Introducing Your Presenter…

Heather Peters, M.Ed, Ph.D
GME Consultant

- GME Director & DIO
- Seasoned speaker at ACGME & sub-specialty national meetings
- Institutional and Program accreditation experience
- 3 decades in education; Masters of Education in curriculum & evaluations, PhD concentration in secondary education & adult learning theories
Goals for Webinar

1. Briefly review the concept of ACGME milestone assessment
2. Describe how to go beyond end-of-rotation evaluations to create a robust milestone evaluation system
3. Discuss the current medical education literature about milestone assessment
4. Provide resources for milestone implementation support
Polling Question #1

What level of milestone implementation describes you?

1. Just starting with milestones
2. Have incorporated the milestones and CCC into program over the past year
3. Have integrated multiple evaluation methods that inform the CCC about milestones
4. I have mastered milestones and am looking for some ways to help my faculty/leadership understand milestones better
Brief Review of Milestones

Why Milestones

Initial Implementation

Guiding Principles

Presented by Partners in Medical Education, Inc. 2015
<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquires a general medical history</td>
<td>Acquires a basic physiatric history including medical, functional, and psychosocial elements</td>
<td>Acquires a comprehensive physiatric history integrating medical, functional, and psychosocial elements</td>
<td>Efficiently acquires and presents a relevant history in a prioritized and hypothesis driven fashion across a wide spectrum of pages and impairments</td>
<td>Gathers and synthesizes information in a highly efficient manner</td>
</tr>
<tr>
<td>Elicits subtleties and information that may not be readily volunteered by the patient</td>
<td>Seeks and obtains data from secondary sources when needed</td>
<td>Rapidly focuses on presenting problem, and elicits key information in a prioritized fashion</td>
<td>Models the gathering of subtle and difficult information from the patient</td>
<td></td>
</tr>
</tbody>
</table>

**Milestone**

Presented by Partners in Medical Education, Inc. 2015
### Milestone Template

**Competency and Sub-Competency illustrated**

#### Milestone Description: Template

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are the expectations for a beginning resident?</td>
<td>What are the expectations for a resident who has advanced over entry, but is performing as a lower level than expected at mid-residency</td>
<td>What are the key developmental milestones mid-residency?</td>
<td>What does a graduating resident look like?</td>
<td>Stretch Goals – Exceeds expectations</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>What should they be able to do well in the realm of the specialty at this point?</td>
<td>What additional knowledge, skills and attitudes have they obtained?</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Are they ready for certification?</td>
</tr>
</tbody>
</table>

#### Comments:

Presented by Partners in Medical Education, Inc. 2015
Milestones Background

**ACGME**
- Accreditation – continuous monitoring of programs; lengthening of site visit cycles
- Public Accountability – report at a national level on competency outcomes
- Community of practice for evaluation and research, with focus on continuous improvement

**Certification Boards**
- Potential use – ascertain whether individuals have demonstrated qualifications needed to sit for Board exams

**Milestones**

**Residency Programs**
- Guide curriculum development
- More explicit expectations of residents
- Support better assessment
- Enhanced opportunities for early identification of under-performers

**Residents**
- Increased transparency of performance requirements
- Encourage resident self-assessment and self-directed learning
- Better feedback to residents
Milestone Implementation

- Dec 13: 5 specialties
- June 14: 8 specialties
- Dec 14: 90 specialties
- June 15: 96 specialties
- Dec 15: 140 specialties

June 2016: All specialties reporting

Presented by Partners in Medical Education, Inc. 2015
OB/GYN Clinical Competency Committee

Current Tools used to inform Milestones
Tools to Transition in July-Dec 2015
Tools to Transition in Jan-June 2016

Clinical Competency Committee

Assessment of Milestones

Presented by Partners in Medical Education, Inc. 2015
## Guiding Principles

<table>
<thead>
<tr>
<th>Feasibility</th>
<th>Quality</th>
<th>Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manageable number of milestones</td>
<td>Convened by ACGME</td>
<td>Developed by each specialty</td>
</tr>
<tr>
<td>Meaningful</td>
<td>Uniform template</td>
<td>ABMS Board</td>
</tr>
<tr>
<td>“Measurable”</td>
<td>Ongoing</td>
<td>PD Society</td>
</tr>
<tr>
<td></td>
<td>Need to reassess and revise</td>
<td>Resident</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RRC</td>
</tr>
</tbody>
</table>
Expected Benefits

Residents
- Explicit expectations of residents
- Identifies areas to work on
- Earlier identification of under-performers
- Provides aspirational goals for over-achievers

Program
- Guides curriculum development
- Earlier identification of under-performers
- Guide accreditation requirement revision

Public
- Better definition of graduating resident
- Use for program Accreditation
- Possible use for Board Certification

Presented by Partners in Medical Education, Inc. 2015
UNDERSTANDING EVALUATIONS
## Shifting Types of Evaluations

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>STRUCTURE &amp; PROCESS-BASED</th>
<th>COMPETENCY-BASED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving force for curriculum</td>
<td>Content—knowledge acquisition</td>
<td>Outcome—knowledge acquisition</td>
</tr>
<tr>
<td>Driving force for process</td>
<td>Teacher</td>
<td>Learner</td>
</tr>
<tr>
<td>Path of learning</td>
<td>Hierarchical (teacher—student)</td>
<td>Non-hierarchical (student -- teacher)</td>
</tr>
<tr>
<td>Responsibility for content</td>
<td>Teacher</td>
<td>Student and teacher</td>
</tr>
<tr>
<td>Goal of educational encounter</td>
<td>Knowledge acquisition</td>
<td>Knowledge application</td>
</tr>
<tr>
<td>Typical assessment tool</td>
<td>Single subjective measure</td>
<td>Multiple objective measure (“evaluation portfolio”)</td>
</tr>
<tr>
<td>Assessment tool</td>
<td>Proxy</td>
<td>Authentic (mimics real tasks of profession)</td>
</tr>
<tr>
<td>Setting for evaluation</td>
<td>Removed (gestalt)</td>
<td>“In the trenches” (direct observation)</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Norm-referenced</td>
<td>Criterion-referenced</td>
</tr>
<tr>
<td>Timing of assessment</td>
<td>Emphasis on summative</td>
<td>Emphasis on formative</td>
</tr>
<tr>
<td>Program completion</td>
<td>Fixed time</td>
<td>Variable time</td>
</tr>
</tbody>
</table>

OB/GYN Clinical Competency Committee

Clinical Competency Committee

Assessment of Milestones

Current Tools used to inform Milestones
Tools to Transition in July-Dec 2015
Tools to Transition in Jan-June 2016

Patient Evaluations
In-House Testing
End-of-Rotation Evaluations
ITE
Faculty Comments
OpLogs
Simulations
Student Evaluations
Prof Resp:
• Eval Comp
• Conf Att
Operative/Procedural Forms

Presented by Partners in Medical Education, Inc. 2015
Newer Tools

- Sign-off Evaluations
- Mock Codes
- Point of Care

Presented by Partners in Medical Education, Inc. 2015
Academic Year Overview

- PEC Review of Evaluation Program
- Early review of PGY-1s & Transfers
- Faculty Discussions
- Compile MS Data
- CCC Meeting #1
- CCC Meeting #2
- Faculty Discussion
- Compile MS Data
ANALYZING YOUR PROGRAM
## Analyzing Your Program

<table>
<thead>
<tr>
<th>Department Name</th>
<th>PC</th>
<th>MK</th>
<th>PR</th>
<th>CIS</th>
<th>PBLI</th>
<th>SBP</th>
<th>Name on WebADS</th>
<th>Evaluators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>360/Multi-rater Process</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>End-of-Rotation Evaluations (by faculty)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>Global Assessments</td>
<td>Faculty</td>
</tr>
<tr>
<td>Nursing Evaluations</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Multisource Assessment</td>
<td>Nurses</td>
</tr>
<tr>
<td>Patient Evaluations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Patient Survey</td>
<td>Patients</td>
</tr>
<tr>
<td>Peer Evaluations</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>Multisource Assessment</td>
<td>Peers</td>
</tr>
<tr>
<td>Self Evaluations</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>Multisource Assessment</td>
<td>Self</td>
</tr>
<tr>
<td>Patient Interaction Form</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>Direct Observation</td>
<td>Faculty</td>
</tr>
<tr>
<td>Surgical Observation Form</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Direct Observation</td>
<td>Faculty</td>
</tr>
<tr>
<td>Pig Lab/Skills Lab</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Simulations/Models</td>
<td>Faculty</td>
</tr>
<tr>
<td>M&amp;M</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>Review of patient outcomes</td>
<td>Faculty</td>
</tr>
<tr>
<td>SBP Project (making a change in the patient care system)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>Project Assessment</td>
<td>PD Self</td>
</tr>
<tr>
<td>Well-Woman Forms</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>Review of drug prescribing</td>
<td>Faculty</td>
</tr>
<tr>
<td>Quarterly PREOG/PABOG</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>In-house examination</td>
<td>Other</td>
</tr>
<tr>
<td>In-Service Exam</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>In-training examination</td>
<td>Other</td>
</tr>
<tr>
<td>Chief Resident Evaluations (Teaching Skills)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>Multisource Evaluations</td>
<td>Junior Resident</td>
</tr>
</tbody>
</table>

Presented by Partners in Medical Education, Inc. 2015
Assessment Program Guidelines

1. Single assessment is intrinsically limited
2. Assessment for ‘does’ cannot be standardized
3. Combining roles of mentor/coach and judge in high stakes decisions is a conflict of interest
4. Information from all low-stake assessments should feed into high stake decisions

ALL THOSE INVOLVED IN THE ASSESSMENT PROCES SHOULD RECEIVE EXTENSIVE TRAINING


Presented by Partners in Medical Education, Inc. 2015
Evaluating Competence

No assessment method can reliably measure the competencies separately from one another as separate constructs.

- Competencies are interdependent
- Assessment in the workplace is a social encounter
- Raters’ expertise as clinicians & raters not stable
- Competence is not a stable trait

## Incorporating All Evaluations

<table>
<thead>
<tr>
<th>Department Name</th>
<th>PC</th>
<th>MK</th>
<th>PR</th>
<th>CIS</th>
<th>PBLI</th>
<th>SBP</th>
<th>How to Convert to Milestones</th>
<th>Evaluators</th>
</tr>
</thead>
<tbody>
<tr>
<td>End-of-Rotation Evaluations (by faculty)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Determine which milestones align with individual rotations—not all milestones apply to every rotation</td>
<td>Faculty</td>
</tr>
<tr>
<td>Nursing Evaluations</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>Nurses</td>
</tr>
<tr>
<td>Patient Evaluations</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>Patients</td>
</tr>
<tr>
<td>Peer Evaluations</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>Peers</td>
</tr>
<tr>
<td>Self Evaluations</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>Self</td>
</tr>
<tr>
<td>Patient Interaction Form</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>Faculty</td>
</tr>
<tr>
<td>Surgical Observation Form</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td>Faculty</td>
</tr>
<tr>
<td>Pig Lab/Skills Lab</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Faculty</td>
</tr>
<tr>
<td>M&amp;M</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>Faculty</td>
</tr>
<tr>
<td>SBP Project (making a change in the patient care system)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>PD</td>
<td>PD</td>
</tr>
<tr>
<td>Well-Woman Forms</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Faculty</td>
<td>Self</td>
</tr>
<tr>
<td>Quarterly PREOG/PABOG</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Other</td>
</tr>
<tr>
<td>In-Service Exam</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Other</td>
</tr>
<tr>
<td>Chief Resident Evaluations (Teaching Skills)</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Junior Resident</td>
<td>Junior Resident</td>
</tr>
</tbody>
</table>
Resources

STFM
APPD
CORD
ACGME
APDS
CREOG
ABIM

Presented by Partners in Medical Education, Inc. 2015
Polling Question #2

Which of these is true?

1. Milestones are meant to be a replacement for global ratings
2. Milestones can be assessed with a single clinical encounter
3. Milestones eliminate grade inflation
4. Milestone levels accurately correspond to year of training
5. All of these statements are true
6. None of these statements are true

Milestone Myths and Misperceptions; Carter WA; JGME; March 2014; 18-20.
Miller’s Pyramid of Clinical Competence

- Does
- Shows How
- Knows How
- Knows

- Collective Competence
- Entrustable Professional Activities
- Individual Competence
- Discrete KSAs

Miller, GE. Assessment of Clinical Skills/Performance. Academic Medicine (Supplement); 1990. 65 (S63-S67).

Presented by Partners in Medical Education, Inc. 2015
Miller’s Pyramid of Clinical Competence

Does

 Shows How

 Knows How

 Knows

Workplace Assessment: Clinical Observations, Multi-source Feedback, Team Assessments, Operative (Procedural) Skill Assessments

Structured Clinical Observation, Simulation, Standardized Patient, Standardized Mini-CEX

MCQ, Oral Examinations, Standardized Patients

MCQ, Oral Examinations

Miller, GE. Assessment of Clinical Skills/Performance. Academic Medicine (Supplement); 1990. 65 (S63-S67).

Clinical Evaluation of “Does”

- Include multiple forms of workplace-based assessment tools in the planned assessment program:
  - Tools with word descriptors, not numerical rating scales
  - Clear, performance-based descriptors of what is being judged and at what level
  - Recommend end-of-training be used as a common framework for judging levels
  - Avoid checklist-only tools; combine checklists with a global evaluation

Clinical Evaluation of “Does”

Plan an assessment program (i.e., multiple evaluations, multiple raters, multiple settings, identified times, faculty development).

- Deliberate and arranged set of longitudinal assessment activities
- Individual assessments maximally used to provide learner feedback (assessment for learning)
- Aggregated assessment data used for higher stake decisions (assessment of learning); the higher the stakes, the more data needed
- Expert professional judgment is imperative

Understanding Competence


1. Mastery of knowledge
2. Demonstration of observed behaviors
3. Representation of characteristics and behaviors with numbers
4. Mindful practice through reflection and self-assessment
5. Demonstration of standardized outcomes for knowledge, skills and behaviors

Presented by Partners in Medical Education, Inc. 2015
References

  - The authors hope that these experiences can inform others embarking upon similar journeys with the milestones.
  - The EM milestones demonstrated validity and reliability as an assessment instrument for competency acquisition. EM residents can be assured that this evaluation process has demonstrated validity and reliability; faculty can be confident that the Milestones are a nationally standardized, objective measure of specialty-specific competency acquisition.

  - Although the authors are early in the evolution of applying the new milestones system, this approach has thus far allowed the m to comprehensively evaluate the residents and the program in an efficient and effective fashion, with notable improvements compared to the prior approach.

  - This pilot study demonstrates a practical approach for preparing 4th year medical students for the expectations of Milestones Level One in obstetrics and gynecology. This curriculum can serve as a framework as medical schools and specific specialties work to meet the first steps of the ACGME’s Next Accreditation System.
■ Impact of remote monitoring and supervision (RMS) on resident training using new ACMGE milestone criteria. Can J Urol. 2015 Oct;22(5):7959-64. (PMID 26432965)
  - RMS in integrated endourology suites may enhance resident education and endoscopic training. The study demonstrated an increase in competency levels reported by residents trained using RMS.

  - The UPDATED audit is a milestone-based tool that can be used to assess written sign-out communication skills in internal medicine residency programs. Future work is planned to adapt the tool for use by senior supervisory residents to appraise sign-outs in real time.

■ Initial validity analysis of the emergency medicine milestones. Acad Emerg Med. 2015 Jul;22(7):838-44 (PMID: 26112031)
  - The EM milestones demonstrated validity and reliability as an assessment instrument for competency acquisition. EM residents can be assured that this evaluation process has demonstrated validity and reliability; faculty can be confident that the Milestones are a nationally standardized, objective measure of specialty-specific competency acquisition.

■ Assessing competency in physical medicine and rehabilitation residency: the ACGME milestones initiative. AMA J Ethics. 2015 June 1;17(6):515-20 (PMID: 26075978)
  - No conclusion –in process

  - Informatics-driven strategies for data assessment and processing represent feasible solutions to Milestones assessment and analysis, reducing the potential administrative burden for program directors, residents and staff.
WHAT’S NEXT
What’s Next

• Identify core activities
• Describe their functions
• Develop a curriculum

EPAs

Domains of Competence

Competencies Milestones

Presented by Partners in Medical Education, Inc. 2015
BARRIERS TO MILESTONES
What are your barriers to implementation?

1.
2.
3.
4.
Polling Question #3

What is your most significant barrier?

1. Scheduling CCC meetings
2. Lack of consistency among faculty evaluators
3. Lack of understanding of milestones by faculty
### Faculty Research Findings

1. Experienced faculty pay more attention to situation-specific cues, compile different pieces of information to create meaningful patterns of information.

2. Less experienced faculty pay more attention to specific and discrete aspects of performance.

3. Both experienced and inexperienced faculty contribute valuable insights into resident competence.

4. When required to substantiate ratings with concrete examples, no significant differences in a rating score between experienced and inexperienced faculty.

---

## Faculty Development Recommendations

<table>
<thead>
<tr>
<th>Deliberate practice to develop expertise in assessment</th>
<th>Include all participants in the assessment system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation to assessment system</td>
<td></td>
</tr>
<tr>
<td>Discussions to develop shared ‘mental models’ of competence, not just orientation to a form</td>
<td></td>
</tr>
<tr>
<td>Ongoing discussions: feedback from assessors to learners; feedback to assessors on their feedback</td>
<td></td>
</tr>
</tbody>
</table>

**FACULTY/ASSESSOR TRAINING**

Assessors’ insecurities
- *content knowledge;
- *knowledge about level of knowledge;
- *self-efficacy

Assessors’ perceptions of assessment tasks
- *tension between mentoring and assessing;
- *authenticity of assessment;
- *lack of clear standard

**GOAL is culture change: mutual respect and trust**

Counteract by providing additional assessment opportunities to build convincing basis for decisions

Counteract by incorporating two-way formative feedback as a common feature of all assessments (i.e., assessment as continuous learning)

---

Take-home Points

- Assessment for milestones requires observations and judgments of performance in the workplace.
  - Competence is not a stable trait and is inherently subjective.
  - There are no ‘valid and reliable’ tools for workplace assessment; focus on understanding the users of the tools and developing rater expertise in assessment through deliberate practice.

- Develop a program of assessment as part of curriculum planning.
Upcoming Live Webinars

PC Series
Thursday, December 10, 2015
12:00pm – 1:30pm EST

My Program Received Pre/Initial Accreditation. Now What?
Tuesday, January 12, 2016
12:00pm – 1:00pm EST

CLER Pathways II
Thursday January 28, 2016
12:00pm – 1:00pm EST

Resident Wellness Initiatives
Tuesday February 9, 2016
12:00pm – 1:00pm EST

On-Demand Webinars

Self-Study Visits

Introduction to GME for New Program Coordinators

Milestones & CCCs

GME Financing – The Basics

Single Accreditation System

The IOM Report

Institutional Requirements: What’s New?

Contact us today to learn how our Educational Passports can save you time & money!
724-864-7320

www.PartnersInMedEd.com

Presented by Partners in Medical Education, Inc. 2015
Partners in Medical Education, Inc. provides comprehensive consulting services to the GME community. For more information, contact us at:

Phone: 724-864-7320  
Fax: 724-864-6153  
Email: Info@PartnersInMedEd.com  

www.PartnersInMedEd.com