

Assessment: Hot Topics

Fall 2023 APPD

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Assessment: A HUGE topic!



Assessment Learning Community



Goals:

- To engage and develop members through project-based working groups
- To promote scholarship through study of processes and procedures in working groups
- To foster leadership and collaboration through partnerships with other LCs

But really....



We're on your team!

Our true purpose = meeting your assessment needs



Breaking it down: some Hot Topics in Assessment



1. CBME and EPAs
2. Recruitment
3. Equity in Assessment



Hot Topic 1: CBME and EPAs

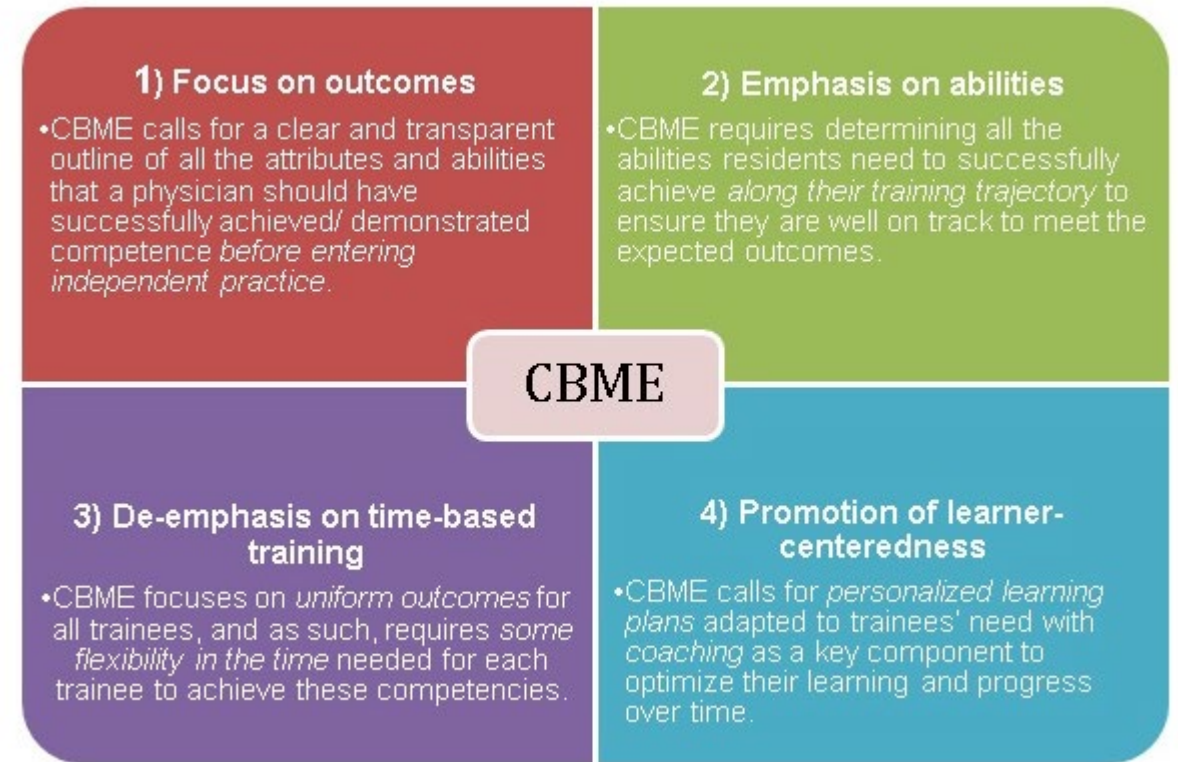
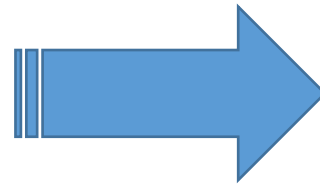
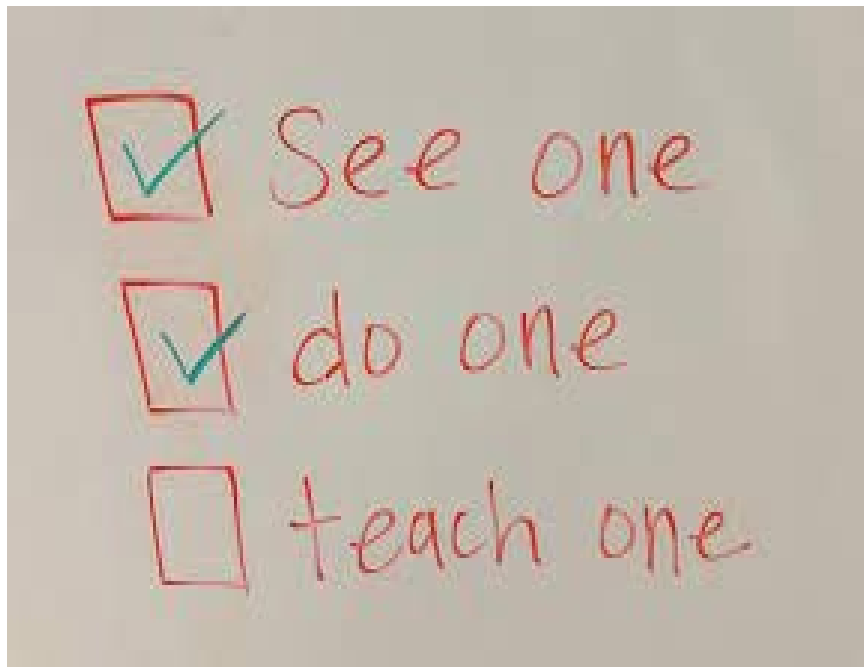


(Competency-Based Medical Education and Entrustable Professional Activities)

Objectives:

1. Appreciate the educational value of a CBME system
2. Begin to consider incorporating EPA assessments into your programs

Foundational shift in assessment in Med Ed

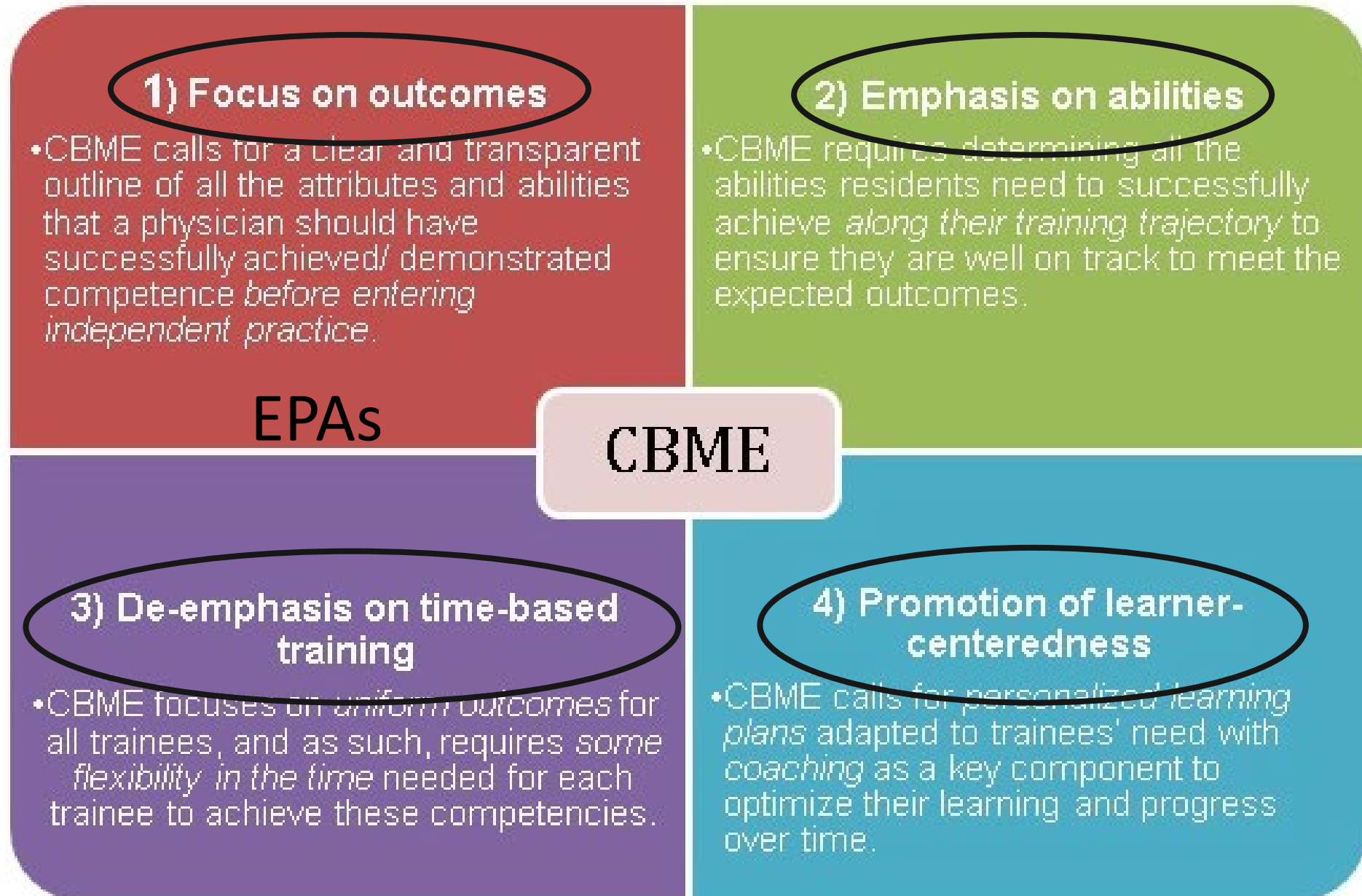


Why should we care?



CBME and EPAs:

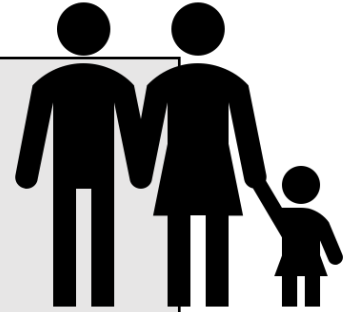
1. Are a framework for comprehensive medical education, valuing both the **patient** and the **learner**
2. Will be used by the ABP for certification decision making starting 2028



CBME is Patient-Focused and Learner-Centered

CBME is Patient-Focused

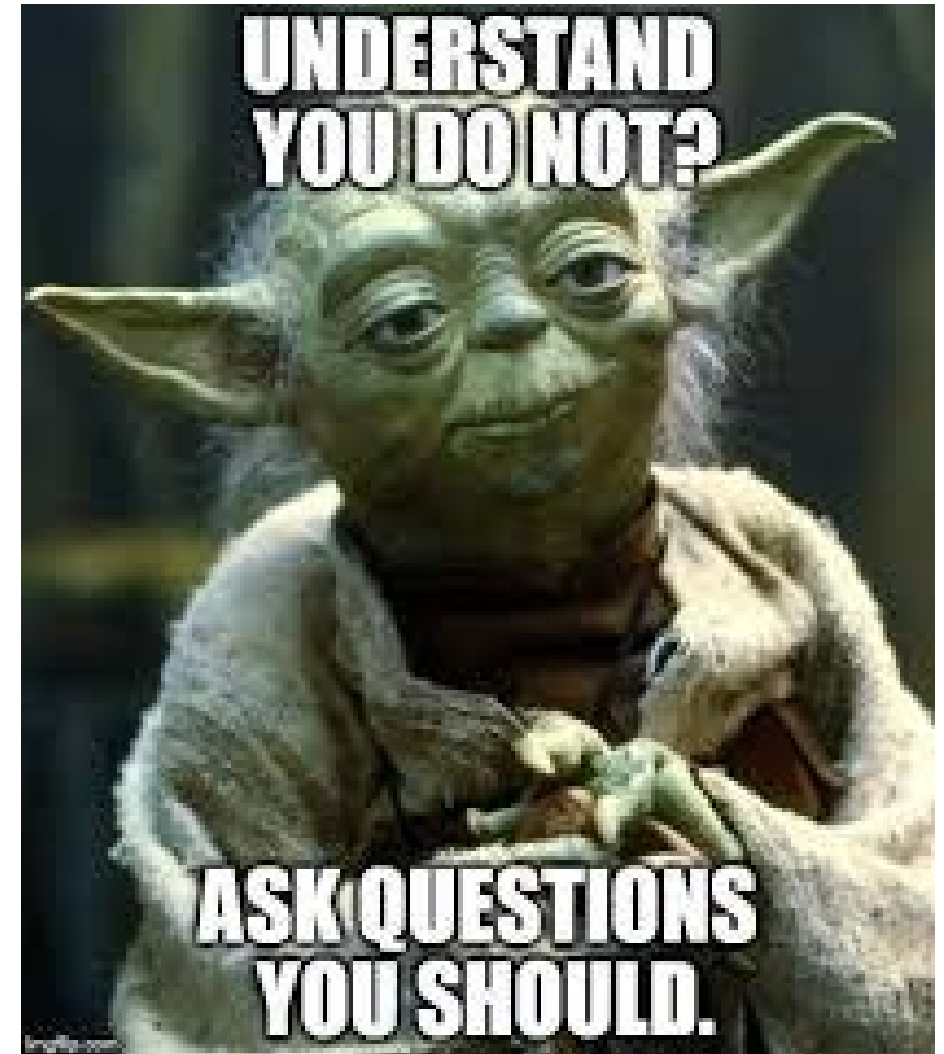
- CBME begins by defining the desired patient outcomes_{EPAs!}
- Patient needs → knowledge, skills and attitudes needed for a pediatrician



CBME is Learner-Centered

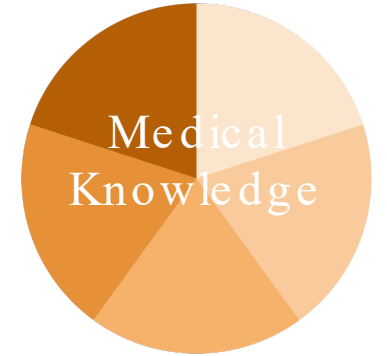
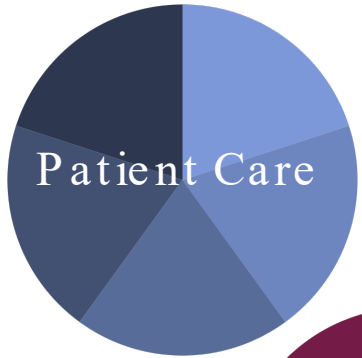
- Individual trainee strengths and areas of growth are identified
- Curricula individualized, with opportunities for coaching, mentoring, and continued growth

If we have
Competencies and
Milestones, why do
we need EPAs?

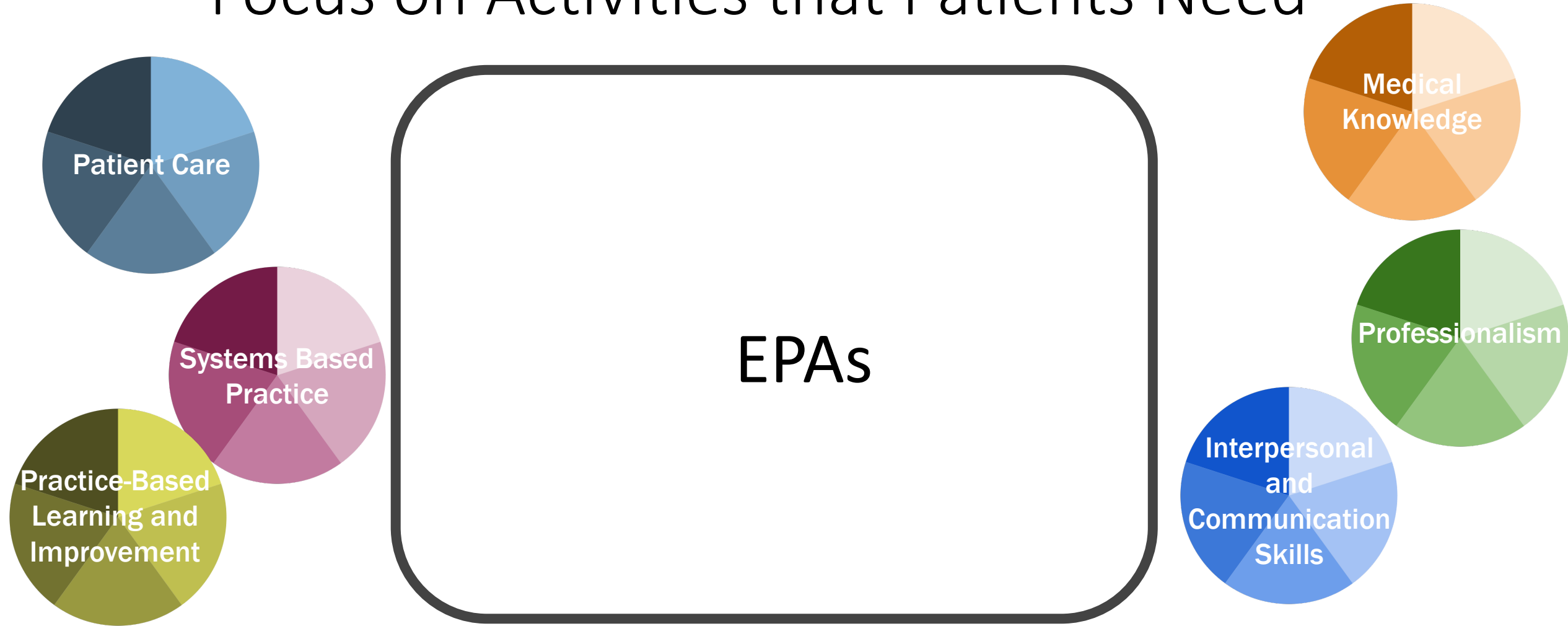


Milestones Leave Gaps in Assessment

- Competencies and Milestones focus on **small, isolated tasks**
- Care delivery requires the integration of those tasks
- Assessment of competencies/milestones is difficult without **context**



EPAs Bring Together the Competencies and Focus on Activities that Patients Need



A Non-Medical Example of an EPA

Competencies and Milestones

Can he control
the
handlebars



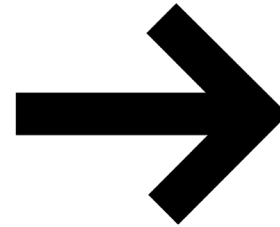
Can he
independently
secure his
helmet?



Can he use the
breaks?



Can he follow
traffic laws and
road signs?



EPA



Can he safely ride
a bike?

EPA Framework

Developed by the pediatrics community and the ABP

17 EPAs for
General
Pediatrics

7 EPAS
Common to all
Subspecialties

3-6 EPAs for
Each Specific
Subspecialty

What does an EPA look like?

EPA 3: Care for the Well Newborn

Supervision Scale for This

1. Trusted to observe o
2. Trusted to execute w
 - 2a. As a coactivity
 - 2b. With the super
3. Trusted to execute w
 - 3a. ALL findings d
 - 3b. KEY findings d
4. Trusted to execute u
(phone), findings revie
5. Trusted to execute w
 - 5a. Not yet ready t
 - 5b. Also trusted to

**Where supervisio
and further trainee*

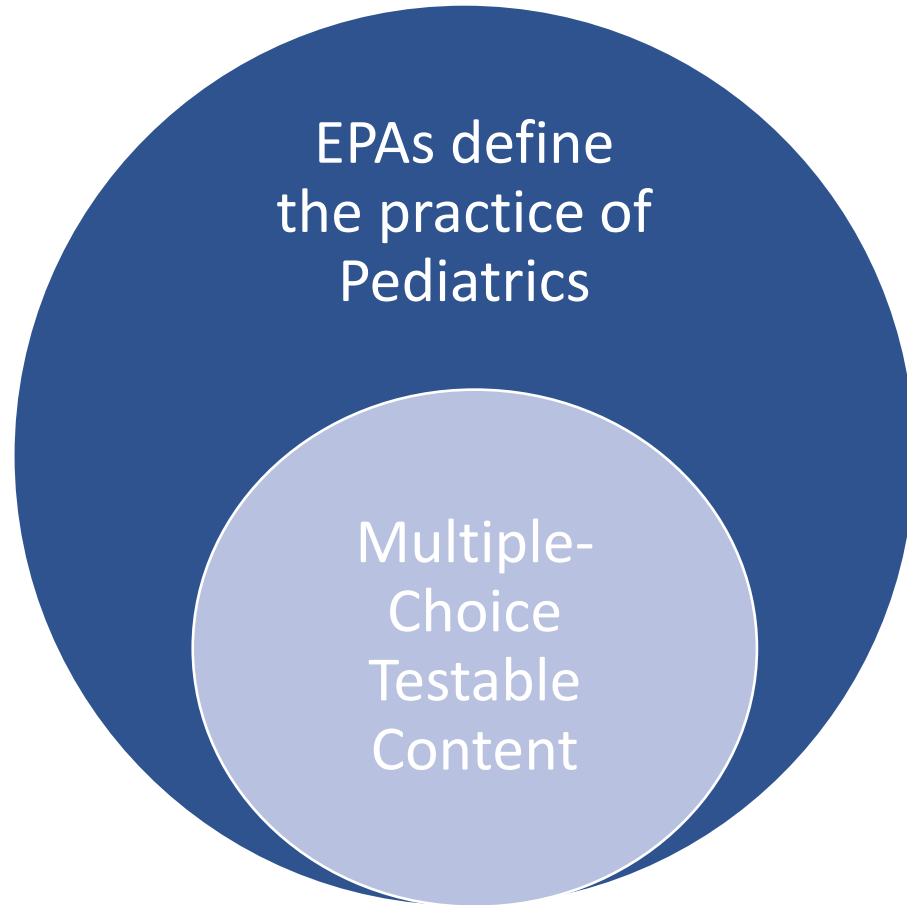
Description of the Activity

Care of the well newborn in the immediate perinatal period will occur predominantly in the newborn nursery. Scope of practice for this EPA includes well full-term and late pre-term infants. A pediatrician is also expected to manage the common problems that occur in these newborns.

The specific functions which define this EPA include:

- Performing a physical examination to look for normal variations, abnormal signs and congenital anomalies
- Identifying and applying key evidence-based guidelines for care of the newborn
- Providing routine care, as well as addressing common problems that develop within the first 28 days of life
- Using judgment to know when common problems can be handled at home, and arrange for discharge and follow up
- Assessing maternal/family readiness to care for the infant post discharge
- Transitioning care to the community practitioner
- Demonstrating confidence that puts new parents at ease

EPAs Define the Practice of Pediatrics



EPAs answer the question:

What do patients and families expect and need from their physician?

But—only *some* of the knowledge essential to this practice can be tested by the Board exam

So at the end of training, the question is:

Is this learner ready to be trusted to perform this professional activity without supervision?

Schumacher, et al. asked...

And the answer (as of 2020) was often “No”

Looking closer...

- Only 53% of graduates were prepared for unsupervised practice in the Behavioral Mental Health EPA
- Less than 80% of residents were deemed ready for unsupervised practice by their PD/CCC at graduation for ***6/17 Gen Peds EPAs***
- ***These activities have all been deemed by the pediatrics community as essential for practice***

While that data is humbling...



The bright side:

Integrating EPAs into assessment early/often can address *both* individual learning *and* curricular/program gaps

The Bottom Line (or TL; DR in Gen Z-ese)

- EPAs are fundamentally important, to the patient and the learner
- The Board recognizes this, and is going to use them starting 2028
- We have more work to do to get our learners there



But remember....
We're on your team!



What are APPD members needs re: EPAs?

Likely many!

- Using them: Where? When? How?
- Teaching them: Faculty development for PDs and clinical faculty
- Translating them: EPA assessments in the real learning environment
- Integrating them: How do they work with the Milestones?

The Crosswalk Study



- Longitudinal pilot study on EPA implementation
- Many programs included
- Aims to ultimately inform the linkage between Milestones 2.0 and EPAs



Where we started:
WG formed in 2022



Along the Way :

- ELS at APPD 2023 Spring Meeting
- VC Aug 2023
- Expanding resources from the Crosswalk Study
- Ongoing regular meetings with EPA Working Group
- Continued offerings (in person, virtual, resource banking, etc)



Where we're going :
You and your program: ready by 2028!

Hot Topic 2: Recruitment!



Let's Talk About Recruitment!



Perfect Time
to Re-Examine
Your
Recruitment
Strategies!



Reason #1



Step 1



+



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Reason #1 – Goodbye, Step 1 Scores



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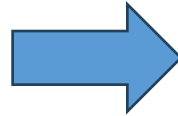


The Feasibility of Blinding Residency Programs to USMLE Step 1 Scores During GME Application, Interview, and Match Processes

BOX Factors Used in Absence of Step 1 Data

- AOA/Gold Humanism Honor Society
- Commitment to underserved communities
- Completed audition rotation with program
- Connection to Arizona/Southwest
- Languages spoken
- Leadership experience
- Leave of absence for academic reasons
- Mission fit
- MSPEs
- Research experience
- Schools with history of previous match at UACOM-T
- Specialty specific pre-clerkship performance
- USMLE Step 2 CK/COMLEX Level 2 CE Scores

Closer attention to clerkship comments and grades in pre-clerkship blocks



Two programs reported interviewing applicants they would have missed if they had screened with Step 1 data.

Reason #2

SURPRISE!

From ERAS with love!

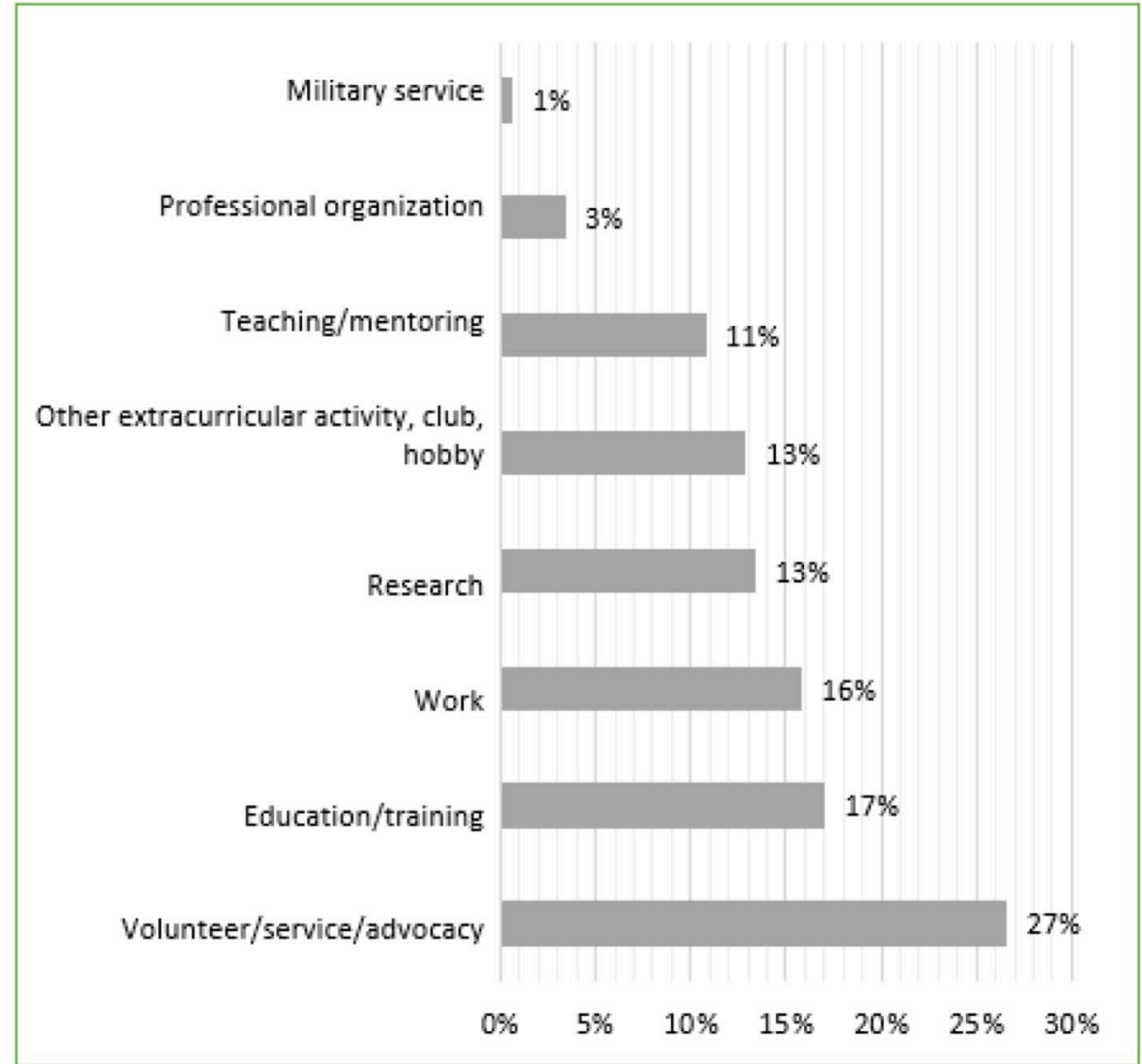


Part 1 - Revised and Reorganized Experiences Section in ERAS

- Applicants can list up to **10 experiences** that communicate who they are and what is most important to them.
 - Short descriptions focused on critical information (750 character limit)
 - Roles, Responsibilities, Context
- *Applicants can designate and describe up to three experiences they identify as the “most meaningful”*
- New experience types
 - Volunteer, Work, Hobby, Professional Organization
- More descriptive information about each entry
 - Position, Organization, Timeframe, Location, Frequency of Participation



% of Experience Types 2022- 2023





What Data Will You Use in Absence of Step 1 Scores?

10 selected experiences?

BOX Factors Used in Absence of Step 1 Data

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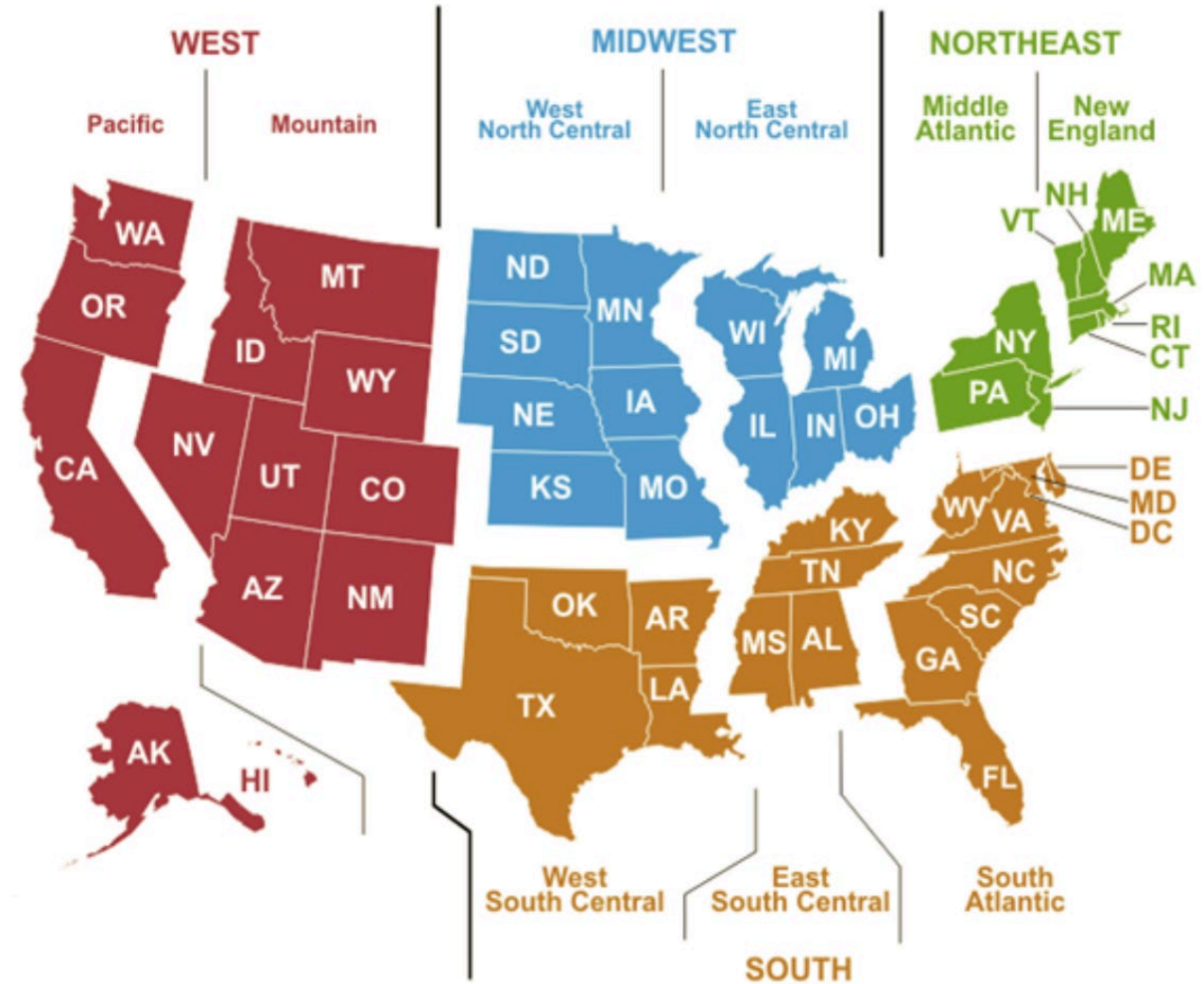
3 most meaningful experiences?

Remember to Consider Access and Mentorship

Reason #2

Part 2 - Signaling

- Applicants will have the opportunity to communicate their preference or lack of preference for
 - Up to **3 geographic divisions**
 - **Urban or rural** settings
- Pediatrics residency applicants who completed
 - Geographic preferences: 92%
 - Setting preferences: 91%
 - Program signaling: 90%



Do you care about signals? When do you care?

Letters of Recommendation have clear evidence of bias



Ways to Mitigate Bias in Letters of Recommendation



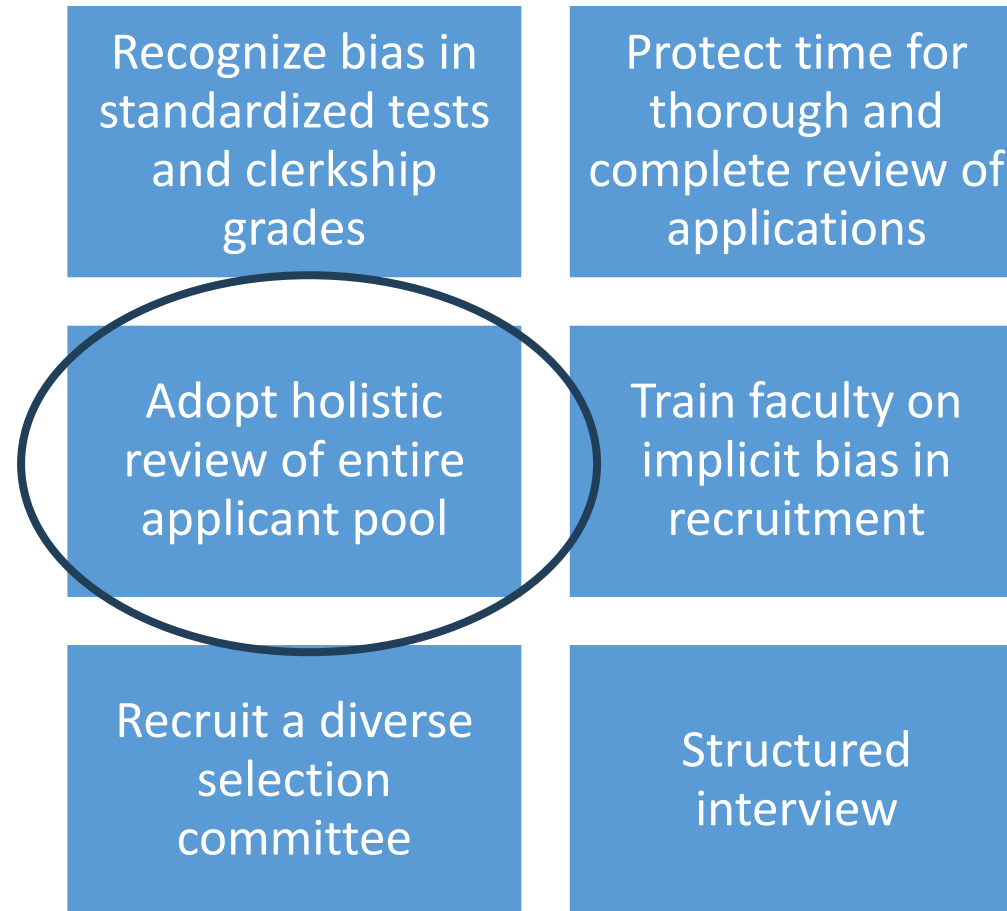
A Framework for Inclusive Graduate Medical Education Recruitment Strategies: Meeting the ACGME Standard for a Diverse and Inclusive Workforce

Reason #4



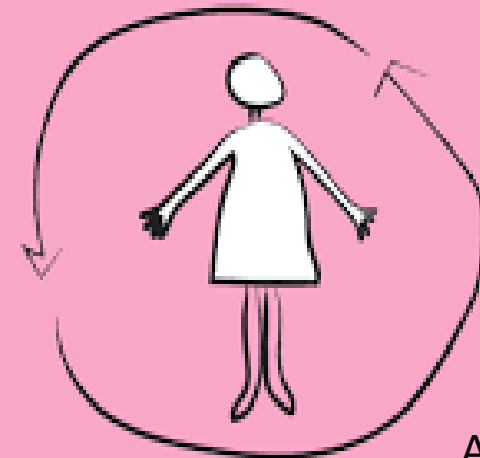
A Framework for Inclusive Graduate Medical Education Recruitment Strategies: Meeting the ACGME Standard for a Diverse and Inclusive Workforce

Implementing Inclusive Recruitment Practices



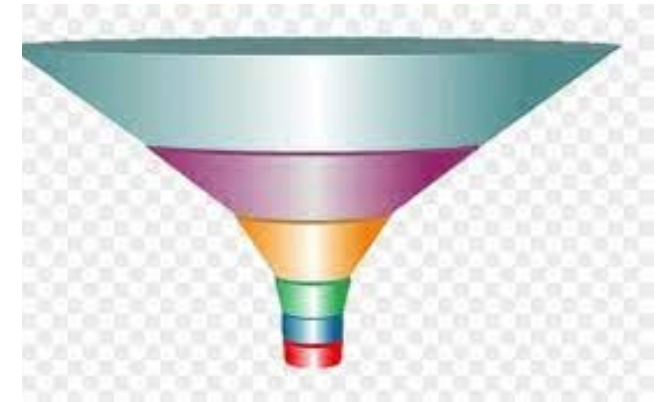
What is Holistic Review?

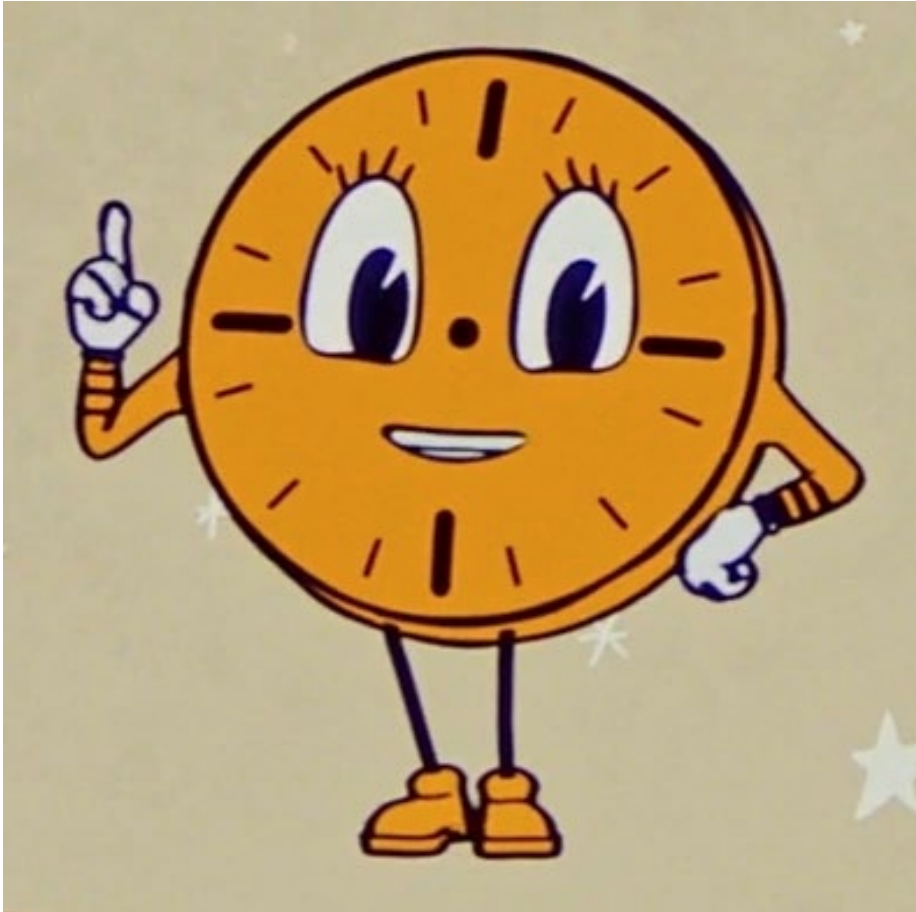
- Flexible, individualized way of assessing an applicant's capabilities, by which **balanced consideration is given to experience, attributes, competencies, and academic or scholarly metrics (EACM)** and, when considered in combination, **how the individual might contribute value to the institution's mission.**



Adapted from AAMC

Model for Holistic GME Selection





Time to Re-Examine Recruitment Strategies!

- Step 1 is Pass/Fail
- ERAS updates
 - Part 1 – Application changes
 - Part 2 – Signaling
- Awareness of Bias in Letters of Recommendation

**It's the perfect time for
Holistic Review!**

Hot Topic 3: Equity in Assessment !



Exploring Equity in Assessment

APPD Fall Conference 2023

Ariel Frey-Vogel, MD, MAT

Duncan Henry, MD

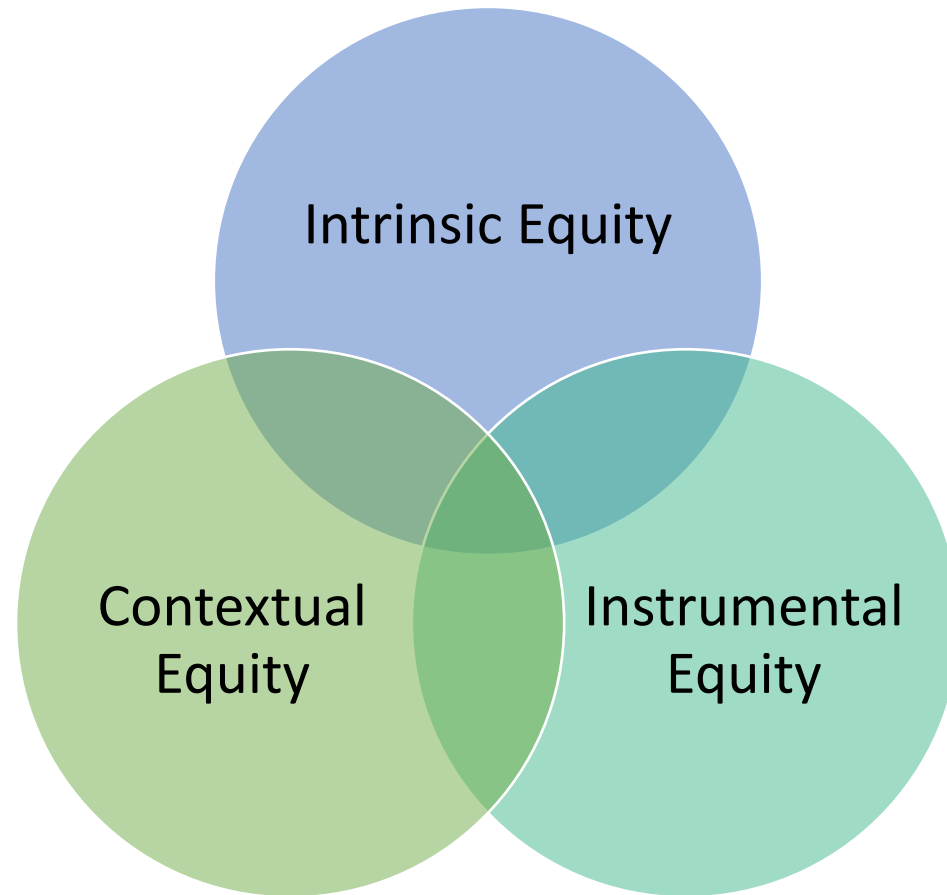
Objectives

- Propose a definition of equitable assessment and identify components of equitable assessment systems
- Highlight areas where bias and inequity may arise in assessment
- Discuss a framework for analyzing assessment in relationship to equity
 - In assessments (and what they ask for and how)
 - In assessors (and what they say or write)
 - In aggregate review (and how it's performed)
- Highlight potential strategies to enhance equity in assessment

Equity, Assessment, and Equity in Assessment

- Equity – state of being fair and achieving social justice¹
- Assessment – “processes employed to make judgements about the achievements of students (learners) over a course of study”²
- Equitable assessment – a system that facilitates future educational and career opportunities¹
 - Trainees have fair/unbiased opportunities to learn, be evaluated, coached, advanced, graduated, etc
 - AND neither the learning experiences nor assessments are negatively influenced by structural or interpersonal bias related to personal or social characteristics of both assessors and trainees

Facets of Equity in Assessment



Breaking Down Equity in Assessment

Instruments, Processes, and Systems

- What are some examples of inequitable assessments or assessment processes?
- What changes can one make to enhance assessments and systems to foster fairness and growth?

Assessors

- What does the literature say about inequity perpetuated by assessors/faculty?
- What is one strategy to employ that can begin to mitigate bias/injustice?

High Stakes Decisions and Consequences

- What is the potential impact of inequity in high stakes decisions?
- What strategies can be employed to diminish the presence of bias and foster sound and equitable decisions?

Instruments, Processes, Systems and Equity: An Example

- Qualitative study at a single institution analyzing faculty evaluations of 3 years of intern classes (2016 – 2018)
- Analyzed a total of 448 evaluations for 87 residents (17 men, 70 women)
- Men tended to receive comments that were more agentic (e.g. independence)
- Women tended to receive comments that were more communal (e.g. caring, enthusiastic, hardworking)
- Specificity of constructive feedback differed by gender as well (men >> women)

Words Matter: Examining Gender Differences in the Language Used to Evaluate Pediatrics Residents

Jessica M. Gold, MD, MS; Lahia Yemane, MD; Hannah Keppler, MD; Vidhya Balasubramanian, MS; Caroline E. Rassbach, MD, MA

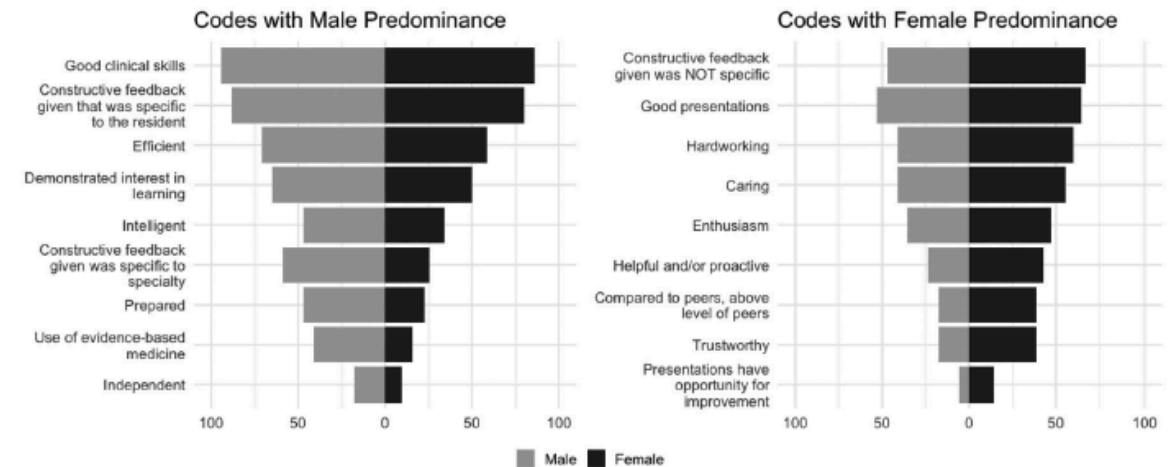


Figure 1. Frequency of codes applied to resident evaluations by resident gender, with significant ($SMD > 0.2$) imbalances by gender.

Instruments, Processes, Systems and Equity: A Path Forward

- Teherani et al, 2020
 - Qualitative study of 20 UIM learners (6 students, 14 residents)
 - Used a narrative research design and an anti-deficit lens
 - Asked to share 1-2 stories about achievements, assessments that captured achievement, mastery of learning, a patient-care related challenge
 - Also asked whether (and if so how) these were reflected in their assessments
 - Developed a model for equitable assessment
 - Focus on capturing achievements
 - Real time feedback with predefined expectations
 - Supportive, longitudinally connected clinical supervisors
 - Avoiding comparisons with peers
 - Using narrative assessment
 - Assessed for growth
 - Trained supervisors to avoid bias
 - Acknowledgement of learner identity

Instruments, Processes, Systems and Equity: A Path Forward

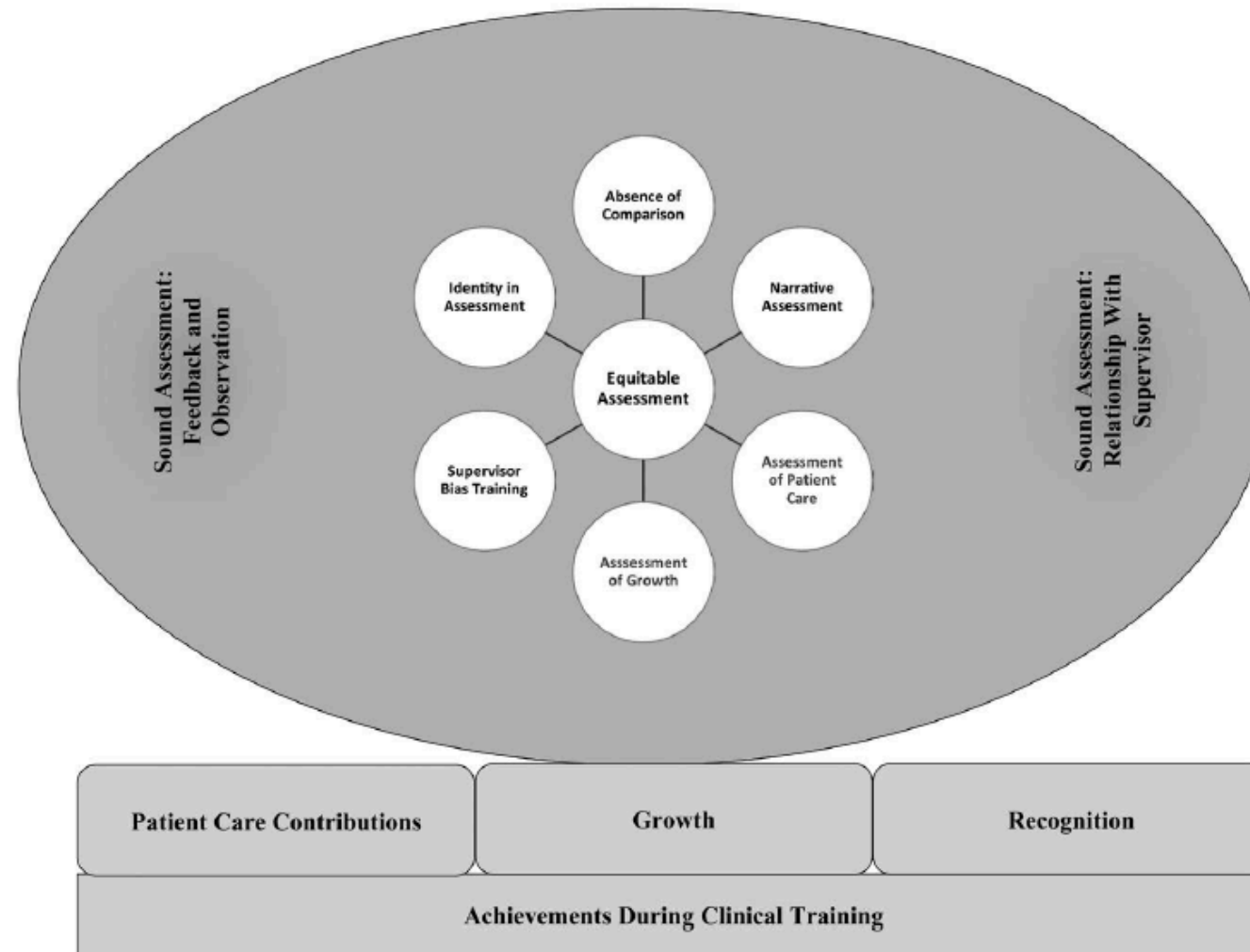


Figure 1 Characteristics of a sound and equitable clinical training assessment system built upon the foundation of achievement, based on interviews with 20 underrepresented in medicine (UIM) learners, 2019.

Instruments, Processes, Systems and Equity: A Practical Implementation

- Value narrative assessments
- Faculty development to focus on behaviors not attributes (observations not judgements)
- Support moving faculty from summative judgements to micro moments of growth-oriented feedback and assessment
 - Consider the literature around elements of coaching in clinical skills development
 - Read the work by Summer Telio, Becky Blankenburg, Jed Gonzalo
 - Amplify the number of assessments and decrease the power of any individual assessment
 - See work by Ben Kinnear, Eric Warm, Kevin Eva

A Disclaimer

- We are going to have to get uncomfortable with this next part
- Our systems are inherently built to value and reinforce white concepts of what it means to be a doctor, professional, and successful
- Facing this and dismantling this is challenging and will continue to be a journey

Assessors and Equity: The Evidence for Faculty

Association Between Resident Race and Ethnicity and Clinical Performance Assessment Scores in Graduate Medical Education

Robin Klein, MD, MEHP, Nneka N. Ufere, MD, MSCE, Sarah Schaeffer, MD, Katherine A. Julian, MD, Sowmya R. Rao, PhD, Jennifer Koch, MD, Anna Volerman, MD, Erin D. Snyder, MD, Vanessa Thompson, MD, Ishani Ganguli, MD, MPH, Sherri-Ann M. Burnett-Bowie, MD, MPH, and Kerri Palamara, MD



Original Investigation | Medical Education

Association of Gender With Learner Assessment in Graduate Medical Education

Robin Klein, MD, MEHP; Nneka N. Ufere, MD; Sowmya R. Rao, PhD; Jennifer Koch, MD; Anna Volerman, MD; Erin D. Snyder, MD; Sarah Schaeffer, MD; Vanessa Thompson, MD; Ana Sofia Warner, MD, MBA; Katherine A. Julian, MD; Kerri Palamara, MD; for the Gender Equity in Medicine workgroup

REVIEWS

Gender Bias in Resident Assessment in Graduate Medical Education: Review of the Literature

Robin Klein, MD MEHP¹, Katherine A. Julian, MD², Erin D. Snyder, MD³, Jennifer Koch, MD⁴, Nneka N. Ufere, MD⁵, Anna Volerman, MD^{6,7}, Ann E. Vandenberg, PhD, MPH¹, Sarah Schaeffer, MD, MPH⁸, and Kerri Palamara, MD⁹ From the Gender Equity in Medicine (GEM) workgroup



Klein et al, Acad Med 2022
Klein et al JAMA Network Open, 2020
Klein et al, JGIM 2019

Assessors and Equity: The Evidence for Residents

Gender Difference in Teaching Evaluation Scores of Pediatric Faculty

Kristin Tiedt, MD; Sarah Webber, MD; Jessica Babal, MD; Kirstin A.M. Nackers, MD; Ann Allen, MD; Carrie L. Nacht, MPH; Ryan J. Coller, MD, MPH; Jens Eickhoff, PhD; Daniel J. Sklansky, MD; Madeline Kieren; Kristin A. Shadman, MD; Michelle M. Kelly, MD, MS

RESEARCH REPORT

Differences in Trainee Evaluations of Faculty by Rater and Ratee Gender

Cullen, Michael J. PhD¹; Zhou, You , MA²; Sackett, Paul R. PhD³; Mustapha, Taj MD⁴; Hane, Jessica MD⁵; Culican, Susan M. MD, PhD⁶

Tiedt et al, Acad Ped 2023
Cullen et al, Acad Med 2023

Assessors and Equity: Potential Strategies

- What can faculty do to promote equitable assessment?
 - Set and model clear expectations for their teams
 - Create an inclusive, welcoming environment
 - Do ask for and use pronouns
 - Do work to develop connections outside of medicine
 - Don't seek out connection that may provoke affinity bias (e.g. specialization, same medical school, etc)
 - Be flexible with processes and supportive of innovation (as long as the same end points are reached)
 - Continually foster psychological safety
 - Attend to imposter syndrome and stereotype threat
 - Practice (and model) self-reflection
 - Be an ally/upstander and actively address micro and macroaggressions

Assessors and Equity: Potential Strategies

Tenets of Psychological Safety

- Members of this team respect each other's abilities
- Members of this team are interested in each other as people
- In this team you aren't rejected for stating what you think
- Members of this team believe that other members have positive intentions

A Grassroots Approach to Fostering Such Spaces

- Getting to know another person beyond their year in training and career interests is a start
- Consider
 - Your own identity and that of your learner
 - Logistics – space, time, resources
 - Goals and expectations (for both of you)
 - Prime the learner for the encounter
- Establish a relationship where growth, trial and error, and effort are valued

High Stakes Decisions and Consequences: The Evidence

Original Investigation | Diversity, Equity, and Inclusion

Racial and Ethnic Differences in Internal Medicine Residency Assessments

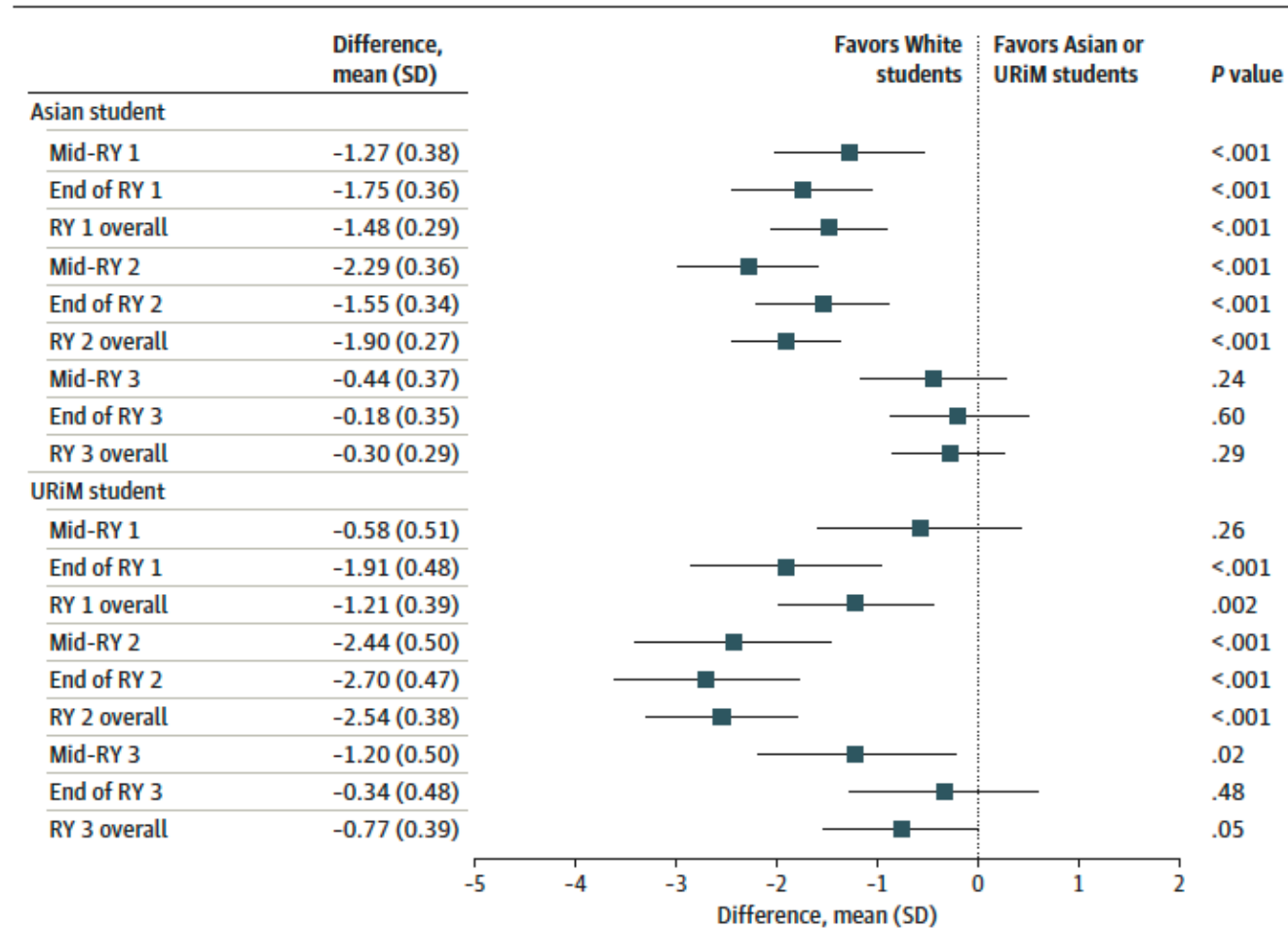
Dowin Boatright, MD, MBA, MHS; Nientara Anderson, MD, MHS; Jung G. Kim, PhD, MPH; Eric S. Holmboe, PhD, MPH; William A. McDade, MD, PhD; Tonya Fancher, MD, MPH; Cary P. Gross, MD; Sarwat Chaudhry, MD; Mytien Nguyen, MS; Max Jordan Nguemeni Tiako, MD, MS; Eve Colson, MD, MHPE; Yunshan Xu, MS; Fangyong Li, MPH, MS; James D. Dziura, PhD; Somnath Saha, MD, MPH

- Evaluated milestones assessments for all IM residents in graduating classes of 2016 and 2017 (n = 9026, program n = 305)
- Evaluated mid-year and year-end aggregated Milestone scores and compared progress in three racial/ethnic categories (URiM, Asian, White)
 - Model included adjustments for age, sex, USMLE 2 scores
 - Accounted for clustering by program
 - Secondary outcomes included individual competency domains and critical deficiency ratings (rated a 0 on any given sub-competency)

Boatright et al, JAMA Network Open, 2022

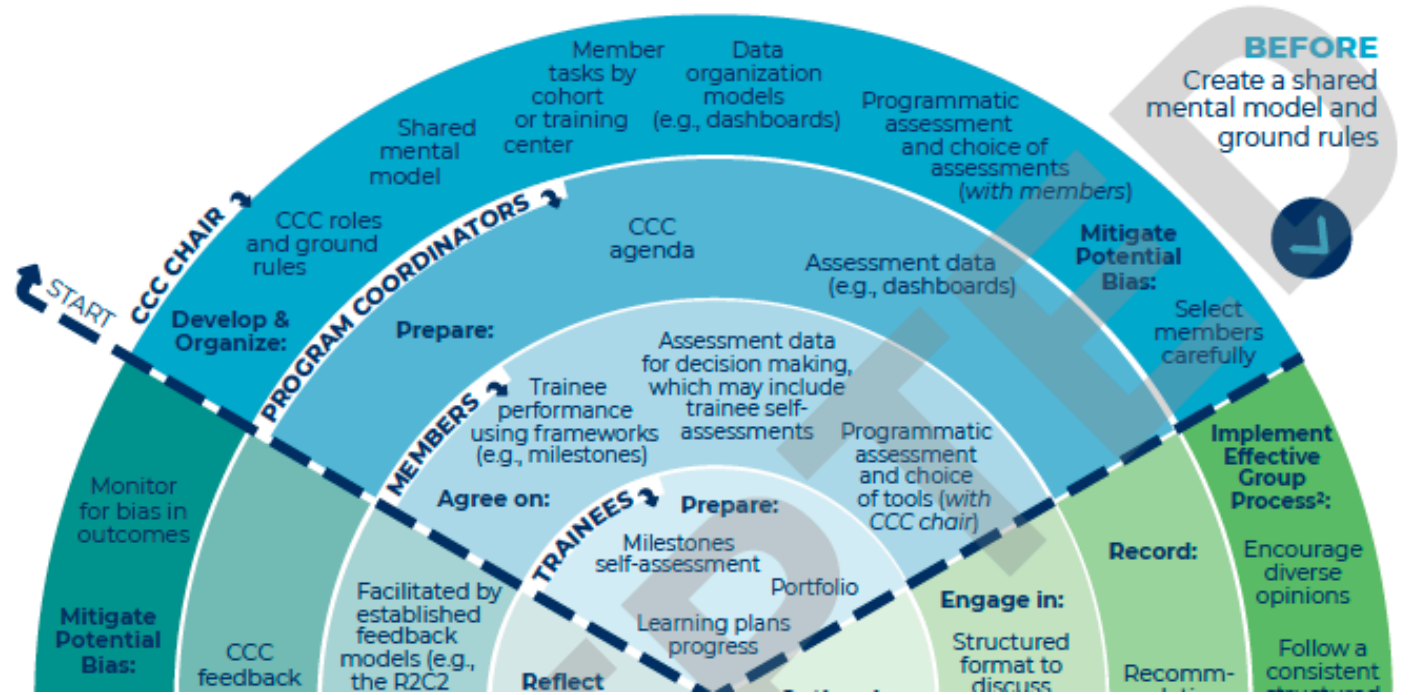
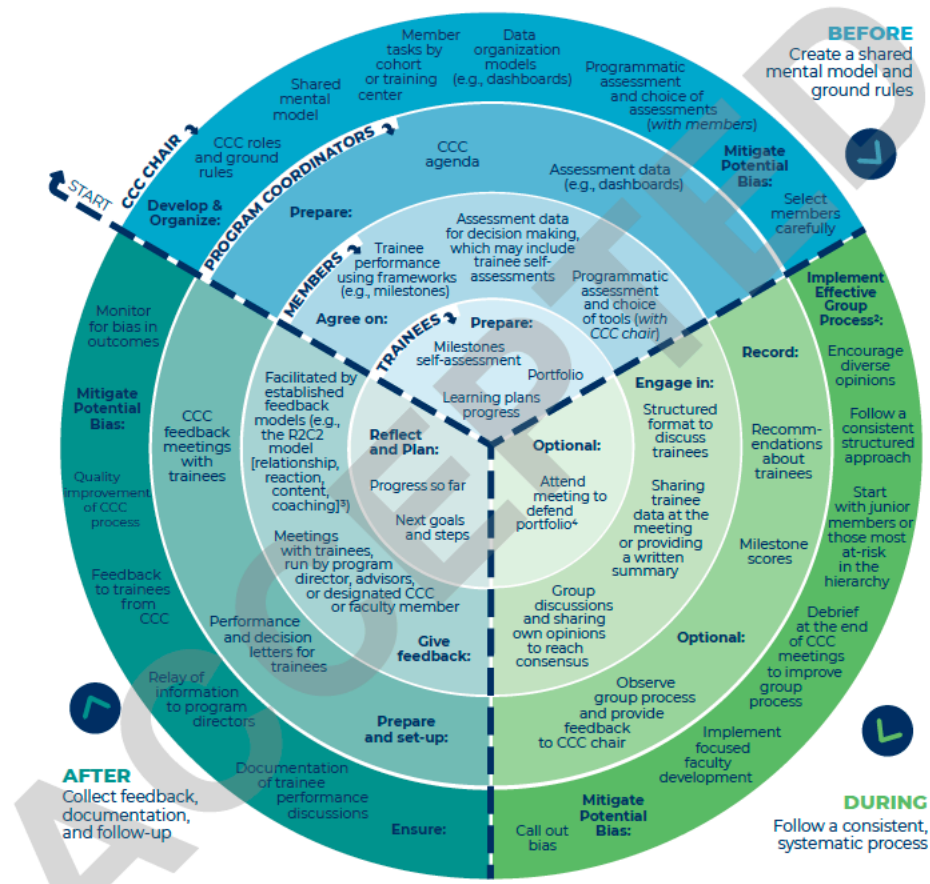
High Stakes Decisions and Consequences: The Evidence

Figure 2. Adjusted Total Milestone Scores



High Stakes Decisions and Consequences: An Evolving Example

- No large published studies on mitigating bias in CCC processes but...



High Stakes Decisions and Consequences: Practical Strategies

- How can your program attend to bias and inequity in:
 - CCC Membership – can you increase diversity and representation, center marginalized voices
 - CCC Processes – create an environment for bias in assessment and discussion to be named and discussed
 - CCC Transparency – contract with your residents to review and report out about differences in ratings based on gender, race, ability, etc
 - CCC Outputs – afford trainees opportunities to discuss and dispute their ratings with an advocate

Conclusions

- Bias and inequity is alive and well in every aspect of our assessment practices
 - Silver-lining: There's no shortage of opportunity for change
- Attending to equity in assessment requires attention not only to stakeholders (trainees, faculty, the CCC, etc) but also to the structure of assessments themselves and the power they carry
- Be mindful and open to change and reinvention and look for opportunities to employ an anti-deficit or strengths-based lens, foster a growth mindset (for all), and embrace transparency/critical review
 - To the latter, while we all have a stake in the process – many of us should probably do the heavier lifting and listen intently when those from minoritized groups and marginalized populations speak up and speak out

References

- Al-Bualy, R et al. Effective Clinical Competency Committee Meeting Practices: Before, During and After. Acad Med 2022
- Boatright, D et al. Racial and Ethnic Differences in Internal Medicine Residency Assessments. JAMA Network Open, 2022; 5(12):e2247649
- Cullen, M et al. Differences in Trainee Evaluations of Faculty by Rater and Ratee Gender. Acad Med 2023; Accepted ahead of print. Apr 26
- Edmondson, A and Lei, Z. (2014) “Psychological Safety: The History, Renaissance, and Future of an Interpersonal Construct” Annu. Rev. Organ. Psychol. Organ. Behav. 1:23–43
- Ferris, H and Flynn, D. Assessment in Medical Education; What Are We Trying to Achieve? Int J of Higher Ed 2015; 4(2):139-144
- Gold, J et al. Words Matter: Examining Gender Differences in the Language Used to Evaluate Pediatrics Residents. Acad Pediatrics 2022; 22(4): 698-704
- Klein, R et al. Gender Bias in Resident Assessment in Graduate Medical Education: Review of the Literature JGIM 2019; May;34(5):712-719
- Klein, R et al. Association of Gender With Learner Assessment in Graduate Medical Education JAMA Network Open, 2020; Jul 1;3(7):e2010888
- Klein, R et al. Association Between Resident Race and Ethnicity and Clinical Performance Assessment Scores in Graduate Medical Education. Acad Med 2022; Sep 1;97(9):1351-1359
- Lucey, C et al. Medical Education's Wicked Problem: Achieving Equity in Assessment for Medical Learners. Acad Med 2020; Dec;95: S98-S108.
- Onumah, C et al. Strategies for Advancing Equity in Frontline Clinical Assessment. Acad Med 2023; 98(85): S57-63
- Teherani, A et al. A Narrative Study of Equity in Clinical Assessment Through the Antideficit Lens. Acad Med 2020; 95(12): S121-130
- Telio, S et al. (2015) The “Educational Alliance” as a Framework for Reconceptualizing Feedback in Medical Education. Acad Med 90: 609–614.
- Tiedt, K et al. Gender Difference in Teaching Evaluation Scores of Pediatric Faculty. Acad Pediatrics 2023; 23(3): 564-568
- Torralba, K et al. (2016) “Does Psychological Safety Impact the Clinical Learning Environment for Resident Physicians? Results From the VA's Learners' Perceptions Survey. JGME 8(5):699-707
- Tsuei SH et al. (2019). “Exploring the Construct of Psychological Safety in Medical Education” Acad Med 94: :S28-S35.

Going to Chicago in 2024?

Come visit us at the
Assessment LC!

APPD Assessment Learning
Community Interest Form

