

# Supplemental Guide: Family Medicine



October 2019

#### **Milestones Supplemental Guide**

This document provides additional guidance and examples for the Family Medicine 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. Curricular mapping was intentionally left blank, as it will vary from program to program and therefore could not be generalized in this document.

The assessment of a family medicine resident's clinical skills is an essential task for all programs. It should be noted that the Milestones do not include a subcompetency for these clinical skills to be reported to the ACGME. During development of the new Milestones, the clinical skills were considered to be the underpinning of each of the Patient Care subcompetencies and required in order to complete the stated tasks.

#### Patient Care 1: Care of the Acutely III Patient Overall Intent: To recognize, stabilize, and manage patients with acute and urgent needs across settings, including inpatient and outpatient **Milestones Examples** • Evaluates a patient with shortness of breath and lists common causes for the patient's Level 1 Generates differential diagnosis for acute presentations dyspnea Recognizes role of clinical protocols and • Recognizes that activation of the rapid response system is appropriate for a patient in guidelines in acute situations acute respiratory distress Recognizes that acute conditions have an Recognizes that being hospitalized for chronic obstructive pulmonary disease (COPD) impact beyond the immediate disease process may require discharge on home oxygen Level 2 Prioritizes the differential diagnosis for • Evaluates a patient with acute shortness of breath and prioritizes the workup of most potentially serious causes of a patient's dyspnea like pulmonary embolism, acute presentations pneumothorax, or myocardial infarction Develops management plans for patients with After diagnosing a patient with COPD exacerbation, documents a management plan for a patient and writes appropriate orders common acute conditions Identifies the interplay between psychosocial • When discharging a patient with a COPD exacerbation, considers potential financial factors and acute illness implications to medication adherence for the inhalers prescribed • After evaluating a patient in severe, acute respiratory distress, without prompting, initiates Level 3 Promptly recognizes urgent and emergent situations and coordinates appropriate the rapid response system and leads urgent workup with tests like blood gas. electrocardiogram (EKG), and chest x-ray diagnostic strategies Balances need for high-dose steroids and elevated blood sugar in a patient with a COPD Implements management plans for patients with complex acute conditions, including stabilizing exacerbation, who also has uncontrolled diabetes and edema from poorly managed heart acutely ill patients failure Identifies a patient in respiratory failure and makes an appropriate decision to provide assisted or mechanical ventilation. Incorporates psychosocial When discharging a patient with a COPD exacerbation, uses available resources such as factors into management plans of acute illness hospital programs to obtain needed inhalers for patients and caregivers Level 4 Mobilizes the multidisciplinary team to • While stabilizing patient with acute respiratory distress, initiates an appropriate diagnostic manage care for simultaneous patient visits plan with a consideration for patient wishes, financial resources, and best practices for a

new patient with acute chest pain

Independently coordinates care for acutely ill patients with complex comorbidities  Modifies management plans for acute illness based on complex psychosocial factors and patient preferences  Level 5 Efficiently manages and coordinates the care of multiple patients with a range of severity, including life threatening conditions	<ul> <li>Works with multi-disciplinary team and appropriate specialists if needed to manage intubation of COPD patient while addressing poorly controlled diabetes and renal failure</li> <li>Adjusts management plan of assisted respiration for a patient with severe COPD exacerbation based on advanced directives that requests no intubation negotiating with family the use of bi-level positive airway pressure (BIPAP) instead</li> <li>Independently manages a panel of multiple acute emergency room patients simultaneously</li> </ul>
Directs the use of resources to manage a complex patient care environment or situation  Implements strategies to address the psychosocial impacts of acute illness on populations	<ul> <li>Creates order set to direct care for activation of rapid response team for patients with acute respiratory distress</li> <li>Works with homeless shelter to negotiate for space of newly discharged patients outside of standard intake hours</li> </ul>
Assessment Models or Tools	<ul> <li>Case-based discussions</li> <li>Direct observation</li> <li>Medical record (chart) audit</li> <li>Multisource feedback</li> <li>Precepting encounters</li> <li>Simulation</li> </ul>
Curriculum Mapping	
Notes or Resources	<ul> <li>Residents demonstrate use of clinical decision tools and point of care apps in making decisions for management of patients with acute conditions. Examples include Mediquations, Calculate by QxMD, MDCalc, MedCalX,</li> </ul>

#### Patient Care 2: Care of Patients with Chronic Illness Overall Intent: To diagnose, manage, and coordinate care of patients with chronic illness in the context of a continuous relationship **Examples Milestones Level 1** Recognizes that common conditions may • Identifies that a 38-year-old male presenting to the office with an elevated blood pressure be chronic (e.g., anxiety, high blood pressure) may have a diagnosis of essential hypertension Formulates a basic management plan that Recommends that the patient take serial home blood pressure readings, follow a low sodium diet and return for repeat evaluation of the blood pressure addresses a chronic illness • Recognizes a patient with uncontrolled hypertension will not be able to maintain a Recognizes that chronic conditions have an commercial driver's license impact beyond the disease process Level 2 Identifies variability in presentation and • Recognizes that a new onset headache may be a symptom of underlying hypertension progression of chronic conditions Identifies and accesses appropriate clinical Locates and reviews guidelines from appropriate agencies, such as the American College guidelines to develop and implement plans for of Cardiology/American Heart Association, and initiates a first-line antihypertensive for the management of chronic conditions patient and schedules appropriate follow up after starting the medication Identifies the impact of chronic conditions on • Understands that hypertension will affect the patient and their caretaker/loved one's individual patients and the others involved in their lifestyle, including the need to modify food choices, alcohol intake and activity levels care **Level 3** Determines the potential impact of Screens for and addresses diabetes and dyslipidemia in the patient with hypertension comorbidities on disease progression • In a patient with hypertension who is also found to have diabetes, sets up education on Synthesizes a patient-centered management plan that acknowledges the relationship between glucose control and adjusts the hypertensive regimen to include agents that provide renal comorbidities and disease progression protection Develops collaborative goals of care and • Works with their patient to establish a weight loss goal for the next visit and offers realistic engages the patient in self-management of steps to engage the patient in self-management, noting the effects behavior change will chronic conditions have on their diabetes and hypertension • Adjusts medications and dosing regimens (i.e., stops metformin and an ACE-inhibitor) Level 4 Balances the competing needs of when a patient develops worsening chronic kidney disease without prompting. patients' comorbidities Independently demonstrates planning for future care plans with each patient who has a chronic illness

Applies experience with patients while incorporating evidence-based medicine in the	
management of patients with chronic conditions  Facilitates efforts at self-management of chronic conditions, including engagement of family and	• Explains to a patient and his or her caretakers the use of a basal/bolus insulin regimen, how to properly use an insulin pen and sliding scale, and informs the patient about local resources for medications and further education (e.g., health education website, social
community resources	work, community centers)
Level 5 Leads multidisciplinary initiatives to manage patient populations with chronic conditions and co-morbidities	<ul> <li>A resident who knows a patient wants to be the best possible grandparent is able to use this information to provide motivation for behavioral change in the patient</li> </ul>
Initiates supplemental strategies (e.g., leads patient and family advisory councils, community	Participates in the development of a diabetes task force involving subspecialists and other health care professionals to meet the needs of their community
health, practice innovation) to improve the care of patients with chronic conditions	Leads a patient and family advisory council to begin work to address the local food desert that exists in their community
Assessment Models or Tools	Direct observation
	Medical record (chart) audit
	Multisource feedback
	Objective structured clinical examination     Circulation
Curriculum Mapping	Simulation
Notes or Resources	Since the Agency for Healthcare Research and Quality ended the Guidelines
Notes of Nesources	Clearinghouse, other organizations have taken up the role of centralizing clinical guidelines to assist in the care of patients with chronic illness  • Guideline Central. Official Society Guidelines Tools. <a href="https://www.guidelinecentral.com/">https://www.guidelinecentral.com/</a> . 2019.  • Android/iOS Guideline Central app

Patient Care 3: Health Promotion and Wellness	
Overall Intent: To promote wellness and improve health throughout screening and prevention by partnering with the patient, family	
members, and community; understands conc communities served	ept of wellness and is able to promote in individual patients, their practice and their
Milestones	Examples
Level 1 Identifies screening and prevention guidelines by various organizations	Lists usual/most common sources of guidelines such as American Academy of Family Physicians (AAFP), US Preventive Services Task Force (USPSTF) during routine precepting encounters
Identifies opportunities to maintain and promote wellness in patients	Administers an measles-mumps-rubella (MMR) vaccine prior to discharge in a recently postpartum rubella non-immune patient
<b>Level 2</b> Reconciles competing prevention guidelines to develop a plan for an individual patient, and considers how these guidelines apply to the patient population	Discusses discrepant guidelines from different organizations to determine if breast cancer screening in a 50-year-old patient, without significant family history, should be done every one or two years
Recommends management plans to maintain and promote health	Conducts a wellness visit for a patient and includes screening, immunizations, and lifestyle modification strategies that correlate with the patient's age and comorbidities
Level 3 Identifies barriers and alternatives to preventive health tests, with the goal of shared decision making	After seeing an insured patient with limited resources, and inability to secure transportation to and from appointments, patient agrees on fecal immunochemical testing as the preferred method for colon cancer screening
Implements plans to maintain and promote health, including addressing barriers	
Level 4 Incorporates screening and prevention guidelines in patient care outside of designated well visits	Completes a chart audit on a panel of patients and identifies those needing a mammogram, and contacts patients and recommends screening
Implements comprehensive plans to maintain and promote health, incorporating pertinent psychosocial factors and other determinants of health	Engages a dietician and community health worker to prevent weight gain in a patient who lives in a food desert and recently started taking antipsychotic medications
<b>Level 5</b> Participates in guideline development or implementation across a system of care or community	Participates on a committee that develops an influenza vaccination strategy for the health care system

Partners with the community to promote health	Is a member of an advisory board working to improve school lunches at the local elementary school
Assessment Models or Tools	<ul> <li>Case-based discussion</li> <li>Direct observation</li> <li>Medical record (chart) audit</li> <li>Post precepting evaluations focused on prevention</li> <li>Simulation</li> </ul>
Curriculum Mapping	
Notes or Resources	<ul> <li>Agency for Healthcare Research and Quality. ePSS. <a href="https://epss.ahrq.gov/PDA/index.jsp">https://epss.ahrq.gov/PDA/index.jsp</a>. 2019.</li> <li>AAFP app with attention to Clinical Recommendations, Immunizations</li> <li>Centers for Disease Control and Prevention. Healthy Living. <a href="https://www.cdc.gov/healthyliving/index.html">https://www.cdc.gov/healthyliving/index.html</a>. 2019.</li> <li>Egger G, Binns A, Rossner S, Sagner M. Lifestyle Medicine: Lifestyle, the Environment and Preventive Medicine in Health Disease. 3rd ed. London, UK: Academic Press; 2017. </li></ul>

Patient Care 4: Ongoing Care of Patients with Undifferentiated Signs, Symptoms, or Health Concerns	
<b>Overall Intent:</b> To partner with the patient to address issues of ongoing signs, symptoms, or health concerns that remain over time without clear diagnosis despite evaluation and treatment, in patient-centered, cost-effective manner	
Milestones	Examples
<b>Level 1</b> Acknowledges the value of continuity in caring for patients with undifferentiated illness	Schedules a patient with a chronic cough for a return visit on their own schedule to continue the work-up
Level 2 Accepts uncertainty and maintains continuity while managing patients with undifferentiated illness	After initial evaluation of a patient with an unusual rash of unclear etiology, develops a diagnostic and treatment strategy with periodic follow up appointments to reassess and alters treatment if desired results do not occur
Develops a differential diagnosis for patients with undifferentiated illness	Provides a thorough differential diagnosis of a patient presenting with a rash of unclear etiology including contact, infectious and autoimmune etiologies
<b>Level 3</b> Facilitates patients' understanding of their expected course and events that require physician notification	• Explains to a patient with knee pain of unclear origin what the most likely diagnosis is and when under normal circumstances the pain would be expected to improve; advises that if the pain worsened, swelling increased, or the patient developed a fever, that he/she should seek medical attention
Prioritizes cost-effective diagnostic testing and consultations that will change the management of undifferentiated illness	Orders a plain film x-ray of a patient with unclear knee pain to make certain that a fracture is not present which could necessitate splinting or casting; does not immediately recommend an magnetic resonance image (MRI) or orthopedic referral
<b>Level 4</b> Coordinates collaborative treatment plans for patients with undifferentiated illness	<ul> <li>For a patient with renal issues that may have an underlying autoimmune component, prioritizes evaluation by a nephrologist and a rheumatologist and ensures that there is no duplication in testing between the specialists</li> </ul>
Uses multidisciplinary resources to assist patients with undifferentiated illness to deliver health care more efficiently	For patient with unclear symptoms that are affecting ability to work and that might have a psychosomatic origin, enlists the assistance of behavioral health and social work for assessment and facilitation of care
<b>Level 5</b> Coordinates expanded initiatives to facilitate care of patients with undifferentiated illness	Works in conjunction with a clinical team to create an evaluation protocol for a constellation of symptoms/syndrome that has arisen in the local community
Contributes to the development of medical knowledge around undifferentiated illness	• Leads a research study related to a constellation of symptoms/syndrome and presents the study regionally/nationally or publishes the study in a peer-reviewed journal
Assessment Models or Tools	<ul> <li>Case-based discussions</li> <li>Direct observation</li> <li>Precepting encounters</li> <li>Simulation</li> </ul>

Curriculum Mapping	
Notes or Resources	• Edwards TM, Stern A, Clarke DD, Ivbijaro G, Kasney LM. The treatment of patients with
	medically unexplained symptoms in primary care: a review of the literature. Mental Health
	Fam Med. 2010;7(4):209-221. <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3083260/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3083260/</a> .
	2019.
	Madden S, Sim J. Acquiring a diagnosis of fibromyalgia syndrome: The sociology of
	diagnosis. Social Theory Health. 2016;14(1):88-108. doi:10.1057/sth.2015.7.
	Canovas L, Carrascosa AJ, Garcia M, et al. Impact of empathy in the patient-doctor
	relationship on chronic pain relief and quality of life: a prospective study in Spanish pain
	clinics. <i>Pain Medicine</i> . 2018;19(7):1304–1314. doi:10.1093/pm/pnx160.

Patient Care 5: Management of Procedural Care	
Overall Intent: To understand that procedural care is critical to the scope of family medicine, both in performing and explaining	
Milestones	ocedures will vary by program, community, and practice setting  Examples
Level 1 Identifies the breadth of procedures that family physicians perform	Identifies that a patient with a knee effusion can be treated with arthrocentesis in the family medicine center and does not require referral
Recognizes family physicians' role in referring patients for appropriate procedural care	Recognizes that a family physician has the responsibility to recommend and coordinate the referral of a patient with suspected hernia seen in family medicine practice (FMP)
<b>Level 2</b> Identifies patients for whom a procedure is indicated and who is equipped to perform it	Identifies that a patient with squamous intraepithelial lesion on a pap smear needs a colposcopy and that the FMP offers this service to its patients
Counsels patients about expectations for common procedures performed by family physicians and consultants	Obtains informed consent prior to performing a punch biopsy of a skin lesion
<b>Level 3</b> Demonstrates confidence and motor skills while performing procedures, including addressing complications	Adeptly performs a newborn circumcision using an accepted clamp technique and is able to promptly control any unexpected bleeding
Performs independent risk and appropriateness assessment based on patient-centered priorities for procedures performed by consultants	For a morbidly obese patient who has chosen to pursue bariatric surgery, counsels the surgical options and completes a preoperative evaluation and risk assessment
Level 4 Identifies and acquires the skills to independently perform procedures in the current practice environment	Identifies minimal exposure to skin procedures and seeks opportunities to obtain additional experience via simulation, then under direct observation and eventually independently
Collaborates with procedural colleagues to match patients with appropriate procedures; including declining support for procedures that are not in the patient's best interest	Articulates to local cardiologist that an elderly patient with advanced dementia and severe aortic stenosis is not an appropriate candidate for transcatheter aortic valve replacement, even if technically feasible
<b>Level 5</b> Identifies procedures needed in future practice and pursues supplemental training to independently perform	Determines that the community does not have adequate colonoscopy services and seeks the opportunity to be proctored and learn procedure
Assessment Models or Tools	Clinical case discussion

	<ul> <li>Direct observation</li> <li>Objective structured clinical examination</li> <li>Simulation</li> </ul>
Curriculum Mapping	•
Notes or Resources	<ul> <li>Nothnagle M, Sicilia JM, Forman S, et al. Required procedural training in family medicine residency: a consensus statement. Family Medicine. 2008;40(4):248-252. <a href="https://www.stfm.org/FamilyMedicine/Vol40Issue4/Nothnagle248">https://www.stfm.org/FamilyMedicine/Vol40Issue4/Nothnagle248</a>. 2019.</li> <li>Barstow C, Shahan B, Roberts M. Evaluating medical decision-making capacity in practice. Am Fam Physician. 2018;98(1):40-46. <a href="https://www.aafp.org/afp/2018/0701/p40.html">https://www.aafp.org/afp/2018/0701/p40.html</a>. 2019.</li> <li>Fowler G. Pfenninger and Fowler's Procedures for Primary Care. 4th ed. Philadelphia, PA: Elsevier; 2019. <a href="https://evolve.elsevier.com/cs/product/9780323476331?role=student">https://evolve.elsevier.com/cs/product/9780323476331?role=student</a>. 2019.</li> </ul>

Medical Knowledge 1: Demonstrates Medical Knowledge of Sufficient Breadth and Depth to Family Medicine  Overall Intent: To integrate and apply medical knowledge throughout the full scope of family medicine across the lifespan of the individual in	
the context of his or her family and community	
Milestones	<b>Examples</b>
<b>Level 1</b> Describes the pathophysiology and treatments of patients with common conditions	<ul> <li>Explains the pathophysiology of type 2 diabetes and how weight loss, regular exercise, and commonly used diabetes medications work</li> </ul>
Describes how behaviors impact patient health	<ul> <li>Describes how poor dietary choices and inadequate physical exercise have contributed to obesity and type 2 diabetes</li> </ul>
<b>Level 2</b> Applies knowledge of pathophysiology with intellectual curiosity for treatment of patients with common conditions	<ul> <li>Prescribes diabetic medications in a sequential, rational, and stepwise fashion which factors in pharmacodynamics and current literature recommendations</li> </ul>
Identifies behavioral strategies to improve health	Understands that using motivational interviewing assists with behavioral change
Level 3 Demonstrates knowledge of complex pathophysiology and the comprehensive management of patients across the lifespan	Develops a management plan for achieving appropriate glycemic control for a patient with type 2 diabetes, monitoring for and managing the microvascular and macrovascular complications. Able to list the appropriate guidelines and goals for A1C parameters in patients with different co-morbidities and age
Engages in learning behavioral strategies to address patient care needs	Works with behaviorist through co-counseling visits to learn to better engage a patient who is resistant to change
Level 4 Integrates clinical experience and comprehensive knowledge in the management of patients across the lifespan	Shares learned strategies with colleagues about working with children and families who are opposed to vaccinations
Demonstrates comprehensive knowledge of behavioral strategies and resources to address patient's needs	Prioritizes multiple strategies to use for an adolescent patient with suicidal ideation and identifies resources for acute and long term treatment for the patient and their family
<b>Level 5</b> Expands the knowledge base of Family Medicine through dissemination of original research	Publishes a book chapter or peer review article on diabetes management
Assessment Models or Tools	<ul> <li>Clinical case discussion</li> <li>Direct observation</li> <li>In-training exam</li> <li>Knowledge testing</li> </ul>
	<ul><li>Medical record (chart) audit</li><li>Objective structured clinical examination</li></ul>

Curriculum Mapping	
Notes or Resources	<ul> <li>American Family Physician. Journals. <a href="https://www.aafp.org/journals/afp.html">https://www.aafp.org/journals/afp.html</a>. 2019.</li> </ul>
	• Osteopathic Family Physician Journal. Index. <a href="https://www.ofpjournal.com/index.php/ofp">https://www.ofpjournal.com/index.php/ofp</a> .
	2019.

Medical Knowledge 2: Critical Thinking and Decision Making  Overall Intent: To analyze and synthesize medical knowledge to apply critical reasoning to clinical decision making, appropriately prioritizing	
diagnoses and using diagnostic tests  Milestones	Examples
<b>Level 1</b> Incorporates key elements of a patient story into an accurate depiction of their presentation	Presents a patient with COPD, including relevant pulmonary symptoms and smoking history after interviewing the patient
Describes common causes of clinical reasoning error	Lists anchoring and recency biases as potential causes of clinical reasoning error
Interprets results of common diagnostic testing	Identifies an abnormal HbA1c as indicative of a presumptive diagnosis of diabetes
Level 2 Develops an analytic, prioritized differential diagnosis for common presentations	Prioritizes common-to-rare differential diagnoses for anemia
Identifies types of clinical reasoning errors within patient care, with guidance	When asked by an attending, is able to recognize that a missed diagnosis of gout in a patient with a normal uric acid level may be due to anchoring bias
Interprets complex diagnostic information	Reviews the results of stress echocardiography to determine if the patient is having ischemia
<b>Level 3</b> Develops a prioritized differential diagnosis for complex presentations	Prioritizes a broad differential diagnosis for the presentation of chronic shortness of breath with fatigue
Demonstrates a structured approach to personally identify clinical reasoning errors	Participates in quality and patient safety conferences, reviewing decision making that may have led to a missed diagnosis of colon cancer in a 35-year-old patient
Synthesizes complex diagnostic information accurately to reach high probability diagnoses	Uses the clinical laboratory and radiological findings to make a presumptive diagnosis of sarcoidosis
<b>Level 4</b> Synthesizes information to reach high probability diagnoses with continuous reappraisal to minimize clinical reasoning errors	Identifies cognitive bias if laboratory studies deviate from anticipated results and adjusts diagnostic and treatment plan of care
Anticipates and accounts for errors and biases when interpreting diagnostic tests	Changes an emergency room diagnosis of COPD exacerbation to acute pulmonary embolus by reviewing clinical evidence and correcting bias errors associated with the incorrect diagnosis

<b>Level 5</b> Engages in deliberate practice and coaches others to minimize clinical reasoning errors	Includes common clinical reasoning errors when presenting a lecture on differential diagnosis for shortness of breath
Pursues knowledge of new and emerging diagnostic tests	The resident understands the science and application of multipoint DNA testing for colorectal cancer and presents this information to others
Assessment Models or Tools	<ul> <li>Case-based discussions</li> <li>Multisource feedback</li> <li>Medical record (chart) audit</li> <li>Preceptor encounters</li> <li>Reflection</li> </ul>
Curriculum Mapping	
Notes or Resources	<ul> <li>Humbert AJ, Besinger B, Miech Ej. Assessing clinical reasoning skills in scenarios of uncertainty: convergent validity for a Script Concordance Test in an emergency medicine clerkship and residency. <i>Acad Emerg Med.</i> 2011;18(6):627-634. doi:10.1111/j.1553-2712.2011.01084.x.</li> <li>Croskerry P. Achieving quality in clinical decision making: cognitive strategies and detection of bias. <i>Academic Emergency Medicine</i>. 2002;9(11):1184-1204. doi:10.1197/aemj.9.11.1184.</li> <li>Hedrick TL, Young JS. The use of "war games" to enhance high-risk clinical decision-making in students and residents. <i>The American Journal of Surgery</i>. 2008;195(6):843-849. doi:10.1016/j.amjsurg.2007.06.032.</li> <li>Norman GR, Monteiro SD, Sherbino J, Ilgen JS, Schmidt HG, Mamede S. The causes of errors in clinical reasoning: cognitive biases, knowledge deficits, and dual process thinking. <i>Acad Med</i>. 2017;92(1):23-30. doi:10.1097/ACM.0000000000001421.</li> <li>Royce CS, Hayes MM, Schwartzstein RM. Teaching critical thinking: a case for instruction in cognitive biases to reduce diagnostic errors and improve patient safety. <i>Acad Med</i>. 2019;94(2):187-194. doi:10.1097/ACM.0000000000002518.</li> </ul>

families, and health care professionals; to cond  Milestones	Examples
<b>Level 1</b> Demonstrates knowledge of common patient safety events	Lists patient misidentification or medication errors as common patient safety events
Demonstrates knowledge of how to report patient safety events	Describes how to report errors in your environment
Demonstrates knowledge of basic quality improvement methodologies and metrics	Describes fishbone tool
Level 2 Identifies system factors that lead to patient safety events	Identifies lack of hand sanitizer dispenser at each clinical exam room may lead to increased infection rates
Reports patient safety events through institutional reporting systems (actual or simulated)	Reports lack of hand sanitizer dispenser at each clinical exam room to the medical director
Describes local quality improvement initiatives (e.g., community vaccination rate, infection rate, smoking cessation)	Summarizes protocols resulting in decreased spread of hospital acquired C. diff
<b>Level 3</b> Participates in analysis of patient safety events (simulated or actual)	Preparing for morbidity and mortality presentations
Participates in disclosure of patient safety events to patients and families (simulated or actual)	Through simulation, communicates with patients/families about a vaccine administration error
Participates in local quality improvement initiatives	Participates in project identifying root cause of rooming inefficiency
<b>Level 4</b> Conducts analysis of patient safety events and offers error prevention strategies (simulated or actual)	Collaborates with a team to conduct the analysis of a vaccine administration errors and can effectively communicate with patients/families about those events

Discloses patient safety events to patients and families (simulated or actual)	
Demonstrates skills required to identify, develop, implement, and analyze a quality improvement project	Participates in the completion of a QI project to improve human papillomavirus (HPV) vaccination rates within the practice, including assessing the problem, articulating a broad goal, developing a SMART (specific, measurable, attainable, relevant, time-based) objective plan, and monitoring progress and challenges
Level 5 Actively engages teams and processes to modify systems to prevent patient safety events	Assumes a leadership role at the departmental or institutional level for patient safety
Role models or mentors others in the disclosure of patient safety events	Conducts a simulation for disclosing patient safety events
Designs, implements, and assesses quality improvement initiatives at the institutional or community level	Initiates and completes a QI project to improve county HPV vaccination rates in collaboration with the county health department and shares results with stakeholders
Assessment Models or Tools	<ul> <li>Direct observation</li> <li>E-module multiple choice tests</li> <li>Medical record (chart) audit</li> <li>Portfolio review</li> <li>Reflection</li> <li>Simulation</li> </ul>
Curriculum Mapping	
Notes or Resources	<ul> <li>Institute for Healthcare Improvement. <a href="http://www.ihi.org/Pages/default.aspx">https://www.ihi.org/Pages/default.aspx</a>. 2019.</li> <li>The Joint Commission. <a href="https://www.ipintcommission.org/">https://www.ipintcommission.org/</a>. 2019.</li> <li>Agency for Healthcare Research and Quality. Quality and Patient Safety. <a href="https://www.ahrq.gov/professionals/quality-patient-safety/index.html">https://www.ahrq.gov/professionals/quality-patient-safety/index.html</a>. 2019.</li> <li>Agency for Healthcare Research and Quality. TeamSTEPPS. <a href="https://www.ahrq.gov/teamstepps/index.html">https://www.ahrq.gov/teamstepps/index.html</a>. 2019.</li> <li>World Health Organization. Patient Safety. <a href="https://www.who.int/patientsafety/en/">https://www.ahrq.gov/teamstepps/index.html</a>. 2019.</li> <li>American Academy of Family Physicians. Basics of Quality Improvement. <a href="https://www.aafp.org/practice-management/improvement/basics.html">https://www.aafp.org/practice-management/improvement/basics.html</a>. 2019.</li> <li>American Board of Family Medicine. Performance Improvement. <a href="https://www.theabfm.org/continue-certification/performance-improvement">https://www.theabfm.org/continue-certification/performance-improvement</a>. 2019.</li> </ul>

Systems-Based Practice 2: System Navigation for Patient-Centered 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-qua	Examples
Level 1 Demonstrates knowledge of care coordination	For a patient with multiple myeloma identifies the hematologist-oncologist, home health nurse, and social workers as members of the team
Identifies key elements for safe and effective transitions of care and handoffs	Lists the essential components of a structured tool such as I-PASS for sign-out and care transition and hand-offs
Demonstrates knowledge of population and community health needs and disparities	Identifies that patients in rural areas may have different needs than urban patients
<b>Level 2</b> Coordinates care of patients in routine clinical situations effectively utilizing the roles of the interprofessional team member	Coordinates care with the heart failure clinic at the time of discharge from the hospital
Performs safe and effective transitions of care/handoffs in routine clinical situations	Routinely uses I-PASS for a stable patient during night float sign-out
Identifies specific population and community health needs and inequities in their local population	Identifies that limited transportation options may be a factor in rural patients getting to multiple chemotherapy appointments
<b>Level 3</b> Coordinates care of patients in complex clinical situations effectively utilizing the roles of the interprofessional team member	Works with the social worker to coordinate care for a homeless patient that will ensure follow-up to a heart failure clinic after discharge from the hospital
Performs safe and effective transitions of care/handoffs in complex clinical situations	Routinely uses I-PASS when transferring a patient to the intensive care unit
Uses local resources effectively to meet the needs of a patient population and community	Refers patients to a local pharmacy which provides a sliding fee scale option and prints pharmacy coupons for patients in need
Level 4 Role models effective coordination of patient-centered care among different disciplines and specialties	During inpatient rotations, leads team members in approaching consultants to review cases/recommendations and arranges radiology rounds for the team

Role models and advocates for safe and effective transitions of care/handoffs within and across healthcare delivery systems including outpatient settings	Prior to going on vacation, proactively informs the covering FMP resident about a plan of care for a pregnant patient who has elevated blood pressure at 36 weeks and has outpatient labs pending
Participates in changing and adapting practice to provide for the needs of specific populations	Assists to design FMP protocols for prescribing naloxone to patients with opioid use disorders
Level 5 Analyzes the process of care coordination and leads in the design and implementation of improvements	Leads a program to arrange for team home visits to newborns at high risk for infant mortality
Improves quality of transitions of care within and across healthcare delivery systems to optimize patient outcomes	Develops a protocol to improve transitions to long term care facilities
Leads innovations and advocates for populations and communities with health care inequities	Leads development of telehealth diagnostic services for a rural FMP site
Assessment Models or Tools	Direct observation
	Medical record (chart) audit
	Multisource feedback     Objective etweet elipsical exemination
	Objective structured clinical examination     Portfolio review
	Quality metrics and goals mined from electronic health records (EHR)
Curriculum Mapping	•
Notes or Resources	Institute for Healthcare Improvement. IHI Open School Online Courses.
	http://www.ihi.org/education/IHIOpenSchool/courses/Pages/default.aspx. 2019.
	Centers for Disease Control and Prevention. Population Health Training in Place Program  (PLLTIPP) https://www.ede.gov/conbealthtreining/whytip http://www.ede.gov/conbealthtreining/whytip http://www.ede.gov/conbealthtreining/whytip.
	(PH-TIPP). <a href="https://www.cdc.gov/pophealthtraining/whatis.html">https://www.cdc.gov/pophealthtraining/whatis.html</a> . 2019. <a href="https://www.cdc.gov/pophealthtraining/whatis.html">https://www.cdc.gov/pophealthtraining/whatis.html</a> .

American Academy of Family Physicians. The EveryONE Project TOOLKIT.
https://www.aafp.org/patient-care/social-determinants-of-health/everyone-project/eop-
tools.html. 2019.
• UCSF. Center for Excellence in Primary Care. <a href="https://cepc.ucsf.edu/">https://cepc.ucsf.edu/</a> . 2019.

Systems-Based Practice 3: Physician Role in Health Care Systems  Overall Intent: To understand his/her role in the complex health care system and how to optimize the system to improve patient care and	
the health system's performance  Milestones	Examples
Level 1 Identifies key components of the complex healthcare system (e.g., hospital, skilled nursing facility, finance, personnel, technology)	Able to articulate differences between skilled nursing and long-term care facilities
Describes basic health payment systems, (including government, private, public, uninsured care) and practice models	Understands the impact of health plan coverage on prescription drugs for individual patients
Identifies basic knowledge domains for effective transition to practice (e.g., information technology, legal, billing and coding, financial, personnel)	Identifies that notes must meet coding requirements
Level 2 Describes how components of a complex healthcare system are interrelated, and how this impacts patient care	Explains that improving patient satisfaction impacts patient adherence and payment to the health system
Delivers care with consideration of each patient's payment model (e.g., insurance type)	Takes into consideration patient's prescription drug coverage when choosing a statin for treatment of hyperlipidemia
Demonstrates use of information technology required for medical practice (e.g., electronic medical record, documentation required for billing and coding)	Recognizes that appropriate documentation can influence the severity of illness determination upon discharge
Level 3 Discusses how individual practice affects the broader system (e.g., length of stay, readmission rates, clinical efficiency)	Ensures that patient with COPD has a scheduled follow up appointment at discharge within seven days to reduce risk of readmission
Engages with patients in shared-decision making, informed by each patient's payment models	Discusses risks and benefits of pursuing MRI imaging in the setting of acute low back pain when a patient has a high out of pocket deductible

Describes core administrative knowledge needed for transition to practice (e.g., contract negotiations, malpractice insurance, government regulation, compliance)	Understands the core elements of employment contract negotiation
Level 4 Manages various components of the complex healthcare system to provide efficient and effective patient care and transition of care	Ensures proper documentation of three day qualifying hospital stay prior to discharging a patient to a skilled nursing facility for physical therapy
Advocates for patient care needs (e.g., community resources, patient assistance resources)	Works collaboratively to improve patient assistance resources for a patient with a recent amputation and limited resources
Analyzes individual practice patterns and prepares for professional requirements	Proactively compiles procedure log in anticipation of applying for hospital privileges
<b>Level 5</b> Advocates for or leads systems change that enhances high value, efficient and effective patient care and transition of care	Works with community or professional organizations to advocate for no smoking ordinances
Participates in health policy advocacy activities	<ul> <li>Improves informed consent process for non-English-speaking patients requiring interpreter services</li> </ul>
Assessment Models or Tools	<ul> <li>Direct observation</li> <li>Knowledge based content testing</li> <li>Medical record (chart) audit</li> <li>Multisource feedback</li> <li>QI metrics/practice data</li> </ul>
Curriculum Mapping	•
Notes or Resources	<ul> <li>Center for Medicare and Medicaid Services. Merit-based Incentive Payment System (MIPS) Overview. <a href="https://qpp.cms.gov/mips/overview">https://qpp.cms.gov/mips/overview</a>. 2019.</li> <li>Center for Medicare and Medicaid Services. MACRA: MIPS and MACRA. <a href="https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/MACRA-MIPS-and-APMs.html">https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/MACRA-MIPS-and-APMs.html</a>. 2019.</li> <li>Agency for Healthcare Research and Quality. The Challenges of Measuring Physician Quality. <a href="https://www.ahrq.gov/talkingquality/measures/setting/physician/measurement-sets.html">https://www.ahrq.gov/talkingquality/measures/setting/physician/measurement-sets.html</a>. 2018.</li> </ul>

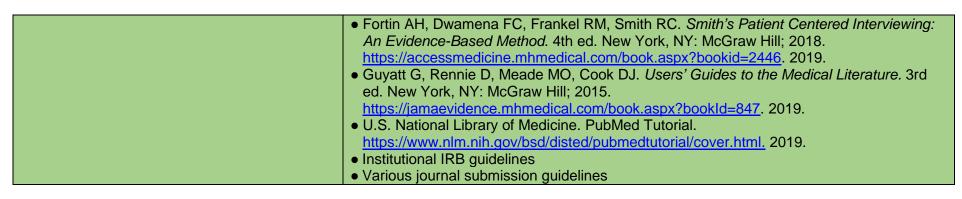
- The Kaiser Family Foundation. Health Reform. <a href="https://www.kff.org/health-reform/">https://www.kff.org/health-reform/</a>. 2019.
- Dzau VJ, McClellan MB, McGinnis M, et al. Vital directions for health and health care: positions from a National Academy of Medicine Initiative. *JAMA*. 2017;317(14):1461-1470. doi:10.1001/jama.2017.1964.
- The Commonwealth Fund. Health System Data Center.

  <a href="http://datacenter.commonwealthfund.org/?ga=2.110888517.1505146611.1495417431-1811932185.1495417431#ind=1/sc=1.2019">http://datacenter.commonwealthfund.org/?ga=2.110888517.1505146611.1495417431-1811932185.1495417431#ind=1/sc=1.2019</a>.
- The Commonwealth Fund. Health Reform Resource Center.
   <a href="http://www.commonwealthfund.org/interactives-and-data/health-reform-resource-center#/f:@facasubcategoriesfacet63677=[Individual%20and%20Employer%20Responsibility.">http://www.commonwealthfund.org/interactives-and-data/health-reform-resource-center#/f:@facasubcategoriesfacet63677=[Individual%20and%20Employer%20Responsibility.</a>
   2019.
- Institute for Healthcare Improvement. IHI Open School Online Courses. http://app.ihi.org/lmsspa/#/6cb1c614-884b-43ef-9abd-d90849f183d4. 2019.

	Systems-Based Practice 4: Advocacy	
Overall Intent: To ensure that family physicians are able to use their voice to speak to the concerns of patient populations and for family		
medicine as a discipline		
Milestones	Examples	
Level 1 Identifies that advocating for patient	Accepts role in helping patients access resources	
populations is a professional responsibility	Recognizes the impact of the physician voice	
Level 2 Identifies that advocating for Family	Actively recruits medical students for family medicine	
Medicine is a professional responsibility	Endorses the importance of family medicine's role in health care system	
Level 3 Describes how stakeholders influence	Discusses impact of legislative action on patient health and health care delivery	
and patients are affected by health policy at the	Identifies stakeholders around a legislative topic	
local, state, and federal level		
Level 4 Access advocacy tools and other	Complete online advocacy modules	
resources needed to achieve (or prevent a	Responds to advocacy email alerts	
deleterious) policy change		
Level 5 Develops an ongoing relationship with	Contacts legislators on matters important to family medicine	
stakeholders that advances or prevents a policy	Serves as the resident delegate to a professional organization	
change that improves individual or community	Attends advocacy days at the state capitol to speak with legislators	
health	Develops grant proposals along with implementation to assist in community initiatives (for	
Assessment Mardala on Table	example, grants to help those with food or financial insecurity that impacts their health)	
Assessment Models or Tools	<ul> <li>Completion of e-modules</li> <li>Direct observation</li> </ul>	
	Multisource feedback	
	Portfolio	
Curriculum Mapping	• FOILIOID	
Notes or Resources	American Osteopathic Association. Advocacy. <a href="https://osteopathic.org/about/advocacy/">https://osteopathic.org/about/advocacy/</a> .	
Trotes of resources	2019.	
	American College of Osteopathic Family Physicians. Advocacy.	
	https://www.acofp.org/acofpimis/Acofporg/Default.aspx?hkey=19ca3704-4183-4ca8-8532-	
	db156c7820c4&WebsiteKey=fc4f41d1-af75-443c-a928-3d7d67bac6a7. 2019.	
	• American Academy of Family Physicians. Advocacy. <a href="https://www.aafp.org/advocacy.html">https://www.aafp.org/advocacy.html</a> .	
	2019.	
	• American Medical Association. Advocacy. <a href="https://www.ama-assn.org/advocacy">https://www.ama-assn.org/advocacy</a> . 2019.	
	• Robert Graham Center. <a href="http://www.graham-center.org/rgc/home.html">http://www.graham-center.org/rgc/home.html</a> 2019.	
	• Society of Teachers of Family Medicine (STFM). Online courses: advocacy modules.	
	https://www.stfm.org/facultydevelopment/onlinecourses/advocacycourse/overview/	
	Accessed 2019.	

• STFM. Advocacy: advocacy resources and key issues. https://www.stfm.org/about/advocacy/resourcesandissues/. Accessed 2019.

Practice-Based Learning and Improvement 1: Evidence-Based and Informed Practice  Overall Intent: To incorporate evidence and patient values into clinical practice	
Milestones	Examples
Level 1 Demonstrates how to access, categorize, and analyze clinical evidence	Identifies evidence-based guidelines for osteoporosis screening at USPSTF website
<b>Level 2</b> Articulates clinical questions and elicits patient preferences and values in order to guide evidence based care	<ul> <li>In a patient with hyperlipidemia, identifies and discusses potential evidence-based treatment options, and solicits patient perspective</li> <li>Explains why a screening test should not be performed</li> </ul>
<b>Level 3</b> Locates and applies the best available evidence, integrated with patient preference, to the care of complex patients	<ul> <li>Obtains, discusses, and applies evidence for the treatment of a patient with hyperlipidemia and co-existing diabetes and hypertension</li> <li>Understands and appropriately uses clinical practice guidelines in making patient care decisions while eliciting patient preferences</li> </ul>
<b>Level 4</b> Critically appraises and applies evidence even in the face of uncertainty and conflicting evidence to guide care, tailored to the individual patient	Accesses the primary literature to identify alternative treatments to bisphosphonates for osteoporosis
Level 5 Coaches others to critically appraise and apply evidence for complex patients; and/or collaboratively develops evidence based decision making tools	<ul> <li>Leads clinical teaching on application of best practices in critical appraisal of sepsis criteria</li> <li>As part of a team, develops low-risk chest pain protocol for the emergency department</li> </ul>
Assessment Models or Tools	<ul> <li>Direct observation</li> <li>Medical record (chart) audit</li> <li>Oral or written examination</li> <li>Presentation evaluation</li> <li>Research portfolio</li> </ul>
Notes or Resources	<ul> <li>US Preventive Services Task Force. <a href="https://www.uspreventiveservicestaskforce.org/">https://www.uspreventiveservicestaskforce.org/</a>.</li> <li>2019.</li> <li>Agency for Healthcare Research and Quality. Guidelines and Measures.</li> </ul>
	<ul> <li>https://www.ahrq.gov/gam/index.html. 2019.</li> <li>Mayo Clinic. Mayo Clinic Shared Decision Making National Resource Center</li> <li>https://shareddecisions.mayoclinic.org/. 2019.</li> </ul>



	mprovement 2: Reflective Practice and Commitment to Personal Growth
<b>Overall Intent:</b> To seek clinical performance information with the intent to improve care; reflects on all domains of practice, personal interactions, and behaviors, and their impact on colleagues and patients (reflective mindfulness); develop clear objectives and goals for	
improvement in the form of a personal learning	,, ,
Milestones	Examples
<b>Level 1</b> Accepts responsibility for personal and professional development by establishing goals	Initiates personal goals and meets with advisor to discuss
Identifies the factors which contribute to gap(s) between expectations and actual performance	Is aware that inadequate sleep may adversely impact performance
Acknowledges there are always opportunities for self-improvement	Attends and engages in didactic sessions and supplemental readings
Level 2 Demonstrates openness to performance data (feedback and other input) in order to inform goals	Increasingly able to identify performance gaps in terms of diagnostic skills and daily work using feedback and supplied performance metrics
Self-reflects and analyzes factors which contribute to gap(s) between expectations and actual performance	After working with an attending for a week, asks him/her about performance and opportunities for improvement
Designs and implements a learning plan, with prompting	Uses feedback with a goal of improving communication skills with peers/colleagues, staff members, and patients the following week
<b>Level 3</b> Intermittently seeks additional performance data with adaptability and humility	<ul> <li>Takes input from peers/colleagues and supervisors to gain complex insight into personal strengths and areas to improve</li> <li>Self-reflects and is appreciative, no defensive of others' input</li> </ul>
Self-reflects, analyzes, and institutes behavioral change(s) to narrow the gap(s) between expectations and actual performance	Documents goals in a more specific and achievable manner, such that attaining them is reasonable and measurable
Independently creates and implements a learning plan	Seeks out and engages in activities targeted at practice areas requiring improvement
<b>Level 4</b> Consistently seeks performance data with adaptability and humility	• Is clearly in the habit of making a learning plan for each rotation, seeks out data on his/her clinical performance

Challenges assumptions and considers alternatives in narrowing the gap(s) between expectations and actual performance	Consistently identifies ongoing gaps and chooses areas for further development
Uses performance data to measure the effectiveness of the learning plan and when necessary, improves it	Consistently seeks out and engages in evidence based activities targeted at practice areas requiring improvement identified by external sources as well as self-reflection
Level 5 Leads performance review processes  Coaches others on reflective practice	<ul> <li>Actively discusses learning goals with supervisors and colleagues; may encourage other learners on the team to consider how their behavior affects the rest of the team</li> <li>Serves as a role model for self-reflection and effective self-directed learning</li> </ul>
Facilitates the design and implementing learning plans for others	Demonstrates emotional intelligence and cognitive reframing skills
Assessment Models or Tools	<ul> <li>Direct observation</li> <li>Review of learning plan</li> <li>SWOT analysis</li> <li>Self-reflection</li> </ul>
Curriculum Mapping	
Notes or Resources	<ul> <li>Hojat M, Veloski JJ, Gonnella JS. Measurement and correlates of physicians' lifelong learning. <i>Acad Med.</i> 2009;84(8):1066-74. doi:10.1097/ACM.0b013e3181acf25f.</li> <li>Winkel AF, Yingling S, Jones AA, Nicholson J. Reflection as a learning tool in graduate medical education: a systematic review. <i>JGME</i>. 2017;9(4):430-439. doi:10.4300/JGME-D-16-00500.1.</li> <li>Grant A, McKimm J, Murphy F. <i>Developing Reflective pRactice: A Guide for Medical Students, Doctors and Teachers</i>. Hoboken, NJ: Wiley-Blackwell; 2017. https://www.wiley.com/en-us/Developing+Reflective+Practice%3A+A+Guide+for+Medical+Students%2C+Doctors+and+Teachers-p-9781119064749. 2019.</li> <li>Burke AE, Benson B, Englander R, Carraccio C, Hicks PJ. Domain of competence: practice-based learning and improvement. <i>Acad Pediatr</i>. 2014;14(2 Suppl):S38-S54. doi:10.1016/j.acap.2013.11.018.</li> <li>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>Acad Med.</i> 2013;88(10):1558-1563. doi:10.1097/ACM.0b013e3182a352e6.</li> </ul>

	<ul> <li>Kraut A, Yarris LM, Sargeant J. Feedback: cultivating a positive culture. <i>J Grad Med Educ</i>. 2015;7(2):262-264. doi:10.4300/JGME-D-15-00103.1.</li> <li>RJug R, Jiang XS, Bean SM. Giving and receiving effective feedback: a review article and how-to guide. <i>Arch Pathol Lab Med</i>. 2019;143(2):244-250. doi:10.5858/arpa.2018-0058-RA.</li> </ul>
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Professionalism 1: Professional Behavior and Ethical Principles		
<b>Overall Intent:</b> To recognize and address lapses in ethical and professional behavior, demonstrates ethical and professional behaviors, and use appropriate resources for managing ethical and professional dilemmas		
Milestones	Examples	
<b>Level 1</b> Describes professional behavior and potential triggers for personal lapses in professionalism	Understands that being tired can cause a lapse in professionalism	
Takes responsibility for personal lapses in professionalism	Understands being late to sign out has adverse effect on patient care and on professional relationships	
Demonstrates knowledge of ethical principles	Articulates how the principle of "do no harm" applies to a patient who may not need a central line even though the training opportunity exists	
<b>Level 2</b> Demonstrates professional behavior in routine situations	Respectfully approaches a resident who is late to sign out about the importance of being on time	
Describes when and how to report professionalism lapses in self and others	Notifies appropriate supervisor when a resident is routinely late to sign out	
Analyzes straightforward situations using ethical principles	• Identifies and applies ethical principles involved in informed consent when the resident is unclear of all of the risks	
<b>Level 3</b> Demonstrates professional behavior in complex or stressful situations	Appropriately responds to a distraught family member, following an unsuccessful resuscitation attempt of a relative	
Recognizes need to seek help in managing and resolving complex professionalism lapses	After noticing a colleague's inappropriate social media post, reviews policies related to posting of content and seeks guidance	
Analyzes complex situations using ethical principles	Offers treatment options for a terminally ill patient, free of bias, while recognizing own limitations, and consistently honoring the patient's choice	
Level 4 Recognizes situations that may trigger professionalism lapses and intervenes to prevent lapses in self and others	<ul> <li>Actively considers the perspectives of others</li> <li>Models respect for patients and promotes the same from colleagues, when a patient has been waiting an excessively long time to be seen</li> </ul>	
Recognizes and utilizes appropriate resources for managing and resolving dilemmas as needed	Recognizes and uses ethics consults, literature, risk management, and/or legal counsel in order to resolve ethical dilemmas	

Level 5 Mentors others in professional behavior	Coaches others when their behavior fails to meet professional expectations and creates a performance improvement plan to prevent recurrence
Identifies and seeks to address system-level factors that induce or exacerbate ethical problems and professionalism lapses or impede their resolution	Engages stakeholders to address excessive wait times in the FMP to decrease patient and provider frustrations that lead to unprofessional behavior
Assessment Models or Tools	<ul> <li>Direct observation</li> <li>Multisource feedback</li> <li>Oral or written self-reflection (e.g., of a personal or observed lapse, ethical dilemma, or systems-level factors)</li> <li>Simulation</li> </ul>
Curriculum Mapping	
Notes or Resources	<ul> <li>American Medical Association. Ethics. <a href="https://www.ama-assn.org/delivering-care/ama-code-medical-ethics">https://www.ama-assn.org/delivering-care/ama-code-medical-ethics</a>. 2019.</li> <li>ABIM Foundation. American Board of Internal Medicine. Medical professionalism in the new millennium: a physician charter. <a href="https://annals.org/notes.com/delivering-care/ama-doi:10.7326/0003-4819-136-3-200202050-00012">https://association.org/notes.com/delivering-care/ama-doi:10.7326/0003-4819-136-3-200202050-00012</a>.</li> <li>Byyny RL, Papadakis MA, Paauw DS, Pfiel S, Alpha Omega Alpha. <a href="https://aedical-professionalism Best Practices">https://association Best Practices</a>. Menlo Park, CA: Alpha Omega Alpha. <a aedical-professionalism.nedical-gold-gold-gold-gold-gold-professionalism.nedical-gold-gold-gold-gold-gold-gold-gold-gol<="" href="https://aedical-professionalism.nedical-gold-professionalism.nedical-gold-professionalism.nedical-gold-professionalism.nedical-gold-professionalism.nedical-gold-professionalism.nedical-gold-professionalism. &lt;a href=" https:="" td=""></a></li></ul>

#### **Professionalism 2: Accountability/Conscientiousness** Overall Intent: To take responsibility for one's own actions and the impact of these on patients and other members of the health care team **Milestones Examples** Level 1 Takes responsibility for failure to • Responds promptly to reminders from program administrator to complete work hour logs complete tasks and responsibilities, identifies • Timely attendance at conferences potential contributing factors, and describes strategies for ensuring timely task completion in the future Responds promptly to requests or reminders to • Completes end of rotation evaluations complete tasks and responsibilities Level 2 Performs tasks and responsibilities in a • Completes administrative tasks, documents safety modules, procedure review, and timely manner with appropriate attention to licensing requirements by specified due date detail in routine situations • Before going out of town, completes tasks in anticipation of lack of computer access while Recognizes situations that may impact own ability to complete tasks and responsibilities in a traveling timely manner Level 3 Performs tasks and responsibilities in a • Notifies attending of multiple competing demands on call, appropriately triages tasks, and timely manner with appropriate attention to asks for assistance from other residents or faculty members as needed detail in complex or stressful situations Proactively implements strategies to ensure that • In preparation for being out of the office, arranges coverage for assigned clinical tasks on FMP patients and ensures appropriate continuity of care the needs of patients, teams, and systems are met Level 4 Recognizes and addresses situations • Takes responsibility for inadvertently omitting key patient information during sign-out and that may impact others' ability to complete tasks professionally discusses with the patient, family members, and interprofessional team and responsibilities in a timely manner **Level 5** Takes ownership of system outcomes • Sets up a meeting with the nurse manager to streamline patient discharges and leads team to find solutions to the problem Assessment Models or Tools • Compliance with deadlines and timelines Direct observation Multisource feedback Resident learning portfolio

	Self-evaluations and reflective tools     Simulation
Curriculum Mapping	
Notes or Resources	American Society of Anesthesiologists. Standards and Guidelines.
	https://www.asahq.org/standards-and-guidelines. 2019.
	Code of conduct from fellow/resident institutional manual
	Expectations of residency program regarding accountability and professionalism

Professionalism 3: Self-Awareness and Help-Seeking  Overall Intent: To examine resident insight and ability to monitor and address personal well-being and professional growth		
Milestones	Examples	
<b>Level 1</b> Recognizes status of personal and professional well-being, with assistance	<ul> <li>Acknowledges their fatigue when pointed out by a colleague</li> <li>Recognizes that asking for help is a sign of strength and not a sign of weakness</li> </ul>	
Recognizes limits in the knowledge/skills of self, with assistance	Accepts and exhibits positive responses to constructive feedback     Receptive to attending physician guidance prior to seeing a patient	
Level 2 Independently recognizes status of	Identifies times when critical thinking is impaired due to fatigue	
personal and professional well-being	Recognizes own symptoms of depression	
Independently recognizes limits in the	Actively seeks guidance when unsure about a clinical situation	
knowledge /skills of self and team and demonstrates appropriate help-seeking behaviors	Schedules a review session with an attending when there are challenges understanding the management of COPD with inhalers	
Level 3 Proposes a plan to optimize personal and professional well-being, with guidance	<ul> <li>After meeting with an advisor over concerns about increased stress in residency, develops a schedule for daily exercise</li> <li>Is receptive to faculty member suggestions to seek outside evaluation and/or treatment for possible learning disability</li> <li>Coordinates with advisor to schedule blocked times in FMP and during the inpatient rotation for lactation</li> </ul>	
Proposes a plan to remediate or improve limits in the knowledge/ skills of self or team, with guidance	Seeks assistance to develop a learning plan for an identified gap in prioritizing treatment needs of patients with multiple comorbid conditions	
Level 4 Independently develops a plan to optimize personal and professional well-being	<ul> <li>After becoming a parent, adjusts time management to allow for completion of clinical work while attending to family needs</li> <li>Initiates contact with a financial planner to optimize loan repayment strategies</li> </ul>	
Independently develops a plan to remediate or improve limits in the knowledge/skills of self or team  Level 5 Addresses system barriers to maintain personal and professional well-being	<ul> <li>Develops workshop to address ability of team to manage shoulder dystocia</li> <li>After a missed diagnosis of diabetic ketoacidosis on the inpatient service, develops a workshop to review best practice for the management of this condition at noon conference</li> <li>Works as part of a system committee to develop and administer wellness survey</li> </ul>	

Mentors others to enhance knowledge/ skills of self or team	Leads an Education Committee to develop longitudinal workshops
Assessment Models or Tools	<ul> <li>Direct observation</li> <li>Group interview or discussions for team activities</li> <li>Individual interview</li> <li>Multisource feedback</li> <li>Online training modules</li> <li>Participation in well-being programs</li> <li>Personal learning plan</li> <li>Reflection</li> <li>Self SWOT</li> <li>Self-assessment</li> </ul>
Curriculum Mapping	•
Notes or Resources	<ul> <li>Local resources, including Employee Assistance</li> <li>Pipas CF. A Doctor's Dozen: 12 Strategies for Personal Health and a Culture of Wellness. Hanover, NH: Dartmouth College Press; 2018. <a href="https://www.press.uchicago.edu/ucp/books/book/distributed/D/bo44895080.html">https://www.press.uchicago.edu/ucp/books/book/distributed/D/bo44895080.html</a>. 2019.</li> <li>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. doi:10.1016/j.acap.2013.11.017.</li> <li>ACGME. Tools and Resources. <a href="https://www.acgme.org/What-We-Do/Initiatives/Physician-Well-Being/Resources.">https://www.acgme.org/What-We-Do/Initiatives/Physician-Well-Being/Resources.</a> 2019.</li> <li>Case Network. CoreWellness Online. <a href="http://casenetwork.com/markets/corewellness/">http://casenetwork.com/markets/corewellness/</a>. 2019.</li> </ul>

Internary and Communication Skills 1. Detient, and Eamily Contared Communication		
Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication		
<b>Overall Intent:</b> To deliberately use language and behaviors to form constructive relationships with patients, identify communication barriers including self-reflection on personal biases, and minimize them in the doctor-patient relationships; organize and lead communication around		
shared decision making	i minimize them in the doctor-patient relationships, organize and lead communication around	
Milestones	Examples	
Level 1 Uses language and nonverbal behavior	Introduces self and faculty members, identifies patient and others in the room, and	
to demonstrate respect, establish rapport while communicating one's own role within the healthcare system	engages all parties in health care discussion	
Recognizes easily identified barriers to effective communication (e.g., language, disability)	Identifies need for trained interpreter with non-English-speaking patients	
Identifies the need to individualize communication strategies	Uses age-appropriate language when discussing vaccinations with pediatric patients	
<b>Level 2</b> Establishes a therapeutic relationship in straightforward encounters using active listening and clear language	Avoids medical jargon and restates patient perspective when discussing tobacco cessation	
Identifies complex barriers to effective communication (e.g. health literacy, cultural)	Recognizes the need for handouts with diagrams and pictures to communicate information to a patient who is unable to read	
Organizes and initiates communication, sets the agenda, clarifies expectations and verifies understanding	Prioritizes and sets agenda at the beginning of the appointment for a new patient with chronic back pain	
Level 3 Establishes a therapeutic relationship in challenging patient encounters	Acknowledges patient's request for an MRI for new onset back pain without red flags and arranges timely follow-up visit to align diagnostic plan with goals of care	
When prompted, reflects on personal biases while attempting to minimize communication barriers	In a discussion with the faculty member, acknowledges discomfort in caring for a patient with COPD who continues to smoke	
Sensitively and compassionately delivers medical information, managing patient/family	Conducts a family meeting to determine a plan for withdrawal of treatment in a terminally ill patient	

values, goals, preferences, uncertainty, and conflict	
<b>Level 4</b> Maintains therapeutic relationships, with attention to patient/family concerns and context, regardless of complexity	Continues to engage representative family members with disparate goals in the care of a patient with dementia
Independently recognizes personal biases while attempting to proactively minimize communication barriers	Reflects on personal bias related to lung cancer death of resident's father and solicits input from faculty about mitigation of communication barriers when counseling patients around smoking cessation
Independently uses shared decision making to align patient/family values, goals, and preferences with treatment options to make a personalized care plan	Uses patient and family input to engage pastoral care and develop a plan for home hospice in the terminally ill patient, aligned with the patient's values
<b>Level 5</b> Mentors others in situational awareness and critical self-reflection to consistently develop positive therapeutic relationships	Leads a discussion group on personal experience of moral distress
Leads or develops initiatives to identify and address bias	Develops a residency curriculum on social justice which addresses unconscious bias
Role models shared decision making in patient/family communication including those with a high degree of uncertainty/conflict	Serves on a hospital bioethics committee
Assessment Models or Tools	Direct observation     Multipourse feedback
	Multisource feedback     Portfolio
	Self-assessment including self-reflection exercises
	Standardized patients or structured case discussions
Curriculum Mapping	
Notes or Resources	<ul> <li>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. doi:10.3109/0142159X.2011.531170.</li> <li>Makoul G. Essential elements of communication in medical encounters: the Kalamazoo consensus statement. <i>Acad Med</i>. 2001;76(4):390-393. doi:10.1097/00001888-</li> </ul>
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<ul> <li>Makoul G. The SEGUE Framework for teaching and assessing communication skills.         Patient Educ Couns. 2001;45(1):23-34. doi:10.1016/S0738-3991(01)00136-7.     </li> <li>Symons AB, Swanson A, McGuigan D, Orrange S, Akl EA. A tool for self-assessment of communication skills and professionalism in residents. BMC Med Educ. 2009; 9:1.</li> </ul>
doi:10.1186/1472-6920-9-1.

Interpersonal and Communication Skills 2: Interprofessional and Team Communication

Overall Intent: To effectively communicate with the health care team, including consultants, in both straightforward and complex situations

Milestones	Examples
<b>Level 1</b> Respectfully requests/receives a consultation	Contacts cardiology, identifies care team role and reason for consultation
Uses language that values all members of the healthcare team	Correctly identifies individuals in the FMP by name and role; acknowledges team approach to care with patients
Level 2 Clearly and concisely requests/responds to a consultation	Communicates physical exam and work-up to date to cardiology team when requesting consultation
	Uses osteopathic manipulative medicine consult template when reporting on a patient referred for somatic dysfunction
Communicates information effectively with all healthcare team members	• Identifies reason for nursing follow up for international normalized ratio and parameters to contact the physician
<b>Level 3</b> Checks understanding of consult recommendations (received or provided)	Uses closed loop communication when receiving cardiology recommendation
Communicates concerns and provides feedback to peers and learners	• Facilitates a mid-rotation feedback session with a student, developing an action plan for improved problem-focused medical history taking
Level 4 Coordinates recommendations from different members of the healthcare team to optimize patient care, resolving conflict when needed	Develops a single plan of care for a patient with multiple sclerosis based on recommendations from neurology, psychiatry, and pain management
Communicates feedback and constructive criticism to supervising individuals	Respectfully raises concerns about a disruptive faculty member
<b>Level 5</b> Role models flexible communication strategies that value input from all healthcare team members, resolving conflict when needed	Effectively leads a clinical operations meeting to discuss controversial new scheduling templates
Facilitates regular healthcare team-based feedback in complex situations	Convenes and facilitates a multidisciplinary debriefing session after a failed resuscitation effort
Assessment Models or Tools	Direct observation
	<ul> <li>Medical record (chart) audit</li> <li>Multisource feedback</li> </ul>
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	• Simulation
Curriculum Mapping	
Notes or Resources	<ul> <li>Roth CG, Eldin KW, Padmanabhan V, Freidman EM. Twelve tips for the introduction of emotional intelligence in medical education. <i>Med Teach</i>. 2018;21:1-4. doi:10.1080/0142159X.2018.1481499.</li> <li>Green M, Parrott T, Cook G. Improving your communication skills. <i>BMJ</i>. 2012;344:e357 doi:10.1136/bmj.e357.</li> <li>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. doi:10.3109/0142159X.2013.769677.</li> <li>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/. 2019.</li> <li>Fay D, Mazzone M, Douglas L, Ambuel B. A validated, behavior-based evaluation instrument for family medicine residents. <i>MedEdPORTAL</i>. 2007;3:622. doi:10.15766/mep_2374-8265.622.</li> <li>Dehon E, Simpson K, Fowler D, Jones A. Development of the faculty 360. <i>MedEdPORTAL</i>. 2015;11:10174. doi:10.15766/mep_2374-8265.10174.</li> <li>Lane JL, Gottlieb RP. Structured clinical observations: a method to teach clinical skills with limited time and financial resources. <i>Pediatrics</i>. 2000;105(4):973-977. https://pdfs.semanticscholar.org/8a78/600986dc5cffcab89146df67fe81aebeaecc.pdf. 2019.</li> <li>Braddock CH, Edwards KA, Hasenberg NM, Laidley TL, Levinson W. Informed decision making in outpatient practice: time to get back to basics. <i>JAMA</i>. 1999;282(24):2313-2320. doi:10.1001/jama.282.24.2313.</li> </ul>

#### Interpersonal and Communication Skills 3: Communication within Health Care Systems Overall Intent: To effectively and responsibly use and improve EHR and health systems communication **Milestones Examples** Level 1 Accurately and timely records • Completes notes promptly with accurate data information in the patient record Learns institutional policy and safeguards Adheres to HIPAA requirements by not discussing patients in common areas patient personal health information Communicates through appropriate channels as Uses only secure text messaging and email systems when including patient data required by institutional policy (e.g. patient safety reports, cell phone/pager usage) Level 2 Demonstrates organized diagnostic and • After seeing a patient with low back pain the resident documents rationale for not ordering therapeutic reasoning through notes in the an MRI patient record Appropriately uses documentation shortcuts: Avoids inappropriate copying and pasting of notes records required data in formats and timeframes Adjusts contents of macros to be patient specific specified by institutional policy • Discusses the breakdown of communication between nurses and physicians with Respectfully communicates concerns about the appropriate individuals system Level 3 Uses patient record to communicate • Documents changes in patient status in the medical record outside of the daily note updated and concise information in an • Routinely updates problem list to reflect current status organized format Appropriately selects direct (e.g. telephone, in-• Calls the patient to communicate a concerning test result, then notifies the clinical staff to person) and indirect (e.g. progress notes, text schedule an appointment messages) forms of communication based on context and policy Uses appropriate channels to offer clear and Communicates specific opportunities for EHR improvement to appropriate advisory constructive suggestions for system committee improvement while acknowledging system *limitations*

<b>Level 4</b> Demonstrates efficiency in documenting patient encounters and updating record	Completes notes and updates charts for visits on day of appointment at a practice-level volume
Manages the volume and extent of written and verbal communication that are required for practice	Manages practice-level volume of EHR tasks so addressed in a time-frame consistent with policy
Initiates difficult conversations with appropriate stakeholders to improve the system	<ul> <li>Participates in task force to update policy for sharing abnormal results</li> <li>Addresses members of the team, when needed, in an objective but compassionate, constructive, non-threatening manner</li> </ul>
<b>Level 5</b> Optimizes and improves functionality of the electronic medical record within their system	Is identified an EHR super-user
Guides departmental or institutional communication around policies and procedures	Participates in a task force established by the hospital QI committee to develop a plan to improve order sets
Facilitates dialogue regarding systems issues among larger community stakeholders (residency institution, health care system, field)	Participates in pharmacy and therapeutics committees to develop EHR tools to communicate across or between systems
Assessment Models or Tools	<ul> <li>Direct observation</li> <li>Medical record (chart) audit</li> <li>Multisource feedback</li> </ul>
Curriculum Mapping	
Notes or Resources	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;29(4):420-432. doi:10.1080/10401334.2017.1303385.      Stormar AL Spector ND, Srivestova B, et al. LRASS, a magnetic to stondardize verbal.
	<ul> <li>Starmer AJ, Spector ND, Srivastava R, et al. I-PASS, a mnemonic to standardize verbal handoffs. <i>Pediatrics</i>. 2012;129(2):201-204. <a href="https://ipassinstitute.com/wp-content/uploads/2016/06/I-PASS-mnemonic.pdf">https://ipassinstitute.com/wp-content/uploads/2016/06/I-PASS-mnemonic.pdf</a>. 2019.</li> <li>Haig KM, Sutton S, Whittington J. SBAR: a shared mental model for improving</li> </ul>
	communication between clinicians. <i>Jt Comm J Qual Patient Saf.</i> 2006;32(3)167-175. <a href="https://www.ncbi.nlm.nih.gov/pubmed/16617948">https://www.ncbi.nlm.nih.gov/pubmed/16617948</a> . 2019.

In an effort to aid programs in the transition to using the new version of the Milestones, we have mapped the original Milestones 1.0 to the new Milestones 2.0. Below we have indicated where the subcompetencies are similar between versions. These are not necessarily exact matches, but are areas that include some of the same elements. Note that 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: Cares for acutely ill or injured patients in urgent and	PC1: Care of the Acutely III patient
emergent situations and in all settings	
PC2: Cares for patients with chronic conditions	PC2: Care of Patients with Chronic Illness
PC3: Partners with the patient, family, and community to	PC3: Health Promotion and Wellness
improve health through disease prevention and health	
promotion	
PC4: Partners with the patient to address issues of	PC4: Ongoing Care of Patients with Undifferentiated Signs,
ongoing signs, symptoms, or health concerns that remain	Symptoms, or Health Concerns
over time without clear diagnosis despite evaluation and	
treatment, in a patient-centered, cost-effective manner	
PC5: Performs specialty-appropriate procedures to meet	PC5: Management of Procedural Care
the health care needs of individual patients, families, and	
communities, and is knowledgeable about procedures	
performed by other specialists to guide their patients' care	ANCA D
MK1: Demonstrates medical knowledge of sufficient	MK1: Demonstrates Medical Knowledge of Sufficient Breadth
breadth and depth to practice family medicine	and Depth to Practice Family Medicine
MK2: Applies critical thinking skills in patient care	MK2: Critical Thinking and Decision Making
No match	ODDO: Dissolicies Date in Health Once Osotome
SBP1: Provides cost-conscious medical care	SBP3: Physician Role in Health Care Systems
SBP2: Emphasizes patient safety	SBP1: Patient Safety and Quality Improvement
SPB3: Advocates for individual and community health	SBP4: Advocacy
SBP4: Coordinates team-based care	SBP2: System Navigation for Patient-Centered Care
PBLI1: Locates, appraises, and assimilates evidence from	PBLI1: Evidence-Based and Informed Practice
scientific studies related to the patients' health problems	
PBLI2: Demonstrates self-directed learning	PBLI2: Reflective Practice and Commitment to Personal Growth
PBLI3: Improves systems in which the physician provides	SBP1: Patient Safety and Quality Improvement
care	SBP3: Physician Role in Health Care Systems
PROF1: Completes a process of professionalization	

PROF2: Demonstrates professional conduct and	PROF1: Professional Behavior and Ethical Principles
accountability	PROF3: Accountability/ Conscientiousness
PROF3: Demonstrates humanism and cultural proficiency	PROF1: Professional Behavior and Ethical Principles ICS2: Interprofessional and Team Communication
PROF4: Maintains emotional, physical, and mental health; and pursues continual personal and professional growth	PROF4: Self-Awareness and Help Seeking
ICS1: Develops meaningful, therapeutic relationships with patients and families	ICS1: Patient and Family-Centered Communication
ICS2: Communicates effectively with patients, families, and the public	ICS1: Patient and Family-Centered Communication
ICS3: Develops relationships and effectively communicates with physicians, other health professionals, and health care teams	ICS2: Interprofessional and Team Communication
ICS4: Utilizes technology to optimize communication	ICS3: Communication within Health Care Systems