Video-aided simulation-based training to improve interdisciplinary interaction and clinical performance of emergency care competencies

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Simulation benefits...

“Simulation is a powerful training tool because it allows the trainer to systematically control the schedule of practice, presentation of feedback, and introduction (or suppression) of environmental distractions within a safe, controlled learning environment.”

- Long history of different types of simulation in AT education
  - CPR training
  - Oral/Practical examinations


Video benefits...

“The use of video analysis represents an effective pedagogical method to educate athletic training students.”

- 3 benefits
  - Evaluation of student proficiency
  - Allowing student input into their clinical performance
  - Developing archival data of student performance for re-evaluation and documentation of learning over time
HSU simulation equipment

• Resusci Anne Patient Simulator (Laerdal®)
  • Remote tablet managed
  • Vital signs
    • Chest rise (rate)
    • Carotid/radial pulses (rate)
    • Lung sounds
    • Blood pressure
  • Sounds (moan, cough, vomiting, speech)
  • Cost -- $11,300 (funded through campus academic grant)

• Also video live model practical skills exams (lab)

SimPad photo source: http://www.laerdal.com/us/SimPad
HSU simulation equipment

• Video/Audio
  • Swann 4-camera security system with DVR ($350)
  • GoPro camera ($400)
  • Microphones ($120)

• Moulage kit ($300)
Patient presentation

Trying to improve 2 things:

- Presentation to preceptors
- Handoff to other personnel (EMS, MD, another AT, etc.)

Goal for provider(s):

- I know what’s wrong
- I know what to do
- I know what to worry about
- I see what you see

<table>
<thead>
<tr>
<th>IMIST-AMBO</th>
<th>Goal for provider(s):</th>
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<tbody>
<tr>
<td>I – Identification</td>
<td>I know what’s wrong</td>
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<tr>
<td>M – Mechanism of injury</td>
<td>I know what to do</td>
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<tr>
<td>I – (medical) Impact</td>
<td>I know what to worry about</td>
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<td>S – Signs/vital signs</td>
<td>I see what you see</td>
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<td>T – Treatment/Trends/response to</td>
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<td>A – Allergies</td>
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<td>M – Medications</td>
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<td>B – Background History</td>
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<td>O – Other relevant info</td>
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Things we’ve learned...

• Students aren’t as competent as believed with basic skills
• NOT comfortable with uncertainty
• Students report simulator provides more realism/interaction
• Moulage application aids realism
• Prebriefing, including familiarization with manikin is critical
• Use of a structured, handoff format helps interaction with other providers