Emergency Medicine Milestones

The Accreditation Council for Graduate Medical Education



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The Milestones are designed only for use in evaluation of residents in the context of their participation in ACGME-accredited residency programs. The Milestones provide a framework for the assessment of the development of the resident in key dimensions of the elements of physician competence in a specialty or subspecialty. They neither represent the entirety of the dimensions of the six domains of physician competency, nor are they designed to be relevant in any other context.

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Work Group

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American Board of Emergency Medicine Association of American Medical Colleges Council of Residency Directors in Emergency Medicine Emergency Medicine Residents' Association Review Committee for Emergency Medicine

Understanding Milestone Levels and Reporting

This document presents the Milestones, which programs use in a semi-annual review of resident performance, and then report to the ACGME. Milestones are knowledge, skills, attitudes, and other attributes for each of the ACGME Competencies organized in a developmental framework. The narrative descriptions are targets for resident performance throughout their educational program.

Milestones are arranged into levels. Tracking from Level 1 to Level 5 is synonymous with moving from novice to expert resident in the specialty or subspecialty. For each reporting period, the Clinical Competency Committee will review the completed evaluations to select the milestone levels that best describe each learner's current performance, abilities, and attributes for each subcompetency.

These levels *do not* correspond with post-graduate year of education. Depending on previous experience, a junior resident may achieve higher levels early in his/her educational program just as a senior resident may be at a lower level later in his/her educational program. There is no predetermined timing for a resident to attain any particular level. Residents may also regress in achievement of their milestones. This may happen for many reasons, such as over scoring in a previous review, a disjointed experience in a particular procedure, or a significant act by the resident.

Selection of a level implies the resident substantially demonstrates the milestones in that level, as well as those in lower levels (see the diagram on page vi).

Additional Notes

Level 4 is designed as a graduation *goal* but *does not* represent a graduation *requirement*. Making decisions about readiness for graduation and unsupervised practice is the purview of the program director. Furthermore, Milestones 2.0 include revisions and changes that preclude using Milestones as a sole assessment in high-stakes decisions (i.e., determination of eligibility for certification or credentialing). Level 5 is designed to represent an expert resident whose achievements in a subcompetency are greater than the expectation. Milestones are primarily designed for formative, developmental purposes to support continuous quality improvement for individual learners, education programs, and the specialty. The ACGME and its partners will continue to evaluate and perform research on the Milestones to assess their impact and value.

Examples are provided for some milestones within this document. Please note: the examples are not the required element or outcome; they are provided as a way to share the intent of the element.

Some milestone descriptions include statements about performing independently. These activities must occur in conformity to ACGME supervision guidelines as described in the Program Requirements, as well as to institutional and program policies. For example, a resident who performs a procedure independently must, at a minimum, be supervised through oversight.

A Supplemental Guide is also available to provide the intent of each subcompetency, examples for each level, assessment methods or tools, and other available resources. The Supplemental Guide, like examples contained within the Milestones, is designed only to assist the program director and Clinical Competency Committee, and is not meant to demonstrate any required element or outcome.

Additional resources are available in the <u>Milestones</u> section of the ACGME website. Follow the links under "What We Do" at <u>www.acgme.org</u>.

The diagram below presents an example set of milestones for one sub-competency in the same format as the ACGME Report Worksheet. For each reporting period, a resident's performance on the milestones for each sub-competency will be indicated by selecting the level of milestones that best describes that resident's performance in relation to those milestones.

Level 1	Level 2	Level 3		Level 4	Level 5
Demonstrates an openness to performance data (feedback and other input)	Demonstrates an openness to performance data and uses it to develop personal and professional goals		nce data for g personal and	Using performance data, continually improves and measures the effectiveness of one's personal and professional goals	Acts as a role model for the development of personal and professional goals
	Identifies the factors that contribute to the gap(s) between expectations and actual performance	upon the f	and reflects factors that to gap(s) expectations and formance	Analyzes, reflects on, and institutes behavioral change(s) to narrow the gap(s) between expectations and actual performance	Coaches others on reflective practice
Comments:				Not Yet C	ompleted Level 1
Selecting a respo middle of a level i milestones in that levels have been demonstrated.	mplies that level and in lower		between level in lower levels demonstrated	sponse box on the line s indicates that milesto s have been substantia as well as some the higher level(s).	nes

Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth

Level 1	Level 2	Level 3	Level 4	Level 5
Detects when a patient's vital signs are abnormal	Identifies a patient who is unstable and requires immediate intervention	Identifies a patient with occult presentation that is at risk for instability or deterioration	Ascertains, in a timely fashion, when further clinical intervention for a patient is futile	
Assesses a patient's ABCs and performs basic interventions	Addresses the unstable vital signs and initiates advanced resuscitation procedures and protocols	Reassesses the patient's status after implementing a stabilizing intervention	Integrates hospital support services into the management of critically-ill or -injured patients	Manages patients with rare or complex presentations requiring emergency stabilization

Patient Care 2: Performa	nce of a Focused History a	nd Physical Exam		
Level 1	Level 2	Level 3	Level 4	Level 5
Elicits and communicates a reliable comprehensive patient history and performs a physical exam	Elicits and communicates a focused patient history and performs a focused physical exam that effectively address the patient's chief complaint and urgent issues	Prioritizes essential components of a patient history and physical exam, given a limited or dynamic circumstance	Using all potential sources of data, gathers those that are necessary for the beneficial management of patients	Models the effective use of a patient history and physical exam to minimize the need for further diagnostic testing
Comments:			Not Yet Co Not Yet As	ompleted Level 1

Patient Care 3: Diagnost	ic Studies			
Level 1	Level 2	Level 3	Level 4	Level 5
Determines the need for diagnostic studies	Selects appropriate diagnostic studies and reviews the risks, benefits, and contraindications of them	Given a limited or dynamic circumstance, prioritizes the diagnostic studies that are essential	Practices cost-effective ordering of diagnostic studies	Proposes alternatives when barriers exist to specific diagnostic studies
Demonstrates understanding of diagnostic testing principles	Interprets results of diagnostic testing (e.g., electrocardiogram (EKG), diagnostic radiology, point-of-care ultrasound)	Orders and performs diagnostic testing, considering the pre-test probability of disease and the likelihood of test results altering management	Considers the factors that impact post-test probability	In the context of the patient presentation, discriminates between subtle and/or conflicting diagnostic results
Comments:				ompleted Level 1

Patient Care 4: Diagnosis	S			
Level 1	Level 2	Level 3	Level 4	Level 5
Constructs a list of potential diagnoses based on the patient's chief complaint and initial assessment	Provides a prioritized differential diagnosis	Provides a diagnosis for common medical conditions and demonstrates the ability to modify a diagnosis based on a patient's clinical course and additional data	Provides a diagnosis for patients with multiple comorbidities or uncommon medical conditions, recognizing errors in clinical reasoning	Serves as a role model and educator to other learners for deriving diagnoses and recognizing errors in clinical reasoning
Comments:				ompleted Level 1

Patient Care 5: Pharmac	otherapy			
Level 1	Level 2	Level 3	Level 4	Level 5
Describes the different classifications of pharmacologic agents	Selects appropriate agent for therapeutic intervention	Considers array of drug therapy and selects appropriate agent based on mechanism of action and intended effect	Selects the appropriate agent based on patient preferences, allergies, cost, policies, and clinical guidelines	Participates in developing departmental and/or institutional policies on pharmacy and therapeutics
Consistently asks patients for drug allergies	Evaluates for potential adverse effects of pharmacotherapy and drug-to-drug interactions	Recognizes and acts upon common adverse effects and interactions	Recognizes and acts upon uncommon and unanticipated adverse effects and interactions	
Comments:			Not Yet Co Not Yet A	ompleted Level 1

Patient Care 6: Reassess	sment and Disposition			
Level 1	Level 2	Level 3	Level 4	Level 5
Describes basic resources available (e.g., follow-up care, rehabilitation, transfer centers)	Makes a disposition decision for patients with routine conditions needing minimal resources	Makes a disposition decision for patients with routine conditions, with resource utilization	Makes disposition decision for patients with complex conditions, with resource utilization	Participates in institutional committees to develop systems that enhance safe patient disposition and maximizes resources
Describes basic patient education plans	Educates patients on simple discharge and admission plans	Educates patients regarding diagnosis, treatment plan, medication review and primary care physician/consultant appointments	Educates patients on complex discharge and admission plans, including complex transfers	
Identifies the need for patient re-evaluation	Monitors that necessary diagnostic and therapeutic interventions are performed	Identifies which patients will require ongoing emergency department evaluation and evaluates the effectiveness of diagnostic and therapeutic interventions	Evaluates changes in clinical status during a patient's emergency department course	Participates in the development of protocols to enhance patient safety
Comments:				ompleted Level 1

Patient Care 7: Multitask	ing (Task-Switching)			
Level 1	Level 2	Level 3	Level 4	Level 5
Manages a single patient amidst distractions	Task-switches between different patients of similar acuity	Employs task-switching in an efficient manner to manage multiple patients of varying acuity and at varying stages of work-up	Employs task-switching in an efficient manner to manage the emergency department	Employs task switching in an efficient manner to manage the emergency department under high- volume or surge situations
Comments:			Not Yet C Not Yet A	ompleted Level 1

Level 1	Level 2	Level 3	Level 4	Level 5
Identifies indications for a procedure and pertinent anatomy and physiology	Assesses indications, risks, benefits, and alternatives and obtains informed consent in low- to moderate-risk situations	Assesses indications, risks, and benefits and weighs alternatives in high-risk situations	Acts to mitigate modifiable risk factors in high-risk situations	
Performs basic therapeutic procedures (e.g., suturing, splinting)	Performs and interprets basic procedures, with assistance	Performs and interprets advanced procedures, with guidance	Independently performs and interprets advanced procedures	Teaches advanced procedures and independently performs rare, time-sensitive procedures
	Recognizes common complications	Manages common complications	Independently recognizes and manages complex and uncommon complications	Performs procedural peer review

Medical Knowledge 1: Se	cientific Knowledge			
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates scientific knowledge of common presentations and conditions	Demonstrates scientific knowledge of complex presentations and conditions	Integrates scientific knowledge of comorbid conditions for complex presentations	Integrates scientific knowledge of uncommon, atypical, or complex comorbid conditions for complex presentations	Pursues and integrates new and emerging knowledge
Comments:				ompleted Level 1

Medical Knowledge 2: Tr	eatment and Clinical Reaso	oning		
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of treatment of common conditions	Demonstrates knowledge of treatment of patients with complex conditions	Demonstrates knowledge of the impact of patient factors on treatment	Demonstrates comprehensive knowledge of the varying patterns of disease presentation and alternative and adjuvant treatments of patients	Contributes to the body of knowledge on the varying patterns of disease presentation, and alternative and adjuvant treatments of patients
Identifies types of clinical reasoning errors within patient care, with substantial guidance	Identifies types of clinical reasoning errors within patient care	Applies clinical reasoning principles to retrospectively identify cognitive errors	Continually re-appraises one's clinical reasoning to prospectively minimize cognitive errors and manage uncertainty	Coaches others to recognize and avoid cognitive errors
Comments:			Not Yet Co Not Yet As	ompleted Level 1

Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of common patient safety events	Identifies system factors that lead to patient safety events	Participates in analysis of patient safety events (simulated or actual)	Conducts analysis of patient safety events and offers error prevention strategies (simulated or actual)	Actively engages teams and processes to modify systems for preventing patient safety events
Demonstrates knowledge of how to report patient safety events	Reports patient safety events through institutional reporting systems (simulated or actual)	Participates in disclosure of patient safety events to patients and families (simulated or actual)	Discloses patient safety events to patients and families (simulated or actual)	Acts as a role model and/or mentor for others in the disclosing of patien safety events

Systems-Based Practice	e 2: Quality Improvement			
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of basic quality improvement methodologies and metrics	Describes local quality improvement initiatives (e.g., emergency department throughput, testing turnaround times)	Participates in local quality improvement initiatives	Demonstrates the skills required for identifying, developing, implementing, and analyzing a quality improvement project	Creates, implements, and assesses quality improvement initiatives at the institutional or community level
Comments:			Not Yet C	ompleted Level 1

Systems-Based Practice	3: System Navigation for F	Patient-Centered Care		
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of care coordination	In routine clinical situations, effectively coordinates patient care integrating the roles of interprofessional teams	In complex clinical situations, effectively coordinates patient care by integrating the roles of the interprofessional teams	Serves as a role model, effectively coordinates patient-centered care among different disciplines and specialties	Analyzes the process of care coordination and leads in the design and implementation of improvements
Identifies key elements for safe and effective transitions of care and hand-offs	In routine clinical situations, enables safe and effective transitions of care/hand-offs	In complex clinical situations, enables safe and effective transitions of care/hand-offs	Serves as a role model, advocates for safe and effective transitions of care/hand-offs within and across health care delivery systems, including outpatient settings	Improves quality of transitions of care within and across health care delivery systems to optimize patient outcomes
Demonstrates knowledge of population and community health needs and disparities	Identifies specific population and community health needs and inequities for their local population	Effectively uses local resources to meet the needs of a patient population and community	Participates in changing and adapting practice to provide for the needs of specific populations	Leads innovations and advocates for populations and communities with health care inequities
Comments:			Not Yet C	ompleted Level 1

Systems-Based Practice	e 4: Physician Role in Healtl	n Care Systems		
Level 1	Level 2	Level 3	Level 4	Level 5
Identifies key components of the complex health care system (e.g., hospital, skilled nursing facility, finance, personnel, technology)	Describes how components of a complex health care system are interrelated, and how this impacts patient care	Discusses how individual practice affects the broader system (e.g., length of stay, readmission rates, clinical efficiency)	Manages various components of the complex health care system to provide efficient and effective patient care and the transition of care	Advocates for or leads systems change that enhances high value, efficient, and effective patient care, and the transition of care
Describes basic health payment systems, including (e.g., government, private, public, uninsured care) practice models	Delivers care with consideration of each patient's payment model (e.g., insurance type)	Engages patients in shared decision making, informed by each patient's payment models	Advocates for patient care needs with consideration of the limitations of each patient's payment model	Participates in health policy advocacy activities
	Identifies basic knowledge domains required for medical practice (e.g., information technology, legal, billing, coding, financial, and personnel aspects)	Demonstrates efficient integration of information technology required for medical practice (e.g., electronic health record, documentation required for billing and coding)	Describes core administrative knowledge needed for the transition to practice (e.g., contract negotiation, malpractice insurance, government regulation, compliance)	Analyzes individual practice patterns and professional requirements
Comments:			Not Yet C	ompleted Level 1

Practice-Based Learning	and Improvement 1: Evide	ence-Based and Informed P	Practice	
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates how to access and use available evidence	Articulates the clinical questions that are necessary to guide evidence-based care	Locates and applies the best available evidence, integrating it with patient preference, to the care of complex patients	Critically appraises and applies evidence even in the face of uncertainty and of conflicting evidence to guide care that is tailored to the individual patient	Coaches others to critically appraise and apply evidence for complex patients, and/or participates in the development of guidelines
Comments:			Not Yet C	ompleted Level 1

Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates an openness to performance data (feedback and other input)	Demonstrates an openness to performance data and uses it to develop personal and professional goals	Seeks and accepts performance data for developing personal and professional goals	Using performance data, continually improves and measures the effectiveness of one's personal and professional goals	Acts as a role model for the development of personal and professiona goals
	Identifies the factors that contribute to the gap(s) between expectations and actual performance	Analyzes and reflects upon the factors that contribute to gap(s) between expectations and actual performance	Analyzes, reflects on, and institutes behavioral change(s) to narrow the gap(s) between expectations and actual performance	Coaches others on reflective practice

Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates professional behavior in routine situations and in how to report professionalism lapses	Identifies and describes potential triggers and takes responsibility for professionalism lapses	Exhibits professional behavior in complex and/or stressful situations	Sets apart those situations that might trigger professionalism lapses and intervenes to prevent them in oneself and others	Coaches others when their behavior fails to meet professional expectations
Demonstrates knowledge of the ethical principles underlying patient care	Analyzes straightforward situations using ethical principles	Analyzes complex situations using ethical principles, and recognizes the need to seek help in managing and resolving them	Uses appropriate resources for managing and resolving ethical dilemmas	Identifies and addresses system-level factors that either induce or exacerbate ethical problems or impede their resolution
Comments:				

Level 1	Level 2	Level 3	Level 4	Level 5
In routine situations, performs tasks and responsibilities with appropriate attention to detail	In routine situations, performs tasks and responsibilities in a timely manner with appropriate attention to detail	In complex or stressful situations, performs tasks and responsibilities in a timely manner with appropriate attention to detail	Recognizes situations that might impact others' ability to complete tasks and responsibilities	Takes ownership of system outcomes
Responds promptly to requests and reminders to complete tasks and responsibilities	Takes responsibility for failure to complete tasks and responsibilities	Recognizes situations that might impact one's own ability to complete tasks and responsibilities in a timely manner, and describes strategies for ensuring timely task completion in the future	Proactively implements strategies to ensure that the needs of patients, teams, and systems are met	

Professionalism 3: Self-A	Awareness and Well-Being			
Level 1	Level 2	Level 3	Level 4	Level 5
Recognizes, with assistance, the status of one's personal and professional well-being	Independently recognizes the status of one's personal and professional well-being and engages in help-seeking behaviors	With assistance, proposes a plan to optimize personal and professional well-being	Independently develops a plan to optimize one's personal and professional well-being	Coaches others when their emotional responses or level of knowledge/skills fail to meet professional expectations
Comments:	intended to evaluate a reside			ompleted Level 1

This subcompetency is not intended to evaluate a resident's well-being. Rather, the intent is to ensure that each resident has the fundamental knowledge of factors that affect well-being, the mechanisms by which those factors affect well-being, and available resources and tools to improve well-being.

Interpersonal and Comm	unication Skills 1: Patient-	and Family-Centered Com	munication	
Level 1	Level 2	Level 3	Level 4	Level 5
Uses language and non- verbal behavior to reflect respect and establish rapport while accurately communicating one's own role within the health care system	Establishes a therapeutic relationship in straightforward encounters with patients using active listening and clear language	Establishes a therapeutic relationship in challenging patient encounters	Easily establishes therapeutic relationships with patients, regardless of the complexity of cases	Acts as a mentor to others in situational awareness and critical self-reflection with the aim of consistently developing positive therapeutic relationships and minimizing communication barriers
Identifies common barriers to effective communication (e.g., language, disability)	Identifies complex barriers to effective communication (e.g., health literacy, cultural, technology)	When prompted, reflects on one's personal biases, while attempting to minimize communication barriers	Independently recognizes personal biases of patients, while attempting to proactively minimize communication barriers	
With insight gained through an assessment of patient/family expectations coupled with an understanding of their health status and treatment options, adjusts one's communication strategies	Organizes and initiates communication with a patient/family by clarifying expectations and verifying one's understanding of the clinical situation	With guidance, sensitively and compassionately delivers medical information to patients, elicits patient/family values, learns their goals and preferences, and acknowledges uncertainty and conflict	Independently uses shared decision making with a patient/family to align their values, goals, and preferences with potential treatment options and ultimately to achieve a personalized care plan	Acts as a role model to exemplify shared decision making in patient/family communication that embodies various degrees of uncertainty/conflict
Comments:			Not Yet C	ompleted Level 1

Level 1	Level 2	Level 3	Level 4	Level 5
Respectfully requests a consultation	Clearly and concisely requests a consultation or other resources for patient care	Integrates recommendations made by various members of the health care team to optimize patient care	Acts as a role model for flexible communication strategies, i.e., those strategies that value input from all health care team members and that resolve conflict when needed	
Uses language that reflects the values all members of the health care team	Communicates information effectively with all health care team members	Engages in active listening to adapt to the communication styles of the team	Uses effective communication to lead or manage health care teams	Acts as a role model for communication skills necessary to lead or manage health care teams
Receives feedback in a respectful manner	Solicits feedback on performance as a member of the health care team	Communicates concerns and provides feedback to peers and learners	Communicates feedback and constructive criticism to superiors	In complex situations, facilitates regular health care team-based feedback

Level 1	Level 2	Level 3	Level 4	Level 5
Accurately documents information in the patient's record and safeguards the patient's personal information	Demonstrates organized diagnostic and therapeutic reasoning through the patient record in a timely manner	Concisely reports diagnostic and therapeutic reasoning in the patient record	Communicates clearly, concisely, and contemporaneously in an organized written form, including anticipatory guidance	Models feedback to improve others' written communication
Communicates through appropriate channels as required by institutional policy (e.g., patient safety reports, cell phone/pager usage)	Respectfully communicates concerns about the system	Uses appropriate channels to offer clear and constructive suggestions for improving the system	Initiates difficult conversations with appropriate stakeholders to improve the system	Facilitates dialogue regarding systems issues among larger community stakeholders (e.g., institution, the health care system, and/or the field)
Comments:				