A Narrative Study of Equity in Clinical Assessment Through the Antideficit Lens

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Abstract

Purpose

Efforts to address inequities in medical education are centered on a dialogue of deficits that highlight negative underrepresented in medicine (UIM) learner experiences and lower performance outcomes. An alternative narrative explores perspectives on achievement and equity in assessment. This study sought to understand UIM learner perceptions of successes and equitable assessment practices.

Method

Using narrative research, investigators selected a purposeful sample of self-identified UIM fourth-year medical students and senior-level residents and conducted semistructured interviews.

Results

Twenty UIM learners (6 medical students and 14 residents) were interviewed. Learners often thought about equity during clinical training and provided personal definitions of equity in assessment. Learners shared stories that reflected their achievements in patient care, favorable assessment outcomes, and growth throughout clinical training. Sound assessments that captured achievements included frequent observations with real-time feedback on predefined expectations by supportive, longitudinal clinical supervisors. Finally, equitable assessment systems were characterized as sound assessment systems that also avoided comparison to peers, used narrative assessment, assessed patient care and growth, trained supervisors to avoid bias, and acknowledged learner identity.

Conclusions

UIM learners characterized equitable and sound assessment systems that captured achievements during clinical training. These findings guide future efforts to create an inclusive, fair, and equitable clinical assessment experience.

Medical education in the United States and internationally has struggled to create and sustain a diverse and equitable educational environment. This, in turn, has perpetuated the long-term consequences of structural discrimination in education and health care. In the United States, research to date has focused on negative learning experiences, such as bias and stereotype threat1–3 and lower assessed outcomes of learners6,7 from racial/ethnic groups underrepresented in medicine (UIM; i.e., members of a racial or ethnic group historically underrepresented in medicine compared with their numbers in the general population).4 This emphasis on negative experiences and lower academic performance has centered the dialogue on deficits. Consequently, messages to educators and learners amplify UIM learners’ negative experiences and lack of success rather than focusing on achievements. Identification of deficits does not capitalize on the strengths UIM learners bring to the learning environment and to patient care stemming from lived experiences, community ties, and new perspectives.

The literature on inequities in medical education has addressed differential attainment, an inherently deficit-focused concept, that encompasses how educational outcomes vary for different demographic groups assessed in the same way.9,10 Efforts to eradicate differential attainment have focused on raising academic performance and, in particular, high-stakes, multiple-choice examination scores. Support-focused interventions used to increase UIM student examination scores11–13 and academic performance have focused on study of these interventions such as faculty and peer mentoring, tutoring, and teaching test-taking skills.14–17 UIM medical students underscore the importance of a pass–fail grading system in contributing to a positive learning climate.18 Beyond the latter study, research studies that explore UIM learners’ experiences with achievement and equitable assessment in medical education are, to the best of our knowledge, lacking. Assessment experiences, particularly during clinical education, play a critical role in impacting career and residency choice and shaping learners’ opportunities, identity, and growth.19

To understand educational and career accomplishment for UIM learners, the antideficit achievement framework prompts research questions that explore how UIM learners persist and successfully navigate their education.20 Studies based on the antideficit model ask questions such as: What positive educational experiences create a supportive environment for UIM learners? Which programs enhance UIM learners’ interest in academic careers, and how? How can educators use assessment tools and strategies to capture UIM

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learners’ successes? The framework has been informed by research and theories from sociology, psychology, gender studies, and education.\textsuperscript{21} The antideficit framework has guided education research for the National Black Male College Achievement Study\textsuperscript{22} and other studies, primarily in higher education, which have examined outcomes such as student persistence\textsuperscript{23} and institutional characteristics contributing to positive educational experiences.\textsuperscript{24} Thus, the framework captures contributors to success related to both student characteristics and features of the educational environment. The antideficit framework has important applicability in medical education because we understand little about UIM learners’ experiences with achievement and equitable assessment along the medical education continuum.

Conceptualization of equity has emphasized the importance of teaching and assessment strategies, as well as learning environments, that help learners from diverse backgrounds attain the competencies needed to function within and build a just society.\textsuperscript{25} Assessment strategies are core to this conceptualization. Gipps characterizes equity in assessment as practices including interpretation of assessment results that are just and fair for all groups.\textsuperscript{26} Gipps also notes that equity in assessment considers how achievement is defined and recognizes that learner identity and motivation as well as learning environment factors, such as teachers’ belief systems, impact achievement.\textsuperscript{26} Yet, we understand little about UIM learner perceptions of achievement and equitable assessment practices during clinical training. We understand even less about how a positive, antideficit-focused view of assessment shapes learner assessment experiences. Hence, through the antideficit lens,\textsuperscript{26} we built upon Gipps’ framework for equity in assessment\textsuperscript{26} to determine how UIM learners along the continuum of medical education:

1. Define their achievements during clinical training;
2. Characterize sound clinical assessment practices that reflect their achievements; and
3. Characterize an equitable clinical assessment system.

Our fundamental aim is to lay the groundwork for an equitable assessment system during clinical training for institutions committed to creating equity in assessment.

**Method**

**Design**

Our study design drew on narrative research, a cross-disciplinary, qualitative inquiry method that ascertains participants’ personal and social experiences through eliciting their stories.\textsuperscript{27-29} Narrative research design aligned with our research questions that centered on understanding UIM learners’ personal narratives around achievement and equitable assessment experiences. We received institutional review board approval at the University of California, San Francisco (UCSF).

**Participants and setting**

Our participants were from a research-intensive, urban, postgraduate public medical school in the western United States, where approximately 34% of the medical school class and 16% of residents and fellows are UIM.\textsuperscript{30,31} We purposefully selected participants to include (1) UIM medical students and residents and (2) those who had completed a considerable amount of clinical training at their stage of education (i.e., fourth-year medical students and senior-level residents). We selected both medical students and residents because their different learning roles influence their identities;\textsuperscript{32} residents are assessed as learners while also supervising and assessing medical students, providing them with valuable insight into assessment experiences. Participating in interviews later in clinical training allowed participants to reflect on and relate stories that encompassed a substantial portion of their clinical assessment experiences.

**Instrument**

We designed a semistructured interview guide to elicit stories based on Gipps’ framework for equity in assessment\textsuperscript{26} and the antideficit lens.\textsuperscript{20} Participants shared 1 or 2 clinical training stories about the following: achievements, assessments that captured achievement, mastery of a learning or patient care–related challenge and if/how this was reflected in their assessment, or equitable assessments.

Stories prompted subsequent semistructured interview questions about whether achievements and overcoming challenges were reflected in the current clinical assessment system, whether learners thought about equity during clinical assessment and how they defined equity, and what an equitable clinical assessment system would look like (the complete interview guide is available as Supplemental Digital Appendix 1 at http://links.lww.com/ACADMED/B11). We also collected participant demographic data including race/ethnicity, gender, and whether the participant was first in their family to attend college. One investigator (S.P.) piloted the initial interview guide with 2 UIM learners who helped refine the questions for clarity and content; pilot interviews were not included in the study dataset. The postpilot guide was used in its final form with minor modifications (i.e., order of questions) made throughout the interviews.

**Procedures**

Two investigators (S.P., K.L.) recruited participants via emails to the school’s student and resident UIM association listservs and direct emails to self-identified UIM learners. Four rounds of recruitment emails were sent. One trained investigator completed all interviews (S.P.) via telephonic or in person between June and August 2019. The interviews lasted 25–60 minutes, averaging 40 minutes. The interviews were audiorecorded, transcribed, and deidentified before analysis.

**Analysis**

Analysis of interview transcripts included 2 steps: (1) re-storying\textsuperscript{26} and (2) thematic analysis\textsuperscript{33} of stories and interview responses. Fundamental to narrative research is the re-storying process, which entails analyzing participant stories for key elements of a story (described below) and rewriting the story to place it within a chronological sequence.\textsuperscript{29} The chronological sequence may not always be present when the participant tells the story. Through re-storying, the researcher builds the link between ideas, events, and outcomes presented by the participant. We selected a problem–solution approach to re-storying in which each story was analyzed for 5 key elements of story structure: characters, setting, problem, action, and resolution. Using thematic analysis, we identified...
themes within and across the stories as well as core themes, such as identity, motivation, and learning environment factors underscored by Gipps.26

All investigators independently coded one transcript to identify story elements and generated themes for an initial codebook. Subsequently, pairs of investigators applied the codebook to 4 additional transcripts to further refine and finalize the codebook. Pairs of investigators then used the final codebook to code all transcripts. All coding involved discussion and reconciliation of codes. Finally, stories were extracted and re-storied into a spreadsheet. All investigators participated in synthesizing the codes into larger themes. We analyzed data using Dedoose (SocioCultural Research Consultants LLC, Los Angeles, California).

Researcher reflexivity

The research team consisted of educational researchers, a medical student, and physicians. The investigators were females whose backgrounds were immigrant, American, European, UIM, and not-underrepresented in medicine (not-UIM). It is possible that these individual and collective backgrounds and lived experiences influenced data collection and interpretation. One UIM medical student conducted all interviews, and her background might have enhanced participants’ comfort sharing stories. All investigators were involved in all aspects of the study including design, analysis, and synthesis; they shared and compared their reactions with and interpretations of the data through group discussion.

Results

We interviewed 20 (87%) of the 23 volunteers who were available to be interviewed during the study time period. Thirteen (65%) participants were male, and 11 (55%) were first in their family to attend college. Participants self-identified as Latinx/Hispanic (9, 45%), Black/African American (6, 30%), underrepresented Asian/Pacific Islander (3, 15%), and mixed UIM race/ethnicity (2, 10%). Six (30%) were medical students, and 14 (70%) were residents. Residents’ specialties were internal medicine (9, 64%), emergency medicine (4, 29%), and pediatrics (1, 7%).

To contextualize participants’ experiences, we first provide an overview of their story elements. We then highlight participants’ awareness and personal definitions of equity. Finally, we describe how participants conceptualized their achievement and an assessment system that is sound and equitable. Medical students and residents related mostly similar experiences and, where relevant, we describe distinctions in their experiences and perceptions.

Overview of the stories

Setting, character, and the problem.

Participants’ stories occurred during clinical learning (e.g., clerkships, subinternships, internship, ongoing rotations) in the clinical workplace (e.g., inpatient and outpatient settings). Stories involved one or more characters: learner, patient, patients’ family members, clinical supervisor (attending, resident, other clinical instructors), and/or clinical team members. The problem portion of the stories almost always focused on the story elicited in the interview questions (e.g., achievement, equitable learning experiences).

Actions. Actions within stories comprised the intricate components of the story such as what happened, emotions evoked, and actions that led to the resolution. Actions were the most varied component of the stories and are presented in the re-storied narratives in the results.

Resolution. Regardless of the story told, resolutions centered on 3 intersecting conclusions: assessment, relationships, and patient outcomes. Stories that concluded with assessment outcomes described whether and how participants were observed and given feedback; how they learned; and whether they received formal recognition, such as high ratings and awards. Relationship-based outcomes included building trust and teamwork with the health care team and peers and receiving mentorship. Patient outcomes included building positive and productive patient relationships, contributing to patient care, and saving patient lives.

Equity awareness and definitions

Most participants reported thinking about the notion of equity regularly in the context of clinical assessment. Their awareness of equity came from their own experiences and knowledge of the inequities that impact UIM learners. When asked to define equity in the context of assessment, participants’ definitions varied. Most described equity as including consideration of the individual learner (background, current circumstances, starting point) and focusing on growth, fairness, and lack of bias. Some spoke to the allocation of resources to create equitable opportunities and outcomes, and others spoke about teachers’ investment in learners’ success.

Figure 1 illustrates that participants’ stories of achievement formed the foundation for how they characterized a sound and equitable assessment system during clinical training and how an equitable assessment system existed within a sound one. We describe themes and subthemes related to achievement and a sound and equitable assessment below.

Achievements during clinical training

Participants characterized their achievements in terms of contributing to patient care, involving growth, and receiving recognition. Table 1 displays stories of learners’ achievements related to each of the themes described.

Contributions to patient care.

Participants described their achievements as providing patient care, applying evidence to patient care, demonstrating work ethic, and using excellent communication skills. Participants considered their relationship building and trust with patients and families as vital contributions to patient care. They told stories of how they enhanced patient outcomes and improved patients’ lives. Learners highlighted patient advocacy as a core achievement. They described influencing specific medical outcomes, such as helping patients improve their blood sugar and creating conditions for patients to experience a “good death.” Pride manifested when learners played a core role in affecting what they perceived to be critical patient care outcomes.

Growth.

Participants described the importance of setting personal goals for growth and attaining those goals as a key achievement. Growth goals included acquiring specific knowledge and skills at a specific time point, improving patient care, and gaining self-assurance and confidence. An important facet of growth was improving one’s learning through relationships with patients and figuring out how to contribute to improved patient outcomes.
Recognition. Some participants named instances when their strengths were captured during assessment and/or through praise and feedback as achievements. Recognition by clinical supervisors through high grades/ratings, written details about how participants impacted patient care (e.g., ability to explain clinical concepts, coordination of patient care), and receipt of awards and honors (e.g., being selected as chief resident) were regarded as achievements. Participants noted that recognition seemed sparse in medicine and, hence, positive feedback and praise by clinical supervisors and the team constituted significant achievements.

Characteristics of a sound clinical assessment system that captures achievement

Participants endorsed that the existing assessment process varies in how well it captures achievement throughout the continuum of clinical training. Existing assessments reward knowledge base, oral presentations, rapid clinical judgment, and patient management. Assessments seem to undervalue skills such as helpfulness, patient trust, rapport and relationships, and communication. Table 2 displays learners’ stories illustrating the themes that underscore a sound clinical assessment system. Table 2 also displays stories of experiences that characterize an equitable assessment system, which we describe in the subsequent section. Despite our interview questions designed to prompt antideficit stories, learners sometimes told deficit-focused stories. To stay true to the participants’ perceptions, we include all findings but describe our themes in relation to the original antideficit-focused research questions.

Feedback and observation. Participants highlighted the importance of real-time, frequent, transparent, and specific feedback on observed patient encounters and interactions with team members. Robust assessments included clear expectations, consistency in standards to be met, and clinical supervisors systematically trained in how to complete assessments. Feedback that addressed predefined tasks upon which learners would be judged best captured achievement.

Relationship with clinical supervisor. Positive relationships with clinical supervisors provided students with safe learning environments, which, in turn, seemed to improve the quality of assessments received. These relationships facilitated participants’ abilities to navigate difficult clinical situations and self-improve. Learners found that longitudinal relationships with clinical supervisors provided avenues for supervisors to witness participants’ hard work, abilities, and team contributions. Additionally, learners felt that interacting with multiple clinical supervisors...
Characteristics of an equitable assessment system

Participants varied in their judgments of how equitable their clinical assessment experiences had been. Residents noted that assessment in residency felt more equitable than in medical school because residency programs did not emphasize grades and focused largely on patient care.

Participants indicated that an equitable assessment system must include characteristics of a sound assessment system that captures achievement. An equitable assessment system includes a number of additional facets: absence of comparison to peers, use of narrative assessment, assessment of patient care and growth, bias training for supervisors, and acknowledgment of learner identity (Table 2).

Absence of comparison. Cognizant of inequities, participants said that assessments that include comparison to other learners are inherently inequitable. This inequity is exacerbated when clinical supervisors compare learners with others in their demographic group. For assessments to be equitable, the focus has to be on attainment of required standards. Medical students focused on the detrimental impact of comparison on formal assessed outcomes, which creates stress and anxiety about grades. They perceived that assessments are most equitable with only one student on the team. Residents expressed that comparison to peers is less common at their level of training and, when present, tends to emphasize gender rather than racial/ethnic differences. In addition, participants spoke about how current clinical performance assessment processes tend to favor those who speak up more often and are more extroverted. Often learners with these personal characteristics are considered more likeable. Hence, assessments provided more opportunities to capture learner strengths that may otherwise be missed.

Table 1
Themes and Representative Stories of Achievement During Clinical Training Told by Underrepresented in Medicine Medical Students and Residents (N = 20), 2019

<table>
<thead>
<tr>
<th>Theme</th>
<th>Representative story*</th>
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<tr>
<td>Patient care contributions</td>
<td>Sam (P20, resident) described a patient who presented in the hospital with altered mental status. The patient wasn’t responsive, and after 20 days of being in the hospital and multiple tests and procedures, the team could not determine what was going on with the patient. Through taking time to read through the patient’s history and examining the patient, Sam was able to piece together the patient’s clinical story and recognize that the patient’s symptoms included catatonia and a form of muscle rigidity. The team then involved psychiatrists which ultimately led to the patient being appropriately diagnosed, treated, and recovered. Sam noted that this achievement also included working successfully with the health care team to seek the best care for the patient.</td>
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<td>Sonny (P13, resident) saw a patient with undifferentiated shock and low blood pressure. Using ultrasound, Sonny correctly diagnosed the patient’s giant aorta as starting to rupture. Sonny diagnosed the patient while others were unsure and recommended administering antibiotics. Sonny noted that this story highlighted his patient care skills and knowledge.</td>
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<td>Theo (P16, resident) was conducting a particularly challenging trauma resuscitation. On physical exam, Theo elicited subtle neurologic findings indicating a critical diagnosis. Theo’s clinical supervisor was impressed that Theo didn’t discount findings given the other immediate needs of the patient. Theo’s achievements were that he was calm under pressure and he quickly build rapport with patient and team to get needed information or assistance.</td>
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<td>Growth</td>
<td>On a longitudinal rotation, Levi (P8, medical student) received a good amount of feedback on his ability to assess, understand, and report the need for an urgent transfer of a patient to the emergency department. Levi’s assessment captured his ability to respond quickly to situations and make sound clinical judgment, and his strengths in ethics and compassion for patients. Levi reflected that these assessments were a product of the longitudinal relationships with attendings who got to know him over time and could comment on his growth.</td>
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<td>Bruce (P19, resident) was working with a medical student and felt it was particularly important to be attentive to the student’s growth as a physician. Bruce was able to focus his teaching while also giving the student a chance to learn on her own and receive feedback on her growth.</td>
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<td>Recognition</td>
<td>Joe (P7, resident) was involved in a family meeting around dialysis for a quadriplegic patient in the intensive care unit. Clinical supervisor feedback captured Joe’s strengths in understanding people’s motivations and goals nonjudgmentally and interacting with the patient and his family. Joe received lots of positive feedback from attendings and consultants regarding how well he addressed palliative care issues and conducted care discussions in complex family meetings with multiple providers. Joe was not expecting this immense positive feedback and was particularly proud because the feedback had been noted numerous times.</td>
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<td>Joanna (P11, resident) worked at the hospital on a weekend when there were fewer providers available. Joanna had 23 new patients to manage and stayed late that weekend along with the few fellows and attendings working with her. Joanna received positive detailed feedback that she did a good job managing patients during the weekend. Receipt of the feedback helped Joanna realize the positive impact of her contributions.</td>
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<td>Bruce (P19, resident) worked with a medical student to treat a patient who was experiencing a sickle cell crisis. Because of the therapeutic relationship Bruce and student built with the patient, she disclosed she was struggling emotionally due to a difficult relationship, providing additional diagnostic information about the triggers that may have provoked the crisis. The clinical supervisor congratulated Bruce on his style and expertise in patient-centered care and noted that Bruce role modeled important lessons about patient-centered care for the medical student he was working with.</td>
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<td>Lara (P15, resident) mentioned that one of the most significant acknowledgments of her achievements was when she was named a chief resident. She felt this recognition was a credit to her patient care skills, clinical knowledge, ability to work well with others, and leadership skills.</td>
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*Participants’ names changed to protect their confidentiality.
Table 2
Themes and Representative Stories About Characteristics of a Sound and Equitable Assessment System That Captured Learner Achievement told by Underrepresented in Medicine Medical Students and Residents (N = 20), 2019

<table>
<thead>
<tr>
<th>Theme</th>
<th>Representative Story*</th>
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<tr>
<td><strong>Sound assessment system that captured achievement</strong></td>
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<td>Feedback and observation</td>
<td><strong>Lara</strong> (P15, resident) described starting her internship year experiencing imposter syndrome. She felt she was not as intelligent and capable as other interns. Through a series of assessments in which her clinical supervisors provided detailed specific feedback on her strengths and weaknesses, Lara learned where she excelled (e.g., in autonomy over making patient decisions, patient advocacy) and where she needed to grow (e.g., she was asked to speak up more). This detailed feedback, based often on observation, helped Lara become more confident in herself.</td>
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<td><strong>Jack</strong> (P4, medical student) helped an outpatient navigate his diabetes diagnosis, demonstrated learning in diabetes pathophysiology, provided good patient care, and was trusted by the preceptor to lead the patient’s management. The preceptor’s positive feedback of Jack’s strengths, garnered through observing Jack during patient interaction, included details on problem solving patient management issues, prioritizing tasks, directing questions to address problems, and synthesizing information.</td>
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<td>Relationship with clinical supervisor</td>
<td><strong>Miguel</strong> (P6, resident) described an incident during medical school when his not-underrepresented in medicine peers were able to afford review materials to study for exams and receive advice from parents who were physicians, neither of which he could afford. Overcoming this initial inequity involved extra work, pressure, and anxiety for Miguel and also creativity with the resources at his disposal.</td>
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<td><strong>John</strong> (P2, medical student) recollects a time when a not-underrepresented in medicine (not-UIM) peer received credit for work he had not completed but instead had been completed by John and other classmates. After giving a case presentation, John was told by a supervisor to take ownership of his patients and present them like his (not-UIM) peer. John noted how this comparison was inequitable since he just finished presenting the patient and his not-UIM peer, unknown to the supervisor, had received undeserved credit. To appear professional and avoid appearing disrespectful, John did not speak up to correct the supervisor.</td>
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<td><strong>Asya</strong> (P9, resident) described one of her rotations in which a clinical supervisor kept track of every patient she took care of and gave her exceptional evaluations and feedback by speaking about each patient interaction, diagnosis, presentation, and about what Asya did well for each patient.</td>
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<td>Equitable assessment system</td>
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<tr>
<td>Absence of comparison</td>
<td><strong>Sonia</strong> (P3, medical student) was began a night shift on her rotation with no orientation and didn’t feel part of the team. When she was assertive and tried to seek help, she felt she irritated others, but came across as disinterested when she was not assertive. On the evaluation, Sonia scored 2.5 [on a 4-point scale] on professionalism despite maintaining a score between 3.5 and 4 throughout the year on other rotations. Sonia felt this score was inequitable because she received no written feedback and she needed to learn and do.</td>
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<td>Narrative assessments</td>
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<td>Assessment of patient care</td>
<td><strong>Lara</strong> (P15, resident) described starting her internship year experiencing imposter syndrome. She felt she was not as intelligent and capable as other interns. Through a series of assessments in which her clinical supervisors provided detailed specific feedback on her strengths and weaknesses, Lara learned where she excelled (e.g., in autonomy over making patient decisions, patient advocacy) and where she needed to grow (e.g., she was asked to speak up more). This detailed feedback, based often on observation, helped Lara become more confident in herself.</td>
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<td>Assessment for growth</td>
<td><strong>Lara</strong> (P15, resident) described starting her internship year experiencing imposter syndrome. She felt she was not as intelligent and capable as other interns. Through a series of assessments in which her clinical supervisors provided detailed specific feedback on her strengths and weaknesses, Lara learned where she excelled (e.g., in autonomy over making patient decisions, patient advocacy) and where she needed to grow (e.g., she was asked to speak up more). This detailed feedback, based often on observation, helped Lara become more confident in herself.</td>
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*(Table continues)*
that deemphasize these personal characteristics and learner likeability are considered more equitable.

**Narrative assessments.** Narrative assessments containing details on learner strengths and areas for improvement were considered more equitable to some participants than ratings and grades. Clinical supervisors who provide detailed feedback on performance were less likely to be perceived as inequitable. Participants noted that detailed narrative assessments are not always provided in formal assessments and learners often receive “generic” narratives or no narratives in evaluations, rendering them without insight into areas needing improvement.

**Assessment of patient care.** Equitable assessments captured a broad range of student skills and contributions to patient care beyond medical knowledge, including patient ownership and advocacy, addressing patients’ needs, student initiative, being a team player, and self-improvement. Achievement in an equitable assessment system would focus largely on the provision of optimal patient care.

**Assessment of growth.** Participants spoke about how assessment for growth is inherent to an equitable assessment system. According to participants, assessment for growth involves multiple features. Longitudinal observation of a learner over time and in continuity creates an overall picture of performance that acknowledges individual circumstances. Assessment for growth also involves self-improvement through early goal-setting between learner and teacher and subsequent follow-up to determine goal attainment. Equitable assessments consider what is taught and learned instead of preexisting knowledge. A growth-oriented assessment system underscores the principle that everyone can learn and perform similarly regardless of access to supplemental study resources, socioeconomic status, and/or family and educational background.

Finally, inherent to assessment for growth is an environment that acknowledges learners learn in different ways and that is designed to help them succeed. Participants felt that both learners and clinical supervisors should be primed with knowledge that some learning environments (e.g., rushing through rounds) might not facilitate optimal assessment.

**Clinical supervisor antibias training.** Participants acknowledged that implicit biases are inherent to learning environments and that ongoing education about implicit bias is key to creating an equitable assessment system. Training should entail descriptions of common biases (e.g., narrative assessment words used to describe women vs men) and education to mitigate those biases. Participants suggested that clerkship or residency directors be trained to examine student assessments for potential evidence of bias to ensure fair and balanced assessments.

**Identity in assessment.** Participants spoke about the important role identity plays in influencing assessed outcomes. UIM learners bring a unique perspective to the health care team, bridge gaps with patients, build trust with patients from similar backgrounds, and address patient needs that other providers may miss. Participants worried that stereotypes influence evaluations and said they struggle with openly displaying their identities. Some learners said they model supervisors’ behaviors and identities, believing that this will lead to positive assessed outcomes. Nonetheless, participants perceived that evaluators’ knowledge of learners’ different backgrounds and learning opportunities contributes to equitable assessments. They appreciated evaluators taking into account learners’ privileges/disadvantages and their trajectories.
Discussion

Through the antideficit lens, we sought to characterize an equitable clinical training assessment system. UIM learners' stories of their achievements emphasized their contributions to patient care, growth, and recognition of strengths, which together formed the foundation for how they characterized a sound and equitable assessment system. UIM learners said an equitable assessment system that capitalizes on antideficit principles and highlights learner achievement will avoid comparison to peers, value narrative assessment, focus assessment on patient care and learner growth, train clinical supervisors to mitigate bias, and appreciate learner identity. Finally, an equitable assessment system cannot exist without being fundamentally sound. Components of a sound assessment system described in our study—including specific and ongoing feedback, observation, and continuity in relationships with clinical supervisors—have been previously described and apply to all learners. Our study reiterates these findings and additionally underscores that equitable assessment requires implementation of facets less commonly addressed in the literature, including clinical supervisor antibias training, acknowledgment of identity in assessment, and assessment that accounts for learner growth.

The important role of identity in assessment underscored by Gipps was also reinforced in our findings. Strategies to recognize and support UIM learners through the challenging negotiation of their personal and professional identity require further development. Our participants named acknowledgment of identity as a core component of equity. Yet, learners' expectations for how identity should play into assessment was layered with trepidation that personal identity could negatively influence evaluations. It is inherently unfair for learners to feel they have to mask their identities to receive favorable assessments. Importantly, identity concealment among marginalized groups can negatively affect well-being and achievement. An assessment system designed to embrace learners' diverse identities can ensure both individual and collective success to improve care of diverse patients and populations.

Assessment for growth is a core tenet of competency-based medical education, in which milestones ratings can demonstrate learners' trajectories over time. However, learners typically perceive all assessment as high stakes, and thus evidence of growth or improvement seem to signal weakness. Design of medical school assessments, with distinct course and clerkship grades and frequent supervisor switches, tends to represent a snapshot view of student performance and does not consider the student's growth or capacity to grow with increased experience. Students with particularly strong preexisting knowledge or skills, perhaps gained through previous personal, educational, or work experiences, are more facile navigating the clinical setting and thus more likely to receive higher assessed ratings. To effectively regulate learning, learners must understand: (1) the measures on which they will be judged, (2) where they stand on these measures, and (3) how they can improve. Development of assessment methods that capture students' growth must be a key priority for equitable clinical education.

Gipps' conceptualization of equity in assessment explicates how learning environment factors, such as relationships with teachers and teachers' belief systems, impact achievement. In line with this framework, learners in our study both confirmed and elaborated on these factors as critical for equitable assessment in the clinical setting. Learners addressed how relationships with clinical supervisors, particularly longitudinal ones, are critical to a sound assessment system, and also how a teacher's belief system, such as investment in learner success, belief in growth, and awareness of the risks of bias and comparison, is essential to equity. Moreover, equitable assessments represent student performance in the context of valued competencies. Learners in our study spoke about how assessments of skills in patient advocacy, teamwork, and learner initiative create equitable assessments. In medical education, despite an emphasis on a range of competencies, medical knowledge tends to be implicitly valued for a host of historical and practical reasons that, together, reinforce unequal systems and structures. An education that prepares learners for a variety of competencies must ensure rigorous assessment of all competencies. Our study was limited to a single institution and a limited sample in terms of composition and size, which may limit the transferability of our results. Future research should examine, through deductive methods such as surveys, how our model for equitable assessment resonates with larger numbers of learners across disciplines. Our study did not ask participants to distinguish between what they would consider equitable formative vs summative assessment and future research must explore this further. Despite our antideficit-focused interview questions, some participants described challenges and inequities that arose naturally in their stories. We included all stories because we deemed it important to represent our participants' experiences to the fullest even if not all of the experiences were positive. We did not corroborate learners' stories with their supervisors or by examining actual written assessments.

Assessment experiences, particularly during clinical education, play a critical role in shaping learners' future training and career opportunities, identity, and growth. Efforts to create an inclusive, fair, and equitable clinical training experience must address the development of an equitable assessment system that considers how UIM learners achieve and succeed. An assessment system that capitalizes on this antideficit framing would avoid comparison to peers, emphasize narrative assessment, focus on patient care and learner growth, train clinical supervisors to minimize bias, and consider learner identity. Nurturing and capitalizing on learner strengths and contributions can create and sustain a diverse and equitable learning environment that optimizes patient care.

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