

*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, healthcare students, 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 a useful tool to improve newborn safety, neonatal care professionals performance, and outcomes of neonatal care. (2) It is a superior method to educate healthcare providers, including neonatal nurses and midwives, in a broad range of clinical skills. (3,4) Traditional strategies, such as the “see one, do one, teach one” approach result in uneven skill acquisition and unnecessary harm to patients. (5) The inclusion of simulation in training by both classroom-based, digital or a hybrid approach is valuable with respect to how personnel are educated, trained, and sustained in providing safe clinical care. (1,6–8) Simulation-based team training in neonatal resuscitation has been shown to improve both team and technical performance (9,10)

*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
<b>For parents and family</b>		
1. Parents and families are involved in development, delivery and as recipients of simulation scenarios by healthcare professionals. (11)	B (Moderate quality)	Training documentation
<b>For healthcare professionals</b>		
2. Simulation training is attended by all healthcare professionals. (7)	A (Moderate quality) B (High quality)	Training documentation
<b>For neonatal unit</b>		
3. Repeated simulation sessions; digital, in-person or hybrid are incorporated in the training programmes. (8)	A (Moderate quality) B (High quality)	Training documentation
<b>For hospital</b>		
4. Simulation training is ensured.	B (High quality)	Training documentation
5. Facilities, equipment and instructors for simulation are provided. (8)	A (Moderate quality) B (Moderate quality)	Audit report
<b>For health service</b>		
6. Nationwide education programmes incorporating simulation techniques are established and regularly updated.	B (High quality)	Training documentation
<b>For education provider</b>		
7. Undergraduate (bachelor) and graduate (master) programmes incorporate simulation in curricula by a hybrid (blended) approach incorporating both classroom and digital methods. (12)	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"><li>Contribute to the development of simulation scenarios, both classroom and / or via digital means or a hybrid approach. (12)</li></ul>	B (Low quality)
For healthcare professionals	
N/A	
For neonatal unit	
N/A	
For hospital	
<ul style="list-style-type: none"><li>Integrate simulation as a routine part of the “every day” work environment. (8)</li></ul>	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, equipment and instructors.

For education provider

- Provide access to simulation laboratories and equipment.
- Involve parents during the development of simulation scenarios within curricula.

## Source

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### *Lifecycle*

3 years/next revision: 2025

### *Recommended citation*

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