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
Ultimate Goal

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

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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