

Mitigating Bias in Assessment and Evaluation

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Disclosure

None

Disclaimers

- We are human and have our own biases
- We will discuss gender bias and bias against under-represented minorities in medicine (URM) – other forms of bias exist
- All of us here are doing the best we can . . . and make mistakes!

Objectives

1. Describe the impact of bias in assessment in evaluations
2. Identify language commonly used in written comments that reflect racial and gender bias
3. Use competency-based frameworks (eg., EPAs and milestones) in writing evaluations
4. Create a personal plan to mitigate bias when evaluating learners
5. Plan changes at your institution to reduce biased assessments and evaluations

The literature -Bias in assessment-



Racial disparities exist in clinical grading

- Examined clerkship grades and MSPE summary words
- Student categories: White, URM, non-URM minority
- In 4 out of 6 clerkships, grading disparities ($p < 0.05$) favored White students over URM and non-URM minority students
- Non-URM minority students received lower MSPE summary words ($p = 0.001$)
- Single institution study: UWSOM

Bias is reflected in words used in assessment and evaluation

- Letters of Recommendation
- Clerkship evaluations
- MSPE

Letters of Recommendation

Men = Agentic

Decisive
Ambitious
Strong
Assertive
Logical
Independent



Women = Communal

Nurturing
Supportive
Caring
Kind
Emotional
Dependent

Men = Standout

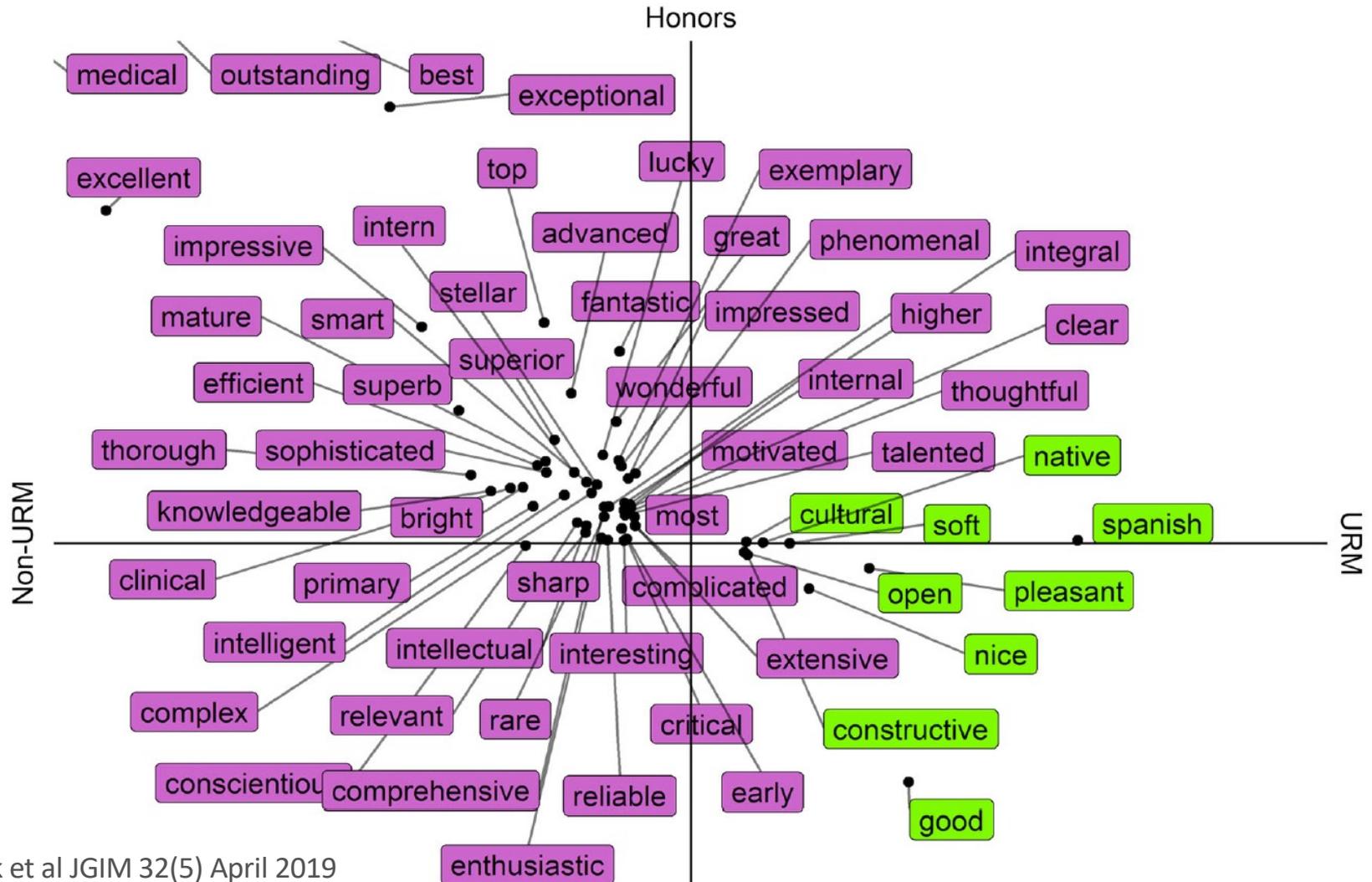
Exceptional
Best
Outstanding
Superb



Women = Grindstone

Organized
Hardworking
Conscientious
Diligent

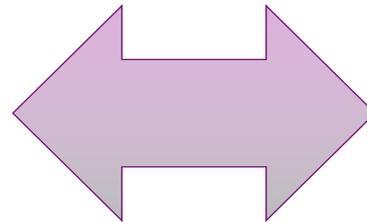
Clerkship Evaluations



Clerkship Evaluations

Non-URM and Men Competency-Related Behaviors

Advanced
Clinical
Compassionate
Comprehensive
Conscientious
Efficient
Knowledgeable
Medical
Scientific
Thorough



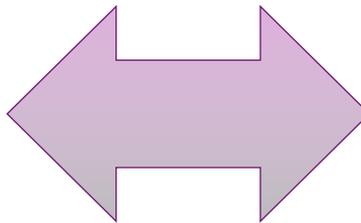
URM and Women Personal Attributes

Cheerful
Delightful
Energetic
Enthusiastic
Lovely
Mature
Pleasant
Reliable
Respectful
Wonderful

MSPEs

**Non-URM =
Standout or Ability**

Exceptional
Best
Superb
Intelligent
Brilliant



**URM =
Competent***

Organized
Bright

* Secondary content analysis of use of “competent” found it to have a positive connotation less often when describing Black and Latino students than when describing Asian and white students.

The amplification cascade (Teherani, 2018 et al)

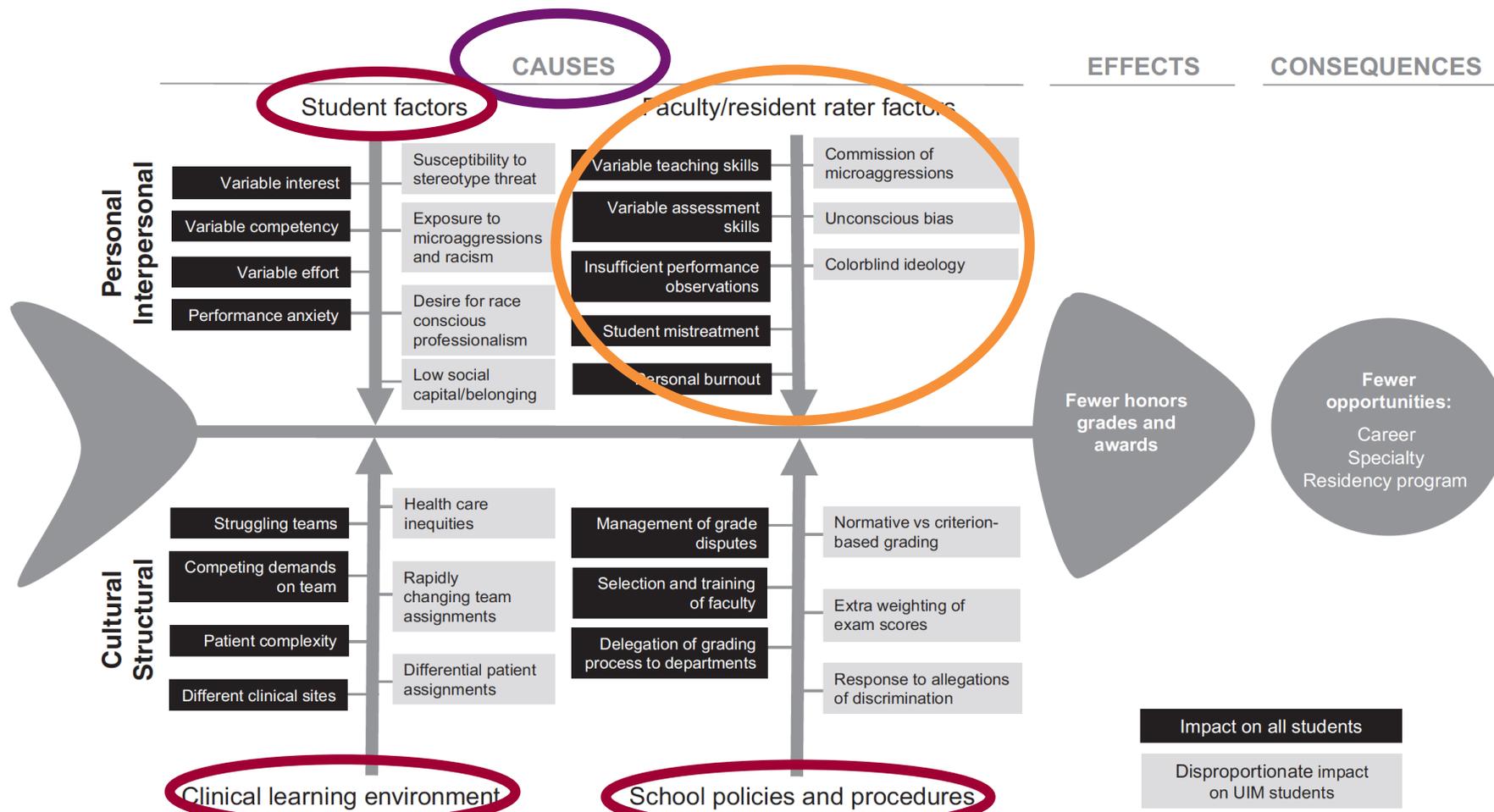
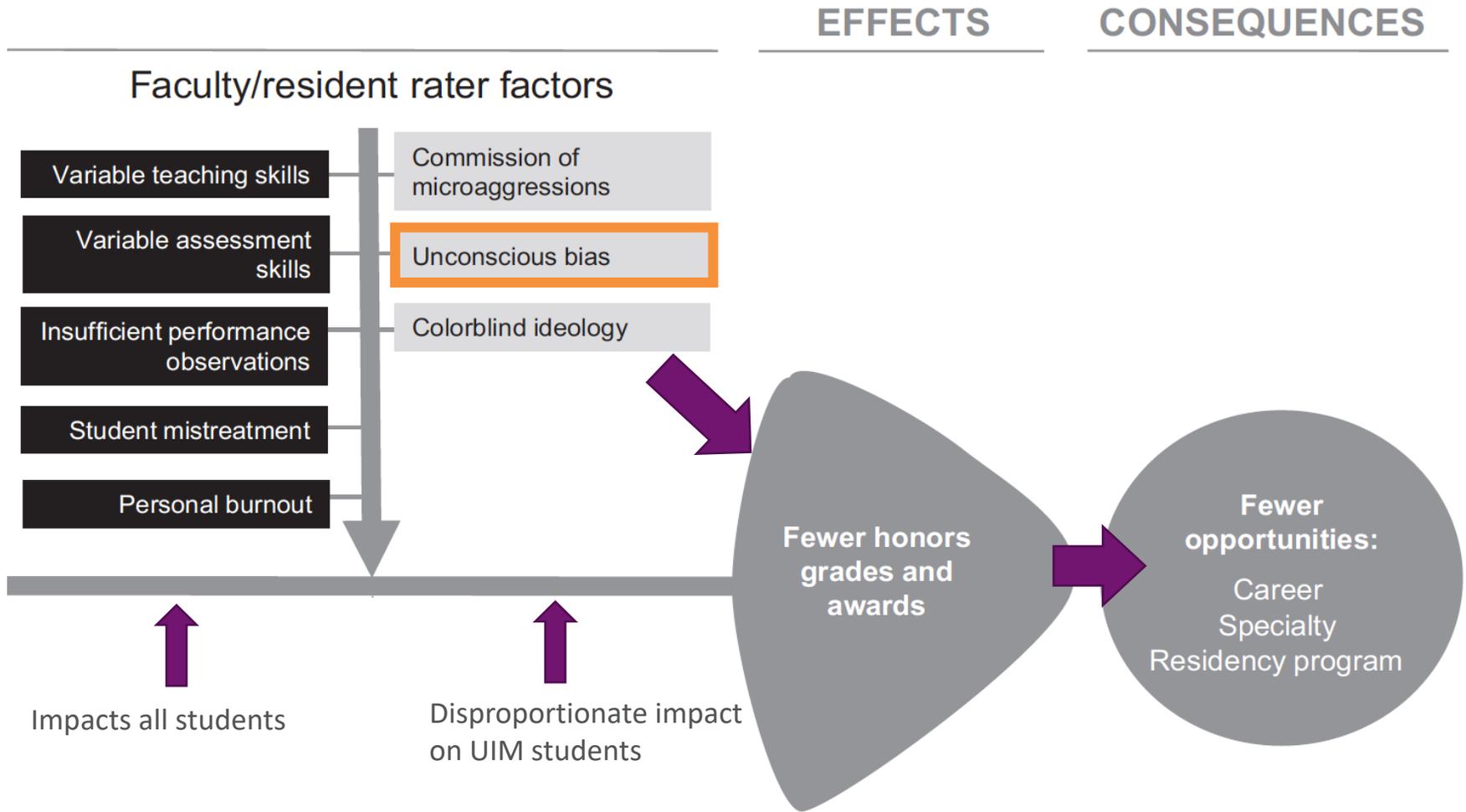


Figure 1 Fishbone diagram illustrating the causes, effects, and consequences of lower assessed performance in underrepresented in medicine (UIM) students compared with all students.



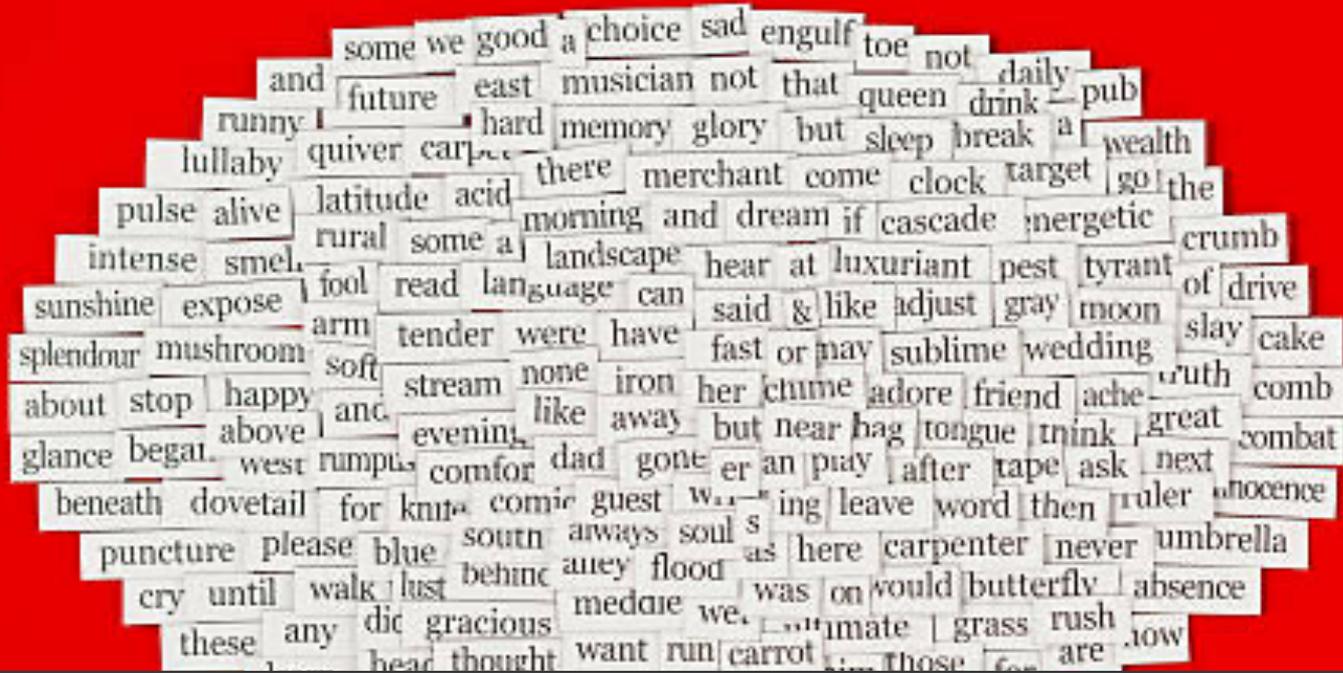
To be evaluated, learners need opportunities to perform

- Significant gender-based discrepancies in surgical case volumes among ENT residents
- Female residents reported 41 less cases than male residents per graduating year

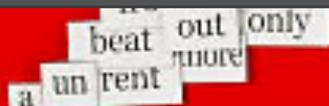
Equitable opportunities for learning and evaluation are critical

Key Lessons from the Literature

- We all have implicit bias
- Bias can cause discrepancies in learning opportunities
- Bias is reflected in words that are used in assessment and evaluation
- Bias can affect how students are graded
- This effect is amplified and impacts careers long-term



Let's think about words



Exercise

Using Narrative Language

What **word categories** do these words belong to?

Word Categories

- Standout
- Ability
- Grindstone
- Compassion

W What word category does the word CARING belong to?

Standout

Ability

Grindstone

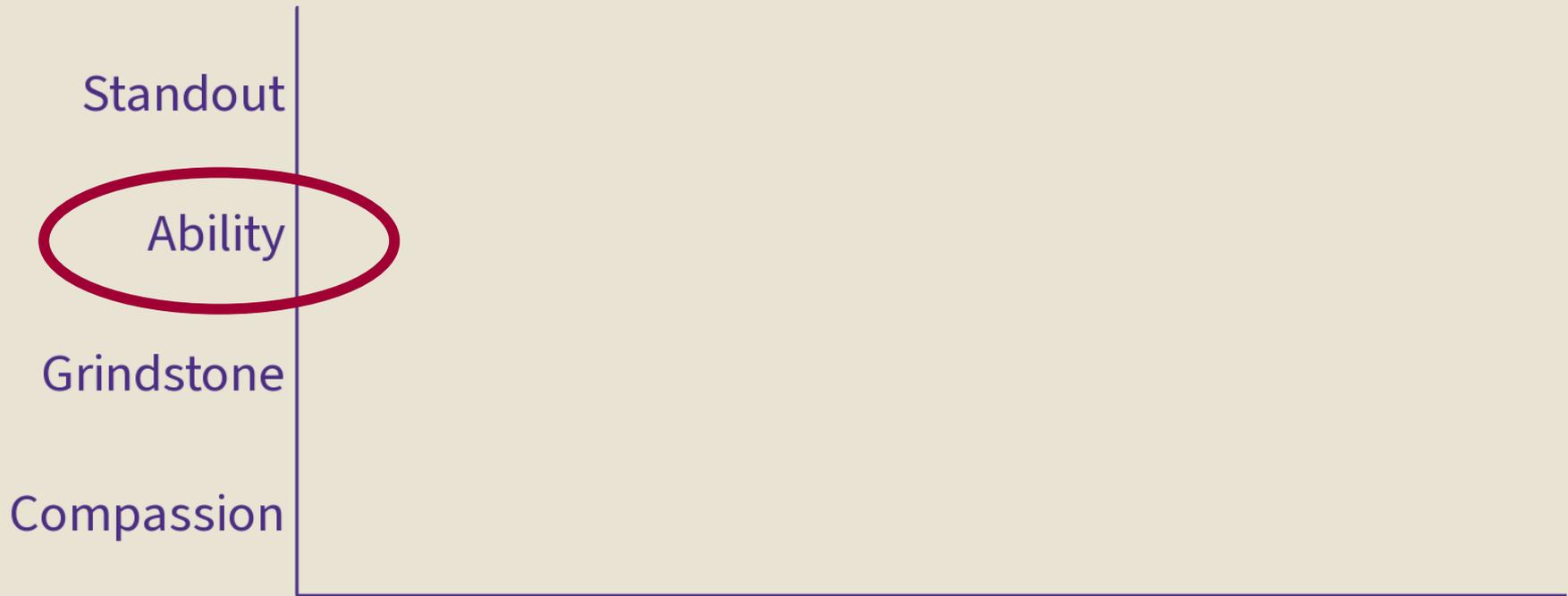
Compassion

Total Results: 0

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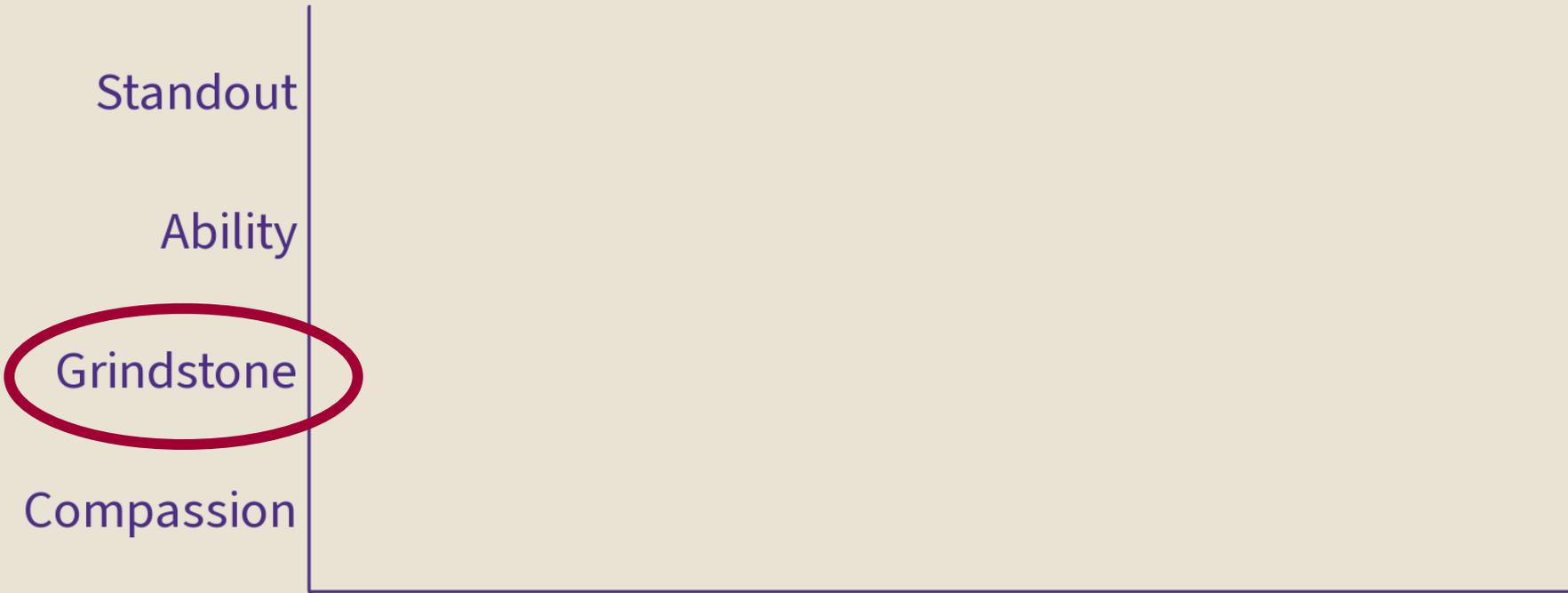
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W What word category does the word INTELLIGENT belong to?



Total Results: 0

W What word category does the word DILIGENT belong to?



Total Results: 0

W What word category does the word STELLAR belong to?

Standout

Ability

Grindstone

Compassionate

Total Results: 0

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Word categories commonly used

Women/URM	Men/White
Grindstone Compassion Personal attributes	Standout words Ability Competency



Gender-bias calculator

This calculator is derived from [the version made by Thomas Forth](#) which was, in turn, inspired by this [AWIS blog](#) post on gender biases in recommendation letters. The blog post and [the scientific paper](#) it is based on also explain why this gender bias is important. Thanks to [Dr. Karen James](#) for the inspiration. Privacy note: no content you test here will leave your browser as all the calculation is done in this page.

Try an example!

Write or paste your recommendation letter here. Words that are more often associated with women will be added to the female list. Words that are more often associated with men will be added to the male list.

Female-associated words | Male-associated words

<https://www.tomforth.co.uk/genderbias/>



Use competency-based frameworks to minimize bias



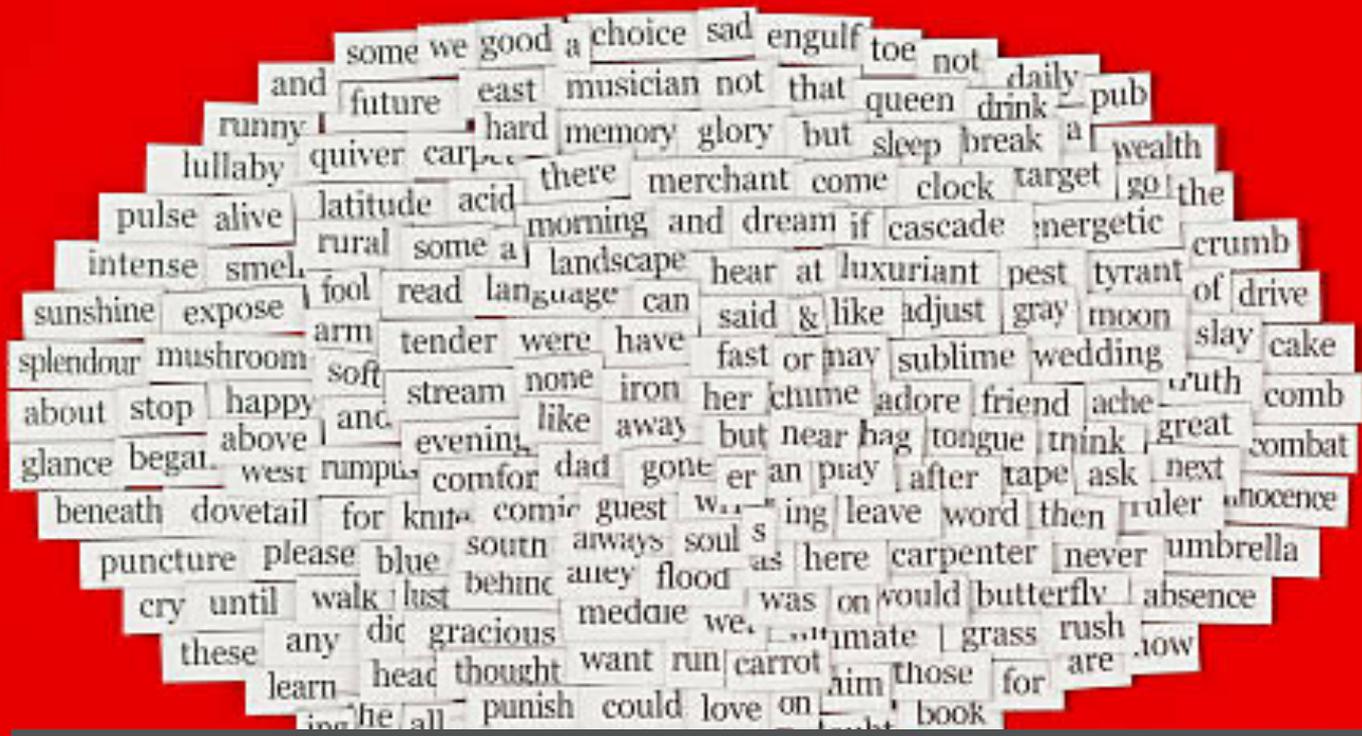
Encourage use of standardized language



Anchors/milestones along the developmental trajectory



Common understanding across institutions



Practice using a competency-based framework



Competency-based framework example 1:

AAMC's 13 Core Entrustable Activities for Entering Residency²

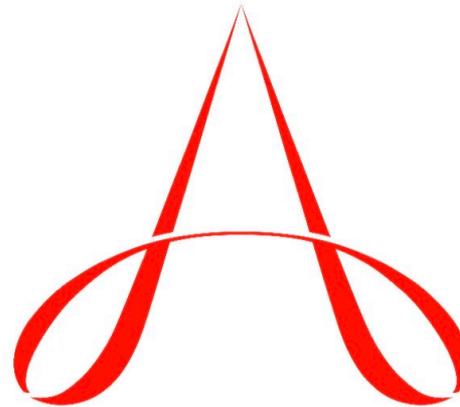
1. Gather a history and perform a physical examination
2. Prioritize a differential diagnosis following a clinical encounter
3. Recommend and interpret common diagnostic and screening tests
4. Enter and discuss orders and prescriptions
5. Document a clinical encounter in the patient record
6. Provide 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

Competency-based framework example 2:



Family Medicine Milestones

The Accreditation Council for Graduate Medical Education



ACGME

ACGME Family Medicine Milestone example

Patient Care 3: Health Promotion and Wellness				
Level 1	Level 2	Level 3	Level 4	Level 5
Identifies screening and prevention guidelines by various organizations	Reconciles competing prevention guidelines to develop a plan for an individual patient, and considers how these guidelines apply to the patient population	Identifies barriers and alternatives to preventive health tests, with the goal of shared decision making	Incorporates screening and prevention guidelines in patient care outside of designated wellness visits	Participates in guideline development or implementation across a system of care or community
Identifies opportunities to maintain and promote wellness in patients	Recommends management plans to maintain and promote health	Implements plans to maintain and promote health, including addressing barriers	Implements comprehensive plans to maintain and promote health, incorporating pertinent psychosocial factors and other determinants of health	Partners with the community to promote health
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments: <div style="text-align: right;"> Not Yet Completed Level 1 <input type="checkbox"/> Not Yet Assessable <input type="checkbox"/> </div>				

Exercise 2: Pair-share

- For each comment on the slides that follow,
- Turn to your neighbor and discuss:
 - How do you categorize the language here?
 - How might you rewrite this comment?
 - Assume both students are demonstrating competencies at the highest levels and would be eligible for an honors grade at your institution.

Pair-share

(Student) was a dependable and strong member of the team. They responded well and improved with feedback given over the course of several directly observed encounters and demonstrated an exceptionally productive and positive attitude towards their education and professional development.

Pair-share

It was a delight to supervise (student) during this rotation. They were remarkably diligent, thorough, energetic, and dedicated to taking great care of our patients. I would gladly refer patients or family members to see them.

Exercise 2:

- Think of a learner that you recently worked with
 - If you really can't think of one or don't do clinical work, pair up!
- **Write an objective, competency-based evaluation**

QR codes to access competency-based frameworks

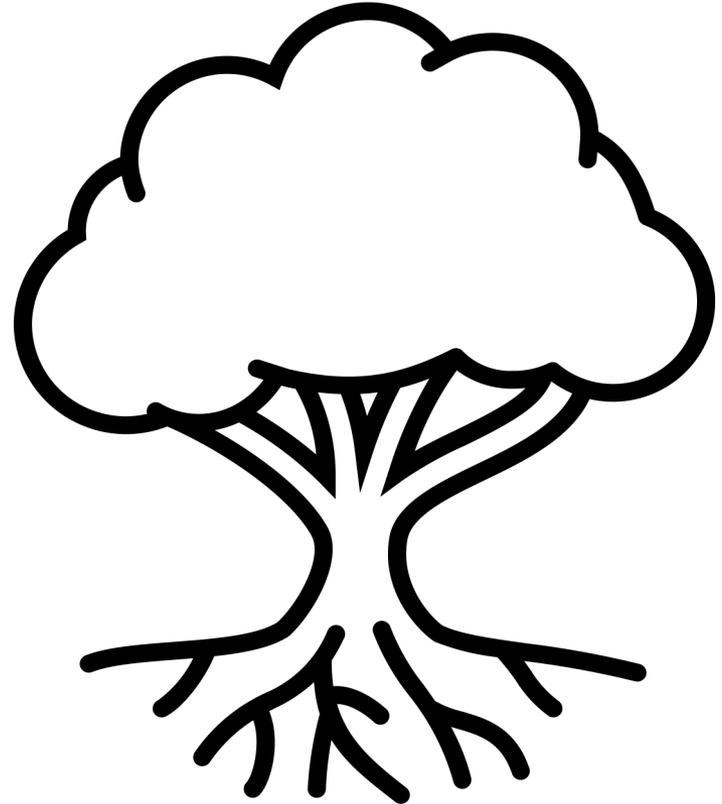
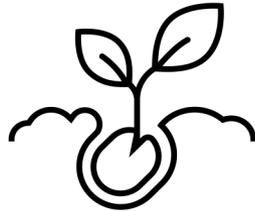
AAMC EPAs



ACGME FM Milestones



Maximizing Our Impact

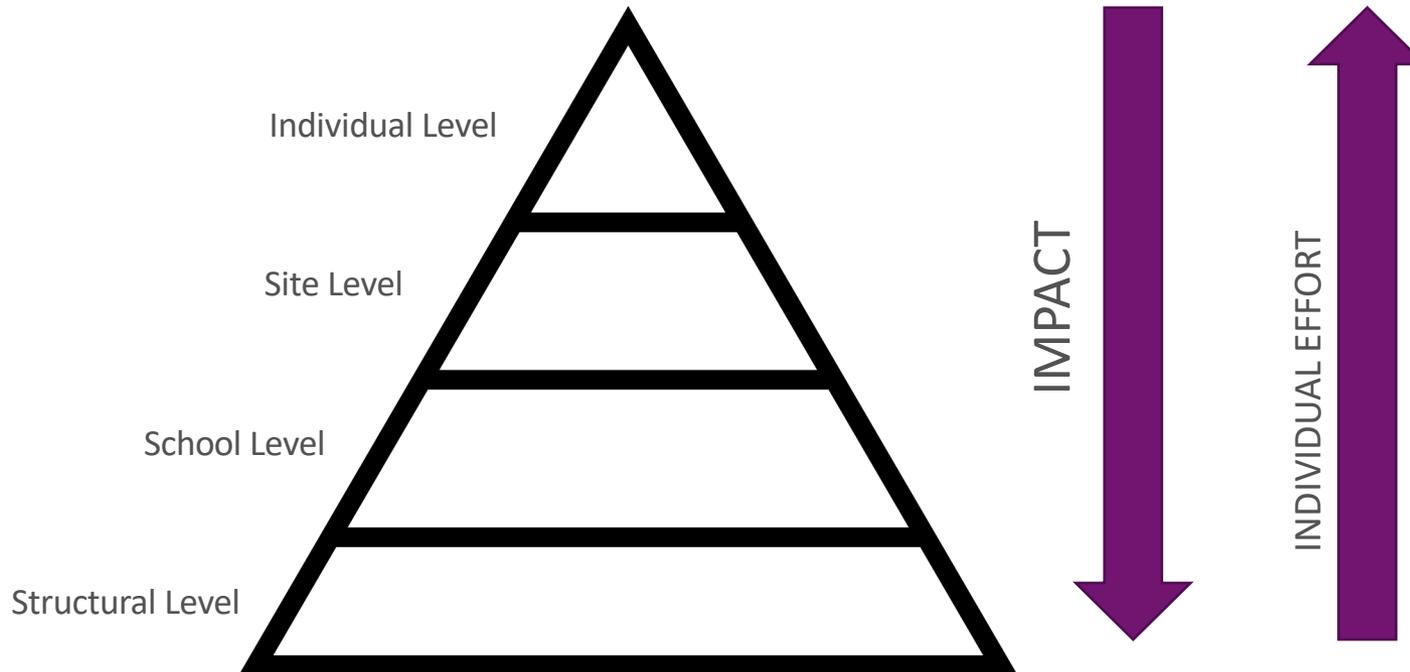


Implementing Higher-Level Change to Reduce Bias

- Individual change is one way to reduce bias
- How can we scale up our impact?
- What is the institution's responsibility?
- Clerkship Directors & Program Directors: how can you use your power?

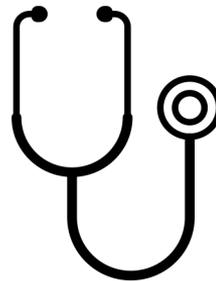


Impact Pyramid



Examples from Our Work

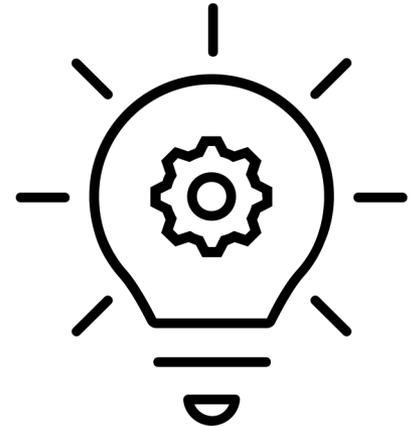
- Grading Committees
- LOR guidance with specific reference to reducing bias
- Diversifying faculty to reflect student experiences



Exercise 3: Small Group Work

Consider current teaching environment (clerkships, subs, etc.) and brainstorm how to implement changes on a larger scale

- Start with thinking about your own role/institution
 - Faculty development, evaluation forms, etc.
- Form a group of 4 and share ideas
- Select a person to report 1 idea to larger group



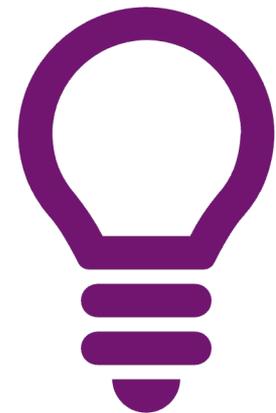


Pause and Reflect

- One thing you'll take back home
- One thing you're still thinking about

Take homes

- TIP 1: Be aware that you have biases
- TIP 2: Know your learner as a unique individual
- TIP 3: Ensure equity with learning opportunities
- TIP 4: Slow down when writing an evaluation
- TIP 5: Use competency-based frameworks with specific examples
- TIP 6: Comment on knowledge and skills
- TIP 7: Check your words
- TIP 8: Consider system-level changes





Evaluation

Please complete an evaluation for this presentation.

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