

Learning Objectives and Curricular Mapping

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Disclosures

- Neither Dr. Ramsey McGowen nor Dr. Ivy Click, nor any members of their immediate families, have financial interests/arrangements or affiliations that could be perceived as a real or apparent conflicts of interest related to the content or supporters of this activity.

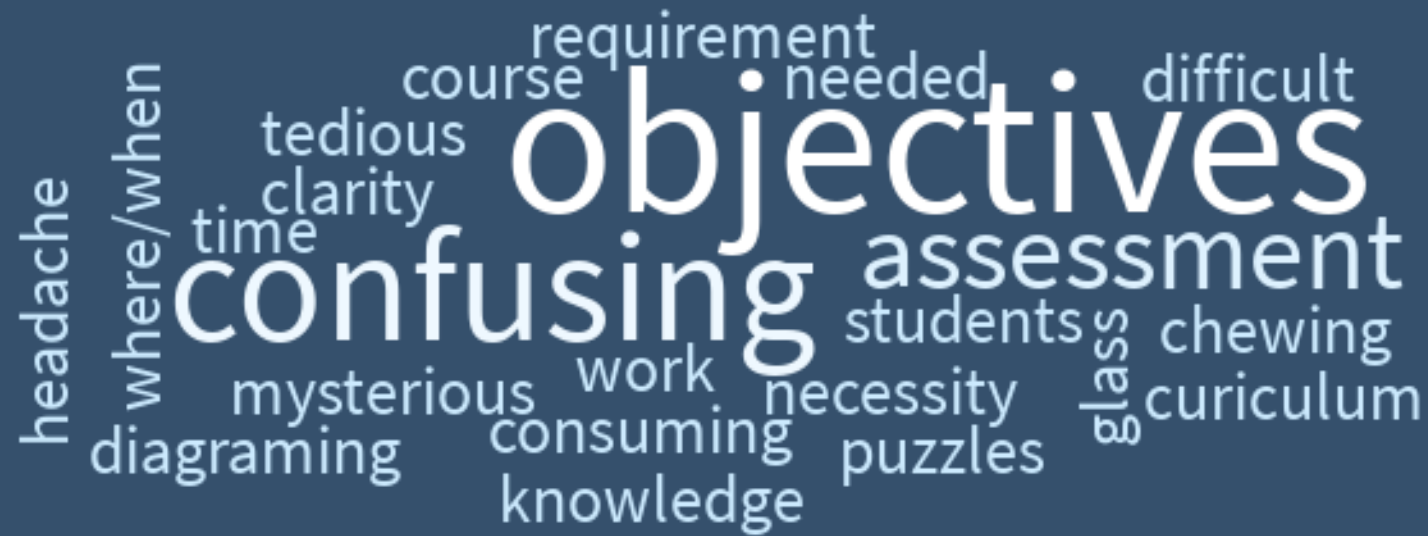
Objectives



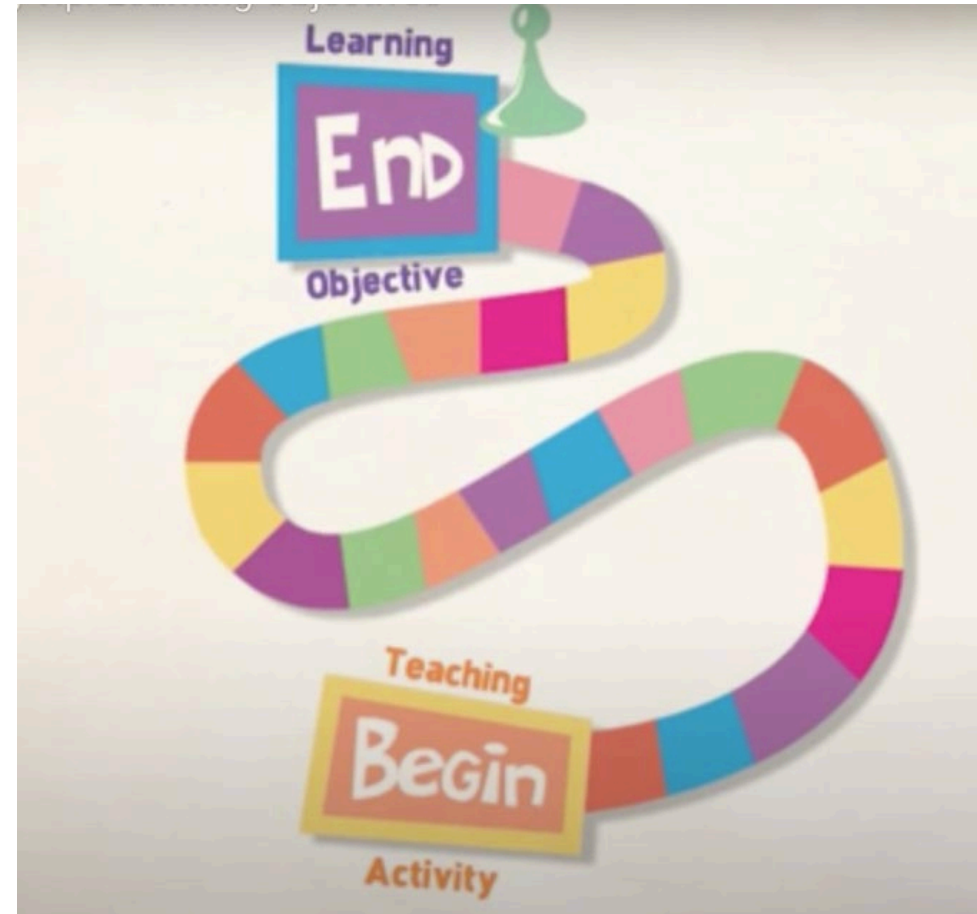
At the end of this session, participants will be able to:

- Construct effective course and session learning objectives using principles of sound learning objective development
- Evaluate the robustness of course and session learning objectives
- Identify appropriate linkage between IEO's and course objectives
- Identify appropriate linkage between session objectives and assessments and the USMLE content outline
- Create an accurate course map linking all major course components

What words do you associate with curriculum mapping?



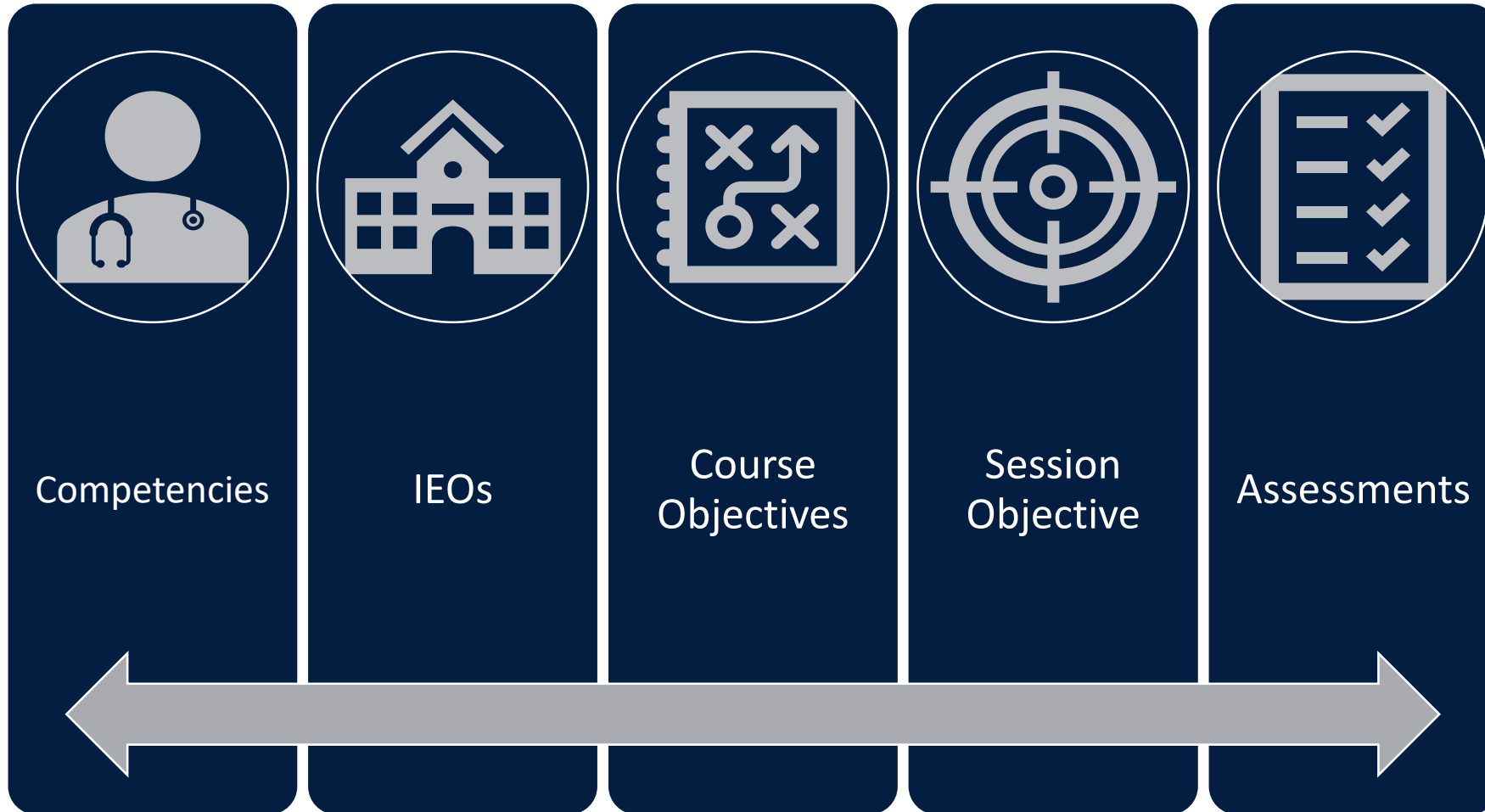
Developing learning objectives



Why Map ?

- Planning process
 - Relationship between long term outcomes and interim processes
- Prioritize content and focus on what's most important.
- Break down content into meaningful pieces.
- Design assessments and instruction that support objectives.
- Communicate expectations to students.
- Help colleagues teaching the same course share intentions
- Help colleagues teaching in other parts of the curriculum identify associated material
- Enable institution to identify how courses and content in the program fit together.

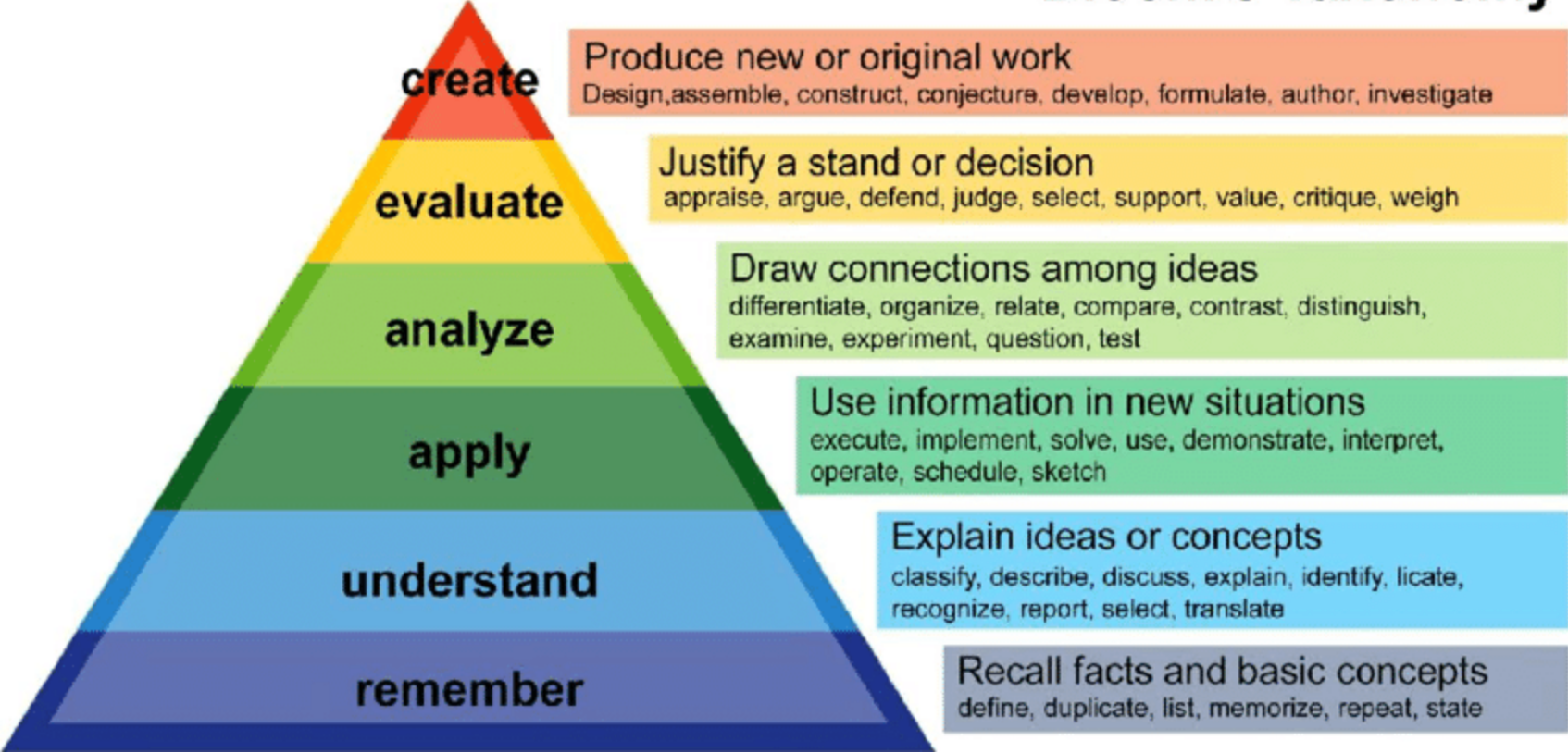
What should we map?



Constructing a Good Course Learning Objective

- **Specific, measurable, and written from the learner's perspective**
 - 2 Key Features
 1. Begins with an action verb that specifies the desired level of learning by the student
 - Use Bloom's Taxonomy to identify different levels of learning and verbs that reflect the level.
 - Note:
 - Terms like appreciate/understand/know/learn are vague and not measurable
 - The focus is always on what the student will be able to do
 - Statements such as "will be given an opportunity to..." fail because they describe what the faculty will do
 2. Identify the subject to be learned
- Quick tip: Could it serve as a short answer question?

Bloom's Taxonomy



Examples

- List appropriate tests for differential diagnosis of chest pain
 - *Verb:* List (is this an action verb?)
 - *Subject :* tests for differential diagnosis of chest pain
 - Is it specific? Measurable? Learner focused? Action verb?
 - Could it be a short answer question?
- Understand the steps of the scientific method
 - *Verb:* Understand (is this an action verb?)
 - *Subject :* scientific method
 - Is it specific? Measurable? Learner focused?
 - Could it be a short answer question?
- Demonstrate effective communication skills to support of team performance
 - *Verb:* Demonstrate
 - *Subject:* communication skills in teams
 - Is it specific? Measurable? Learner focused?
 - Could it be a short answer question?

Mapping IEO's and Course Objectives- General Points

- Preliminary Identification of course objectives
- Identify IEO pertinent to the content
- Notice Competency Focus
- Determine if content addresses that competency focus in a meaningful way
 - Competencies and IEO's are program end points; your content may support development
- Assure that instructional method and its associated assessment supports learning at level of objective
- Assure that assessment method closes the loop—confirms the objective has been achieved in the way described
- Revise objectives to reflect accuracy
 - Might decide to revise verb, instructional method, or assessment

Questions?

Pointers for Linking IEO's and Course Objectives

Competency 1: Patient Care

Linkage to IEO --Considerations

Provide patient-centered care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health

- Use if:
 - the instructional/assessment method of these objectives includes a meaningful clinical application
 - Examples: patient care application through case discussion, clinical presentation, simulation, assignments using clinical scenarios, etc.
- Do not use Patient Care IEO's for foundational knowledge that are distant from patient care applications

Competency 2: Knowledge for Practice

Linkage to IEO --Considerations

Demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care

- Use if:
 - Knowledge is the primary focus
 - Examples
 - 2.1—labs, case discussions, general class discussions
 - 2.2—almost any core basic science content
 - 2.3-- use if there is a diagnostic or therapeutic decision making, problem solving, or evidence-based component to content or assignments
 - 2.4 and 2.5— refer to specific content required (population health, prevention, social sciences, etc.)

Competency 3: Practice Based Learning and Improvement

Linkage to IEO --Considerations

Demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care

- Use if:
 - Instructional or assessment strategies for this objective provide opportunities for learner self-evaluation and developing improvement goals (applies to all IEO's under #3).
 - Examples: Self-assessment, reflection on practice, development of learning plans
- Note specific content constraints to PBLI IEO's:
- 3.4 -- QI methods
 - 3.5 – regular use of feedback
 - 3.6 –clinically focused use of scientific literature
 - 3.7—incorporation of IT
 - 3.9 & 3.10—outcomes for patient care/service delivery applications

Competency 4: Interpersonal and Communication Skills

Linkage to IEO --Considerations

Demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals

- Use if:
 - Instructional and assessment strategies focus on effective exchange of information or collaboration (oral or written)
 - Examples:
4.2 and 4.3 most likely to be appropriate for basic science courses with labs, simulations, or group activities

Competency 5: Professionalism

Linkage to IEO --Considerations

Demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles

Use if:

- Instructional/assessment methods provide meaningful focus on ethics or professionalism
- 5.1 most likely to be appropriate for basic science courses
- 5.4 may be appropriate
- 5.6 is appropriate if one of the 7 specifically identified ethical issues is a focus

Competency 6. Systems-Based Practice

Linkage to IEO --Considerations

Demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care

Use if:

- Instructional/assessment methods focus on health systems, coordinated/team based care, patient and coordinated systems advocacy, addressing barriers and potential harms (including systems based errors) that impede optimal delivery of health care

Competency 7: Interprofessional Collaboration Linkage to IEO --Considerations

Demonstrate the ability to engage in an interprofessional team in a manner that optimizes safe, and effective patient- and population-centered care

Use if:

- Students work other health professionals
- Session includes an interprofessional case application/simulation
- There is a meaningful discussion of how other health professionals might be involved with this content in a clinical setting or population application (IPE team safety, coordinated roles, etc.)

Competency 8. Personal and Professional Development

Linkage to IEO –Considerations

Demonstrate the qualities required to sustain lifelong personal and professional growth

- Use if:
 - There is narrative evaluation or noncognitive assessment in some way
 - Instructional and assessment methods clearly include components of professional and personal development as defined within the competency (e.g., group activities, discussions, or assignments that identify components as session objectives)

Questions?

- Entrustable Professional Activities



Entrustable Professional Activities (EPAs)

- Increased focus on competencies in GME has exposed a “gap between residency program directors’ expectations and new residents’ performance.”¹
- AAMC defined 13 Core Entrustable Professional Activities for Entering Residency (Core EPAs) that all graduating medical students might be expected to perform on day one of residency without direct supervision.

1. Englander R, Flynn T, Call S, et al. Toward defining the foundation of the MD degree: Core entrustable professional activities for entering residency. *Acad Med.* 2016;91:1352–1358.



13 Entrustable Professional Activities for Entering Residency

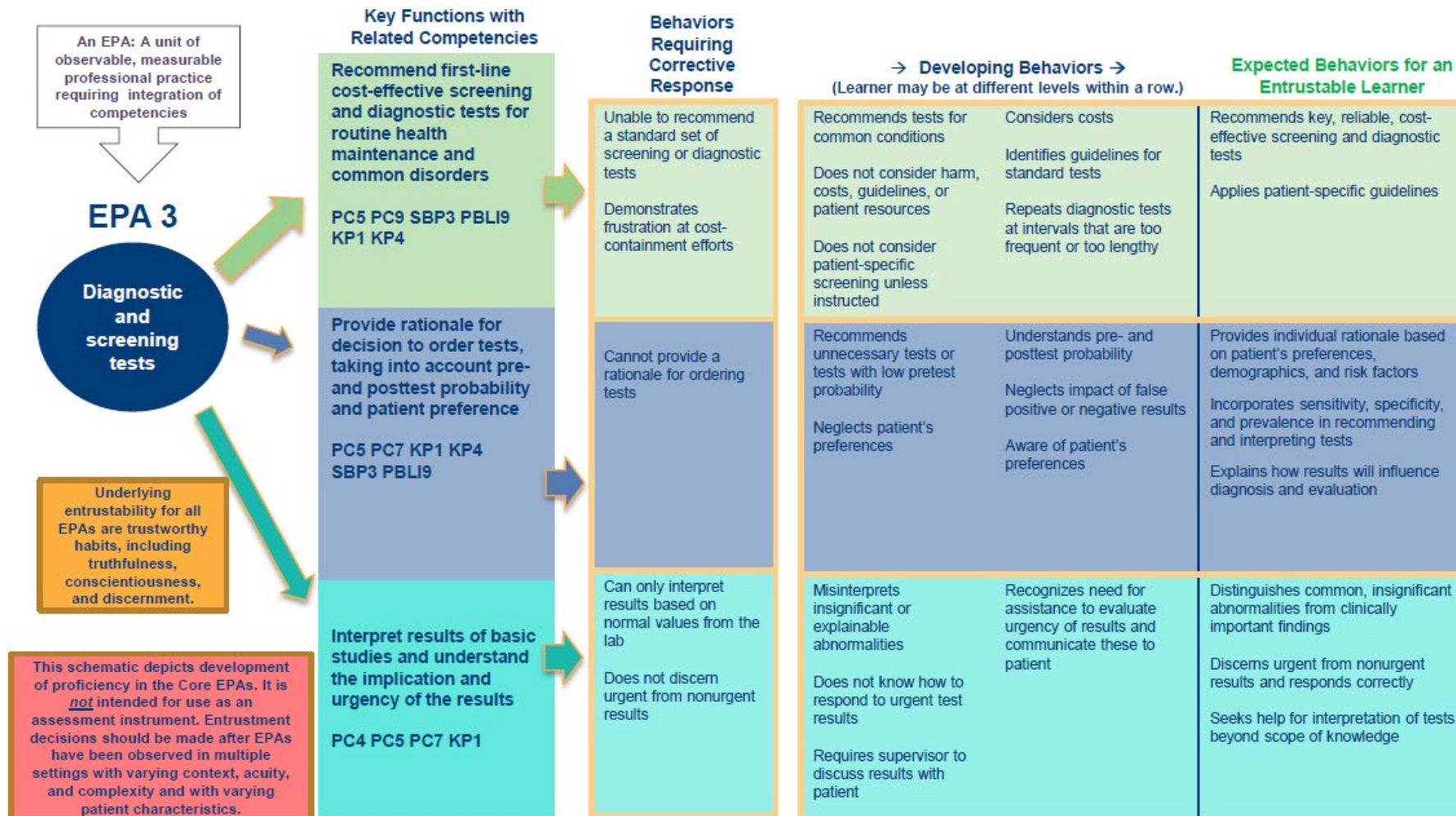
1. Gather a history and perform a physical examination
2. Prioritize a differential diagnosis following a clinical encounter
3. Recommend and interpret common diagnostic and screening tests
4. Enter and discuss orders and prescriptions
5. Document a clinical encounter in the patient record
6. Provide an oral presentation of a clinical encounter
7. Form clinical questions and retrieve evidence to advance patient care
8. Give or receive a patient handover to transition care responsibility
9. Collaborate as a member of an interprofessional team
10. Recognize a patient requiring urgent or emergent care and initiate evaluation and management
11. Obtain informed consent for tests and/or procedures
12. Perform general procedures of a physician
13. Identify system failures and contribute to a culture of safety and improvement

EPAs, Competencies, Goals, & Learning Objectives

Term	Definition	Example
Entrustable Professional Activity (EPA)	Units of professional practice, defined as tasks or responsibilities to be entrusted to a trainee once sufficient specific competence is reached to allow for unsupervised practice.	<ol style="list-style-type: none"> 1. Gather a history and perform a physical examination 2. Prioritize a differential diagnosis following a clinical encounter 3. Recommend and interpret common diagnostic and screening tests
Competency	Core attribute or characteristic required of the graduating learner	<ol style="list-style-type: none"> 1. Patient Care 2. Knowledge for Practice 3. Practice-based Learning and Improvement 4. Interpersonal and Communication Skills 5. Professionalism 6. Systems-Based Practice 7. Interprofessional Collaboration 8. Personal and Professional Development
Educational Goal	Broad statements of the purpose an educational unit (e.g., course, block, or clerkship)	EX: Students will develop the knowledge, attributes, and skills necessary to care for a patient presenting for routine prenatal care.
Learning Objective	Statement provided to learners that describes what they are expected to learn and how they will demonstrate their learning.	EX: Communicate effectively with patients and families, across a broad range of cultural, literacy and socioeconomic backgrounds.



EPA 3: Recommend and Interpret Common Diagnostic and Screening Tests



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.

EPAs into Practice

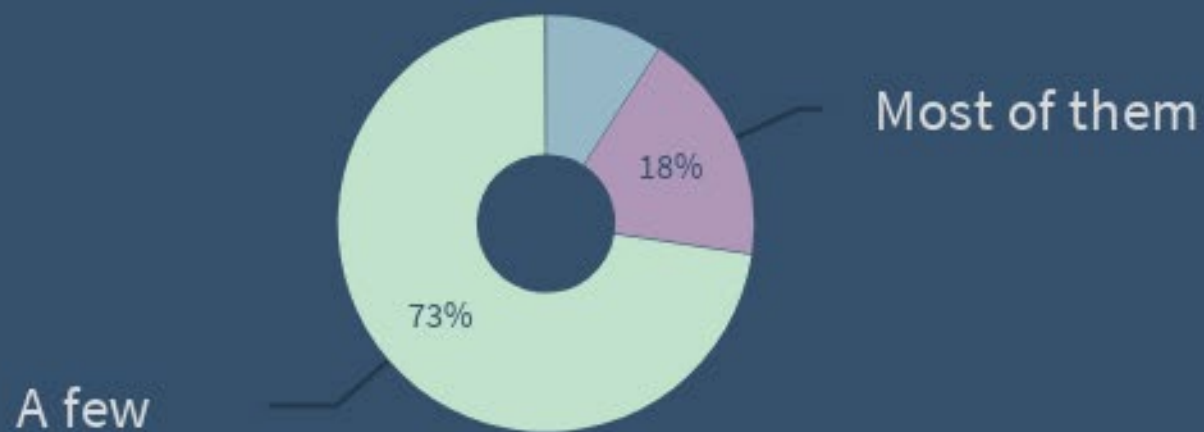
EPA	IEO	Clerkship Objective	Assessment
1	PC2, KP1	Perform a focused, systems-based physical exam	AM03: Exam – Institutionally developed, clinical performance AM09: Multi-source assessment
7	KP3, KP4, PBLI1, PBLI3, PBLI6, PBLI7, ICS2	Critically evaluate medical literature and present best-evidence findings.	AM16: Research or project assessment
3, 11	PC4, PC5, PC7, PC9, KP1, KP3, KP4, SB3, PBLI9, IC1, IC7, PPD1, PPD7, PPD8	Apply current guidelines for health maintenance and preventive medicine including screening tests and vaccinations for patients of all ages.	AM02: Clinical performance rating/checklist AM03: Exam – Institutionally developed, clinical performance AM08: Exam – Nationally normed/standardized

When poll is active, respond at PollEv.com/ivyclick291

Text **IVYCLICK291** to **37607** once to join

Have you mapped your session objectives to your course objectives?

YES! 100% **A** Most of them **B** A few **C** None yet **D**



Session Mapping

- **What counts as an event/session?**
- An “event” or “session” is a complete, coherent unit of instruction. This is typically a single class session; examples include a didactic session, lab, group session, grand rounds, conference, clinical experience, or required review session.
- Every “event” or “session” should have at least one associated USMLE, Keyword, PLUS List keyword or phrase.

Session Mapping

- **What do I need to do to map my course?**
- For each session, fill out the session-level curriculum entry form as best you can. This includes:
 - Basic info on the name of the course
 - Primary and any secondary instruction methods, i.e., whether you used a flipped classroom approach (Use MedBiquitous instruction method terms)
 - Primary and any secondary assessment methods used (Use MedBiquitous assessment method terms)
 - Types of resources used for teaching (Use MedBiquitous resource types terms)
 - Learning objectives,
 - Content covered* (USMLE, Keyword, PLUS List)
 - Depth of coverage, i.e., basic, intermediate, advanced



Terms

- USMLE Content Outline – list of content across all USMLE examinations
- Plus List - Concepts not included in the USMLE outline. Tend to be terms on issues such as health disparities, socioeconomic, ethics, bias, diagnosis, and several societal issues of interest, and identified curriculum threads.
- MedBiquitous Terms – Standardized terms used by AAMC for curriculum inventory. Includes Instructional Methods, Assessment Methods, and Resource Types.

More on Keywords

- Should be as specific as possible to describe the session.
- If you were telling someone else what your session was about, what would you tell them?
- What key concepts do you want students to carry with them from your session?
- Think of it like your 3-5 keywords when submitting a journal article.

Depth of coverage

- Depth of coverage – refers to how deeply a concept is taught; choose from three categories, including:
 - Basic: students are expected to remember/recall basic concepts, recognize, define, label, or describe; corresponds to “Knowledge” in Bloom’s Taxonomy
 - Intermediate: students are expected to understand enough to discuss, explain, summarize, give examples; corresponds to “Comprehension” in Bloom’s Taxonomy
 - Advanced: students are expected apply, demonstrate, interpret, use, illustrate, can apply information in new situations; corresponds to “Application” in Bloom’s Taxonomy

By now you may
be thinking...



When should you do mapping?

Suggestions

- When you're planning each session of your course for the year.
- Immediately before each session. (You might have time set aside that week to work on your class.)
- Immediately after each course session, when it's fresh in your mind.
- When you update your course, altering the educational objectives for a course session.

GREAT THINGS
HAPPEN A
LITTLE AT A
TIME.

What about guest lecturers or co-instructors?



- Ask the instructor for the specific session to complete the session-level form.
- Need at minimum: event/session title, length, instructor name.
 - Hopefully they have objectives for their lecture/session!



- ✓ Identify objectives from one “session” of your course or clerkship.
- ✓ Match at least one session objective to at least one course objective.
- ✓ Identify keywords for the session using USMLE or Plus list terms.

Breakout