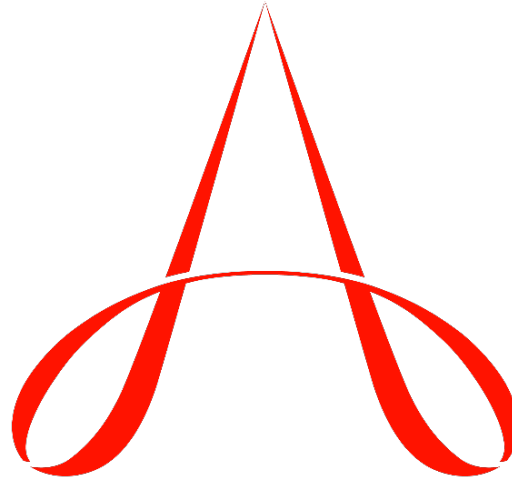


Infectious Disease Milestones

The Accreditation Council for Graduate Medical Education



ACGME

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Second Revision: April 2021
First Revision: October 2014

Infectious Disease Milestones

The Milestones are designed only for use in evaluation of fellows in the context of their participation in ACGME-accredited residency or fellowship programs. The Milestones provide a framework for the assessment of the development of the fellow in key dimensions of the elements of physician competency 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.

Infectious Disease Milestones

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American Board of Internal Medicine

ACGME Review Committee for Internal Medicine

Infectious Diseases Society of America

Understanding Milestone Levels and Reporting

This document presents the Milestones, which programs use in a semi-annual review of fellow 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/fellow 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 fellow 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 fellow may achieve higher levels early in his/her educational program just as a senior fellow 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. Fellows 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/fellow.

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

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 fellow 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.

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 fellow 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 [Milestones](#) section of the ACGME website. Follow the links under “What We Do” at www.acgme.org.

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

Interpersonal and Communication Skills 3: Communication within Health Care Systems				
Level 1	Level 2	Level 3	Level 4	Level 5
Accurately documents comprehensive and current information	Documents encounter, including clinical reasoning in an organized manner	Documents encounter through prioritized and concise yet thorough notes	Concisely documents clinical reasoning, including anticipatory guidance, while satisfying institutional billing needs and compliance	Coaches others in accurately documenting diagnostic and therapeutic reasoning
Communicates using formats specified by institutional policy to safeguard patient personal health information	Selects direct and indirect forms of communication based on context, with guidance	Independently selects direct and indirect forms of communication based on context	Models effective written and verbal communication	Guides departmental or institutional communication policies and procedures
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐				

Selecting a response box in the middle of a level implies that milestones in that level and in lower levels have been substantially demonstrated.

Selecting a response box on the line in between levels indicates that milestones in lower levels have been substantially demonstrated as well as **some** milestones in the higher level(s).

Patient Care 1: History and Physical Examination				
Level 1	Level 2	Level 3	Level 4	Level 5
Acquires a foundational history for common infectious diseases and syndromes	Acquires a complete history, including specific host and environmental factors	Acquires a detailed history incorporating pertinent supplemental information	Acquires a tailored history that incorporates epidemiology, past clinical data, and nuances specific for suspected pathogens or syndromes	Serves as a role model in obtaining a history that identifies subtle details and resolves ambiguity in the patient history
Performs a foundational physical examination	Performs an examination that elicits common or straightforward infectious diseases and syndromes	Performs an examination that elicits uncommon or complicated infectious diseases and syndromes	Performs a tailored examination that elicits subtle findings of infectious diseases and syndromes	Serves as a role model who has mastered the art of examination that helps in making a definitive diagnosis
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐ Not Yet Assessable ☐				

Patient Care 2: Management of Patients with Possible and Proven Infectious Diseases				
Level 1	Level 2	Level 3	Level 4	Level 5
Develops an initial assessment for patients with low-complexity conditions	Develops initial and follow-up management plans for patients with low-complexity conditions	Develops an initial and follow-up plan for patients with moderate-complexity conditions and adjusts the plan over the course of clinical care	Develops a comprehensive management plan, including contingency plans for patients with complex conditions	Develops customized management plans for all patients, regardless of the complexity of the condition, and incorporating diagnostic uncertainty and cost effectiveness
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐ Not Yet Assessable ☐				

Patient Care 3: Consultative Care				
Level 1	Level 2	Level 3	Level 4	Level 5
Respectfully responds to a consultation request and conveys recommendations, with supervision	Identifies and clarifies the clinical questions and recommendations for the consultation	Seeks and integrates input from different members of the health care team and provides recommendations to the primary team in a clear and timely manner	Provides comprehensive and prioritized recommendations, including assessment and rationale to all necessary health care team members	Leads the health care team in the provision of effective consultative services across the spectrum of disease complexity and acuity
Recognizes consult acuity and urgency, with supervision	Recognizes consult acuity and urgency independently	Prioritizes workflow in response to consult acuity and urgency	Mobilizes resources to provide care in an urgent situation	
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐ Not Yet Assessable ☐				

Patient Care

The fellow is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in the training program. He or she is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice that includes the delivery of safe, effective, patient-centered, timely, efficient, and equitable care.

_____ Yes _____ No _____ Conditional on Improvement

Medical Knowledge 1: Diagnostic Reasoning				
Level 1	Level 2	Level 3	Level 4	Level 5
Integrates patient-specific information to generate a limited differential diagnosis	Provides a limited prioritized differential diagnosis using supporting rationale	Formulates a prioritized differential diagnosis; demonstrates the ability to modify a diagnosis based on a patient's clinical course and additional data	Formulates a differential diagnosis to include atypical presentations and uncommon disorders; recognizes sources of diagnostic error	Formulates a differential diagnosis to include newly recognized and emerging conditions
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐ Not Yet Assessable ☐				

Medical Knowledge 2: Diagnostic Evaluation				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates foundational knowledge of diagnostic evaluation for pathogens	Applies knowledge of diagnostic evaluation for common pathogens	Applies knowledge of indications for diagnostic evaluation of uncommon pathogens, antimicrobial resistance, and therapeutic drug monitoring	Interprets diagnostic evaluations for pathogens and clinical syndromes, considering performance characteristics, limitations, and nuances	Teaches others the nuances of directed diagnostic evaluation for pathogens and clinical syndromes
Demonstrates foundational knowledge of diagnostic evaluation for clinical syndromes	Applies knowledge of indications for diagnostic evaluation for common clinical syndromes	Applies diagnostic testing in consideration of risks, benefits, and consequences for clinical syndromes		
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐ Not Yet Assessable ☐				

Medical Knowledge 3: Treatment and Therapeutics including Anti-Infectives, Immunoprophylaxis, and Adjunctive Therapies				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates foundational knowledge of common anti-infectives, including spectrum of activity, contraindications, and clinical indications	Demonstrates knowledge of common anti-infectives, immunoprophylaxis, and adjunctive therapies, including dosing, monitoring, and adverse effects	Demonstrates knowledge of common anti-infectives, immunoprophylaxis, and adjunctive therapies, including resistance mechanisms, drug interactions, and relative effectiveness	Demonstrates knowledge of uncommon anti-infectives, immunoprophylaxis, and adjunctive therapies, including dosing, monitoring, resistance mechanisms, drug interactions, adverse effects, and relative effectiveness	Teaches others the nuances of anti-infectives, immunoprophylaxis, and adjunctive therapies
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐ Not Yet Assessable ☐				

Medical Knowledge 4: Infection Control/Prevention, Antimicrobial Stewardship, and Epidemiology				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates foundational knowledge of the principles of infection prevention	Implements infection prevention measures for common situations	Implements infection prevention measures for uncommon situations	Teaches infection prevention practices to health care providers, patients, and the medical community	Demonstrates innovation and leadership in infection prevention practices
Demonstrates foundational knowledge of the principles of antimicrobial stewardship	Implements antimicrobial stewardship practices for common situations	Implements antimicrobial stewardship practices for uncommon situations	Teaches health care providers, patients, and the medical community antimicrobial stewardship practices	Demonstrates innovation and leadership in antimicrobial stewardship practices
	Demonstrates basic knowledge of the principles of epidemiology	Practices the basic principles of epidemiology, including identifying and responding to common epidemiological events	Teaches on the epidemiological impact of infectious diseases on population health	Leads a team in identifying and responding to epidemiological events
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐ Not Yet Assessable ☐				

Medical Knowledge 5: Pathophysiology and Foundational Science				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates basic knowledge of pathophysiological and foundational science pertaining to common infectious diseases and host response	Demonstrates advanced knowledge of pathophysiological and foundational science concepts pertaining to common infectious diseases and host response	Applies advanced knowledge of pathophysiological and foundational science concepts pertaining to common infectious diseases and host response	Applies advanced knowledge of pathophysiological and foundational science concepts pertaining to uncommon infectious diseases and host response	Applies comprehensive knowledge of pathophysiology and foundational science pertaining to new and emerging infectious diseases and issues of host response
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐ Not Yet Assessable ☐				

Medical Knowledge 6: Scholarly Activity				
Level 1	Level 2	Level 3	Level 4	Level 5
Identifies areas worthy of scholarly activity	Plans a scholarly activity	Implements scholarly activity	Disseminates independent scholarly work, locally or regionally, that has generated new medical knowledge, educational programs, or process improvement	Disseminates independent scholarly work, nationally or internationally, that has generated new medical knowledge, educational programs, or process improvement
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐ Not Yet Assessable ☐				

Medical Knowledge

The fellow is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in the training program. He or she is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice that includes the delivery of safe, effective, patient-centered, timely, efficient, and equitable care.

___ Yes ___ No ___ Conditional on Improvement

Systems-Based Practice 1: Patient Safety				
Level 1	Level 2	Level 3	Level 4	Level 5
Identifies patient safety events and discloses them to leadership, patients, and/or patients' family members	Analyzes the factors that contribute to patient safety events	Offers prevention strategies to mitigate patient safety events	Participates in efforts to modify systems to prevent patient safety events	Leads efforts to modify systems to prevent patient safety events
Demonstrates knowledge of how to report patient safety events	Reports patient safety events using the health system's reporting mechanism			
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐				

Systems-Based Practice 2: Quality Improvement				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates basic knowledge of quality improvement methodologies and metrics	Identifies opportunities for quality improvement projects	Participates in quality improvement projects	Demonstrates the skills required to identify, develop, implement, and analyze a quality improvement project	Leads quality improvement projects
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐				

Systems-Based Practice 3: Coordination and Transitions of Care				
Level 1	Level 2	Level 3	Level 4	Level 5
Identifies key elements for safe and effective transitions and coordination of care and hand-offs	Performs safe and effective transitions and coordination of care and hand-offs in routine clinical situations	Performs safe and effective transitions and coordination of care/hand-offs in complex clinical situations	Role models and advocates for safe and effective transitions and coordination of care/hand-offs within and across health care delivery systems	Improves quality of transitions and coordination of care within and across health care delivery systems to optimize patient outcomes
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐				

Systems-Based Practice 4: Population Health				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of population and community health needs and disparities	Identifies specific population and community health needs and inequities for the local population	Identifies local resources effectively to meet the needs of a patient population and community	Uses local resources effectively to meet the needs of a patient population and community	Leads innovations and advocates for populations and communities with health care inequities
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐				

Systems-Based Practice 5: Physician Role in Health Care Systems				
Level 1	Level 2	Level 3	Level 4	Level 5
Identifies key components of the health care system	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	Manages various components of the complex health care system to provide efficient and effective patient care	Advocates for or leads systems change that enhances high-value, efficient, and effective patient care
Describes basic health payment systems	Delivers care with consideration of each patient's payment model	Engages with 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	Actively engaged in influencing health policy through advocacy activities at the local, regional, or national level
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐				

Systems-Based Practice

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_____ Yes _____ No _____ Conditional on Improvement

Practice-Based Learning and Improvement 1: Evidence-Based and Informed Practice				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates how to access and use available evidence for patient care and elicits patient preferences and values to guide care	Locates and applies the best available evidence, integrated with patient values and preferences, to the care of patients with common conditions	Locates and applies the best available evidence, integrated with patient values and preference, to the care of patients with complex conditions	Critically appraises conflicting or ambiguous evidence to guide individualized patient care	Mentors others to critically appraise and apply evidence
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐				

Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth				
Level 1	Level 2	Level 3	Level 4	Level 5
Identifies personal and professional development goals and recognizes gaps between expectations and actual performance	Demonstrates openness to performance data (feedback and other input), and analyzes and reflects on gaps to inform goals	Seeks performance data episodically, with adaptability and humility, and institutes behavioral changes to narrow the gaps between expectations and actual performance	Intentionally seeks performance data consistently with adaptability and humility, considering alternatives in narrowing the gaps between expectations and actual performance	Role models commitment to self-improvement and coaches others on reflective practice
Actively seeks opportunities to improve	Designs and implements a learning plan, with prompting	Independently creates and implements a learning plan	Uses performance data to measure the effectiveness of the learning plan and improves it when necessary	Facilitates the design and implementation of learning plans for others
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐				

Practice-Based Learning and Improvement

The fellow is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in the training program. He or she is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice that includes the delivery of safe, effective, patient-centered, timely, efficient, and equitable care.

_____ Yes _____ No _____ Conditional on Improvement

Professionalism 1: Professional Behavior				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates professional behavior in routine situations	Identifies and describes potential personal triggers for professionalism lapses and takes responsibility for one's own professionalism lapses	Demonstrates a pattern of professional behavior in complex or stressful situations; describes when and where to report professionalism lapses	Recognizes situations that may trigger professionalism lapses and intervenes to prevent lapses in oneself and others	Coaches others when their behavior fails to meet professional expectations
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐				

Professionalism 2: Ethical Principles				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of ethical principles	Applies ethical principles to address straightforward situations	Analyzes complex situations using ethical principles and identifies the need to seek help in addressing complex situations	Uses appropriate resources for managing and resolving ethical dilemmas as needed	Identifies and seeks to address system-level factors that induce or exacerbate ethical problems or impede their resolution
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐				

Professionalism 3: Accountability/Conscientiousness				
Level 1	Level 2	Level 3	Level 4	Level 5
Performs tasks and responsibilities with prompting	Recognizes factors that may impact one's own ability to complete tasks and responsibilities in a timely manner and describes strategies for improvement	Performs tasks and responsibilities in a timely manner 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	Creates strategies to enhance others ability to complete administrative tasks and patient care efficiently
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐				

Professionalism 4: Well-Being				
Level 1	Level 2	Level 3	Level 4	Level 5
Recognizes the importance of addressing personal and professional well-being	Lists available resources for personal and professional well-being Describes institutional resources that are meant to promote well-being	With assistance, proposes a plan to promote personal and professional well-being Recognizes which institutional factors affect well-being	Independently develops a plan to promote personal and professional well-being Describes institutional factors that positively and/or negatively affect well-being	Creates institutional level interventions that promote colleagues' well-being Describes institutional programs designed to examine systemic contributors to burnout
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐				

This subcompetency is not intended to evaluate a fellow's well-being. Rather, the intent is to ensure that each fellow 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.

Professionalism

The fellow is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in the training program. He or she is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice that includes the delivery of safe, effective, patient-centered, timely, efficient, and equitable care.

_____ Yes _____ No _____ Conditional on Improvement

Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication				
Level 1	Level 2	Level 3	Level 4	Level 5
Uses clear language and non-verbal behavior to demonstrate respect and establish rapport Identifies common barriers to effective communication	Establishes and maintains a therapeutic relationship with the patient using active listening and clear language in straightforward encounters Identifies complex barriers to effective communication	Establishes and maintains a therapeutic relationship using effective communication behaviors in challenging patient encounters Adjusts communication strategies based on identified barriers, incorporating patient and caregiver expectations and goals of care	Establishes and maintains therapeutic relationships using shared decision making, regardless of complexity Proactively improves communication by addressing barriers, including patient and personal biases	Serves as a role model in establishing respectful, culturally sensitive therapeutic relationships while mitigating communication barriers and engaging in critical self-reflection
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐				

Interpersonal and Communication Skills 2: Interprofessional and Team Communication				
Level 1	Level 2	Level 3	Level 4	Level 5
Communicates information effectively in a manner that demonstrates respect for all members of the interprofessional team	Solicits feedback on performance as a member of the health care team and adjusts communication approach to team needs, promoting open and safe communication	Facilitates interprofessional team communication to reconcile conflict and provides constructive feedback to team members	Leads and facilitates regular interdisciplinary discussions, including in complex and challenging situations	Models and coaches flexible communication strategies that facilitate excellence in interprofessional teamwork
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐				

Interpersonal and Communication Skills 3: Communication within Health Care Systems				
Level 1	Level 2	Level 3	Level 4	Level 5
Accurately documents comprehensive and current information	Documents encounter, including clinical reasoning in an organized manner	Documents encounter through prioritized and concise yet thorough notes	Concisely documents clinical reasoning, including anticipatory guidance, while satisfying institutional billing needs and compliance	Coaches others in accurately documenting diagnostic and therapeutic reasoning
Communicates using formats specified by institutional policy to safeguard patient personal health information	Selects direct and indirect forms of communication based on context, with guidance	Independently selects direct and indirect forms of communication based on context	Models effective written and verbal communication	Guides departmental or institutional communication policies and procedures
☐	☐	☐	☐	☐
Comments: Not Yet Completed Level 1 ☐				

Interpersonal and Communication Skills

The fellow is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in the training program. He or she is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice that includes the delivery of safe, effective, patient-centered, timely, efficient, and equitable care.

_____ Yes _____ No _____ Conditional on Improvement

Overall Clinical Competence

This rating represents the assessment of the fellow's development of overall clinical competence during this year of training:

____ Superior: Far exceeds the expected level of development for this year of training

____ Satisfactory: Always meets and occasionally exceeds the expected level of development for this year of training

____ Conditional on Improvement: Meets some developmental milestones but occasionally falls short of the expected level of development for this year of training. An improvement plan is in place to facilitate achievement of competence appropriate to the level of training.

____ Unsatisfactory: Consistently falls short of the expected level of development for this year of training.