



ACGME

# Diagnostic Radiology: Milestones 2.0

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# Disclosure

- Full-time employee of ACGME



# Milestones 2.0

*Thank  
You!*

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Seng Ong

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Rocky Saenz

Mary Scanlon

Ely Wolin



# Milestones

- A milestone is a significant point in development
- Milestones follow an individual's developmental trajectory across a range of knowledge, skills, and attitudes



# Purposes and Implications

## ACGME

- **Accreditation** – continuous quality improvement (CQI)
- **Public Accountability** – focus nationally on important competency outcomes
- **Community of practice** for evaluation and research, with focus on continuous improvement

## Training Programs

- **Framework for CCC**
- **Guide curriculum development**
- **More explicit expectations of trainees**
- **Support better assessment**
- **Enhanced opportunities for early identification of under-performers**

## Milestones

## High Stakes Decisions

- **Not for Certification Board eligibility**
- **Research ONLY**
- ***Not intended for SMB use***

## Residents and Fellows

- **Encourage informed self-assessment and self-directed learning**
- **Better feedback**
- **Facilitate individualized learning plans**

***Milestones are a Formative Assessment Framework***



# Milestone Levels – A Brief Review

Level	Dreyfus Stage	Description
1	Novice	Rule driven; analytic thinking; little ability to prioritize information
2	Advanced beginner	Able to sort through rules based on experience; analytic and non-analytic for some common problems
3	Competent	Embraces appropriate level of responsibility; dual processing of reasoning for most common problems; can see big picture; Complex problems default to analytic reasoning. Performance can be exhausting.
4	Proficient	More fully developed non-analytic and dual process thinking; comfortable with evolving situations; able to extrapolate; situational discrimination; can live with ambiguity
5	Expert	Experience in subtle variations; distinguishes situations

STORY  
DEFINITION  
ALLUSIONS ANCIENT MEANING  
MUSICAL POETRY  
READER LIFE INCITING  
CONTEXTUAL ROLE LITERARY TOLD  
IDENTITY ARGUMENTATION  
NOVELS RESTITUTION  
SEQUENCE  
IMPOSITION CONTEXT BIOGRAPHIES NARRATIVES VERDICT SURVIVORSHIP  
COMPLEX EXPOSITION HISTORIANS FORM HUMANS DATA  
IN VETERATE DEVELOPMENT HISTORICAL ANALYTICAL COHERENT  
FICTIONALIZED EVIDENCE PROGRAMMATIC  
INQUIRY FOUNDATION ILLNESS MUSIC CULTURAL DEFINED  
FIGURAL NARRATION RESEARCHER CASE DENIED NARRATIVE  
EPISTEMOLOGICAL DIALECTIC REFERENCE SOCIAL WRITTEN ARGUED  
CONSTRUCTED LITERATURE SUGGESTIONS

# NARRATIVE



458 579 993 702 105 704 97 65 90 16 95 3  
220 599 932 423 52 84 52 142 25  
741 506 104 265 149 326 287 62  
423 093 585 704 263 549 326 287 62  
284 258 505 470 450 268 351 74 63 108  
582 585 054 270 450 268 351 74 63 108  
939 153 926 490 873 513 283 506 294 7  
549 278 108 754 106 675 452 05 400  
294 673 873 108 754 106 675 452 05 400  
842 541 323 525 682 374 986 721 256 15  
571 101 815 602 88 104 3 29 049 49 013  
205 160 815 602 88 104 3 29 049 49 013  
621 684 604 945 36 403 06 27 04 23 92 56 01 65 3



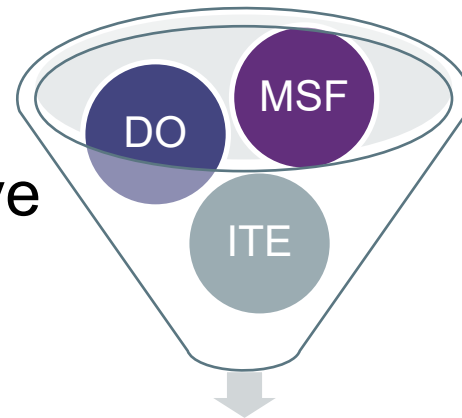
# Milestones as Assessments

Milestones were designed to be formative

A repository for other assessments

Not every Milestone can or should be evaluated on every rotation

Not everything that should be evaluated is included in the Milestones



**Milestone Evaluation**





# Milestones 2.0





# What have we learned?

- Too many subcompetencies
- Language too complex
- Too much in each Milestone set
- More people want to participate
- Validity evidence is available



# What have we learned?

- Too many subcompetencies
- Language too complex
- Too much in each Milestone set
- More people want to participate
- Validity evidence is available

TOO

MUCH!



# What changed?

Patient Care 2: Clinical Consultation				
Level 1	Level 2	Level 3	Level 4	Level 5
Uses electronic health records (EHRs) to obtain relevant clinical information	For emergent and routine radiology consultations, delineates the clinical question, obtains appropriate clinical information, and uses evidence-based imaging guidelines, recommends next steps, with assistance	For complex radiology consultations, delineates the clinical question, obtains appropriate clinical information, and uses evidence-based imaging guidelines, recommends next steps, with assistance	Manages radiology consultations independently, taking into consideration cost effectiveness and risk benefit analysis	Provides comprehensive radiology consultations at the expected level of a subspecialist
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:  Not Yet Completed Level 1   
 Not Yet Assessable

PCTS1: Consultant					
Has not Achieved Level 1	Level 1	Level 2	Level 3	Level 4	Level 5
	Uses established evidence-based imaging guidelines such as American College of Radiology (ACR) Appropriateness Criteria®  Appropriately uses the Electronic Health Record to obtain relevant clinical information	Recommends appropriate imaging of <u>common</u> * conditions independently  *As defined by the residency program	Recommends appropriate imaging of <u>uncommon</u> * conditions independently  *As defined by the residency program	Integrates current research and literature with guidelines, taking into consideration cost effectiveness and risk-benefit analysis, to recommend imaging	Participates in research, development, and implementation of imaging guidelines
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:					



# What changed?

Patient Care 4: Competence in Procedures				
Level 1	Level 2	Level 3	Level 4	Level 5
Discusses the indications for and assists with procedures	Performs procedures, with direct supervision	Competently performs procedures, with indirect supervision	Proficiently and independently performs procedures as expected of a general radiologist	Proficiently and independently performs procedures expected of a subspecialist
Discusses potential procedural complications	Recognizes complications of procedures and enlists help	Manages complications of procedures, with supervision	Anticipates and independently manages complications of procedures performed by a general radiologist	Proficiently and independently manages complications of procedures performed by a subspecialist
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b>				
Not Yet Completed Level 1 <input type="checkbox"/>				
Not Yet Assessable <input type="checkbox"/>				



# Supplemental Guide

- Document created to assist programs with Milestones assessment and the creation of a shared mental model within the Clinical Competency Committee
- Used as a companion tool to the Milestones to provide more in-depth information and explanation



# Parts of the Supplemental Guide

- Overall Intent
- Level Examples
- Assessment Tools
- Curriculum Mapping
- Notes and Resources



# Supplemental Guide

Patient Care 2: Clinical Consultation	
<b>Overall Intent:</b> To provide a high-quality clinical consultation	
Milestones	Examples
<b>Level 1</b> <i>Uses electronic health records (EHRs) to obtain relevant clinical information</i>	<ul style="list-style-type: none"> <li>Looks up glomerular filtration rate (GFR) prior to protocol a study with intravenous contrast</li> <li>Reviews relevant history and laboratory results for a patient with abdominal pain</li> </ul>
<b>Level 2</b> <i>For emergent and routine radiology consultations, delineates the clinical question, obtains appropriate clinical information, and uses evidence-based imaging guidelines, recommends next steps, with assistance</i>	<ul style="list-style-type: none"> <li>Determines that patient has right lower quadrant pain, refers to American College of Radiology (ACR) Appropriateness Criteria and suggests appropriate exam</li> <li>Determines that a pregnant patient has right lower quadrant pain, refers to ACR Appropriateness Criteria and suggests appropriate exam</li> </ul>
<b>Level 3</b> <i>For complex radiology consultations, delineates the clinical question, obtains appropriate clinical information, and uses evidence-based imaging guidelines, recommends next steps, with assistance</i>	<ul style="list-style-type: none"> <li>A primary care physician has a patient with cirrhosis and a liver mass on ultrasound; the resident provides consultation to address the next step in imaging</li> <li>Provides consultation for a patient with a pacemaker and requires magnetic resonance imaging (MRI)</li> </ul>
<b>Level 4</b> <i>Manages radiology consultations independently, taking into consideration cost effectiveness and risk benefit analysis</i>	<ul style="list-style-type: none"> <li>Independently recommends a scrotal ultrasound and tumor markers first on a <a href="#">consultation</a> for a lung biopsy on a 25-year-old male patient who presents with multiple lung masses on x-ray and a retroperitoneal mass on CT.</li> </ul>
<b>Level 5</b> <i>Provides comprehensive radiology consultations at the expected level of a subspecialist</i>	<ul style="list-style-type: none"> <li>Consults about a brain tumor and recommends advanced MRI in preparation for biopsy or surgery</li> </ul>
Assessment Models or Tools	<ul style="list-style-type: none"> <li>Case conferences</li> <li>Direct observation</li> <li>End-of-rotation evaluation</li> <li>Faculty evaluation</li> <li>Multisource feedback</li> <li>Report review of recommendations</li> </ul>
Curriculum Mapping	<ul style="list-style-type: none"> <li></li> </ul>
Notes or Resources	<ul style="list-style-type: none"> <li>Routine represents those situations in which a resident is expected to provide consultation prior to call/float</li> <li>Complex represents those situations in which the patient has a complex clinical history/presentation</li> <li>Consultations can be over the phone, in the reading room, at tumor boards, etc.</li> <li>American College of Radiology. ACR Appropriateness Criteria. <a href="https://www.acr.org/Clinical-Resources/ACR-Appropriateness-Criteria">https://www.acr.org/Clinical-Resources/ACR-Appropriateness-Criteria</a>. 2019.</li> </ul>





# Supplemental Guide: Mapping 1.0 to 2.0

Milestones 1.0	Milestones 2.0
PC1: Consultant	PC2: Clinical Consultation
PC2: Competence in Procedures	PC4: Competence in Procedures
No match	MK1: Diagnostic Knowledge
MK1: Protocol Selection and Optimization of Images	MK2: Physics
MK1: Protocol Selection and Optimization of Images	MK3: Protocol Selection and Optimization of Images
MK1: Protocol Selection and Optimization of Images	MK4: Imaging Technology and Image Acquisition
MK2: Interpretations of Examinations	PC3: Image Interpretation
No match	SBP1: Patient Safety
SBP1: Quality Improvement	SBP2: Quality Improvement
SBP2: Health Care Economics	SBP4: Physician Role in Health Care Systems
No match	SBP3: System Navigation for Patient-Centered Care
PBL11: Patient Safety: Contrast Agents; Radiation Safety; MR Safety; Sedation	SBP5: Contrast Safety Agent
	SBP6: Radiation Safety
	SBP7: MR Safety
No match	SBP8: Informatics
PBLI2: Self-directed Learning	PBLI2: Reflective Practice and Commitment to Personal Growth
PBLI3: Scholarly Activity	PBLI1: Evidence-Based and Informed Practice
PROF1: Professional Values and Ethics	PROF1: Professional Behavior and Ethical Principles
PROF1: Professional Values and Ethics	PROF2: Accountability/ Conscientiousness
No match	PROF3: Self-Awareness and Help Seeking
ICS1: Effective Communication with Patients, Families, and Caregivers	ICS1: Patient and Family-Centered Communication
ICS2: Effective Communication with Health Care Team	PC1: Reporting
	ICS2: Interprofessional and Team Communication
ICS2: Effective Communication with Health Care Team	ICS3: Communication within Health Care Systems



# Supplemental Guide

Review the Milestones and Supplemental guide with your CCC

Your CCC should do a shared mental model exercise

Program's expectations at each level

Assessment tool(s) you will use

Rotations each will be assessed





# Resources

- Are you aware of the Milestones resources available from ACGME?
- Resident-Fellow Guidebook for Milestones?
- Annual Milestones National Report?



# Accreditation Council for Graduate Medical Education

## LOG INTO

- [Accreditation Data System \(ADS\)](#)
- [ACGME Surveys](#)
- [Case Log System](#)

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- [Institution and Program Finder](#)

[What We Do](#)

[Designated Institutional Officials](#)

[Program Directors and Coordinators](#)

[Residents and Fellows](#)

[Meetings and Educational Activities](#)

[Data Collection Systems](#)

[Specialties](#)

## 2020 Annual Educational Conference

More than 4,000 members of the GME community have gathered in San Diego to discuss, share, and inform each other on the latest developments in medical education.

Read daily updates and more on the

# Meaning in Medicine

COMPASSION AND CONNECTION



## WHAT'S NEW

**Hahnemann University Hospital owners to pay resident/fellow tail insurance**  
MARCH 4, 2020

**ACGME honors graduate medical education community with annual awards**  
FEBRUARY 28, 2020

Read the latest issue of the *Journal of Graduate Medical Education*



Milestones Guidebook



Milestones Guidebook for Residents and Fellows



Clinical Competency Committee Guidebook



## Other Resources

Milestones FAQs



Use of Individual Milestones Data by External Entities for High Stakes Decisions



## Online Education

The ACGME's online mini-courses, *Introduction to Assessment*, and *Introduction to Milestones* are available in the ACGME's online learning portal: **Learn at ACGME**. These courses are the first in a series of online mini-courses being developed based on the ACGME's Developing Faculty Competencies in Assessment week-long

# Distance Learning





# Accreditation Council for Graduate Medical Education

**LOG INTO**

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Case Log Sys

Institution and

**What We Do**

Designated  
Institutional Officials

Program Directors  
and Coordinators

Residents and Fellows

Meetings and  
Educational Activities

Data Collection  
Systems

[Home](#) > [What We Do](#) > [Accreditation](#) > [Milestones](#) > [Milestones Engagement](#)

## Milestones Engagement

The ACGME plans to involve the public more in the next iteration of the Milestones. Opportunities to be involved range from completing surveys to becoming a member of a committee. E-mail any questions to [milestones@acgme.org](mailto:milestones@acgme.org).

### Call for Volunteers

There are no volunteer positions currently available.

### Feedback Surveys

There are no feedback surveys currently available.

### Quick Links

[Overview](#)

[Resources](#)

[Research and R](#)

[Engagement](#)





# MILESTONES

NATIONAL REPORT

2019

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# Here to help

## Milestones:

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