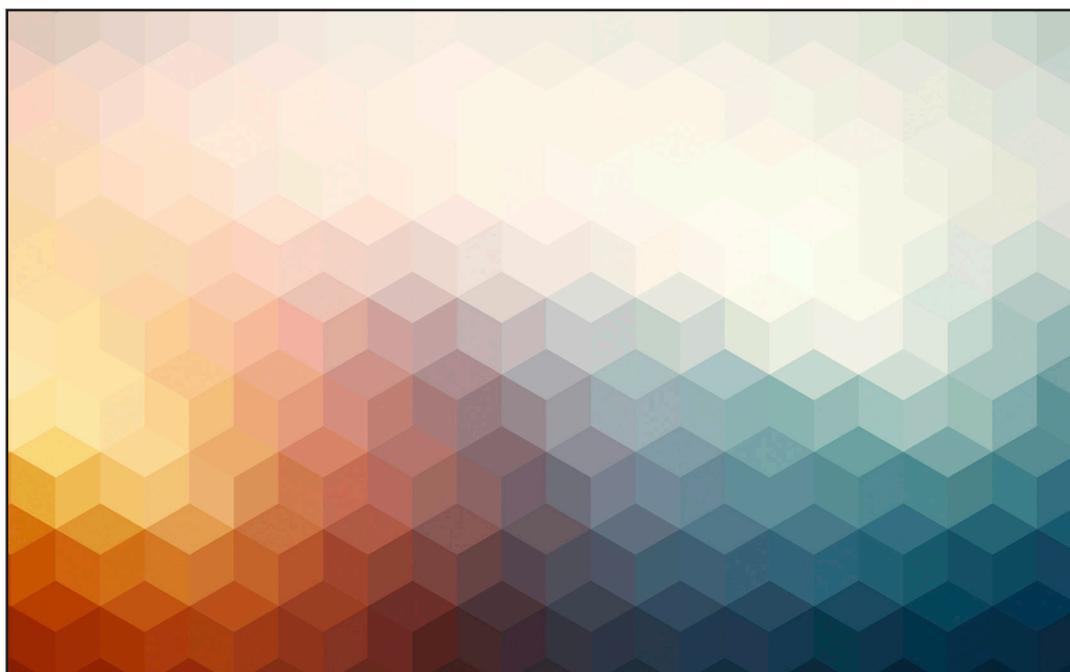


Osteopathic Considerations for Core Entrustable Professional Activities (EPAs) for Entering Residency



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Prepared by the American Association of Colleges of Osteopathic Medicine,
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Preface

Dear Reader:

As we reflect on innovations in the assessment of learning and clinical competence, best practices in medical education are constantly evolving in response to those challenges. As an example, the growing number of medical errors and the rising concerns for patient safety remains a catalyst for change in medical education.¹ Medical educators are now called to prepare learners with the end goal in mind—to meet the needs of the patients they serve and to ensure quality health outcomes.² The osteopathic core competencies in medical education have been a guiding framework for assessment in both undergraduate (UME) and graduate medical education (GME) for a number of years in helping to describe, in general, a ‘good’ medical school graduate or physician, and ultimately toward meeting the health care needs of the public. An additional and complementary framework for learning and skill assessment was more recently introduced into GME utilizing competency-based developmental outcomes³ to assist in guiding curriculum development and specific assessments. But how are these milestones and competencies related or integrated? Learning milestones, whether undergraduate or graduate, can be clustered into meaningful activities to make competency assessment more clinically meaningful and contextual.

The entrustable professional activities (EPAs) were originally conceptualized by Olle ten Cate in the Netherlands and further matured as “units of professional practice, defined as tasks or responsibilities that trainees are entrusted to perform unsupervised once they have attained sufficient specific competence. EPAs are independently executable, observable, and measurable in their process and outcome, and therefore, suitable for entrustment decisions.”⁴ Therefore, the EPAs provide direct relevancy of the competencies and related milestones into the work of the health care professional.

As an extension of these assessment innovations in GME, the Association of American Medical Colleges (AAMC) developed 13 Core Entrustable Professional Activities for Entering Residency in 2014⁵ as a subset list of integrated clinical activities that all MD graduates making the transition from medical school to residency should be expected to independently perform upon entering any GME program.

In that same year, AACOM’s Board of Deans approved an initiative charging its Society of Osteopathic Medical Educators (SOME) to further examine and provide osteopathic medical consideration and perspective into these 13 EPAs. Under this charge, SOME synthesized a steering committee, guiding liaison representatives from each of its osteopathic medical programs to review and identify relevant items within the AAMC-identified activities requiring osteopathic consideration. This document is a culmination of those deliberations that may assist and guide your programs’ activities in curriculum development.

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1 Institute of Medicine (IOM). 2001. *Crossing the Quality Chasm: A new Health System for the 21st Century*. Washington, D.C.: National Academy Press.

2 Frank JR, Danoff D. 2007. The CanMEDS Initiative: implementing an outcomes-based framework for physicians’ competencies. *Medical Teacher*, 29(7):642-647.

3 Holmboe, E., Yamazaki, K., Edgar, ., et al. 2015. Reflections on the First 2 Years of Milestone Implementation. *Journal of Graduate Medical Education*, 7(3):506-511. doi: <http://dx.doi.org/10.4300/JGME-07-03-43>.

4 ten Cate, O. 2013. Nuts and Bolts of Entrustable Professional Activities. *Journal of Graduate Medical Education*. 5(1):157-158.

5 Association of American Medical Colleges (AAMC).2014. *Core Entrustable Professional Activities for Entering Residency: Curriculum Developers’ Guide*. Washington, D.C.: AAMC.

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Background

In 2014, the American Association of Medical Colleges (AAMC) published the *Core Entrustable Professional Activities (EPAs) for Entering Residency: Curriculum Developers' Guide* as a framework for advancing competency-based medical education. Both MD-granting and DO-granting medical schools are called to use the EPAs and the curriculum tools to enhance the quality of education and to think differently about assessment within their respective institutions. As we enter into the next phase of the single accreditation in graduate medical education, it is imperative that osteopathic medical schools adequately prepare graduates to meet these performance outcomes and ensure their competitiveness in the residency application process.

The AAMC has moved forward with a demonstration phase at 10 pilot schools in order to test the feasibility of the EPAs and to learn about the challenges, opportunities, and best practices in implementation. Learning communities, with representation from both the Liaison Committee for Medical Education (LCME) and the Commission on Osteopathic College Accreditation (COCA), accredited medical schools, were subsequently established to extend the network of medical educators involved in the conversation to guide promising practices in curriculum, faculty development, entrustment, and assessment. The AAMC process is designed to promote an open dialogue across a broad range of stakeholders to help guide the evolution of EPAs in the years ahead.

Overview

AACOM established an EPA Steering Committee in the fall of 2015 with the goal of advancing the implementation of EPAs within undergraduate osteopathic medical education. The committee consists of 13 members from osteopathic medical schools, many of whom hold leadership positions in a broad range of areas including curriculum, assessment, clinical education, and faculty development. A student representative of the Council of Osteopathic Student Government Presidents (COSGP) is also a member of the committee and offers an important voice for students in guiding the work of the committee. Representative school liaisons, appointed by their respective deans, provide insight and feedback from each school and have contributed through survey responses, a webinar meeting, and email feedback on the osteopathic adaptations for each EPA. Lastly, representatives from the Educational Council on Osteopathic Principles (ECOP) offered valuable consultation in developing the *Osteopathic Considerations for Core Entrustable Professional Activities (EPAs) for Entering Residency*.

The AACOM EPA Steering Committee was charged with the task of examining the relevance and appropriateness of the EPAs to osteopathic medical education and identifying a strategy for moving forward. The initial work of the committee was to review and adapt the core EPAs to address osteopathic-specific skills and practice essential to entering residency. The committee began by conducting a needs assessment of all osteopathic schools to determine the baseline understanding of EPAs and to identify progress that had been made within individual schools to address the EPAs in the curriculum or in their assessment of students. Each steering committee member was assigned to serve as the lead contact with designated school liaisons to ensure that all schools had input into the process. Working meetings were held with steering committee members throughout the year; additional webinar and telephone meetings were conducted with individual school liaisons to obtain feedback on work products.

The committee carefully deliberated and considered several approaches to adapting the existing EPAs

including: (1) creating a distinct osteopathic EPA document, (2) adding an additional EPA that described osteopathic-specific skills and practices, or (3) integrating osteopathic elements into the existing 13 EPAs. The option to integrate osteopathic-specific skills and practices into the existing document was determined to be consistent with national efforts to promote collaboration and was seen as important to ensuring the competitiveness of our osteopathic student graduates as they enter residency. Additionally, the integration of osteopathic philosophy into the EPAs is consistent with the practice of osteopathic medicine, a practice of medicine that approaches the patient as an integrated whole of mind, body, and spirit. Rather than listing all the osteopathic elements of patient care in an additional EPA, and thus relegating osteopathic medicine to a professional activity, the AACOM Steering Committee felt that the existing 13 EPAs reflected the practices of an osteopathic physician, with the addition of osteopathic elements to reflect the distinctive approach.

The committee reviewed each of the 13 EPAs and considered changes that represented essential osteopathic skills and practices for entering residents. The draft document was sent to the school liaisons and the feedback from all schools was carefully considered and integrated into the final document by the steering committee. Adaptations were made to each of the existing EPAs; the osteopathic considerations are noted in italics in three sections: (1) description of activity, (2) most relevant domains of competence, and (3) competencies within each domain critical to entrustment decisions.

The Osteopathic Considerations for Core Entrustable Professional Activities (EPAs) for Entering Residency is offered as a tool to guide the implementation of EPAs in osteopathic medical education. Schools may choose to adopt the recommendations as offered, add school-specific adaptations, or move forward with a novel approach. The document is seen as a living document that will evolve over time as osteopathic schools gain experience and establish best practices for implementation.

As we enter the next phase of the project, the EPA steering committee and school liaison group will continue to collaborate in the year ahead to identify strategies to support schools in the process of implementation. The committee will seek and disseminate information about resources, best practices, and lessons learned as they emerge from our community of schools and from the efforts of the AAMC. There is a clear need to share common resources for faculty development, curriculum mapping, and assessment strategies. It is the goal of AACOM to continue to be a leader in supporting schools in this effort.

Osteopathic Competencies, Milestones, and EPAs Framework

To allow all colleges of osteopathic medicine to work toward a single set of standards, which graduates must meet to enter residency, a common vocabulary must exist. Therefore, as related to these standards, **competencies** are observable characteristics or qualities of graduating students that integrate knowledge, skills, attitudes, and behaviors. The progression of a student toward competence can be measured using milestones. **Milestones** describe the progression of a learner toward an expected level of proficiency in their competency development. Finally, the notion of **entrustment** must be understood.

One of the first questions that emerged from the Association of American Medical Colleges (AAMC) pilot was about the concept of entrustment. The Entrustment Working Group decided on a few guiding principles. Entrustment should: (1) include longitudinal formative relationships with faculty, (2) be based on robust data collection, and (3) include early and ongoing assessment of trustworthiness, especially the following components of trustworthiness: truthfulness, consciousness, and discernment (Kennedy, et al. 2008). The idea of trust reflects a dimension of competence that reaches further than observed ability. It includes the real outcome of training—that is, the quality of care.

Entrusting a critical activity should lead to the trainee being granted responsibility based on competency and trustworthiness. Entrustment could range from **pre-entrustment** (ability to observe only or act in a supervised manner) to full **entrustment** (once sound feedback has confirmed a critical number of times that all went well, the entrustment can be formalized and considered a qualification to act independently or unsupervised). Thus, **entrustable professional attributes (EPAs)** are units of work, tasks, or responsibilities that graduating students can be entrusted to carry out.

EPAs encompass the integration of multiple competencies as shown in Table 1. AACOM has modified the functions proposed in the original work of the AAMC's *Core Entrustable Professional Activities for Entering Residency Curriculum Developers' Guide, 2014* to include pertinent, distinctively osteopathic components, as appropriate.

EPAs are assessed as an observable workplace task or responsibility that a graduate will perform (measured in various contexts) once they have attained competence in each of the requisite functions. A graduate may function unsupervised for a specific EPA in one context, for example in an inpatient setting, but not function unsupervised in another context, such as in an outpatient setting. Each EPA can be assessed by measuring functions or subunits of the task or responsibility. Entrustment decisions are complex and require multiple measures across the various contexts. There is a progression to completion of each EPA from *unsupervised* to *supervision of others*.

Table 1: Examples of Osteopathic Components Added to EPAs

EPAs (activities of work)	Competencies (together describe expectations of a physician)
<p>EPA 1: Gather a history and perform a physical examination.</p> <p>Functions include (but are not limited to):</p> <ol style="list-style-type: none"> a. Perform a complete and accurate physical exam, including an osteopathic structural exam. b. Identify, describe and document abnormal physical exam findings including osteopathic structural findings (e.g. somatic dysfunction, TART, etc.) 	<p>Osteopathic Principles and Practices: Approach the patient with recognition of the entire clinical context; Use OPP to perform competent physical, neurologic, and structural exams.</p> <p>Patient Care: Gather accurate data related to the patient encounter.</p> <p>Professionalism: Demonstrate awareness of issues of culture, religion, age, etc.</p> <p>Interpersonal Communication Skills: Establish the physician-patient relationship; conduct a patient-centered interview.</p>
<p>EPA 5: Document a clinical encounter in the patient record.</p> <p>Functions include (but are not limited to):</p> <ol style="list-style-type: none"> a. Filter, organize, and prioritize information. b. Record documentation so that it is timely and legible. c. Document a procedural note including an OMM procedural note. 	<p>Osteopathic Principles and Practices: Appropriately document somatic dysfunction related to primary medical diagnoses assessing for TART; communicate and document treatment details.</p> <p>Patient Care: Record patient information in an accurate, organized, and logical manner appropriate to the clinical situation.</p> <p>Interpersonal and Communication Skills: Maintain accurate, comprehensive, timely and legible medical records.</p>
<p>Assessed in different contexts and measured based on level of supervision and trust.</p>	<p>Assessed using development milestones or levels of proficiency.</p>

How to Use This Document

Content

In this document, faculty will find the 13 EPAs adapted to better pertain to osteopathic medical education. These osteopathic EPAs describe what all osteopathic physicians should be expected to perform without direct supervision on day one of residency. EPAs are generalizable skills and required of all osteopathic residents regardless of any specific discipline. For each EPA, faculty will find the following sections:

- Description of the 13 EPAs with key functions
- List of most relevant domains of competence
- List of competencies within each domain, defined by both the ACGME and AOA, critical to entrustment decisions

Tables of milestones, narrative descriptions, and vignettes can be found in the AAMC's *Core Entrustable Activities for Entering Residency: Curriculum Developers Guide* and the AAMC's *Core Entrustable Activities for Entering Residency: Faculty & Learners' Guide*.

Using the Guide for Curriculum Design and Assessment

The EPA descriptions and the tables of competencies should serve as the basis for curriculum development, for both MD-granting as well as DO-granting medical schools. Schools intending to utilize these EPAs will need to address their implementation into the curriculum and their assessment. As schools incorporate EPAs and use this guide, the following questions may frame discussions about the school's curriculum:

- Who will teach the content?
- What will be the content?
- Where will the teaching/assessment be conducted?
- When will the content be taught/assessed?
- How will the content be taught/assessed?
- Who will make the entrustment decision?
- How and when will that entrustment decision be made?

Using the Guide for Faculty Development

Faculty can use this guide as a reference for their own development in both pre-clinical as well as clinical settings. As faculty critically review course content and curriculum, incorporating EPAs will undoubtedly challenge faculty and help them expose new opportunities to engage learners. This document is designed for those involved in curriculum development, and may also assist clinical teaching faculty to better appreciate their own educational input as it applies to the development of osteopathic trainees.

Using the Guide for Learners' Development

Osteopathic student learners can also use this document to understand the rationale and framework of what is expected of them during their four years and by the time they graduate. The EPA descriptions provide concrete and actionable skills required of them upon graduation, providing them with direction as they progress through their training as osteopathic medical students.

Core Entrustable Professional Activities (EPAs)

EPA 1: Gather a history and perform a physical examination.

<p>1. Description of the activity</p>	<p>Day one residents should be able to perform an accurate, complete or focused history and physical exam in a prioritized, organized manner without supervision and with respect for the patient. The history and physical examination should be tailored to the clinical situation and specific patient encounter. This data gathering and patient interaction activity serves as the basis for clinical work and as the building block for patient evaluation and management. Learners need to integrate the scientific foundations of medicine with clinical reasoning skills to guide their information gathering.</p> <p>Functions</p> <p>History</p> <ul style="list-style-type: none"> • Obtain a complete and accurate history in an organized fashion. • Demonstrate patient-centered interview skills (attentive to patient verbal and nonverbal cues, patient/family culture, social determinants of health, need for interpretive or adaptive services; seeks conceptual context of illness; approaches the patient holistically and demonstrates active listening skills). • Identify pertinent history elements in common presenting situations, symptoms, complaints, and disease states (acute and chronic). • Obtain focused, pertinent histories in urgent, emergent, and consultative settings. • Consider cultural and other factors that may influence the patient's description of symptoms. • Identify and use alternate sources of information to obtain history when needed, including but not limited to family members, primary care physicians, living facility, and pharmacy staff. • Demonstrate clinical reasoning in gathering focused information relevant to a patient's care. • Demonstrate cultural awareness and humility (for example, by recognizing that one's own cultural models may be different from others) and awareness of potential for bias (conscious and unconscious) in interactions with patients. <p>Physical Exam</p> <ul style="list-style-type: none"> • Perform a complete and accurate physical exam, <i>including an osteopathic structural exam</i>, in logical and fluid sequence. • Perform a clinically relevant, focused physical exam pertinent to the setting and purpose of the patient visit. • Identify, describe, and document abnormal physical exam findings, <i>including osteopathic structural findings (e.g. somatic dysfunction, TART, etc.)</i>. • Demonstrate patient-centered examination techniques that reflect respect for patient privacy, comfort, and safety (e.g., explaining physical exam maneuvers, telling the patient what one is doing at each step, keeping patients covered during the examination). 																	
<p>2. Most relevant domains of competence</p>	<table> <tr> <td><input checked="" type="checkbox"/> Patient Care</td> <td><input type="checkbox"/> Systems-Based Practice</td> </tr> <tr> <td><input checked="" type="checkbox"/> Knowledge for Practice</td> <td><input type="checkbox"/> Interprofessional Collaboration</td> </tr> <tr> <td><input type="checkbox"/> Practice-Based Learning and Improvement</td> <td><input type="checkbox"/> Personal and Professional Development</td> </tr> <tr> <td><input checked="" type="checkbox"/> Interpersonal and Communication Skills</td> <td><input checked="" type="checkbox"/> <i>Osteopathic Principles and Practice (OPP)</i></td> </tr> <tr> <td><input checked="" type="checkbox"/> Professionalism</td> <td></td> </tr> </table>		<input checked="" type="checkbox"/> Patient Care	<input type="checkbox"/> Systems-Based Practice	<input checked="" type="checkbox"/> Knowledge for Practice	<input type="checkbox"/> Interprofessional Collaboration	<input type="checkbox"/> Practice-Based Learning and Improvement	<input type="checkbox"/> Personal and Professional Development	<input checked="" type="checkbox"/> Interpersonal and Communication Skills	<input checked="" type="checkbox"/> <i>Osteopathic Principles and Practice (OPP)</i>	<input checked="" type="checkbox"/> Professionalism							
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<p>3. Competencies within each domain critical to entrustment decisions</p>	<p>AAMC Competencies</p> <table> <tr> <td>PC 2</td> <td>P 1</td> </tr> <tr> <td>KP 1</td> <td>P 3</td> </tr> <tr> <td>ICS 1</td> <td>P 5</td> </tr> <tr> <td>ICS 7</td> <td></td> </tr> </table>	PC 2	P 1	KP 1	P 3	ICS 1	P 5	ICS 7		<p>AACOM Competencies</p> <table> <tr> <td><i>OPP 1</i></td> <td><i>P 7</i></td> </tr> <tr> <td><i>OPP 3</i></td> <td><i>ICS 1</i></td> </tr> <tr> <td><i>MK 3</i></td> <td><i>ICS 2</i></td> </tr> <tr> <td><i>PC 1</i></td> <td></td> </tr> </table>	<i>OPP 1</i>	<i>P 7</i>	<i>OPP 3</i>	<i>ICS 1</i>	<i>MK 3</i>	<i>ICS 2</i>	<i>PC 1</i>	
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<i>PC 1</i>																		

EPA 1: Expected Behaviors for a Pre-Entrustable Learner

The learner at this level demonstrates underdeveloped skill in history gathering, manifested as errors of omission or commission in gathering information. The learner may also incorrectly perform physical exam maneuvers and may miss key physical exam findings, including osteopathic structural exam findings. These gaps in demonstrated skill may be due to a limited ability to filter, prioritize, and connect pieces of information to each other; to prior clinical encounters; or to existing factual knowledge. The pre-entrustable learner may make decisions based on intuition or a limited ability to develop relevant mental models rather than on appropriate information. The learner inconsistently demonstrates use of patient-centered information gathering and physical exam skills, and may either generalize based on a patient's background or pay inadequate attention to the patient's individual background.

EPA 1: Expected Behaviors for an Entrustable Learner

The learner at this level is routinely able to gather an accurate complete history and can also gather a focused history in an urgent, emergent, or consultation setting. When necessary, the learner identifies and uses alternative sources of information beyond the patients themselves and ensures appropriate communication by using interpreter services when necessary. The entrustable learner can perform an accurate complete physical exam or a focused physical exam pertinent to the patient visit, identify and document abnormal findings, including osteopathic structural exam findings, and describe such findings to team members. For the entrustable learner, analytic reasoning and the abilities to activate prior foundational knowledge and prior clinical experience underlie the choice of either a complete or a focused history and physical exam, and guide the gathering of information relevant to the patient's care. The learner at this level consistently uses patient-centered interview skills and physical exam techniques that, even under conditions of stress or fatigue, demonstrate respect for patients, insight about patients' emotional responses, sensitivity toward each patient's unique background and needs, and the ability to communicate bi-directionally.

EPA 2: Prioritize a differential diagnosis following a clinical encounter.

1. Description of the activity	<p>To be prepared for the first day of residency, all physicians need to be able to integrate patient data to formulate an assessment, developing a list of potential diagnoses that can be prioritized and lead to selection of a working diagnosis. Developing a differential diagnosis is a dynamic and reflective process that requires continuous adaptation to avoid common errors of clinical reasoning such as premature closure.</p> <p>Functions</p> <ul style="list-style-type: none"> • Synthesize essential information from the previous records, history, physical exam, including an osteopathic structural exam, and initial diagnostic evaluations. • Integrate information as it emerges to continuously update differential diagnosis. • Integrate the scientific foundations of medicine with clinical reasoning skills to develop a differential diagnosis and a working diagnosis. • <i>Integrate musculoskeletal considerations that may lead to somatic dysfunction and somato-visceral findings as they may relate to disease or health promotion.</i> • Engage with supervisors and team members for endorsement and verification of the working diagnosis in developing a management plan. • Explain and document the clinical reasoning that led to the working diagnosis in a manner that is transparent to all members of the health care team. • Manage ambiguity in a differential diagnosis for self and patient and respond openly to questions and challenges from patients and other members of the health care team. 															
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EPA 2: Expected Behaviors for a Pre-Entrustable Learner

The learner at this level approaches assessment of a patient problem largely from a rigid template based on associations made between symptoms or physical exam findings and diagnoses and is unable to perform an osteopathic structural examination with the goal to discern possible imbalances of the physiological, autonomic, and biomedical processes contributing to the disease process(es). This learner may not gather all pertinent information from the patient's history or physical exam findings, leading to a differential diagnosis that is too narrow or contains inaccuracies. The learner at this level has a limited ability to filter, prioritize, and make connections between information gathered from primary and secondary sources including the patient's history, physical exam, and diagnostic evaluations, such as laboratory and radiographic studies, including those related to the autonomic, lymphatic, and vasculature systems. Additionally, this learner has a limited ability to identify and reflect on pertinent information as it emerges in order to continuously update the differential diagnosis and avoid errors of clinical reasoning, such as premature closure.

The pre-entrustable learner may overly rely on supervisors and team members for development of the differential diagnosis and selection of a working diagnosis and may not be able to articulate a cohesive management plan. When this learner does offer a management plan, it may not be sufficiently inclusive of all items in the differential, thereby missing confirmation or disconfirmation of important diagnoses. The pre-entrustable learner may also create and carry out a management plan without the required prior endorsement and/or verification of the working and differential diagnosis from supervisors. The management plans developed by the learner may, thus, include a broad range of diagnostic evaluations that are not tailored to the prioritized differential diagnosis; plans may disregard pre-test probability or relevant system factors.

The pre-entrustable learner has little insight into his or her limitations and may not be aware when his or her knowledge is insufficient for the situation at hand, leading to over- or underestimation of abilities and uneasiness when questioned by the patient or supervisor. This learner may come to premature closure. He or she may not be comfortable acknowledging ambiguity and may not ask other health care providers on the team, including supervising physicians, nursing, or other staff, for help. The pre-entrustable learner may fail to document or may incompletely document the reasoning that led to the assessment and plan, which have errors that would be apparent to other team members.

EPA 2: Expected Behaviors for an Entrustable Learner

The individual at this level approaches development of the differential and working diagnosis of a patient problem with the ability to link the osteopathic structural examination with the goal to discern possible imbalances of the physiological, autonomic, and biomedical processes contributing to the disease process(es) along with current findings to prior clinical encounters. The individual gathers pertinent information including those related to the autonomic, lymphatic, and vasculature systems not only from the patient but also from the patient's record and past history, using all the available data to propose a relevant set of differential diagnoses, neither too broad nor too narrow. This learner can usually understand how to relate current and emerging information to continuously update the differential diagnosis and is able to avoid most errors of clinical reasoning, such as premature closure.

The learner at this level has an understanding of their individual knowledge, strengths, and weaknesses. Entrustable learners know when to consult supervisors and team members in the development of their differential diagnosis and selection of a working diagnosis, and can usually articulate a cohesive management plan that takes into account the items in the differential diagnosis. This learner engages with supervisors and team members for endorsement and verification of the working diagnosis in developing a management plan tailored to the prioritized differential diagnosis.

The entrustable learner is comfortable with some ambiguity, manifested as an ability to respond to questions or challenges from the patient, family, or supervisor in a professional manner, even when uncertain about the answer. This learner feels comfortable seeking assistance from other members of the health care team. The learner's documentation demonstrates evidence of clinical reasoning so that other providers will be able to ensure continuity of care for the patient.

EPA 3: Recommend and interpret common diagnostic and screening tests.

<p>1. Description of the activity</p>	<p>This EPA describes the essential ability of the day one resident to select and interpret common diagnostic and screening tests* using evidence-based and cost-effective principles as one approaches a patient in any setting.</p> <p>Functions</p> <ul style="list-style-type: none"> • Recommend first-line, cost-effective diagnostic evaluation for a patient with an acute or chronic common disorder or as part of routine health maintenance. • Provide a rationale for the decision to order the test. • Incorporate cost awareness and principles of cost-effectiveness and pre-test/post-test probability in developing diagnostic plans. • Interpret the results of basic diagnostic studies (both lab and imaging); know • Common lab values (e.g., electrolytes). • Understand the implications and urgency of an abnormal result and seek assistance for interpretation as needed. • Elicit and take into account patient preferences in making recommendations. <p>*Common diagnostic and screening tests include the following:</p> <p>Plasma/serum/blood studies</p> <table border="0"> <tr> <td>Arterial blood gases</td> <td>Culture and sensitivity</td> <td>HIV antibodies</td> </tr> <tr> <td>Bilirubin</td> <td>Electrolytes</td> <td>HIV viral load</td> </tr> <tr> <td>Cardiac enzymes</td> <td>Glucose</td> <td>Lipoproteins</td> </tr> <tr> <td>Coagulation studies</td> <td>Hepatic proteins</td> <td>Renal function tests</td> </tr> <tr> <td>CBC</td> <td>HgbA1c</td> <td>RPR</td> </tr> </table> <p>Urine studies</p> <ul style="list-style-type: none"> Chlamydia Culture and sensitivity Gonorrhea Microscopic analysis U/A dipstick <p>Body fluids (CSF, pleural, peritoneal)</p> <ul style="list-style-type: none"> Cell counts Culture and sensitivity Protein(s) 		Arterial blood gases	Culture and sensitivity	HIV antibodies	Bilirubin	Electrolytes	HIV viral load	Cardiac enzymes	Glucose	Lipoproteins	Coagulation studies	Hepatic proteins	Renal function tests	CBC	HgbA1c	RPR	
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PC 4 (h)	SBP 3																	

EPA 3: Expected Behaviors for a Pre-Entrustable Learner

The pre-entrustable learner can recommend a standard set of studies for the patient and can provide a list of additional labs and imaging examinations thought to be useful for that particular patient. However, the learner is limited in their ability to discuss which panel(s) or individual lab value(s) or imaging studies are most important for specific patients. Additionally, the learner has difficulty justifying each recommendation and does not appear to have considered the impact a false-positive or false-negative test might have on the patient's work-up.

At this level, the learner may not always provide the rationale for the recommended evaluation, and when they do, the rationale often does not include (1) considerations of pertinent risk factors identified from the history, physical, and osteopathic structural examination, (2) other determinants of health that may modify the patient's risk profile, (3) considerations of pre-test and post-test probabilities, or (4) considerations of costs either overall or out-of-pocket. Additionally, there is limited evidence that patient preferences have been factored into the recommendations.

When test results are received, the pre-entrustable learner may misinterpret common insignificant or explainable abnormalities as important or may fail to recognize important abnormalities and their urgency.

EPA 3: Expected Behaviors for an Entrustable Learner

The entrustable learner provides an initial plan for laboratory tests and imaging studies that are targeted to the most important working diagnoses when discussing the next steps in a patient's care after a thorough history, physical, and osteopathic structural exam. This learner is able to provide a rationale for each test. The learner provides information to the supervisor and other members of the health care team that attempts to place the patient's risk factors and clinical presentation in context and considers the patient's resources and preferences in making recommendations. The learner demonstrates cost awareness and attempts to apply cost-benefit considerations that are specific to the patient's condition, demographics, and ability to pay.

For common diagnostic tests, the learner at this level can cite relevant information on the likelihood and interpretation of a positive test. This learner also incorporates the patient's demographics and health behaviors into their recommendations for screening and diagnostic evaluations. At this level, the learner provides clear rationales for his or her diagnostic recommendations.

The entrustable learner methodically reviews each test and imaging result, interpreting the cause and urgency of abnormal values, and seeking help for interpretation of tests that are beyond their scope of knowledge. The entrustable learner notes and attempts to interpret results that are unexpectedly normal.

EPA 4: Enter and discuss orders and prescriptions.

<p>1. Description of the activity</p>	<p>Writing safe and indicated orders is fundamental to the physician's ability to prescribe therapies or interventions beneficial to patients. It is expected that physicians will be able to do this without direct supervision when they matriculate to residency. Entering residents will have a comprehensive understanding of some but not necessarily all of the patient's clinical problems for which they must provide orders. They must also recognize their limitations and seek review for any orders and prescriptions they are expected to provide but for which they do not understand the rationale. The expectation is that learners will be able to enter safe orders and prescriptions in a variety of settings (e.g., inpatient, ambulatory, urgent, or emergent care).</p> <p>Functions</p> <ul style="list-style-type: none"> • Demonstrate an understanding of the patient's current condition and preferences that will underpin the orders being provided. • Demonstrate working knowledge of the protocol by which orders will be processed in the environment in which they are placing the orders. • Compose orders efficiently and effectively, such as by identifying the correct admission order set, selecting the correct fluid and electrolyte replacement orders, and recognizing the needs for deviations from standard order sets. • Compose prescriptions in verbal, written, and electronic formats. • Recognize and avoid errors by using safety alerts (e.g., drug-drug interactions) and information resources to place the correct order and maximize therapeutic benefit and safety for patients. • Attend to patient-specific factors such as age, weight, allergies, pharmacogenetics, and comorbid conditions when writing or entering prescriptions or orders. • Discuss the planned orders, including those for osteopathic manipulative medicine (OMM), and prescriptions (e.g., indications, contraindications, risks) with patients and families and use a nonjudgmental approach to elicit health beliefs that may influence the patient's comfort with orders and prescriptions. 									
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EPA 4: Expected Behaviors for a Pre-Entrustable Learner

The pre-entrustable learner has difficulty filtering and synthesizing key information from a patient's history and physical examination, including the osteopathic structural exam, to inform an understanding of a patient's condition in a manner that enables safe and effective prioritization in ordering tests and therapies. The learner fails to consider non-pharmacologic and preventive strategies and adopts a "shotgun" approach to orders, casting a wide, unfocused net that may, nonetheless, miss key tests needed and minimally considers costs of orders. The pre-entrustable learner acts impulsively in placing orders rather than pausing to consider the big picture and waiting for cause and effect to play out from earlier orders.

This learner feels compelled to act and can be impatient and non-reflective. The learner does not take into account patient preferences when placing orders and is often focused on personal needs and desire for information. The learner does not recognize when to tailor or deviate from a standard order set.

The pre-entrustable learner can be defensive when questioned about orders and may be unable to clearly articulate the rationale behind the orders. The learner may be overly confident in plans and may not seek sufficient review of orders despite limited experience. This learner may place orders without communicating with the rest of the team and/or patients and families regarding plans.

The learner, although technologically facile, has little ability to navigate the order-entry system and does not understand alerts or other system features that can aid the selection of order sets. The pre-entrustable learner may not follow established protocols for placing and carrying out orders within the system in which they are being placed. Common errors in prescription writing and entry are made, with limited double-checking or knowledge of how to verify drug dosages, names, and interactions.

EPA 4: Expected Behaviors for an Entrustable Learner

The entrustable learner is able to synthesize the information at hand from the patient's history, physical exam, including the osteopathic structural exam, and review of existing studies to reach an understanding of the patient's current condition. The learner considers non-pharmacologic interventions and preventive health options, as well as patient preferences and desires with respect to expectations for diagnostic and therapeutic next steps.

With this big picture perspective, the entrustable learner is able to parsimoniously place orders in a thoughtful, stepwise process, awaiting results from one set of studies before making a decision to order additional tests. The learner is flexible in their thinking, and when faced with an unexpected result from a study, is able to interpret the result and adjust plans for next steps.

The learner communicates with patients as results become available and engages with patients when considering starting new medications or other treatments. When a patient asks about other options, the entrustable learner is able to articulate the risks and benefits of a given approach and to consider alternatives. The entrustable learner considers special patient demographics that may dictate a particular care pathway.

This learner is able to effectively use care pathways and algorithms, yet can recognize when deviation is needed. The learner is also able to recognize and effectively use the safety alerts within the electronic medical record. When the entrustable learner is faced with a diagnostic or therapeutic need that is unfamiliar or that she is not comfortable with, they seek the help of more experienced health care providers or other osteopathic resources for guidance.

EPA 5: Document a clinical encounter in the patient record.

<p>1. Description of the activity</p>	<p>Entering residents should be able to provide accurate, focused, and context-specific documentation of a clinical encounter in either written or electronic formats. Performance of this EPA is predicated on the ability to obtain information through history, using both primary and secondary sources, and physical exam in a variety of settings (e.g., office visit, admission, discharge summary, telephone call, email). Documentation is a critical form of communication that supports the ability to provide continuity of care to patients and allows all health care team members and consultants to:</p> <ul style="list-style-type: none"> • Understand the evolution of the patient’s problems, diagnostic work-up, and impact of therapeutic interventions. • Identify the social and cultural determinants that affect the health of the patient. • View the illness through the lens of the patients and family. • Incorporate the patient’s preferences into clinical decision making. <p>The patient record is a legal document that provides a record of the transactions in the patient-physician contract.</p> <p>Functions</p> <ul style="list-style-type: none"> • Filter, organize, and prioritize information. • Synthesize information into a cogent narrative. • Record a problem list, working and differential diagnosis and plan. • Choose the information that requires emphasis in the documentation based on its purpose (e.g., Emergency Department visit, clinic visit, admission History and Physical Examination). • Document an osteopathic structural exam. • Document a procedural note, including an OMM procedure note. • Comply with requirements and regulations regarding documentation in the medical record. • Verify the authenticity and origin of the information recorded in the documentation (e.g., avoids blind copying and pasting). • Record documentation so that it is timely and legible. • Accurately document the reasoning supporting the decision making in the clinical encounter for any reader (e.g., consultants, other health care professionals, patients and families, auditors). • Document patient preferences to allow their incorporation into clinical decision making. 									
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EPA 5: Expected Behaviors for a Pre-Entrustable Learner

Documentation follows a standard template regardless of the intended audience or purpose of the communication. Availability of documentation may be delayed and may be missing necessary elements, but may also include unnecessary or redundant information, inaccurate information from cutting and pasting pieces of the electronic health record (EHR), as well as prohibited abbreviations. The note may not include date, time, and signature, as well as other institutionally required information. Written forms are not always legible.

Documentation of the history does not demonstrate pursuit of primary or secondary sources to fill gaps. Documentation of part of the physical examination, including the osteopathic structural exam, and/or laboratory values may not be verifiable by others. The note reflects lack of time or skill, or both, or frustration in navigating the system to piece together various sources of information required for accuracy (e.g., medication reconciliation is not accurate and complete) and does not identify gaps in care when they occur. Clinical reasoning is not reflected in the note, and laboratory values may be interpreted literally or inaccurately. Management plans are based on directives from others and limited help-seeking behaviors often leave gaps in understanding.

If OMM was performed, a procedural note was absent or incomplete. Communication may be unidirectional or may not consider the patient's cultural context or health beliefs, resulting in plans that may not address patient preferences.

EPA 5: Expected Behaviors for an Entrustable Learner

The learner at this level provides documentation that is adapted to the intended audience or purpose of the communication. The documentation is timely and comprehensive and tells a cogent patient story without excessive detail. The notes include only acceptable abbreviations and date, time, and signature, as well as other institutionally required information. The written forms are always legible.

The entrustable learner's documentation of the history demonstrates accurate use of primary or secondary sources to fill in any gaps. The documentation of the physical examination and laboratory values is verifiable by others. The notes demonstrate successful navigation of the medical system by identifying problems when they arise and documenting engagement of those who can help resolve them. Clinical reasoning is documented and reflects a combination of thought processes and an interpretation of osteopathic structural exam findings.

If OMM was performed, it is appropriately documented in the note. Discussions with other providers are noted as such. The entrustable learner interprets basic laboratory values accurately and uses them to inform the management plan. The communication with patients occurs in a bidirectional manner, highlights patient preferences in the documentation, and integrates those preferences into the plan.

EPA 6: Provide an oral presentation of a clinical encounter.

<p>1. Description of the activity</p>	<p>The day one resident should be able to concisely present a summary of a clinical encounter to one or more members of the health care team (including patients and families) in order to achieve a shared understanding of the patient’s current condition. A prerequisite for the ability to provide an oral presentation is synthesis of the information, gathered into an accurate assessment of the patient’s current condition.</p> <p>Functions</p> <ul style="list-style-type: none"> • Present information that has been personally gathered or verified, acknowledging any areas of uncertainty. • Provide an accurate, concise, and well-organized oral presentation. • Adjust the oral presentation to meet the needs of the receiver of the information. • Assure closed-loop communication between the presenter and receiver of the information to ensure that both parties have a shared understanding of the patient’s condition and needs. 											
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EPA 6: Expected Behaviors for a Pre-Entrustable Learner

The pre-entrustable learner follows a rigid template when presenting, failing to take cues from the receiver of information to ensure that there is a shared understanding of the information being conveyed. The learner often rushes ahead and fails to pause in the presentation at appropriate inflexion points to allow for input or discussion.

The presentation is often not concise or well organized around the chief complaint or primary patient care issue being presented. The presentation wanders to include extraneous information that is not immediately relevant and fails to incorporate factors and findings that relate to structure, function, mental status/ psychosocial factors, and/or disability that may impact clinical outcome. The pre-entrustable learner does not tailor the presentation to meet the needs of the receiver of the information, often using many acronyms and medical jargon, nor are they able to adjust the presentation appropriately for varying contexts of patient care (e.g., emergent versus ambulatory settings).

When queried about information presented about which they are unsure, the learner can become defensive or can sometimes even confabulate information in order to cover uncertainty. The learner may also fail to retrieve some piece of evidence that is being requested. The learner at this level tends to accept information contained in the medical record and include it in the presentation without personally verifying it.

The pre-entrustable learner can be either under- or overconfident in presentations, leading to a lack of comfort with the recommendations from other members of the health care team and/or patients and their family members. At the conclusion of the presentation, the learner does not ensure that there is closed-loop communication with verbal expression by all parties verifying the agreed-upon next steps and plan.

EPA 6: Expected Behaviors for an Entrustable Learner

The entrustable learner is a skilled communicator who understands that the oral presentation serves an important function in medical care and is able to adjust their presentation appropriately for the receiver of information (e.g., faculty, patient/family, team members), for the context of the presentation (e.g., emergent versus ambulatory), and for the emotional intensity of the presentation.

The learner actively engages the patient, family, and other team members in the presentation and does not shy away from difficult or stressful issues. This learner tells the patient's story accurately and efficiently and can make a cogent argument to support the proposed management plan including factors and findings that relate to structure, function, mental status/psychosocial factors, and/or disability that may impact clinical outcome.

The learner usually feels comfortable with uncertainty and readily acknowledges gaps in the knowledge and skills needed to manage a given patient. The learner reflects on areas of uncertainty and seeks additional information and assistance as needed.

The entrustable learner engages consistently in bidirectional communication that ensures a shared understanding of information and avoids unnecessary medical jargon. The learner filters, synthesizes, and prioritizes information into broad categories and can recognize patterns while presenting findings, resulting in a concise, well-organized presentation. The entrustable learner is sensitive to issues of privacy and confidentiality when discussing patients.

EPA 7: Form clinical questions and retrieve evidence to advance patient care.

<p>1. Description of the activity</p>	<p>On day one of residency, it is crucial that residents be able to identify key clinical questions in caring for patients, identify information resources, and retrieve information and evidence that will be used to address those questions. Day one residents should have basic skill in critiquing the quality of the evidence and assessing applicability to their patients and the clinical context. Underlying the skill set of practicing evidence-based medicine is the foundational knowledge an individual has and the self-awareness to identify gaps and fill them.</p> <p>Functions</p> <ul style="list-style-type: none"> • Develop a well-formed, focused, pertinent clinical question based on clinical scenarios or real-time patient care. • Demonstrate basic awareness and early skills in appraisal of both the sources and content of medical information using accepted criteria. • Identify and demonstrate the use of information technology to access accurate and reliable online medical information. • Demonstrate basic awareness and early skills in assessing applicability/generalizability of evidence and published studies to specific patients. • Demonstrate curiosity, objectivity, and the use of scientific reasoning in acquisition of knowledge and application to patient care. • Apply the primary findings of one’s information search to an individual patient or panel of patients. • Communicate one’s findings to the health care team (including the patient/family). • Close the loop through reflection on the process and the outcome for the patient. 															
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EPA 7: Expected Behaviors for a Pre-Entrustable Learner

The learner at this level often relies more on linear thinking than does a more advanced learner, has less experience to draw on, and is less aware of their own knowledge limitations. The pre-entrustable learner may be overly focused on the individual patient, less aware of or attentive to trends or understanding about populations and communities of patients, and may in general jump to conclusions or generalizations without fully understanding the complexity of the situation or the types of information or evidence needed.

This learner may have an underdeveloped mental model of the problem even after multiple iterations of the problem-solving cycle, and even with sufficient prior knowledge in place, may not be able to activate it to their advantage in problem solving. This learner needs improvement in the ability to both retrieve and assess relevant evidence. Finally, this learner is not always able to translate new findings into the care of the patient or a panel of patients.

EPA 7: Expected Behaviors for an Entrustable Learner

The learner at this level routinely identifies situations in patient care in which additional information is needed based on assessment of their own knowledge gaps and patient needs. The learner formulates focused, pertinent clinical questions based on clinical scenarios, or real-time care of a patient or panel of patients and is willing and able to take the time to identify appropriate evidence to answer those questions.

This learner is able to focus his or her cognitive processes on discerning relevant factors, identifying the unknowns, and developing knowledge for generating a solution via just-in-time learning. When gaps in personal knowledge are identified, the learner takes steps to address those gaps in order to maintain a sufficient biophysical, clinical, epidemiological, and social-behavioral scientific knowledge base that can be applied to patient care activities.

This learner demonstrates skill in appraising sources, using information technology appropriately, and generating a manageable volume of information. The learner is able to assess the applicability and generalizability of the information. When gaps in the evidence are identified, the entrustable learner takes steps to “close the loop” to determine ways to improve care.

EPA 8: Give or receive a patient handover to transition care responsibility.

1. Description of the activity	<p>Effective and efficient handover communication is critical for patient care. Handover communication ensures that patients continue to receive high-quality and safe care through transitions of responsibility from one health care team or practitioner to another. Handovers are also foundational to the success of many other types of interprofessional communication, including discharge from one provider to another and from one setting to another. Handovers may occur between settings (e.g., hospitalist to PCP, pediatric to adult caregiver, discharges to lower-acuity settings) or within settings (e.g., shift changes).</p> <p>Functions for transmitter of information</p> <ul style="list-style-type: none"> • Conduct handover communication that minimizes known threats to transitions of care (e.g., by ensuring you engage the listener, avoiding distractions). • Document and update an electronic handover tool. • Follow a structured handover template for verbal communication. • Provide succinct verbal communication that conveys, at a minimum, illness severity, situation awareness, action planning, and contingency planning. • Elicit feedback about the most recent handover communication when assuming primary responsibility of the patients. • Demonstrate respect for patient privacy and confidentiality. <p>Functions for receiver of information</p> <ul style="list-style-type: none"> • Provide feedback to transmitter to ensure informational needs are met. • Ask clarifying questions. • Repeat back to ensure closed-loop communication. • Ensure that the health care team (including patient/family) knows that the transition of responsibility has occurred. • Assume full responsibility for required care during one's entire care encounter. • Demonstrate respect for patient privacy and confidentiality. 											
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EPA 8: Expected Behaviors for a Pre-Entrustable Learner

When giving handover communication, this learner is inconsistent in the application of a standardized format, leading to errors of omission and/or commission in the verbal and written versions of the handover. Because the learner at this level may not be able to prioritize the information to be communicated, they often present data in an unfiltered manner, resulting in a low “signal-to-noise” ratio.

The pre-entrustable learner’s choice of setting in which to conduct the handover does not reflect awareness of established characteristics of high-quality handover communication (e.g., finding a setting that minimizes interruptions and distractions). This learner also focuses on his or her own tasks to the exclusion of the big picture, demonstrating minimal “situation awareness” about the overall team workload or other factors that may influence the receiver of the information.

When functioning as a receiver of handovers, the pre-entrustable learner does not ask clarifying questions, anticipate patient events, or verbalize understanding.

EPA 8: Expected Behaviors for an Entrustable Learner

When giving handover communication, the entrustable learner is able to consistently follow a standardized format, providing, at a minimum, for each patient: (1) illness severity, (2) action planning, and (3) contingency planning. This learner can modify the template to suit specific patient, team, and contextual variables.

The entrustable learner is able to update and effectively use the computerized handoff tool to complement handover communication. The learner can organize the content of verbal communication about each patient to prioritize the information for the recipient of the handover. The entrustable learner conducts patient handovers in settings and in manners that reflect awareness of established characteristics of high-quality handover communication (e.g., in an appropriate environment for handovers, minimizing distractions and interruptions, using closed-loop communication, and taking into account the workload of the other team members and the oncoming provider).

When functioning as a receiver of handovers, the entrustable learner demonstrates active listening and asks clarifying questions. Further, the entrustable learner uses summarizing and repeat-back techniques to ensure closed-loop communication.

EPA 9: Collaborate as a member of an interprofessional team.

<p>1. Description of the activity</p>	<p>Effective teamwork is necessary to achieve the Institute of Medicine competencies for care that is safe, timely, effective, efficient, and equitable. Introduction to the roles, responsibilities, and contributions of individual team members early in professional development is critical to fully embracing the value that teamwork adds to patient care outcomes.</p> <p>Functions</p> <ul style="list-style-type: none"> • Identify team members’ roles and the responsibilities associated with each role. • Establish and maintain a climate of mutual respect, dignity, integrity, and trust. • Communicate with respect for and appreciation of team members and include them in all relevant information exchange. • Use attentive listening skills when communicating with team members. • Adjust communication content and style to align with team-member communication needs. • Understand one’s own roles and personal limits as an individual provider and seek help from the other members of the team to optimize health care delivery. • Help team members in need. • Explain to team members appropriate utilization of OMM and OPP in the treatment of patients. • Prioritize team needs over personal needs in order to optimize delivery of care. 																							
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EPA 9: Expected Behaviors for a Pre-Entrustable Learner

The pre-entrustable learner is at a stage of identity development where they are concerned about and focused on personal performance, making it difficult to recognize and prioritize team goals over personal ones. The pre-entrustable learner identifies the roles of other team members but only fully understands and appreciates the contributions of other physicians. Therefore, the pre-entrustable learner usually seeks answers from physicians and adheres only to their recommendations and directives.

The pre-entrustable learner has a limited ability to appreciate the importance of other team members and the role of diversity and inclusion in team-based care. Their communication is largely unidirectional in response to a prompt, and is template driven with limited ability to modify content based on audience, venue, receiver preference, or type of message. The learner at this level has difficulty reading their own emotions and struggles with anticipating or reading others' emotions. The learner is thus unable to manage strong emotions of themselves or others. The learner may demonstrate lapses in professionalism such as disrespectful interactions, particularly in times of stress and fatigue.

The pre-entrustable learner functions as a passive member of the team and acts independently of input from team members, patients, and families. As a result, the pre-entrustable learner is unaware of resources available to and needed by patients, which limits their ability to help coordinate their care with other members of the interprofessional team.

EPA 9: Expected Behaviors for an Entrustable Learner

The entrustable learner actively strives to integrate themselves into the team. This learner recognizes the value and contributions of all team members and seeks their input and help as needed. The entrustable learner keeps other team members informed.

The learner enjoys good interactions with team members based on ability to adapt their communication strategies to the needs of the recipient in content, style, and venue. The learner at this level listens actively and elicits ideas and opinions from all team members. The learner anticipates and responds to emotions in typical situations.

Other team members perceive their style of interaction as professional, and the learner rarely shows lapses in professional conduct. These lapses tend to occur only in unanticipated situations that evoke strong emotions, when even entrustable learners may have some difficulty managing the situation. When the occasional lapse occurs, however, the entrustable learner has the insight to grow from the experience by using what they learn to anticipate and manage future triggers.

The entrustable learner generally works toward achieving team goals, though this is sometimes more difficult when personal goals compete with team goals. The learner involves patients, families, and other members of the interprofessional team in goal setting and care plan development. The entrustable learner shares their knowledge of community resources with patients and is actively involved in care coordination.

EPA 10: Recognize a patient requiring urgent or emergent care and initiate evaluation and management.

<p>1. Description of the activity</p>	<p>The ability to promptly recognize a patient who requires urgent or emergent care, initiate evaluation and management, and seek help is essential for all physicians. New residents in particular are often among the first responders in an acute care setting, or the first to receive notification of an abnormal lab or deterioration in a patient’s status. Early recognition and intervention provides the greatest chance for optimal outcomes in patient care. This EPA often calls for simultaneously recognizing need and initiating a call for assistance. Examples of conditions for which first-day interns might be expected to recognize, initiate evaluation and management, and seek help include the following:</p> <ul style="list-style-type: none"> • Chest pain • Mental status changes • Shortness of breath and hypoxemia • Fever • Hypotension and hypertension • Tachycardia and arrhythmias (e.g., SVT, Afib, heart block) • Oliguria, anuria, urinary retention • Electrolyte abnormalities (e.g., hyponatremia, hyperkalemia) • Hypoglycemia and hyperglycemia <p>Functions</p> <ul style="list-style-type: none"> • Recognize normal vital signs and variations that might be expected based on patient- and disease-specific factors. • Recognize severity of a patient’s illness and indications for escalating care. • Identify potential underlying etiologies of the patient’s decompensation. • Apply basic and advanced life support as indicated. • Start initial care plan for the decompensating patient. • Engage team members required for immediate response, continued decision making, and necessary follow-up to optimize patient outcomes. • Understand how to initiate a code response and participate as a team member. • Communicate the situation to responding team members. • Document patient assessments and necessary interventions in the medical record. • Update family members to explain patient’s status and escalation-of-care plans. • Clarify patient’s goals of care upon recognition of deterioration (e.g., DNR, DNI, comfort care). 																								
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EPA 10: Expected Behaviors for a Pre-Entrustable Learner

The pre-entrustable learner has an incomplete understanding of personal limitations. This may result in an overestimation of personal ability, dismissal of concerns that other health care team members express about a deteriorating patient, and delay in responding to or asking for help for a patient in need of urgent or emergent care. The pre-entrustable learner has difficulty gathering, filtering, and prioritizing the critical data for a patient. Consequently, this learner has difficulty communicating clinical encounters in a concise and efficient manner.

This learner has gaps in their medical knowledge and inconsistently applies the knowledge the learner does have. Consequently, the pre-entrustable learner fails to recognize variations of vital signs that may occur with age or various disease states. This learner may also inconsistently order and interpret test results, delaying reassessment and further testing or therapeutic interventions. Gaps in medical knowledge make it challenging for them to anticipate next steps for patients requiring urgent or emergent care.

Additionally, this learner does not understand the health care system, and therefore, may have difficulty mobilizing the skills and abilities of team members or using escalation in care policies and procedures. The pre-entrustable learner communicates in a unidirectional manner without seeking input from the patient, family members, or health care team members. Following the urgent or emergent interventions, the pre-entrustable learner may demonstrate a defensive and/or argumentative attitude in debriefing sessions.

EPA 10: Expected Behaviors for an Entrustable Learner

The entrustable learner responding to an urgent or emergent patient condition has insight into their personal limitations. As this learner encounters new scenarios, they will seek help from colleagues, members of the health care team, and supervisors. Additionally, this learner uses information from credible sources (e.g., the electronic health record, or EHR) to aid in decision making.

The entrustable learner has the ability to gather, filter, and prioritize information such as vital signs, focused physical exam, past medical history, recent tests or procedures, and medications to form a focused differential diagnosis, initiate interventions, and drive early testing decisions in the urgent or emergent setting. The entrustable learner can anticipate next steps in care, efficiently communicate the patient scenario to the health care team, interact with other team members based on an understanding of their roles and skills, and facilitate initial tests and interventions to stabilize the patient.

During the urgent or emergent episode of care, this learner facilitates early bidirectional communication with the patient, patient families, and health care team members to allow for shared decision making. After the encounter, the entrustable learner seeks guidance and feedback from the health care team to improve future patient care.

EPA 11: Obtain informed consent for tests and/or procedures.

<p>1. Description of the activity</p>	<p>All physicians must be able to perform patient care interventions that require informed consent. From day 1, residents may be in a position to obtain informed consent for interventions, tests, or procedures they order or perform (e.g., immunizations, central lines, contrast and radiation exposures, blood transfusions, and OMM). Of note, residents on day 1 should not be expected to obtain informed consent for procedures or tests for which they do not know the indications, contraindications, alternatives, risks, and benefits.</p> <p>Functions</p> <ul style="list-style-type: none"> • Describes the indications, risks, benefit alternatives, and potential complications of the procedure. • Communicates with the patient/family and ensures their understanding of the indications, risks, benefit alternatives, and potential complications. • Creates a context that encourages the patient/family to ask questions. • Enlists interpretive services when necessary. • Documents the discussion and the informed consent appropriately in the health record. • Displays an appropriate balance of confidence with knowledge and skills that puts patients and families at ease. • Understands personal limitations and seeks help when needed. 																	
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EPA 11: Expected Behaviors for a Pre-Entrustable Learner

The pre-entrustable learner regards obtaining informed consent as a task to be performed based on the directive of others. This learner lacks understanding of at least some key elements of informed consent (indications, contraindications, risks, benefits, and alternatives) or knows the elements that should be addressed but does not know the specifics for the given procedure. As a result, conversations with the patient/family often have critical errors of omission. The learner also frequently uses medical jargon, further limiting the ability of patient/family to understand and make an informed decision.

Conversations with patients and families are unidirectional, with the learner describing what they know about the procedure and then providing the form for the patient to sign, without first inviting questions or discussion. If patients raise issues around preferences on their own, the learner at this level will respect them; however, this learner does not solicit preferences that might relate to the procedure absent the patient's prompt.

The pre-entrustable learner does not consistently enlist interpretive services when needed, especially if the family does not make an explicit request. The learner at this level also often misses emotional cues from patients, such as anger, fear, or frustration, leaving them unaddressed. The inability of the learner to recognize emotional cues and the lack of knowledge to answer patient questions (e.g., about risks and benefits) may result in patients experiencing an erosion of trust and a request to talk to a more senior member of the team before signing the form. Alternately, the patient may sign without truly being informed.

Finally, documentation of the informed consent frequently has errors of commission or omission and/or deviates from policy (e.g., not timed, dated, signed by patient and physician, all sections completed).

EPA 11: Expected Behaviors for an Entrustable Learner

The entrustable learner understands the importance of the informed consent process in the patient-doctor relationship and for shared decision making. This learner understands the key elements of informed consent (indications, contraindications, risks, benefits, and alternatives) and begins the process prepared with the specifics for the given procedure. As a result, conversations with the patient/family rarely have errors of omission. The entrustable learner tends to avoid medical jargon in an attempt to maximize the patient's and family's ability to understand and make an informed decision.

Conversations with patients and families are bidirectional, with the learner sharing their knowledge about the procedure, walking the patient/family through the elements of the informed consent, and then inviting questions and/or discussion. The learner at this level enlists interpretive services as needed, even when not explicitly requested by the patient or family. During the conversation, learners at this level will seek to understand the patient's and family's preferences about the procedure.

By recognizing and discussing patient or family preferences, the learner engages the patient and/or family in shared decision making. Additionally, the learner at this level generally can recognize emotional cues from patients, such as anger, fear, or frustration, and address them or seek help from supervisors in addressing them. The learner's knowledge and concern for the patient's input demonstrates the confidence necessary to put the patient at ease.

Finally, documentation of the informed consent rarely has errors of omission and is consistent with the policy of the institution (e.g., timed, dated, signed by patient and physician, all sections completed).

EPA 12: Perform general procedures of a physician.

<p>1. Description of the activity</p>	<p>All physicians need to demonstrate competency in performing a few core procedures on completion of medical school in order to provide basic patient care. These procedures include:</p> <ul style="list-style-type: none"> • Basic cardiopulmonary resuscitation (CPR) • Bag and mask ventilation • Venipuncture • Inserting an intravenous line • <i>Osteopathic manipulative medicine (OMM)</i> <p>Functions</p> <ul style="list-style-type: none"> • Demonstrate the technical (motor) skills required for the procedure. • Understand and explain the anatomy, physiology, <i>structure and function relationships</i>, indications, risks, contraindications, benefits, alternatives, and potential complications of the procedure. • Communicate with the patient/family to ensure pre- and post-procedure explanation and instructions. • Manage post-procedure complications. • Demonstrate confidence that puts patients and families at ease. 															
<p>2. Most relevant domains of competence</p>	<p><input checked="" type="checkbox"/> Patient Care <input type="checkbox"/> Knowledge for Practice <input type="checkbox"/> Practice-Based Learning and Improvement <input checked="" type="checkbox"/> Interpersonal and Communication Skills <input checked="" type="checkbox"/> Professionalism</p>	<p><input checked="" type="checkbox"/> Systems-Based Practice <input type="checkbox"/> Interprofessional Collaboration <input checked="" type="checkbox"/> Personal and Professional Development <input checked="" type="checkbox"/> <i>Osteopathic Principles and Practice (OPP)</i></p>														
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EPA 12: Expected Behaviors for a Pre-Entrustable Learner

The learner at this level approaches a procedure as a mechanical task to perform, often at the behest of others, without understanding the context (such as patient-specific factors, indications, contraindications, risks, benefits, alternatives). This learner uses medical jargon that limits the patient's ability to verbalize a clear understanding of why the procedure is being done; this can impede shared decision making.

Additionally, the pre-entrustable learner may not be aware of potential complications of the procedure or may minimize or miss them. The pre-entrustable learner usually lacks confidence in their knowledge, making them uneasy when questioned by the patient. This, in turn, may prompt the patient to ask about previous experience with this procedure or even request a more experienced provider. Conversely, the pre-entrustable learner may overestimate individual skill. This may result in potential harm to the patient, both physically if the learner attempts a procedure without proper skill and emotionally if trust is eroded.

This learner's mechanical skills in the procedure are often inconsistent, resulting in an inability to reliably complete the procedure. This may include inconsistent use of universal precautions and aseptic technique. This learner's skill level may also require such intense focus on the task that the learner is unable to attend to the emotional response of the patient (e.g., pain, fear, frustration, anger). Finally, this learner's documentation of procedures may be incomplete or absent.

EPA 12: Expected Behaviors for an Entrustable Learner

The learner at this level understands both the skill required and the context of a procedure such as patient-specific factors, indications, contraindications, risks, benefits, and alternatives. The entrustable learner avoids medical jargon in communicating the indications, risks, benefits, and complications of a procedure to the patient. This enables the patient to verbalize a clear understanding of why the procedure is being done and to participate in shared decision making about the procedure.

Additionally, the entrustable learner knows and recognizes complications of the procedure and how to mitigate them. The learner at this level has confidence commensurate with his or her knowledge and skill, thus putting patients at ease during the procedure.

This learner's mechanical skills in the procedure are consistent and reliable in most situations, and this learner knows when to get help for procedures or situations beyond his or her abilities (e.g., placing an IV in a neonatal intensive care patient). The learner consistently uses universal precautions and aseptic technique. This learner's skill level allows him or her to simultaneously pay attention to the procedure and the patient's emotional response (e.g., pain, fear, frustration, anger). Finally, the entrustable learner's documentation of procedures is usually complete and timely.

EPA 13: Identify system failures and contribute to a culture of safety and improvement.

<p>1. Description of the activity</p>	<p>Since the publication of the Institute of Medicine (IOM) reports <i>To Err is Human</i> and <i>Crossing the Quality Chasm</i>, the public has been focused on the need to improve quality and safety in health care. Preventing unnecessary morbidity and mortality requires health professionals to have both an understanding of systems and a commitment to their improvement.</p> <p>This commitment must begin in the earliest stages of health professional education and training. Therefore, this EPA is critical to the professional formation of a physician and forms the foundation for a lifelong commitment to systems thinking and improvement.</p> <p>Functions</p> <ul style="list-style-type: none"> • Understand systems and their vulnerabilities. • Identify actual and potential (“near miss”) errors in care. • “Speak up” in the face of real or potential errors. • Use system mechanisms for reporting errors (e.g., event reporting systems, chain of command policies). • Recognize the use of “workarounds” as an opportunity to improve the system. • Participate in system improvement activities in the context of rotations or learning experiences (e.g., rapid-cycle change using plan-do-study-act cycles; root cause analyses; morbidity and mortality conferences; failure modes and effects analyses; improvement projects). • Engage in daily safety habits (e.g., universal precautions, hand washing, time-outs). • Admit one’s own errors, reflect on one’s contribution, and develop an improvement plan. 															
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EPA 13: Expected Behaviors for a Pre-Entrustable Learner

The learner at this level either does not understand systems or has a superficial understanding that prevents recognition of real or potential errors. Common safety behaviors, such as the use of universal precautions or hand washing, require external prompts because they are not yet a matter of habit. Because these learners do not yet understand the systemic implications of safety behaviors, they are easily frustrated and may see them as overly burdensome (e.g., when asked to wash hands when going into a patient's room for a couple of seconds to answer a patient's question).

Additionally, the pre-entrustable learner tends to be a passive observer on the team and is dependent on external sources to identify safety risks, even when they are the cause of the risk. When confronted with their role in a real or potential error, the learner becomes defensive and tends to blame others or the system for a lack of support. The pre-entrustable learner is unlikely to submit an occurrence or event report unless prompted and required to do so by supervisors. While this learner is invested in caring for individual patients, they do not recognize how problems in that care may be generalizable to populations of patients. Participation in identifying system solutions or in carrying out improvement plans also requires external prompting. This learner takes a passive role in improvement activities, generally simply doing what they are told to do.

The pre-entrustable learner tends to be rigid and rules-based, especially in communication. Thus, this learner would be hard-pressed to question a supervisor, even when questioning is warranted by an imminent unsafe behavior. When errors do occur, the pre-entrustable learner avoids conversations about them, and tends to develop workarounds that ease their own burden of future work without improving the system for others. Finally, this learner may not recognize their own symptoms of fatigue, or fears consequences of disclosing such symptoms to a supervisor, thus increasing risk of harm events.

EPA 13: Expected Behaviors for an Entrustable Learner

The learner at this level understands systems well enough to identify real errors and some potential errors. The entrustable learner performs common safety behaviors, such as hand washing and universal precautions, with rare lapses (mostly when stressed or rushed). He or she understands the implications of these behaviors both to the individual patient and to the population of patients in the system (that is, the practice or institution).

The learner at this level is an active member of the team, understanding and taking responsibility for their role in errors when they occur. Because this learner has learned to build into their routine "slowing down" to engage in reflection on practice, they often identify system errors or opportunities for improvement on their own. However, the learner also relies on external sources for information on their own practice, especially for populations. The entrustable learner also looks to other members of the team for help understanding the root causes of quality or safety issues and identifying the solutions. This learner understands the importance of error reporting and almost always does so whenever they identify an error. The learner actively participates in improvement efforts and in identifying systems issues and their solutions, recognizing the importance of learning from individual events when they have implications for populations.

The entrustable learner is an active listener. The learner understands the importance of communication about errors, and can create a narrative that is compelling, accurate, and succinct to motivate others on the health care team. The entrustable learner's understanding of the need to prevent errors propels them to question or challenge others on the team, including supervisors, when concerned that an error is about to occur, even if this means overcoming fears of the supervisor's response. Finally, this learner recognizes their own symptoms of fatigue and can moderate behavior accordingly or seek help when needed, thus decreasing the risk of harm events.

Appendix A

Bulleted List of Expected Behaviors for Pre-Entrustable and Entrustable Learners

EPA 1: Gather a history and perform a physical examination.

Expected behaviors for a pre-entrustable learner

- Information gathering and physical exam maneuvers:
 - Gathers either insufficient or overly exhaustive information.
 - Incorrectly performs physical exam maneuvers.
 - Misses key physical exam findings including structural exam findings.
 - Does not seek or is overly reliant on secondary data.
 - Uses medical jargon or other examples of ineffective communication techniques.
- Scientific foundation and/or reasoning skills:
 - Limited ability to filter, prioritize, and connect pieces of information to each other or to previous clinical encounters.
 - May be less observant of important information or trends; focused on individual patients, potentially without attention to that patient's community or background.
 - May jump to conclusions without probing first (that is, shortcut the scientific method).
 - Lack of experience results in limited ability to develop clinical mental models, which limits ability to gather relevant information and/or perform appropriate maneuvers.
 - Demonstrates low activation of prior knowledge, either because they lack it or because they do not use it to their advantage in problem solving.
- Patient-centered skills:
 - May demonstrate disrespectful interactions with patients, because of stress, fatigue, or unawareness (e.g., forgetting to keep patient draped).
 - May generalize based on patient's age, gender, culture, race, religion, disabilities, and/or sexual orientation.

Expected behaviors for an entrustable learner

- Information gathering and physical exam maneuvers:
 - Obtains a complete and accurate history in an organized fashion.
 - Identifies pertinent history elements in common presenting situations, symptoms, complaints, disease states (acute and chronic).
 - Obtains focused, pertinent histories in urgent, emergent, and consultation settings.
 - Identifies and uses alternate sources of information to obtain history when needed, including from family members, primary care physicians, living facilities, and pharmacies.
 - Performs a complete and accurate physical exam, including a structural exam, in logical and fluid sequence.

- Performs a clinically relevant, focused physical exam pertinent to the setting and focus of the patient visit.
- Identifies, describes, and documents abnormal physical exam findings.
- Scientific foundation and/or reasoning skills:
 - Demonstrates clinical reasoning in gathering focused information relevant to a patient's care.
 - Links current findings to those from previous patients.
 - Uses analytic reasoning and activation of prior knowledge to guide process.
- Patient-centered skills:
 - Demonstrates patient-centered interview skills (attentive to patient verbal and nonverbal cues, patient/family culture, social determinants of health, need for interpretive or adaptive services; demonstrates active listening skills).
 - Demonstrates patient-centered examination techniques that reflect respect for patient privacy, comfort, and safety (that is, explaining physical exam maneuvers, telling the patient what the physician is doing at each step, keeping patients covered during the examination).

EPA 2: Prioritize a differential diagnosis following a clinical encounter.

Expected behaviors for a pre-entrustable learner

- Approaches assessment of patient problem from a rigid template, leading to creation of differential diagnoses that are too narrow or contain inaccuracies:
 - May have a limited ability to filter, prioritize, and make connections between sources of pertinent information.
 - May be unable to perform a structural examination with the intent to discern possible imbalances of the physiological, autonomic and biomedical processes contributing to the disease process(es).
 - May struggle to continuously update a differential diagnosis.
 - May make errors in clinical reasoning, such as premature closure.
 - May recommend a broad range of diagnostic evaluations that are not tailored to the prioritized differential diagnosis.
- May rely too much on supervisors and other team members in creating a differential diagnosis and selecting a working diagnosis.
- Offers management plans that may miss confirmation or disconfirmation of important diagnoses including those related to the autonomic, lymphatic and vasculature systems. May develop a management plan without required endorsement or verification.
- Has little insight into limitations and may over- or underestimate their own abilities.
- May not be comfortable with ambiguity.
- May not completely document reasoning so that other team members can understand what led to their assessment.

Expected behaviors for an entrustable learner

- Can link current findings, including structural exam findings, to prior data in approaching a patient assessment.
- Gathers pertinent information, including those related to the autonomic, lymphatic and vasculature systems, and proposes a relevant differential diagnosis that is neither too broad nor too narrow.
- Can usually integrate current and emerging information to continuously update the differential diagnosis.
- Understands limits of knowledge and personal strengths and weaknesses.
- Understands when to consult supervisors and team members for endorsement and verification of a working diagnosis and for developing a tailored management plan.
- Can usually articulate a management plan based on the well-reasoned differential and working diagnoses.
- Has insight into limitations and is comfortable with ambiguity:
 - Can respond to questions and challenges from patients and team members.
 - Is comfortable seeking assistance from other members of the health care team.
- Provides complete and succinct documentation so that other providers have evidence of their clinical reasoning to ensure continuity of care.

EPA 3: Recommend and interpret common diagnostic and screening tests.

Expected behaviors for a pre-entrustable learner

- Recommends standard templates or order sets for patient evaluation but may not be able to explain the role of each study in screening, diagnosis, management, or follow-up.
- Fails to consider pertinent risk factors identified in the history, physical and osteopathic structural examination or other determinants of health that may modify a patient's risk profile.
- Identifies key diagnostic tests for some, but not all, common acute and chronic conditions.
- Frequently recommends unnecessary tests or tests with minimal or no pre-test probability for patients with common acute or chronic conditions.
- Has difficulty articulating how the test results will affect diagnosis, management, or risk stratification.
- Understands concepts of sensitivity and specificity, but diagnostic test recommendations do not consistently take these into account.
- Has difficulty integrating pre-test and post-test probabilities with patient risk factors in recommending screening and/or diagnostic evaluations.
- May repeat diagnostic or screening tests at intervals that are too frequent or too lengthy.
- Describes diagnostic plan to the patient but without soliciting or taking into account patient preferences in making recommendations.
- Infrequently includes consideration of costs or patient resources in the rationale for diagnostic evaluation recommendations.
- Fails to identify or respond to all critical values.
- May misinterpret common lab values and overreact to normal or readily explainable variations, fail to recognize important abnormalities, or fail to recognize inappropriately normal findings.

Expected behaviors for an entrustable learner

- Recommends reliable, cost-effective tests when indicated for screening or evaluating patients with common acute or chronic conditions.
- Considers pertinent risk factors identified in the history, physical and osteopathic structural examination or other determinants of health that may modify a patient's risk profile.
- Is able to explain how the results of each test will influence diagnosis, management, and health-risk stratification and subsequent evaluation.
- Incorporates knowledge of sensitivity and specificity and pre-test and post-test probabilities along with patient risk factors in recommending tests.
- Consistently discusses diagnostic plans with the patient, and provides evidence that patient preferences have been solicited and factored into decision making.
- Includes in the rationale for recommendations some consideration of costs and patient resources.
- Correctly interprets abnormal laboratory and imaging findings for common tests.
- Identifies critical values and responds correctly and with commensurate urgency by (a) initiating confirmatory or corrective measures or (b) notifying the health care team for assistance in recognition of his or her own limitations.
- Is able to distinguish common, insignificant abnormalities from clinically important abnormalities.

EPA 4: Enter and discuss orders and prescriptions.

Expected behaviors for a pre-entrustable learner

- Is unable to filter and synthesize history and physical and structural examination information to inform an understanding of a patient's condition that enables prioritization of correct diagnostics and orders.
- Focuses on one's own desire for information, sometimes ignoring patient preferences as a result (e.g., orders a CT scan when an ultrasound might have sufficed despite patients' expressed concern to avoid radiation).
- May focus on a single abnormality at the expense of putting all of the pieces together; has a "shot-gun" approach to ordering tests.
- Misses subtle signs and/or physical exam findings that should guide orders.
- Understands general order sets but does not recognize when the need arises to tailor or deviate from the standard order set.
- Does not consider non-pharmacologic and preventive strategies, cost of orders (e.g., tests, drugs/prescriptions) or patient factors (e.g., culture).
- Views cost-containment efforts as externally mandated and interfering with the doctor-patient relationship.
- Is defensive when questioned about orders and is unable to articulate the rationale behind them (they don't know what they don't know).
- May demonstrate overconfidence by not seeking review of orders even when their experience is limited.
- Acts impulsively in placing orders rather than pausing to consider the big picture and waiting for cause and effect to play out from earlier orders. Feels compelled to act.
- Places orders without communicating with the rest of team, patient, and family regarding plans; communication style is unidirectional ("Here is what we are doing...").
- Does not involve patient as integral member of team in shared decision making.
- Does not understand the system; may ignore alerts; may not be able to navigate system or may know the mechanics of the system but not how to apply them (e.g., can find an order set but is unsure what order set is ideal or needed).
- Does not follow established protocols for placing and carrying out orders within a given system.
- Has not developed the habits of safe prescription writing, including doing a double check of patient weight, age, renal function, co-morbidities, dose, and/or interval.
- May rely excessively on technology to highlight drug-drug interactions and/or risks without understanding why there is an interaction (e.g., smartphone or EHR suggests an interaction, but the learner cannot explain why).

Expected behaviors for an entrustable learner

- Is able to filter and synthesize information (e.g., history, signs, symptoms, structural exam findings) to identify or clarify the condition(s) they are addressing with their orders/prescriptions.
- Recognizes patterns and takes into account the "big picture" when ordering diagnostics and/or therapeutics.
- Considers patient's preferences and non-pharmacologic interventions and preventive health options in placing orders.

- Communicates recommendations to patients, families, and the health care team.
- Recognizes limitations and seeks help in a manner that places the needs of patients above one's own sense of autonomy.
- Demonstrates flexibility in thinking; accepts questions as learning opportunities and considers other possibilities.
- Has a parsimonious, reasoned approach to placing orders (e.g., waits for contingent results before ordering more tests).
- Routinely reflects on how the results of a test will influence clinical decision making and, conversely, on the potential consequences of not doing a test.
- Articulates the risks and benefits of what they are ordering (e.g., drugs, tests).
- Considers the costs of their orders and the patient's ability and willingness to proceed with the plan. Can adapt plan based on the patient's unique demographic, cognitive, physical, cultural, socioeconomic, or situational needs.
- Engages in bidirectional communication with patients, their families, and members of the health care team.
- Uses treatment guidelines and algorithms consistently but recognizes or asks for help when the patient's condition requires deviation from them.
- Responds to the EHR's safety alerts and understands the rationale for them.
- Uses electronic resources to fill in gaps in knowledge and inform safe order writing and entry (e.g., drug-drug interactions, treatment guidelines, etc.).

EPA 5: Document a clinical encounter in the patient record.

Expected behaviors for a pre-entrustable learner

- Communicates and documents using a template with limited ability to adjust or adapt based on audience, context, or purpose.
- Makes errors of omission and/or commission when documenting and may not document the use of primary or secondary sources important to the encounter.
- Fails to appropriately document osteopathic structural examination or procedural note when performing OMM.
- May miss some required elements of written documentation, such as date, time, signature, or other institutionally required elements.
- May create handwritten documentation that is difficult to read.
- Demonstrates difficulty meeting needed turnaround time for documentation, limiting its availability to other team members engaged in a patient's care.
- Communicates in a unidirectional manner without actively soliciting or recording patient preferences.
- Does not typically document clinical reasoning in notes, and interpretation of laboratory values may be literal or inaccurate.
- Demonstrates limited help-seeking behavior to fill gaps in knowledge, skill, and experience, resulting in the learner relying on directives from others to manage patients' care.
- Demonstrates frustration with documentation systems (e.g., the EHR) due to a superficial understanding of systems rather than seeing opportunities to engage in system improvement.
- Is in early stages of identity formation as a physician, which lead to a more passive role in care activities.

Expected behaviors for an entrustable learner

- Adjusts and adapts communication and documentation to audience, context, or purpose.
- Provides documentation that is comprehensive and contains important information without unnecessary details or redundancies.
- Appropriately documents and interprets osteopathic structural examination findings and includes a procedural note when OMM is performed.
- Provides documentation that includes institutionally required elements (e.g., date, time, and signature).
- Creates legible handwritten documentation.
- Enters documentation in a timely manner to make it readily available to other team members.
- Communicates in a bidirectional manner, allowing solicitation of patient preferences, which are recorded in the note.
- Documents clinical reasoning in notes, and interpretation of laboratory values is typically accurate.
- Engages in help-seeking behavior to fill gaps in knowledge, skill, and experience, enabling the development and documentation of management plans aligned with the patient's needs.
- Demonstrates a general understanding of documentation systems that leads to the identification of opportunities to engage with others in system improvement.
- Documents one's role(s) in all team care activities in the patient record.

EPA 6: Provide an oral presentation of a clinical encounter.

Expected behaviors for a pre-entrustable learner

- Tends toward unidirectional communication so may ignore the patient/family while presenting.
- Often fails to verify the information being presented and/or to obtain additional information from patient, family, and other team members.
- Avoids obtaining sensitive information from the history and does not follow up on ambiguous information.
- Uses medical jargon and acronyms without clarifying meaning or ensuring a shared understanding.
- Does not distill the presentation or focus on the most relevant information (e.g., last sentence of all presentations of the history of present illness (HPI) is “Patient denies fevers, night sweats, and chills,” regardless of presenting signs or symptoms).
- Fails to incorporate critical factors and findings that relate to structure, function, mental status/psychosocial factors, and/or disability that impact clinical outcome.
- Uses a template rigidly for all presentations without adapting to context of patient care or receiver of information (e.g., failing to tailor the presentation of an urgent or emergent patient issue to a briefer format with only immediately relevant information or adjusting communication style for a patient’s family member as opposed to the health care team).
- Does not generally match the needs of the communication to the tool of communication (e.g., in person, phone, email).
- May present in a disorganized and incoherent fashion.
- Does not generally adjust presentation based on real-time verbal and nonverbal feedback from listener (e.g., a quizzical look suggesting a lack of understanding on the part of the receiver of the information).
- Does not ensure a shared understanding between the presenter and receiver of information at the conclusion of the presentation.
- May confabulate information to respond to questions the learner is unable to answer.
- Lacks situational awareness when discussing patients and presenting sensitive patient information (e.g., presenting in an elevator or in a loud voice in a public place).
- Presents information without personally verifying or acknowledging the source. Takes all information in the chart at face value, reporting it back sometimes without fully understanding and without questioning inconsistencies.
- Demonstrates either a lack of confidence or more confidence than merited by capabilities.
- At times reacts defensively when interrupted during case presentation (e.g., stating, “I’m going to get to that in a minute,” when questioned midway during a presentation).

Expected behaviors for an entrustable learner

- Can filter, synthesize, and prioritize information and recognize patterns, resulting in a concise, well organized, and accurate presentation.
- Incorporate critical factors and findings that relate to structure, function, mental status/psychosocial factors, and/or disability that impact clinical outcome.
- Engages in bidirectional communication that ensures a shared understanding of a presentation.
- Avoids medical jargon.

- Adjusts the presentation for the receiver of information (e.g., faculty, patient/family, team members) and for the context of the presentation (e.g., emergent versus ambulatory).
- Actively engages patient, family, and other team members in the presentation.
- Does not shy away from difficult or stressful issues in obtaining or presenting the information.
- Can efficiently tell a story and make an argument to support the plan.
- Acknowledges gaps in knowledge base and/or skills in managing a given patient presentation or condition and seeks help.
- Reflects on areas of uncertainty and seeks additional information.
- Acknowledges gaps in information without becoming defensive or confabulating information.
- Respects patient privacy and confidentiality by demonstrating situational awareness when discussing patients.
- Demonstrates a level of confidence commensurate with knowledge and skills that puts others at ease (e.g., less certain in emergent settings and more comfortable in an ambulatory setting).

EPA 7: Form clinical questions and retrieve evidence to advance patient care.

Expected behaviors for a pre-entrustable learner

- Asks relevant clinical questions:
 - Has more-limited experience, which results in linear, less complex thinking in terms of analytical skills.
 - Focuses on individual patients, which may result in missing important information or trends in populations or panels of patients.
 - May jump to conclusions without probing first (that is, shortcut the scientific method).
 - Lacks awareness of limitations and gaps in own scientific knowledge (that is, biophysical, clinical, epidemiological, social-behavioral) and how to get help to improve.
 - Lacks experience, which results in limited ability to develop clinical mental models and thus limits ability to form appropriate questions and solve them.
 - Demonstrates low activation of prior knowledge, either because they lack it or they do not use it to their advantage in problem solving.
- Retrieves and assesses evidence:
 - Is unable to manage the volume of possible evidence for review due to lack of focus in question or inability to match evidence to type of question.
 - Has limited ability to judge quality of evidence, applicability, and/or generalizability.
 - Is unable to identify gaps/limitations in literature, and is unable or unwilling to think about ways to close gaps.
 - Accepts findings of studies without critical appraisal.
 - Is unfamiliar with or unwilling to use new information/informatics technologies.
- Reports or applies evidence to effect change or improvement:
 - Does not attempt to apply evidence to one's patients.
 - Does not discuss findings with team or patient.

Expected behaviors for an entrustable learner

- Routinely identifies the need to ask for help or seek new information in the context of the clinical setting, based on awareness of one's own knowledge gaps and patient needs.
- Maintains a sufficient biophysical, clinical, epidemiological, and social-behavioral scientific knowledge base that can be translated to patient care activities.
- Asks relevant clinical questions:
 - Develops well-formed, focused, pertinent clinical question based on clinical scenarios, real-time care of a patient or a panel of patients.
 - Demonstrates curiosity, objectivity, scientific reasoning.
 - Is able to focus cognitive processes on discerning relevant factors, identifying the unknowns, and developing knowledge for generating a solution via just-in-time-learning.
- Retrieves and assesses evidence:
 - Demonstrates awareness and early skill in appraisal of sources and content of medical information.
 - Uses info technology to gather and assess information.

- Acquires a manageable volume of information.
- Assesses applicability/generalizability of the information.
- Reports or applies evidence to effect change or improvement:
 - Applies findings by communicating with team and with patient, and changes approach to patient care if necessary.
 - Reflects on the process by which questions are identified and answered and seeks to improve (may need guidance in understanding subtleties of the evidence).

EPA 8: Give or receive a patient handover to transition care responsibility.

Note: this list applies to both the provider and receiver of information.

Expected behaviors for a pre-entrustable learner

- Uses rigid rules of communication (e.g., a handover template) but cannot adjust based on the audience and/or context.
- Documents patient information in written or electronic handover tools incompletely with errors of both omission and commission.
- Demonstrates variability in transfer of information regarding content, accuracy, efficiency, and synthesis.
- May miss key aspects of the ideal handover, including verbalizing the patient's illness severity and/or providing action planning and/or contingency planning.
- Demonstrates minimal situation awareness of the team's total work load or of the circumstances of the individual to whom one is transferring care.
- Is unable to organize, prioritize, and anticipate patient care needs consistently.
- Demonstrates minimal awareness of known threats to handover communication (e.g., interruptions and distractions).
- Focuses on one's own handover responsibilities with minimal awareness of the workload and concurrent responsibilities of the remainder of the team.

Expected behaviors for an entrustable learner

- Uses a template for the handover communication but can adapt based on patient, audience, setting, or context, including patient disabilities or language barriers.
- Generally documents patient information without errors of omission and/or commission.
- Consistently transfers information regarding content, accuracy, efficiency, and synthesis.
- Organizes and prioritizes information for handover communications.
- Provides key aspects of the ideal handover to the recipient, including verbalizing the patient's illness severity and/or providing action planning and/or contingency planning.
- Demonstrates situation awareness of both the team's total work load and the circumstances of the individual to whom one is transferring care.
- Demonstrates awareness of known threats to handover communication (e.g., interruptions and distractions) by paying attention to the timing and location of the handover communication.

EPA 9: Collaborate as a member of an interprofessional team.

Expected behaviors for a pre-entrustable learner

- Prioritizes one's own goals over those of the team.
- Demonstrates limited understanding of the roles of other team members besides physicians (e.g., seeks counsel from the other physicians to the exclusion of other team members).
- Typically communicates in a unidirectional manner and in response to a prompt.
- Displays limited ability to modify communication based on audience, venue, receiver preference, or type of message.
- Demonstrates difficulty reading one's own emotions and struggles to anticipate or read the emotions of others.
- Succumbs to lapses in professionalism particularly when stressed or tired.
- Is typically a more passive member of the team.
- Has limited interaction with other team members, with the unintended consequence of not being able to optimally support patients through transitions of care.

Expected behaviors for an entrustable learner

- Acts as an active and integrated member of the team who in most situations prioritizes team goals over one's own professional goals.
- Understands the roles of other team members, seeks their counsel, actively listens to their recommendations, and incorporates them into practice.
- Typically communicates in a bidirectional manner and keeps all team members informed and up to date.
- Modifies and adapts communication content and style based on audience, venue, receiver preference, or type of message.
- In most situations, is able to read one's own emotions and anticipates and reads the emotions of others.
- Maintains a professional demeanor in all but the most trying of circumstances.
- Actively engages with the patient and other team members to coordinate care and provide for seamless transitions between care providers and from one setting to another.

EPA 10: Recognize a patient requiring urgent or emergent care and initiate evaluation and management.

Expected behaviors for a pre-entrustable learner

- Does not recognize age appropriateness of trends in and variations of patients' vital signs.
- May dismiss concerns of patient deterioration by team members (e.g., nurses, families).
- Is easily distracted by multiple problems and has difficulty prioritizing for efficient patient care.
- Does not demonstrate an understanding of the roles and responsibilities of each member of the health care team.
- Demonstrates limited ability to gather, filter, prioritize, and connect pieces of information (e.g., vital signs, focused physical exam, pertinent medical history, recent test or procedures, medications) to form a patient-specific differential diagnosis, initiate interventions, and drive testing decisions.
- Requires supervisors and/or other members of the team to initiate correct interventions and testing in an urgent or emergent setting.
- Inconsistently orders and interprets test results delaying reassessment and further testing or interventions.
- Delays seeking help due to pride, anxiety, fear, and/or an inadequate awareness of personal limitations.
- Provides unidirectional communication with health care team and family regarding goals of care and treatment plan.
- Provides superfluous and/or incomplete patient information to responding members of the health care team.
- Demonstrates errors of omission when documenting the clinical encounter in the medical record.
- May become defensive and/or argumentative during debriefing sessions of the clinical encounter.

Expected behaviors for an entrustable learner

- Recognizes age appropriateness of, trends in, and variations of patients' vital signs.
- Actively listens to and elicits feedback from team members (e.g., nursing, family members) regarding concerns about patient deterioration to determine next steps.
- Adheres to institutional procedures and protocols regarding escalation of patient care.
- Uses the health care team members according to their roles and responsibilities to increase task efficiency in dealing with urgent or emergent patient conditions.
- Gathers, filters, prioritizes, and connects pieces of information (e.g., vital signs, focused physical exam, pertinent medical history, recent test or procedures, medications) to form a patient-specific differential diagnosis, initiate interventions, and drive testing decisions.
- Initiates interventions and tests with frequent reassessment to determine level of help needed and to anticipate next steps.
- Interprets common test results to anticipate and respond to early clinical deterioration.
- Understands and recognizes personal limitations, emotions, and personal biases and seeks help when needed.
- Demonstrates bidirectional communication with health care team and family regarding goals of care and treatment plan that leads to shared decision making.

- Provides a focused and concise presentation of accurate patient information to responding members of the health care team.
- Completes documentation in the medical record of the clinical encounter.
- Seeks guidance and feedback from supervisors after the clinical encounter.

EPA 11: Obtain informed consent for tests and/or procedures.

Expected behaviors for a pre-entrustable learner

- May be complacent in the informed consent process due to a lack of understanding of its importance in shared decision making.
- Obtains informed consent only on the directive of others.
- Does not demonstrate an understanding of the key elements of informed consent (indications, contraindications, risks, benefits, alternatives) or may know the elements but not the specifics for the procedure for which consent is being sought.
- May let personal biases interfere with the informed consent process (e.g., history of bad experience with the procedure results in overemphasis of risks).
- May make errors of omission in communicating with patients and families about consent.
- Uses medical jargon frequently in conversations with patients and families.
- Uses unidirectional communication strategies that is, provides information and then requests signature on consent form.
- Does not solicit patient preferences.
- Is unable to read emotional cues in others.
- Provides documentation with errors of both commission and omission.

Expected behaviors for an entrustable learner

- Understands the importance of informed consent to rapport building and shared decision making.
- Demonstrates an understanding of the elements of informed consent generally (indications, contraindications, risks, benefits, alternatives) and the specifics of these elements for the procedures for which consent is being sought.
- Provides complete information to patients and families.
- Avoids medical jargon in communicating with patients and families.
- Uses bidirectional communication to both inform patients and families and seek their input and questions.
- Solicits patient/family preferences to engage them in shared decision making.
- Recognizes emotional cues in others (e.g., fear, anger, anxiety) and can address them in real time or seek help from others on the health care team.
- Demonstrates confidence commensurate with skills.
- Seeks guidance from superiors around areas of uncertainty.
- Documents the informed consent in a complete and timely fashion.

EPA 12: Perform general procedures of a physician.

Expected behaviors for a pre-entrustable learner

- Approaches procedures as mechanical tasks to be performed and often initiated at the request of others
- May not understand key issues in performing OMM and other procedures, such as:
 - Patient-specific factors
 - Indications
 - Contraindications
 - Risks
 - Benefits
 - Alternatives
- Demonstrates limited knowledge of complications of procedures or how to minimize them.
- Has inconsistent mechanical skills and may not be able to reliably complete the procedure.
- Does not consistently demonstrate patient-centered skills in performing procedures:
 - Uses medical jargon or other examples of ineffective communication techniques.
 - May be unable to read emotional response from the patient during the procedure because of focus on the task.
 - Does not engage patients in shared decision making about the procedure.
 - Demonstrates a lack of confidence that results in an increase in patient's stress or discomfort or overconfidence that erodes trust with the patient if the learner struggles with the procedure.
- Uses universal precautions and aseptic technique inconsistently.
- Incompletely writes or enters required documentation or neglects to write or enter required documentation in the patient's health record.

Expected behaviors for an entrustable learner

- Demonstrates the necessary preparation required for performance of procedures.
- Demonstrates and applies understanding of key issues in performing procedures, including OMM, such as:
 - Patient-specific factors
 - Indications
 - Contraindications
 - Risks
 - Benefits
 - Alternatives
- Knows and takes steps to mitigate complications of procedures.
- Demonstrates reliable mechanical skills in performing procedures in most situations and knows when to seek help for procedures or situations beyond the learner's abilities.
- Uses universal precautions and aseptic technique consistently.
- Demonstrates patient-centered skills in performing procedures.
- Avoids medical jargon such that patients are able to verbalize understanding of the procedure.

- Participates in shared decision making with patients about procedures.
- Has confidence commensurate with level of knowledge and skill that puts patients at ease.
- Simultaneously pays attention to both the procedure and the patient's emotional response.
- Creates required documentation that is usually complete and timely.

EPA 13: Identify system failures and contribute to a culture of safety and improvement.

Expected behaviors for a pre-entrustable learner

- Does not recognize potential errors and often misses real errors.
- Is inconsistent in demonstrating common safety behaviors (e.g., universal precautions, hand washing).
- May get frustrated by system requirements and see them as a burden.
- Tends to be passive observer on the team.
- Requires others to point out systems failures.
- May become defensive or blame the system when faced with an error.
- Does not recognize generalizability of lessons from understanding errors.
- Participates in system improvements only when externally prompted to do so.
- Uses rigid and rules-based communication that prevents “speaking up,” especially when a superior is involved in an error or potential error.
- Does not recognize one’s own fatigue or is afraid to tell superiors when fatigued.

Expected behaviors for an entrustable learner

- Identifies real and potential errors.
- Performs common safety behaviors (e.g., universal precautions, hand washing).
- Understands the importance of error prevention both to individual patients and to systems.
- Takes responsibility for one’s role in errors.
- Takes time to “slow down” and reflect on one’s work.
- Still relies on external sources of information to understand one’s population of patients.
- Reports real and/or potential errors when they occur using the system reporting structure.
- Participates in improvement activities voluntarily.
- Speaks up when concerned about a potential error, even if that means questioning or challenging a supervisor.
- Recognizes one’s own symptoms of fatigue and moderates behavior or seeks help.

Appendix B

Osteopathic Core Competencies for Medical Students (Abridged)

I. Osteopathic Principles and Practices

1. Approach the patient with recognition of the entire clinical context including mind-body and psychosocial interrelationships.
2. Use the relationship between structure and function to promote health.
3. Use osteopathic principles and practices (OPP) to perform competent physical, neurologic, and structural examinations, incorporating analysis of laboratory and radiology results, diagnostic testing, and physical examination.
4. Diagnose clinical conditions and plan patient care.
5. Perform or recommend osteopathic manipulative medicine (OMM) as part of a treatment plan.
6. Communicate and document treatment details.
7. Collaborate with OMM specialists and other health care providers to maximize patient treatment and outcomes, as well as to advance OMM research and knowledge.
8. Evaluate the medical evidence concerning the utilization of OMM.

II. Medical Knowledge

1. Articulate basic biomedical science and epidemiological and clinical science principles related to patient presentation.
2. Apply current best practices in osteopathic medicine.
3. Physician interventions.

III. Patient Care

1. Gather accurate data related to the patient encounter.
2. Develop a differential diagnosis appropriate to the context of the patient setting and findings.
3. Implement essential clinical procedures.
4. Form a patient-centered, interprofessional, evidence-based management plan.
5. Health promotion and disease prevention (HPDP).
6. Documentation, case presentation, and team communication.

IV. Interpersonal and Communication Skills

1. Establish and maintain the physician-patient relationship.
2. Conduct a patient-centered interview.
3. Demonstrate effective written and electronic communication in dealing with patients and other

health care professionals.

4. Work effectively with other health professionals as a member or leader of a health care team.

V. Professionalism

1. Knowledge: Demonstrate knowledge of the behavioral and social sciences that provide the foundation for the professional competency including medical ethics, social accountability and responsibility, and commitment to professional virtues and responsibilities.
2. Humanistic behavior: Demonstrate humanistic behavior including respect, compassion, probity, honesty, and trustworthiness.
3. Primacy of patient need: Demonstrate responsiveness to the needs of patients and society that supersedes self-interest.
4. Accountability: Demonstrate accountability to patients, society, and the profession including the duty to act in response to the knowledge of professional behavior of others.
5. Continuous learning: Attain milestones that indicate a commitment to excellence (i.e., through ongoing professional development as evidence of a commitment to continuous learning).
6. Ethics: Demonstrate knowledge of and the ability to apply ethical principles in the practice and research of osteopathic medicine, particularly in the areas of provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices, the conduct of research, and the reporting of research results.
7. Cultural competency: Demonstrate awareness of and proper attention to issues of culture, religion, age, gender, sexual orientation, and mental and physical disabilities.
8. Professional and personal self-care: Demonstrate understanding that he/she is a representative of the osteopathic profession and is capable of making valuable contributions as a member of this society; lead by example; provide for personal care and well-being by utilizing principles of wellness and disease prevention in the conduct of professional and personal life.
9. Honest, transparent business practices.

VI. Practice-Based Learning and Improvement

1. Describe and apply evidence-based medical principles and practices. Interpret features and meanings of different types of data, both quantitative and qualitative, and different types of variables including nominal, dichotomous, ordinal, continuous, ratio, and proportion.
2. Evaluate the relevance and validity of clinical research.
3. Describe the clinical significance of and apply strategies for integrating research evidence into clinical practice.
4. Critically evaluate medical information and its sources, and apply such information appropriately to decisions relating to patient care.
5. Describe and apply systematic methods to improve population health.

VII. System-Based Practice

1. The candidate must demonstrate understanding of variant health delivery systems and their effect on the practice of a physician and the health care of patients.
2. Demonstrate understanding of how patient care and professional practices affect other health care professionals, health care organizations, and society.
3. Demonstrate knowledge of how different delivery systems influence the utilization of resources and access to care.
4. Identify and utilize effective strategies for assessing patients.
5. Demonstrate knowledge of and the ability to implement safe, effective, timely, patient-centered, equitable systems of care in a team-oriented environment to advance populations and individual patients' health.

XIV. Interprofessional Collaboration

1. Act with honesty and integrity in relationships with patients, families, and other team members.
2. Respect the dignity and privacy of patients while maintaining confidentiality in the delivery of team-based care.
3. Communicate one's role and responsibilities clearly to patients, families, and others.
4. Explain the roles and responsibilities of other care providers and how the team works together to provide care.
5. Choose effective communication tools and techniques, including information systems and communication technologies, for facilitating interprofessional discussions and interactions that enhance team function.
6. Give timely, sensitive, instructive feedback to others about their performance on the team, and respond respectfully to feedback from other team members.
7. Engage other health professionals (appropriate to the specific care situation) in shared patient-centered problem solving for effective team-based care.

Appendix C

AACOM Osteopathic Core Competencies Linked to 13 EPAs: A Crosswalk

Competencies	Entrustable Professional Activities													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	
I. Osteopathic Principles and Practices (OPP)														
OPP 1	X													1
OPP 2														0
OPP 3	X				X							X		3
OPP 4		X										X		2
OPP 5														0
OPP 6				X	X									2
OPP 7														0
OPP 8														0
II. Medical Knowledge (MK)														
MK 1		X												1
MK 2		X												1
MK 3	X		X										X	3
III. Patient Care (PC)														
PC 1	X		X											2
PC 2		X												1
PC 3												X		1
PC 4			X				X	X			X			4
PC 5			X											1
PC 6				X	X				X	X				4
IV. Interpersonal and Communication Skills (ICS)														
ICS 1	X										X	X		3
ICS 2	X										X			2
ICS 3					X						X	X		3
ICS 4						X		X	X	X			X	5
V. Professionalism (P)														
P1														0
P2														0
P3														0
P4													X	1
P5														0
P6														1
P7	X							X						1
P8														0
P9														0

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AACOM Osteopathic Core Competencies Linked to 13 EPAs: A Crosswalk.

Competencies	Entrustable Professional Activities													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	
VI. Practice-based Learning and Improvement (PBLI)														
PBLI 1							X							1
PBLI 2							X							1
PBLI 3							X						X	2
PBLI 4			X				X	X			X			4
PBLI 5							X							1
VII. Systems-based Practice (SBP)														
SBP 1									X	X				2
SBP2									X	X				2
SBP3									X	X	X		X	5
SBP4			X						X	X				2
SBP 5									X	X	X		X	4
XIV. Interprofessional Collaboration (IPC)														
IPC 1									X	X				2
IPC 2									X	X				2
IPC 3									X	X				2
IPC 4									X	X				2
IPC 5									X	X				2
IPC 6									X	X				2
IPC 7						X			X	X				3
Total	7	4	6	2	4	2	6	4	14	14	7	5	6	81

Appendix D

EPA Resources

AAMC Core EPA Listserv

To join, send a blank email to subscribe-coreepas@lists.aamc.org.

Original Resource Publication

Association of American Medical Colleges (AAMC). *Core Entrustable Professional Activities for Entering Residency: Curriculum Developers' Guide*. 2014. <http://www.aamc.org/cepaer>

Journal and Other Articles

The following articles have been posted to the Core EPA listserv. We have categorized the articles according to (1) Entrustment, (2) Faculty Development, (3) Curriculum, Implementation, and Assessment, and (4) Competencies realizing that many articles address more than one of these entities.

Entrustment

Hauer, K.E., Oza, S.K., Kogan, J.R., et al. 2015. **How Clinical Supervisors Develop Trust in Their Trainees: A Qualitative Study.** *Medical Education*, 49 (8):783-795. doi: 10.1111/medu.12745.

Rekman, J., Gofton, W., Dudek, N., Gofton, T., et al. 2015. **Entrustability Scales: Outlining Their Usefulness for Competency-Based Clinical Assessment.** *Academic Medicine*, 91(2):186-190. <http://doi.org/10.1097/ACM.0000000000001045>.

Chen, H.C., van den Broek, W.E.S., ten Cate, O., et al. 2015. **The Case for Use of Entrustable Professional Activities in Undergraduate Medical Education.** *Academic Medicine*, 90(4):431-436. doi: 10.1097/ACM.0000000000000586.

Blog on **Understanding Competency-based medical education:** <http://academicmedicineblog.org/understanding-competency-based-medical-education/>.

ten Cate, O., Hart, D., Ankel, F., et al. 2016. **Entrustment Decision Making in Clinical Training.** *Academic Medicine*, 91(2):191-198. doi: 10.1097/ACM.0000000000001044.

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Faculty Development

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