Hybrid Healthcare

Clinical Simulation in Medical Education

https://hybridhealthcareproject.eu/

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Contents

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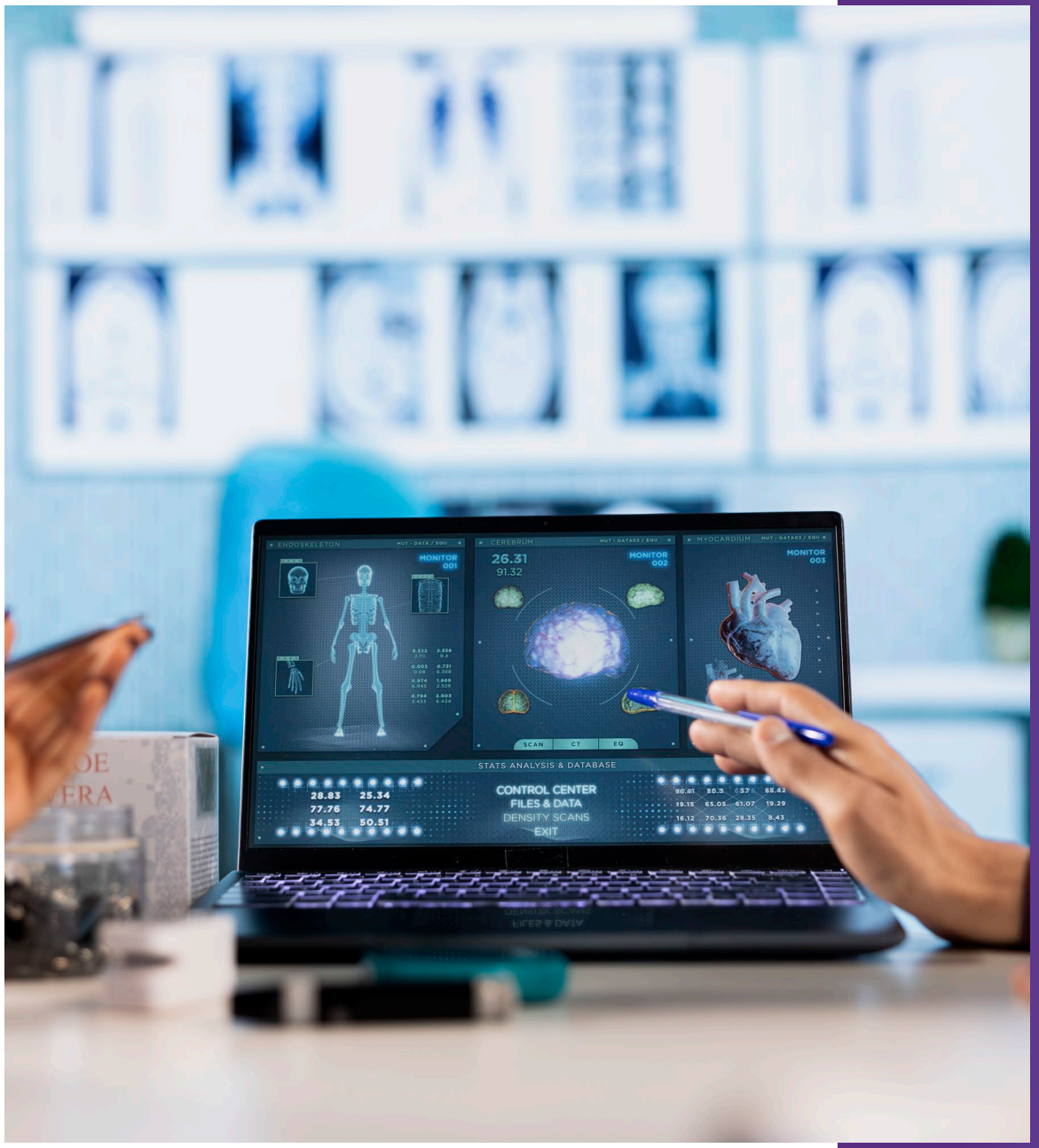
What this module is about



Purpose

This OER supports medical educators in integrating clinical simulation into healthcare education through practical, structured, and learner-centred simulation activities.

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Why we are doing this

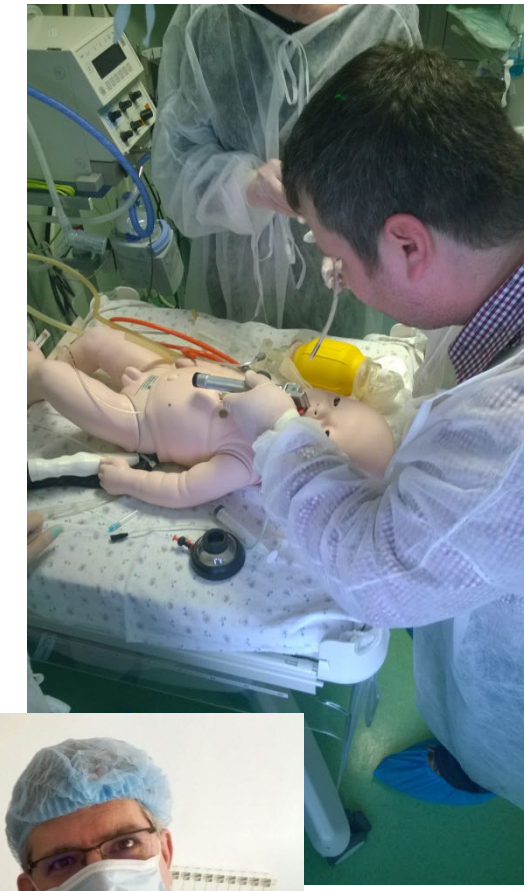
Bridges the gap between theory and clinical practice through realistic simulation experiences.

Improves students' clinical confidence before working with real patients.

Provides a safe environment to practice procedures, teamwork, and decision-making without patient risk.

Enhances patient safety by reducing errors and strengthening clinical competence.

Supports modern, competency-based medical education aligned with current healthcare needs.



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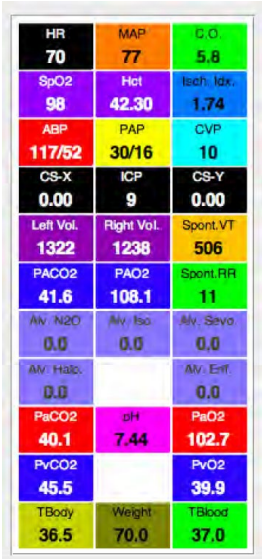
What this means for you

You will leave able to:

- Use 1–3 digital tools in a 10-minute lecture segment;
- Follow a simple structure (problem → demo → action);
- Apply tools to real or realistic clinical/technical data;
- Reflect on safe and effective use of digital tools.

Why start small

- Fits into busy lecture schedules;
- Reduces cognitive load for both lecturer and students;
- Builds confidence before using more complex tools;
- Encourages consistent use through simple routines.



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Who this is for and what they need

Audience & Needs

For:

- Medical educators and clinical trainers
- Healthcare educators in medicine, nursing and allied health
- Simulation centre instructors
- Curriculum developers in health professions education

Needs

- Integrate simulation into teaching and assessment
- Design realistic clinical scenarios
- Facilitate effective debriefing sessions
- Improve learners' clinical competence and patient safety

A one-minute story

A clinical instructor notices that students know the theory but hesitate during emergency scenarios. After introducing simulation-based training, students repeatedly practice critical situations in a safe environment.
Their confidence, teamwork, and clinical decision-making improve before entering real clinical placements.

03

Implementation Process

What you will be able to do

01 Guide students through a short digital tool activity step-by-step

02 Use a simple structure (problem → demo → task) to support learning

03 Support students with different levels of digital skills during the activity

04 Reflect on what worked and adjust the approach for future sessions

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Why this approach works (the evidence)

What we see in practice

Students engage more when they actively use tools during the session;

Short, guided tasks help reduce confusion when learning new tools;

Step-by-step support improves confidence, especially for beginners.

What the literature and case studies show

Research on the effective use of digital tools in education shows that experiential learning enables students to act as problem-solvers in real-world tasks, building confidence. When digital tools are combined with collaboration and interdisciplinary projects, these approaches support the development of technical proficiency, ethical awareness, and clinical readiness.

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Experiential and Practice-Based Learning

- Simulation-to-practice learning improves skill transfer
  Students practice with digital tools in controlled settings before applying them in real-world contexts.

Challenges & Recommendations

- High costs for equipment and facilities
  Maintenance and technical support needs
- Resistance to curricular change
  Need for national accreditation standards
- Reflecting on successes and challenges helps improve future performance and practical application.

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Sources
Patocka, C., Pandya, A., Brennan, E., Lacroix, L., Anderson, I., Ganshorn, H., & Hall, A. K. (2024). The Impact of Just-in-Time Simulation Training for Healthcare Professionals on Learning and Performance Outcomes: A Systematic Review. Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare, 19(1S), S32–S40. https://journals.lww.com/simulationinhealthcare/toc/2024/01001

04

How this session runs

Clinical Simulation Workflow

Explain → Do → Reflect

A short based clinical scenario → practice one simulation task → guide students through the interaction → reflect on learning

Explain:
Introduce the simulation environment and learning goals
Demonstrate emergency or procedural simulation scenarios
Guide students through practical simulation exercises

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How the session runs: Explain → Do → Reflect

Simulation Activities

Do:
Explore simulated clinical emergencies
Practice diagnostic and procedural skills
Receive structured debriefing and feedback

What if..
Some students struggle with simulation tools?
→ Provide guidance and repeat practice sessions

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How the session runs: Explain → Do → Reflect

Lessons Learned

Reflect:
Start small with pilot modules
Train faculty for effective adoption
Embed simulation into curriculum

Guide:
Some students struggle with clinical simulation?
→ Use debriefing to reinforce learning

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