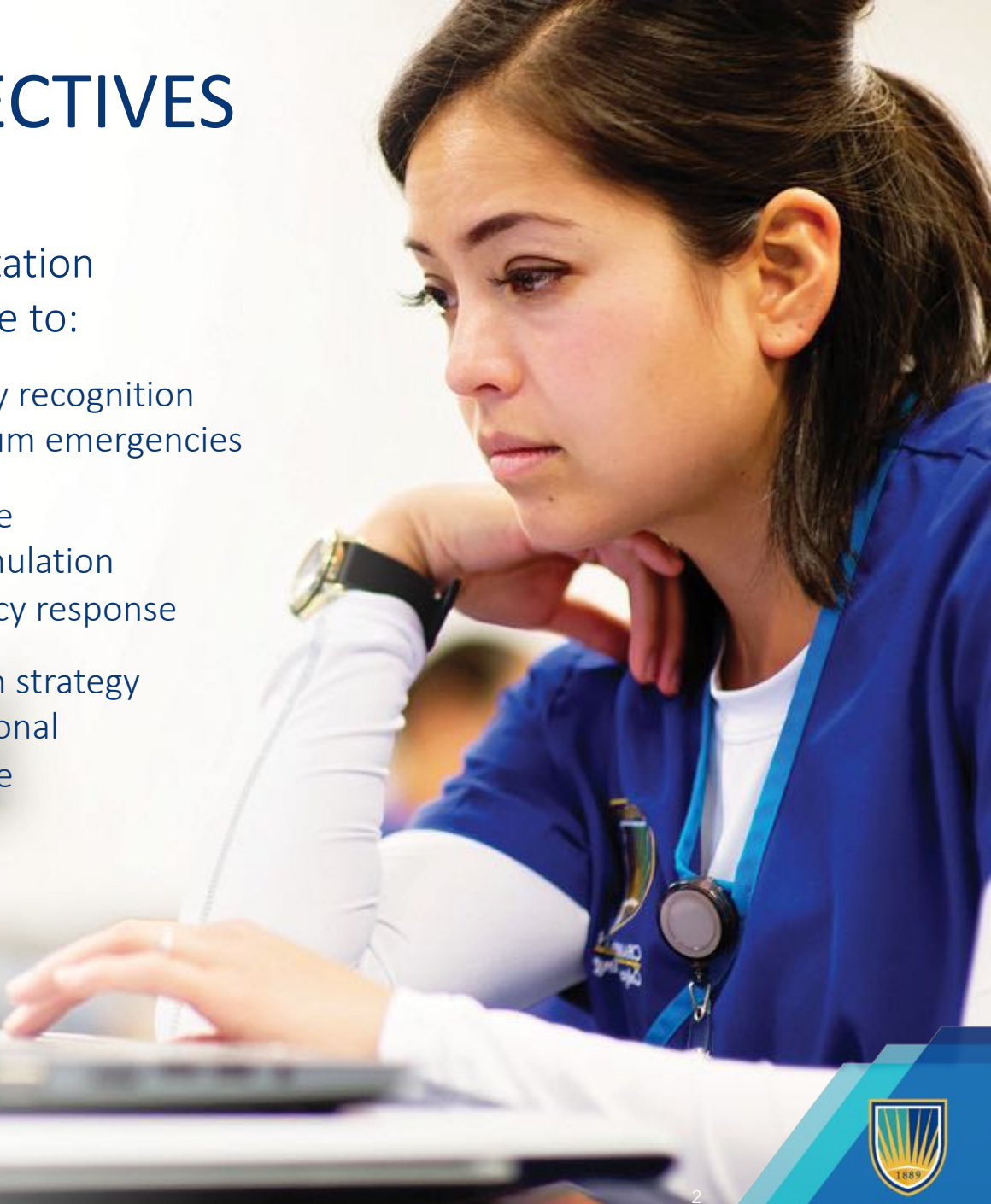
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LEARNING OBJECTIVES

- ▶ By the end of this presentation the participant will be able to:
 - Identify strategies for early recognition and response to postpartum emergencies
 - List reasons supporting the importance of running simulation drills to improve emergency response
 - Describe a communication strategy which enhances interpersonal communication to improve patient care within a multidisciplinary team



INTRODUCTION

- ▶ There is a need for enhanced recognition and response to postpartum complications, as maternal morbidity and mortality in the U.S. are on the rise, increasing from 7.2 deaths per 100,000 live births in 1987 to 17.2 deaths per 100,000 live births in 2015 (CDC, 2019).
- ▶ **Background:** In this quality improvement DNP project, perinatal nurses in a new hospital building completed in situ emergency simulated drills and utilized the Modified Maternal Early Warning Trigger (MMEWT) tool, to increase their confidence by practicing screening for and recognizing early warning signs of complications.



PROJECT DESIGN & METHODOLOGY

- ▶ **Nine-week simulation-based training**
- ▶ **Quantitative with validated pre-/post-test evaluation tool**
 - The Simulation Effectiveness Tool-Modified (SET-M)
(Leighton, Ravert, Mudra, & Macintosh, 2015)
- ▶ **Setting:** New City Hospital Building – Mother-infant Unit
- ▶ **Group:** Convenience sample of 24 perinatal registered nurses –
Bedside, charge and certified nurses with varying levels of experience
 - N=18 (75 percent) had previously been involved in a postpartum emergency
 - N=8 (33 percent) had five to ten years experience, being the largest demographic based upon experience level



PROJECT EVALUATION

- ▶ **Initial Planning:** CEU approval, scheduling with the Simulation Center Team, recruiting and scheduling of nurses, consents signed, compiling educational plan and collecting resources
- ▶ **Week One:** Education about planned simulations
- ▶ **Week Two to Four:** Two-hour simulations, one to four times weekly, with a pre-brief PowerPoint and debriefing, including review of the MMEWT tool
- ▶ **Week Six to Eight:** Twice weekly audits of MMEWT tool use and rounding on unit continued for formative assessment
- ▶ **Week Nine:** Summative evaluation using SET-M post-surveys to measure nurse confidence



PREBRIEF EMPHASIS: OBSTETRIC EMERGENCIES – THE 4 R'S

1. Readiness

- Unit resources

2. Recognition and Prevention

- Assess early for patient risk factors and signs of complications
- Use of the MMEWT tool
- Measurement of cumulative blood loss

3. Response

- Escalation of care and emergency management protocols

4. Reporting/Systems Learning

- Daily huddles and debriefing



(Council On Patient Safety in Women's Health Care, 2020).



RESULTS

- ▶ This quality improvement project incorporating in situ simulated team drills, resulted in statistically significant outcomes:
 - An impactful pre-brief session, which increased nurse confidence ($p=0.020$)
 - The project helped nurses feel better, able to respond to changes in their patient condition ($p=0.008$) and become empowered to make clinical decisions on behalf of their patient's health and safety ($p=0.006$)
 - Medication review was found to be beneficial in helping nurses better understand medication used in postpartum emergencies ($p=0.022$)



CONCLUSION

- ▶ This multidisciplinary simulation experience with integration of the MMEWT tool allowed nurses to feel empowered to care for their postpartum patients, make decisions based upon their needs and be better prepared to respond to complications.
- ▶ Maternal safety in a new hospital unit was promoted by integrating strategies from recommended safety bundles within the AIM program, particularly obstetric hemorrhage.



REFERENCES

- Centers for Disease Control and Prevention (CDC). (2019). *Pregnancy mortality surveillance system*. <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pregnancy-mortality-surveillance-system.htm>
- Council On Patient Safety in Women's Health Care. (2020). *Patient safety bundle: Obstetric hemorrhage*. <https://safehealthcareforeverywoman.org/aim/patient-safety-bundles/maternal-safety-bundles/obstetric-hemorrhage-patient-safety-bundle-2/>
- Leighton, K., Ravert, P., Mudra, V., & Macintosh, C. (2015). Using the Simulation Effectiveness Tool: Item modifications and reevaluation of psychometric properties. *Nursing Education Perspectives*, 36(5), 317-323. Doi: 10.5480/15-1671.

