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Core Entrustable Professional Activities for Entering Residency

Faculty and Learners' Guide

We are excited to provide you with the nal “version 1.0” of the Core Entrustable Professional

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Over the past several years, program directors have increasingly expressed concern that some medical school graduates are not prepared for residency.[1,2] Efforts are under way in both the United States and Canada[4,5] to better de ne the requirements at key transition points in the formation of physicians (college to medical school, medical school to residency, and residency to practice or fellowship).

Liaison Committee for Medical Education (LCME) standards require all accredited schools to have educational objectives that are grounded in

Table 1. Comparison of the Bene ts and Disadvantages of the Two Conceptual Frameworks Considered: Competencies and EPAs

	EPAs	Competencies
Bene ts	s %0!S ARE hACTIVITIES v s to faculty, trainees, and the public s 2EPRESENT THE DAY TO DAY WORK OF THE professional s 3ITUATE COMPETENCIES AND MILESTONES IN the clinical context in which we live s -AKE ASSESSMENT MORE PRACTICAL BY clustering milestones into meaningful activities s %XPLICITLY ADD THE NOTIONS OF TRUST AND supervision into the assessment equation	s WHICH HAVE BEEN THE assessment in the GME space for a decade s)N THE AGGREGATE DEINE THE physician” s (AVE A REASONABLE BODY OF E around assessment of the “traditional” domains (medical knowledge and patient care) s (AVE BEEN USED FOR ESTABLISH developing milestones of performance for at least the GME years
Disadvantages	s 7ERE RELATIVELY RECENT literature s (AVE HAD LITTLE OPERATIONAL worldwide s 7ERE DESIGNED ORIGINALLY FOR THE residency-to-practice transition	s !RE ABSTRACT IN THE s !RE GRANULAR AND THEREFORE way we think about or observe learners

Charge to the Core EPAs for Entering Residency Drafting Panel

As a result of the chosen conceptual framework, the Drafting Panel was charged with the following:

To delineate those activities that all entering residents should be expected to perform on day 1 of residency without direct supervision , regardless of specialty. We used the ACGME de nitions for direct and indirect supervision[14]:

1) Direct Supervision: The supervising physician is physically present with the resident and the patient.

2) Indirect Supervision is broken down into two levels:

   a. Direct Supervision Immediately Available: The supervising physician is physically within the hospital or other site of patient care and is immediately available to provide direct supervision.

   b. Direct Supervision Available: The supervising physician is not physically present within the hospital or other site of patient care, but is immediately available by means of telephonic and/or electronic modalities, and is available to provide direct supervision.

Guiding Principles

Before delineating the Core EPAs for Entering Residency, the Drafting Panel de ned the following principles to guide our work:

A. General

- The primary motivation for this work is patient safety. We focused on aligning the professional development at the UME-GME transition with safe, effective, and compassionate care.
- A secondary motivation is to enhance the con dence of new residents, program directors, and patients with respect to the residents' abilities to perform the activities they will be expected to do without direct supervision when they enter residency.
- The activities will represent a necessary but not suf cient set of competencies for entering residents, a "core," not a ceiling.
- These activities are intended to supplement, not replace, the mission- and specialty-speci c graduation competencies of the individual medical schools and specialties.

B. Implementation Principles

- The success of this work will require faculty development in teaching the EPAs, direct observation, using tools for workplace assessment, and delivering feedback.

C. Assessment Principles

- Assessment must be considered through every step of this process.
- Assessment of these activities must embrace qualitative feedback based on direct observation.
- Cost, feasibility and educational impact should be added to the validity and reliability considerations of new or existing assessment tools[15].
- Critical competencies and their milestones should be linked to the EPAs to provide a shared mental model of expected behavior for new residents that will help faculty and students in assessment.
- The ideal implementation and assessment system will give students many opportunities to practice with repeated, low-stakes formative assessments, culminating in entrustment decisions for each of the 13 EPAs by the time they graduate.

Relationship between the Core EPAs for Entering Residency and School or Specialty-Speci c EPAs

The Core EPAs for Entering Residency are designed to be a subset of all of the graduation requirements of a medical school. Individual schools may have additional mission-speci c graduation requirements, and specialties may have speci c EPAs that would be required after the student has made the specialty decision but before residency matriculation. The Core EPAs may also be foundational to an EPA for any practicing physician or for specialty-speci c EPAs. The relationships among Core EPAs for Entering Residency, medical school graduation requirements, EPAs for all physicians, and specialty-speci c EPAs are depicted in Figure 1.

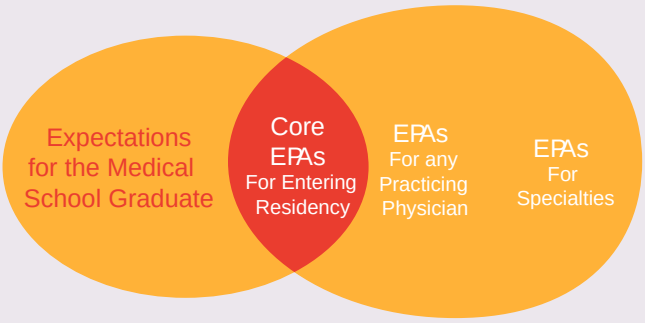

Figure 1. The relationships among the Cor e EPAs for Entering Residency to a medical school' s graduation r equir ements, the EPAs for any physician, and specialty-specific EP As

The Relationships among EPAs, Competencies, and Milestones

Before discussing the relationships among EPAs, competencies, and milestones, we want to emphasize that two competencies are foundational to all of the EPAs because they are required for any entrustment decision: 1) trustworthiness and 2) self-awareness of limitations that leads to appropriate help-seeking behavior.[16] Therefore, both of these competencies should be documented in a learner's portfolio before any entrustment decision is made.

The relationship between EPAs and competencies has been elucidated in the literature.[12,17] EPAs are units of work, while competencies are abilities of individuals. One of the de ning markers of an EPA is that its performance requires integration of competencies, usually across domains. To apply that concept to this work, the Drafting Panel did a mapping exercise to determine the ve to eight competencies most critical to making an entrustment decision for each of the 13 EPAs. We chose the competencies from the "Reference List for General Physician Competencies."[10]

Furthermore, we wanted to underscore that Interpersonal and Communication Skills (ICS) and Professionalism competencies are integrated throughout the Core EPAs for Entering Residency. Appendix D is a table that displays the number of times each competency was linked to one of the EPAs as a critical component of a supervisor's entrustment decision. Readers can see in that appendix that ICS and Professionalism competencies are among the most frequently cited as critical to performing the EPAs. In fact, ICS competencies 1 and 2, which refer to effective communication with p anyees

Contents

This document delineates 13 EPAs that all entering residents should be expected to perform on day 1 of residency without direct supervision regardless of specialty choice.

Each EPA has the following sections:

- Description of the EPA with associated critical functions
- A narrative for each EPA of the expected behaviors for pre-entrustable and entrustable learners based on the milestones
- Vignettes for each EPA that illustrate what the pre-entrustable and entrustable learners might look like in a clinical setting

The Appendix lists the behaviors expected of a pre-entrustable and entrustable learner in bulleted form.

Using the Guide for Developing Faculty

The EPA descriptions, the expected behaviors, and the vignettes are expected to serve as the foundation for faculty development. Faculty can use this guide as a reference for both feedback and assessment in pre-clinical and clinical settings. We have created this version of the document for frontline faculty and learners by retaining only the detail essential for observing and assessing the EPAs and making entrustment decisions. This document is available online and is titled Core Entrustable Professional Activities for Entering Residency: Faculty and Learners' Guide.

Using the Guide for Developing Learners

Learners can also use this document to understand the core of what is expected of them by the time they graduate. The EPA descriptions themselves delineate the expectations, while the developmental progression laid out from pre-entrustable to entrustable behaviors can serve as the roadmap for achieving them.

EPA 1: Gather a history and perform a physical examination

Description of the activity	Day 1 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 speci c 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 scienti c foundations of medicine with clinical reasoning skills to guide their information gathering. Functions History s /BTAIN A COMPLETE AND ACCURATE HISTORY IN AN ORG s $EMONSTRATE PATIENT CENTERED INTERVIEW SKILLS 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). s)DENTIFY PERTINENT HISTORY ELEMENTS IN COMMON P complaints, and disease states (acute and chronic). s /BTAIN FOCUSED PERTINENT HISTORIES IN URGENT E s #ONSIDER CULTURAL AND OTHER FACTORS THAT MAY IN symptoms. s)DENTIFY AND USE ALTERNATE SOURCES OF INFORMATI including but not limited to family members, primary care physicians, living facility, and pharmacy staff. s $EMONSTRATE CLINICAL REASONING IN GATHERING FOC patient's care. s $EMONSTRATE CULTURAL AWARENESS AND HUMILITY F one's own cultural models may be different from others) and awareness of potential for bias (conscious and unconscious) in interactions with patients. Physical Exam s 0ERFORM A COMPLETE AND ACCURATE PHYSICAL EXAM s 0ERFORM A CLINICALLY RELEVANT FOCUSED PHYSICAL purpose of the patient visit. s)DENTIFY DESCRIBE AND DOCUMENT ABNORMAL PHYS s $EMONSTRATE PATIENT CENTERED EXAMINATION TECHN 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).

Pre-Entrustable Learners

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. This learner may also incorrectly perform physical exam maneuvers and may miss key physical exam ndings. These gaps in demonstrated skill may be due to a limited ability to lter, 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.

Vignette for a pre-entrustable learner

Zhongshu is seeing patients in the free clinic as part of a primary care team. Her rst patient of the day is Mr. Rodriguez, for whom the nursing triage sheet documents a chief complaint of cough. Mr. Rodriguez is new to the clinic. He is fully clothed and sitting on the examination table when Zhongshu walks into the room. Zhongshu closes the door and stands, leaning against the wall, with a tablet in hand to take notes and document in the chart. Zhongshu starts her histo ry-taking by saying, "The nurses said you have a cough. How long has it been going on?" She follows this with a series of questions regarding the description and progression of the cough. She nds that the patient has a chronic cough that seems to have gotten acutely worse. She asks about associated symptoms and incit ing or relieving factors. She asks pertinent questions about history such as smoking, exposure to sick con tacts, and known lung disease. She takes a full medical history, including medications, and details a family tree in the chart. Social history points include marital status, current living situation, and substance use history. She does not include occupational or travel history. She 9.9626 BTauscultat6 54 262_0 10 9. Tfx 0 0 9.969.9, 54 2rs8(ogr)17.9(ession of the coug71 9.9626 274.1537 202.6028 Tm (-)

Zhongshu is seeing patients in the free clinic as part of a primary care team. Her rst patient of the day is Mr. Rodriguez, for whom the nursing triage sheet documents a chief complaint of cough. Mr. Rodriguez is new to the clinic. Before entering the room, Zhongshu asks the nurse if an interpreter is needed; she clari es that the patient's rst language is Spanish but that he has full ability to communicate in English. Mr. Rodriquez is fully clothed and sitting on the examination table when Zhongshu walks into the room. Zhongshu closes the door and invites the patient to sit in the chair while

EPA 2: Prioritize0trln 0 9.9626 184.2491 407.168 Tm [(health car)17.9(e team.)

Description of the activity	To be prepared for the rst 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 REmECTIVE PR adaptation to avoid common errors of clinical reasoning such as premature closure. Functions s 3YNTHESIZE ESSENTIAL INFORMATION FROM THE PREVIOU and initial diagnostic evaluations. s)NTEGRATE INFORMATION AS IT EMERGES TO CONTINUOU s)NTEGRATE THE SCIENTIIC FOUNDATIONS OF MEDICINE WI develop a differential diagnosis and a working diagnosis. s %NGAGE WITH SUPERVISORS AND TEAM MEMBERS FOR EN the working diagnosis in developing a management plan. s %XPLAIN AND DOCUMENT THE CLINICAL REASONING THAT manner that is transparent to all members of the health care team. s -ANAGE AMBIGUITY IN A DIFFERENTIAL DIAGNOSIS FOR SE openly to questions and challenges from patients and other members of the health care team.

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.

Vignette for a pre-entrustable learner

Tom is working at a general pediatrics clinic. He is asked to see Ben, a 3-year-old boy whose mother brought him in with a fever last night. Tom proceeds to gather a history from Ben's mom, who states that he was in his usual state of health until last night, when she noticed he felt warm. His temperature was 102.4, and she gave him Tylenol, which brought the fever down. Upon Tom's questioning, she notes that he HAS BEEN DRINKING PLENTY OF fluids from the night before. On examination, Tom tells the mother that Ben has an erythematous pharynx and an erythematous, non-mobile right tympanic membrane.

Tom tells Ben's mother that he isn't sure exactly what is causing the fever, but he would like to obtain a strep test and a chest X-ray to be certain of what is going on. Ben's mother asks why a chest X-ray will be necessary, stating she is concerned about the radiation exposure for her son. Tom states he isn't sure, but the baby has a fever and might have pneumonia. He states he will discuss the case with his supervisor, Dr. Miller, and the two of them will return.

Tom gives a presentation about his encounter with Ben to Dr. Miller and lists his differential diagnosis as 1) strep throat, 2) ear infection, and 3) pneumonia. Dr. Miller asks Tom additional information about Ben's history, including hydration status and presence or absence of a productive cough. When Tom cannot provide the additional details, Dr. Miller also asks if he obtained Ben's past medical history. Tom says that he did not, and Dr. Miller informs him that Ben has a history of two prior ear infections and that because of the erythematous, non-mobile right tympanic membrane, ear infection is the most likely diagnosis.

Dr. Miller and Tom return to the exam room, and Dr. Miller con rms with Ben's mother that he has been making adequate urine and has not been suffering from a cough. Dr. Miller repeats Tom's physical exam and veri es the reported ndings. He tells Ben's mom that a right ear infection is the working diagnosis because of the red eardrum. He suggests a prescription for amoxicillin and a follow-up visit in 2 weeks to check the ears and make sure the infection has cleared. Mom asks about the strep test Tom mentioned, and Dr. Miller responds that because the plan is for a course of amoxicillin and the treatment for strep is the same, he thinks the test would not help and is therefore not worth the cost.

Entrustable Learners

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 current ndings to prior clinical encounters. He gathers pertinent information mostly 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 his 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 veri cation 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

Tom is working at a general pediatrics clinic. He is asked to see Ben, a 3 year-old boy whose mother brought him in with a fever last night. Before gathering the history from Ben's mom, he checks the medical record and nds that Ben has had two prior ear infections. As Tom gathers the history from Ben's mom, he learns that Ben was well until last night, when she noted a temperature of 102.4, and that Tylenol brought the fever down. He continues to be interested in play and is making adequate urine. When questioned, she denies productive cough. Tom tells Ben's mom that he sees a red throat and a red and non-moving eardrum on physical exam and that Ben's lung elds are clear.

Tom tells Ben's mother that he suspects an ear infection is the cause of the fever but that he is also considering a strep throat, given Ben's red throat. Tom tells Ben's mom that he will report his ndings and plan to his supervisor, Dr. Miller.

Tom presents this encounter to Dr. Miller in a thorough yet focused manner and lists the differential diagnoses as ear infection, strep throat, or other pharyngitis, noting that because of the symptoms, physical exam ndings, and past history, he believes that the most likely cause of the fever is an ear infection. Dr. Miller concurs with Tom's assessment and suggests that they return to the exam room to discuss the plan with Ben's mom. They enter the examination room and tell Mom the most likely diagnosis is an ear infection because of the red, non-moving eardrum. Tom states that since amoxicillin was effective for Ben's last infection, he will write a prescription for it. Mom asks about the strep test Tom mentioned, and Tom responds that because the plan is for a course of amoxicillin and the treatment for strep is the same, he thinks the test would not help and is therefore not worth the cost. He suggests that she return with Ben to see Dr. Miller in two weeks for a follow-up.

EPA 3: Recommend and interpret common diagnostic and screening tests

Description of the activity	This EPA describes the essential ability of the day 1 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. Functions s 2ECOMMEND IRST LINE COST EFFECTIVE DIAGNOSTIC E acute or chronic common disorder or as part of routine health maintenance. s 0ROVIDE A RATIONALE FOR THE DECISION TO ORDER T s)NCORPORATE COST AWARENESS AND PRINCIPLES OF C test probability in developing diagnostic plans. s)NTERPRET THE RESULTS OF BASIC DIAGNOSTIC STUDI common lab values (e.g., electrolytes). s 5NDERSTAND THE IMPLICATIONS AND URGENCY OF AN A assistance for interpretation as needed. s %LICIT AND TAKE INTO ACCOUNT PATIENT PREFERENC *Common diagnostic and screening tests include the following: Plasma/serum/blood studies: Arterial blood gases Bilirubin Cardiac enzymes Coagulation studies CBC Culture and sensitivity Electrolytes Glucose Hepatic proteins HgbA1c HIV antibodies HIV viral load Lipoproteins Renal function tests RPR Urine studies: Chlamydia Culture and sensitivity Gonorrhea Microscopic analysis U/A dipstick Body uids (CSF, pleural, peritoneal): Cell counts Culture and sensitivity Protein(s)

as a “dirty catch” but notes the lack of WBC and leukocyte esterase, telling her supervisor that she does not believe further testing is indicated. She correctly interprets the low sodium level as pseudo-hyponatremia due to hyperglycemia. She recommends an NSAID as needed for chest pain, suggests that the patient be reassured about the cause of her pain, and volunteers to explore further any concerns she may have about her pain and new diagnosis of diabetes.

Vignette #2 for an entrustable learner

Margaret has been called down to the Emergency Room to see Ms. Smith, a 36-year-old who presented with severe abdominal pain of several hours duration. She has been unable to eat or nd a comfortable position. The Emergency Room is busy, and Margaret begins her evaluation. The nurse notes that it is time for Ms. Smith to be admitted, so the supervising physician asks Margaret to share her initial thoughts and provide suggestions about next steps in the evaluation. Margaret presents the history of present illness and examination ndings. She reports that while obtaining the history, she asked Ms. Smith what she thought was going on, and Ms. Smith mentioned that she might be pregnant. When reviewing the labs, Margaret notes rst that Ms. Smith’s urine pregnancy test is positive and that not only must they consider abdominal causes of her pain, but a beta-HCG might be needed as ectopic pregnancy is in the differential as well. Margaret identi es the elevated alkaline phosphatase as an acute concern and notes that her white count that is higher than normal. She

Description of the activity	Writing safe and indicated orders is fundamental to the physician's ability to prescribe therapies or interventions bene cial 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). Functions s $EMONSTRATE AN UNDERSTANDING OF THE

because it appeared that he had a femur fracture, and there was concern for significant blood loss. Sheila verifies that the child has appropriate IV access and necessary monitoring in place and appears to be stable. She further queries the paramedics about the concerns about bleeding. She reviews the outside hospital records to determine what workup was completed there with respect to delineation of the femur fracture and evaluation for other injuries. She then performs her own complete physical exam. The boy's mother arrives, and it appears that English is not her first language, so Sheila requests an interpreter.

After assuring the boy's mother that he is currently stable and while awaiting the arrival of the interpreter, Sheila proceeds to the bedside computer to enter some orders. Because the boy had already undergone a full series of X-rays and a full panel of labs at the outside hospital, she elects to order only a CBC, type and screen, and basic metabolic panel at this time. The interpreter then arrives, and Sheila is able to obtain further history from the child's mother, learning that he has a history of asthma and that the family are Jehovah's Witnesses and refuse all blood products. Sheila returned to the computer to order the boy's asthma medication, and a safety alert pops up indicating an inappropriate dose. Sheila verifies the dose of his medication on the inhaler from the mother and re-enters the correct dose. She also enters an alert in the system regarding the parent's refusal of blood products for her son.

Sheila then presents the boy's case to the attending physician, noting her concern about the boy's anemia, which was just verified on repeat CBC, and the mother's refusal of blood products for her son. The attending physician asks Sheila if there are any alternatives to packed red blood cells for acute blood loss anemia and whether the mother might consider those alternatives. Sheila states she does not know but

Description of the activity	Entering residents should be able to provide accurate, focused, and context-speci c 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., of ce 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 1. Understand the evolution of the patient's problems, diagnostic work-up, and impact of therapeutic interventions. 2. Identify the social and cultural determinants that affect the health of the patient. 3. View the illness through the lens of the patients and family. 4. Incorporate the patient's preferences into clinical decision making. The patient record is a legal document that provides a record of the transactions in the patient-physician contract. Functions s &ILTER ORGANIZE AND PRIORITIZE INFORMATION s 3YNTHESIZE INFORMATION INTO A COGENT NARRATIVE s 2ECORD A PROBLEM LIST WORKING AND DIFFERENTIAL D s #HOOSE THE INFORMATION THAT REQU¬P 1L THOSIS THE

Pre-Entrustable Learners

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 ll gaps. Documentation of part of the physical examination and/or laboratory values may not be veri able 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. Thus, management plans are based on directives from others and limited help-seeking behaviors often leave gaps in understanding. 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.

Vignette for a pre-entrustable learner

As the attending on service, you review the admission note of the learner, Meena, assigned to your team. Meena was asked to evaluate Grif n, a three-year-old boy with cystic brosis being readmitted after a recent admission for pneumonia and failure to thrive, who now presents with persistent cough, listlessness, and poor oral intake. When you round at 8 a.m. the morning after admission, there is no recorded history and physical, so you return in late morning to review it. The admission note has a date but no time or signature.

Meena's admission history documents that Grif n was doing well for the rst couple of days after his last discharge and then his cough worsened. She wrote that he hasn't been eating or drinking much and spends the day lying on the couch watching TV. The note indicates poor oral intake, but there is no mention of urine output or the pattern of bowel movements. Several other pertinent negative aspects of the history are not mentioned (e.g., color or amount of sputum, history of abdominal pain or urinary symptoms, fever, sweating). She gives the dates of the recent admission but does not mention results of sputum cultures or chest radiograph. She lists the medications from his discharge summary as his current medication list, but the list is not accurate. It does not include the increase in dose, which you prescribed yesterday when the mother called to ask for a new prescription because she left his medicine at the grandmother's house. During this call, Mom also told you that Grif n wouldn't take the nutritional supplement and that no one ever called her about the home care services she was supposed to receive. This information is not noted in the history. The recorded physical examination includes vital signs and oral and ear, lung, heart, and abdominal exams. There is no mention of overall appearance and no mention of skin turgor. The recorded lung exam does not address degree of distress and says, "Dif cult to examine due to patient crying." The laboratory data include a CBC, electrolytes, and renal function tests noted as "within normal limits." The note does not clarify the date of those tests, and you are left wondering if they were

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 ll in any gaps. The documentation of the physical examination and laboratory values is veri able

Nick runs into Janelle in the elevator and begins his presentation in front of several other people. Janelle asks him to wait until they exit the elevator. He then launches into the patient's past medical history, current medications, and extensive review of systems including the patient's past history of onychomycosis, for which he sees a podiatrist, rather than succinctly framing the discussion around the patient's current acute complaint. When Janelle tries to redirect Nick to de ne the chief COMPLAINT HE BECOMES VERY mUSTERED AND SAYS HE is getting to that next. He ultimately completes his presentation, which is quite prolonged and not well organized, and Janelle asks for his recommendations. He states with certainty that he feels the patient has a bowel obstruction, based on the vomiting and a history of past abdominal surgery, which has led to renal failure. When queried about the evidence to support this diagnosis Nick, is unable to provide any supporting evidence and becomes a bit defensive, stating that the ER resident hadn't yet ordered all the correct tests to con rm his suspicions, but labs were pending.

Nick and Janelle proceed to the Emergency Department to evaluate the patient together and run into their attending, who is in the Emergency Room to see the new patient consult with them. Nick immediately jumps in and again presents the patient in essentially the same manner as he had to Janelle, without incorporating her feedback about the organization and focus of his presentation. In addition, he fails to notice that the daughter is listening to his presentation and appears both confused and distraught. When she tries to INTERRUPT HE BRIEmY PAUSES AND SAYS HE WILL BE WITH HER in a minute, when he is nished presenting her father's case to his attending.

Entrustable Learners

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 his 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. He actively engages the patient, family, and other team members in the presentation and does not shy away from dif cult or stressful issues. This learner tells the patient's story accurately and ef ciently and can make a cogent argument to support the proposed management plan. He usually feels comfortable with uncertainty and readily acknowledges gaps in the knowledge and skills needed to manage a given patient. The LEARNER REmECTS ON AREAS OF UNCERT additional information and assistance as needed. The entrustable learner engages consistently in bidirectional eommunicato

Nick finds Mr. Jones' nurse and Janelle, and takes them to a private location to begin the presentation. Nick starts by ascertaining what Janelle already knows about Mr. Jones. He then focuses on the most emergent issues first and asks the nurse to contribute her initial history and sequential pattern of vital signs noted. Nick presents the chief complaint and relevant past medical history clearly, using the patient's own description and words for clarification. The presentation is concise and efficient, and Nick notes some of the gaps in the history that he will need to look for in Mr. Jones' chart, including the fact that neither the patient nor his daughter can recall the medication history fully. He states with confidence, but not certainty, that the patient likely has a bowel obstruction, based on the vomiting, his physical exam findings, and the history of past abdominal surgery. He states his concern that the obstruction has produced dehydration and consequent acute renal failure. He also considers a number of other possibilities in the differential diagnosis and notes that they will have to be ruled out by the various laboratory tests recommended. Nick states his plan to ask the NURSE TO START AN)6 AND BEGIN A mUID BOLUS AS WELL AS some intravenous antibiotics, while they are waiting for

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

Description of the activity	On day 1 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 1 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 ll them. Functions s $EVELOP A WELL FORMED FOCUSED PERTINENT CLINICA scenarios or real-time patient care. s $EMONSTRATE BASIC AWARENESS AND EARLY SKILLS IN A content of medical information using accepted criteria. s)DENTIFY AND DEMONSTRATE THE USE OF INFORMATION T and reliable online medical information. s $EMONSTRATE BASIC AWARENESS AND EARLY SKILLS IN A generalizability of evidence and published studies to speci c patients. s $EMONSTRATE CURIOSITY OBJECTIVITY AND THE USE OF of knowledge and application to patient care. s !PPLY THE PRIMARY INDINGS OF ONE S INFORMATION SEA panel of patients. s #OMMUNICATE ONE S INDINGS TO THE HEALTH CARE TEAM s #LOSE THE LOOP THROUGH REmECTION ON THE PROCESS

Pre-Entrustable Learners

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 her 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 suf cient 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 ndings into the care of the patient or a panel of patients.

Vignette for a pre-entrustable learner

Sierra is on the transfusion medicine service and is asked to consult on a patient for whom the diagnosis of thrombotic thrombocytopenic purpura (TTP) is being considered and the initiation of plasmapheresis is being requested. Sierra reviews the chart quickly and notes that the patient was admitted with thrombocytopenia 24 hours ago. She notes a lack of agreement between the primary team and the consulting hematology service on the diagnosis. She continues to collect the data that she feels are pertinent and then noti es the transfusion medicine fellow that she has a new consult and is ready to present.

Upon hearing the presentation of Sierra's chart review on the patient, the fellow asks Sierra what she thinks is the etiology of the thrombocytopenia. Sierra states that

the chart suggests TTP. When the fellow prompts for other causes of thrombocytopenia, Sierra is able to list several other diagnoses that should be considered. The fellow then asks Sierra what she thinks the next steps should be. Sierra states that they should go see the patient and talk to the hematology experts to gure out what the diagnosis is.

The fellow prompts Sierra to review some background literature on the differential diagnosis of thrombocytopenia, the diagnosis of TTP, and its treatment. Sierra consults her pocket medicine book and also searches online using a generic web browser. She returns stating that they need to review the blood smear, collect more laboratory data, and get some more historical facts from the patient. She states that she suspects TTP and thinks that, if they con rm by looking at the smear, they should initiate plasmapheresis as soon as possible.

The attending physician now joins the discussion and asks if Sierra and the fellow have reviewed the most recent evidence regarding the use of plasmapheresis in TTP. Sierra states that she has reviewed the literature and that plasmapheresis is useful. The attending physician asks her if she ran across any new evidence in this area and prompts Sierra to think about where she might nd that evidence. Sierra states that she searched the Internet but that she could also use a summary updated source very quickly. She leaves, reviews a summary source, and returns again, suggesting that plasmapheresis should be started. At this point, the attending physician prompts Sierra to review the case one more time to identify any patient-speci c issues that might suggest that the general evidence is not applicable to this patient, noting that the patient is on several speci c medications that may be associated with TTP.

Entrustable Learners

Expected behaviors for an entrustable learner

The learner at this level routinely identi es situations in patient care in which additional information is needed based on assessment of her own knowledge gaps and patient needs. She 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 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 identi ed, she takes steps to address those gaps in order to maintain a suf cient biophysical, clinical, epidemiological, and social-behavioral scienti c knowledge base that can lear289>ET EM/T1_apl/626 72 177s5EM

the fellow to outline her assessment, Sierra outlines a differential diagnosis that considers the patient-speci c key features. She includes medication-associated TTP. She states that she came across an association with one of the patient's medications in a review article, but that she is not aware of the actual incidence, reporting that she has a reference for an original article that she would like to pull because it will give her a more accurate sense of the association. She also includes several other disease states in her differential diagnosis, including B12 de ciency, noting that there are several case reports in the literature describing B12 de ciency and TTP presenting in similar ways.

At this point, the fellow asks Sierra what she thinks they should do next for the patient. Sierra states that based on her reading, plasmapheresis should not be initiated while there is still doubt about the diagnosis. She suggests that they need a few more laboratory studies and wonders aloud if there is evidence to support the use of empiric plasmapheresis in this type of a presentation. She also asks if there is harm in doing plasmapheresis if the diagnosis is actually B12 de ciency or medication-associated TTP. She con rms with the fellow that she should take a few minutes to search PubMed for any controlled-trial evidence in this area.

The attending physician now joins the discussion. Sierra reports from her literature search that there is strong and consistent evidence from randomized controlled trials for using plasmapheresis in TTP, but that this is less strong if the TTP is associated with a medication or if an alternative diagnosis is being considered. The attending physician agrees and con rms Sierra's recommendations to check several more lab values, including B12, and to postpone plasmapheresis for now. As a team, they go to discuss their recommendations with the primary team and the hematology consulting team. As they leave, Sierra suggests that they bring several of the articles with them for the team.

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

Description of the activity	Effective and ef cient 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). Functions for transmitter of information s #ONDUCT HANDOVER COMMUNICATION THAT MINIMIZES care (e.g., by ensuring you engage the listener, avoiding distractions). s $OCUMENTˆAND UPDATEˆAN ELECTRONIC HANDOVER TO s &OLLOW A STRUCTURED HANDOVER TEMPLATE FOR VE s 0ROVIDE SUCCINCT VERBAL COMMUNICATION THAT CON situation awareness, action planning, and contingency planning. s %LICIT FEEDBACK ABOUT THE MOST RECENT HANDOVER primary responsibility of the patients. s $EMONSTRATE RESPECT FOR PATIENT PRIVACY AND CO Functions for receiver of information s 0ROVIDE FEEDBACK TO TRANSMITTER TO ENSURE INFO s !SK CLARIFYING QUESTIONS s 2EPEAT BACK TO ENSURE CLOSED LOOP COMMUNICATI s %NSURE THAT THE HEALTH CARE TEAM INCLUDING PAT transition of responsibility has occurred. s !SSUME FULL RESPONSIBILITY FOR REQUIRED CARE DU s $EMONSTRATE RESPECT FOR PATIENT PRIVACY AND CO

Pre-Entrustable Learners

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, he often presents data in an un ltered manner, resulting in a low “signal-to-noise” ratio. The pre-entrustable learner’s choice of setting in which to conduct the handover does N O T R E m E C T

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

Description of the activity	Effective teamwork is necessary to achieve the Institute of Medicine competencies for care that is safe, timely, effective, ef cient, 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. Functions s)DENTIFY TEAM MEMBERS ROLES AND THE RESPONSIBILI s %STABLISH AND MAINTAIN A CLIMATE OF MUTUAL RESPEC s

past three days. Karl rolls his eyes and when they leave the room, he says, “I spoke to that therapist two days ago. He said the patient had declined therapy on the first day, and on the second day she wasn’t in the room when he stopped by. No wonder this hospital has a bad reputation! No one is doing their job to take care of the patient.”

The next day, the case manager on the team approaches Karl’s supervisor to say that when the liaison from the nursing home arrived to evaluate Mrs. Gardner, Karl wouldn’t give up the patient’s chart to let her review it for almost a half hour. The liaison had waited patiently, then inquired about when he would be done. Karl told her impatiently that he had had to wait for the chart, and so would she. The case manager described him as being dismissive and rude. When the supervisor asked Karl about it, he responded with frustration: “I can’t believe she complained about that! She should know we have to get our notes in the chart as soon as possible, and I had to get to lecture at 1:00 p.m.”

Entrustable Learners

Expected behaviors for an entrustable learner

The entrustable learner actively strives to integrate himself into the team. He recognizes the value and contributions of all team members and seeks their input and help as needed. This learner keeps other team members to stay informed. He enjoys good interactions with team members based on his ability to adapt his 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. He anticipates and responds to emotions in typical situations. Other team members perceive his style of interaction as professional, and he 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, he has the insight to grow from the experience by using what he learns 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. He usually involves patients, families, and other members of the interprofessional team in goal setting and care plan development. He shares his knowledge of community resources with patients and is actively involved in care coordination.

Vignette for an entrustable learner

Karl is assigned to an inpatient general medicine service for four weeks. He is five minutes late for work rounds one morning. When he joins the team, he apologizes for being late and says that he wanted to look at the overnight tracings for one of his patients who is hospitalized for evaluation of syncope so they could make a decision about discharge during rounds. He says he had to wait a few minutes for the overnight tech and the day tech to finish their handoff

Description of the activity	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 rst responders in an acute care setting, or the rst to receive noti cation 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 rst-day interns might be expected to recognize, initiate evaluation and management, and seek help include the following: 1. chest pain 2. mental status changes 3. shortness of breath and hypoxemia 4. fever 5. hypotension and hypertension 6.

message on their machine: “Mr. Gold has deteriorated and has been moved to the ICU for ventilator support and central line placement. Please call the hospital and ask for Jorge for further details.”

During subsequent debrie ng of entire episode of care, Jorge becomes defensive and argumentative. He blames the nursing staff for giving him inaccurate information about the oxygen requirement and distracting him with “pointless” questions.

Entrustable Learners

Expected behaviors for an entrustable learner

The entrustable learner responding to an urgent or emergent patient condition has insight into his personal limitations. As this learner encounters new scenarios, he 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, lter, and prioritize information such as vital signs, focused physical exam, past medstis43f 9sh36 encoun6 1e 6ET EMC io ET f 9.u626 CID 2611 /T1sts4 41p6 0 0 9.ced [(

second visit to this clinic since she recently moved. Her chronic problems include hypertension, moderate obesity, and type 2 diabetes. John notices that she speaks with an accent but that her English is “good,” so he proceeds with the interval history and physical.

Following the interval history and physical examination, *OHN TELLS HER THAT SHE NEEDS THE mU VACCINE AND THAT HE will need her to sign the informed consent. He hands HER A mYER ON THE mU VACCINE ALONG WITH THE INFORMED consent form, and asks her to read it over. She states: “I don’t need to read it, doctor. If you think I need it, then I’ll just sign.” She signs and hands the consent back to John. He states that someone will be in shortly to give her the vaccine.

John steps out into the hallway and meets his supervisor. “Here’s the consent form for Mrs. Lopez’s mU SHOT *IM 3HE S ALL SET TO GO v *OHN S SUPERVISOR looks at the sheet and says to John, “She hasn’t lled in the contraindications section. Did you ask her about A HISTORY OF 'UILLAIN "ARRE PRIOR REACTIONS TO THE mU shot, or an egg allergy?” John admits he did not and notes that he was not sure what Guillain-Barre was or WHY IT WAS ON THE LIST (IS SUPERVISOR BRIEmY EXPLAINS Guillain-Barre syndrome and its prior association with THE SWINE mU VACCINE (E ALSO NOTES THAT *OHN HAS NOT signed on the medical provider line of the informed consent to document his discussion with Mrs. Lopez.

They enter the room together, and John’s supervisor

As she readies a tourniquet for the right arm, Shu tells Mrs. Amir that she will be looking for an “antecubital vein.” Mrs. Amir says, “I’m not sure what that is, but I was told I couldn’t have IVs in my right arm.” Mrs. Amir points to a sign above her bed reading “No right arm procedures.” Shu changes to the left arm, applies a tourniquet and grabs an alcohol swab to start preparing. Mrs. Amir asks her if she is going to wash her hands. Shu goes to the sink but forgets to release the tourniquet prompting Mrs. Amir to say her arm is really starting to hurt. Shu returns and releases the tourniquet and apologizes.

Mrs. Amir asks Shu, “How many IVs have you put in?” She admits to “a couple.” Mrs. Amir asks for a more senior provider to place the IV.

The following day on rounds, Shu notes that the IV was replaced. The attending asks if there is any evidence of phlebitis at the site, to which Shu has to reply, “I’m not sure, I didn’t check.”

Entrustable Learners

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-speci c factors, indications, contraindications, risks, bene ts, and alternatives. The entrustable learner avoids medical jargon in communicating the indications, risks, bene ts, 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 con dence commensurate with 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 her abilities (e.g., placing an IV in a neonatal intensive care patient). She consistently uses universal precautions and aseptic technique. This learner’s skill level allows her to simultaneously pay attention to the procedure and the patient’s emotional response (e.g., pain, fear, frustration, anger). Finally, this learner’s documentation of procedures is usually complete and timely.

Vignette for an entrustable learner

Shu is working on a general surgical service. On morning rounds, the nurse noti es the team that the intravenous line fell out overnight in Mrs. Amir, who is post-operative day 2 status post modi ed right radical mastectomy for breast cancer. Realizing that Mrs. Amir is still requiring intravenous pain medication, she volunteers to replace it.

Shu uses alcohol gel before entering the room and introduces herself to Mrs. Amir, stating, “I am here to discuss replacement of your IV with you.” She discusses the risks and bene ts of placement of a new intravenous line, noting that Mrs. Amir may not need one if she feels that her pain could be managed with oral medications. Mrs. Amir expresses her understanding but requests that a new line be placed in an attempt to get her pain under control rst.

Shu explains to Mrs. Amir that she will gather supplies and then attempts to place an IV in Mrs. Amir’s left arm because she knows of the increased risk for arm swelling with placement on the same side as her surgery. After washing her hands, Shu returns to the bedside with all necessary supplies. Since Shu uses a wheelchair, she lowers the patient bed to a comfortable height to ensure she has appropriate access to both the patient’s arm and all supplies. She applies a tourniquet to the left arm, and explains that she will attempt to place the IV in one of the big veins that cross Mrs. Amir’s elbow. Shu prepares the area using aseptic technique and successfully completes the intravenous catheter insertion, applying a sterile dressing and MAKING NOTE THAT THE LINE mUSHES AN and the site has no evidence of swelling. As Shu exits the room, again using alcohol gel, she communicates details of the line placement to Mrs. Amir’s nurse to ensure they are documented properly.

The following day on rounds Shu notes that the IV was replaced and that the site is clean, dry, and intact with no evidence of phlebitis.

fears consequences of disclosing such symptoms to a supervisor, thus increasing risk of harm events.

Vignette for a pre-entrustable learner

Sudeep has just started on an internal medicine inpatient team. On morning rounds, he is asked to schedule an EEG for a patient admitted with a possible seizure the night before. The team decides to wait on additional antiepileptic medication until the test is completed. Sudeep goes to the computerized prescriber order entry and types in “EEG.” This results in the following message: “This is a test that requires a written request form in addition to the online order.” Sudeep gets visibly upset that he has to nd the form and walks toward the central nurse’s station. En route, a patient calls out to him from a room, and he enters to answer her question without washing his hands. As he emerges, a nurse reminds him that he has to wash his hands on entry and exit from the patient’s room, to which Sudeep replies, “I barely went in, and it was just to answer her question.”

At the central nurse’s station, Sudeep approaches a nurse to ask where he can nd an EEG request form.

errors, and can create a narrative that is compelling, accurate, and succinct to motivate others on the health care team. His understanding of the need to prevent errors propels him to question or challenge others on the team, including supervisors, when he is concerned that an error is about to occur, even if this means overcoming fears of the supervisor's response. Finally, this learner recognizes his own symptoms of fatigue

Expected behaviors for a pre-entrustable learner

s)NFORMATION GATHERING AND PHYSICAL EXAM MANEUVERS
  - o Gathers either insuf cient or overly exhaustive information.
  - o Incorrectly performs physical exam maneuvers.
  - o Misses key physical exam ndings.
  - o Does not seek or is overly reliant on secondary data.
  - o Uses medical jargon or other examples of ineffective communication techniques.

s 3CIENTIIC FOUNDATION AND OR REASONING SKILLS
  - o Limited ability to lter, prioritize, and connect pieces of information to each other or to previous clinical encounters.
  - o May be less observant of important information or trends; focused on individual patients, potentially without attention to that patient's community or background.
  - o May jump to conclusions without probing rst (that is, shortcut the scienti c method).
  - o Lack of experience results in limited ability to develop clinical mental models, which limits ability to gather relevant information and/or perform appropriate maneuvers.
  - o Demonstrates low activation of prior knowledge, either because they lack it or because they do not use it to their advantage in problem solving.

s 0ATIENT CENTERED SKILLS
  - o May demonstrate disrespectful interactions with patients, because of stress, fatigue, or unawareness (e.g., forgetting to keep patient draped).
  - o May generalize based on patient's age, gender, culture, race, religion, disabilities, and/or sexual orientation.

Expected behaviors for an entrustable learner

s)NFORMATION GATHERING AND PHYSICAL EXAM MANEUVERS
  - o Obtains a complete and accurate history in an organized fashion.
  - o Identi es pertinent history elements in common presenting situations, symptoms, complaints, disease states (acute and chronic).
  - o Obtains focused, pertinent histories in urgent, emergent, and consultation settings.
  - o Identi es and uses alternate sources of information to obtain history when needed, including from family members, primary care physicians, living facilities, and pharmacies.
  - O 0ERFORMS A COMPLETE AND ACCURATE PHYSICAL EXAM IN LOGICAL
  - o Performs a clinically relevant, focused physical exam pertinent to the setting and focus of the patient visit.
  - o Identi es, describes, and documents abnormal physical exam ndings.

s 3CIENTIIC FOUNDATION AND OR REASONING SKILLS
  - o Demonstrates clinical reasoning in gathering focused information relevant to a patient's care.
  - o Links current ndings to those from previous patients.
  - o Uses analytic reasoning and activation of prior knowledge to guide process.

s 0ATIENT CENTERED SKILLS
  - o 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).
  - O $EMONSTRATES PATIENT CENTERED EXAMINATION TECHNIQUES THAT P
    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).

Expected behaviors for a pre-entrustable learner

- !PPROACHES ASSESSMENT OF PATIENT PROBLEM FROM A RIGID TEMPL
  that are too narrow or contain inaccuracies:
  - May have a limited ability to lter, prioritize, and make connections between sources of pertinent information.
  - 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.
- -AY RELY TOO MUCH ON SUPERVISORS AND OTHER TEAM MEMBERS IN
  working diagnosis.
- /FFERS MANAGEMENT PLANS THAT MAY MISS CONIRMATION OR DISCON
- -AY DEVELOP A MANAGEMENT PLAN WITHOUT REQUIRED ENDORSEMEN
- (AS LITTLE INSIGHT INTO LIMITATIONS AND MAY OVER OR UNDEREST
- -AY NOT BE COMFORTABLE WITH AMBIGUITY
- -AY NOT COMPLETELY DOCUMENT REASONING SO THAT OTHER TEAM M
  assessment.

Expected behaviors for an entrustable learner

- #AN LINK CURRENT INDINGS TO PRIOR DATA IN APPROACHING A PATIE
- 'ATHERS PERTINENT INFORMATION FROM MANY SOURCES AND PROPOS

Expected behaviors for a pre-entrustable learner

-)S UNABLE TO ILTER AND SYNTHESIZE INFORMATION TO INFORM AN UN
  prioritization of correct diagnostics and orders.
- &OCUSES ON ONE S OWN DESIRE FOR INFORMATION SOMETIMES IGNO
  CT scan when an ultrasound might have suf ced despite patients' expressed concern to avoid radiation).
- -AY FOCUS ON A SINGLE ABNORMALITY AT THE EXPENSE OF PUTTING A
  approach to ordering tests.
- -ISSES SUBTLE SIGNS AND OR PHYSICAL EXAM INDINGS THAT SHOULD
- 5NDERSTANDS GENERAL ORDER SETS BUT DOES NOT RECOGNIZE WHEN
  standard order set.
- $OES NOT CONSIDER EITHER COST OF ORDERS E G TESTS DRUGS P
  maximizing compliance.
- 6IEWS COST CONTAINMENT EFFORTS AS EXTERNALLY MANDATED AND
-)S DEFENSIVE WHEN QUESTIONED ABOUT ORDERS AND IS UNABLE TO A
  know what they don't know).
- -AY DEMONSTRATE OVERCONIDENCE BY NOT SEEKING REVIEW OF ORD
- !CTS IMPULSIVELY IN PLACING ORDERS RATHER THAN PAUSING TO CON
  effect to play out from earlier orders. Feels compelled to act.
- 0LACES ORDERS WITHOUT COMMUNICATING WITH THE REST OF TEAM
  communication style is unidirectional ("Here is what we are doing…").
- $OES NOT INVOLVE PATIENT AS INTEGRAL MEMBER OF TEAM IN SHARE
- $OES NOT UNDERSTAND THE SYSTEM MAY IGNORE ALERTS MAY NOT E
  mechanics of the system but not how to apply them (e.g., can nd an order set but is unsure what order set is ideal or needed).
- $OES NOT FOLLOW ESTABLISHED

Expected behaviors for an entrustable learner

s)S ABLE TO lLTER AND SYNTHESIZE INFORMATION E G HISTORY SIGNS
they are addressing with their orders/prescriptions.
s 2ECOGNIZES PATTERNS AND TAKES INTO ACCOUNT THE hBIG PICTUREv W
s #ONSIDERS PATIENT S PREFERENCES IN PLACING ORDERS
s #OMMUNICATES RECOMMENDATIONS TO PATIENTS FAMILIES AND THE H
s 2ECOGNIZES LIMITATIONS AND SEEKS HELP IN A MANNER THAT PLACES T
autonomy.
s $EMONSTRATES mEXIBILITY IN THINKING ACCEPTS QUESTIONS AS LEARN
possibilities.
s (AS A PARSIMONIOUS REASONED APPROACH TO PLACING ORDERS E G
more tests).
s 2OUTINELY REmECTS ON HOW THE RESULTS OF A TEST WILL INmUENCE C
potential consequences of not doing a test.
s !RTICULATES THE RISKS AND BENElTS OF WHAT THEY ARE ORDERING E
s #ONSIDERS THE COSTS OF THEIR ORDERS AND THE PATIENT S ABILITY AI
adau#D pl>„B@SPK_#C1 DfALRSB5® pB0>W@cuAaSTEKE<5 EOFO0IOF>> BDC<K0S0>Cj ESMK S<00570480bFEFY0020>>> Bua

Expected behaviors for a pre-entrustable learner

- 4ENDS TOWARD UNIDIRECTIONAL COMMUNICATION SO MAY IGNORE THE
- /FTEN FAILS TO VERIFY THE INFORMATION BEING PRESENTED AND OR TO
  family, and other team members.
- !VOIDS OBTAINING SENSITIVE INFORMATION FROM THE HISTORY AND DO
- 5SES MEDICAL JARGON AND ACRONYMS WITHOUT CLARIFYING MEANING
- $OES NOT DISTILL THE PRESENTATION OR FOCUS ON THE MOST RELEVAN
  presentations of the history of present illness (HPI) is “Patient denies fevers, night sweats, and chills,”
  regardless of presenting signs or symptoms).
- 5SES A TEMPLATE RIGIDLY FOR ALL PRESENTATIONS WITHOUT ADAPTING
  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).
- $OES NOT GENERALLY MATCH THE NEEDS OF THE COMMUNICATION TO TH
  phone, email).
- -AY PRESENT IN A DISORGANIZED AND INCOHERENT FASHION
- $OES NOT GENERALLY ADJUST PRESENTATION BASED ON REAL TIME VER
  quizzical look suggesting a lack of understanding on the part of the receiver of the information).
- $OES NOT ENSURE A SHARED UNDERSTANDING BETWEEN THE PRESENTER
  of the presentation.
- -AY CONFABULATE INFORMATION TO RESPOND TO QUESTIONS THE LEARI
- ,ACKS SITUATIONAL AWARENESS WHEN DISCUSSING PATIENTS AND PRES
  presenting in an elevator or in a loud voice in a public place).
- 0RESENTS INFORMATION WITHOUT PERSONALLY VERIFYING OR ACKNOWL
  the chart at face value, reporting it back sometimes without fully understanding and without questioning
  inconsistencies.
- $EMONSTRATES EITHER A LACK OF CONIDENCE OR MORE CONIDENCE TH
- !T TIMES REACTS DEFENSIVELY WHEN INTERRUPTED DURING CASE PRESE
  in a minute,” when questioned midway during a presentation).

Expected behaviors for an entrustable learner

- #AN ILTER SYNTHESIZE AND PRIORITIZE INFORMATION AND RECOGNIZE
  and accurate presentation.
- %NGAGES IN BIDIRECTIONAL COMMUNICATION THAT ENSURES A SHARED
- !VOIDS MEDICAL JARGON
- !DJUSTS THE PRESENTATION FOR THE RECEIVER OF INFORMATION E G
  the context of the presentation (e.g., emergent versus ambulatory).
- !CTIVELY ENGAGES PATIENT FAMILY AND OTHER TEAM MEMBERS IN TH
- $OES NOT SHY AWAY FROM DIFICULT OR STRESSFUL ISSUES IN OBTAINI
- #AN EFICIENTLY TELL A STORY AND MAKE AN ARGUMENT TO SUPPORT TH
- !CKNOWLEDGES GAPS IN KNOWLEDGE BASE AND OR SKILLS IN MANAGING
  and seeks help.
- 2EmECTS ON AREAS OF UNCERTAINTY AND SEEKS ADDITIONAL INFORMAT
- !CKNOWLEDGES GAPS IN INFORMATION WITHOUT BECOMING DEFENSIVE

Expected behaviors for a pre-entrustable learner

- !SKS 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 rst (that is, shortcut the scienti c method).
  - Lacks awareness of limitations and gaps in own scienti c 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.
- 2ETRIEVES 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 ndings of studies without critical appraisal.
  - Is unfamiliar with or unwilling to use new information/informatics technologies.
- 2EPORTS OR APPLIES EVIDENCE TO EFFECT CHANGE OR IMPROVEMEN
  - Does not attempt to apply evidence to one's patients.
  - Does not discuss ndings with team or patient.

Expected behaviors for an entrustable learner

- 2OUTINELY IDENTIIES THE NEED TO ASK FOR HELP OR SEEK NEW INFO
  based on awareness of one's own knowledge gaps and patient needs.
- -AINTAINS A SUFICIENT BIOPHYSICAL CLINICAL EPIDEMIOLOGICAL AN
  that can be translated to patient care activities.
- !SKS 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, scienti c 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.
- 2ETRIEVES 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.
- 2EPORTS OR APPLIES EVIDENCE TO EFFECT CHANGE OR IMPROVEMEN
  - Applies ndings by communicating with team and with patient, and changes approach to patient care if necessary.
  - O 2EmECTS ON THE PROCESS BY WHICH QUESTIONS ARE IDENTIIED AN
    guidance in understanding subtleties of the evidence).

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

Expected behaviors for a pre-entrustable learner

s 5SE5ESIGID RULES OF COMMUNICATION E G A HANDOVER TEMPLATE

Expected behaviors for a pre-entrustable learner

- 0RIORITIZES ONE S OWN GOALS OVER THOSE OF THE TEAM
- $EMONSTRATES LIMITED UNDERSTANDING OF THE ROLES OF OTHER TE
  counsel from the other physicians to the exclusion of other team members).
- 4YPICALLY COMMUNICATES IN A UNIDIRECTIONAL MANNER AND IN RES
- $ISPLAYS LIMITED ABILITY TO MODIFY COMMUNICATION BASED ON AUD
  message.
- $EMONSTRATES DIFICULTY READING ONE S OWN EMOTIONS AND STRUGG
- 3UCCUMBS TO LAPSES IN PROFESSIONALISM PARTICULARLY WHEN STI
-)S TYPICALLY A MORE PASSIVE MEMBER OF THE TEAM
- (AS LIMITED INTERACTION WITH OTHER TEAM MEMBERS WITH THE UNI
  optimally support patients through transitions of care.

Expected behaviors for an entrustable learner

- !CTS AS AN ACTIVE AND INTEGRATED MEMBER OF THE TEAM WHO IN M
  own professional goals.
- 5NDERSTANDS THE ROLES OF OTHER TEAM MEMBERS SEEKS THEIR CO
  and incorporates them into practice.
- 4YPICALLY COMMUNICATES IN A BIDIRECTIONAL MANNER AND KEEPS A
- -ODIIES AND ADAPTS COMMUNICATION CONTENT AND STYLE BASED ON
  of message.
-)N MOST SITUATIONS IS ABLE TO READ ONE S OWN EMOTIONS AND AN
- -AINTAINS A PROFESSIONAL DEMEANOR IN ALL BUT THE MOST TRYING
- !CTIVELY ENGAGES WITH THE PATIENT AND OTHER TEAM MEMBERS TO

Expected behaviors for a pre-entrustable learner

- $OES NOT RECOGNIZE POTENTIAL ERRORS AND OFTEN MISSES REAL E
-)S INCONSISTENT IN DEMONSTRATING COMMON SAFETY BEHAVIORS E
- -AY GET FRUSTRATED BY SYSTEM REQUIREMENTS AND SEE THEM AS A
- 4ENDS TO BE PASSIVE OBSERVER ON THE TEAM
- 2EQUIRES OTHERS TO POINT OUT SYSTEMS FAILURES
- -AY BECOME DEFENSIVE OR BLAME THE SYSTEM WHEN FACED WITH AN
- $OES NOT RECOGNIZE GENERALIZABILITY OF LESSONS FROM UNDERST
- 0ARTICIPATES IN SYSTEM IMPROVEMENTS ONLY WHEN EXTERNALLY PR
- 5SES RIGID AND RULES BASED COMMUNICATION THAT PREVENTS hSPEA in an error or potential error.
- $OES NOT RECOGNIZE ONE S OWN FATIGUE OR IS AFRAID TO TELL SU

Expected behaviors for an entrustable learner

-)DENTIIES REAL AND POTENTIAL ERRORS
- 0ERFORMS COMMON SAFETY BEHAVIORS E G UNIVERSAL PRECAUTIO
- 5NDERSTANDS THE IMPORTANCE OF ERROR PREVENTION BOTH TO IND
- 4AKES RESPONSIBILITY FOR ONE S ROLE IN ERRORS
- 4AKES TIME TO hSLOW DOWNv AND REmECT ON ONE S WORK
- 3TILL RELIES ON EXTERNAL SOURCES OF INFORMATION TO UNDERSTA
- 2EPORTS REAL AND OR POTENTIAL ERRORS WHEN THEY OCCUR USING
- 0ARTICIPATES IN IMPROVEMENT ACTIVITIES VOLUNTARILY
- 3PEAKS UP WHEN CONCERNED ABOUT A POTENTIAL ERROR EVEN IF THA
- 2ECOGNIZES ONE S OWN SYMPTOMS OF FATIGUE AND MODERATES BEH

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