

Competencies and Milestones in UME

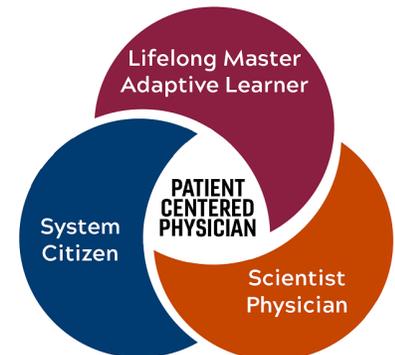
TEACH: Health Professions Educator Series Session

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Associate Dean for Research



Acknowledgments

- Jed Gonzalo, MD, MSc

Senior Associate Dean, Medical Education; Professor, Internal Medicine and Health Systems & Implementation Science, VTCSOM

<https://teach.vtc.vt.edu/past-events/20240122-hpe.html>

- Brock Mutcherson, PhD

Associate Dean for Assessment and Program Evaluation; Assistant Professor, Health Systems & Implementation Science, VTCSOM

Objectives

Upon completion of this activity, participants will be able to:

- Distinguish between competence-based and time-based curriculum.
- Compare the implementation of competency-based medical education in undergraduate and graduate medical education.
- Identify strategies for assessing competencies in undergraduate medical education and graduate medical education.

Undergraduate Medical Education Outcomes

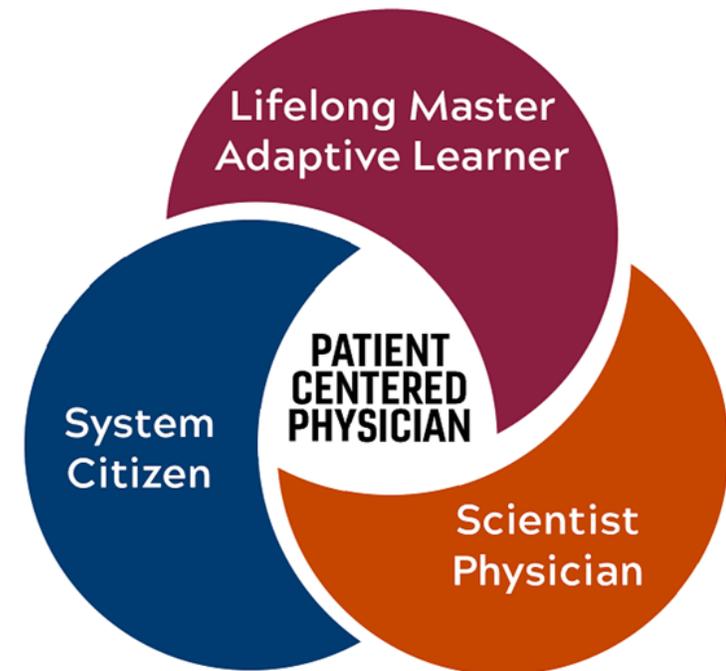
When planning for new Identities Phase 1 curriculum ...

Outcomes

Pass boards

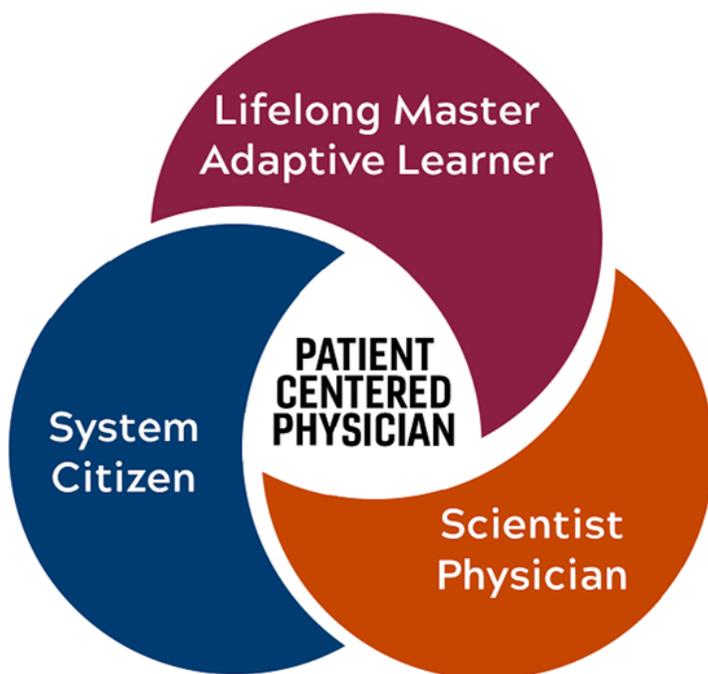
Ready for clerkships

VTCSOM values

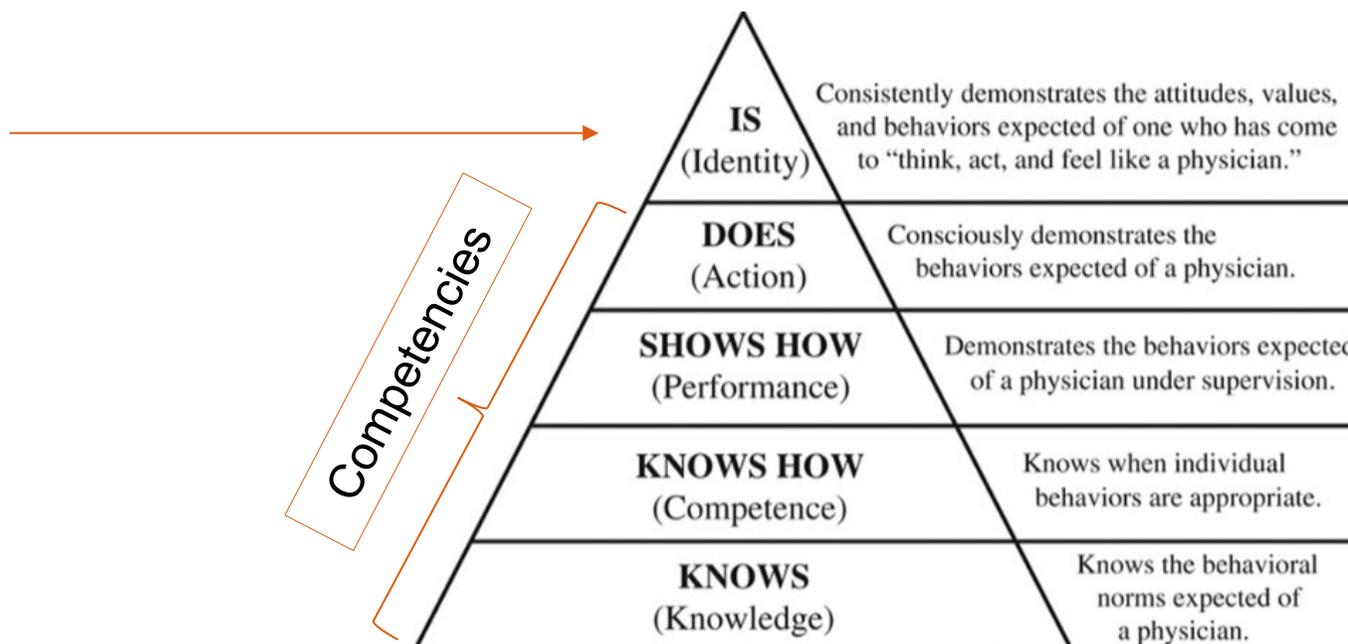


Our North Star in Medical Education: Integrating Professional Identity and Competencies

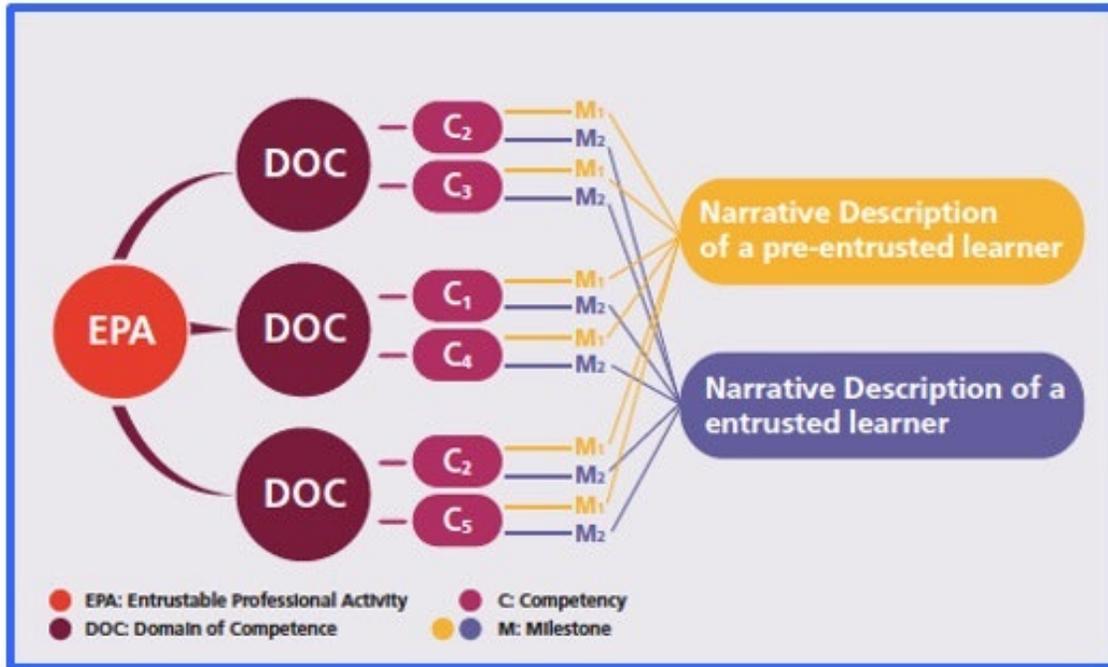
VTCSOM Professional Identities



Cruess and Cruess Pyramid for Competencies and Professional Identity



The Word Soup of CBME



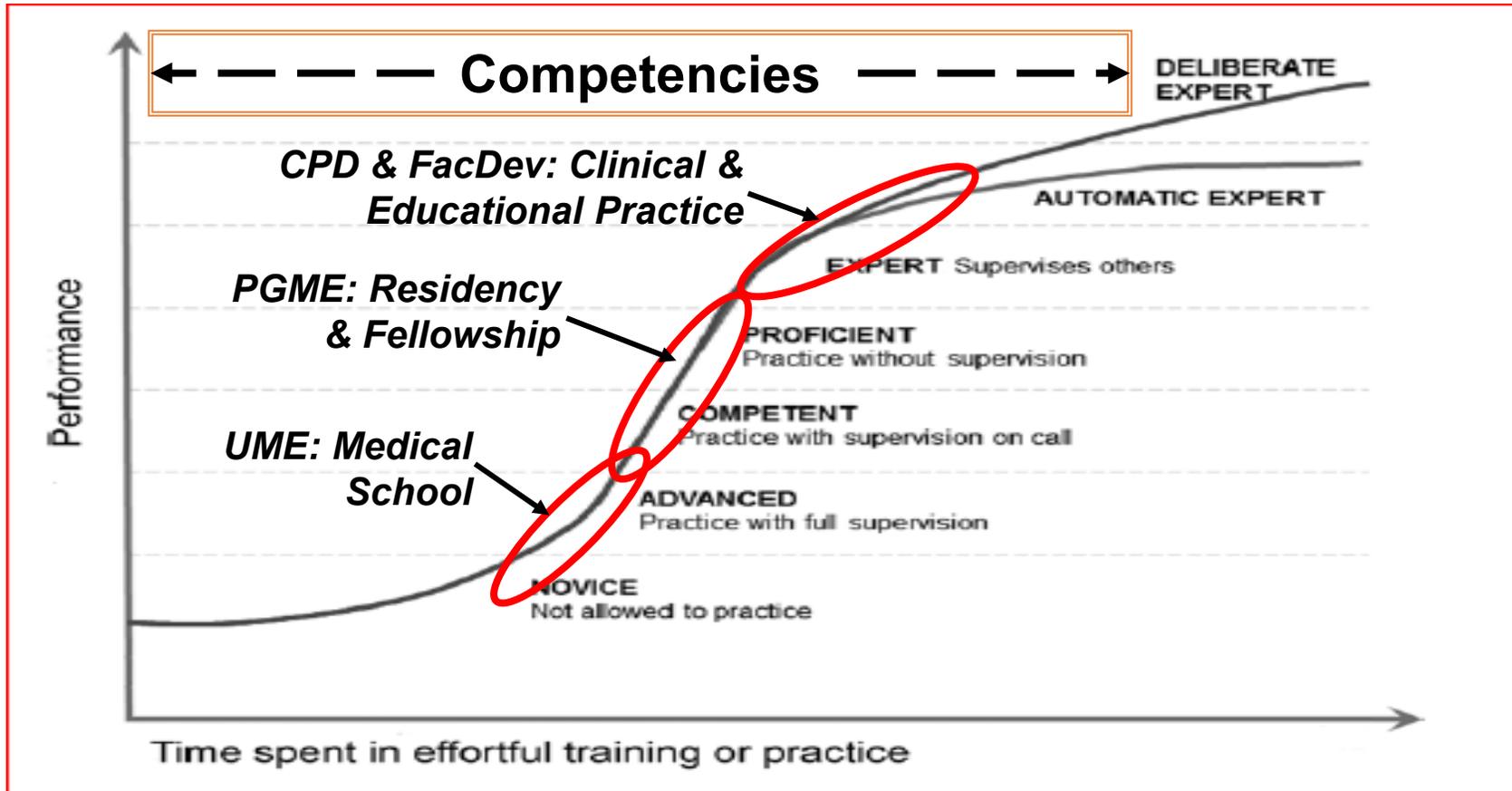
Entrustable Professional Activity (EPA): Unit of professional practice that may be entrusted to a learner to execute unsupervised, once they have demonstrated competence. (work descriptors)

Domain of Competence: A dimension of related competences (e.g., Systems-Based Practice).

Competency: Actions someone performs or demonstrates within the practice environment at a defined stage of professional development (person descriptors).

Milestone: Specific observable and measurable achievements or marker of progress in the development of a learner's competencies.

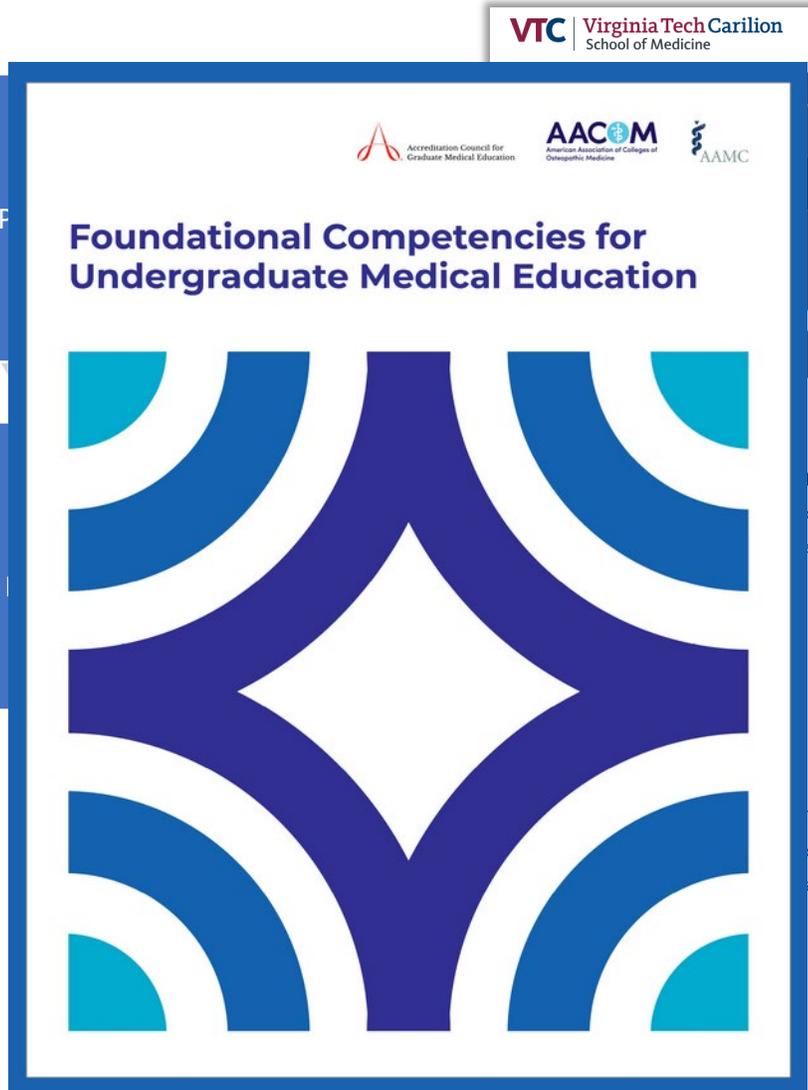
Learning Curves and Developmental Models



ACGME Core Competencies



VTCSOM Educational Program Objectives



Objectives

Foundational Program Objectives

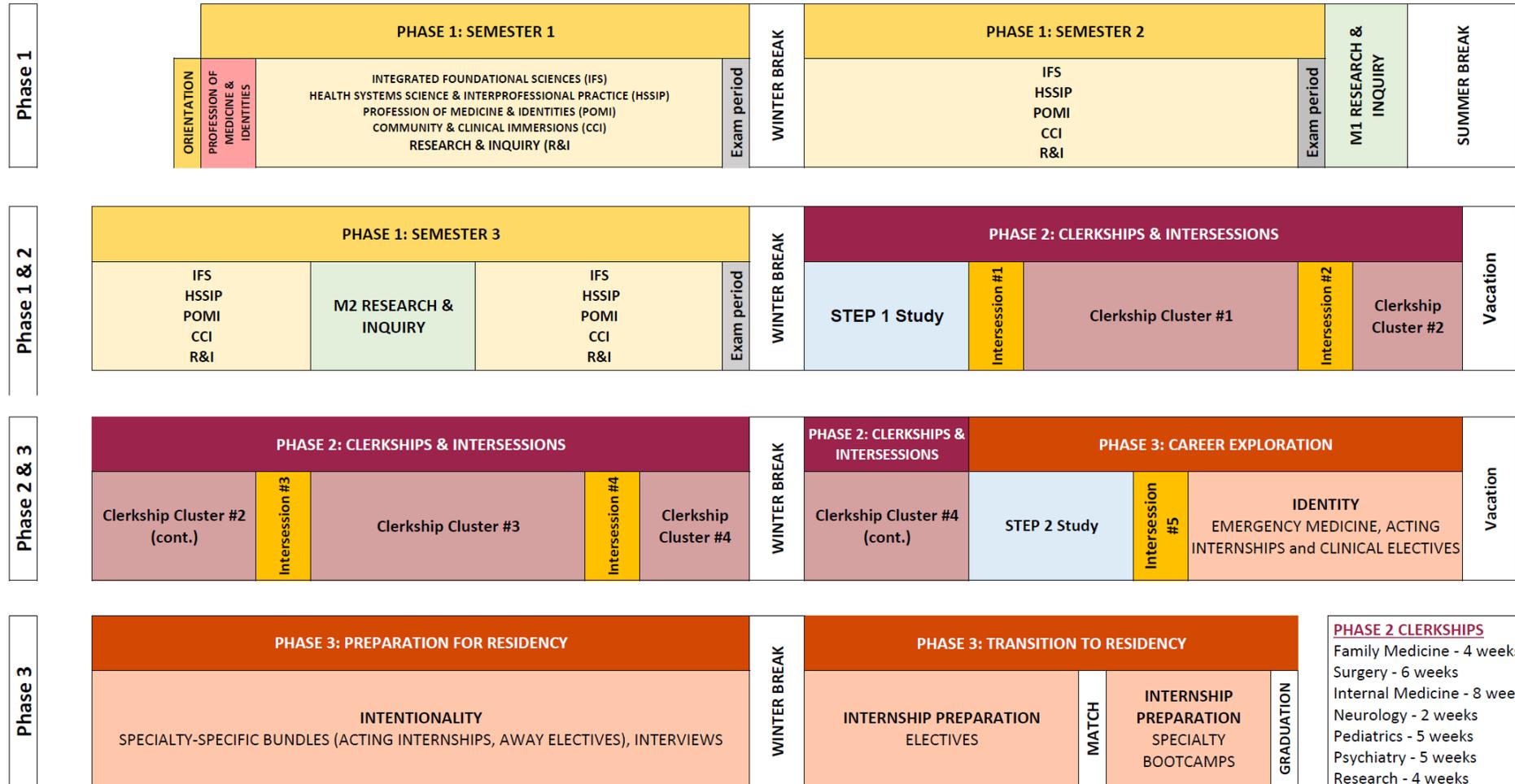
Educational program objectives (EPOs) are the comprehensive framework of competencies (i.e., outcomes) adopted and implemented by U.S. medical schools to guide all aspects of their medical school work. The EPOs are used as the "backbone" of all curricular priority areas by:

1. Providing the basis for curricular content,
2. Highlighting the areas for a fully integrated curricular design (horizontal and vertical),
3. Facilitating a "backwards" curricular design for all courses and clinical experiences,
4. Providing the foundation and strategies for methods of assessment, and,
5. Outlining the vision for the overall education program.

The Liaison Committee for Medical Education expects medical schools to intentionally design the comprehensive framework of EPOs, link these EPOs to assessments, and ensure that all learners and educators are aware of and use these EPOs in educationally-related processes.

Competencies in UME: vertically integrated

- Intersessions in Phase 2 & 3
- Higher order competencies
 - Harmonized milestones

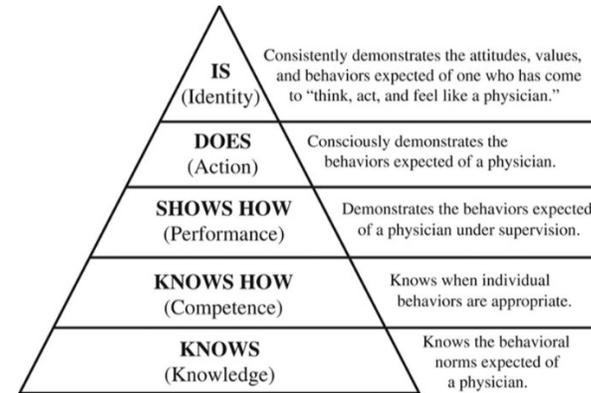


PHASE 2 CLERKSHIPS

- Family Medicine - 4 weeks
- Surgery - 6 weeks
- Internal Medicine - 8 weeks
- Neurology - 2 weeks
- Pediatrics - 5 weeks
- Psychiatry - 5 weeks
- Research - 4 weeks
- Obstetrics & Gynecology - 6 weeks

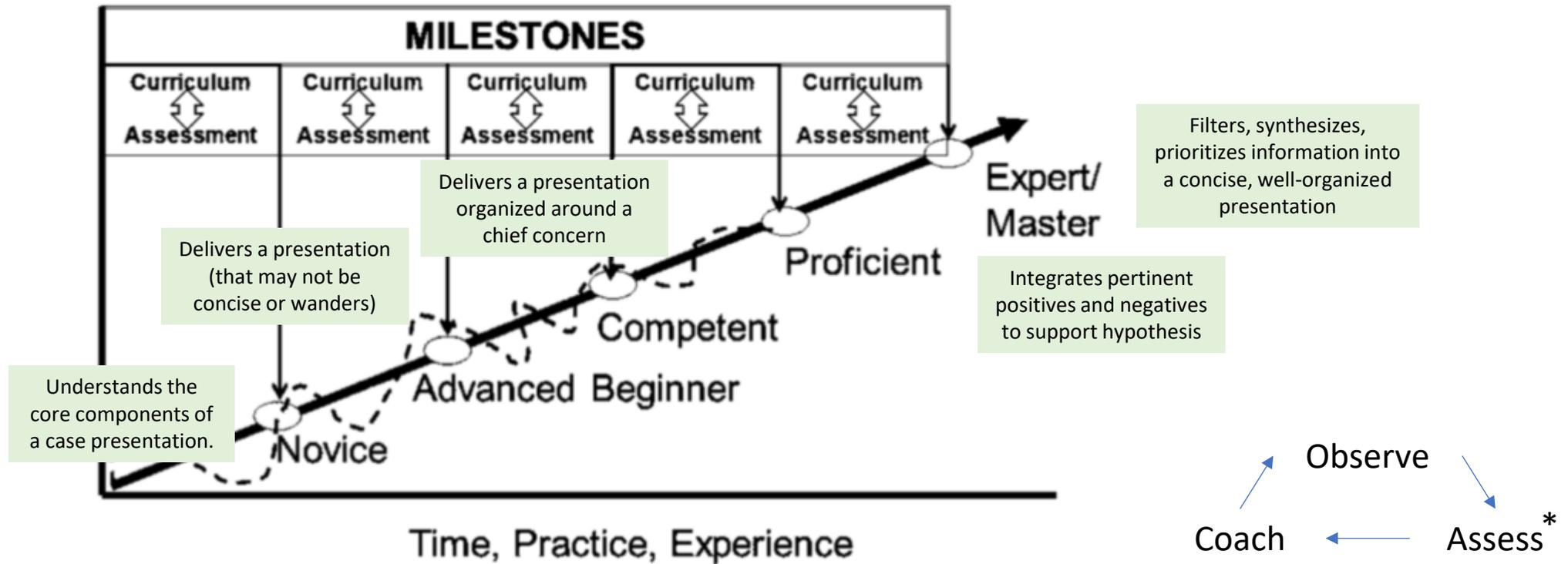
CBME in UME....but time-driven?

- Frequent, low-stakes assessments
- Personalized learning plans
- Coaching
- Shortened Phase 1, expanded Phase 3 allows for personalized learning



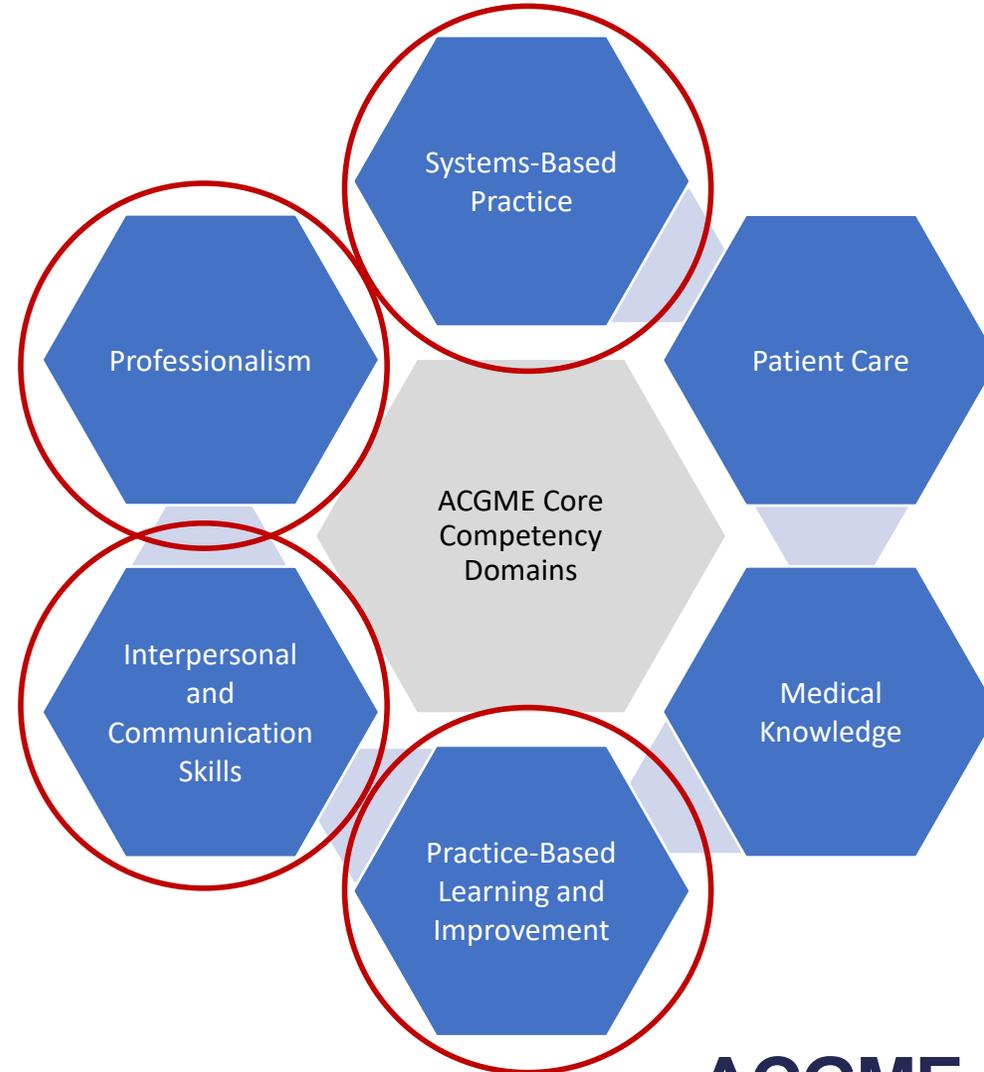
To assess competence, we need milestones!

Competency/EPA – Provide an Oral Presentation of a Clinical Encounter.
Key function: Provide accurate, well-organized oral presentation.



*No Clinical Competency Committee (CCC)

What are the Harmonized Milestones?



VTCSOM Educational Program Objectives and Subcompetencies

Domain 1: Patient Care

EPO1: Gathering Essential, Accurate Information

SC1: Interview skills

SC2: Physical and mental status examination

EPO2: Clinical and Diagnostic Reasoning

SC3: Differential diagnosis

EPO3: Patient Management Plans

SC4: Diagnostic tests and specialty consultations

SC5: Treatment plans

SC6: Support in management plans

EPO4: Health Maintenance and Prevention

SC7: Communicating preventive care recs

EPO5: Procedural Skills

SC8: Clinical procedures

Domain 2: Medical Knowledge

EPO6: Biopsychosocial Scientific Principles

SC9: Basic science foundation

EPO7: Scientific Approach to Clinical Situations

SC10: Scientific approach to clinical situations

EPO8: New Healthcare Knowledge and Practice

SC11: Research



Domain 3: Systems-Based Practice

EPO9: Systems Thinking

SC12: Systems thinking

EPO10: Patient Safety and Quality Improvement

SC13: Prevention of patient safety events

SC14: Patient safety

SC15: Disclosure of patient safety events

SC16: Quality improvement

EPO11: System Navigation for Patient Centered Care

SC17: Care coordination of a patient's care

SC18: Transitions of care and handoffs

SC19: Population/community health needs, inequities

EPO12: Physician Role in Healthcare Systems

SC20: Healthcare delivery and change agency

SC21: Policy and advocacy

SC22: Transition to practice

SC23: Leadership



Domain 4: Practice-Based Learning/Improvement

EPO13: Evidence Based and Informed Practice

SC24: Critical thinking and inquiry

SC25: Appraisal and evidence-based medicine applications

EPO14: Personal Growth and Reflective Practice

SC26: Personal performance data

SC27: Reflective practice

SC28: Personal and professional learning plans



Competency Domain 5: Professionalism

EPO15: Professional Behavior and Ethical Principles

SC29: Professionalism adaptations

SC30: Ethical principles, practice, and solutions

SC31: Responsible conduct of research

EPO16: Accountability/Conscientiousness

SC32: Conscientious behaviors

EPO17: Self-Awareness and Help-seeking

SC33: Self-awareness and well being

SC34: Help-seeking for professional growth



Domain 6: Interpersonal and Communication Skills

EPO18: Patient and Family-Centered Communication

SC35: Rapport and therapeutic relationships

SC36: Communication approaches to minimize barriers

SC37: Shared-decision making

EPO19: Interprofessional and Team Communication

SC38: Collaborative consultations

SC39: Teaming and team performing improvement

EPO20: Communication within the Healthcare System

SC40: Oral presentations, EHR documentation

SC41: Communication of systems issues

EPO21: Scientific Communication - Pts, Colleagues

SC42: Communication of scientific evidence

What about assessing Harmonized Milestones in UME?

- span all learning settings...
 - milestones that are *harmonized* across the entire curriculum
 - Preparation for clerkships and identity formation
- Which competency domains?



INTERPROFESSIONAL & TEAM COMMUNICATION

COMMITMENT TO PERSONAL GROWTH & REFLECTIVE PRACTICE

ACCOUNTABILITY & CONSCIENTIOUS BEHAVIOR

- Attendance
- Timely completion of assignments
- Attention to course expectations and details

| Subcompetency | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
|--|---|--|--|---|------------------------------------|
| CD5_S32: Conscientious Behaviors Ability to demonstrate conscientious behaviors for effective and responsible medical practice as a student physician. | Takes responsibility for failure to complete tasks and responsibilities, identifies potential contributing factors, and describes strategies for ensuring timely task completion in the future; responds promptly to requests or reminders to complete tasks and responsibilities | Performs tasks and responsibilities in a timely manner with appropriate attention to detail in routine situations; recognizes situations that may impact own ability to complete tasks and responsibilities in a timely manner | Performs tasks and responsibilities in a timely manner with appropriate attention to detail in complex or stressful situations; proactively implements strategies to ensure that the needs of patients, teams, and systems are met | Recognizes situations that may impact others' ability to complete tasks and responsibilities in a timely manner | Takes ownership of system outcomes |

Assessing Harmonized Milestones in Phase 1

- Formative cumulative assessment released with semester grades
- Illustrate growth across competencies
- Comments from faculty on milestones
- Inform learning plans, coaching discussions, remediation

Accountability/Conscientiousness [VTC-PROF2_EPO16]

I. Conscientious Behaviors: Ability to demonstrate conscientious behaviors and accountability (CD5_S33)

| | | Unsatisfactory | Novice | Practicing | Met Milestone |
|--|---|---|---|---|---|
| | N/A - Did not have the opportunity to observe | Arrives late to or does not attend required event(s) and does not communicate | Arrives late to or does not attend required event(s) and does not demonstrate *conscientious behaviors (e.g., communicated after prompting) | Arrives late to or does not attend required event(s), but demonstrates *conscientious behaviors | Attends required event(s) and ready to engage at designated start time. |
| *1. Milestone 1: Attendance (CD5_S33) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**Conscientious behavior is defined as effective and timely communication and effort*

Sources of Evidence

1. **Basic Science:** PBL attendance and tardiness (PBL Spiral #13), Anatomy attendance and tardiness noted, attendance at any other designated required sessions and tardiness noted
2. **Clinical Science:** Attendance at any designated required sessions and tardiness noted
3. **HSSIP:** Attendance at any designated required sessions and tardiness noted; HSSIP small-group facilitator assessment of student (#1)
4. **Research:** Attendance at any designated required sessions and tardiness noted

Comments:

| | | Unsatisfactory | Novice | Practicing | Met Milestone |
|--|---|---|---|---|-------------------------------|
| | N/A - Did not have the opportunity to observe | Does not submit assignment(s), or submits them late, and does not communicate | Submits assignment(s) late and does not demonstrate *conscientious behaviors (e.g., communicated after prompting) | Submits assignment(s) late, but demonstrates *conscientious behaviors | Submits assignment(s) on time |
| *2. Milestone 1: Timely completion of assignments (CD5_S33) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**Conscientious behavior is defined as effective and timely communication and effort*

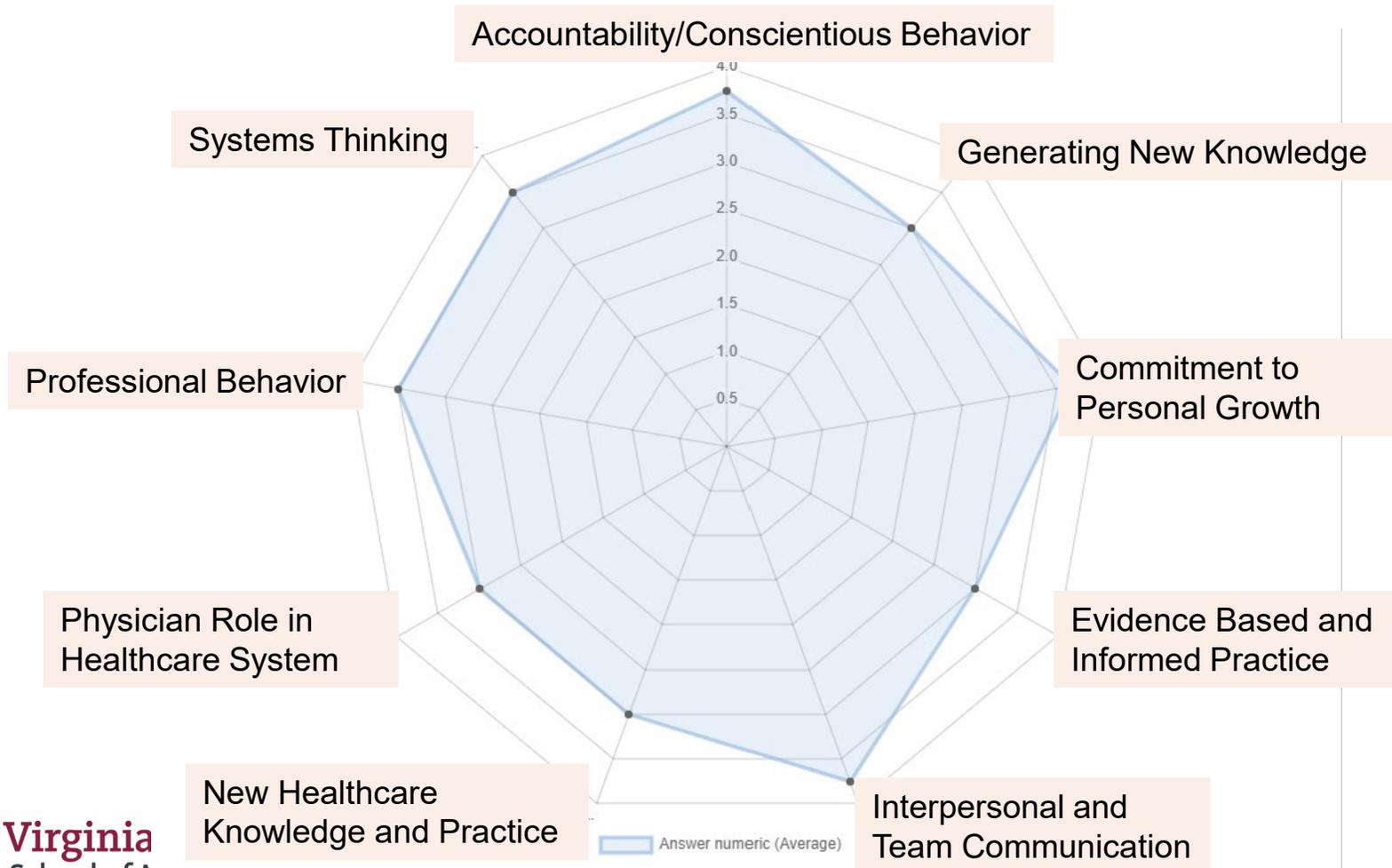
Sources of Evidence

1. **Basic Science:** PBL SPIRAL #11; Anatomy Lab Safety Quiz; Formative Exam completion
2. **Clinical Science:** Timely submission of all assignments and related communication noted (e.g., self-reflections, write-ups, LACE presentations, peer feedback, articulate modules, cornerstone modules, group assignments)
3. **HSSIP:** Timely submission of all assignments and related communication noted
4. **Research:** Timely submission of all assignments and related communication noted.

Comments:

Feedback on harmonized milestones

- Formative cumulative assessment released with semester grades



- Illustrate growth across competencies
- Comments from faculty on milestones
- Inform remediation

Developing competence across the continuum

- Aligning UME harmonized milestone assessments with assessments in the clinical learning environment (then GME, than CPE!)
- Miller's pyramid: higher-order competencies are harder to assess AND essential!
- Systems thinking is a VTCSOM strength!

