Core Entrustable Professional Activities for Entering Residency

Core Entrustable Professional Activities for Entering Residency: Toolkits for the 13 Core EPAs - Abridged
The Full Toolkit is Available on AAMC’s Website:

**Senior Editors**

Vivian Obeso, MD, Florida International University  
David Brown, MD, Florida International University  
Carrie Phillipi, MD, PhD, Oregon Health & Science University

**Editors**

Meenakshy Aiyer, MD, University of Illinois  
Beth Barron, MD, Columbia University  
Jan Bull, MA, Association of American Medical Colleges  
Teresa J. Carter, EdD, Virginia Commonwealth University  
Matthew Emery, MD, MSc, Michigan State University  
Colleen Gillespie, PhD, New York University  
Mark Hormann, MD, The University of Texas Health Science Center at Houston  
Abbas Hyderi, MD, MPH, University of Illinois  
Carla Lupi, MD, Florida International University  
Michael L. Schwartz, PhD, Yale University  
Margaret Uthman, MD, The University of Texas Health Science Center at Houston  
Eduard E. Vasilevskis, MD, MPH, Vanderbilt University  
Sandra Yingling, PhD, University of Illinois at Chicago

**AAMC Staff**

Alison Whelan, MD  
Chief Medical Education Officer  
Chris Hanley, MBA  
Project Manager  
Lynn Shaull, MA  
Senior Research Specialist

For inquiries and correspondence, contact Dr. Vivian Obeso at vobeso@fiu.edu, Carrie Phillipi at phillica@ohsu.edu, or Dr. Alison Whelan at awhelan@aamc.org.

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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

<table>
<thead>
<tr>
<th>Key Functions</th>
<th>Behaviors Requiring Corrective Response</th>
<th>Expected Behaviors for an Entrustable Learner</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Obtain a complete and accurate history in an organized fashion</strong></td>
<td>Does not collect accurate historical data</td>
<td>Gathers excessive or incomplete data</td>
</tr>
<tr>
<td><strong>Demonstrate patient-centered interview skills</strong></td>
<td>Relies exclusively on secondary sources or documentation of others</td>
<td>Uses a logical progression of questioning</td>
</tr>
<tr>
<td><strong>Demonstrate clinical reasoning in gathering focused information relevant to a patient’s care</strong></td>
<td>Is disrespectful in interactions with patients</td>
<td>Questions are prioritized and not excessive</td>
</tr>
<tr>
<td><strong>Perform a clinically relevant, appropriately thorough physical exam pertinent to the setting and purpose of the patient visit</strong></td>
<td>Disregards patient privacy and autonomy</td>
<td>Obtains a complete and accurate history in an organized fashion</td>
</tr>
<tr>
<td><strong>Communicates unidirectionally</strong></td>
<td>Fails to recognize patient’s central problem</td>
<td>Seeks secondary sources of information when appropriate (e.g. family, primary care physician, living facility, pharmacy)</td>
</tr>
<tr>
<td><strong>Questions are not guided by the evidence and data collected</strong></td>
<td></td>
<td>Adapts to different care settings and encounters</td>
</tr>
</tbody>
</table>

### Behaviors with Related Competencies

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

### Expected Behaviors for an Entrustable Learner

- **Gathers excessive or incomplete data**
- **Uses a logical progression of questioning**
- **Questions are prioritized and not excessive**
- **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**

### 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 2: Prioritize a Differential Diagnosis Following a Clinical Encounter**

<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>Synthesize essential information from previous records, history, physical exam, and initial diagnostic evaluations to propose a scientifically supported differential diagnosis</td>
<td>Cannot gather or synthesize data to inform an acceptable diagnosis</td>
<td>Approaches assessment from a rigid template</td>
<td>Gathers pertinent data based on initial diagnostic hypotheses</td>
</tr>
<tr>
<td></td>
<td>Lacks basic medical knowledge to reason effectively</td>
<td>Struggles to filter, prioritize, and make connections between sources of information</td>
<td>Proposes a reasonable differential diagnosis but may neglect important diagnostic information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proposes a differential diagnosis that is too narrow, too broad, or contains inaccuracies</td>
<td>Is beginning to organize knowledge by illness scripts (patterns) to generate and support a diagnosis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Demonstrates difficulty retrieving knowledge for effective reasoning</td>
<td>Seeks and integrates emerging information to update the differential diagnosis</td>
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<td>Encourages questions and challenges from patients and team</td>
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EPA 3: Recommend and Interpret Common Diagnostic and Screening Tests

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

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

→ Developing Behaviors →

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

Recommends tests for common conditions

Does not consider harm, costs, guidelines, or patient resources

Does not consider patient-specific screening unless instructed

→

Recommends unnecessary tests or tests with low pretest probability

Neglects patient’s preferences

Can only interpret results based on normal values from the lab

Does not discern urgent from nonurgent results

Misinterprets insignificant or explainable abnormalities

Does not know how to respond to urgent test results

Requires supervisor to discuss results with patient

Recommends key, reliable, cost-effective screening and diagnostic tests

Identifies guidelines for standard tests

Repeats diagnostic tests at intervals that are too frequent or too lengthy

Identifies guidelines for standard tests

Neglects impact of false positive or negative results

Aware of patient’s preferences

Provides individual rationale based on patient’s preferences, demographics, and risk factors

Incorporates sensitivity, specificity, and prevalence in recommending and interpreting tests

Explains how results will influence diagnosis and evaluation

Recognizes need for assistance to evaluate urgency of results and communicate these to patient

Discerns urgent from nonurgent results and responds correctly

Seeks help for interpretation of tests beyond scope of knowledge

Expected Behaviors for an Entrustable Learner

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

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<table>
<thead>
<tr>
<th>Key Functions with Related Competencies</th>
<th>Behaviors Requiring Corrective Response</th>
<th>Developing Behaviors (Learner may be at different levels within a row.)</th>
<th>Expected Behaviors for an Entrustable Learner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compose orders efficiently and effectively verbally, on paper, and electronically PC6 PBL1</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>Does not recognize 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></td>
<td>Does not follow established protocols for placing orders</td>
<td>Orders tests excessively (uses shotgun approach)</td>
<td>Able to complete complex orders requiring changes in dose or frequency over time (e.g., a taper)</td>
</tr>
<tr>
<td>Demonstrate an understanding of the patient’s condition that underpins the provided orders PC5 PC2</td>
<td>Lacks basic knowledge needed to guide orders</td>
<td>May be overconfident, does not seek review of orders</td>
<td>Undertakes a reasoned approach to placing orders (e.g., waits for contingent results before ordering more tests)</td>
</tr>
<tr>
<td>Recognize and avoid errors by attending to patient-specific factors, using resources, and appropriately responding to safety alerts PBL7</td>
<td>Discounts information obtained from resources designed to avoid drug–drug interactions</td>
<td>Unable to articulate the rationale behind orders</td>
<td>Recognizes limitations and seeks help</td>
</tr>
<tr>
<td></td>
<td>Fails to adjust doses when advised to do so by others</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ignores alerts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discuss planned orders and prescriptions with team, patients, and families ICS1 SBP3</td>
<td>Places orders without communicating with others; uses unidirectional style (“Here is what we are doing...”)</td>
<td>Places orders with communicating with others; uses bidirectional style</td>
<td>Enters orders that reflect bidirectional communication with patients, families, and team</td>
</tr>
<tr>
<td></td>
<td>Does not consider cost of orders or patient’s preferences</td>
<td>Does not consider cost of orders or patient’s preferences</td>
<td>Considers the costs of orders and the patient’s ability and willingness to proceed with the plan</td>
</tr>
</tbody>
</table>

**EPA 4: Enter and Discuss Orders and Prescriptions**

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

Enter and discuss orders and prescriptions

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Adapted from the Association of American Medical Colleges (AAMC). Core entrustable professional activities for entering residency. 2014.
### EPA 5: Document a Clinical Encounter in the Patient Record

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

**EPA 5**

**Document a clinical encounter**

<table>
<thead>
<tr>
<th>Key Functions with Related Competencies</th>
<th>Behaviors Requiring Corrective Response</th>
<th>Developing Behaviors (Learner may be at different levels within a row.)</th>
<th>Expected Behaviors for an Entrustable Learner</th>
</tr>
</thead>
<tbody>
<tr>
<td>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)</td>
<td>Provides incoherent documentation</td>
<td>Misses key information</td>
<td>Provides a verifiable cogent narrative without unnecessary details or redundancies</td>
</tr>
<tr>
<td>Follow documentation requirements to meet regulations and professional expectations</td>
<td>Copies and pastes information without verification or attribution</td>
<td>Uses a template with limited ability to adjust or adapt based on audience, context, or purpose</td>
<td>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)</td>
</tr>
<tr>
<td>Document a problem list, differential diagnosis, and plan supported through clinical reasoning that reflects patient’s preferences</td>
<td>Does not provide documentation when required</td>
<td>Produces documentation that has errors or does not fulfill institutional requirements (e.g., date, time, signature, avoidance of prohibited abbreviations)</td>
<td>Provides accurate, legible, timely documentation that includes institutionally required elements</td>
</tr>
<tr>
<td>includes inappropriate judgmental language</td>
<td>Provides illegible documentation</td>
<td>Has difficulty meeting turnaround expectations, resulting in team members’ lack of access to documentation</td>
<td>Documents in the patient’s record role in team-care activities</td>
</tr>
<tr>
<td>Documents potentially damaging information without attribution</td>
<td></td>
<td>Recognizes and corrects errors related to required elements of documentation</td>
<td>Documents use of primary and secondary sources necessary to fill in gaps</td>
</tr>
</tbody>
</table>

**Expected Behaviors for an Entrustable Learner**

- Provides clear, concise, and accurate documentation
- 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
- Documents a problem list, differential diagnosis, and plan, reflecting a combination of thought processes and input from other providers
- Communicates bidirectionally to develop and record management plans aligned with patient’s preferences

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### EPA 6: Provide an Oral Presentation of a Clinical Encounter

#### Key Functions with Related Competencies

<table>
<thead>
<tr>
<th>Present personally gathered and verified information, acknowledging areas of uncertainty</th>
<th>Fabricates information when unable to respond to questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC2 PBL1 PPD4 P1</td>
<td>Reacts defensively when queried</td>
</tr>
<tr>
<td>Provide an accurate, concise, well-organized oral presentation</td>
<td>Presents in a disorganized and incoherent fashion</td>
</tr>
<tr>
<td>ICS2 PC6</td>
<td>Presents information in a manner that frightens family</td>
</tr>
<tr>
<td>Adjust the oral presentation to meet the needs of the receiver</td>
<td>Disregards patient's privacy and autonomy</td>
</tr>
<tr>
<td>ICS1 ICS2 PBL1 PPD7</td>
<td>Lacks situational awareness when presenting sensitive patient information</td>
</tr>
<tr>
<td>Demonstrate respect for patient's privacy and autonomy</td>
<td>Incorporates patient's preferences and privacy needs</td>
</tr>
<tr>
<td>P3 P1 PPD4</td>
<td>Respects patients’ privacy and confidentiality when discussing patients</td>
</tr>
</tbody>
</table>

#### Behaviors Requiring Corrective Response

- **Developing Behaviors**
  - Gathers evidence incompletely or exhaustively
  - Fails to verify information
  - Does not obtain sensitive information
  - Delivers a presentation that is not concise or that wanders
  - Presents a story that is imprecise because of omitted or extraneous information
  - Follows a template
  - Uses acronyms and medical jargon
  - Projects too much or too little confidence
  - Lacks situational awareness when presenting sensitive patient information
  - Does not engage patients and families in discussions of care

- **Expected Behaviors for an Entrustable Learner**
  - Acknowledges gaps in knowledge, adjusts to feedback, and then obtains additional information
  - Delivers a presentation organized around the chief concern
  - When asked, can identify pertinent positives and negatives that support hypothesis
  - Supports management plans with limited information
  - Filters, synthesizes, and prioritizes information into a concise and well-organized presentation
  - Integrates pertinent positives and negatives to support hypothesis
  - Provides sound arguments to support the plan

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

- **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 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)
- Demonstrate awareness and skill in using information technology to access accurate and reliable medical information (ACQUIRE)
- Demonstrate skill in appraising sources, content, and applicability of evidence (APPRAISE)
- Apply findings to individuals and/or patient panels; communicate findings to the patient and team, reflecting on process and outcomes (ADVISE)

Behaviors Requiring Corrective Response

- Does not reconsider approach to a problem, ask for help, or seek new information
- Declines to use new information technologies
- Refuses to consider gaps and limitations in the literature or apply published evidence to specific patient care
- Does not discuss findings with team
- Does not determine or discuss outcomes and/or process, even with prompting

→ Developing Behaviors →

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

- With prompting, translates information needs into clinical questions
- Refuses to consider gaps and limitations in the literature or apply published evidence to specific patient care
- Does not determine or discuss outcomes and/or process, even with prompting
- Does not discuss findings with team
- Does not reconsider approach to a problem, ask for help, or seek new information

Expected Behaviors for an Entrustable Learner

- Identifies limitations and gaps in personal knowledge
- Develops knowledge guided by well-formed clinical questions
- Identifies and uses available databases, search engines, and refined search strategies to acquire relevant information
- Uses levels of evidence to appraise literature and determines applicability of evidence
- Seeks guidance in understanding subtleties of evidence
### EPA 8: Give or Receive a Patient Handover to Transition Care Responsibility

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

**Core Entrustable Professional Activities for Entering Residency**

**EPA 8**

**Give or receive a patient handover**

#### Key Functions with Related Competencies

| Document and update an electronic handover tool and apply this to deliver a structured verbal handover |
| PBL17 ICS2 ICS3 P3 |
| *Transmitter* |

**Conduct handover using communication strategies known to minimize threats to transition of care**

| ICS2 ICS3 |
| *Transmitter* |

**Provide succinct verbal communication conveying illness severity, situational awareness, action planning, and contingency planning**

| ICS2 PC8 |
| *Transmitter* |

**Give or elicit feedback about handover communication and ensure closed-loop communication**

| PBL15 ICS2 ICS3 |
| *Transmitter and Receiver* |

**Demonstrate respect for patient’s privacy and confidentiality**

| P3 |
| *Transmitter and Receiver* |

### Behaviors Requiring Corrective Response

| Inconsistently uses standardized format or uses alternative tool |
| Uses electronic handover tool |
| Inconsistently updates tool |

| Requires clarification and additional relevant information from others to prioritize information |
| Provides patient information that is disorganized, too detailed, and/or too brief |

| Requires assistance to minimize interruptions and distractions |
| Demonstrates minimal situational awareness |

| Inconsistently communicates key components of the standardized tool |
| Does not provide action plan and contingency plan |

| Withholds or is defensive with feedback |
| Displays lack of insight on the role of feedback |
| Does not summarize (or repeat) key points for effective closed-loop communication |

| Is unaware of HIPAA policies |
| Breaches patient confidentiality and privacy |

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

| Consistently updates electronic handover tool with mostly relevant information, applying a standardized template |
| Adjusts patient information for context and audience |
| May omit relevant information or present irrelevant information |

| Requires assistance with time management |
| Focuses on own handover tasks with some awareness of other’s needs |

| Identifies illness severity |
| Provides incomplete action list and contingency planning |

| Creates a contingency plan that lacks clarity |
| Delivers incomplete feedback; accepts feedback when given |

| Accepts feedback and adjusts |
| Summary statements are too elaborate |

| Inconsistently uses repeat-back technique |
| Asks mutually clarifying questions, provides succinct summaries, and uses repeat-back techniques |

| Is aware of HIPAA policies |
| Is cognizant of and attempts to minimize breaches in privacy and confidentiality |

| Consistently considers patient privacy and confidentiality |
| Highlights and respects patient’s preferences |

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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**

- Identify team members' roles and responsibilities and seek help from other members of the team to optimize health care delivery
  - IPC2 SBP2 ICS3
- Include team members, listen attentively, and adjust communication content and style to align with team-member needs
  - ICS2/IPC3 IPC1 ICS7 P1
- Establish and maintain a climate of mutual respect, dignity, integrity, and trust
- Prioritize team needs over personal needs to optimize delivery of care
- Help team members in need
  - P1 ICS7 IPC1 SBP2

**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
- Communication is largely unidirectional, in response to prompts, or template driven
- Has limited participation in team discussion
- Is typically a more passive member of the team
- Prioritizes own goals over those of the team

- Interacts with other team members, seeks their counsel, actively listens to their recommendations, and incorporates these recommendations into practice
- Listens actively and elicits ideas and opinions from other team members
- Communicates bidirectionally; keeps team members informed and up to date
- Integrates into team function, prioritizing team goals
- Demonstrates respectful interactions and tells the truth
- Remains professional and anticipates and manages emotional triggers

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

**Key Functions with Related Competencies**

- **Recognize normal and abnormal vital signs as they relate to patient- and disease-specific factors as potential etiologies of a patient's decompensation**
- **Recognize severity of a patient's illness and indications for escalating care and initiate interventions and management**
- **Initiate and participate in a code response and apply basic and advanced life support**
- **Upon recognition of a patient's deterioration, communicate situation, clarify patient's goals of care, and update family members**

**Behaviors Requiring Corrective Response**

- **EPA 10: Recognize urgent or emergent situation**
  - Fails to recognize trends or variations of vital signs in a decompensating patient
  - Misses abnormalities in patient's clinical status or does not anticipate next steps
  - Fails to recognize change in patient's clinical status or seek help when a patient requires urgent or emergent care
  - Accepts help
  - Requires prompting to perform basic procedural or life support skills correctly
  - Dismisses concerns of team members (nurses, family members, etc.) about patient deterioration
  - Disregards patient's goals of care or code status
  - Communicates in a unidirectional manner with family and health care team
  - Provides superfluous or incomplete information to health care team members
  - Does not consider patient's wishes if they differ from those of the provider

**Expected Behaviors for an Entrustable Learner**

- Recognizes variations of patient's vital signs based on patient- and disease-specific factors
- Gathers, filters, and prioritizes information related to a patient's decompensation in an urgent or emergent setting
- Responds to early clinical deterioration and seeks timely help
- Prioritizes patients who need immediate care and initiates critical interventions
- Initiates and applies effective airway management, BLS, and advanced cardiovascular life support (ACLS) skills
- Monitors response to initial interventions and adjusts plan accordingly
- Adheres to institutional procedures and protocols for escalation of patient care
- Uses the health care team members according to their roles and responsibilities to increase task efficiency in an emergent patient condition
- Communicates bidirectionally with the health care team and family about goals of care and treatment plan while keeping them up to date
- Actively listens and elicits feedback from team members (e.g., patient, nurses, family members) regarding concerns about patient deterioration to determine next steps

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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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An EPA: A unit of observable, measurable professional practice requiring integration of competencies.
EPA 11: Obtain Informed Consent for Tests and/or Procedures

<table>
<thead>
<tr>
<th>Key Functions with Related Competencies</th>
<th>Behaviors Requiring Corrective Response</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>Understands and explains the key elements of informed consent</td>
</tr>
<tr>
<td></td>
<td>Provides inaccurate or misleading information</td>
<td>Provides complete and accurate information</td>
</tr>
<tr>
<td></td>
<td>Hands the patient a form and requests a signature</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>Communicate with the patient and family to ensure that they understand the intervention</td>
<td>Uses language that frightens patient and family</td>
<td>Avoids medical jargon</td>
</tr>
<tr>
<td></td>
<td>Disregards emotional cues</td>
<td>Uses bidirectional communication to build rapport</td>
</tr>
<tr>
<td></td>
<td>Regards interpreters as unhelpful or inefficient</td>
<td>Practices shared decision making, eliciting patient and family preferences</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>Displays overconfidence and takes actions that can have a negative effect on outcomes</td>
<td>Responds to emotional cues in real time</td>
</tr>
<tr>
<td></td>
<td>Has difficulty in attending to emotional cues</td>
<td>Enlists interpreters</td>
</tr>
<tr>
<td></td>
<td>Does not consider the use of an interpreter when needed</td>
<td>Enlists interpreters collaboratively</td>
</tr>
<tr>
<td></td>
<td>Displays a lack of confidence that increases patient stress or discomfort, or overconfidence that erodes trust</td>
<td>Demonstrates confidence commensurate with knowledge and skill so that patient and family are at ease</td>
</tr>
<tr>
<td></td>
<td>Asks questions</td>
<td>Seeks timely help</td>
</tr>
<tr>
<td></td>
<td>Accepts help</td>
<td></td>
</tr>
</tbody>
</table>

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.

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 12: Perform General Procedures of a Physician

**Key Functions with Related Competencies**
- Demonstrate technical skills required for the procedure
  - PC1
- Understand and explain the anatomy, physiology, indications, contraindications, risks, benefits, alternatives, and potential complications of the procedure
  - PC1
- Communicate with the patient and family to ensure they understand pre- and post-procedural activities
  - PC7, ICS6, P6
- Demonstrate confidence that puts patients and families at ease
  - PPD7, PPD1

**Behaviors Requiring Corrective Response**
- Lacks required technical skills
  - Fails to follow sterile technique when indicated
- Displays lack of awareness of knowledge gaps
  - Uses inaccurate language or presents information distorted by personal biases
  - Disregards patient’s and family’s wishes
  - Fails to obtain appropriate consent before performing a procedure
- 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
  - Asks for help with complications
  - Accepts help when offered

**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
  - Conversations are respectful and generally free of jargon and elicit patient’s and family’s wishes
  - When focused on the task during the procedure, may struggle to read emotional response from the patient
- 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
  - Seeks timely help
  - Has confidence commensurate with level of knowledge and skill that puts patients and families at ease

**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

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

- Basic cardiopulmonary resuscitation (CPR)
- Bag-mask ventilation (BMC)
- Sterile technique
- Venipuncture
- Insertion of an intravenous line
- Placement of a Foley catheter

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.

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Adapted from the Association of American Medical Colleges (AAMC). Core entrustable professional activities for entering residency. 2014.

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Association of American Medical Colleges
**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, failure modes and effects analyses, improvement projects)
- Engage in daily safety habits (e.g., accurate and complete documentation, including allergies and adverse reactions, medicine reconciliation, patient education, universal precautions, hand washing, 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
- Demonstrates defensiveness or places blame

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

- Superficial understanding prevents recognition of real or potential errors
- Identifies and reports actual and potential errors
- Demonstrates structured approach to describing key elements of patient safety concerns
- Passively observes system improvement activities in the context of rotations or learning experiences
- Participates in system improvement activities when prompted but may require others to point out system failures
- Requires prompts for common safety behaviors
- Demonstrates common safety behaviors
- Engages in daily safety habits with only rare lapses
- Requires prompts to reflect on own errors and their underlying factors
- Identifies and reflects on own contribution to errors but needs help developing an improvement plan
- May not recognize own fatigue or may be afraid to tell supervisor when fatigued
- Identifies and reflects on the element of personal responsibility for errors

**Expected Behaviors for an Entrustable Learner**

- Identifies and reports patient safety concerns in a timely manner using existing system reporting structures (e.g., event reporting systems, chain of command policies)
- Speaks up to identify actual and potential errors, even against hierarchy
- Actively engages in efforts to identify systems issues and their solutions
- Engages in daily safety habits with rare lapses

**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.**

Appendix 1: Core EPA Pilot Supervision and Coactivity Scales

Scales for clinical supervisors to determine how much help (coactivity) or supervision they judge a student needs for a specific activity have been proposed—the Chen entrustment scale and the Ottawa scale (Chen et al 2015; Rekman et al 2016). There is limited validity evidence for these scales and no published data comparing them. We include these published tools here for your reference. The Core EPA Pilot Group has agreed on a trial using modified versions of these scales (described below). A description of how the pilot is working with these scales is available on the Core EPA website.

<table>
<thead>
<tr>
<th>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?</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>Modified Ottawa scale</th>
<th>Original Ottawa scale (Rekman et al 2016)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. “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. “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. “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. “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. (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>
Association of American Medical Colleges