Teaching and Learning Physical Examination in the Clinical Setting:
Authentic Assessment of Multi-domain Competencies for Independent Professional Practice

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MILLER'S PRISM OF CLINICAL COMPETENCE (aka Miller's Pyramid)

it is only in the "does" triangle that the doctor truly performs

Based on work by Miller GE. The Assessment of Clinical Skills/Competence/Performance; Acad. Med. 1990; 65(9): 63-67
Adapted by Drs. R. Mehay & R. Burns, UK (Jan 2009)
Assessment of physical examination skills - Undergraduate summative assessment
Assessment of physical examination skills - Postgraduate professional examination

Royal College of Paediatrics and Child Health membership examination circuit

Candidate information
Each candidate will be given the same brief introduction to each child and the task required.

This will be provided verbally by the examiner or as written instruction.
Physical Examination (PE) Round for Paediatric Residency

<table>
<thead>
<tr>
<th>Traditional Bedside Teaching</th>
<th>PE Round</th>
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</thead>
<tbody>
<tr>
<td>Teacher-led</td>
<td>Student-led</td>
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<tr>
<td>The ward as a ‘classroom’</td>
<td>The ward as a ‘workplace’</td>
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<tr>
<td>Teacher provides a ‘lead-in’</td>
<td>Student summarizes the clinical situation of the patient</td>
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<tr>
<td>Students are ‘told’ which body system to examine</td>
<td>Student determines the approach of examination with respect to patient’s chief complaint and problem list (context-specific)</td>
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<td>System-based</td>
<td>Holistic, patient-centered</td>
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<tr>
<td>Focuses on assessing PE technique, the ability to elicit and interpret the physical signs</td>
<td>The student exercises clinical reasoning to perform PE as a professional activity</td>
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<tr>
<td>Student performance grade on a Likert scale (1 – 5)</td>
<td>Grading based on whether the competence level expected of a medical graduate is achieved</td>
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</table>
Key components

• Execution of a defined task by the student
• Link with defined competencies and milestones expected of the learner
• Observation by the teacher
• Feedback and debriefing
• Reflections
• Documentations
Assessing students via a Competency Framework

☐ Developing  ☑ Competent  ☐ Proficient

1. Summarize the medical history with pertinent clinical features
2. Targets the exam to systems relevant to the clinical situation
3. Performs PE maneuvers correctly and in an organized manner, not omitting necessary elements of exam
4. Recognize and respond to patient’s verbal and non-verbal cues
5. Use tools / positioning appropriately
6. Presenting the PE findings: describe normal and abnormal findings in logical sequence, incorporate pertinent positive and negative findings
7. **Identifies key findings** with **correct interpretation**
8. Integrate PE findings with history to effectively rank differential diagnoses
9. Professional conduct
   - Ask permissions
   - Give instructions to the patient in an age-appropriate manner
   - Show good rapport with parent / carer
   - Ensure privacy and comfort
   - Perform hand hygiene
Entrustable Professional Activities (EPAs)

- An integration of multiple competencies, each requiring specific sets of knowledge, skills and attitude delivered by the curriculum
- EPAs are taught, practised and assessed holistically in authentic clinical workplace settings
- Competencies are framed in the context of workplace activities as subunits of clinical work required to execute the task(s) of an EPA
  \[\text{EPA} \neq \text{sum of its parts}\]
  
- Executable within a given time frame
- Observable and measurable
- Lead to recognized output suitable for focused entrustment decisions
- Essential professional tasks / responsibilities that educators entrust to qualified learners in the workplace