



Topic Expert Group: Education and training of the multidisciplinary team working in neonatology

The role of simulation in education and training in neonatal care

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Target group

Infants, parents, and families

User group

Parents and families, healthcare professionals, neonatal units, hospitals, health services, and education providers

Statement of standard

All healthcare professionals develop and maintain competencies to provide safe and effective care through regular simulation-based learning.

Rationale

Simulation replaces or amplifies real experiences with guided experiences, often immersive in nature, that evoke or replicate substantial aspects of the real world in a fully interactive fashion. (1) Simulation is a superior method to educate healthcare providers in a broad range of clinical skills. Traditional strategies, such as the “see one, do one, teach one” approach result in uneven skill acquisition and unnecessary harm to patients. (2) The inclusion of simulation in training is valuable with respect to how personnel are educated, trained, and sustained in providing safe clinical care. (1,3–5)

Benefits

- Effective assessment tool for performance and competency of individual clinicians and teams (consensus)
- Effective adjunct to actual clinical practice (consensus)
- Powerful assessment tool for research and evaluation, concerning organisational practices (patient care protocols) and for the investigation of human factors (consensus)
- Efficient tool for changing the culture of healthcare to be more safety oriented, by training clinicians in practices that enact the desired “culture of safety” (consensus)
- Facilitated exchange and collaboration between experienced clinicians and healthcare administrators and experts on human factors, organisational behaviour, or institutional change. (1)



Components of the standard

| Component | Grading of evidence | Indicator of meeting the standard |
|---|--|--|
| For parents and family | | |
| 1. Parents and families are involved in development and delivery of simulation scenarios by healthcare professionals. | B (Moderate quality) | Training documentation |
| For healthcare professionals | | |
| 2. Simulation training is attended by all healthcare professionals. (3) | A (Moderate quality) B (High quality) | Training documentation |
| For neonatal unit | | |
| 3. Simulation is incorporated in the training programmes. (5) | A (Moderate quality) B (High quality) | Training documentation |
| For hospital | | |
| 4. Simulation training is ensured. | B (High quality) | Training documentation |
| 5. Facilities and equipment for simulation are provided. (5) | A (Moderate quality) B (Moderate quality) | Audit report |
| For health service | | |
| 6. Nationwide education programmes incorporating simulation techniques are established and regularly updated. | B (High quality) | Training documentation |
| For education provider | | |
| 7. Undergraduate and graduate programmes incorporate simulation in curricula. | B (High quality) | Training documentation |
| 8. Parents are given the opportunity to be engaged in the delivery of simulation scenarios. | B (Low quality) | Training documentation |



Where to go – further development of care

| Further development | Grading of evidence |
|---|----------------------------|
| For parents and family | |
| <ul style="list-style-type: none"> Contribute to the development of simulation scenarios. | B (Low quality) |
| For healthcare professionals | |
| N/A | |
| For neonatal unit | |
| N/A | |
| For hospital | |
| <ul style="list-style-type: none"> Integrate simulation as a routine part of the “every day” work environment. (5) | A (Moderate quality) |
| For health service | |
| N/A | |
| For education provider | |
| N/A | |

Getting started

Initial steps

For parents and family

- Invite parents to observe simulation scenarios.

For healthcare professionals

- Participate in simulation training.

For neonatal unit

- Develop simulation scenarios.

For hospital

- Support healthcare professionals to participate in simulation training.
- Provide access to simulation laboratories and equipment.

For education provider

- Provide access to simulation laboratories and equipment.
- Provide parents with the opportunity to develop simulation scenarios within curricula.

Source

- Gaba DM. The future vision of simulation in health care. Qual Saf Health Care. 2004 Oct;13 Suppl 1:i2-10.
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- Stephenson E, Salih Z, Cullen DL. Advanced Practice Nursing Simulation for Neonatal Skill Competency: A Pilot Study for Successful Continuing Education. J Contin Educ Nurs. 2015 Jul;46(7):322–5.



4. Dempsey E, Pammi M, Ryan AC, Barrington KJ. Standardised formal resuscitation training programmes for reducing mortality and morbidity in newborn infants. *Cochrane Database Syst Rev.* 2015 Sep 4;(9):CD009106.
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Lifecycle

3 years/next revision: 2021

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