

# Equity in Assessment Plenary Workshop



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# Objectives

By the end of the session, participants will be able to

1. Describe the contributors to inequity in assessment for clinical learners
2. Outline the components of an equitable assessment system and discuss strategies for implementation

## Activity 1: Your experiences

### Table discussion

- Introductions
- Discussion: What issues related to inequity in assessment have you encountered either as a teacher, learner, or otherwise?

Be prepared to share with large group



# Inequities in Assessment

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Differential Attainment and  
the Amplification Cascade

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Definition of Excellence

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Deficit Thinking and Anti  
Deficit model

# Differential Attainment & The Amplification Cascade

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Academic outcomes – Differences favor not-UIM/White students through out the medical education experience

Boatright, 2017; Campos Outcult 1994; Colson 2020; Low, 2019; NHS 2019; Teherani, 2019

# (in)Equity in Assessment

JAMA Internal Medicine | [Original Investigation](#)

## Racial Disparities in Medical Student Membership in the Alpha Omega Alpha Honor Society

Dowin Boatright, MD, MBA; David Ross, MD, PhD; Patrick O'Connor, MD, MPH; Edward Moore, PhD; Marcella Nunez-Smith, MD, MHS

JAMA Internal Medicine May 2017 Volume 177, Number 5

## Racial/Ethnic Disparities in Clinical Grading in Medical School

Daniel Low, Samantha W. Pollack, Zachary C. Liao, Ramoncita Maestas, Larry E. Kirven, Anne M. Eacker & Leo S. Morales

Teaching and Learning in Medicine

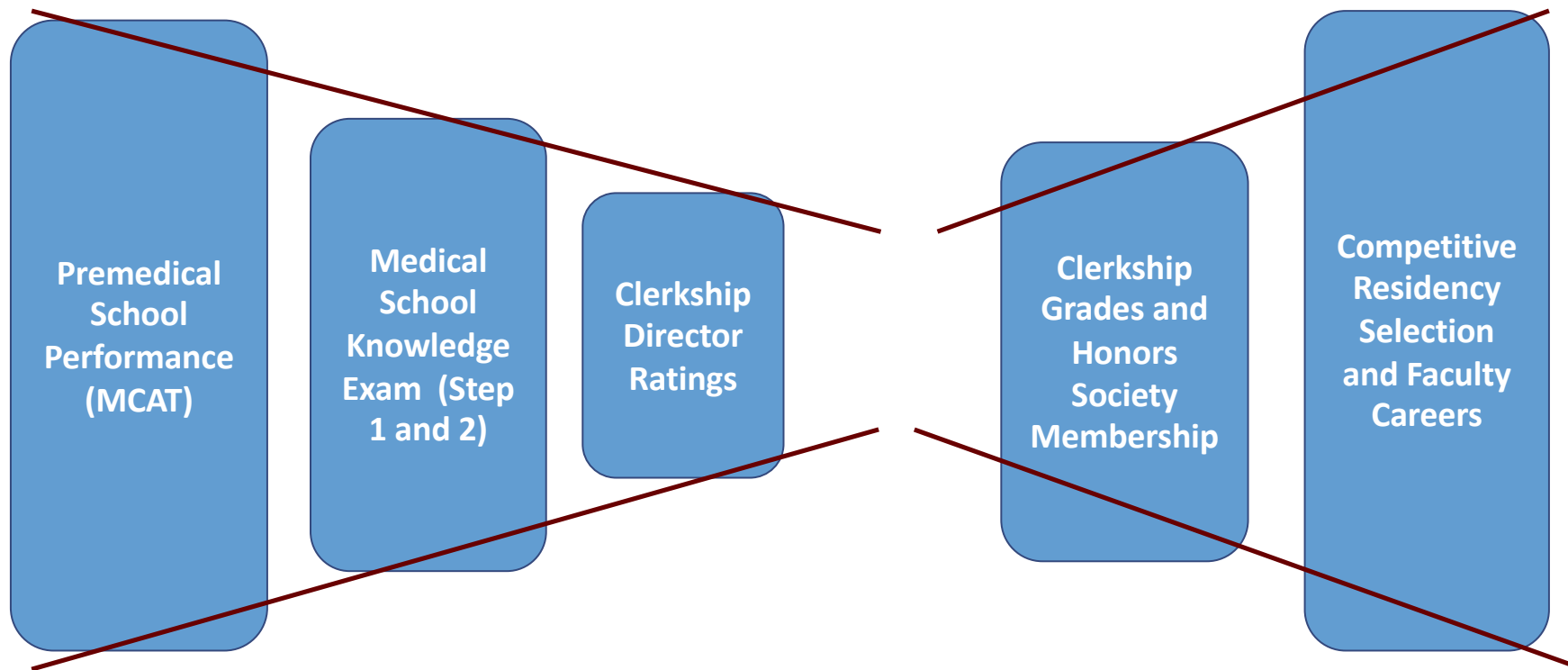
Perspective

## How Small Differences in Assessed Clinical Performance Amplify to Large Differences in Grades and Awards: A Cascade With Serious Consequences for Students Underrepresented in Medicine

Arianne Teherani, PhD, Karen E. Hauer, MD, PhD, Alicia Fernandez, MD, Talmadge E. King Jr, MD, and Catherine Lucey, MD

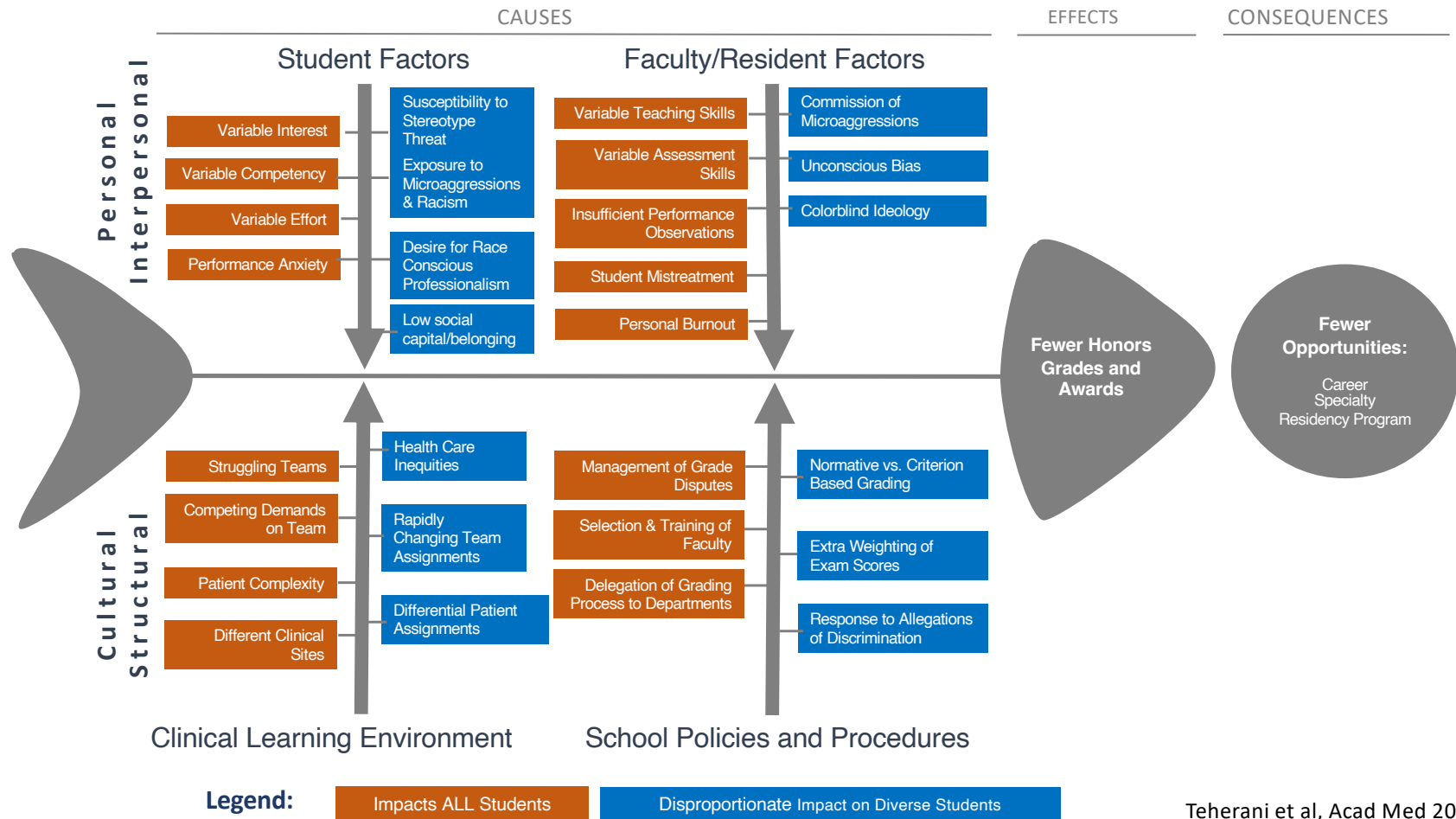
Academic Medicine, Vol. 93, No. 9 / September 2018

# Effect Size Changes in Assessed Outcomes for UIM and Not-UIM Students: *Differences that Narrow and Widen*



Teherani et al, Acad Med 2018

**Figure 1. Fishbone Diagram Illustrating the Causes, Effects and Consequences of Lower Assessed Performance in under-represented in medicine students**





# Student Factors

Susceptibility to stereotype threat

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graph TD; A[Susceptibility to stereotype threat] --> B[Exposure to microaggressions and racism]; B --> C[Desire for race conscious professionalism]; C --> D[Lack of sense of belonging];
```

Exposure to microaggressions and racism

Desire for race conscious professionalism

Lack of sense of belonging

Bullock et al. 2020; Burgess et al., 2010; Lucey et al., 2017; Mensah, 2019; Rosenstein, 2008; Slopen & Williams, 2014

# Faculty/Resident Rater Factors

Commission of  
microaggressions

Unconscious bias

Impartial  
ideology

Girod et. Al., 2016; Lucey, et al., 2017; Montenegro, 2016; Purdie-Vaughn et al., 2008; Williams & Rucker, 2000

# Clinical Learning Environment

Health care inequities



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graph TD; A[Health care inequities] --> B[Rapidly changing team environments]; B --> C[Differential patient assignments];
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Rapidly changing team environments

Differential patient assignments

Fernandez et al., 2007; Vaughn et al., 2015; Woolf et al., 2012

# School Policies and Procedures

Normative vs.  
criterion-  
based grading

Extra  
weighting of  
exam scores

Response to  
allegations of  
discrimination

Davis et al., 2013; Kuo et al., 2015; ; Kleshinki et al., 2009; Miller & Stassun 2014

## Definition of Excellence

*What counts  
as “excellent”?*

High grades, test scores

Honors society membership

Publication records

*Few of the best and brightest*

Initial high performance that remains high  
(not growth focused)

Dhaliwal & Hauer, 2021; Lai et al, 2019; Razack et al., 2018

# Deficit Thinking

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Deficit vs. asset-based education frameworks

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Macro-level: Why are UIM students not performing as well as non UIM students on MCQ tests? Why are UIM students underprepared for medical school

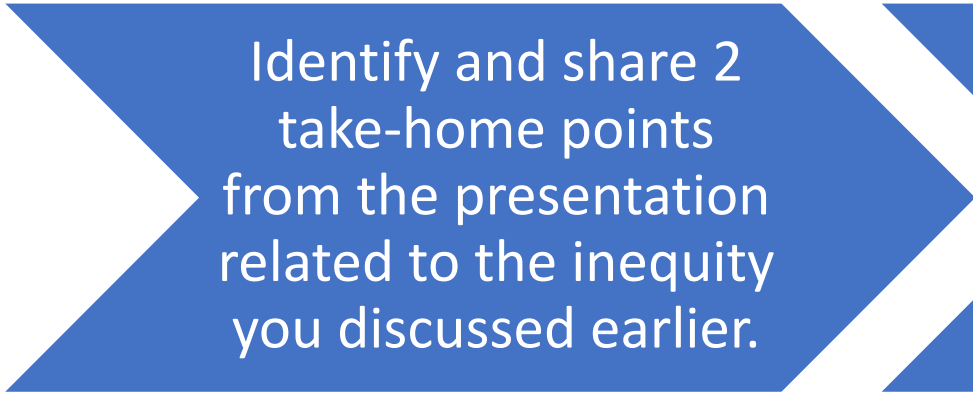
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Micro-level: What background experience prevent UIM students from feeling a sense of belonging? How are students' cultural backgrounds not allowing them to succeed?

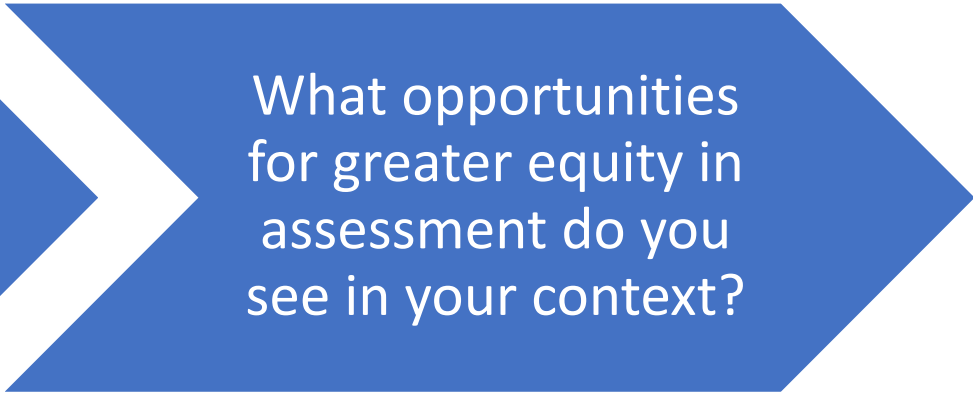


Expósito & Favela, 2003 ; Harper, 2013; Teherani et al, Acad Med 2020

## Activity 2: Take-home points for your setting



Identify and share 2  
take-home points  
from the presentation  
related to the inequity  
you discussed earlier.



What opportunities  
for greater equity in  
assessment do you  
see in your context?

# Establish values to guide assessment

Assessment must  
be fair and  
equitable

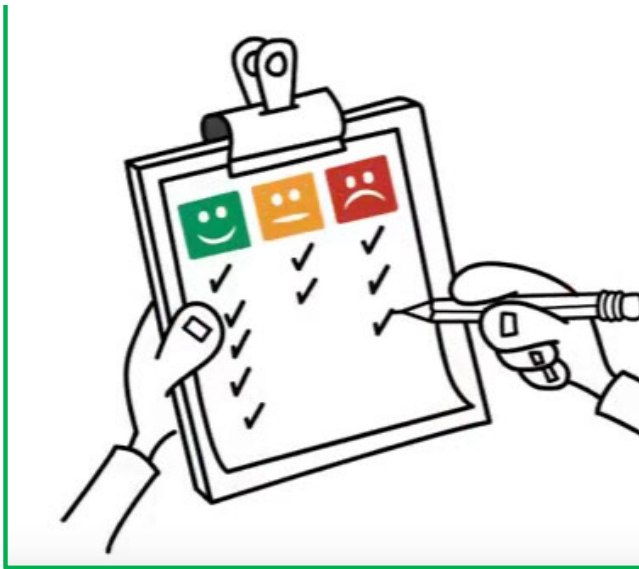
Equitable  
opportunities for  
all to learn and  
advance

Prepare to provide  
health care that  
patients and  
populations need

Foster ability to  
promote social  
justice and health  
equity

Master adaptive  
learner skills and  
growth mindset





**Intrinsic**



**Contextual**



**Instrumental**

## Framework for equity in assessment

Lucey et al, Acad Med 2020



## Intrinsic: Design assessment to foster desired learning outcomes

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- Implement assessment as a system
  - Using multiple assessments to inform competency decisions mitigates possible bias that may arise from a single assessment
  - Example: programmatic assessment
- Maximize opportunities to assess learners formatively
  - Frequent feedback allows learners to prepare for high stakes assessment

Heeneman, Ottawa 2020 consensus statement, Med Teach 2021

# Intrinsic: Consider and counteract bias with assessment procedures

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- Expert review of assessment design
  - Expert = educators, learners, patients, community members
- Use 'rating procedures' that minimize bias
  - Rubrics, construct alignment
- Incorporate narrative assessment
  - Assessor observations of behaviors

Teherani, Acad Med 2020



# Intrinsic: Use group process for decision making

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- Collaborative discussions to reduce risk of individual bias
- Useful for high stakes decisions – grading, promotion, progress
- Serve as real-time faculty development

Kinnear, Med Teach 2018

# Contextual: Foster an equitable learning and assessment environment

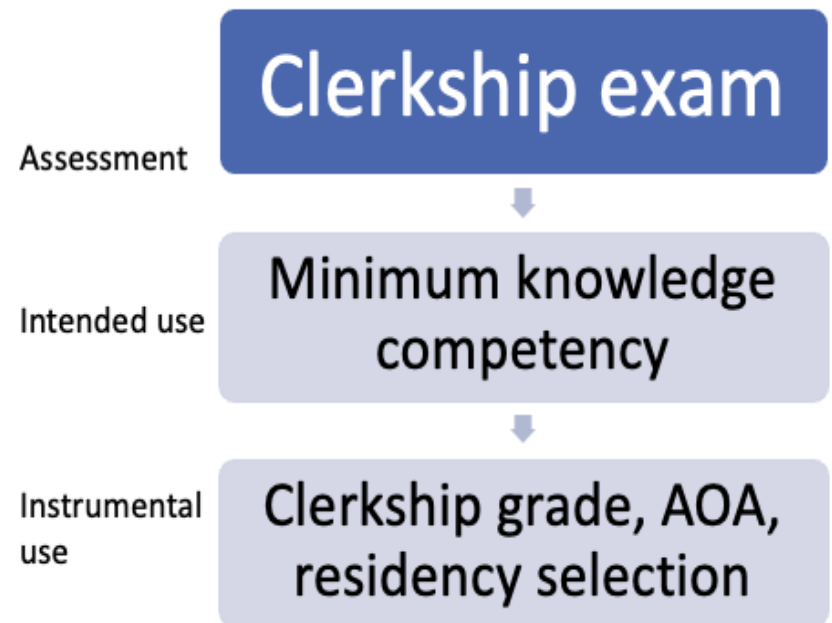
- Cultivate psychological safety
- Provide ongoing faculty development on bias, fairness in assessment
- Address accessibility



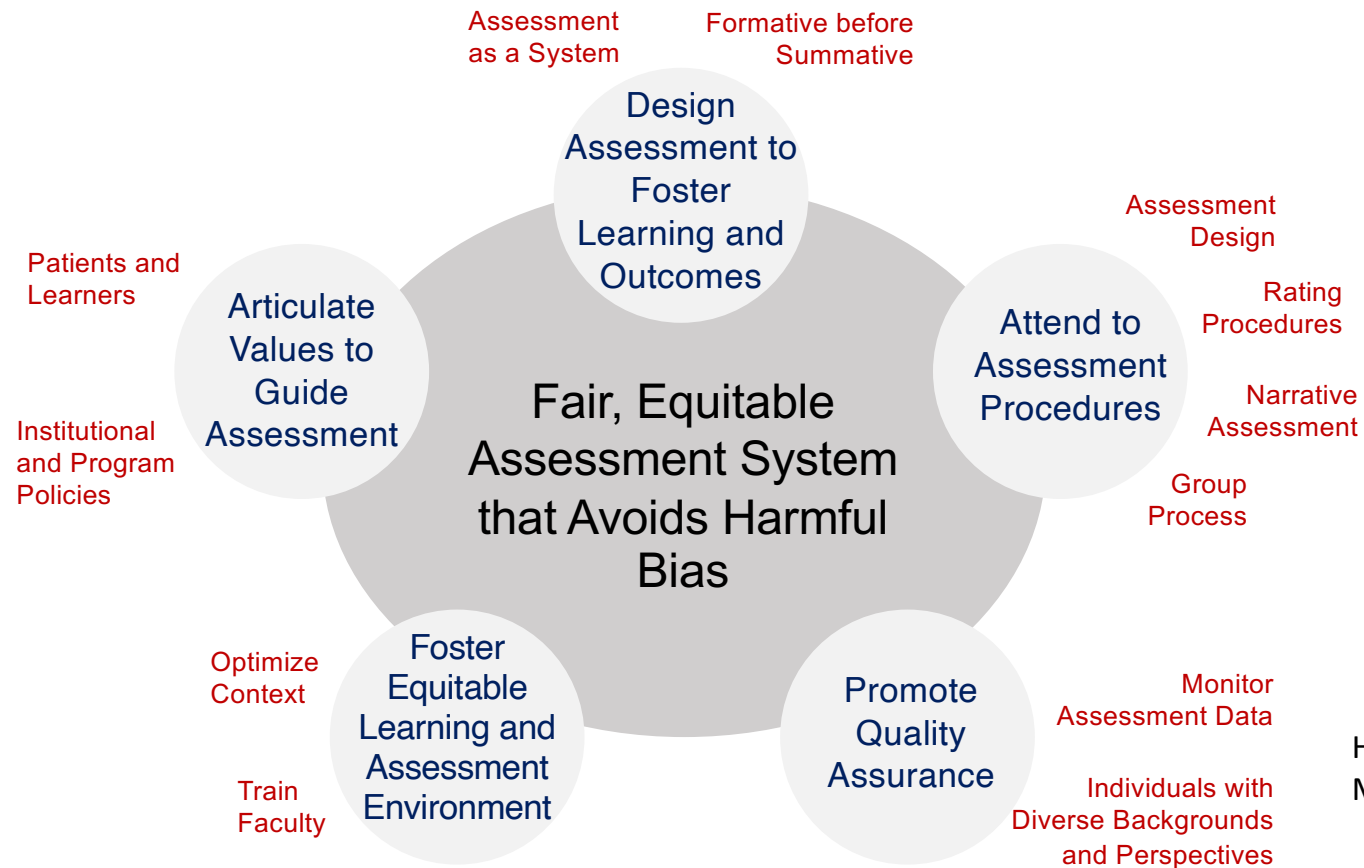
# Intrinsic & instrumental: Monitor and promote continuous quality improvement of assessment

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- Engage diverse individuals in assessment system design, review, and improvement
- Monitor assessment data and consequences
- Use data wisely



# Summary: Recommendations



Hauer et al, Acad Med, in press

## Activity 3: Strategies to achieve equity in assessment

- Based on today's session, how would you alter an existing assessment or develop a new approach to assessment in your context to create greater equity?
- Which of the fishbone factors will you address?
- Design and describe the new assessment/process
- Who will you involve in designing, implementing, and evaluating the new assessment approach?
- What will you STOP doing?
- How will you determine if it is more equitable than what currently exists?



# Q & A

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- [Karen.hauer@ucsf.edu](mailto:Karen.hauer@ucsf.edu)



# Handout (based on slides)

- Fishbone
- Recommendations from Macy paper

