

Milestone	Primary Means of Assessment	Year Two Revisions
Emergency Stabilization (PC1)	On shift evaluation	Students required to overtly report abnormal vital signs to faculty
History and Physical (PC2)	On shift evaluation	
Diagnostic Studies (PC3)	On shift evaluation	
Differential Diagnosis (PC4)	On shift evaluation	Students required to present minimum 5 part differential to faculty
Pharmacology (PC5)	On shift evaluation	Students required to present drug allergies prior to suggested therapy
Observation/Reassessment (PC6)	On shift evaluation	Students required to re-evaluate their patients hourly and provide an update to the faculty
Disposition (PC7)	Nursing shift	Students locate critical equipment on nursing shift
Task-switching (PC8)	On shift evaluation	
Gen Approach to Procedures (PC9)	Procedure Consult™ quizzes, Student's Procedure Recorder	Faculty attest to use of universal precautions in procedure recorder
Airway Management (PC10)	Simulation Lab, Procedure Consult™ quizzes	Cases changes to emphasize BVM (bag/valve/mask)
Anesthesia, Pain Management (PC11)	Procedure Lab, Procedure Consult™ quizzes, In house quiz, Procedure recorder	Addition to in house quiz. Faculty attest to use of local anesthesia in procedure recorder

**Figure 1.** Milestones #1-11 iterative changes and means of assessment.

Ultrasound (PC12)	Ultrasound lecture, Procedure Recorder	Faculty attest to use of ultrasound on shift in procedure recorder
Wound Management (PC13)	Procedure Lab, Procedure Consult™ quizzes. Procedure recorder	Students required to repair 1 laceration on shift. Addition repairs considered for improved grade
Vascular Access (PC14)	Simulation Lab, Procedure Consult™ quizzes. Procedure recorder, Nursing Shift	Addition of femoral stick to simulation lab case
Medical Knowledge (MK1)	Not assessed for SLOE	SAEM test score included, but level one status not indicated with this instrument
Patient Safety (SBP 1)	IHI Open School	IHI module requirement added
Process Improvement (SBP 2)	Automatically passed	As written, we presume students can identify members of a health care team
Technology	Partially assessed. Students cannot participate in our EMR	Medicine reconciliation added to nursing shift
Practice Based Improvement (PBL 1)	Participation in Fresno Test of EBM Based Two Hour Workshop	
Professionalism (PR 1)	On shift evaluation	
Accountability (PR 2)	Completion of assignments. Social media anchor not assessed	A revised checklist records asynchronous assignment completion
Patient Centered Communication (ICS 1)	On shift evaluation	
Team Management (ICS 2)	On shift evaluation	

**Figure 2.** Milestones #12-23 iterative changes and means of assessment.

3, and 5 of a Likert Scale. Students are deemed proficient with an average of >80% on Milestones measured on shift. Milestones not evaluated on-shift were graded as Pass/Fail. Faculty were educated about the changes, and fliers were posted in the emergency department.

**Impact/Effectiveness:** This year 49 students rotated. 575 on-shift evaluations were completed, with 16 Milestones deficiencies noted. Of 41 SLOEs, 1 noted deficiencies in Milestones 2, 3, 4, 5, and 8. Communication of Milestone proficiency via the SLOE may identify students who will require early observation or remediation. In our system, however, even with increased rigor of assessment, we find that assessment with the Milestones does not adequately differentiate students.

**Educational Soundbites Oral Presentations**

**95** **Creating Clarity for the Process of Managing Residents through Remediation, Probation and Termination**

*Murano T, Lypson M, Smith J, Silverberg M, Weizberg M, Lukela M, Santen S / Rutgers New Jersey Medical School, Newark, NJ; University of Michigan School of Medicine, Ann Arbor, MI; Alpert Medical School of Brown University, Providence, RI; SUNY Downstate/ Kings County Hospital, Brooklyn, NY; Staten Island University Hospital, Staten Island, NY*

**Introduction:** Our recent study on resident remediation demonstrated that most emergency medicine program directors (PDs) recognize formal remediation as a resident status, but there is still much variation regarding the triggers for remediation, probation and termination (RPT), as well as the processes and documentation for these residents.

**Educational Objectives:** To create a clear framework for PDs to manage residents who need RPT.

**Curricular Design:** Through consensus, a team of graduate medical education leaders, including PDs in multiple specialties, developed the framework below for struggling residents. We focused on the definition, process of management, documentation, and notification for each category describing residents in RPT (Table 1).

1. Informal remediation: when a resident's performance is deficient in one or more milestones or competencies. Process: Initiate when there are warning signs of problems that are not significant enough to trigger formal remediation.
2. Formal remediation: when deficiencies are significant enough to warrant formal documentation because informal remediation failed or because the issues are substantial. Process: Initiate when the resident fails to correct the identified deficiency in the designated observation period, or substantial deficiencies are identified.
3. Probation: when resident is unsuccessful in meeting the terms of formal remediation or if initial problems are so significant to warrant immediate probation. Process: Initiate when the resident fails to correct the deficiency in formal remediation in the designated observation period.
4. Termination: when a resident is unsuccessful in meeting the terms of probation or if initial problems are so significant to warrant immediate termination. Process: initiate when probation is not successful.

**Impact:** We propose a consensus framework for RPT. The impact will be clarity surrounding RPT, and to provide guidance for PDs, residents, and post-graduate employers.

**Table 1.** Description of documentation and notifications for remediation, probation, and termination.

	Informal remediation	Formal remediation	Probation	Termination
Documentation	<ul style="list-style-type: none"> <li>*Usual documentation of strengths and weaknesses of resident</li> <li>*Important to document in case resident fails to course correct</li> <li>*No formal letter in permanent resident file, there may be some documentation of the discussion</li> </ul>	<ul style="list-style-type: none"> <li>*Document the failed informal remediation process, an updated corrective plan with expected outcomes, and the time frame for expected correction</li> <li>*Formal letter to the resident from PD</li> <li>*Resident signature acknowledging receipt and understanding</li> <li>*Documentation is maintained in permanent file</li> </ul>	<ul style="list-style-type: none"> <li>Document the failed formal remediation process, and update the expected outcomes and time frame</li> <li>*Formal letter to the resident from PD</li> <li>*Resident signature acknowledging receipt and understanding</li> <li>*Documentation is maintained in permanent file</li> </ul>	<ul style="list-style-type: none"> <li>Document the failed remediation and failed probation</li> </ul>
Notification	None	<ul style="list-style-type: none"> <li>Notify the GME office in accordance with institutional guidelines</li> <li>*Final verification and letters of recommendation-up to the discretion of PD whether it is mentioned</li> </ul>	<ul style="list-style-type: none"> <li>*Notify the GME office</li> <li>*Include probation status in letters of recommendation and in the final verification of training</li> </ul>	<ul style="list-style-type: none"> <li>Notification of GME office and legal office</li> <li>*Include termination status in letters of recommendation and the verification of training</li> </ul>

GME, graduate medical education; PD, program director

## 96 Creation and Implementation of an Online Teaching Resource: The Northwestern Emergency Medicine Model in Orthopedics Education

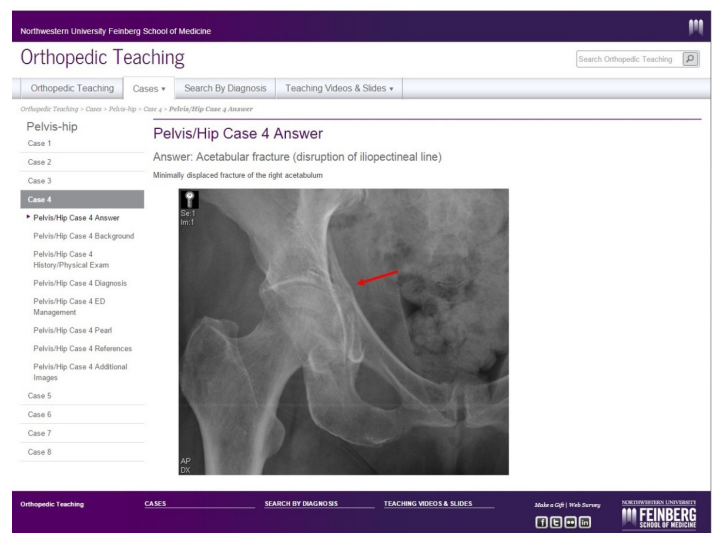
Burns W, Elsaesser T, Levine M / Northwestern University, Chicago, IL

**Introduction:** Orthopedics, a core competency of emergency medicine (EM) education, is traditionally taught through textbooks and clinical exposure. As textbooks are expensive and lack portability, and clinical exposure can be variable, we recognized the need for a free, mobile, and complete review of orthopedics topics for EM residents.

**Educational Objectives:** We describe the creation, dissemination, and sustainment of an asynchronous online teaching tool using resources available to any residency program.

**Curricular Design:** Orthopedic cases with educational merit were sought from a single emergency department. Important uncommon and core common cases were identified and securely recorded. EM residents selected images from this list and added teaching material to compose didactic cases using a standardized template. Edited cases, original videos and lessons were uploaded to a project website (<http://ortho-teaching.feinberg.northwestern.edu/>) (Figure 1) for use as a portion of the orthopedics curriculum. It was also made freely accessible for external use by other medical professionals.

**Impact:** This free, open access, education resource was created using technology and human resources available to any residency program. It has been sustained since publication



**Figure 1.**

by residents with negligible cost. Currently there are 104 cases, 8 lessons and 26 videos available. Data regarding use of the website has been gathered since June 2014. There have been 2,143 website sessions and 1,405 unique users. Cities with the highest use: Chicago, IL (14%), Providence, RI (10%), and St. Louis, MO (3%); countries: US (69%), UK (5%) and Australia (3%) with use extending across Europe, Middle East and Asia (Figure 2). It is used as asynchronous material for our orthopedics module, implemented into the curriculum at other institutions, and was cited as a favorite website in EM education at Council of Emergency Medicine Residency Directors in 2011. This model can serve as a guide to create similar web-based resources that can be widely disseminated as a teaching tool and reference.