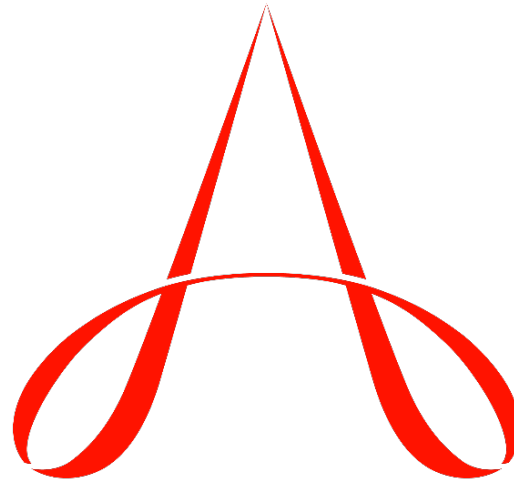




Supplemental Guide: Pediatrics



ACGME

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Milestones Supplemental Guide

This document provides additional guidance and examples for the Pediatrics Milestones. This is not designed to indicate any specific requirements for each level, but to provide insight into the thinking of the Milestone Work Group.

Included in this document is the intent of each Milestone and examples of what a Clinical Competency Committee (CCC) might expect to be observed/assessed at each level. Also included are suggested assessment models and tools for each subcompetency, references, and other useful information.

Review this guide with the CCC and faculty members. As the program develops a shared mental model of the Milestones, consider creating an individualized guide (Supplemental Guide Template available) with institution/program-specific examples, assessment tools used by the program, and curricular components.

Additional tools and references, including the Milestones Guidebook, Clinical Competency Committee Guidebook, and Milestones Guidebook for Residents and Fellows, are available at the end of this document as well as on the [Resources](#) page of the Milestones section of the ACGME website.

Patient Care 1: History

Overall Intent: To gather patient history with the level of detail and focus required for the individual patient

Milestones	Examples
Level 1 <i>Gathers information strictly following a template</i>	<ul style="list-style-type: none"> ● In taking the history of a 13-year-old female presenting to the clinic with fever, vomiting, and diarrhea, relies on a standard template to ask questions and is unable to focus the history based on the chief complaint
Level 2 <i>Adapts template to filter and prioritize pertinent positives and negatives based on broad diagnostic categories or possible diagnoses</i>	<ul style="list-style-type: none"> ● Using elements of the chief complaint and review of systems, appropriately focuses information gathering to characterize acuity and develop broad diagnostic categories for a 13-year-old female with acute onset of abdominal pain with fever, nausea, vomiting, and diarrhea
Level 3 <i>Filters, prioritizes, and synthesizes the history to develop a differential diagnosis in real-time for uncomplicated or typical presentations</i>	<ul style="list-style-type: none"> ● Uses an organized and descriptive approach to discuss a 13-year-old female with acute onset of febrile illness including nausea, nonbilious emesis, non-bloody diarrhea with the preceptor; takes a focused history to distinguish between likely diagnoses ● Incorporates some social determinants of health or other social screening questions when performing history
Level 4 <i>Filters, prioritizes, and synthesizes the history to develop a differential diagnosis in real time for complicated or atypical presentations</i>	<ul style="list-style-type: none"> ● Recognizes during history taking the nuanced risk factors of hemolytic uremic syndrome and bacterial colitis in a teenage patient, and gathers the necessary information to further inform their diagnosis ● Incorporates a detailed but related social history including social determinants of health and other factors that could be contributing to the patient's presentation
Level 5 <i>Recognizes and probes subtle clues from patients and families; distinguishes nuances among diagnoses to efficiently drive further information gathering</i>	<ul style="list-style-type: none"> ● Elicits information about ongoing risk factors for hemolytic uremic syndrome such as dietary history, recent antibiotic use, and travel history and makes recommendations for family members based on the history obtained
Assessment Models or Tools	<ul style="list-style-type: none"> ● Direct observation (e.g., mini-CEX, structured clinical observation tool, minicard, observable structural clinical examination (OCSE)) ● Medical record (chart) review ● Multisource feedback ● Verbal presentations on bedside rounds or clinic setting (can use tools like the one-minute preceptor)
Curriculum Mapping	<ul style="list-style-type: none"> ●
Notes or Resources	<ul style="list-style-type: none"> ● The American Board of Pediatrics. Entrustable Professional Activities for General Pediatrics. https://www.abp.org/entrustable-professional-activities-epas. 2020. ● Schumacher DJ, Englander R, Hicks PJ, Carraccio C, Guralnick S. Domain of competence: Patient care. <i>Academic Pediatrics</i>. 2014;14(2) Supp:S13-S35. https://pubmed.ncbi.nlm.nih.gov/24602619/. 2020.

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Patient Care 2: Physical Exam	
Overall Intent: To gather objective information, recognizing normal and abnormal physical findings while engaging the patient/family using appropriate behavioral and developmental techniques, and considering information gleaned from patient history	
Milestones	Examples
<p>Level 1 <i>Performs fundamental physical examination</i></p> <p><i>Performs a rote physical examination using a strict head-to-toe approach</i></p>	<ul style="list-style-type: none"> ● Performs a complete physical examination without deviation from the template, regardless of the chief complaint ● For a two-year-old with a laceration on the hand, performs a complete head-to-toe exam ● Begins head to toe exam of a two-year-old rather than starting with a chest/heart exam while the child is calm
<p>Level 2 <i>Performs complete physical examination and identifies variants and abnormal findings</i></p> <p><i>Performs a physical examination considering appropriate adaptation for age and development</i></p>	<ul style="list-style-type: none"> ● For a five-year-old with cough and fever, performs a complete examination including lung exam and identifies decreased breath sounds in the left lower lobe ● Asks a 5-year-old to stand on one foot during a wellness exam, but appropriately does not ask a one year old to do it
<p>Level 3 <i>Performs complete or focused physical examination, as indicated, and interprets normal variants and abnormal findings</i></p> <p><i>Performs a physical examination with consistent use of a developmentally appropriate approach</i></p>	<ul style="list-style-type: none"> ● For a three-year-old patient with runny nose and mouth sores, performs an examination focused on the head, chest, abdomen, extremities, and skin based on differential diagnosis ● Begins physical exam of an 18-month-old patient while child is in the arms of a parent or primary caretaker
<p>Level 4 <i>Performs complete or focused physical examination, as indicated, and selects advanced maneuvers to distinguish between diagnoses</i></p> <p><i>Performs a physical examination using strategies to maximize patient cooperation and comfort</i></p>	<ul style="list-style-type: none"> ● Examines a nine-year-old with lower right quadrant pain and possible appendicitis for signs of systemic toxicity, noting location of abdominal pain, presence of guarding and/or rebound and psoas/obturator sign, and considers the utility of a rectal exam ● Uses distractors appropriately such as examining the favorite stuffed animal to decrease anxiety in a toddler, or discussing exam and findings with adolescent ● Recognizes that differences in skin pigmentation can affect the appearance of certain rashes or dermatologic conditions, and pays careful attention when examining patients with darker skin ● Adapts exam to ensure minimal discomfort for a patient with a history of abuse
<p>Level 5 <i>Detects, pursues, and integrates key physical examination findings to distinguish nuances among competing, often similar diagnoses</i></p>	<ul style="list-style-type: none"> ● Examines patient with a rash incorporating history, other portions of the physical examination, and pertinent literature to distinguish among causes of rashes from common to rare

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<i>Performs a physical examination that consistently and positively engages the patient</i>	<ul style="list-style-type: none"> ● Has parent hold patient for exam (rather than place child on exam table); and talks to child or plays with child during exam as appropriate to maintain engagement
Assessment Models or Tools	<ul style="list-style-type: none"> ● Chart/medical record audit ● Course evaluations ● Direct observation (e.g., mini-CEX, structured clinical observation tool, minicard, OSCE) ● Multisource feedback ● Reflection
Curriculum Mapping	<ul style="list-style-type: none"> ●
Notes or Resources	<ul style="list-style-type: none"> ● The American Board of Pediatrics. Entrustable Professional Activities for General Pediatrics. https://www.abp.org/entrustable-professional-activities-epas. 2020. ● Schumacher DJ, Englander R, Hicks PJ, Carraccio C, Guralnick S. Domain of competence: Patient care. <i>Academic Pediatrics</i>. 2014;14(2) Supp:S13-S35. https://pubmed.ncbi.nlm.nih.gov/24602619/. 2020.

Patient Care 3: Organize and Prioritize Patients Overall Intent: To organize and appropriately prioritize patient needs to optimize patient outcomes	
Milestones	Examples
Level 1 <i>Completes tasks for an individual patient, when prompted</i>	<ul style="list-style-type: none"> • Sees a jaundiced baby but does not order bilirubin level until prompted • Sees a healthy five-year-old child for a well-child visit but does not provide anticipatory guidance until prompted
Level 2 <i>Organizes patient care responsibilities by focusing on individual (rather than multiple) patients</i>	<ul style="list-style-type: none"> • While admitting a well appearing newborn with hyperbilirubinemia one point above phototherapy threshold, a second patient with fever and neutropenia arrives; does not assess or place orders for the neutropenic patient until the entire history, physical, and laboratory orders for the newborn are complete • While seeing a healthy five-year-old child for a well-child visit, the nurse informs the resident that a seven-year-old child has arrived with wheezing and tachypnea; the resident completes the well-child visit prior to assessing the wheezing seven-year-old
Level 3 <i>Organizes and prioritizes the simultaneous care of patients with efficiency</i>	<ul style="list-style-type: none"> • While admitting a well appearing newborn with hyperbilirubinemia one point above phototherapy threshold, a second patient with fever and neutropenia arrives; excuses self from the room of the newborn to briefly evaluate the patient with neutropenia; places any critical orders prior to returning to complete the remainder of the encounter with the patient with hyperbilirubinemia • When seeing a healthy five-year-old child for a well-child visit, the nurse informs the resident that a seven-year-old child has arrived with wheezing and tachypnea. The resident goes to evaluate the wheezing child; after ascertaining the child has a history of asthma and doing a respiratory exam, the resident orders a nebulizer treatment and oxygen. After ensuring the seven-year-old child is stable, the resident returns to complete the well-child visit.
Level 4 <i>Organizes, prioritizes, and delegates patient care responsibilities even when patient volume approaches the capacity of the individual or facility; anticipates and triages urgent and emergent issues</i>	<ul style="list-style-type: none"> • When expecting two admissions, a well appearing newborn with hyperbilirubinemia one point above phototherapy threshold and an oncology patient with fever and neutropenia, asks a PGY-1 to see the newborn while the resident sees the oncology patient with neutropenia since that patient has the greater potential to decompensate; once the oncology patient is stable and admitted, reviews the admission for the newborn with hyperbilirubinemia with the PGY-1 and verifies the history, physical, assessment, and plan • When two patients arrive at the outpatient clinic simultaneously, the resident asks the PGY-1 to see the five-year-old patient who is there for a well-child visit, and the resident sees the seven-year-old patient who has come in audibly wheezing. Once the seven-year-old has been evaluated and treatment initiated, the resident reviews the well-child visit and verifies the child is meeting appropriate developmental milestones, that appropriate anticipatory guidance has been given, and the appropriate vaccines are ordered.

	<ul style="list-style-type: none"> ● Prioritizes or delegates responsibilities without bias; e.g., does not ignore a Black, indigenous person of color (BIPOC) patient with sickle cell disease who complains of leg pain
<p>Level 5 Serves as a role model and coach for patient care responsibilities</p>	<ul style="list-style-type: none"> ● When expecting two admissions (well appearing newborn with hyperbilirubinemia one point above phototherapy threshold and a sick oncology patient with fever and neutropenia), asks the PGY-1 to see the baby, reviewing the important key history elements, physical exam findings, and differential diagnosis, then see the higher-acuity patient together since that patient has the potential to decompensate; once both patients are stable and admitted, meets with the PGY-1 for feedback and teaching points, and checks in with the nurse and family members for further questions ● When two patients arrive at the outpatient clinic simultaneously, the resident asks the PGY-1 to see the five-year-old patient for a well-child visit, reviewing the expected developmental milestones, anticipatory guidance, and vaccine schedule with the treating physician; sees the wheezing 7-year-old patient, initiating treatment and stabilizing the patient. Once both patients are seen, the resident meets with the PGY-1 to review the well-child visit for feedback and teaching, and checks in with the nurse and family members for further questions.
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Audit of diagnoses and numbers of patients seen per shift in the emergency department or per session in a clinic ● Direct observation ● Multisource feedback ● Self-assessment
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> ●
<p>Notes or Resources</p>	<ul style="list-style-type: none"> ● The American Board of Pediatrics. Entrustable Professional Activities for General Pediatrics. https://www.abp.org/entrustable-professional-activities-epas. 2020. ● Covey S. <i>The Seven Habits of Highly Effective People</i>. New York, NY: Simon & Schuster; 1989. ● Ledrick D, Fisher S, Thompson J, Sniadanko M. An assessment of emergency medicine residents' ability to perform in a multitasking environment. <i>Academic Medicine</i>. 2009;84(9):1289-1294. https://pubmed.ncbi.nlm.nih.gov/19707074/. 2020.

Patient Care 4: Clinical Reasoning	
Overall Intent: To integrate collected data (e.g., history including social determinants of health, physical, laboratory/diagnostic if available) to make an informed and appropriately broad differential diagnosis	
Milestones	Examples
Level 1 <i>Presents clinical facts (e.g., history, exam, tests, consultations) in the order they were elicited</i>	<ul style="list-style-type: none"> ● Recites all information elicited from patient/family/data ● Inconsistently filters out extraneous/non-contributory details ● Functions as a “reporter”
Level 2 <i>Generates an unfocused differential diagnosis based on the clinical facts</i>	<ul style="list-style-type: none"> ● Suggests extensive evaluations as a proxy for a differential, saying “I saw a six-year-old well-appearing, afebrile, female with a 24-hour history of intermittent abdominal pain and I think we should do a complete blood count, a chemistry panel, a urine analysis, an x-ray, and an ultrasound to figure out what’s going on.” ● Considers somatic dysfunction as part of the differential diagnosis, but is not more specific in terms of the differential diagnosis
Level 3 <i>Organizes clinical facts to compare and contrast diagnoses being considered, resulting in a prioritized differential diagnosis</i>	<ul style="list-style-type: none"> ● Develops an informed differential diagnosis that considers clinical patterns based on previous learning/experience in conjunction with a succinct summary of findings ● States that this is “a six-year-old female with abdominal pain for three days who has been experiencing vomiting, diarrhea, and poor appetite. The most likely diagnosis is acute gastroenteritis. Appendicitis is also on my differential, but the pain is not localized to the right lower quadrant.” ● Considers contribution of factors such as food insecurity, inability to afford medications, and other social factors when developing a differential diagnosis
Level 4 <i>Integrates clinical facts into a unifying diagnosis(es); reappraises in real time to avoid diagnostic error</i>	<ul style="list-style-type: none"> ● Re-visits and adjusts diagnosis to avoid diagnostic error as patient status changes or new information becomes available ● Comfortably compares and contrasts several diagnoses and uses supporting evidence to determine which is the most likely in a given patient ● Identifies somatic dysfunction that could be contributing to the patient’s problem ● Counsels a patient with severe asthma in the context of social factors (instead of labeling the patient with “noncompliance”)
Level 5 <i>Role models and coaches the organization of clinical facts to develop a prioritized differential diagnosis, including life threatening diagnoses, atypical presentations, and complex clinical presentations</i>	<ul style="list-style-type: none"> ● Articulates clinical reasoning in a way that allows insight into an expert’s clinical decision making ● During rounds, presents a six-year-old female with abdominal pain for one day who has been experiencing vomiting, diarrhea, and poor appetite with the likely diagnosis of acute gastroenteritis, and explains how to check for more serious causes like appendicitis, or more unusual presentations of things like diabetic ketoacidosis
Assessment Models or Tools	<ul style="list-style-type: none"> ● Chart review ● Direct observation ● Mini-CEX or structured clinical observation

	<ul style="list-style-type: none"> ● Multisource feedback
Curriculum Mapping	<ul style="list-style-type: none"> ●
Notes or Resources	<ul style="list-style-type: none"> ● The American Board of Pediatrics. Entrustable Professional Activities for General Pediatrics. https://www.abp.org/entrustable-professional-activities-epas. 2020. ● Schumacher DJ, Englander R, Hicks PJ, Carraccio C, Guralnick S. Domain of competence: Patient care. <i>Academic Pediatrics</i>. 2014;14(2) Supp:S13-S35. https://pubmed.ncbi.nlm.nih.gov/24602619/. 2020. ● Bowen JL. Educational strategies to promote clinical diagnostic reasoning. <i>NEJM</i>. 2006;355:2217-2225. https://www.nejm.org/doi/full/10.1056/NEJMra054782. 2020. ● Society to Improve Diagnosis in Medicine. Tools & Toolkit. https://www.improvediagnosis.org/toolkits/. 2020.

Patient Care 5: Patient Management	
Overall Intent: To lead the health care team in the creation of a comprehensive, patient-centered management plan based on multiple patient factors, including social factors and varied patient backgrounds, regardless of complexity	
Milestones	Examples
Level 1 <i>Reports management plans developed by others</i>	<ul style="list-style-type: none"> ● Considers antibiotics and chest x-ray based on previous day's comments from senior residents or attending physician ● Repeats consultant's written recommendations verbatim
Level 2 <i>Participates in the creation of management plans</i>	<ul style="list-style-type: none"> ● Develops plan for a patient's chief complaint but neglects other active issues; identifies pneumonia and correct treatment but fails to adjust management plan to address interval development of respiratory failure ● When an infant presenting for newborn follow-up has not regained birth weight, suggests referral to a lactation specialist, but needs prompting to establish follow-up for weight check ● Creates plan independently to discharge patient from an inpatient team but needs assistance with finer details of a complete discharge
Level 3 <i>Develops an interdisciplinary management plan for common and typical diagnoses</i>	<ul style="list-style-type: none"> ● In a case of progressive respiratory failure caused by pneumonia, creates plans with respiratory therapist and nursing staff to add chest physiotherapy, including plans for reassessment and communication ● Asks bedside nurse on rounds for input on current plan ● Acknowledges the need for child life to assist with a lumbar puncture on a three-year-old ● Considers details about insurance coverage and cost of medications
Level 4 <i>Develops and implements informed management plans for complicated and atypical diagnoses, with the ability to modify plans as necessary</i>	<ul style="list-style-type: none"> ● Identifies that respiratory failure and sepsis from pneumonia is driven by concurrent empyema and coordinates drainage with subspecialty consultation ● Creates alternative plan for iron infusion for patient whose family who is Jehovah's Witness and decline a blood transfusion ● Sends prescriptions to the pharmacy early to ensure the medications will be available for the patient at the time of discharge ● Designs treatment plans using shared decision making to help individuals with low incomes or little/no insurance minimize financial strain ● Realizing a patient's mother is unable to read, labels the patient's prescriptions in a way the mother understands so she can administer medications correctly, eliciting teach-back to gauge understanding
Level 5 <i>Serves as a role model and coach for development of management plans for complicated and atypical diagnoses, with the ability to modify plans as necessary</i>	<ul style="list-style-type: none"> ● Promptly recognizes/identifies team members' misunderstanding and redirects discussion to consider the most important aspects of a case ● Engages the team in discussing a management plan by considering the major therapeutic interventions and the evidence for and against each modality

	<ul style="list-style-type: none"> ● Shares an error of clinical reasoning in order to correct treatment plan and educate the team
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Case-based discussion ● Chart audit ● Direct observation ● Multisource feedback
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> ●
<p>Notes or Resources</p>	<ul style="list-style-type: none"> ● The American Board of Pediatrics. Entrustable Professional Activities for General Pediatrics. https://www.abp.org/entrustable-professional-activities-epas. 2020. ● Cook DA, Durning SJ, Sherbino J, Gruppen LD. Management reasoning: Implications for health professions educators and a research agenda. <i>Acad Med</i>. 2019;94(9):1310–1316. https://journals.lww.com/academicmedicine/Fulltext/2019/09000/Management_Reasoning_Implications_for_Health.19.aspx?casa_token=CrKAiT6kwcYAAAAA:RfZyQrmTw4eWB_SRQlwC2kpX_ajz_X4rs_ssjLi_btaqHCwzNCrr6eT1rDSLiwQGMKSQIvW2ZqLbRtj8ozw 2020. ● Physicians draw upon other skills and knowledge sets to create management plans. Accordingly, many other milestones may overlap with this specific milestone (SBP 3, PBLI 1, MK 2) given its complexity. However, the primary focus is to consider the overall ability to create a management plan in various areas of complexity and a variety of situations. It may be useful to consider these themes that guide management decisions: <ul style="list-style-type: none"> ○ Involving patients and decision-making process ○ Integrating competing priorities (e.g., risks, benefits) and preferences ○ Tolerating uncertainty ○ Monitoring treatment response and adjusting as needed

Medical Knowledge 1: Clinical Knowledge	
Overall Intent: To demonstrate medical and scientific knowledge and apply it to the care of pediatric patients	
Milestones	Examples
Level 1 <i>Demonstrates basic medical knowledge</i>	<ul style="list-style-type: none"> ● Correctly identifies normal versus abnormal vital signs for pediatric patients of different ages ● Accurately differentiates between normal and abnormal major developmental milestones in a pediatric patient
Level 2 <i>Links basic medical knowledge to clinical scenarios</i>	<ul style="list-style-type: none"> ● Correctly identifies a temperature of 101°F and respiratory rate of 55 breaths per minute as abnormal in a 10-year-old child, then uses pertinent positives and negatives from history and physical exam to offer reasonable diagnostic possibilities ● Explains how social determinants of health impact medical decisions
Level 3 <i>Applies medical knowledge to common and typical scenarios to guide patient care</i>	<ul style="list-style-type: none"> ● Appropriately triages and creates a treatment plan for a 10-year-old child with a typical presentation of community-acquired pneumonia; uses clinical pathways/guidelines/order sets when appropriate ● Uses a social determinants of health framework to maximize patient care in common scenarios
Level 4 <i>Integrates a breadth of medical knowledge that includes complicated and atypical conditions to guide patient care</i>	<ul style="list-style-type: none"> ● Appropriately triages and creates a treatment plan for a 10-year-old child with an atypical or complex presentation of community-acquired pneumonia appropriately adapting from clinical pathways/guidelines/order sets; recognizes and modifies treatment appropriate to changes in clinical condition ● Considers systemic issues of diversity, equity, and inclusion when creating treatment plans
Level 5 <i>Teaches at multiple levels, drawing from a breadth of medical knowledge that spans the continuum of simple to complex problems</i>	<ul style="list-style-type: none"> ● Actively teaches other learners about typical and atypical presentations of simple and complex pediatric problems ● Educates team on situations in which social determinants of health or diversity, equity, and inclusion issues are present and how they can affect patient care and contribute to provider implicit bias ● Demonstrates commitment to lifelong learning; stays up-to-date on current literature and often cites newest clinical guidelines for management
Assessment Models or Tools	<ul style="list-style-type: none"> ● Direct observation (e.g., clinical rounds) ● In-training examination ● Medical record (chart) audit ● OSCE
Curriculum Mapping	<ul style="list-style-type: none"> ●
Notes or Resources	<ul style="list-style-type: none"> ● The American Board of Pediatrics. Entrustable Professional Activities for General Pediatrics. https://www.abp.org/entrustable-professional-activities-epas. 2020.

- Englander R, Carraccio C. Domain of competence: Medical knowledge. *Academic Pediatrics*. 2014;14(2)Supp:S36-S37.
<https://www.sciencedirect.com/science/article/abs/pii/S1876285913003240>. 2020.

Medical Knowledge 2: Diagnostic Evaluation	
Overall Intent: To order diagnostic tests and subspecialty consultations (if appropriate), tailoring the evaluation to patient complexity, severity of illness, and the most likely diagnosis(es); to interpret results accurately within the context of the clinical picture	
Milestones	Examples
<p>Level 1 Lists basic evaluation (e.g., diagnostic testing and consultation) for common diagnoses, with prompting</p> <p><i>Reports results of diagnostic studies</i></p>	<ul style="list-style-type: none"> ● Evaluates a two-week-old infant for a fever and lists a complete blood count and blood cultures as the diagnostic studies; after discussion of potential differential diagnoses recognizes that urinalysis, urine culture, and lumbar puncture should be added ● Reports the results of a lumbar puncture without interpretation
<p>Level 2 Recommends broad evaluation based on an unfocused differential diagnosis</p> <p><i>Identifies clinically significant diagnostic study results, with guidance</i></p>	<ul style="list-style-type: none"> ● When evaluating a nine-year-old child presenting with a three-day history of fever and cough and household contacts with similar symptoms, includes tuberculosis and histoplasmosis in the differential diagnosis despite no risk factors ● Reports the preliminary interpretation of the chest x-ray of a tall, thin teenager complaining of acute onset of right sided chest pain as normal; when the attending physician mentions a thin white line in the peripheral right lung field with a small area peripheral to the line with no lung markings, the learner correctly identifies a pneumothorax
<p>Level 3 Recommends focused evaluation based on a prioritized differential diagnosis</p> <p><i>Interprets clinical significance of diagnostic study results</i></p>	<ul style="list-style-type: none"> ● Recommends an appropriate, limited workup for a four-year-old admitted with clinical evidence of pneumonia with mild hypoxia ● Uses social or cultural identifiers when necessary to inform diagnostic evaluation ● Considers racial disparities to minimize bias in ordering labs and tests ● Recognizes a platelet count of 800,000/mm³ as indicative of marked inflammation in a patient being evaluated for fever of unknown origin
<p>Level 4 Prioritizes and optimizes evaluation based on risks, benefits, indications, and alternatives to clarify the diagnosis(es)</p> <p><i>Interprets clinical significance of diagnostic study results while considering study limitations</i></p>	<ul style="list-style-type: none"> ● Noting a past history of kidney disease and a persistently elevated creatinine, recommends ordering an abdominal ultrasound or magnetic resonance imaging (MRI) instead of an abdominal computed tomography (CT) with contrast as part of an initial evaluation for right lower quadrant abdominal pain ● Identifies pertinent and focused somatic dysfunction and how it is influencing patient's condition ● Acknowledges data pertaining to social determinants of health and their impact on decision making ● Recognizes that an elevated serum alkaline phosphatase is abnormal and that without additional testing the abnormality does not distinguish between a problem in the bone or liver

<p>Level 5 <i>Educates others about risks, benefits, indications, and alternatives to guide diagnostic decision making</i></p> <p><i>Teaches others to interpret clinically significant results and consider study limitations</i></p>	<ul style="list-style-type: none"> ● Explains to a PGY-1 the risks of settling on a diagnosis too early and lists additional evaluations that may be necessary to identify other serious or fatal etiologies of disease ● When a medical student rules out a diagnosis of a specific infection based on a negative serologic antibody test, points out that if the patient is immunodeficient (i.e., not making antibodies normally), the test may be negative even if the patient has the disease ● Advocates on a systemic level to revise/remove race-based tests that are not evidence based (e.g., glomerular filtration rate calculation)
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Clinical evaluations ● Direct observation ● Chart audits ● Multisource feedback ● In-training examination
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> ●
<p>Notes or Resources</p>	<ul style="list-style-type: none"> ● The American Board of Pediatrics. Entrustable Professional Activities for General Pediatrics. https://www.abp.org/entrustable-professional-activities-epas. 2020. ● Englander R, Carraccio C. Domain of competence: Medical knowledge. <i>Academic Pediatrics</i>. 2014;14(2)Supp:S36-S37. https://www.sciencedirect.com/science/article/abs/pii/S1876285913003240. 2020. ● Epner PL, Gans JE, Graber ML. When diagnostic testing leads to harm: A new outcomes-based approach for laboratory medicine. <i>BMJ Quality & Safety</i>. 2013;22(Supp 2):ii6-ii10. https://pubmed.ncbi.nlm.nih.gov/23955467/. 2020. ● Cutler P, Kelly P. <i>Problem Solving in Clinical Medicine: From Data to Diagnosis</i>. 3rd ed. Baltimore, MD: Lippincott, Williams & Wilkins; 1998.

Systems-Based Practice 1: Patient Safety	
Overall Intent: To engage in the analysis and management of patient safety events, including relevant communication with patients, families, and health care professionals	
Milestones	Examples
<p>Level 1 <i>Demonstrates knowledge of common patient safety events</i></p> <p><i>Demonstrates knowledge of how to report patient safety events</i></p>	<ul style="list-style-type: none"> ● Lists common patient safety events such as patient misidentification or medication errors ● Lists “patient safety reporting system” or “patient safety hotline” as ways to report safety events
<p>Level 2 <i>Identifies system factors that lead to patient safety events</i></p> <p><i>Reports patient safety events through institutional reporting systems (simulated or actual)</i></p>	<ul style="list-style-type: none"> ● Identifies electronic health record (EHR) default timing of orders as “routine” (without changing to “stat”) may lead to delays in antibiotic administration time for sepsis ● Reports delayed antibiotic administration time using the appropriate reporting mechanism
<p>Level 3 <i>Participates in analysis of patient safety events (simulated or actual)</i></p> <p><i>Participates in disclosure of patient safety events to patients and families (simulated or actual)</i></p>	<ul style="list-style-type: none"> ● Participates in department morbidity and mortality presentations ● Participates in root cause analyses (mock or actual) ● Participates in a quality improvement project aimed at reducing racial disparities ● With the support of an attending or risk management team member, participates in the disclosure of a medication order error to a family
<p>Level 4 <i>Conducts analysis of patient safety events and offers error prevention strategies (simulated or actual)</i></p> <p><i>Discloses patient safety events to patients and families (simulated or actual)</i></p>	<ul style="list-style-type: none"> ● Leads a simulated or actual root cause analysis related to a patient fall from a crib and develops action plan that includes signs to remind caregivers to always put side rails up, add floor mats under cribs, bedside shift report fall prevention checklists, and environmental stressors ● Following consultation with risk management and other team members, independently discloses a medication error to a family
<p>Level 5 <i>Actively engages teams and processes to modify systems to prevent patient safety events</i></p> <p><i>Role models or mentors others in the disclosure of patient safety events</i></p>	<ul style="list-style-type: none"> ● Leads a multidisciplinary team to work on improved medication reconciliation processes to prevent discharge medication errors and considers biases amongst team members ● Conducts a simulation demonstrating techniques and approaches for disclosing patient safety events ● Teaches a course during intern bootcamp about the resident’s role in disclosure of patient safety events

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<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Case-based discussion ● Direct observation ● E-module multiple choice tests ● Guided reflection ● Medical record (chart) audit ● Multisource feedback ● Portfolio ● Simulation
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> ●
<p>Notes or Resources</p>	<ul style="list-style-type: none"> ● The American Board of Pediatrics. Entrustable Professional Activities for General Pediatrics. https://www.abp.org/entrustable-professional-activities-epas. 2020. ● Institute of Healthcare Improvement. http://www.ihl.org/Pages/default.aspx. 2020. ● Singh R, Naughton B, Taylor JS, et al. A comprehensive collaborative patient safety residency curriculum to address the ACGME core competencies. <i>Med Educ</i>. 2005;39(12):1195-204. https://pubmed.ncbi.nlm.nih.gov/16313578/. 2020. ● Guralnick S, Ludwig S, Englander R. Domain of competence: Systems-based practice. <i>Academic Pediatrics</i>. 2014;14:S70-S79. https://www.acgme.org/Portals/0/PDFs/Milestones/Systems-basedPracticePediatrics.pdf. 2020.

Systems-Based Practice 2: Quality Improvement Overall Intent: To understand and implement quality improvement methodologies to improve patient care	
Milestones	Examples
Level 1 <i>Demonstrates knowledge of basic quality improvement methodologies and metrics</i>	<ul style="list-style-type: none"> • Describes fishbone diagram • Describes components of a “Plan-Do-Study-Act” cycle
Level 2 <i>Describes local quality improvement initiatives (e.g., community vaccination rate, infection rate, smoking cessation)</i>	<ul style="list-style-type: none"> • Describes clinic initiatives to improve vitamin D supplementation for breastfed infants • Describes an initiative in the continuity clinic to improve influenza vaccination rates in the children seen in that clinic
Level 3 <i>Participates in local quality improvement initiatives</i>	<ul style="list-style-type: none"> • Participates in an ongoing interdisciplinary project to improve medication reconciliation • Collaborates on a project to improve discharge efficiency
Level 4 <i>Demonstrates the skills required to identify, develop, implement, and analyze a quality improvement project</i>	<ul style="list-style-type: none"> • Develops and implements a quality improvement project to improve human papillomavirus (HPV) vaccination rates within a practice site, that includes engaging the office team, assessing the problem, articulating a broad goal, developing a SMART (Specific, Measurable, Attainable, Realistic, Time-bound) aim, collecting data, analyzing, and monitoring progress and challenges • In developing a quality improvement project, considers team bias and social determinants of health in patient population
Level 5 <i>Creates, implements, and assesses quality improvement initiatives at the institutional or community level</i>	<ul style="list-style-type: none"> • Initiates and completes a quality improvement project to improve county HPV vaccination rates in collaboration with the county health department and shares results through a formal presentation to the community leaders • Looks for opportunities to improve clinic vaccination rates across a health care system • Consistently engages in quality improvement around improving clinic vaccination rates
Assessment Models or Tools	<ul style="list-style-type: none"> • Direct observation • E-module multiple choice test • Portfolio • Poster or other presentation • Team evaluations
Curriculum Mapping	<ul style="list-style-type: none"> •
Notes or Resources	<ul style="list-style-type: none"> • The American Board of Pediatrics. Entrustable Professional Activities for General Pediatrics. https://www.abp.org/entrustable-professional-activities-epas. 2020. • Institute of Healthcare Improvement. http://www.ihp.org/Pages/default.aspx. 2020. • Murtagh Kurowski E, Schondelmeyer AC, Brown C, et al. A practical guide to conducting quality improvement in the health care setting. <i>Curr Treat Options Peds</i>. 2015;1:380-392. https://link.springer.com/article/10.1007%2Fs40746-015-0027-3. 2020. • Bright Futures. QI Office System Tools. https://brightfutures.aap.org/quality-improvement/Pages/QI-Office-System-Tools-.aspx. 2020.

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<https://www.acgme.org/Portals/0/PDFs/Milestones/Systems-basedPracticePediatrics.pdf>. 2020.

Systems-Based Practice 3: System Navigation for Patient-Centered Care – Coordination of Care	
Overall Intent: To effectively navigate the health care system including the interdisciplinary team and other care providers; to adapt care to a specific patient population to ensure high-quality patient outcomes	
Milestones	Examples
Level 1 <i>Lists the various interprofessional individuals involved in the patient’s care coordination</i>	<ul style="list-style-type: none"> ● For a patient with cancer, identifies the team members and roles as part of the team, including pediatric hematologist-oncologist, clinic and hospital nurses and social workers ● Identifies important members of the medical home team for a complex care patient in the continuity clinic ● Recognizes implicit bias as a contributor to health care disparities ● Identifies access to care and insurance coverage as social determinants of health
Level 2 <i>Coordinates care of patients in routine clinical situations, incorporating interprofessional teams with consideration of patient and family needs</i>	<ul style="list-style-type: none"> ● After induction chemotherapy for a patient with a new diagnosis of acute lymphoblastic leukemia, coordinates care with the oncology clinic at the time of discharge from the hospital ● Coordinates home health and subspecialty care for a child with a gastrostomy tube being seen in the continuity clinic
Level 3 <i>Coordinates care of patients in complex clinical situations, effectively utilizing the roles of interprofessional teams, and incorporating patient and family needs and goals</i>	<ul style="list-style-type: none"> ● Works with the social worker to coordinate outpatient care and ensure appropriate oncology clinic follow-up for a patient with lymphoblastic leukemia who resides in a rural area with limited family transportation options ● Refers patients to a local pharmacy that offers a sliding fee scale and provides pharmacy coupons for patients in need ● Recognizes that BIPOC communities may have additional barriers to access and the need to involve a social worker or case manager in finding community resources
Level 4 <i>Coordinates interprofessional, patient-centered care among different disciplines and specialties, actively assisting families in navigating the health-care system</i>	<ul style="list-style-type: none"> ● During inpatient rotations, leads team members in approaching consultants to review cases/recommendations and arranges radiology rounds for the team ● Advocates for and coordinates rescheduling a patient who was “fired” from a subspecialty clinic for missing appointments due to underlying socioeconomic issues ● Recognizes the need for and coordinates a multidisciplinary team/family meeting to include appropriate subspecialists, physical therapist/occupational therapist, nutrition, child life, mental health resources, chaplain services, the primary care physician, etc.
Level 5 <i>Coaches others in interprofessional, patient-centered care coordination</i>	<ul style="list-style-type: none"> ● Leads an initiative to educate residents about home health services or medical home model for medically complex children, ensuring inclusion of discussion on health care disparities ● Coaches and mentors colleagues through a multidisciplinary team meeting of a child with complex health care needs
Assessment Models or Tools	<ul style="list-style-type: none"> ● Direct observation and entrustable professional activities ● Medical record (chart) audit ● Multisource feedback

	<ul style="list-style-type: none"> ● OSCE ● Review of discharge planning documentation
Curriculum Mapping	<ul style="list-style-type: none"> ●
Notes or Resources	<ul style="list-style-type: none"> ● The American Board of Pediatrics. Entrustable Professional Activities for General Pediatrics. https://www.abp.org/entrustable-professional-activities-epas. 2020. ● American Academy of Pediatrics. https://www.aap.org/en-us/Pages/Default.aspx. 2020. ● AAP. Pediatric Care Coordination Curriculum. https://medicalhomeinfo.aap.org/tools-resources/Documents/PCCC%202nd%20Edition/Full%20Pediatric%20Care%20Coordination%20Curriculum.pdf. 2020. ● Skochelak SE, Hawkins RE, Lawson LE, Starr SR, Borkan J, Gonzalo JD. <i>AMA Education Consortium: Health Systems Science</i>. Elsevier; 2016. ● Starr SR, Agrwal N, Bryan MJ, et al. Science of health care delivery: An innovation in undergraduate medical education to meet society's needs. <i>Mayo Clinic Proceedings: Innovations, Quality & Outcomes</i>. 2017;1(2):117-129. https://www.sciencedirect.com/science/article/pii/S2542454817300395. 2020.

Systems-Based Practice 4: System Navigation for Patient-Centered Care – Transitions in Care Overall Intent: To effectively navigate the health delivery system during transitions of care to ensure high-quality patient outcomes	
Milestones	Examples
Level 1 <i>Uses a standard template for transitions of care/hand-offs</i>	<ul style="list-style-type: none"> ● When handing off to colleagues on a night shift, reads verbatim from a templated hand-off but lacks context, is not appropriately specific in next steps, and does not provide contingency plans
Level 2 <i>Adapts a standard template, recognizing key elements for safe and effective transitions of care/hand-offs in routine clinical situations</i>	<ul style="list-style-type: none"> ● Routinely uses a standardized hand-off for a stable patient, verbalizes a basic understanding of active problems, and provides basic contingency plans ● Discusses a discharge of an infant from the neonatal intensive care unit (NICU) with the primary care physician and provides a problem list, clinical course, and action items to be followed up as an outpatient
Level 3 <i>Performs safe and effective transitions of care/hand-offs in complex clinical situations, and ensures closed-loop communication</i>	<ul style="list-style-type: none"> ● Routinely uses a standardized hand-off when transferring a patient to the intensive care unit, with direct communication of clinical reasoning, problems warranting a higher level of care, and status of completed/planned interventions; solicits read-back and confirms/uses specific resources and timeline for transfer to occur ● Performs the hand-off for a patient with a complex diagnosis from the (NICU) to the primary care physician with a succinct summary by problem or system, a timeline for outpatient follow up and repeat testing, with clearly delineated responsibilities
Level 4 <i>Performs and advocates for safe and effective transitions of care/hand-offs within and across health care delivery systems, including transitions to adult care</i>	<ul style="list-style-type: none"> ● Prior to going on vacation, proactively seeks out colleagues in continuity clinic to follow-up test results that are still pending and expected back during that week with specific instructions and contingency plans for the follow up visit with the patient/family ● Seeks out appropriate adult general and subspecialty providers to facilitate the transition of a 20-year-old patient with complex health care needs to adult care; ensures a thorough hand-off including the patient’s cultural preferences and social needs to the identified new adult providers
Level 5 <i>Coaches others in improving transitions of care within and across health care delivery systems to optimize patient outcomes</i>	<ul style="list-style-type: none"> ● Designs and implements standardized hand-off workshops exercises for medical students prior to the start of their clinical rotations ● Develops and implements a process for residency continuity clinics to improve the transition from pediatrics to adult medicine
Assessment Models or Tools	<ul style="list-style-type: none"> ● Portfolio assessment ● Direct observation ● I-PASS assessment checklist ● Multisource feedback ● OSCE/Simulation ● Review of sign-out tools, use and review of checklists
Curriculum Mapping	<ul style="list-style-type: none"> ●

Notes or Resources	<ul style="list-style-type: none">● The American Board of Pediatrics. Entrustable Professional Activities for General Pediatrics. https://www.abp.org/entrustable-professional-activities-epas. 2020.● Starmer AJ, Spector ND, Srivastava R, et al. Changes in medical errors after implementation of a handoff program. <i>N Engl J Med</i>. 2014;371:1803-1812. https://www.nejm.org/doi/full/10.1056/NEJMsa1405556. 2020.● I-PASS. I-PASS Materials. http://www.ipassstudygroup.com/materialsrequest. 2020.● Matern LH, Farnan J, Hirsch K, et al. A Standardized handoff simulation promotes recovery from auditory distractions in resident physicians. <i>Simul Healthc</i>. 2018;13(4):233-238. https://insights.ovid.com/crossref?an=01266021-201808000-00003. 2020.● GotTransition. Clinician Education & Resources. https://www.gottransition.org/resources-and-research/clinician-education-resources.cfm. 2020.● Society for Adolescent Health and Medicine. Transition to adulthood for youth with chronic conditions and special health care needs. <i>Journl of Adolescent Health</i>. 2020;66(5):P631-634. https://www.jahonline.org/article/S1054-139X(20)30075-6/fulltext. 2020.
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Systems-Based Practice 5: Population and Community Health	
Overall Intent: To promote and improve health across communities and populations through patient care and advocacy including public education and elimination of structural racism	
Milestones	Examples
Level 1 <i>Demonstrates awareness of population and community health needs and disparities</i>	<ul style="list-style-type: none"> ● Identifies social determinants of health, such as poverty and structural racism ● Identifies adverse childhood experiences
Level 2 <i>Identifies specific population and community health needs and disparities; identifies local resources</i>	<ul style="list-style-type: none"> ● Screens patients for adverse childhood experiences and acknowledges social determinants of health and the impact of structural racism for individual patients ● Discusses health disparities and identifies the nearest Women Infants Children (WIC) office
Level 3 <i>Uses local resources effectively to meet the needs and reduce health disparities of a patient population and community</i>	<ul style="list-style-type: none"> ● Consistently refers patients to WIC program, and early intervention services as needed ● Promotes to patients the local resources and programs aimed at eliminating structural racism and improving health disparities
Level 4 <i>Adapts practice to provide for the needs of and reduce health disparities of a specific population</i>	<ul style="list-style-type: none"> ● Participates in an advocacy project to improve health care access and/or decrease practices that support structural racism ● Organizes mental health resources for patients who screen positive for an adverse childhood experience
Level 5 <i>Advocates at the local, regional, or national level for populations and communities with health care disparities</i>	<ul style="list-style-type: none"> ● Engages in a project to open a WIC location ● Partners with a community organization working to increase vaccination rates for a particular group ● Participates in longitudinal discussions with local, state or national government policy makers to eliminate structural racism and reduce health disparities
Assessment Models or Tools	<ul style="list-style-type: none"> ● Analysis of process and outcomes measures based on social determinants of health and resultant disparities ● Direct observation ● Medical record (chart) audit ● Multisource feedback ● Portfolio assessment ● Reflection
Curriculum Mapping	<ul style="list-style-type: none"> ●
Notes or Resources	<ul style="list-style-type: none"> ● The American Board of Pediatrics. Entrustable Professional Activities for General Pediatrics. https://www.abp.org/entrustable-professional-activities-epas. 2020. ● Centers for Disease Control Preventing. Preventing Adverse Childhood Experiences. https://www.cdc.gov/violenceprevention/aces/fastfact.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Facestudy%2Ffastfact.html. 2020.

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Systems-Based Practice 6: Physician Role in Health Care Systems	
Overall Intent: To understand the physician’s role in health systems science to optimize patient care delivery, including cost-conscious care	
Milestones	Examples
Level 1 <i>Engages with patients and other providers in discussions about cost-conscious care and key components of the health care delivery system</i>	<ul style="list-style-type: none"> ● Considers the differences in cost for a patient in the hospital versus being closely followed as an outpatient ● Articulates the impact of patients coming to continuity clinic for non-emergent acute visits instead of seeking care in the emergency department ● Considers that insurance coverage, or lack of coverage, can affect prescription drug availability/cost for individual patients ● Identifies that one’s own implicit biases contribute to disparities and less-than-optimal care
Level 2 <i>Identifies the relationships between the delivery system and cost-conscious care and the impact on the patient care</i>	<ul style="list-style-type: none"> ● Considers the patient’s prescription drug coverage when choosing an inhaled corticosteroid for the treatment of persistent asthma ● Ensures that a patient hospitalized with an acute asthma exacerbation has a scheduled follow-up appointment at discharge
Level 3 <i>Discusses the need for changes in clinical approaches based on evidence, outcomes, and cost-effectiveness to improve care for patients and families</i>	<ul style="list-style-type: none"> ● Accepts an appropriate level of uncertainty when balancing cost-conscious care (e.g., not ordering a respiratory viral panel when it will not change management) ● Discusses risks and benefits of pursuing sedated MRI in the setting of a first unprovoked seizure in a patient with a normal electroencephalography and normal neurological examination in light of costs to family and health system ● Adapts plan to minimize costs and provides appropriate care for an uninsured patient ● Considers health care disparities in pursuit of evidence-based care
Level 4 <i>Advocates for the promotion of safe, quality, and high-value care</i>	<ul style="list-style-type: none"> ● Works collaboratively to identify additional services for a patient with a recent traumatic brain injury with sequelae and limited resources ● Identifies the value of an asthma action plan upon discharge to minimize hospital readmissions and implements a project to address this issue
Level 5 <i>Coaches others to promote safe, quality, and high-value care across health care systems</i>	<ul style="list-style-type: none"> ● Raises awareness at a systems level to promote cost-conscious care (e.g., implementation of Choosing Wisely recommendations or development of a local evidence-based guideline) ● Leads team members in conversations around care gaps for LGBTQ teens and creates team plans to provide comprehensive care in a clinic ● Educates colleagues on local or regional food deserts and coordinates activity to address the need (e.g., develops a community garden)
Assessment Models or Tools	<ul style="list-style-type: none"> ● Direct observation ● Medical record (chart) audit ● Patient satisfaction data ● Patient safety conference

	<ul style="list-style-type: none"> ● Portfolio ● Review and guided reflection on costs accrued for individual patients or patient populations with a given diagnosis
Curriculum Mapping	<ul style="list-style-type: none"> ●
Notes and Resources	<ul style="list-style-type: none"> ● The American Board of Pediatrics. Entrustable Professional Activities for General Pediatrics. https://www.abp.org/entrustable-professional-activities-epas. 2020. ● Choosing Wisely. American Academy of Pediatrics: Ten Things Physicians and Patients Should Question. https://www.choosingwisely.org/societies/american-academy-of-pediatrics/. 2020. ● Solutions for Patient Safety. Hospital Resources. https://www.solutionsforpatientsafety.org/for-hospitals/hospital-resources/. 2020. ● American Board of Internal Medicine. QI/PI Activities. https://www.abim.org/maintenance-of-certification/earning-points/qi-pi-activities.aspx. 2020. ● Journal of Hospital Medicine. Choosing Wisely: Things We Do For No Reason. https://www.journalofhospitalmedicine.com/jhospmed/article/228324/hospital-medicine/things-we-do-no-reason-tm-routine-correction-elevated-inr?channel=27621. 2020. ● American College of Physicians. Newly Revised: Curriculum for Educators and Residents. https://www.acponline.org/clinical-information/high-value-care/medical-educators-resources/newly-revised-curriculum-for-educators-and-residents-version-40. 2020. ● Agency for Healthcare Research and Quality (AHRQ). The Challenges of Measuring Physician Quality. https://www.ahrq.gov/professionals/quality-patient-safety/talkingquality/create/physician/challenges.html. 2020. ● Dzau VJ, McClellan M, Burke S, et al. Vital directions for health and health care: priorities from a National Academy of Medicine Initiative. <i>NAM Perspectives</i>. Discussion Paper, National Academy of Medicine, Washington, DC. https://nam.edu/vital-directions-for-health-health-care-priorities-from-a-national-academy-of-medicine-initiative/. 2020. ● The Commonwealth Fund. Health System Data Center. http://datacenter.commonwealthfund.org/?_ga=2.110888517.1505146611.1495417431-1811932185.1495417431#ind=1/sc=1. 2020. ● The Commonwealth Fund. Health Reform Resource Center. http://www.commonwealthfund.org/interactives-and-data/health-reform-resource-center#/f:@facasubcategoriesfacet63677=[Individual%20and%20Employer%20Responsibility. 2020. ● AAP. Practice Transformation. https://www.aap.org/en-us/professional-resources/practice-transformation/Pages/practice-transformation.aspx. 2020.

Practice-Based Learning and Improvement 1: Evidence-Based and Informed Practice Overall Intent: To incorporate evidence and apply it to individual patients and patient populations	
Milestones	Examples
Level 1 <i>Develops an answerable clinical question and demonstrates how to access available evidence, with guidance</i>	<ul style="list-style-type: none"> ● Identifies a question such as “What is the appropriate treatment for this patient with hyperbilirubinemia?”, but needs guidance to focus it into a searchable question ● Uses general medical resources (i.e., background information) such as UptoDate or DynaMed to search for answers ● Access available evidence using unfiltered resources, retrieving a broad array of related information
Level 2 <i>Independently articulates clinical question and accesses available evidence</i>	<ul style="list-style-type: none"> ● Clearly identifies a focused, answerable question (e.g., “Among full-term infants with breastfeeding jaundice, does earlier initiation of phototherapy decrease the need for hospitalization compared to standard care?”) ● Uses PubMed to search for the answer to a clinical question and appropriately filters results
Level 3 <i>Locates and applies the evidence, integrated with patient preference, to the care of patients</i>	<ul style="list-style-type: none"> ● Obtains, appraises, and applies evidence to use phototherapy to treat a patient with indirect hyperbilirubinemia due to breastfeeding jaundice ● Efficiently searches and filters key databases, retrieving information that is specific to the clinical question ● Evaluates diagnostic criteria that center around social identifiers such as race, gender, and BMI
Level 4 <i>Critically appraises and applies evidence, even in the face of uncertainty and conflicting evidence to guide care tailored to the individual patient</i>	<ul style="list-style-type: none"> ● Routinely seeks out and applies evidence to the care of individual patients or populations to change (or re-evaluate) their clinical practice ● Adds to library of resources with updated primary literature or clinical guidelines with new revisions ● Weighs primary and secondary outcomes to enhance specificity to individual patients ● Elicits patient’s prior experiences regarding diversity, equity, and inclusion in the health care system to start conversations about optimal management patient preference ● Explores, evaluates, and incorporates new resources into search strategies ● Discusses with families if alternative options (e.g., home phototherapy) may be reasonable, while considering patient preferences/needs (e.g., parent-baby bonding may be more difficult if the baby is hospitalized) ● Uses levels of evidence to weigh the primary outcomes that apply to the care of individual patients
Level 5 <i>Coaches others to critically appraise and apply evidence for complex patients</i>	<ul style="list-style-type: none"> ● Provides feedback to other residents on their ability to formulate questions, search for the best available evidence, appraise evidence, and apply that information to the care of patients

	<ul style="list-style-type: none"> ● Participates in the development of clinical guidelines/pathways ● Role models and coaches others in creating efficient and effective search strategies to answer clinical questions ● As part of a team, develops an evidence based clinical pathway in the EHR for babies requiring phototherapy
Assessment Models or Tools	<ul style="list-style-type: none"> ● Direct observation to inform milestones and entrustable professional activities ● Oral or written examinations ● Presentation evaluation ● Research portfolio
Curriculum Mapping	<ul style="list-style-type: none"> ●
Notes or Resources	<ul style="list-style-type: none"> ● The American Board of Pediatrics. Entrustable Professional Activities for General Pediatrics. https://www.abp.org/entrustable-professional-activities-epas. 2020. ● U.S. National Library of Medicine. PubMed Tutorial. https://www.nlm.nih.gov/bsd/disted/pubmedtutorial/cover.html. 2020. ● Guyatt G, Rennie D, Meade MO, Cook DJ. <i>Users' Guides to the Medical Literature: A Manual for Evidence-Based Clinical Practice</i>. 3rd ed. USA: McGraw-Hill Education; 2015. https://jamaevidence.mhmedical.com/Book.aspx?bookId=847. 2020. ● Duke University. Evidence-Based Practice. https://guides.mclibrary.duke.edu/ebm/home. 2020.

Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth Overall Intent: To continuously improve patient care based on self-evaluation and lifelong learning	
Milestones	Examples
Level 1 <i>Participates in feedback sessions</i> <i>Develops personal and professional goals, with assistance</i>	<ul style="list-style-type: none"> ● Attends scheduled feedback sessions ● Develops a plan with faculty member to assess how often an asthma action plan is used ● Acknowledges own implicit/explicit biases
Level 2 <i>Demonstrates openness to feedback and performance data</i> <i>Designs a learning plan based on established goals, feedback, and performance data, with assistance</i>	<ul style="list-style-type: none"> ● Acknowledges concerns about timely note completion and works with clinic preceptor to develop goals for improvement ● After reviewing the use of asthma action plans in the clinic during an annual review, integrates feedback to develop individual education plan ● Devises a plan to explore biases and how they impact care of peer relationships
Level 3 <i>Seeks and incorporates feedback and performance data episodically</i> <i>Designs and implements a learning plan by analyzing and reflecting on the factors which contribute to gap(s) between performance expectations and actual performance</i>	<ul style="list-style-type: none"> ● Evaluates the asthma action plans in the resident's personal continuity clinic patients to ensure each one has an appropriate plan consistent with current guidelines ● Identifies problems performing a lumbar puncture and arranges to spend more time in the simulation lab to improve skills ● Recognizes own implicit biases that affected care for a transgender male seeking contraception and takes steps to mitigate bias
Level 4 <i>Seeks and incorporates feedback and performance data consistently</i> <i>Adapts a learning plan using long-term professional goals, self-reflection, and performance data to measure its effectiveness</i>	<ul style="list-style-type: none"> ● Initiates a quarterly chart audit to ensure appropriate asthma action plans for all scheduled patients with asthma ● Adapts learning plan to improve knowledge of office-based asthma care based on personal reflection, feedback, and patient data ● Actively seeks out conferences to learn about anti-racism and bystander culture
Level 5 <i>Role models and coaches others in seeking and incorporating feedback and performance data</i> <i>Demonstrates continuous self-reflection and coaching of others on reflective practice</i>	<ul style="list-style-type: none"> ● Leads a clinic discussion on opportunities to improve asthma action plan implementation for all patients cared for by the clinic ● Meets with learners to review practice habits and develop their learning goals
Assessment Models or Tools	<ul style="list-style-type: none"> ● Direct observation ● Medical record (chart) audit ● Review of learning plan
Curriculum Mapping	<ul style="list-style-type: none"> ●

Notes or Resources	<ul style="list-style-type: none">● The American Board of Pediatrics. Entrustable Professional Activities for General Pediatrics. https://www.abp.org/entrustable-professional-activities-epas. 2020.● Lockspeiser TM, Li STT, Burke AE, et al. In pursuit of meaningful use of learning goals in residency: A qualitative study of pediatric residents. <i>Acad Med</i>. 2016;91(6):839-846. https://pubmed.ncbi.nlm.nih.gov/26630605/. 2020.● Burke AE, Benson B, Englander R, Carraccio C, Hicks PJ. Domain of competence: practice-based learning and improvement. <i>Acad Pediatr</i>. 2014;14: S38-S54. https://www.academicpedsjnl.net/article/S1876-2859(13)00333-1/fulltext. 2020.● Lockspeiser TM, Schmitter PA, Lane JL, Hanson JL, Rosenberg AA, Park YS. Assessing residents' written learning goals and goal writing skill: validity evidence for the learning goal scoring rubric. <i>Academic Medicine</i>. 2013;88(10):1558-1563. https://journals.lww.com/academicmedicine/fulltext/2013/10000/Assessing_Residents_Written_Learning_Goals_and.39.aspx. 2020.
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Professionalism 1: Professional Behavior	
Overall Intent: To demonstrate ethical and professional behaviors and promote these behaviors in others and to use appropriate resources to manage professional dilemmas	
Milestones	Examples
<p>Level 1 <i>Identifies expected professional behaviors and potential triggers for lapses</i></p> <p><i>Identifies the value and role of pediatrics as a vocation/career</i></p>	<ul style="list-style-type: none"> ● Asks a senior resident for feedback on post-call interactions with staff and colleagues after realizing the resident is sometimes curt when tired ● Acknowledges the importance of pediatricians in informing the public about vaccinations
<p>Level 2 <i>Demonstrates professional behavior with occasional lapses</i></p> <p><i>Demonstrates accountability for patient care as a pediatrician, with guidance</i></p>	<ul style="list-style-type: none"> ● Is late to morning rounds, identifies this lapse, and immediately apologizes to peers and attendings upon arrival ● Family is asking a resident to fill out paperwork, but the resident took care of the patient several months ago; resident communicates the family's request to the patient's care team for the current admission
<p>Level 3 <i>Maintains professional behavior in increasingly complex or stressful situations</i></p> <p><i>Fully engages in patient care and holds oneself accountable</i></p>	<ul style="list-style-type: none"> ● During a busy night on the wards, demonstrates caring and compassionate behaviors with patients, families, colleagues, and staff members ● Advocates for an individual patient's needs in a humanistic and professional manner regarding home care, medication approval, and need for care by another subspecialist ● Despite a difficult and demanding situation, continues to work to provide optimal patient care
<p>Level 4 <i>Recognizes situations that may trigger professionalism lapses and intervenes to prevent lapses in self and others</i></p> <p><i>Exhibits a sense of duty to patient care and professional responsibilities</i></p>	<ul style="list-style-type: none"> ● Models respect and compassion for patients and promotes the same from colleagues by actively identifying positive professional behavior ● Without prompting, assists colleagues with seeing patients when the clinic is busy ● Speaks up in the moment when observing racist/sexist behavior within the health care team and uses reporting mechanisms to address it
<p>Level 5 <i>Models professional behavior and coaches others when their behavior fails to meet professional expectations</i></p> <p><i>Extends the role of the pediatrician beyond the care of patients by engaging with the community, specialty, and medical profession as a whole</i></p>	<ul style="list-style-type: none"> ● Discusses the need to be on time with a PGY-1 who continues to be late, making a plan together to address the underlying issues of why the learner is late ● Advocates for process improvement to help a cohort of patients, takes on larger projects to remedy a system issue that is affecting patients, and sees the opportunity to improve care as a responsibility ● Develops education and/or modules on microaggressions and bias
Assessment Models or Tools	<ul style="list-style-type: none"> ● Direct observation

	<ul style="list-style-type: none"> ● Global evaluation ● Multisource feedback ● Oral or written self-reflection ● Simulation
Curriculum Mapping	<ul style="list-style-type: none"> ●
Notes or Resources	<ul style="list-style-type: none"> ● Below are resources that define professionalism and seek to focus it on what key knowledge, skills, and attitudes are required to ensure public trust and promote integrity within the profession. It is important to note a historical context in which the informal and formal assessment of “professionalism” has extended beyond these ideals to negatively impact the careers of women, LGBTQ people, and underrepresented minorities in medicine. Explicitly, examples of this have included the way in which women, BIPOC learners, and LGBTQ learners have been targeted for certain forms of self-expression of racial, ethnic, or gender identity. The assessment of professionalism should seek to be anti-racist and eliminate all forms of bias. ● The American Board of Pediatrics (ABP). Entrustable Professional Activities for General Pediatrics. https://www.abp.org/entrustable-professional-activities-epas. 2020. ● ABP. Medical Professionalism. https://www.abp.org/content/medical-professionalism. 2020. ● American Academy of Pediatrics. Resident Curriculum. https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Mental-Health/Pages/Residency-Curriculum.aspx. 2020. ● ABP. Teaching, Promoting, and Assessing Professionalism Across the Continuum: A Medical Educator’s Guide. https://www.abp.org/professionalism-guide. 2020. ● American Medical Association. Ethics. https://www.ama-assn.org/delivering-care/ama-code-medical-ethics. 2020. ● American Board of Internal Medicine, ACP-ASIM Foundation, European Federation of Internal Medicine. Medical professionalism in the new millennium: a physician charter. <i>Ann Intern Med</i>. 2002;136:243-246. http://abimfoundation.org/wp-content/uploads/2015/12/Medical-Professionalism-in-the-New-Millennium-A-Physician-Charter.pdf. 2020. ● Domen RE, Johnson K, Conran RM, et al. Professionalism in pathology: a case-based approach as a potential education tool. <i>Arch Pathol Lab Med</i>. 2017;141:215-219. https://www.archivesofpathology.org/doi/10.5858/arpa.2016-0217-CP?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%3dpubmed. 2020. ● Levinson W, Ginsburg S, Hafferty FW, Lucey CR. <i>Understanding Medical Professionalism</i>. New York, NY: McGraw-Hill Education; 2014.

- Bynny RL, Paauw DS, Papadakis MA, Pfeil S. *Medical Professionalism. Best Practices: Professionalism in the Modern Era*. Menlo Park, CA: Alpha Omega Alpha Medical Society; 2017. ISBN: 978-1-5323-6516-4
- Paul DW Jr, Knight KR, Campbell A, Aronson L. Beyond a moment - reckoning with our history and embracing antiracism in medicine [published online ahead of print, 2020 Jul 28]. *N Engl J Med*. 2020;10.1056/NEJMp2021812. doi:10.1056/NEJMp2021812
- AbdelHameid D. Professionalism 101 for Black physicians. *N Engl J Med*. 2020;383(5):e34. doi:10.1056/NEJMp2022773
- Osseo-Asare A, Balasuriya L, Huot SJ, et al. Minority resident physicians' views on the role of race/ethnicity in their training experiences in the workplace. *JAMA Network Open*. 2018;1(5):e182723. Published 2018 Sep 7. doi:10.1001/jamanetworkopen.2018.2723

Professionalism 2: Ethical Principles	
Overall Intent: To recognize and address or resolve common and complex ethical dilemmas or situations	
Milestones	Examples
Level 1 <i>Demonstrates knowledge of the ethical principles underlying informed consent, surrogate decision making, advance directives, confidentiality, error disclosure, stewardship of limited resources, and related topics</i>	<ul style="list-style-type: none"> ● Identifies and applies ethical principles involved in informed consent when the resident is unclear of all of the risks
Level 2 <i>Applies ethical principles in common situations</i>	<ul style="list-style-type: none"> ● Articulates how the principle of “do no harm” applies to a patient who may not need a lumbar puncture even though it could provide a learning opportunity
Level 3 <i>Analyzes complex situations using ethical principles to address conflict/controversy; seeks help when needed to manage and resolve complex ethical situations</i>	<ul style="list-style-type: none"> ● Offers treatment options for a terminally ill patient, minimizing bias, while recognizing own limitations, and consistently honoring the patient’s and family’s choice ● Provides support to a young mother who has custody of her daughter, although the attending strongly supported removal from the home
Level 4 <i>Manages and seeks to resolve ethical dilemmas using appropriate resources (e.g., ethics consultations, literature review, risk management/legal consultation)</i>	<ul style="list-style-type: none"> ● Appropriately uses ethics resources to discuss end-of-life care of a child in the intensive care unit with multiorgan failure and poor prognosis ● Uses institutional resources, including social work and risk management, when a parent chooses to leave the hospital against medical advice ● Reviews state laws on statutory rape as it pertains to a 14-year-old having sex with a 16-year-old and discusses case with attending physician or adolescent medicine provider ● Engages with a multidisciplinary team to address issues when families and physicians disagree on care plan for a patient with brain death; recognizes that prior experiences of racism for the patient and family influence their trust and defer discussion of most complex issues to those who the family have demonstrated trust in, rather than assuming a hierarchical structure
Level 5 <i>Called upon by others to consult in cases of complex ethical dilemmas; identifies and seeks to address system-level factors that induce or exacerbate</i>	<ul style="list-style-type: none"> ● Participates as part of the ethics consult service, providing guidance for complex cases
Assessment Models or Tools	<ul style="list-style-type: none"> ● Direct observation ● Global evaluation ● Multisource feedback ● Oral or written self-reflection ● Simulation
Curriculum Mapping	<ul style="list-style-type: none"> ●

Notes or Resources

- The American Board of Pediatrics. Entrustable Professional Activities for General Pediatrics. <https://www.abp.org/entrustable-professional-activities-epas>. 2020.
- American Medical Association. Ethics. <https://www.ama-assn.org/delivering-care/ama-code-medical-ethics>. 2020.
- American Board of Internal Medicine, ACP-ASIM Foundation, European Federation of Internal Medicine. Medical professionalism in the new millennium: a physician charter. *Ann Intern Med*. 2002;136:243-246. <http://abimfoundation.org/wp-content/uploads/2015/12/Medical-Professionalism-in-the-New-Millennium-A-Physician-Charter.pdf>. 2020.
- Domen RE, Johnson K, Conran RM, et al. Professionalism in pathology: a case-based approach as a potential education tool. *Arch Pathol Lab Med*. 2017;141:215-219. https://www.archivesofpathology.org/doi/10.5858/arpa.2016-0217-CP?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%3dpubmed. 2020.
- Levinson W, Ginsburg S, Hafferty FW, Lucey CR. *Understanding Medical Professionalism*. New York, NY: McGraw-Hill Education; 2014.
- Bynny RL, Paauw DS, Papadakis MA, Pfeil S. *Medical Professionalism. Best Practices: Professionalism in the Modern Era*. Menlo Park, CA: Alpha Omega Alpha Medical Society; 2017. ISBN: 978-1-5323-6516-4

Professionalism 3: Accountability/Conscientiousness	
Overall Intent: To take responsibility for one’s own actions and the impact on patients and other members of the health care team	
Milestones	Examples
Level 1 <i>Performs tasks and responsibilities, with prompting</i>	<ul style="list-style-type: none"> • Responds to reminders from program administrator to complete work hour logs • After being informed by the program director that too many conferences have been missed, changes habits to meet the minimum attendance requirement • Completes patient care tasks (callbacks, consultations, orders) after prompting from a supervisor
Level 2 <i>Performs tasks and responsibilities in a timely manner in routine situations</i>	<ul style="list-style-type: none"> • Completes administrative tasks (e.g., licensing requirements) by specified due date • Completes routine patient care tasks as assigned • Answers pages and emails promptly with rare need for reminders
Level 3 <i>Performs tasks and responsibilities in a thorough and timely manner in complex or stressful situations</i>	<ul style="list-style-type: none"> • Identifies multiple competing demands when caring for patients, appropriately triages tasks, and appropriately seeks help from other team members
Level 4 <i>Coaches others to ensure tasks and responsibilities are completed in a thorough and timely manner in complex or stressful situations</i>	<ul style="list-style-type: none"> • Reminds PGY-1 residents to log work hours, gives tips on task prioritization • Supervises PGY-1s and/or medical students on a busy night, delegating tasks appropriately, and ensures that all tasks are completed for safe and thorough patient care
Level 5 <i>Creates strategies to enhance others’ ability to efficiently complete tasks and responsibilities</i>	<ul style="list-style-type: none"> • Meets with multidisciplinary team (e.g., nurses, social worker, case manager) to streamline patient discharges
Assessment Models or Tools	<ul style="list-style-type: none"> • Compliance with deadlines and timelines • Direct observation • Global evaluations • Multisource feedback • Self-evaluations and reflective tools • Simulation
Curriculum Mapping	<ul style="list-style-type: none"> •
Notes or Resources	<ul style="list-style-type: none"> • The American Board of Pediatrics. Entrustable Professional Activities for General Pediatrics. https://www.abp.org/entrustable-professional-activities-epas. 2020. • American Medical Association. Ethics. https://www.ama-assn.org/delivering-care/ama-code-medical-ethics. 2020. • Code of conduct from fellow/resident institutional manual • Expectations of residency program regarding accountability and professionalism

Professionalism 4: Well-Being	
Overall Intent: To identify resources to manage and improve well-being	
Milestones	Examples
Level 1 <i>Recognizes the importance of addressing personal and professional well-being</i>	<ul style="list-style-type: none"> ● Acknowledges how individual response to participating in a difficult code blue impacts well-being and may impact the approach to patients seen later the same day ● Discusses the importance of a faculty mentor ● Recognizes that personal stress may require a change in schedule
Level 2 <i>Describes institutional resources that are meant to promote well-being</i>	<ul style="list-style-type: none"> ● Identifies well-being resources such as meditation apps, mental health resources, for students and residents available through the program and institution ● Meets with program director to discuss Family Medical Leave Act options when expecting a child
Level 3 <i>Recognizes institutional and personal factors that impact well-being</i>	<ul style="list-style-type: none"> ● Identifies working in the pediatric intensive care unit may be stressful and impact well-being ● Identifies that working during a pandemic is unusually stressful personally and professionally ● Describes the tension between professional and personal responsibilities
Level 4 <i>Describes interactions between institutional and personal factors that impact well-being</i>	<ul style="list-style-type: none"> ● Recognizes that the two-week night rotation is negatively impacting time with two toddlers and spouse at home ● Discusses a plan to mitigate the tension between a busy schedule and time with family ● Recognizes how microaggressions from coworkers and/or faculty members are impacting performance or engagement in patient care
Level 5 <i>Coaches and supports colleagues to optimize well-being at the team, program, or institutional level</i>	<ul style="list-style-type: none"> ● Leads organizational efforts to address clinician well-being ● Leads a team debrief after a stressful, busy shift; shares how the shift impacted them and how they plan to decompress ● Develops an affinity group to provide support for self and others to explore impact of microaggressions and biases
Assessment Models or Tools	<ul style="list-style-type: none"> ● Direct observation ● Group interview or discussions for team activities ● Individual interview ● Institutional online training modules ● Self-assessment and personal learning plan
Curriculum Mapping	<ul style="list-style-type: none"> ●
Notes or Resources	<ul style="list-style-type: none"> ● This subcompetency is not intended to evaluate a resident’s well-being, but to ensure each resident has the fundamental knowledge of factors that impact well-being, the mechanisms by which those factors impact well-being, and available resources and tools to improve well-being.

- The American Board of Pediatrics. Entrustable Professional Activities for General Pediatrics. <https://www.abp.org/entrustable-professional-activities-epas>. 2020.
- Local resources, including Employee Assistance
- Hicks PJ, Schumacher D, Guralnick S, Carraccio C, Burke AE. Domain of competence: personal and professional development. *Acad Pediatr*. 2014;14(2 Suppl):S80-97. <https://www.sciencedirect.com/science/article/abs/pii/S187628591300332X>. 2020.
- ACGME. "Well-Being Tools and Resources." <https://dl.acgme.org/pages/well-being-tools-resources>. 2020.

Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication Overall Intent: To establish a therapeutic relationship with patients and families, tailor communication to the needs of patients and families, and effectively navigate difficult/sensitive conversations	
Milestones	Examples
<p>Level 1 <i>Demonstrates respect and attempts to establish rapport</i></p> <p><i>Attempts to adjust communication strategies based upon patient/family expectations</i></p>	<ul style="list-style-type: none"> ● Introduces self and faculty member, identifies patient and others in the room, and engages all parties in health care discussion ● Attempts to initiate sensitive conversations ● Identifies need for trained interpreter with non-English-speaking patients
<p>Level 2 <i>Establishes a therapeutic relationship in straightforward encounters</i></p> <p><i>Adjusts communication strategies as needed to mitigate barriers and meet patient/family expectations</i></p>	<ul style="list-style-type: none"> ● Prioritizes and sets an agenda based on concerns of parents at the beginning of a health supervision visit with a child with an acute chronic medical problem ● Uses nonjudgmental language to discuss sensitive topics ● Uses patient’s preferred pronouns when addressing patient ● When seeing a distraught teenager with genital herpes, ensures the patient understands that the outbreak will be self-limited but acknowledges uncertainty of future outbreaks and discusses risks/benefits of prophylactic medication ● While acknowledging gender identification, appropriately addresses the need for pelvic and/or bimanual exam in a transgender male with uterus/ovaries
<p>Level 3 <i>Establishes a culturally competent and therapeutic relationship in most encounters</i></p> <p><i>Communicates with sensitivity and compassion, elicits patient/family values, and acknowledges uncertainty and conflict</i></p>	<ul style="list-style-type: none"> ● Prioritizes and sets an agenda based on concerns of parents at the beginning of a health supervision visit with a child with multiple chronic medical problems ● Discusses sensitive topics while promoting trust, respect, and understanding ● Recognizes that mispronouncing a patient’s name, especially one of a different ethnicity, might be experienced as a microaggression; the resident apologizes to the patient and seeks to correct the mistake ● Discusses resources and options with a teenage patient presenting with an unwanted pregnancy in a manner that supports the patient and avoids bias in presentation of options
<p>Level 4 <i>Establishes a therapeutic relationship in straightforward and complex encounters, including those with ambiguity and/or conflict</i></p>	<ul style="list-style-type: none"> ● Continues to engage parents who refuse immunizations, addressing misinformation and reviewing risks/benefits to assuage these concerns in a manner that engages rather than alienates the family ● Facilitates sensitive discussions with patient/family and interdisciplinary team ● Asks questions in ways that validate patient identifies and promote an inclusive environment

<p><i>Uses shared decision making with patient/family to make a personalized care plan</i></p>	<ul style="list-style-type: none"> • While maintaining trust, engages family of a child with medical complexity along with other members of the multi-specialty care team in determining family wishes and expectations regarding resuscitative efforts in the event of an acute deterioration
<p>Level 5 <i>Mentors others to develop positive therapeutic relationships</i></p> <p><i>Models and coaches others in patient- and family-centered communication</i></p>	<ul style="list-style-type: none"> • Acts as a mentor for junior resident disclosing bad news to a patient and their family • Models and coaches the spectrum of difficult communication • Develops a curriculum on patient- and family-centered communication, including navigating difficult conversations
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> • Direct observation • Kalamazoo Essential Elements Communication Checklist (Adapted) • OSCE • Skills needed to Set the state, Elicit information, Give information, Understand the patient, and End the encounter (SEGUE) • Standardized patients
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> •
<p>Notes or Resources</p>	<ul style="list-style-type: none"> • The American Board of Pediatrics. Entrustable Professional Activities for General Pediatrics. https://www.abp.org/entrustable-professional-activities-epas. 2020. • Benson BJ. Domain of competence: Interpersonal and communication skills. <i>Acad Ped</i>. 2014;14(2 Suppl):S55-S65. https://www.acgme.org/Portals/0/PDFs/Milestones/InterpersonalandCommunicationSkillsPediatrics.pdf. 2020. • Laidlaw A, Hart J. Communication skills: an essential component of medical curricula. Part I: Assessment of clinical communication: AMEE Guide No. 51. <i>Med Teach</i>. 2011;33(1):6-8. https://www.tandfonline.com/doi/full/10.3109/0142159X.2011.531170. 2020. • Makoul G. Essential elements of communication in medical encounters: the Kalamazoo consensus statement. <i>Acad Med</i>. 2001;76(4):390-393. https://journals.lww.com/academicmedicine/Fulltext/2001/04000/Essential_Elements_of_Communication_in_Medical.21.aspx#pdf-link. 2020. • Makoul G. The SEGUE Framework for teaching and assessing communication skills. <i>Patient Educ Couns</i>. 2001;45(1):23-34. https://www.sciencedirect.com/science/article/abs/pii/S0738399101001367?via%3Dihub. 2020. • National LGBTQIA+ Health and Education Center https://www.lgbtqiahealtheducation.org/ • AAMC MedEdPortal Anti-racism in Medicine Collection https://www.mededportal.org/anti-racism https://bmcmmededuc.biomedcentral.com/articles/10.1186/1472-6920-9-1. 2020.

Interpersonal and Communication Skills 2: Interprofessional and Team Communication Overall Intent: To communicate effectively with the health care team, including consultants	
Milestones	Examples
<p>Level 1 <i>Respectfully requests a consultation, with guidance</i></p> <p><i>Identifies the members of the interprofessional team</i></p>	<ul style="list-style-type: none"> ● When asking for a cardiology consultation for a patient with Marfan syndrome, respectfully relays the diagnosis and requests for the team to evaluate the patient ● Acknowledges the contribution of each member of the multidisciplinary team to the patient
<p>Level 2 <i>Clearly and concisely requests consultation by communicating patient information</i></p> <p><i>Participates within the interprofessional team</i></p>	<ul style="list-style-type: none"> ● When requesting a consult from the infectious disease team, clearly and concisely describes the recent history of an intensive care unit patient who has a new fever ● Sends a message in the EHR to the dietician of a metabolic patient to discuss increasing the protein restriction
<p>Level 3 <i>Formulates a specific question for consultation and tailors communication strategy</i></p> <p><i>Uses bi-directional communication within the interprofessional team</i></p>	<ul style="list-style-type: none"> ● After a consultation has been completed, communicates with the primary care team to verify they have received and understand the recommendations ● Contacts the metabolic team social worker to arrange for delivery of a specialized formula and completes the prescription
<p>Level 4 <i>Coordinates consultant recommendations to optimize patient care</i></p> <p><i>Facilitates interprofessional team communication</i></p>	<ul style="list-style-type: none"> ● Initiates a multidisciplinary meeting to develop shared care plan for a patient with 22q11.2 deletion syndrome ● Explains to the rest of the team, as well as the parents, the rationale for chromosome analysis instead of chromosome microarray analysis as the preferred diagnostic test for suspected Down syndrome ● Asks other members of the health care team to repeat back recommendations to ensure understanding ● Leads the morning interprofessional huddle on the inpatient unit ● Effectively navigates racial discrimination or microaggressions from a colleague as it pertains to the patient
<p>Level 5 <i>Maintains a collaborative relationship with referring providers that maximizes adherence to practice recommendations</i></p> <p><i>Coaches others in effective communication within the interprofessional team</i></p>	<ul style="list-style-type: none"> ● Talks with team about the importance of regular, professional interactions with the cardiologists providing care for their complex patient ● Mediates a conflict between different members of the health care team

<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Direct observation ● Global assessment ● Medical record (chart) audit ● Multi-source feedback ● Simulation
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> ●
<p>Notes or Resources</p>	<ul style="list-style-type: none"> ● The American Board of Pediatrics. Entrustable Professional Activities for General Pediatrics. https://www.abp.org/entrustable-professional-activities-epas. 2020. ● Green M, Parrott T, Cook G., Improving your communication skills. <i>BMJ</i>. 2012;344:e357. https://www.bmj.com/content/344/bmj.e357. 2020. ● Henry SG, Holmboe ES, Frankel RM. Evidence-based competencies for improving communication skills in graduate medical education: a review with suggestions for implementation. <i>Med Teach</i>. 2013;35(5):395-403. https://www.tandfonline.com/doi/full/10.3109/0142159X.2013.769677. 2020. ● Roth CG, Eldin KW, Padmanabhan V, Freidman EM. Twelve tips for the introduction of emotional intelligence in medical education. <i>Med Teach</i>. 2019;41(7):1-4. https://www.tandfonline.com/doi/full/10.1080/0142159X.2018.1481499. 2020. ● François J. Tool to assess the quality of consultation and referral request letters in family medicine. <i>Can Fam Physician</i>. 2011;57(5):574–575. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3093595/. 2020. ● Fay D, Mazzone M, Douglas L, Ambuel B. A validated, behavior-based evaluation instrument for family medicine residents. <i>MedEdPORTAL</i>. 2007. https://www.mededportal.org/doi/10.15766/mep_2374-8265.622. 2020. ● Dehon E, Simpson K, Fowler D, Jones A. Development of the faculty 360. <i>MedEdPORTAL</i>. 2015;11:10174. http://doi.org/10.15766/mep_2374-8265.10174. 2020. ● Interprofessional Education Collaborative Expert Panel. Core Competencies for Interprofessional Collaborative Practice: Report of an Expert Panel. Washington, D.C.: Interprofessional Education Collaborative; 2011. https://www.aacom.org/docs/default-source/insideome/ccrpt05-10-11.pdf?sfvrsn=77937f97_2. 2020. ● ACAPT. NIPEC Assessment Resources and Tools. https://acapt.org/about/consortium/national-interprofessional-education-consortium-(nipec)/nipec-assessment-resources-and-tools. 2020.

Interpersonal and Communication Skills 3: Communication within Health Care Systems Overall Intent: To effectively communicate using a variety of tools and methods	
Milestones	Examples
<p>Level 1 <i>Records accurate information in the patient record</i></p> <p><i>Identifies the importance of and responds to multiple forms of communication (e.g., in-person, electronic health record (EHR), telephone, email)</i></p>	<ul style="list-style-type: none"> ● Corrects progress note after attending identifies outdated plan ● If using copy paste/forward, goes back to make changes to note after doing so ● Identifies team, departmental, and institutional communication tools, methods, and hierarchies for patient care needs, concerns and safety issues
<p>Level 2 <i>Records accurate and timely information in the patient record</i></p> <p><i>Selects appropriate method of communication, with prompting</i></p>	<ul style="list-style-type: none"> ● Provides organized and accurate documentation that supports the treatment plan and limits extraneous information ● Avoids biased or stigmatized language in notes (e.g., “denies use of marijuana” instead of “doesn’t use marijuana”) ● Intern calls nurse with urgent request for labs after senior resident reminds them
<p>Level 3 <i>Concisely documents updated, prioritized, diagnostic and therapeutic reasoning in the patient record</i></p> <p><i>Aligns type of communication with message to be delivered (e.g., direct and indirect) based on urgency and complexity</i></p>	<ul style="list-style-type: none"> ● Documentation reflects complex clinical thinking and planning, and is concise, but may not contain contingency planning (i.e., if/then statements) ● When a patient begins to decompensate immediately requests additional resources and contacts the immediate supervisor ● Emails patient's cardiologist with non-urgent question rather than paging cardiologist on call
<p>Level 4 <i>Documents diagnostic and therapeutic reasoning, including anticipatory guidance</i></p> <p><i>Demonstrates exemplary written and verbal communication</i></p>	<ul style="list-style-type: none"> ● Documentation is consistently accurate, organized, and concise; reflects complex clinical reasoning and frequently incorporates contingency planning ● Communicates effectively and proactively with collaborating physicians and teams about communication gaps in order to prevent recurrence
<p>Level 5 <i>Models and coaches others in documenting diagnostic and therapeutic reasoning</i></p>	<ul style="list-style-type: none"> ● Leads teams by modeling a range of effective tools and methods of communication that fit the context of a broad variety of clinical encounters

<p><i>Coaches others in written and verbal communication</i></p>	<ul style="list-style-type: none"> • Designs and facilitates the improvement of systems that integrates effective communication among teams, departments, and institutions • Leads a team to discuss implementation and dissemination of preferred pronouns/names into EHR
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> • Direct observation • Medical record (chart) audit • Multisource feedback • Simulation
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> •
<p>Notes or Resources</p>	<ul style="list-style-type: none"> • The American Board of Pediatrics. Entrustable Professional Activities for General Pediatrics. https://www.abp.org/entrustable-professional-activities-epas. 2020. • Benson BJ. Domain of competence: Interpersonal and communication skills. <i>Acad Ped</i>. 2014;14(2 Suppl):S55-S65. https://www.acgme.org/Portals/0/PDFs/Milestones/InterpersonalandCommunicationSkillsPediatrics.pdf. 2020. • Bierman JA, Hufmeyer KK, Liss DT, Weaver AC, Heiman HL. Promoting responsible electronic documentation: validity evidence for a checklist to assess progress notes in the electronic health record. <i>Teach Learn Med</i>. 2017 Oct-Dec;29(4):420-432. • Starmer, Amy J., et al. I-pass, a mnemonic to standardize verbal handoffs. <i>Pediatrics</i>. 2012;129.2:201-204. https://pubmed.ncbi.nlm.nih.gov/22232313/. 2020. • Haig, K.M., Sutton, S., Whittington, J. SBAR: a shares mental model for improving communications between clinicians. <i>Jt Comm J Qual Patient Saf</i>. 2006 Mar;32(3):167-75. https://pubmed.ncbi.nlm.nih.gov/16617948/. 2020.

To help programs transition to the new version of the Milestones, the original Milestones 1.0 have been mapped to the new Milestones 2.0; it is indicated if subcompetencies are similar between versions. These are not exact matches but include some of the same elements. Not all subcompetencies map between versions. Inclusion or exclusion of any subcompetency does not change the educational value or impact on curriculum or assessment.

Milestones 1.0	Milestones 2.0
PC1: Gather essential and accurate information about the patient	PC1: History PC2: Physical Exam
PC2: Organize and prioritize responsibilities to provide patient care that is safe, effective, and efficient	PC3: Organize and Prioritize Patient Care
PC3: Provide transfer of care that ensures seamless transitions	SBP4: System Navigation for Patient-Centered Care – Transitions in Care
PC4: Make informed diagnostic and therapeutic decisions that result in optimal clinical judgement	PC4: Clinical Reasoning MK2: Diagnostic Evaluation
PC5: Develop and carry out management plans	PC5: Patient Management
MK1: Critically evaluate and apply current medical information and scientific evidence for patient care	PBL1: Evidence-Based and Informed Practice
SBP1: Coordinate patient care within the health care system relevant to their clinical specialty	SBP3: System Navigation for Patient Centered Care – Coordination of Care
SBP2: Advocate for quality patient care and optimal patient care systems	SBP1: Patient Safety SBP2: Quality Improvement
SBP3: Work in inter-professional teams to enhance patient safety and improve patient care quality	ICS2: Interprofessional and Team Communication SBP3: System Navigation for Patient Centered Care – Coordination of Care
	SBP5: Population and Community Health SBP6: Physician Role in Health Care Systems
PBL1: Identify strengths, deficiencies, and limits in one’s knowledge and expertise	PBL2: Reflective Practice and Commitment to Personal Growth
PBL2: Identify and perform appropriate learning activities to guide personal and professional development	PBL2: Reflective Practice and Commitment to Personal Growth
PBL3: Systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement	PBL2: Reflective Practice and Commitment to Personal Growth
PBL4: Incorporate formative evaluation feedback into daily practice	PBL2: Reflective Practice and Commitment to Personal Growth

PROF1: Demonstrate humanism, compassion, integrity, and respect for others; based on the characteristics of an empathetic practitioner	PROF1: Professional Behavior
PROF2: Professionalization: A sense of duty and accountability to patients, society, and the profession	PROF3: Accountability/Conscientiousness
PROF3: Professional Conduct: High standards of ethical behavior which includes maintaining appropriate professional boundaries	PROF2: Ethical Principles
PROF4: Self-awareness of one's own knowledge, skill, and emotional limitations that leads to appropriate help-seeking behaviors	PBLI2: Reflective Practice and Commitment to Personal Growth
	PROF4: Well-Being
PROF5: Trustworthiness that makes colleagues feel secure when one is responsible for the care of patients	PROF1: Professional Behavior PROF3: Accountability/Conscientiousness
PROF6: Recognize that ambiguity is part of clinical medicine and to recognize the need for and to utilize appropriate resources in dealing with uncertainty	PROF2: Ethical Principles ICS1: Patient- and Family-Centered Communication
ICS1: Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds	ICS1: Patient- and Family-Centered Communication
ICS2: Demonstrate the insight and understanding into emotion and human response to emotion that allows one to appropriately develop and manage human interactions	ICS1: Patient- and Family-Centered Communication ICS2: Interprofessional and Team Communication
	ICS3: Communication within Health Care Systems

Available Milestones Resources

Milestones 2.0: Assessment, Implementation, and Clinical Competency Committees Supplement, 2021 - <https://meridian.allenpress.com/jgme/issue/13/2s>

Milestones Guidebooks: <https://www.acgme.org/milestones/resources/>

- *Assessment Guidebook*
- *Clinical Competency Committee Guidebook*
- *Clinical Competency Committee Guidebook Executive Summaries*
- *Implementation Guidebook*
- *Milestones Guidebook*

Milestones Guidebook for Residents and Fellows: <https://www.acgme.org/residents-and-fellows/the-acgme-for-residents-and-fellows/>

- *Milestones Guidebook for Residents and Fellows*
- *Milestones Guidebook for Residents and Fellows Presentation*
- *Milestones 2.0 Guide Sheet for Residents and Fellows*

Milestones Research and Reports: <https://www.acgme.org/milestones/research/>

- *Milestones National Report*, updated each fall
- *Milestones Predictive Probability Report*, updated each fall
- *Milestones Bibliography*, updated twice each year

Developing Faculty Competencies in Assessment courses - <https://www.acgme.org/meetings-and-educational-activities/courses-and-workshops/developing-faculty-competencies-in-assessment/>

Assessment Tool: Direct Observation of Clinical Care (DOCC) - <https://dl.acgme.org/pages/assessment>

Assessment Tool: Teamwork Effectiveness Assessment Module (TEAM) - <https://team.acgme.org/>

Improving Assessment Using Direct Observation Toolkit - <https://dl.acgme.org/pages/acgme-faculty-development-toolkit-improving-assessment-using-direct-observation>

Remediation Toolkit - <https://dl.acgme.org/courses/acgme-remediation-toolkit>

Learn at ACGME has several courses on Assessment and Milestones - <https://dl.acgme.org/>