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NEONATAL RESUSCITATION IN THE NEONATAL INTENSIVE CARE UNIT

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Background: Newborns admitted to the neonatal intensive care unit (NICU) may experience acute deterioration due to respiratory failure, hypoxemia, bradycardia, or hemodynamic instability. Prompt recognition, systematic assessment, and coordinated intervention are essential to support safe and effective care.

Objective: To review key principles of neonatal resuscitation in the NICU in accordance with the Neonatal Resuscitation Program (NRP), 9th edition, with emphasis on early recognition of deterioration, respiratory support, structured troubleshooting, and team communication.

Educational approach: This educational presentation reviews a structured response to acute deterioration in critically ill newborns. It addresses rapid assessment and monitoring; evaluation of positive-pressure ventilation effectiveness; and the use of the DOPE mnemonic—displacement of the endotracheal tube, obstruction, pneumothorax, and equipment failure—to guide assessment of sudden deterioration in an intubated infant. The presentation also highlights escalation of respiratory and cardiovascular support, post-resuscitation stabilization, role clarity, and communication during emergencies. A clinical scenario is used to illustrate how a systematic approach can help organize assessment and guide timely, cause-directed intervention.

Conclusion: Applying NRP 9th-edition principles within NICU practice can support a consistent, structured approach to neonatal emergencies. Regular team training, clear communication, and post-event debriefing are important components of preparedness and continuous quality improvement. Clinical decisions should follow current guidelines and local institutional protocols.

Keywords: neonatal resuscitation; NRP; neonatal intensive care; ventilation; DOPE