Overview of Course

1. Demonstrate advanced knowledge of health assessment

2. Apply concepts of clinical decision making and diagnostic reasoning

3. Generate complete for complete, focused, and specialized clinical examinations
   - health history
   - physical exam
   - differential diagnoses
Overview of Course

- Background of Students
  - Mean age, 30 years (range 24-58 years)
  - Nursing experience (range 1 year-30 years)
  - Technology literacy and illiteracy
- Course approach offered online and hybrid
  - 30 mandatory lab hours
  - Hybrid recommends students attend every other week for 2 hours
Background

Advances in graduate nursing education:

– Greater access through online delivery
– Laboratory implementation of high fidelity simulators
– Increased faculty and student engagement through innovative technologies
Challenges

Faculty must provide opportunities online for their students to prepare students for the valuable time spent face-to-face in resource-intensive clinical laboratories. The DCE helped:

– Effectively apply advanced health assessment skills and techniques

– Further develop diagnostic reasoning and skills
• Turn Challenges into Opportunities
Opportunities

Numerous advances have been made in graduate nursing education curriculums across the United States including:

– Greater access through online delivery
– Laboratory implementation of high fidelity simulators
– Increased faculty and student engagement through innovative technologies
Course Requirements

• Required Texts:

• Required Software:
  – Create account by visiting
  https://app.app.shadowhealth.com/
Goals for the DCE

- Ability for students to practice on patient during times convenient for students
- Transparency of student actions and skills
- Improve flow of history taking
- Communication skills
- Review of systems
- Differential Diagnosis
Integration Method

Assigned four different modules

– Begin with History
  • SOAP
– HEENT
– GI
– MS

Later courses will use and reuse modules
History
Module 1

Learning Objectives
- Investigate Tina Jones' comprehensive health history
- Complete focus notes on Tina Jones' chief complaint and health history
- Address questions concerning advanced clinical concepts related to the module
- Write self-reflections after completing exam
- Review and submit results to instructor for feedback

Conduct a History exam by evaluating:
- Chief complaint (CC)
- History of Present Illness (HPI)
- Medications (Meds)
- Allergies (ALL)
- Past Medical History (PMH)
- Surgical History (Surg)
- Immunizations (Immm)
- Social History (SH)
- Safety
- Family Culture
- Spiritual History
- Review of Systems (ROS)
Learning Objectives

- Investigate Tina Jones' comprehensive health history
- Complete focus notes on Tina Jones' chief complaint and health history
- Address questions concerning advanced clinical concepts related to the module
- Write self-reflections after completing exam
- Review and submit results to instructor for feedback
HEENT
Module 2

Learning Objectives
- Perform a complete HEENT exam of Tina Jones
- Complete focus notes on Tina Jones' HEENT exam
- Address questions concerning advanced clinical concepts related to the module
- Write self-reflections after completing exam
- Review and submit results to instructor for feedback

Conduct a HEENT exam by evaluating:

- Head
- Neck
- Eyes
- Ears
- Nose
- Throat
- Lymph nodes

[Click here to type questions to Tina.]
Learning Objectives

- Perform a complete HEENT exam of Tina Jones
- Complete focus notes on Tina Jones' HEENT exam
- Address questions concerning advanced clinical concepts related to the module
- Write self-reflections after completing exam
- Review and submit results to instructor for feedback
Learning Objectives

- Perform a complete gastrointestinal exam.
- Complete focus notes on Tina Jones’ gastrointestinal exam.
- Address questions concerning advanced clinical concepts related to the module.
- Write self-reflections after completing exam.
- Review and submit results to instructor for feedback.

Conduct a GI exam by evaluating:

- Abdomen
- Lower back
Learning Objectives

- Perform a complete gastrointestinal exam
- Complete focus notes on Tina Jones' gastrointestinal exam
- Address questions concerning advanced clinical concepts related to the module
- Write self-reflections after completing exam
- Review and submit results to instructor for feedback
Musculoskeletal
Module 6

Learning Objectives
- Perform a complete musculoskeletal exam
- Complete focus notes on Tina Jones’ musculoskeletal exam
- Address questions concerning advanced clinical concepts related to the module
- Write self-reflections after completing exam
- Review and submit results to instructor for feedback

Conduct a Musculoskeletal exam by evaluating:
- Strength
- Range of Motion (ROM)
- Joints

Diana: “Select strength tests for Tina by clicking on the body map. As the tests proceed, example instructions will appear at the bottom of the screen, so you won’t need to type instructions to Tina.”
Tina: “Ok.”
While I push lightly on your shins, I want you to straighten your legs out all the way.
Learning Objectives

- Perform a complete musculoskeletal exam
- Complete focus notes on Tina Jones' musculoskeletal exam
- Address questions concerning advanced clinical concepts related to the module
- Write self-reflections after completing exam
- Review and submit results to instructor for feedback
Assessing Students of DCE

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<th>Available from</th>
<th>Until</th>
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<td>Jun 2 at 11:30pm</td>
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<td>Completion of History</td>
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<td>Completion of Critical Application questions</td>
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<td>Examination of Tina</td>
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<td>Accuracy of Exam</td>
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<td>Self-reflection</td>
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Total Points: 15
Student Reception of DCE

- Positive
- Would like to use it in other classes
- No complaints verbalized about price
- Tremendous IT support
  - Weekends
  - Nights
Faculty Reflection using the DCE

• Using it again this summer

• Great reflections from students
  – Ex. “Tina helps pull the content of the course together. I am able to read, listen to lecture, practice Tina, and then practice in lab.”
  – “I feel ready for my nurse practitioner clinical.”

• Possible Improvement to DCE
Results

– Student learning styles* were assessed prior to course
• Visual 70%
• Auditory 30%
• Kinesthetic 50%

*Percentages exceed 100% r/t multiple learning styles
Results

– Feedback from students prior to DCE was positive, with some concerns related to lack of experience and new technology.

– Themes obtained post-DCE:
  1. Comprehensive understanding of content
  2. Practice in questioning and collecting history
  3. Strong feedback with documentation
Results

– No significant relationships exist between learning styles and student performance with the History, HEENT, or GI DCE modules.

– Faculty perception was significantly improved with use of the DCE.
Opportunities for Future DCE

• Multisite study with graduate online programs
  – Explore best practices

• Evaluation of Diagnostic reasoning
  – (pre-post DCE)

• Exploring use of different patients
Modifications for 2\textsuperscript{nd} DCE Integration

- Using additional module
- Having students dig deeper
  - History, questions
  - Assessment
  - Plans
- Student assessment of DCE changes
Comments or Questions?