

Performance-Based Assessment/ Simulation

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Performance-Based Assessment/ Simulation

- overview of where simulations can be used to assess (and educate) health professionals
- outline promises and challenges
 - Development
 - Types of simulation
 - Research/ Psychometrics



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What is Simulation?

A “technique” NOT a “technology”

- For interactive and often “immersive” activities that re-create experiences of a real-world environment
 - To amplify or replace actual experiences

Simulation is very broad

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Approximations of actual situations can help individuals deal with real world tasks



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Why is Simulation Important?

- Assessment drives learning
- Can be efficient
 - large numbers of 'examinees'
- Provides clinical exposure
 - Clinical skills assessment
- Practice-based learning
 - Tailored feedback
- Quickly identify curricular problems
- Patient safety



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Ultimate Goal

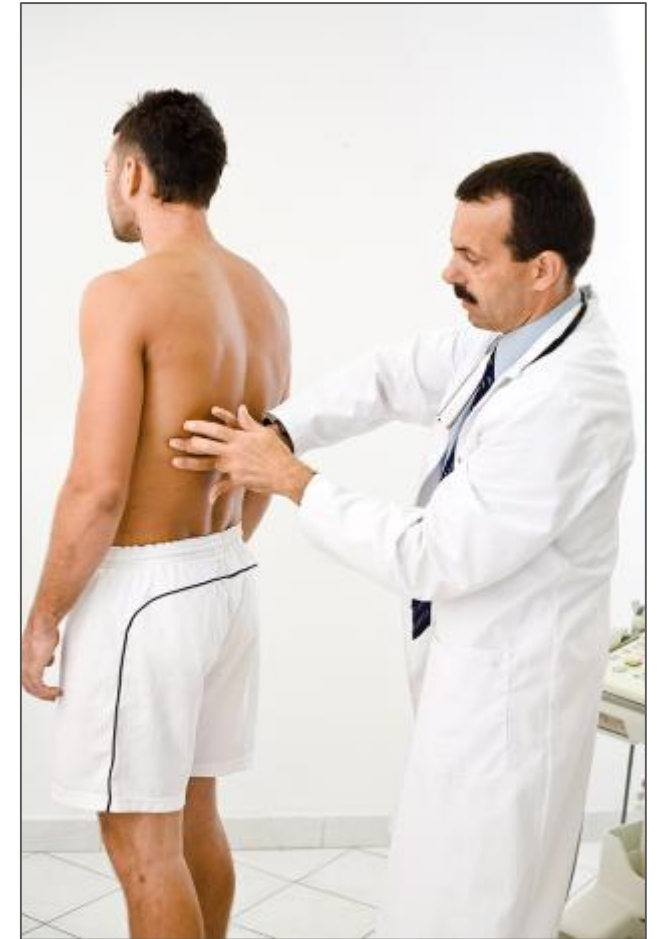
- Improved patient outcomes linked directly to educational events (e.g., simulation-based training) are the ultimate goal of medical education research...



McGaghie WC, Issenberg SB, Cohen ER, et al. Does simulation-based medical education with deliberate practice yield better results than traditional clinical education? A meta-analytical comparative review of the evidence. *Academic Medicine* 2011; 86: 706-711.

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- United States Medical Licensing Examination (USMLE™)
 - Step 2 CS (ECFMG Clinical Skills Assessment)
 - Step 3
- National Board of Osteopathic Medical Examiners
- Medical Council of Canada
- General Medical Council (UK)
 - Professional Linguistics and Assessment Board
- Various specialty board examinations
 - American Board of Emergency Medicine
 - American Board of Internal Medicine
 - American Board of Anesthesiology
- Royal College of Physicians and Surgeons of Canada



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Assessment Challenges

- Measurement Issues
 - Validity, reliability
 - Scoring
 - Competency standards
- Cost
- Logistics/ feasibility
- Competencies to measure?
- Integration



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Future Directions

- Assessment of knowledge, skills and abilities
 - Teamwork
- Use of advanced technology to increase fidelity
 - Virtual reality
 - Haptic systems
- Electronic portfolios
- Combining simulation modalities
- Advanced scoring systems
 - Patient outcomes
- Additional validation studies



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Things to Think About

- Validity of simulation-based assessment?
 - Outcome measures
 - New assessments
 - Timing of assessments
 - Individual versus team
- Cost/benefit of regulatory or accreditation processes that employ simulations?
 - Value to the profession/society

