

**Bridging the Gap Between
Nursing & Respiratory Therapy in
Critical Care through Simulation**

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What is Simulation?

Healthcare simulation is a range of activities that share a broad, similar purpose – to **improve the safety, effectiveness, and efficiency of healthcare**. This goal may be met by some combination of **role play, low and high tech tools, and a variety of settings from tabletop sessions to a realistic full mission environment**. The link that ties together all these activities is the act of imitating or representing some situation or process from the simple to the very complex.

Society for Simulation in Healthcare. Retrieved September 29, 2016, from <http://www.ssih.org/About-Simulation>

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Why Simulation?

- Assess and foster critical thinking
- Safe environment to learn from mistakes with no harm to patients
- Customizable learning experience
- Interdisciplinary simulation fosters collaboration and understanding

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Components of Simulation Experience

- Educational content
 - Assigned pre-work, ticket to the simulation
 - Simulation Pre-brief – facilitated discussion
 - Review of didactic content
 - Sharing of personal experience
 - Questions
- Simulated patient scenario
- Debriefing

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Situation

- NEJM PROSEVA trial demonstrating mortality benefit with proning
- Intensivist request
- Varying levels of experience of critical care RNs and RCPs
- Lack of protocol for manual proning

Guerin, C., Reignier, J., Richard, J.C., Beuret, P., Gacouin, A., Boulain, T., Mercier, E., Badet, M., et al. Prone positioning in severe acute respiratory distress syndrome. *The New England Journal of Medicine*, (368)23, June, 2013.

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Background

- Challenge of training 75 RNs and 60 RTs in a manual technique for proning
- Need for better understanding of ventilator modes for lung recruitment

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Simulation Event

- Multidisciplinary: CNS and Respiratory Clinical Leadership
- Developed simulation objectives with leadership
- Team of staff validators
 - 4 RNs, 4 RCPs
- Scenario development “Dry Runs”

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RN Learning Objectives

Patient with worsening oxygenation

- Demonstrate patient assessment and understanding of ventilator modes
- Recognize and anticipate hemodynamic changes
- ABG interpretation
- Describe appropriate sedation management
- Describe importance of patient positioning for lung recruitment
- Use of SBAR communication and collaboration

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RCP Learning Objectives

Patient with worsening oxygenation

- Demonstrate patient assessment and ventilator management
- Demonstrate set up of ventilator modalities
 - Pressure control
 - Bi-level ventilation
- ABG interpretation
- Use of SBAR communication and collaboration

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Pre-Brief Education

- ARDS definition – mild, moderate, severe
- Patient positioning for lung recruitment
 - Continuous Lateral Rotation Therapy and Proning
- Ventilator modes
- Sedation goals with varying ventilator modes
- Ventilator adjustments for oxygenation and ventilation



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Simulation Scenario

- Patient scenario with escalation through ventilator changes
- Hemodynamic changes
- Nursing and respiratory communication
- End of simulation
- Guided proning exercise
- All elements of proning practiced



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What is Debriefing?

“Conversation among two or more people to review a simulated event or activity. In the debriefing, participants explore and analyze their actions and thought processes, emotional states, and other information to improve performance in real situations.”

Simon R, Raemer DB, Rudolph JW. Debriefing Assessment for Simulation in Healthcare® – Rater Version. Cambridge, MA Center for Medical Simulation, 2009.



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Characteristics of a good debriefing

- Open-ended questions
- Positive reinforcement
- Facilitation of self-debriefing
- Focused on session objectives
- Promotes mutual respect and confidentiality
- Encourages reflection and discussion

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Debrief of Simulation

- 20-30 minute guided discussion on clinical elements of patient deterioration, ventilator changes, and hemodynamic changes
- Communication between disciplines
- Three main questions:
 - What went well?
 - What would you do differently?
 - What do you take away from this experience?

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Implementation Tools

- Complete protocol that describes step by step technique and team roles, from start to finish
- Policy/protocol available in hardcopy and on the unit website
- Videotape of proning technique

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Return on Investment

- Approximately 15 staff experienced with manual proning
- All staff experienced proning one time
- Improved communication and collaboration between nursing and respiratory therapy
- Monitoring patient outcomes

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Thank You!

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