Pediatric Infectious Diseases Milestones

The Accreditation Council for Graduate Medical Education



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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.

Pediatric Infectious Diseases Milestones Work Group

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American Board of Pediatrics

Association of Pediatric Program Directors

Council of Pediatric Subspecialties

Pediatric Infectious Diseases Society Training Program Committee

ACGME Review Committee for Pediatrics

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 fellows' 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 the educational program just as a senior fellow may be at a lower level later in the educational program. There is no predetermined timing for a fellow 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 fellow.

Selection of a level implies the fellow 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 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.

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.

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.

Supplemental Guides and other resources are available on the Milestones page of each specialty section of the ACGME website. On www.acgme.org, choose the applicable specialty under the "Specialties" menu, then select the "Milestones" link in the lower navigation bar.

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 fellow's performance on the milestones for each sub-competency will be indicated by selecting the level of milestones that best describes that fellow's performance in relation to those milestones.

Systems-Based Practice 1: Patient Safety				
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 to prevent 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 patients' families (simulated or actual)	Discloses patient safety events to patients and patients' families (simulated or actual)	Role models or mentors others in the disclosure of patient safety events
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 between levels indicate in lower levels have be demonstrated as well milestones in the high	tes that milestones een substantially as some	

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 history that incorporates epidemiology, past clinical data, and nuances specific for age, immune status, and exposures	Serves as a role model in obtaining a history that identifies subtle details and resolves ambiguity in the patient history
Performs a foundational, developmentally appropriate 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: Organization and Prioritization of Patient Care				
Level 1	Level 2	Level 3	Level 4	Level 5
Organizes patient care tasks, with assistance	Organizes routine patient care tasks but needs assistance for patients with complex disease; recognizes urgent or emergent issues	Prioritizes and triages patient care tasks with efficiency; anticipates and responds to urgent and emergent issues	Prioritizes and delegates patient care responsibilities, including contingency planning, even when patient volume and complexity approach the capacity of the individual or facility	Serves as a role model and coach for organizing, prioritizing, and managing patient care tasks
Comments: Not Yet Completed Level 1 Not Yet Assessable				

Patient Care 3: Diagnostic Reasoning				
Level 1	Level 2	Level 3	Level 4	Level 5
Integrates limited patient data to generate a narrow differential diagnosis	Formulates a differential diagnosis using detailed patient-specific data	Formulates a prioritized differential diagnosis and demonstrates the ability to modify a diagnosis based on a patient's clinical course and additional data	Formulates a tailored differential diagnosis to include atypical presentations and uncommon or newly emerging disorders; recognizes and avoids sources of diagnostic error	Role models and coaches diagnostic reasoning and navigating diagnostic uncertainty
Comments: Not Yet Completed Level 1 Not Yet Assessable				

Patient Care 4: Consultative Care				
Level 1	Level 2	Level 3	Level 4	Level 5
Identifies the clinical questions, with assistance	Clarifies the clinical questions; provides recommendations to the primary team, with assistance	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, rationale, and anticipatory guidance to all relevant health care team members	Leads the health care team in the provision of effective consultative services across the spectrum of disease complexity and acuity
Comments: Not Yet Completed Level 1 Not Yet Assessable				

Patient Care 5: Management of Patients with Possible and Proven Infectious Diseases				
Level 1	Level 2	Level 3	Level 4	Level 5
Develops an initial management plan for patients with low-complexity conditions, with assistance	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 tailored management plans for all patients, regardless of the complexity of the condition, and incorporates diagnostic uncertainty
Comments: Not Yet Completed Level 1 Not Yet Assessable				

Medical Knowledge 1: Pathophysiology and Foundational Science				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates basic knowledge of pathophysiology and foundational science of common infectious diseases	Demonstrates advanced knowledge of pathophysiology and foundational science of common infectious diseases and host response	Applies advanced knowledge of pathophysiology and foundational science to common infectious diseases and host response	Applies advanced knowledge of pathophysiology and foundational science to uncommon, new, and emerging infectious diseases and host response	Serves as a peer expert for the application of advanced knowledge of pathophysiology and foundational science to infectious diseases and host response
Comments: Not Yet Completed Level 1 Not Yet Assessable				

Medical Knowledge 2: Diagnostic Evaluation and Stewardship (consideration of priorities, risks, benefits, costs, and consequences)				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates foundational knowledge of diagnostic evaluation for pathogens and clinical syndromes	Demonstrates basic knowledge of diagnostic evaluation and stewardship, and interpretation of results to common pathogens and clinical syndromes	Applies knowledge of diagnostic evaluation and stewardship, and interpretation of results to uncommon pathogens and clinical syndromes	Applies advanced knowledge of diagnostic evaluation and stewardship, including performance characteristics and limitations, and interpretation of results to a broad spectrum of clinical scenarios	Serves as a peer expert for diagnostic evaluations and stewardship
Comments: Not Yet Completed Level 1 Not Yet Assessable				

Medical Knowledge 3: Treatments Including Source Control, Anti-Infectives, Immunoprophylaxis, and Adjunctive Therapies				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates basic knowledge of common anti-infectives, including dosing, spectrum of activity, contraindications, and clinical indications	Demonstrates knowledge of common treatments, including consideration of pharmacokinetics and pharmacodynamics	Applies knowledge of treatments to straightforward patient scenarios	Applies knowledge of treatments to complex patient scenarios	Serves as a peer expert for application of treatments to all patient scenarios
Comments: Not Yet Completed Level 1 Not Yet Assessable				

Medical Knowledge 4: Infection Control/Prevention and Epidemiology				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates basic knowledge of the principles of infection prevention and epidemiology	Applies concepts of infection prevention measures and epidemiology to common clinical scenarios	Applies knowledge of infection prevention measures and epidemiology to uncommon clinical scenarios	Serves as a resource to other health care practitioners and patients regarding infection prevention practices and epidemiology	Demonstrates leadership in infection prevention practices and/or responding to epidemiological events
Comments: Not Yet Completed Level 1 Not Yet Assessable				

Medical Knowledge 5: Public Health					
Level 1	Level 2	Level 3	Level 4	Level 5	
Identifies examples of public health agencies	Recognizes the public health impact of infectious disease and identifies resources	Applies public health guidance to individual patients	Applies public health guidance to specific situations in institutions or community settings	Serves as a resource for public health guidance in institutions or communities	
Comments:			Not Yet Co Not Yet As	ompleted Level 1	

Medical Knowledge 6: Antimicrobial Stewardship				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates basic knowledge of the principles of antimicrobial stewardship and local antibiograms	Implements antimicrobial stewardship recommendations for routine situations	Implements antimicrobial stewardship recommendations for complex situations	Serves as a resource to health care practitioners, patients, and the community for antimicrobial stewardship concepts	Demonstrates leadership in antimicrobial stewardship initiatives
Comments: Not Yet Completed Level 1 Not Yet Assessable				

Systems-Based Practice 1: Patient Safety				
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 to prevent 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)	Role models or mentors others in the disclosure of patient safety events
Comments: Not Yet Completed Level 1				

Systems-Based Practice 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., community vaccination rate, infection rate)	Participates in local quality improvement initiatives	Demonstrates the skills required to identify, develop, implement, and analyze a quality improvement project	Creates, implements, and assesses quality improvement initiatives at the institutional or community level	
Comments:			Not Yet C	ompleted Level 1	

Level 1	e 3: System Navigation for I	Level 3	Level 4	Level 5
Lists the various interprofessional individuals involved in the patient's care coordination	Coordinates care of patients in routine clinical situations, incorporating interprofessional teams with consideration of patient and family needs	Coordinates care of patients in complex clinical situations, effectively utilizing the roles of interprofessional teams, and incorporating patient and family needs and goals	Coordinates interprofessional, patient-centered care among different disciplines and specialties, actively assisting families in navigating the health care system	Coaches others in interprofessional, patient-centered care coordination
Comments:			Not Yet C	Completed Level 1

Systems-Based Practice 4: System Navigation for Patient-Centered Care – Transitions in Care				
Level 1	Level 2	Level 3	Level 4	Level 5
Uses a standard template for transitions of care/hand-offs	Adapts a standard template, recognizing key elements for safe and effective transitions of care/hand-offs in routine clinical situations	Performs safe and effective transitions of care/hand-offs in complex clinical situations, and ensures closed-loop communication	Performs and advocates for safe and effective transitions of care/hand-offs within and across health care delivery systems, including transitions to adult care	Coaches others in improving transitions of care within and across health care delivery systems to optimize patient outcomes
Comments: Not Yet Completed Level 1				

Systems-Based Practice 5: Population and Community Health					
Level 1	Level 2	Level 3	Level 4	Level 5	
Demonstrates awareness of population and community health needs and disparities	Identifies specific population and community health needs and disparities; identifies local resources	Uses local resources effectively to meet the needs and reduce health disparities of a patient population and community	Adapts practice to provide for the needs of and reduce health disparities of a specific population	Advocates at the local, regional, or national level for populations and communities with health care disparities	
Comments: Not Yet Completed Level 1					

Systems-Based Practice 6: Physician Role in Health Care Systems				
Level 1	Level 2	Level 3	Level 4	Level 5
Engages with patients and other providers in discussions about cost-conscious care and key components of the health care delivery system	Identifies the relationships between the delivery system and cost- conscious care and the impact on the patient care	Discusses the need for changes in clinical approaches based on evidence, outcomes, and cost-effectiveness to improve care for patients and families	Advocates for the promotion of safe, quality, and high-value care	Coaches others to promote safe, quality, and high-value care across health care systems
Comments: Not Yet Completed Level 1				

Practice-Based Learning and Improvement 1: Evidence-Based and Informed Practice				
Level 1	Level 2	Level 3	Level 4	Level 5
Develops an answerable clinical question and demonstrates how to access available evidence, with guidance	Independently articulates clinical question and accesses available evidence	Locates and applies the evidence, integrated with patient preference, to the care of patients	Critically appraises and applies evidence, even in the face of uncertainty and conflicting evidence to guide care tailored to the individual patient	Coaches others to critically appraise and apply evidence for complex patients
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
Participates in feedback sessions	Demonstrates openness to feedback and performance data	Seeks and incorporates feedback and performance data episodically	Seeks and incorporates feedback and performance data consistently	Role models and coaches others in seeking and incorporating feedback and performance data
Develops personal and professional goals, with assistance	Designs a learning plan based on established goals, feedback, and performance data, with assistance	Designs and implements a learning plan by analyzing and reflecting on the factors which contribute to gap(s) between performance expectations and actual performance	Adapts a learning plan using long-term professional goals, self-reflection, and performance data to measure its effectiveness	Demonstrates continuous self-reflection and coaching of others on reflective practice
Comments: Not Yet Completed Level 1				

Professionalism 1: Professional Behavior				
Level 1	Level 2	Level 3	Level 4	Level 5
Identifies expected professional behaviors and potential triggers for lapses	Demonstrates professional behavior with occasional lapses	Maintains professional behavior in increasingly complex or stressful situations	Recognizes situations that may trigger professionalism lapses and intervenes to prevent lapses in self and others	Models professional behavior and coaches others when their behavior fails to meet professional expectations
Identifies the value and role of pediatric infectious disease specialist as a vocation/career	Demonstrates accountability for patient care as a pediatric infectious disease specialist, with guidance	Fully engages in patient care and holds oneself accountable	Exhibits a sense of duty to patient care and professional responsibilities	Extends the role of the pediatric infectious disease specialist beyond the care of patients by engaging with the community, specialty, and medical profession as a whole
Comments: Not Yet Completed Level 1				

Professionalism 2: Ethical Principles				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of the ethical principles underlying informed consent, surrogate decision making, advance directives, confidentiality, error disclosure, stewardship of limited resources, and related topics	Applies ethical principles in common situations	Analyzes complex situations using ethical principles to address conflict/controversy; seeks help when needed to manage and resolve complex ethical situations	Manages and seeks to resolve ethical dilemmas using appropriate resources (e.g., ethics consultations, literature review, risk management/legal consultation)	Called upon by others to consult in cases of complex ethical dilemmas; identifies and seeks to address system-level factors that induce or exacerbate
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	Performs tasks and responsibilities in a timely manner in routine situations	Performs tasks and responsibilities in a thorough and timely manner in complex or stressful situations	Coaches others to ensure tasks and responsibilities are completed in a thorough and timely manner in complex or stressful situations	Creates strategies to enhance others' ability to efficiently complete tasks and responsibilities	
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	Describes institutional resources that are meant to promote well-being	Recognizes institutional and personal factors that impact well-being	Describes interactions between institutional and personal factors that impact well-being	Coaches and supports colleagues to optimize well-being at the team, program, or institutional level	
Comments:			Not Yet Co	ompleted Level 1	

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

Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication							
Level 1	Level 2	Level 3	Level 4	Level 5			
Demonstrates respect and attempts to establish rapport	Establishes a therapeutic relationship in straightforward encounters	Establishes a culturally competent and therapeutic relationship in most encounters	Establishes a therapeutic relationship in straightforward and complex encounters, including those with ambiguity and/or conflict	Mentors others to develop positive therapeutic relationships			
Attempts to adjust communication strategies based upon patient/family expectations	Adjusts communication strategies as needed to mitigate barriers and meet patient/family expectations	Communicates with sensitivity and compassion, elicits patient/family values, and acknowledges uncertainty and conflict	Uses shared decision making with patient/family to make a personalized care plan	Models and coaches others in patient- and family-centered communication			
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			
Respectfully requests a consultation, with guidance	Clearly and concisely requests consultation by communicating patient information	Formulates a specific question for consultation and tailors communication strategy	Coordinates consultant recommendations to optimize patient care	Maintains a collaborative relationship with referring providers that maximizes adherence to practice recommendations			
Identifies the members of the interprofessional team	Participates within the interprofessional team	Uses bi-directional communication within the interprofessional team	Facilitates interprofessional team communication	Coaches others in effective communication within the interprofessional team			
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		
Records accurate information in the patient record	Records accurate and timely information in the patient record	Concisely documents updated, prioritized, diagnostic and therapeutic reasoning in the patient record	Documents diagnostic and therapeutic reasoning, including anticipatory guidance	Models and coaches others in documenting diagnostic and therapeutic reasoning		
Identifies the importance of and responds to multiple forms of communication (e.g., in- person, electronic health record (EHR), telephone, email)	Selects appropriate method of communication, with prompting	Aligns type of communication with message to be delivered (e.g., direct and indirect) based on urgency and complexity	Demonstrates exemplary written and verbal communication	Coaches others in written and verbal communication		
Comments: Not Yet Completed Level 1						