Using Competency Testing to Close the Practice Gap with Undergraduate Nursing Students

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Objectives

- The learner will define the concept and use of competency testing in the form of objective structured clinical examinations (OSCE).
- The learner will be able to evaluate reliable competency testing specific to curricular outcomes.
- The learner will evaluate the usefulness of an OSCE in facilitating transition to practice for new nursing graduates.
- The learner will design a competency evaluation that can be integrated into curricula.
Academic - Practice Gap
Competency Testing

- What is competency testing?
  - Assessment of competence should use more than one indicator.
  - Limited evidence about the most effective or reliable indicators to use.
    - Direct clinical observation, portfolios, OSCE’s and virtual reality.

- Driving forces
  - Commission on Collegiate Nursing Education Task Force (CCNE)
  - National Council State Boards of Nursing (NCSBN)
  - Northeast Ohio Action Coalition (NEOAC)
Objective Structured Clinical Examination

- **Objective**- all students assessed using exactly the same stations with the same critical elements

- **Structured**- single objective - carefully structured to integrate all elements of the curriculum and balance between psychomotor skill, soft skills and clinical judgement.

- **Clinical Examination**-- students demonstrate application of knowledge skills and attitudes within the context of a simulated clinical setting.
Research Questions

- Evaluate relationship between successful completion of each station and first time NCLEX passage
- Evaluate relationship between ATI pharmacology proctored assessment performance and first time NCLEX passage
Conceptual Framework

Test

Deliberate Practice

Adjust

Feedback

http://www.pitchvision.com/what-goes-into-10000-hours-of-practice
OHIO Nurse Competency Model

- Patient-Centered Care
- Leadership & Professionalism
- Systems-Based Practice
- Evidence-Based Practice
- Communication Team Work & Collaboration
- Informatics & Technology
- Quality Improvement & Safety

*Based on QSEN and NOF Competencies
Design

- Objectives
  - Evaluating students’ preparedness for transition to practice
  - Evaluation curricular change
  - Identifying opportunities for teaching and learning
  - Evaluating key program outcomes [authentic measure]

- Principles Guiding Design
  - Deliberate Practice
  - BSN Essentials
  - QSEN Competencies
  - Ohio Action Coalition Competency Model
  - Feedback from Practice Partners
Design

- Station alignment with level/program outcomes/practice partners feedback
  - Quality and safety
  - Unfolding case study
  - Assessment
  - Medication administration
  - Delegation
- Escalation of difficulty and stakes throughout curriculum
- Scenario and rubric design
- Panopto video recording
Mrs. Brown is a 55 year old female that was admitted four hours ago with epigastric pain. She had been experiencing fatigue and indigestion on and off for the past three days. Mrs. Brown’s past medical history includes HTN, hyperlipidemia and DM. She has no known allergies. Her admission assessment indicated Mrs. Brown was pink, warm and dry, capillary refill was brisk, all peripheral pulses were 2+, no edema noted, lung sounds were clear and equal bilaterally, abdomen was soft non-tender upon palpation and bowel sounds were active and present in all four quadrants. Upon admission her vitals were:

- BP 138/85
- HR 82
- Respiratory rate 20
- SPO₂ 98% on RA
- Monitor pattern

After receiving report from the off-going RN you go to assess Mrs. Brown. She states she has pain in the epigastric area that she describes as a “burning fullness” that radiates to her back and neck. She also states she feels a little short of breath. Upon physical assessment Mrs. Brown is diaphoretic, pale in color, capillary refill is > 3 seconds, peripheral pulses are 1+, lung sounds are clear and equal bilaterally, her abdomen is soft, non-tender upon palpation and her bowel sounds are active and present in all four quadrants. When asked about any other pain or symptoms Mrs. Brown states she feel nauseated. Her vitals are:

- BP 165/95
- HR 100
- Respiratory rate 24
- SPO₂ 94% on RA
- Accucheck is 105.
- Monitor pattern

Admission labs included a CBC, BMP and liver enzymes. All findings were normal except the following:

- Hgb 10.9
- K⁺ 3.3
- Glucose 112

**Question 1.** What is happening with Mrs. Brown?

**Question 2.** What is your priority nursing diagnosis for Mrs. Brown?

**Question 3.** What would you include in your report to the provider (utilize the SBAR format)

**Question 4.** List the orders anticipated in order of priority to complete
## Quality and Safety

### Ursuline General Hospital

#### All Active Orders

**Allergies:** NKDA

<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME</th>
<th>ORDERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/1</td>
<td>0900</td>
<td>1000 mL of D5W at 100 mL/hr</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ampicillin 1 g IVPB q 6 hrs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Toradol 30 mg IV now</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Simple Face Mask 5 in</td>
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<tr>
<td></td>
<td></td>
<td>Keep HOB flat</td>
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</table>

**Gonzales, Carmena**  
**DOB:** 8/1/58  
**MR#:** 28346-36
Delegation Station
Assessment
# Focused Assessment

## Cardiovascular Focused Assessment Rubric

<table>
<thead>
<tr>
<th>Essential components</th>
<th>Demonstrated (check mark)</th>
<th>Points for doing</th>
<th>Points for documenting</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient Centered Care</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Introduces self to patient</td>
<td>0.1</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>• Patient identifiers x2</td>
<td>0.1</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>• Explains procedure</td>
<td>0.1</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>• Respects patients privacy/dignity</td>
<td>0.1</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>• Washes hands prior to procedure</td>
<td>0.1</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Subject Information</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pain Assessment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Rating (0-10)</td>
<td>0.15</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>• Location</td>
<td>0.15</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>• Quality</td>
<td>0.10</td>
<td>0.10</td>
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## Inspection: Must verbalize!

<p>| | | | |</p>
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<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>• Jugular vein distention</td>
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<td>0.25</td>
<td>0.25</td>
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<tr>
<td>• Chest Integrity: scars, incisions, hematomas</td>
<td></td>
<td>0.20</td>
<td>0.20</td>
</tr>
<tr>
<td>• Peripheral edema: pedal bilaterally</td>
<td></td>
<td>0.25</td>
<td>0.25</td>
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## Palpation

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<tr>
<th></th>
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<tbody>
<tr>
<td>• Radial pulses bilaterally</td>
<td></td>
<td>0.25</td>
<td>0.25</td>
</tr>
<tr>
<td>• Dorsalis pedis pulses bilaterally</td>
<td></td>
<td>0.25</td>
<td>0.25</td>
</tr>
<tr>
<td>• Capillary refill</td>
<td></td>
<td>0.15</td>
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## Auscultation

(Cardiac assessment landmarks)

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<tbody>
<tr>
<td>• Aortic</td>
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<td>0.25</td>
<td>0.25</td>
</tr>
<tr>
<td>• Pulmonic</td>
<td></td>
<td>0.25</td>
<td>0.25</td>
</tr>
<tr>
<td>• Tricuspid</td>
<td></td>
<td>0.25</td>
<td>0.25</td>
</tr>
<tr>
<td>• Mitral (Bicuspid)</td>
<td></td>
<td>0.25</td>
<td>0.25</td>
</tr>
<tr>
<td>• Point of Maximum Impulse</td>
<td></td>
<td>0.25</td>
<td>0.25</td>
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</tbody>
</table>
Medication Administration

IV Push

NG Tube
### Norepinephrine Continuous Infusion

*Introduces self to patient

*Identifies the patient utilizing 2 identifiers as mandated by The Joint Commission (Name and DOB or Medical Record Number).
  - Verifies information with patient identification bracelet and MAR

*Verbalizes allergies

*Completes required pre-assessments
  - BP

*Performs hand hygiene

*Prepares medication using aseptic technique
  * Selects correct drug from storage or unit-dose drawer and compares drug name with MAR = **Med check #1**
  * Before dosing medication, compares the entire medication label with MAR, noting drug dosage/concentration = **Med check #2**
  * Calculates correct gtt rate
  * Selects the correct IV tubing (primary tubing)
  * Spikes bag maintaining sterility of both ends of the IV tubing
  * Primes tubing removing all air

*Explains the procedure to the patient

*Identifies the medication being given and its indication
  * **Educates the patient about the medication**

*Assessment of IV site
  * Chooses appropriate IV site (**central line**)  
  * Cleans injection port with approved antiseptic swab
  * Aspirates port for blood return
  * Flushes port with 10 mL of normal saline

*Medication Administration
  * Compares label of each prepared medication with MAR at patient bedside = **Med check #3**
  * Loads tubing into IV pump and programs pump correctly
  * Cleans saline lock with approved antiseptic swab and attaches tubing
  * Ensures all clamps are unclamped
  * Starts IV infusion
  * Discards clean gloves and performs hand hygiene

*Documents medication administration on MAR
Methods

- Exploratory cross sectional study
- Sample: 75 BSN students
- Chi Square Test of Association
Results

- Significant relationships with first time NCLEX passage
  - Quality and Safety (1, N=75, = 4.06, p<.05)
  - Unfolding Case Study (1, N=75, = 4.06 p<.05)
  - ATI Proctored Pharmacology Assessment (1, N=75, = 6.53, p<.05)
Limitations & Implications for Future

- Limitations
  - Sample size
  - Instrument reliability and validity
  - Longitudinal follow up

- Implications for Future
  - Instrument development
  - Practice partnerships
  - Station design
    - Emphasis on clinical judgement/decision making
QUESTIONS