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Strategies for Assessing Challenging Milestone Elements

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Consortium of Neurology Program Directors
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Goals

- At the end of the session, participants should be able to discuss and implement a variety of strategies to assess challenging milestone elements in their programs
- To generate a discussion around milestone implementation at the program level, and opportunities to improve them

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Outline

- Brief background on the milestones
- Using translating assessment systems to inform the milestones
- Challenging milestones elements, and potential assessment solutions
- Discussion

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Background: “Next” Accreditation System

In 2013 and 2014, the ACGME implemented the Next Accreditation System (NAS), incorporating a number of significant changes to the accreditation process:

- More comprehensive data collection (annual resident/faculty survey, WebADS)
- Less frequent physical visits (self study visits for programs)
- Comprehensive institution-level site visits (Clinical Learning Environment Review [CLER] Program)
- Assessment of trainees along a series of specialty-specific milestones

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Background: Milestones

The ACGME milestones are developmental outcomes that represent an educational continuum from the beginning of training to readiness for unsupervised practice

- Milestones were designed to be:

"Progressively demonstrated, competency-based developmental outcomes"

- Milestones were *not* designed to be:

"Assessment tools"

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Neurological Exam — Patient Care								
Worst				Average				Best
1	2	3	4	5	6	7	8	9

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Resident: PGY level:	CCC review date: Assigned reviewer:

Neurological Exam — Patient Care

Level 1	Level 2	Level 3	Level 4	Level 5
• Performs complete neurological exam	• Performs complete neurological exam accurately	• Performs a relevant neurological exam incorporating some additional appropriate maneuvers • Visualizes papilledema • Accurately performs a neurological exam on the comatose patient	• Efficiently performs a relevant neurological exam accurately incorporating all additional appropriate maneuvers • Accurately performs a brain death examination	• Consistently demonstrates mastery in performing a complete, relevant, and organized neurological exam

Comments:

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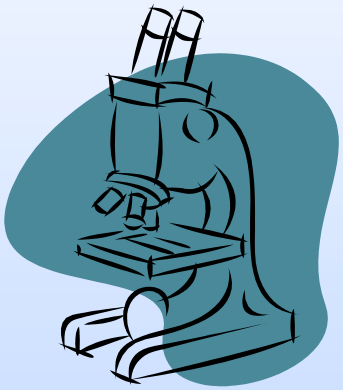
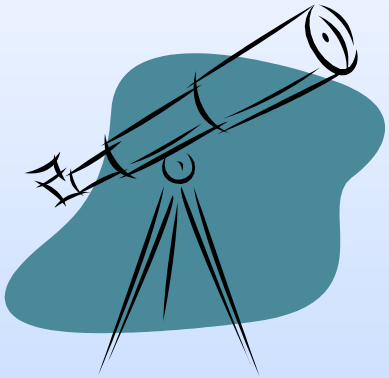
Developing Assessment Tools to Inform Your Milestones

Step 1: Diagnose your milestones



Scope?



Narrow

Specific
Evaluable in fewer settings
Clinically intuitive

Broad

Versatile
Evaluable in more settings

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Developing Assessment Tools to Inform Your Milestones: Diagnose your milestones

Adult Elbow Fracture – Patient Care				
Level 1	Level 2	Level 3	Level 4	Level 5
• Obtains history and basic physical (e.g., age, gender, mechanism of injury, deformity, skin integrity, open/closed injury) • Splints fracture appropriately • Provides basic peri-operative management (e.g., post-operative orders, ice, elevation, compression) • Lists potential complications (e.g., infection, hardware failure, stiffness, reflex sympathetic dystrophy [RSD], neurovascular injury, posttraumatic arthritis)	• Obtains focused history and physical, recognizes implications of soft tissue injury (e.g., open fracture, compartment syndrome, ligamentous injury) • Able to order appropriate imaging studies (e.g., radiographs, CT scan/3D reconstruction) • Performs basic surgical approach to elbow fractures • Reduces fracture if necessary (e.g., provisional fixation, fluoroscopic checks) • Recognizes surgical indications (e.g., fracture displacement, elbow instability, transolecranon injury • Provides post-operative management and rehabilitation (e.g., splinting and ROM therapy) • Capable of diagnosis and early management of complications (e.g., diagnosis from peri-operative x-rays, recognize infection, recognize fracture displacement/dislocation)	• Performs pre-operative planning with instrumentation and implants (e.g., patient positioning, plates/screws, fluoroscopy) • Capable of surgical reduction and fixation of a simple fracture (e.g., olecranon fracture) • Provides post-operative management and rehabilitation (e.g., increase ROM as healing progresses, adequate/proper post-operative x-rays)	• Performs comprehensive pre-operative planning/alternatives (e.g., use of external fixation, radial head replacement, elbow arthroplasty) • Capable of surgical reduction and fixation of moderately complex fractures (extraarticular and simple intraarticular distal humerus fracture) • Modifies and adjusts post-operative plan as needed (e.g., dynamic/static stretch splinting, revise therapy) • Treat simple complications both intra- and post-operatively (e.g., revise hardware placement, recognize improper hardware position)	• Capable of surgical reduction and fixation of a full range of fractures and dislocations • Understands how to avoid/prevent potential complications • Surgically treats complex complications (e.g., elbow release for stiffness, ID infection, revision hardware failure, nonunion treatment)
☐	☐	☐	☐	☐	☐	☐	☐	☐
Comments:				**Not yet rotated** ☐

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Developing Assessment Tools to Inform Your Milestones: Diagnose your milestones

3. Manages patients with progressive responsibility and independence. (PC3)				
Critical Deficiencies			**Ready for unsupervised practice**	**Aspirational**
Cannot advance beyond the need for direct supervision in the delivery of patient care Cannot manage patients who require urgent or emergent care Does not assume responsibility for patient management decisions	Requires direct supervision to ensure patient safety and quality care Inconsistently manages simple ambulatory complaints or common chronic diseases Inconsistently provides preventive care in the ambulatory setting Inconsistently manages patients with straightforward diagnoses in the inpatient setting Unable to manage complex inpatients or patients requiring intensive care	Requires indirect supervision to ensure patient safety and quality care Provides appropriate preventive care and chronic disease management in the ambulatory setting Provides comprehensive care for single or multiple diagnoses in the inpatient setting Under supervision, provides appropriate care in the intensive care unit Initiates management plans for urgent or emergent care Cannot independently supervise care provided by junior members of the physician-led team	Independently manages patients across inpatient and ambulatory clinical settings who have a broad spectrum of clinical disorders including undifferentiated syndromes Seeks additional guidance and/or consultation as appropriate Appropriately manages situations requiring urgent or emergent care Effectively supervises the management decisions of the team	Manages unusual, rare, or complex disorders
☐	☐	☐	☐	☐
Comments:				

Developing Assessment Tools to Inform Your Milestones: Diagnose your milestones

Neurological Exam — Patient Care				
Level 1	Level 2	Level 3	Level 4	Level 5
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Comments:				**Not yet rotated** ☐

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Developing Assessment Tools to Inform Your Milestones

Step 1: Diagnose your milestones

Step 2: “Find” each milestone in your program

Step 3: For those milestones not covered in your curriculum, decide where and how to add them (OSCE, simulation, didactics, etc)

Step 4: Design and implement assessment tools that translate to the milestones

For “**narrow scope**” subcompetencies, evaluations can be drawn more **directly from the milestones**

For “**broad scope**” subcompetencies, **translation tools are needed** to create useful evaluations

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Resident: **PGY level:**	**CCC review date:** **Assigned reviewer:**

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Comments:

Not yet rotated ☐

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Jones L, Dimberg E, Boes C, et al. Milestone-Compatible Resident Assessments: A Role for Observable Practice Activities. *Neurology*, in press 2015.

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Not yet rotated ☐

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Jones L, Dimberg E, Boes C, et al. Milestone-Compatible Resident Assessments: A Role for Observable Practice Activities. *Neurology*, in press 2015.

Translation Tools for the Milestones: Entrustable Professional Activities (EPAs)

Activities that together constitute the mass of critical elements that operationally define a profession

- Generally observable behaviors (unlike competencies, which describe people, not actions)
- Assessed on an entrustment scale
- Require skills from (and therefore can be mapped to) multiple competencies

Ten Cate and Scheele. Viewpoint: Competency-Based Postgraduate Training: Can we bridge the gap between theory and clinical practice? *Academic Medicine* 82(6) June 2007 pp. 542-547

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Translation Tools for the Milestones: Observable Practice Activities (OPAs)

Those individual, observable practices with which trainees are progressively entrusted during training

- Generally observable behaviors (unlike competencies, which describe people, not actions)
- Assessed on an entrustment scale
- May require skills from (and therefore can be mapped to) multiple competencies

Warm EJ, Mathis BR, Held JD, et al. Entrustment and mapping of observable practice activities for resident assessment. *J Gen Intern Med* 2014;29. pp. 1177-1182.

Translation Tools for the Milestones: EPAs, OPAs, ETC…

Recognize papilledema

Perform a brain death examination

Identify and manage neuromuscular emergencies

1	2	3	4	5
The trainee cannot perform this task even with direct supervision or assistance	The trainee can perform this task, but requires direct supervision or assistance	The trainee can perform this task with indirect supervision (ie, supervisor not present)	The trainee can perform this task without supervision (ie, could do this in independent practice)	The trainee has mastered this task (ie, could train others to perform this task)

Developing Assessment Tools to Inform Your Milestones: Faculty Development

- Multiple simultaneous changes enhance the need for faculty development
- Faculty (***and residents***) need to be aware of the developmental nature of milestone evaluations
- All milestone elements must be achieved to assign a given level
- Trainees will generally occupy lower levels early in training

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Assessment of the Challenging Milestone

- What makes a milestone element challenging?
  - Hard to define
  - Hard to observe
  - Seems “outside” conventional clinical medicine
  - Infrequent opportunities to assess
  - Uncommon disorders or syndromes
  - Availability of faculty/assessment expertise in a specific area

Assessment of the Challenging Milestone

- What are some potential approaches?
  - Increase direct observation of trainees in clinical or simulated settings
  - Ask for assessments from a variety of sources (allied, health, peers, patients)
  - Examination questions
  - Expand the settings in which assessment occurs

Assessment of the Challenging Milestone

Competency: Professionalism Subcompetency: Compassion, integrity, accountability, and respect for self and others Level: 3	**Incorporates patients' socio-cultural needs and beliefs into patient care**

- Issue: Faculty may not always be the most convenient primary evaluator of an element
- Approach: Ask others to assess!

Assessment of the Challenging Milestone

- Patient satisfaction form:

	Strongly disagree 1	2	Agree (average score) 3	4	Strongly Agree 5	N/A
Explains information to me and my family using clear, understandable language						
Demonstrates compassionate care						
Incorporates my preferences, background, and beliefs into the treatment plan						
Allows me to participate in the decision-making process						
Keeps me and my family informed of test results and changes in the care plan						

Prof 1/Level 3: Incorporates patients' socio-cultural needs and beliefs into patient care

ICS 1/Level 2: Engages patients in shared decision making

ICS 2/Level 3: Effectively communicates the results of a neurologic consultation in a timely manner

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Assessment of the Challenging Milestone

Competency: Professionalism Subcompetency: Compassion, integrity, accountability, and respect for self and others Level: 3	**Incorporates patients' socio-cultural needs and beliefs into patient care**

- Issue: Faculty may not always be the optimal primary evaluator of an element
- Approach: Ask others to assess!
  - Patients
  - Peers
  - Allied health staff (nurses, assistants, EPCs)

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Assessment of the Challenging Milestone

Competency: Professionalism Subcompetency: Relationship development, teamwork, and managing conflict Level: 3	**Manages conflict in complex situations**

- Issue: How do we assess performance that may not be observable on a typical clinical rotation?
  - Not feasible for observer to be present
  - Low frequency events
- Approach: Simulation

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Assessment of the Challenging Milestone

Competency: Professionalism
Subcompetency: Relationship development, teamwork, and managing conflict
Level: 3

Manages conflict in complex situations

- Neurosimulation:
  - Doesn't have to be in a formal sim center
  - Allows a structured, observed interaction

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Assessment of the Challenging Milestone

Competency: Professionalism
Subcompetency: Relationship development, teamwork, and managing conflict
Level: 3

Manages conflict in complex situations

- Neurosimulation:
  - Allows assessment of numerous competencies:
    - ICS
    - Patient care
    - Professionalism

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Assessment of the Challenging Milestone

Competency: Patient Care Subcompetency: Movement Disorders Level: 4	**Manages movement disorder emergencies**

- Issue: How do we capture performance that may not be observable on a typical clinical rotation?
  - Low frequency events (but you don't want to put a question on every evaluation form)
- Approach: Simulated "oral boards" cases

Assessment of the Challenging Milestone

Competency: Patient Care Subcompetency: Movement Disorders Level: 4	**Manages movement disorder emergencies**

- Despite the demise of the oral examination for initial certification, “oral boards” are incredibly useful assessment exercises
- 1-2 faculty/resident, 10 minutes/case

“You are asked to evaluate a 32 year old man with confusion, tachycardia, and twitching muscle movements…”

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Assessment of the Challenging Milestone

Competency: Professionalism Subcompetency: Compassion, integrity, accountability, and respect for self and others Level: 1	**Describes effects of sleep deprivation and substance abuse on performance**

- Issue: How do we assess performance on elements outside clinical practice?
- Approach: Elements that require the trainee to "explain" or "describe" could be covered with test questions

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Assessment of the Challenging Milestone

Competency: Patient Care Subcompetency: Cognitive/Behavioral Disorders Level: 3	**Diagnoses and manages common cognitive/behavioral disorders**
Competency: Patient Care Subcompetency: Cognitive/Behavioral Disorders Level: 4	**Diagnoses and manages uncommon cognitive/behavioral disorders**

- Issue: Definition of terms
- Approach: CCCs need to develop operational definitions
  - In our program, how are we going to treat these terms?
  - How will we remember this at the next CCC meeting?

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Assessment of the Challenging Milestone

Competency: Patient Care Subcompetency: Headache Syndromes Level: 5	**Engages in scholarly activity in headache syndromes (e.g., teaching, research)**

- Issue: How do we capture content that may not be observable on a typical clinical rotation?
- Approach: For scholarly activity, ask trainees to periodically upload CVs prior to CCC meetings or semiannual review

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Assessment of the Challenging Milestone

Competency: PBLI Subcompetency: Self-directed learning Level: 2	**Use feedback to improve performance**

- Issue: What if the element cannot be assessed in a relatively brief faculty-learner interaction?
- Approach: Include assessment of this element on your semiannual review form

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Assessment of the Challenging Milestone

Competency: SBP Subcompetency: Work in inter-professional teams to enhance patient safety Level: 3	**Describes potential sources of system failure in clinical care such as minor, major, and sentinel events**
Competency: SBP Subcompetency: Work in inter-professional teams to enhance patient safety Level: 4	**Participates in a team-based approach to medical error analysis**
Competency: Medical Knowledge Subcompetency: Diagnostic Investigation Level: 4	**Explain diagnostic yield and cost-effectiveness of testing**

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Assessment of the Challenging Milestone

Competency: SBP Subcompetency: Work in inter-professional teams to enhance patient safety Level: 3	**Describes potential sources of system failure in clinical care such as minor, major, and sentinel events**

- Issue: How do we capture content that may not be observable on a typical clinical rotation?
- Approach: Integrate your milestone assessments into other venues

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Assessment of the Challenging Milestone

Cost of Care

Hospitalization #1 (5 days)
Hospitalization #2 (10 days)

ESR
CRP
Dom2 Private Room/
TTE
TEE
MRI head

Root Cause Analysis

Potential interventions for follow-up of laboratory results	Effort	Yield	Sustainability
Physician training on indications for laboratory testing	High	Low	No
Phone communication for abnormal laboratory results	Med	Med	Yes
Request alteration in ESL to include pertinent stroke labs	Low	Med	Yes
EMR pull of laboratory studies for trend assessment	High	High	Yes
Progress note checklist to include pertinent service labs	High	High	Yes

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Assessment of the Challenging Milestone

Competency: Patient Care Subcompetency: Work in inter-professional teams to enhance patient safety Level: 3	**Describes potential sources of system failure in clinical care such as minor, major, and sentinel events**

- Issue: How do we capture content that may not be observable on a typical clinical rotation?
- Approach: Integrate your milestone assessments into other venues
  - Can include assessment questions (OPA, etc.) in conference evaluation!

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Assessment of the Challenging Milestone

- Other challenging milestone elements?
- Why are they challenging?
- What are some potential solutions?

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Conclusions

- Once you've designed an assessment system for your program, you have to decide how to assess performance on each milestone element
- For challenging milestone elements, be creative in your choice of evaluator, medium, and setting
- Share your solutions with your colleagues!

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Questions?

Thank you!

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