

## INTRODUCTION

Objective, Structured Clinical Examinations (OSCEs)

- Formative or summative
- Gold standard in assessing clinical skills

Challenges in the use of OSCEs

- Lack of widely circulated, validated evaluation tools
  - Variable psychometric properties
  - Inter-rater reliability
  - Heavy faculty workload to observe each encounter

## PURPOSE STATEMENT

Develop valid, reliable OSCE evaluation method

- Less reliant on standardized patient (SP) and student recall
- Resource efficient
- Objective data
- Accurately assesses performance
- Sensitive to detect clinical deficits
- Remediation process improvement

## PROCEDURAL STEPS

1. Establish sim cases in order of increasing difficulty and complexity
  - Reflect iterative acquisition of skills
2. Define minimum criteria required for scenario [e.g. provide care without worsening morbidity & mortality if it were real-world patient (Angoff procedure)]
3. Create rubric with criteria and outcome measures
4. Triangulate student performance
  - Faculty observation (50%)
  - Student experience via quiz, reflection or clinical note (25%)
  - SP feedback via Essential Elements of Communication (EEC) (25%)
5. Beta test- establish operational inter-rater reliability and content validity

## SAMPLE RUBRIC ELEMENTS

| ADULT CRITERION BASED RUBRIC FOR OBSERVATION   |                 |               |   |
|--|-----------------|---------------|---|
| 1. Simulation competencies are listed here   |                 |               |   |
| Red text = critical element  |                 |               |   |
| Student:   | Grader:         | Date:         |   |
| Elements and Samples of Behavior   | Points Possible | Actual Points | Information from Scenario/Evaluator Comments  |
| <b>Must verify patient's name and DOB</b>  | 1               |               | Addresses pt by preferred name  |
| <b>HISTORY</b>   |                 |               |   |
| <b>Chief Concern</b>   | 1               |               | Information about the case are listed here.   |
| <b>HPI (Presenting Illness)</b><br>OLDCARTS, Quality, Timing & Context   | 1               |               | Critical elements are highlighted in red.   |
| <b>Allergies</b><br>Meds, Food, Latex, Environmental   | 1               |               | All or nothing for each   |
| <b>Medications (Duration, frequency, reason)</b><br>Prescription, OTC, Supplements/Herbals, Cannabis   | 1               |               |   |
| <b>Biographic:</b><br>Past History- Medical<br>- Surgical  | 1               |               | All or nothing  |
| <b>Family History</b><br>Relevant medical history of relatives addressed   |                 |               |   |
| <b>Social History</b><br>Tobacco, Alcohol use, Social support system, Recent Travel, Sleep Pattern, Spirituality, Physical Activity, Occupational history, Nutrition, Other as appropriate (living situation, ADLs, caffeine, safety, etc) | 2               |               | Must address at least 2, but need to address all that apply                                     |
| <b>Sexual/Reproductive History (if applicable)</b><br>OB Hx, Partners, Practices, Female: LNMP, Sexual satisfaction/issues   | 0.5             |               |   |
| <b>Health Promotion/Immunizations History (if applicable)</b><br>Immunizations, Last dental and eye exams, Last PE and age appropriate screenings  | 0.5             |               |   |
| <b>Review Of Systems (in context of complaint)</b>   | 3               |               | Minimum of 3 systems with at least 3 questions, must address all that apply                     |
| <b>Total for History</b>   | <b>12</b>       |               |   |
| <b>PHYSICAL EXAM</b>   |                 |               |   |
| <b>Washes hands before beginning examination</b>   |                 |               | Wash hands? Yes / No  |
| <b>Vital Signs (VS) addressed with patient</b><br>Temp, Pulse, Respiration, BP, Pain, BMI  | 1               |               | 1 Point for reviewing vital signs with pt   |
| <b>PE of Affected System and Relevant Systems (in context of complaint)</b>  |                 |               |   |
| <b>Circle Systems Assessed</b>   | 6               |               | Must assess a minimum of 3 systems appropriate to chief complaint. Must address all that apply. |
| <b>Total for Physical</b>  | <b>7</b>        |               |   |
| <b>1. Diagnosis/Plan</b>   |                 |               |   |
| 1. Working diagnosis (accurate diagnosis based on H&P and case scenario)   | 2               |               |   |
| a. Shared decision-making  | 2               |               |   |
| 2. Differential diagnoses (3 ddx) and rationale  | 2               |               |   |
| <b>2. Develops a complete plan of care appropriate for the actual diagnosis and baseline medical conditions</b><br>•Diagnostics (1), therapeutics (1), referrals/followup (1)  | 3               |               | If not needed, must state "none required"   |
| <b>3. Education/Anticipatory Guidance/Follow-up precautions</b>  | 1               |               |   |
| <b>Patient Presentation to Faculty/Preceptor</b>   | 2               |               |   |
| <b>Total for Assessment/Plan/Presentation Section</b>  | <b>10</b>       |               |   |
| <b>Professional demeanor and humanistic qualities</b>  | 1               |               |   |
| <b>Points Possible</b>   | <b>30</b>       |               | <b>Student Score</b>  |

**Note.** Adapted from Ling, Fuller, Taylor & Johnson, 2018, Triangulation of multifactorial assessment: bringing objectivity to OSCE evaluation. *Clinical Simulation in Nursing*, 16, 40-47.

## RESULTS

- Rubric completed independently by 2 faculty before face-to-face feedback
  - Evaluators scored consistently within 1-2 points, noted similar deficits
- Established validity & reliability of quiz encounters by observation
- Triangulated performance- observation, quiz, EEC
- 2 / 29 (7%) required remediation
- Detected struggling students across didactic and clinical competencies

## DISCUSSION

- Tailored remediation plans crafted to support individual students
  - All students passed clinical, coursework, certification exams and subsequently credentialed (historical 1<sup>st</sup> pass rate = 99.9%)
- Valid & reliable quizzes needed changes for balanced scoring
- Scenarios aligned with rubric– ease grading, clarify expectations
- Evaluation of curricular effectiveness
- Guided clinical remediation process

## REFERENCES

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