Preparing the Next Generation of Health Professionals: Advancing Competency-Based Education and Assessment

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American Board of Pediatrics

The Warren Alpert Medical School of Brown University

Symposium for Medical Education, Innovation, Equity, and Well-being

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No disclosures

OUR VISION
Advancing the health of all children.

The CBE journey began many years (decades...) ago

CBE is Patient-Focused and Learner-Centered

Image created by Microsoft Copilot

Feb 09 - Feb 11
2025
Sun - Tue

Event

EVENT REGISTRATION ❯

2025 PROGRAM ❯

LIST OF PARTICIPANTS ❯

Event Information

- Location
- Hotels
- Transportation
- Restaurants
- Airports
- Organizing Committee

I C B E
COLLABORATORS

Forum 2025 Stanford

Building the Future of CBE

University of Illinois Chicago College of Pharmacy, Chicago, IL, USA
ᶠ Auburn University, Harrison College of Pharmacy, Auburn, AL, USA

Core Components of CBE

Defining the Outcomes

Many specialties and disciplines have come together to define their outcomes using the EPA framework

Van Melle et al. *Academic Medicine, 2019.*

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Defining the Outcomes Framework – Entrustable Professional Activities (EPAs)
(for pediatrics, also known as Everyday Pediatrician Activities)

Outcomes competency framework

- Activities that **patients need**
- Expectations/outcomes for a specialty
- Integrate many different competencies
- Guide for *both* curriculum and assessment

A Non-Medical Example of an EPA

Competencies and Milestones
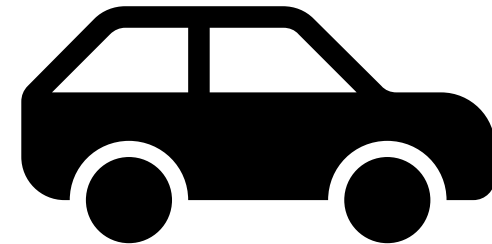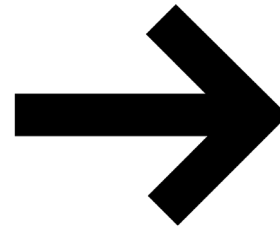
EPA

Can they control the steering wheel?

Can they use the gas pedal?

Are they able to maneuver road changes?

Can they use the turn signals?

Can they safely drive a car?

A Non-Medical Example of an EPA

Competencies and Milestones
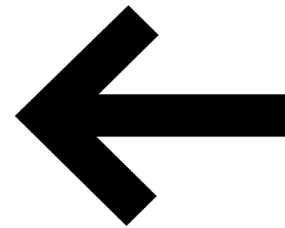
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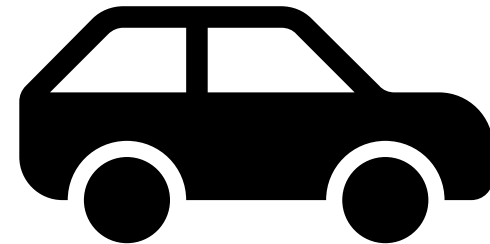
Can they use the turn signals?

EPA

Can they safely drive a car?

Examples of Outcomes Frameworks

Sample General Pediatrics EPAs

- Care for the Newborn
- Manage Common Problems
- Manage Behavioral Health Problems
- Population Health Improvement

Sample Family Medicine Outcomes

- Diagnose and manage acute ... for people of ... pregnancy care ... manage common ... problems

Sample General Surgery EPAs

- Evaluation and Management of a Patient with Acute Abdomen
- Provide Surgical Consultation
- Evaluation and Management of a Patient with RLQ Pain and Appendicitis

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Core Components of CBE

Program Assessment

Learning experiences adapted based on individual progression to a clearly defined expectation (e.g. EPAs, core outcomes, etc.)

Competency Focused Instruction

Learning Experiences

Core Components of CBE
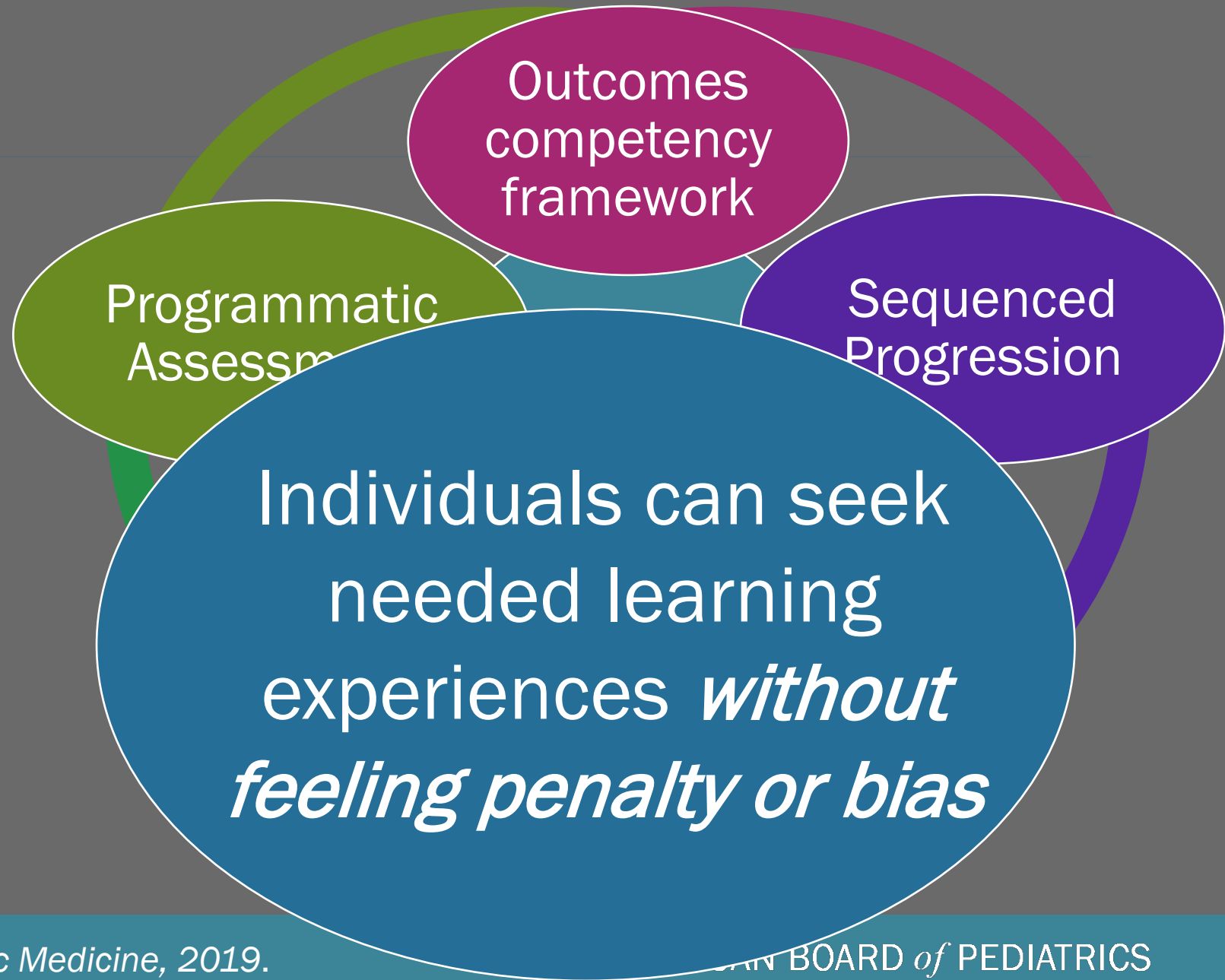
Outcomes competency framework

Programmatic Assessm

Sequenced Progression

Individuals can seek needed learning experiences *without feeling penalty or bias*

Van Melle et al. *Academic Medicine, 2019.*

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Core Components of CBE

Outcomes competency framework

Sequenced Progression

Tailored Learning Experiences

Teachers tailor their approach to the needs of each learner, based on clear expectations
(e.g. EPAs, core outcomes)

Van Melle et al. *Academic Medicine, 2019.*

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Core Components of CBE

Gathering of multiple data points from multiple sources

Outcomes Competency Framework

Sequenced Progression

Tailored Learning Experiences

Focused Instruction

Van Melle et al. *Academic Medicine, 2019.*

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CBE moves us toward a more equitable assessment system

- Intentionality in development and implementation of CBE is critical to advancing equity[1,2]
- In Pediatrics, the EPA framework sets an expectation for all pediatricians to address inequities[3]

[1] Klein et al, *Acad Med* 2022

[2] Busari et al. *Med Teach*, 2024

[3] Unaka et al. *Pediatrics*, 2022

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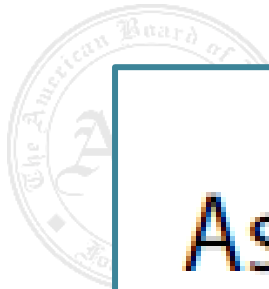
Systematically review programmatic assessment data for bias and respond to any problems (group differences in assessed performance, analysis of language used in narrative comments (program leaders)

Involve learners in creating and implementing assessment plans (learners, faculty, program leaders)

Busari et al. *Medica*

Why is this change important?

Data Demonstrate Variation in Education Outcomes at the Time of Program Completion

Decisions Being Made by Training Programs are Often Based on (Very) Limited Information

A common approach to decisions is to 'default' that trainees should progress unless there are specific concerns
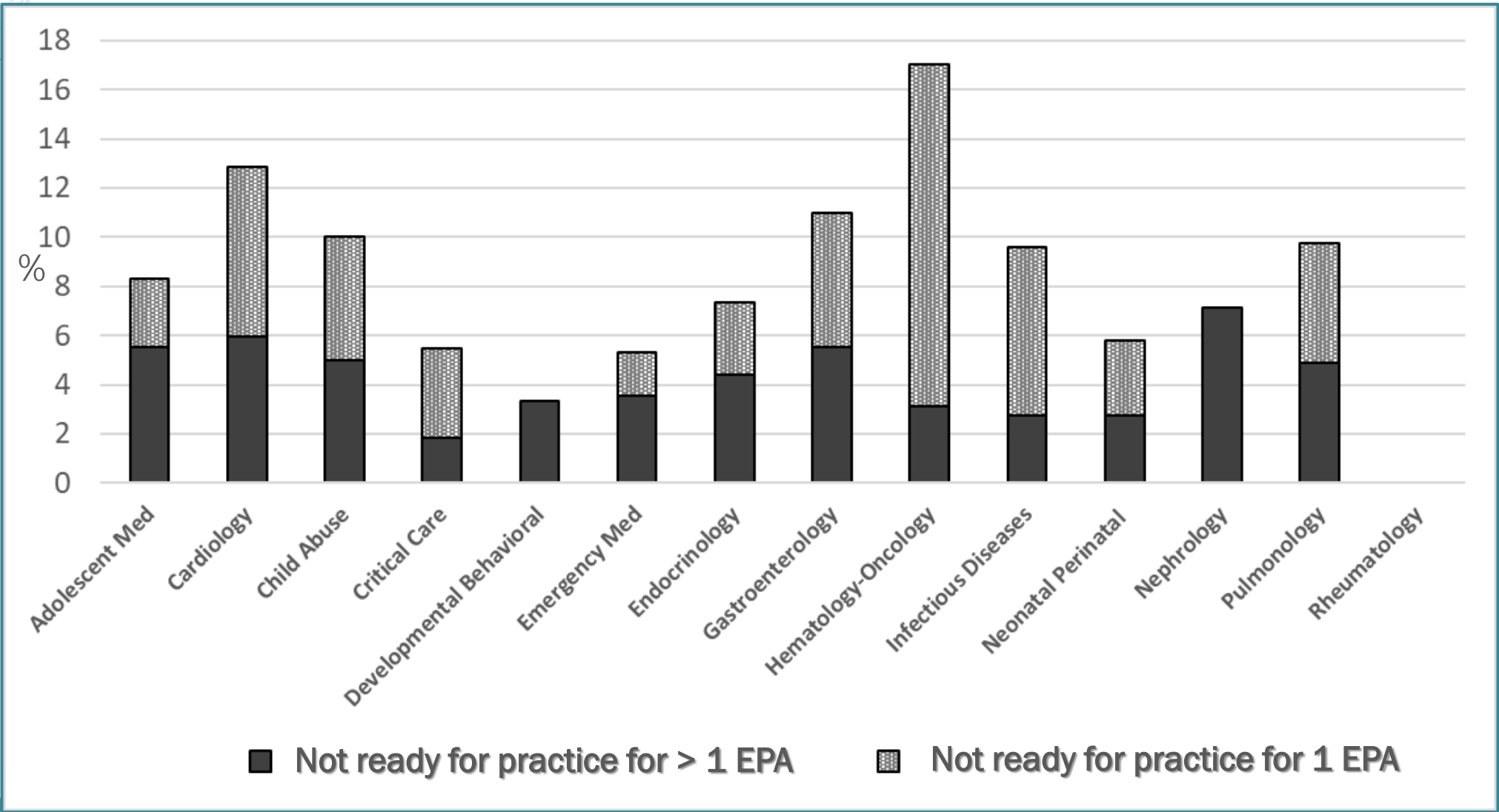
Data from

Table 2. Percentages of Graduating Residents Reaching Entrustment With Unsupervised Practice

EPA	Prior Study – % Ready for Unsupervised Practice	Current Study – % Ready for Unsupervised Practice*
	Level Associated With Entrustment	Graduating Residents Reaching Entrustment With
Health Screening	98	89
Newborn Care	93	88
Acute Common Diagnosis	91	76
Medical Home – Well Child	91	85
16 Handovers	5	5	94 (90-96)
17 Procedures	Expanded 5	7	89 (84-93)

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Graduating Pediatric Subspecialty Fellow Readiness for Practice is Variable

Legend: ■ Not ready for practice for > 1 EPA   ▨ Not ready for practice for 1 EPA

Readiness of Graduating General Surgery Residents to Perform Colorectal Procedures

Jocel

Nursing Graduates' Preparedness for Practice: Substantiating the Call for Competency-Evaluated Nursing Education

Tamr

Work readiness of pharmacy graduates: An exploratory study.

Wei Jin Wong [a,1,*], Ronald FS Lee [a,1], Li Yun Chong [a], Shaun Wen Huey Lee [a], Wee Ming Lau [b]

Vu et al. J Surg Educ 2021
McGarity et al. Behav Sci 2023
Wong et al. Explor Res Clin Soc Pharm 2023

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How do we move toward a more authentic approach to competency-based education and assessment?

Engaging everyone, *especially the learners,* in transforming the education and assessment process

General Pediatrics Pilot to Enhance Direct Observation with Smartphone-based Frontline Assessments

- Implementing an App for EPA- based frontline data collection

- Implementing a Dashboard for reporting and analytics

- Optimizing equity in assessment

Society for Improving Medical Professional Learning (SIMPL)

A 501(c)3, volunteer-led, collaborative network

400 residencies
10,000 physicians
20 specialties
7 countries

Funded by member programs + grants

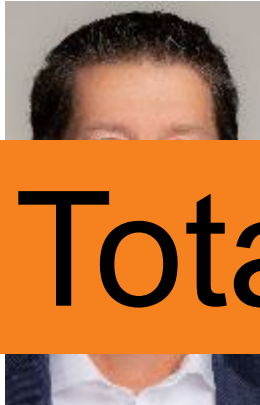Governed by over 40 medical educators organized in 6 committees

David (resident) works with Pat (preceptor) in which a patient presents with ADHD in Primary Care Clinic

Pat initiates an assessment by searching for and choosing
- David's Name
- Primary Care Setting
- The EPA entitled:
  "Behavior/mental health problem"

Pat Answers question 1:

... at most closely ...ared for together?

A. ADHD
B. Anxiety
C. Depression
D. Behavior Concern
E. Learning difficulty/disorder
F. Suicide or Self-Harm
G. Autism/ASD
H. Eating Disorder
I. Other Mental Health Concern

Total time: < 3 minutes

2. Patient complexity

3. Supervision

4. Practice Readiness

5. Narrative comments *(dictated into her phone)*

Completed form appears in David's App

Data is incorporated into SIMPL database and informs reports and dashboards

Slide courtesy of Ariel Winn, MD (Boston Children's Hospital)

Pilot experience to date…

- 15 Pilot Sites
  - Onboarding in phases
  - Nearly 3000 assessments in the first few months
- Forms are simple and easy to use
  - Less than 3 minutes to complete
  - All of the forms are being used
- Early qualitative feedback has been very positive

Goal is *Meaningful* Education and Assessment

Outcomes competency framework (i.e. EPAs)

Programmatic Assessment

CBE

Sequenced Progression

Competency focused Instruction

Tailored Learning Experiences

Van Melle et al. *Academic Medicine, 2019.*
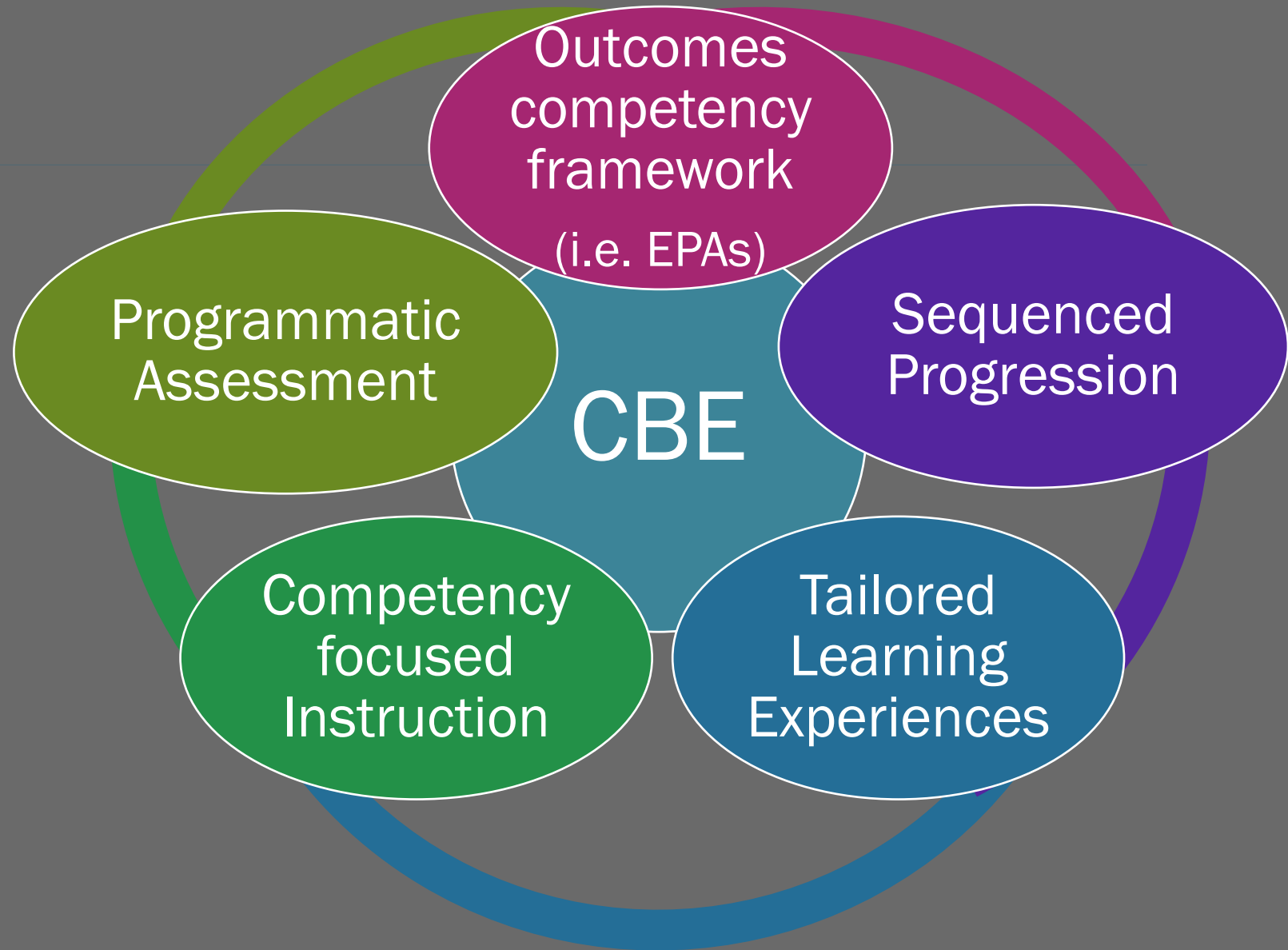
Opportunities for the Future of Competency-Based Assessment

- Addressing imperfect and inequitable Clinical Learning Environments

- Breaking down silos across the continuum and facilitating transitions

- Shifting to a true growth-oriented mindset

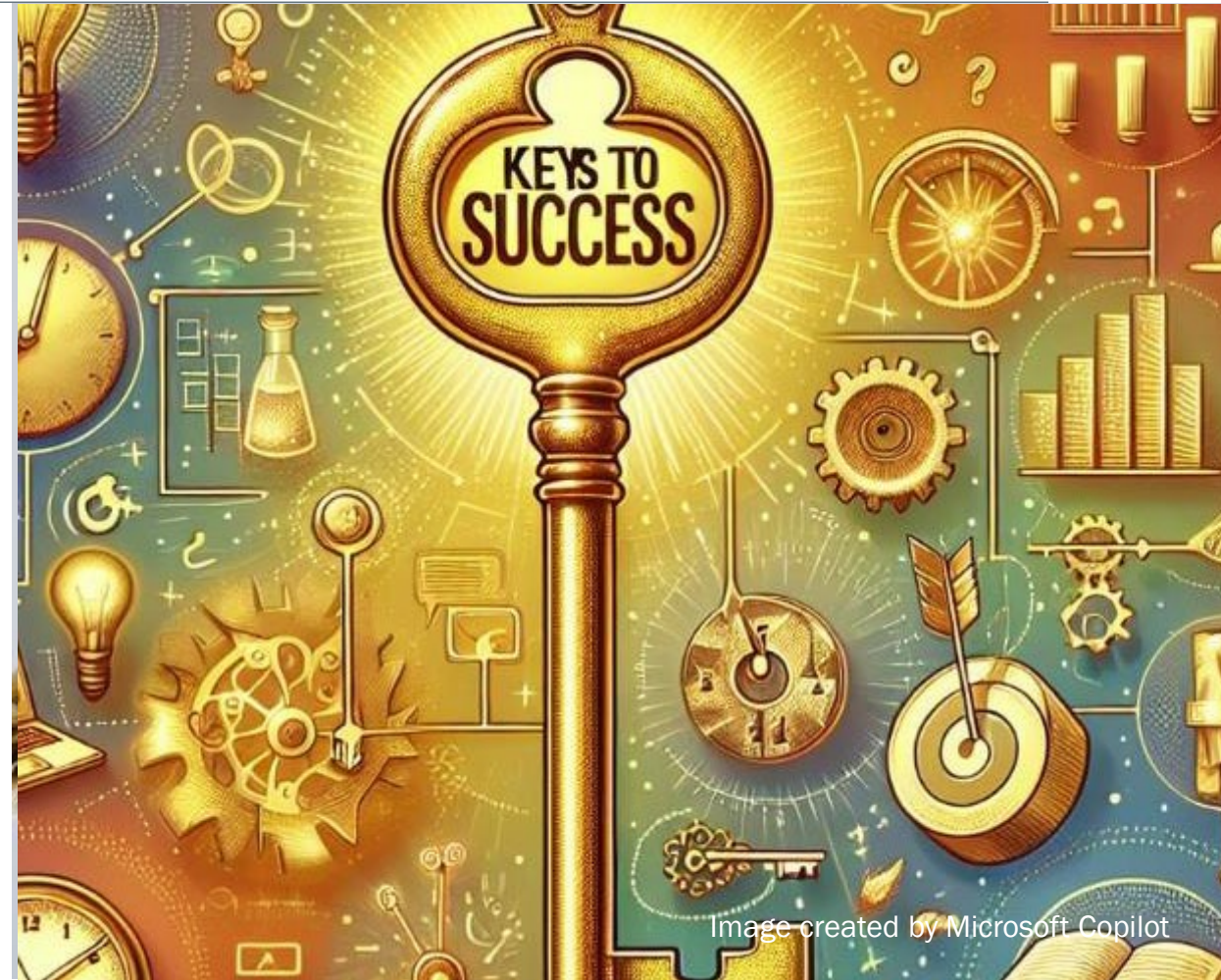- Navigating the need for both *assessment for learning* and *assessment of learning*

Image created by Microsoft Copilot

"Journey of a thousand miles begins with a single step" *Laozi*

Thank You

dturner@abpeds.org