Core Entrustable Professional Activities for Entering Residency

Core Entrustable Professional Activities for Entering Residency: Toolkits for the 13 Core EPAs - Abridged

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The Full Toolkit is Available on AAMC’s Website:
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User Guide
This toolkit is for medical schools interested in implementing the Core Entrustable Professional Activities (EPAs) for Entering Residency. Written by the AAMC Core EPA Pilot Group, the toolkit expands on the EPA framework outlined in the EPA Developer’s Guide (AAMC 2014). The Pilot Group identified progressive sequences of student behavior that medical educators may encounter as students engage in the medical school curriculum and became proficient in integrating their clinical skills. These sequences of behavior are articulated for each of the 13 EPAs in one-page schematics to provide a framework for understanding EPAs; additional resources follow.

This toolkit includes:
- One-page schematic of each EPA
- Core EPA Pilot supervision and coactivity scales

One-Page Schematics
In 2014, the AAMC launched a pilot project with 10 institutions to address the feasibility of implementing 13 EPAs for entering residency in undergraduate medical education. To standardize our approach as a pilot and promote a shared mental model, the Core EPA Pilot Group developed one-page schematics for each of the 13 EPAs.

These schematics were developed to translate the rich and detailed content within The Core Entrustable Professional Activities for Entering Residency Curriculum Developers’ Guide published in 2014 by the AAMC into a one-page, easy-to-use format (AAMC 2014). These one-page schematics of developmental progression to entrustment provide user-friendly descriptions of each EPA. We sought fidelity to the original ideas and concepts created by the expert drafting panel that developed the Core EPA Guide.

We envision the one-page schematics as a resource for:
- Development of curriculum and assessment tools
- Faculty development
- Student understanding
- Entrustment committees, portfolio advisors, and others tracking longitudinal student progress

Understanding the One-Page Schematic
Performance of an EPA requires integration of multiple competencies (Englander and Carraccio 2014). Each EPA schematic begins with its list of key functions and related competencies. The functions are followed by observable behaviors of increasing ability describing a medical student’s development toward readiness for indirect supervision. The column following the functions lists those behaviors requiring immediate correction or remediation. The last column lists expected behaviors of an entrustable learner.

The members of the Curriculum and Assessment Team of the Core EPA Pilot Group led this initiative. Thirteen EPA groups, each comprising representatives from four to five institutions, were tasked with creating each EPA schematic. Development of the schematics involved an explicit, standardized process to reduce variation and ensure consistency with functions.
competencies, and the behaviors explicit in the Core EPA Guide. Behaviors listed were carefully gathered from the Core EPA Guide and reorganized by function and competency and listed in a developmental progression. The Curriculum and Assessment Team promoted content validity by carrying out iterative reviews by telephone conference call with the members of the Core EPA Pilot Group assigned to each EPA.

**EPA Curriculum and Assessment**

Multiple methods of teaching and assessing EPAs throughout the curriculum will be required to make a summative entrustment decision about residency readiness. The schematics can help to systematically identify and map curricular elements required to prepare students to perform EPAs. Specific prerequisite curricula may be needed to develop knowledge, skills, and attitudes before the learner engages in practice of the EPA.

To implement EPAs, medical schools should identify where in the curriculum EPAs will be taught, practiced, and assessed. Among other modalities, simulation, reflection, and standardized and structured experiences will all provide data about student competence. However, central to the concept of entrustment is the global performance of EPAs in authentic clinical settings, where the EPA is taught and assessed holistically, not as the sum of its parts.

**Workplace-Based Assessments: Supervision and Coactivity Scales**

On a day-to-day basis, clinical supervisors make and communicate judgments about how much help (coactivity) or supervision a student or resident needs. “Will I let the student go in the room without me? How much will I let the student do versus observe? Because I wasn’t present to observe, how much do I need to double-check?” Scales for clinical supervisors to determine how much help or supervision a student needs for a specific activity have been proposed (Chen et al 2015; Rekman et al 2016). There is limited validity evidence for these scales, and no published data comparing them. Given our initial experience, the Core EPA Pilot Group has agreed on a trial using modified versions of these scales (Appendix 1).
EPA 1: Gather a History and Perform a Physical Examination

**Key Functions with Related Competencies**

- **Gather a complete and accurate history in an organized fashion**
  - PC2
- **Demonstrate patient-centered interview skills**
  - ICS1 ICS7 P1 P3 P5
- **Demonstrate clinical reasoning in gathering focused information relevant to a patient’s care**
  - KP1
- **Perform a clinically relevant, appropriately thorough physical exam pertinent to the setting and purpose of the patient visit**
  - PC2

**Behaviors Requiring Corrective Response**

- Does not collect accurate historical data
- Relies exclusively in secondary sources or documentation of others
- Is disrespectful in interactions with patients
- Disregards patient privacy and autonomy
- Fails to recognize patient’s central problem
- Does not consider patient’s privacy and comfort during exams
- Incorrectly performs basic physical exam maneuvers
- Does not prioritize or filter information
- Questions reflect a narrow differential diagnosis
- Performs basic exam maneuvers correctly
- Does not perform exam in an organized fashion
- Relies on head-to-toe examination
- Misses key findings

**Developing Behaviors**

- Gathers excessive or incomplete data
- Uses a logical progression of questioning
- Questions are prioritized and not excessive
- Communicates unidirectionally
- Does not respond to patient verbal and nonverbal cues
- May generalize based on age, gender, culture, race, religion, disabilities, and/or sexual orientation
- Does not consistently consider patient privacy and autonomy
- Questions are not guided by the evidence and data collected
- Does not prioritize or filter information
- Questions reflect a narrow differential diagnosis
- Performs basic exam maneuvers correctly
- Identifies and describes normal findings
- Explains exam maneuvers to patient

**Expected Behaviors for an Entrustable Learner**

- Obtains a complete and accurate history in an organized fashion
- Seeks secondary sources of information when appropriate (e.g., family, primary care physician, living facility, pharmacy)
- Adapts to different care settings and encounters
- Adapts communication skills to the individual patient’s needs and characteristics
- Responds effectively to patient’s verbal and nonverbal cues and emotions
- Demonstrates astute clinical reasoning through targeted hypothesis-driven questioning
- Incorporates secondary data into medical reasoning
- Performs an accurate exam in a logical and fluid sequence
- Uses the exam to explore and prioritize the working differential diagnosis
- Can identify and describe normal and abnormal findings
EPA 2: Prioritize a Differential Diagnosis Following a Clinical Encounter

**Key Functions with Related Competencies**

- **Synthesize essential information from previous records, history, physical exam, and initial diagnostic evaluations to propose a scientifically supported differential diagnosis**
  - PC2 KP3 KP4 KP2

- **Prioritize and continue to integrate information as it emerges to update differential diagnosis, while managing ambiguity**
  - PC4 KP3 KP4 PPD8 PBL1

- **Engage and communicate with team members for endorsement and verification of the working diagnosis that will inform management plans**
  - KP3 KP4 ICS2

**Behaviors Requiring Corrective Response**

- Cannot gather or synthesize data to inform an acceptable diagnosis
- Lacks basic medical knowledge to reason effectively
- Disregards emerging diagnostic information
- Becomes defensive and/or belligerent when questioned on differential diagnosis recommendations
- Develops and acts on a management plan before endorsement
- Cannot explain or document clinical reasoning

**Developing Behaviors** (Learner may be at different levels within a row.)

- Approaches assessment from a rigid template
- Struggles to filter, prioritize, and make connections between sources of information
- Proposes a differential diagnosis that is too narrow, is too broad, or contains inaccuracies
- Demonstrates difficulty retrieving knowledge for effective reasoning
- Gathers pertinent data based on initial diagnostic hypotheses
- Proposes a reasonable differential diagnosis but may neglect important diagnostic information
- Is beginning to organize knowledge by illness scripts (patterns) to generate and support a diagnosis

**Expected Behaviors for an Entrustable Learner**

- Gathers pertinent information from many sources in a hypothesis-driven fashion
- Filters, prioritizes, and makes connections between sources of information
- Proposes a relevant differential diagnosis that is neither too broad nor too narrow
- Organizes knowledge into illness scripts (patterns) that generate and support a diagnosis
- Considers emerging information but does not completely integrate to update the differential diagnosis
- Acknowledges ambiguity and is open to questions and challenges
- Seeks and integrates emerging information to update the differential diagnosis
- Encourages questions and challenges from patients and team
- Recommends a broad range of untailored diagnostic evaluations
- Develops and acts on a management plan before receiving team’s endorsement
- Cannot explain or document clinical reasoning
- Recommends diagnostic evaluations tailored to the evolving differential diagnosis after having consulted with team
- Explains and documents clinical reasoning
- Proposes diagnostic and management plans reflecting team’s input
- Seeks assistance from team members
- Provides complete and succinct documentation explaining clinical reasoning

An EPA: A unit of observable, measurable professional practice requiring integration of competencies.
EPA 3: Recommend and Interpret Common Diagnostic and Screening Tests

- **Behaviors Requiring Corrective Response**
  - Unable to recommend a standard set of screening or diagnostic tests
  - Demonstrates frustration at cost-containment efforts
  - Cannot provide a rationale for ordering tests
  - Can only interpret results based on normal values from the lab
  - Does not discern urgent from nonurgent results

- **Expected Behaviors for an Entrustable Learner**
  - Recommends tests for common conditions
  - Considers costs
  - Understands pre- and posttest probability
  - Recognizes need for assistance to evaluate urgency of results and communicate these to patient

- **Key Functions with Related Competencies**
  - Recommend first-line cost-effective screening and diagnostic tests for routine health maintenance and common disorders
    - PC5 PC9 SBP3 PBLI9 KP1 KP4
  - Provide rationale for decision to order tests, taking into account pre- and posttest probability and patient preference
    - PC5 PC7 KP1 KP4 SBP3 PBLI9
  - Interpret results of basic studies and understand the implication and urgency of the results
    - PC4 PC5 PC7 KP1

- **Developing Behaviors**
  - Recommends unnecessary tests or tests with low pretest probability
  - Misinterprets insignificant or explainable abnormalities
  - Does not know how to respond to urgent test results
  - Requires supervisor to discuss results with patient

- **Expected Behaviors for an Entrustable Learner**
  - Identifies guidelines for standard tests
  - Neglects impact of false positive or negative results
  - Requires supervisor to discuss results with patient
  - Seeks help for interpretation of tests beyond scope of knowledge
### EPA 4: Enter and Discuss Orders and Prescriptions

<table>
<thead>
<tr>
<th>Key Functions with Related Competencies</th>
<th>Behaviors Requiring Corrective Response</th>
<th>Developing Behaviors</th>
<th>Expected Behaviors for an Entrustable Learner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compose orders efficiently and effectively verbally, on paper, and electronically</td>
<td>Unable to compose or enter electronic orders or write prescriptions (or does so for the wrong patient or using an incorrect order set)</td>
<td>Recognizes when to tailor or deviate from the standard order set</td>
<td>Routinely recognizes when to tailor or deviate from the standard order set</td>
</tr>
<tr>
<td>Demonstrates an understanding of the patient’s condition that underpins the provided orders</td>
<td>Lacks basic knowledge needed to guide orders</td>
<td>Completes simple orders</td>
<td>Able to complete complex orders requiring changes in dose or frequency over time (e.g., a taper)</td>
</tr>
<tr>
<td>Recognize and avoid errors by attending to patient-specific factors, using resources, and appropriately responding to safety alerts</td>
<td>Discounts information obtained from resources designed to avoid drug–drug interactions</td>
<td>Demonstrates working knowledge of how orders are processed in the workplace</td>
<td>Undertakes a reasoned approach to placing orders (e.g., waits for contingent results before ordering more tests)</td>
</tr>
<tr>
<td>Discuss planned orders and prescriptions with team, patients, and families</td>
<td>Ignores alerts</td>
<td>Articulates rationale behind orders</td>
<td>Recognizes limitations and seeks help</td>
</tr>
<tr>
<td></td>
<td>Underscores information that could help avoid errors</td>
<td>May not take into account subtle signs or exam findings guiding orders</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Places orders without communicating with others; uses unidirectional style (&quot;Here is what we are doing...&quot;)</td>
<td>May inconsistently apply safe prescription-writing habits such as double-check of patient’s weight, age, renal function, comorbidities, dose and/or interval, and pharmacogenetics when applicable</td>
<td>Routinely practices safe habits when writing or entering prescriptions or orders</td>
</tr>
<tr>
<td></td>
<td>Places orders without communicating with others; uses unidirectional style (&quot;Here is what we are doing...&quot;)</td>
<td>Modifies plan based on patient’s preferences</td>
<td>Responds to EHR’s safety alerts and understands rationale for them</td>
</tr>
<tr>
<td></td>
<td>Places orders without communicating with others; uses unidirectional style (&quot;Here is what we are doing...&quot;)</td>
<td>May describe cost-containment efforts as externally mandated and interfering with the doctor–patient relationship</td>
<td>Uses electronic resources to fill in gaps in knowledge to inform safe order writing (e.g., drug–drug interactions, treatment guidelines)</td>
</tr>
<tr>
<td></td>
<td>Places orders without communicating with others; uses unidirectional style (&quot;Here is what we are doing...&quot;)</td>
<td>Enters orders that reflect bidirectional communication with patients, families, and team</td>
<td>Considers the costs of orders and the patient’s ability and willingness to proceed with the plan</td>
</tr>
</tbody>
</table>

**An EPA**: A unit of observable, measurable professional practice requiring integration of competencies.
EPA 5: Document a Clinical Encounter in the Patient Record

Key Functions with Related Competencies

- Prioritize and synthesize information into a cogent narrative for a variety of clinical encounters (e.g., admission, progress, pre- and post-op, and procedure notes; informed consent; discharge summary)
- Follow documentation requirements to meet regulations and professional expectations
- Document a problem list, differential diagnosis, and plan supported through clinical reasoning that reflects patient’s preferences
- Communicates bidirectionally to develop and record management plans aligned with patient’s preferences

Behaviors Requiring Corrective Response

- Misses key information
- Produces documentation that has errors or does not fulfill institutional requirements (e.g., date, time, signature, avoidance of prohibited abbreviations)
- Does not include a rationale for ordering studies or treatment plans
- Documents a problem list, differential diagnosis, plan, and clinical reasoning
- Provides key information but may include unnecessary details or redundancies
- Demonstrates ability to adjust or adapt to audience, context, or purpose
- Recognizes and corrects errors related to required elements of documentation
- Documents a problem list, differential diagnosis, plan, and clinical reasoning
- Provides accurate, legible, timely documentation that includes institutionally required elements
- Documents a problem list, differential diagnosis, plan, reflecting a combination of thought processes and input from other providers
- Provides a verifiable cogent narrative without unnecessary details or redundancies
- Adjusts and adapts documentation based on audience, context, or purpose (e.g., admission, progress, pre- and post-op, and procedure notes; informed consent; discharge summary)
- Documents use of primary and secondary sources necessary to fill in gaps

Developing Behaviors

Learner may be at different levels within a row.

- Provides incoherent documentation
- Does not provide documentation when required
- Provides illegible documentation
- Includes inappropriate judgmental language
- Documents potentially damaging information without attribution
- Provides key information but may include unnecessary details or redundancies
- Demonstrates ability to adjust or adapt to audience, context, or purpose
- Recognizes and corrects errors related to required elements of documentation
- Documents a problem list, differential diagnosis, and plan, reflecting a combination of thought processes and input from other providers
- Engages in help-seeking behavior resulting in improved ability to develop and document management plans
- Solicits patient’s preferences and records them in a note

Expected Behaviors for an Entrustable Learner

- Provides key information but may include unnecessary details or redundancies
- Demonstrates ability to adjust or adapt to audience, context, or purpose
- Recognizes and corrects errors related to required elements of documentation
- Meets needed turnaround time for standard documentation
- May not document the pursuit of primary or secondary sources important to the encounter
- Provides a verifiable cogent narrative without unnecessary details or redundancies
- Adjusts and adapts documentation based on audience, context, or purpose (e.g., admission, progress, pre- and post-op, and procedure notes; informed consent; discharge summary)
- Documents use of primary and secondary sources necessary to fill in gaps
- Identifies key problems, documenting engagement of those who can help resolve them
- Communicates bidirectionally to develop and record management plans aligned with patient’s preferences

This schematic depicts development of proficiency in the Core EPAs. It is not intended for use as an assessment instrument. Entrustment decisions should be made after EPAs have been observed in multiple settings with varying context, acuity, and complexity and with varying patient characteristics.

EPA 7: Form Clinical Questions and Retrieve Evidence to Advance Patient Care

Key Functions with Related Competencies

- Combine curiosity, objectivity, and scientific reasoning to develop a well-formed, focused, pertinent clinical question (ASK)
  - KP3 PBL6 PBL11 PBL13
- Demonstrate awareness and skill in using information technology to access accurate and reliable medical information (ACQUIRE)
  - PBL6 PBL17
- Demonstrate skill in appraising sources, content, and applicability of evidence (APPRAISE)
  - PBL6 KP3 KP4
- Apply findings to individuals and/or patient panels; communicate findings to the patient and team, reflecting on process and outcomes (ADVISE)
  - ICS1 ICS2 PBL1 ICS2 PBL8 PBL19 PC7

Behaviors Requiring Corrective Response

- Does not reconsider approach to a problem, ask for help, or seek new information
- Does not discuss findings with team
- Does not determine or discuss outcomes and/or process, even with prompting
- Refuses to consider gaps and limitations in the literature or apply published evidence to specific patient care
- Declines to use new information technologies
- Accepts findings from clinical studies without critical appraisal
- With assistance, applies evidence to common medical conditions

Developing Behaviors (Learner may be at different levels within a row)

- With prompting, translates information needs into clinical questions
- Uses vague or inappropriate search strategies, leading to an unmanageable volume of information
- Refuses to consider gaps and limitations in the literature or apply published evidence to specific patient care
- Identifies limitations and gaps in personal knowledge
- Identifies and uses available databases, search engines, and refined search strategies to acquire relevant information
- Evaluates evidence quality from clinical studies
- Applies published evidence to common medical conditions
- Applies levels of evidence to appraise literature and determines applicability of evidence

Expected Behaviors for an Entrustable Learner

- Identifies and uses available databases, search engines, and refined search strategies to acquire relevant information
- Applies published evidence to common medical conditions
- Uses levels of evidence to appraise literature and determines applicability of evidence
- Seeks guidance in understanding subtleties of evidence
- Applies nuanced findings by communicating the level and consistency of evidence with appropriate citation
- Reflects on ambiguity, outcomes, and the process by which questions were identified and answered and findings were applied
- Communicates with rigid recitation of findings, using medical jargon or displaying personal biases
- Applies findings based on audience needs
- Acknowledges ambiguity of findings and manages personal bias
- Connects outcomes to process by which questions were identified and answered

An EPA: A unit of observable, measurable professional practice requiring integration of competencies

Clinical questions to advance patient care

Underlying entrustability for all EPAs are trustworthy habits, including truthfulness, conscientiousness, and discernment.

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### EPA 8: Give or Receive a Patient Handover to Transition Care Responsibility

#### Key Functions with Related Competencies

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document and update an electronic handover tool and apply this to deliver a structured verbal handover</td>
<td></td>
</tr>
<tr>
<td>Conduct handover using communication strategies known to minimize threats to transition of care</td>
<td></td>
</tr>
<tr>
<td>Provide succinct verbal communication conveying illness severity, situational awareness, action planning, and contingency planning</td>
<td></td>
</tr>
<tr>
<td>Give or elicit feedback about handover communication and ensure closed-loop communication</td>
<td></td>
</tr>
<tr>
<td>Demonstrate respect for patient’s privacy and confidentiality</td>
<td></td>
</tr>
</tbody>
</table>

#### Behaviors Requiring Corrective Response

**Learner may be at different levels within a row.**

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inconsistently uses standardized format or uses alternative tool</td>
<td>Provides information that is incomplete and/or includes multiple errors in patient information</td>
</tr>
<tr>
<td>Provides information that is incomplete and/or includes multiple errors in patient information</td>
<td>Carries out handover with inappropriate timing and context</td>
</tr>
<tr>
<td>Is frequently distracted</td>
<td>Communication lacks all key components of standardized handover</td>
</tr>
<tr>
<td>Carries out handover with inappropriate timing and context</td>
<td>Withholds or is defensive with feedback</td>
</tr>
<tr>
<td>Communication lacks all key components of standardized handover</td>
<td>Displays lack of insight on the role of feedback</td>
</tr>
<tr>
<td>Withholds or is defensive with feedback</td>
<td>Does not summarize (or repeat) key points for effective closed-loop communication</td>
</tr>
<tr>
<td>Displays lack of insight on the role of feedback</td>
<td>Is unaware of HIPAA policies</td>
</tr>
<tr>
<td>Does not summarize (or repeat) key points for effective closed-loop communication</td>
<td>Is cognizant of and attempts to minimize breaches in privacy and confidentiality</td>
</tr>
</tbody>
</table>

#### Expected Behaviors for an Entrustable Learner

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistently updates electronic handover tool with clear, relevant, and succinct documentation</td>
<td>Adapts and applies all elements of a standardized template</td>
</tr>
<tr>
<td>Adapts and applies all elements of a standardized template</td>
<td>Requires assistance with time management</td>
</tr>
<tr>
<td>Requires assistance with time management</td>
<td>Focuses on own handover tasks with some awareness of other’s needs</td>
</tr>
<tr>
<td>Focuses on own handover tasks with some awareness of other’s needs</td>
<td>Identifies illness severity accurately</td>
</tr>
<tr>
<td>Identifies illness severity accurately</td>
<td>Provides complete action plans and appropriate contingency plans</td>
</tr>
<tr>
<td>Provides complete action plans and appropriate contingency plans</td>
<td>Provides and solicits feedback regularly, listens actively, and engages in reflection</td>
</tr>
<tr>
<td>Provides and solicits feedback regularly, listens actively, and engages in reflection</td>
<td>Identifies areas of improvement</td>
</tr>
<tr>
<td>Identifies areas of improvement</td>
<td>Consistently considers patient privacy and confidentiality</td>
</tr>
<tr>
<td>Consistently considers patient privacy and confidentiality</td>
<td>Highlights respects patient’s preferences</td>
</tr>
</tbody>
</table>

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*Functions are designated as “Transmitter” or “Transmitter and Receiver.”*
### EPA 9: Collaborate as a Member of an Interprofessional Team

**Key Functions with Related Competencies**

<table>
<thead>
<tr>
<th>Identify team members’ roles and responsibilities and seek help from other members of the team to optimize health care delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPC2 SBP2 ICS3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Include team members, listen attentively, and adjust communication content and style to align with team-member needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICS2/IPC3 IPC1 ICS7 P1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Establish and maintain a climate of mutual respect, dignity, integrity, and trust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prioritize team needs over personal needs to optimize delivery of care</td>
</tr>
<tr>
<td>Help team members in need</td>
</tr>
<tr>
<td>P1 ICS7 IPC1 SBP2</td>
</tr>
</tbody>
</table>

**Behaviors Requiring Corrective Response**

- Does not acknowledge other members of the interdisciplinary team as important
- Displays little initiative to interact with team members
- Dismisses input from professionals other than physicians
- Has disrespectful interactions or does not tell the truth
- Is unable to modify behavior
- Puts others in position of reminding, enforcing, and resolving interprofessional conflicts

**→ Developing Behaviors → (Learner may be at different levels within a row.)**

- Identifies roles of other team members but does not know how or when to use them
- Acts independently of input from team members, patients, and families
- Interacts with other team members, seeks their counsel, actively listens to their recommendations, and incorporates these recommendations into practice
- Communication is largely unidirectional, in response to prompts, or template driven
- Has limited participation in team discussion
- Listens actively and elicits ideas and opinions from other team members
- Has direspectful interactions or does not tell the truth
- Is unable to modify behavior
- Puts others in position of reminding, enforcing, and resolving interprofessional conflicts

**Expected Behaviors for an Entrustable Learner**

- Effectively partners as an integrated member of the team
- Articulates the unique contributions and roles of other health care professionals
- Actively engages with the patient and other team members to coordinate care and provide for seamless care transition
- Is typically a more passive member of the team
- Prioritizes own goals over those of the team
- Integrates into team function, prioritizing team goals
- Demonstrates respectful interactions and tells the truth
- Remains professional and anticipates and manages emotional triggers

- Supports other team members and communicates their value to the patient and family
- Anticipates, reads, and reacts to emotions to gain and maintain therapeutic alliances with others
- Prioritizes team’s needs over personal needs

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**An EPA: A unit of observable, measurable professional practice requiring integration of competencies**

**EPA 9**

Collaborate as a member of an interprofessional team

**Underlying entrustability for all EPAs are trustworthy habits, including truthfulness, conscientiousness, and discernment.**

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### EPA 10: Recognize a Patient Requiring Urgent or Emergent Care and Initiate Evaluation and Management

#### Key Functions with Related Competencies

<table>
<thead>
<tr>
<th>An EPA: A unit of observable, measurable professional practice requiring integration of competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recognize normal and abnormal vital signs as they relate to patient- and disease-specific factors as potential etiologies of a patient’s decompensation</strong></td>
</tr>
<tr>
<td><strong>Recognize severity of a patient’s illness and indications for escalating care and initiate interventions and management</strong></td>
</tr>
<tr>
<td><strong>Initiate and participate in a code response and apply basic and advanced life support</strong></td>
</tr>
<tr>
<td><strong>Upon recognition of a patient’s deterioration, communicate situation, clarify patient’s goals of care, and update family members</strong></td>
</tr>
</tbody>
</table>

#### Behaviors Requiring Corrective Response

<table>
<thead>
<tr>
<th>( Learner may be at different levels within a row. )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demonstrates limited ability to gather, filter, prioritize, and connect pieces of information to form a patient-specific differential diagnosis in an urgent or emergent setting</strong></td>
</tr>
<tr>
<td><strong>Does not recognize trends or variations of vital signs in a decompensating patient</strong></td>
</tr>
<tr>
<td><strong>Fails to recognize changes in patient’s clinical status or seek help when a patient requires urgent or emergent care</strong></td>
</tr>
<tr>
<td><strong>Does not recognize clinical status or seek help when a patient requires urgent or emergent care</strong></td>
</tr>
<tr>
<td><strong>Responds to a decompensated patient in a manner that detracts from or harms team’s ability to intervene</strong></td>
</tr>
<tr>
<td><strong>Misses abnormalities in patient’s clinical status or does not anticipate next steps</strong></td>
</tr>
<tr>
<td><strong>May be distracted by multiple problems or have difficulty prioritizing</strong></td>
</tr>
<tr>
<td><strong>Accepts help</strong></td>
</tr>
<tr>
<td><strong>Requires prompting to perform basic procedural or life support skills correctly</strong></td>
</tr>
<tr>
<td><strong>Communicates in an unidirectional manner with family and health care team</strong></td>
</tr>
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<td><strong>Communicates in a unidirectional manner with family and health care team</strong></td>
</tr>
</tbody>
</table>

#### Expected Behaviors for an Entrustable Learner

| **Recognizes outliers or unexpected results or data and seeks out an explanation** |
| **Recognizes concerning clinical symptoms or unexpected results or data** |
| **Asks for help** |
| **Demonstrates appropriate airway and basic life support (BLS) skills** |
| **Initiates basic management plans** |
| **Seeks input or guidance from other members of the health care team** |
| **Communicates bidirectionally with the health care team and family about goals of care and treatment plan while keeping them up to date** |
| **Communicates bidirectionality with the health care team and family about goals of care and treatment plan while keeping them up to date** |

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- Chest pain
- Mental status change
- Shortness of breath and hypoxemia
- Fever
- Hypotension or hypotension
- Tachycardia or arrhythmia
- Oliguria, anuria, or urinary retention
- Electrolyte abnormalities
- Hypoglycemia or hyperglycemia

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Underlying entrustability for all EPAs are trustworthy habits, including truthfulness, conscientiousness, and discernment.

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This schematic depicts development of proficiency in the Core EPAs. It is not intended for use as an assessment instrument. Entrustment decisions should be made after EPAs have been observed in multiple settings with varying context, acuity, and complexity and with varying patient characteristics.

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Adapted from the Association of American Medical Colleges (AAMC). Core entrustable professional activities for entering residency. 2014.
### EPA 11: Obtain Informed Consent for Tests and/or Procedures

**From day 1, residents may be in a position to obtain informed consent for interactions, tests, or procedures they order and perform, including immunizations, medications, central lines, contrast and radiation exposures, and blood transfusions.**

**EPA 11**

**Obtain informed consent**

**Underlying entrustability for all EPAs are trustworthy habits, including truthfulness, conscientiousness, and discernment.**

This schematic depicts development of proficiency in the Core EPAs. It is not intended for use as an assessment instrument. Entrustment decisions should be made after EPAs have been observed in multiple settings with varying context, acuity, and complexity and with varying patient characteristics.

#### EPA 11: Obtain Informed Consent for Tests and/or Procedures

**An EPA: A unit of observable, measurable professional practice requiring integration of competencies**

<table>
<thead>
<tr>
<th>Key Functions with Related Competencies</th>
<th>Behaviors Requiring Corrective Response</th>
<th>Developing Behaviors</th>
<th>Expected Behaviors for an Entrustable Learner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe the key elements of informed consent: indications, contraindications, risks, benefits, alternatives, and potential complications of the intervention</td>
<td>Lacks basic knowledge of the intervention</td>
<td>Develops insights when explaining the need for informed consent</td>
<td>Understands and explains the key elements of informed consent</td>
</tr>
<tr>
<td>PC6 KP3 KP4 KP5 P6</td>
<td>Provides inaccurate or misleading information</td>
<td>Develops an understanding of the importance of informed consent</td>
<td>Provides complete and accurate information</td>
</tr>
<tr>
<td>Communicate with the patient and family to ensure that they understand the intervention</td>
<td>Hands the patient a form and requests a signature</td>
<td>Allows personal biases with intervention to influence consent process</td>
<td>Recognizes when informed consent is needed and describes it as a matter of good practice rather than as an externally imposed sanction</td>
</tr>
<tr>
<td>PC7 ICS1 ICS7 PC5</td>
<td>Uses language that frightens patient and family</td>
<td>Obtains informed consent only on the directive of others</td>
<td></td>
</tr>
<tr>
<td>Display an appropriate balance of confidence and skill to put the patient and family at ease, seeking help when needed</td>
<td>Disregards emotional cues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PPD1 PPD7 PPD8</td>
<td>Regards interpreters as unhelpful or inefficient</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Displays overconfidence and takes actions that can have a negative effect on outcomes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Displays a lack of confidence that increases patient stress or discomfort, or overconfidence that erodes trust</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asks questions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accepts help</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Expected Behaviors for an Entrustable Learner**

- Understands and explains the key elements of informed consent
- Provides complete and accurate information
- Recognizes when informed consent is needed and describes it as a matter of good practice rather than as an externally imposed sanction

**This schematic depicts development of proficiency in the Core EPAs. It is not intended for use as an assessment instrument. Entrustment decisions should be made after EPAs have been observed in multiple settings with varying context, acuity, and complexity and with varying patient characteristics.**

Obeso V, Biehler JL, Terhune K, Brown D, Phillipi C, eds.; for Core EPAs for Entering Residency Pilot Program

Adapted from the Association of American Medical Colleges (AAMC). Core entrustable professional activities for entering residency. 2014.
### EPA 12: Perform General Procedures of a Physician

#### Key Functions with Related Competencies

<table>
<thead>
<tr>
<th>Demonstrates technical skills required for the procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC1</td>
</tr>
<tr>
<td>Understand and explain the anatomy, physiology, indications, contraindications, risks, benefits, alternatives, and potential complications of the procedure</td>
</tr>
<tr>
<td>PC1</td>
</tr>
<tr>
<td>Communicate with the patient and family to ensure they understand pre- and post-procedural activities</td>
</tr>
<tr>
<td>PC7 ICS6 P6</td>
</tr>
<tr>
<td>Demonstrates confidence that puts patients and families at ease</td>
</tr>
<tr>
<td>PPD7 PPD1</td>
</tr>
</tbody>
</table>

#### Behaviors Requiring Corrective Response

<table>
<thead>
<tr>
<th>Lacks required technical skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fails to follow sterile technique when indicated</td>
</tr>
<tr>
<td>Displays lack of awareness of knowledge gaps</td>
</tr>
<tr>
<td>Uses inaccurate language or presents information distorted by personal biases</td>
</tr>
<tr>
<td>Displays overconfidence and takes actions that could endanger patients or providers</td>
</tr>
</tbody>
</table>

#### Developing Behaviors

(Learner may be at different levels within a row.)

| Technical skills are variably applied |
| Completes the procedure unreliably |
| Uses universal precautions and aseptic technique inconsistently |
| Does not understand key issues in performing procedures, such as indications, contraindications, risks, benefits, and alternatives |
| Demonstrates limited knowledge of procedural complications or how to minimize them |
| Uses jargon or other ineffective communication techniques |
| Does not read emotional response from the patient |
| Does not engage patient in shared decision making |
| Displays a lack of confidence that increases patient’s stress or discomfort, or overconfidence that erodes patient’s trust if the learner struggles to perform the procedure |

#### Expected Behaviors for an Entrustable Learner

| Demonstrates necessary preparation for performance of procedures |
| CorRECTly performs procedure on multiple occasions over time |
| Uses universal precautions and aseptic technique consistently |
| Demonstrates and applies working knowledge of essential anatomy, physiology, indications, contraindications, risks, benefits, and alternatives for each procedure |
| Knows and takes steps to mitigate complications of procedures |
| Demonstrates patient-centered skills while performing procedures (avoids jargon, participates in shared decision making, considers patient’s emotional response) |
| Having accounted for the patient’s and family’s wishes, obtains appropriate informed consent |
| Seeks timely help |
| Has confidence commensurate with level of knowledge and skill that puts patients and families at ease |

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EPA 13: Identify System Failures and Contribute to a Culture of Safety and Improvement

Key Functions with Related Competencies

- Identify and report actual and potential ("near miss") errors in care using system reporting structure (e.g., event reporting systems, chain of command policies)
- 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 conference, improvement projects)
- Engage in daily safety habits (e.g., accurate and complete documentation, including allergies and adverse reactions, medicine reconciliation, patient education,universal precautions, handwashing, isolation protocols, falls and other risk assessments, standard prophylaxis, time-outs)
- Admit one’s own errors, reflect on one’s contribution, and develop an individual improvement plan

Behaviors Requiring Corrective Response

- Reports errors in a disrespectful or misleading manner
- Displays frustration at system improvement efforts
- Places self or others at risk of injury or adverse event
- Avoids discussing or reporting errors; attempts to cover up errors

Developing Behaviors

- Superficial understanding prevents recognition of real or potential errors
- Passively observes system improvement activities in the context of rotations or learning experiences
- Requires prompts for common safety behaviors
- Requires prompts to reflect on own errors and their underlying factors

Expected Behaviors for an Entrustable Learner

- Identifies and reports actual and potential errors
- Demonstrates structured approach to describing key elements of patient safety concerns
- Requires prompts to reflect on own contribution to errors but needs help developing an improvement plan
- Identifies and reflects on the element of personal responsibility for errors

Underlying entrustability for all EPAs are trustworthy habits, including truthfulness, conscientiousness, and discernment.

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Adapted from the Association of American Medical Colleges (AAMC). Core entrustable professional activities for entering residency. 2014.
### Modified Chen entrustment scale:

If you were to supervise this student again in a similar situation, which of the following statements aligns with how you would assign the task?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Corresponding excerpt from original Chen entrustment scale (Chen et al 2015)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1b. “Watch me do this.”</td>
<td>1b. Not allowed to practice EPA; allowed to observe</td>
</tr>
<tr>
<td>2a. “Let's do this together.”</td>
<td>2a. Allowed to practice EPA only under proactive, full supervision as coactivity with supervisor</td>
</tr>
<tr>
<td>2b. “I’ll watch you.”</td>
<td>2b. Allowed to practice EPA only under proactive, full supervision with supervisor in room ready to step in as needed</td>
</tr>
<tr>
<td>3a. “You go ahead, and I’ll double-check all of your findings.”</td>
<td>3a. Allowed to practice EPA only under reactive/on-demand supervision with supervisor immediately available, all findings double-checked</td>
</tr>
<tr>
<td>3b. “You go ahead, and I’ll double-check key findings.”</td>
<td>3b. Allowed to practice EPA only under reactive/on-demand supervision with supervisor immediately available, key findings double-checked</td>
</tr>
</tbody>
</table>
**Modified Ottawa scale:** In supervising this student, how much did you participate in the task?

<table>
<thead>
<tr>
<th>Level</th>
<th>Modified Ottawa scale</th>
<th>Original Ottawa scale (Rekman et al 2016)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>“I did it.” Student required complete guidance or was unprepared; I had to do most of the work myself.</td>
<td>1. “I had to do.” (i.e., requires complete hands-on guidance, did not do, or was not given the opportunity to do)</td>
</tr>
<tr>
<td>2.</td>
<td>“I talked them through it.” Student was able to perform some tasks but required repeated directions.</td>
<td>2. “I had to talk them through.” (i.e., able to perform tasks but requires constant direction)</td>
</tr>
<tr>
<td>3.</td>
<td>“I directed them from time to time.” Student demonstrated some independence and only required intermittent prompting.</td>
<td>3. “I had to prompt them from time to time.” (i.e., demonstrates some independence, but requires intermittent direction)</td>
</tr>
<tr>
<td>4.</td>
<td>“I was available just in case.” Student functioned fairly independently and only needed assistance with nuances or complex situations.</td>
<td>4. “I needed to be there in the room just in case.” (i.e., independence but unaware of risks and still requires supervision for safe practice)</td>
</tr>
<tr>
<td>5.</td>
<td>(No level 5: Students are ineligible for complete independence in our systems.)</td>
<td>5. “I did not need to be there.” (i.e., complete independence, understands risks and performs safely, practice ready)</td>
</tr>
</tbody>
</table>