Neonatal Resuscitation Simulation: Fostering a Culture of Safety and Improving Teamwork in the Delivery Room

Maria C. Gallup, MSN, RN, CCNS; Capt Sharina Galindo, MSN, RN; Caroline Kersten, MSN, RN; CPT Cherise Blair, BSN, RN; Janet H. Sims, MSN, RN; LTC Heather Delaney, MD, FAAP, CHSE
Brooke Army Medical Center

BACKGROUND

The Perinatal section staff at BAMC identified the vision to deliver high quality care as a standard of practice during neonatal resuscitation. The Neonatal Resuscitation Task Force (NRTF) was created and comprised of a multidisciplinary team of subject-matter experts in newborn resuscitation, quality improvement, and education. This team focused on performance improvement in the areas of documentation, organization of equipment, allocation of resources, team communication utilizing a scripted checklist and debriefing tool, targeted education, and competency through neonatal resuscitation simulation training.

METHODS

A group of influential stakeholders were identified and met bimonthly to discuss quality objectives over a period of 18 months. Standardized Kangaroo (Equipment) Boards were developed for quick access to emergency neonatal resuscitation supplies. Delivery Team and Newborn Resuscitation Worksheets were designed and continue to be updated as new areas for improvement are identified, three situational simulation scenarios using a low-fidelity manikin and a Simulation Training Assessment Tool were developed, and real-world resuscitation records were reviewed capturing ongoing gaps in performance in an effort to highlight targeted educational objectives.

RESULTS

After an initial simulation competency period over three months (Sep – Nov 2016) where 40 simulation exercises were conducted totaling 326 training hours, ongoing simulation exercises continue weekly now totaling over 400 hours of dedicated quality improvement simulation training. 1,978 real-world newborn deliveries have been audited (Nov 2016 – Nov 2017) and through targeted education and ongoing quality improvement simulation, completion of pre-briefing checklists during real-world deliveries has increased from 52% to 92%; delivery team role assignments have increased from 35% to 99%, and debriefing documentation has increased from 17% to 93% during neonatal resuscitation. 87 specific areas for improvement and feedback have been highlighted with a focus on patient safety issues and improved team performance.

CONCLUSION

The creation of a multidisciplinary team dedicated to newborn resuscitation quality improvement initiatives has resulted in improved team performance and identified ongoing patient safety issues. This has contributed to BAMC’s proactive culture of safety impacting perinatal health care practitioners’ confidence and competence. This task force encourages application of evidence-based clinical practices, transparent communication among disciplines, and effective and efficient healthcare education.

Disclaimer: The view(s) expressed herein are those of the author(s) and do not reflect the official policy or position of Brooke Army Medical Center, the U.S. Army Medical Department, the U.S. Army Office of the Surgeon General, the Department of the Air Force, the Department of the Army or the Department of Defense or the U.S. Government.