Accessibility, Inclusion, and Action in Medical Education

Lived Experiences of Learners and Physicians With Disabilities

March 2018

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Foreword

Increasing diversity and inclusion in medical education is a core mission and value of the AAMC. While many AAMC publications and efforts have focused on increasing the gender, racial, and ethnic diversity of our applicants and students, this new publication makes a significant contribution to the field by highlighting the importance of including disability in our diversity and inclusion efforts.

The fourth AAMC publication on the topic of disability in medical education since 1993, this one breaks new ground by capturing the day-to-day experiences of learners and academic medicine physicians with disabilities. By bringing these important voices into the discussion and sharing their lived experiences, this report, by Lisa Meeks, PhD, and Neera Jain, MS, CRC, elucidates the challenges and complexities encountered by these members of the academic medicine community. Their stories, gathered in interviews with learners and physicians across the United States, reveal the common barriers to inclusion, as well as the opportunities and promising institutional practices that will help inform and enhance the academic medicine community's approach to individuals with disabilities.

This report also amplifies the call for disability to become fully integrated into diversity and inclusion discussions at medical schools and teaching hospitals. The inclusion of the experiences and perspectives of students and residents with disabilities, like those whose racial or ethnic group is underrepresented in medicine (URIM), LGBTQ+ learners, students with Deferred Action for Childhood Arrivals (DACA) status, and many others, contributes to the rich diversity we seek in the medical education community. Their inclusion also enhances learning for everyone and elevates our community's awareness and knowledge of policies, procedures, and practices that affect, both positively and negatively, the learning environment and, ultimately, patient care.

As with other diversity efforts, enhancing access and inclusion for learners with disabilities requires sustained commitment. Institutional leadership has a particularly critical role to play in shaping the culture, establishing accountability, and allocating necessary resources.

There will likely be a range of reactions to and opinions about this publication. We hope it finds an audience among medical students, residents, faculty, institutional administrators, and aspiring applicants and their advisors. That the report speaks to such a wide range of readers reinforces the idea that all stakeholders have a role in enhancing accessibility and inclusion for learners with disabilities.

We also hope the report catalyzes discussion and facilitates the sharing of knowledge about disability issues and medical education. We encourage readers to evaluate the considerations and promising practices presented here as part of an overarching commitment by their institution to advance diversity, inclusion, and accessibility for all members of their teaching and learning communities.

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Disclosures

Lisa Meeks was on faculty at the University of California, San Francisco, School of Medicine (UCSF-SOM) during the development, data collection, and writing of this report. She was also the president-elect of the Coalition for Disability Access in Health Science and Medical Education at the time of the study.

Neera Jain is the policy advisor for the Coalition for Disability Access in Health Science and Medical Education.

Students from UCSF-SOM were not included in the study to avoid any conflicts of interest. However, UCSF policy and practices were highlighted in this report as examples of leading practices.

Acknowledgments

Executive Summary

> *I would like to see the day when somebody would be appointed surgeon somewhere who had no hands, for the operative part is the least part of the work.*
>
> — Harvey Cushing, MD, the father of neurosurgery, in a letter to Henry Christian, MD, November 20, 1911

The waters of medical education are inherently turbulent and difficult to navigate. This is especially true for learners with disabilities,[1] who experience unique barriers in the course of their training. Medical educators have sought guidance in their efforts to support these learners as they enter and graduate from medical school. What was once relatively unusual has become much more common in medical education: About 1,500 medical students with disabilities in the United States currently receive accommodations. While there has certainly been growth in the number of students who disclose a disability, the proportion of those students who seek accommodations remains small, at 2.7%.[2]

The Association of American Medical Colleges (AAMC) and the University of California, San Francisco, School of Medicine (UCSF) sought to understand the lived experiences of learners with disabilities navigating medical education by gathering the perspectives of students, residents, and physicians with disabilities. This report weaves together the major themes shared by these individuals and current research in order to capture the current state of medical education for qualified learners with disabilities. The intended audience includes medical students, residents, faculty, institutional leaders and administrators, and aspiring applicants and their advisors. The report is designed to help the reader understand the lived experiences of learners with disabilities and to catalyze movement toward practices that ensure that all qualified learners, regardless of disability, have equal access to medical education and the profession of medicine.

Interviewees in the Lived Experience Project were recruited through announcements on relevant email lists and to medical school disability service providers, as well as through direct email to known residents and physicians with disabilities and advertisements in materials produced by relevant professional groups. The lead researchers developed a short online questionnaire and a semistructured interview guide. A total of 47 interviews were conducted, each exploring the factors that create barriers to medical education. The interviews also focused on mechanisms that support learners with disabilities and solicited recommendations for improving medical education for those with disabilities. The report shares major themes across the experiences of those interviewed, a small proportion of the overall population of learners and physicians with disabilities. Findings in this study may not generalize to the experiences of all medical learners and physicians with disabilities.

The report lays out the ways structures, culture,[3] and climate[4]—both in institutions and academic medicine writ large—generate barriers and supports to education. Barriers that follow from certain structural arrangements include:

- Uninformed disability service providers

- Lack of clear policies and procedures

- Lack of access to knowledge about nuanced clinical accommodations and assistive technology

- Lack of access to other meaningful accommodations

- Failure to publicize technical standards and to provide information on accessing accommodations

- Technical standards that do not reflect current technology and other developments in medical practice

- Lack of access to health care and wellness supports

Structural arrangements that are more conducive to supporting learners with disabilities include:

- Access to appropriate accommodations

- Ease in accessing accommodations

- Knowledge of clinical accommodations and medical education among disability service providers

- Personal networks and student organizations

Although changes in structural barriers and supports are relatively easy to identify and measure, changes in culture and climate that affect learners with disabilities are not. In this report, the culture and climate of schools affected learners greatly, imposing barriers such as:

- Stereotypes and stigma

- A "clinicalized" culture

- Negative peer attitudes

- Restricted views of disability leading to learners being counseled out of specialties

Culture and climate elements that tend to support students include:

- Openness to disability in admissions

- Peer support networks and physician mentors

- A top-down commitment to diversity

Throughout this report and summarized in an appendix, the authors suggest considerations to help guide stakeholders in academic medicine as they work to improve the climate for learners with disabilities. The considerations align with the supportive factors identified earlier in this summary. As with the findings, the considerations are organized by structure and culture and include both institutional and individual role-based guidance. Structural considerations focus primarily on how to increase meaningful access for learners with disabilities. They include:

- Designating and providing resources for disability service providers who are knowledgeable about medical education

- Publicizing clear, accessible policies and processes

- Providing access to appropriate accommodations

- Reviewing and revising technical standards in light of current promising practices

- Normalizing help-seeking behaviors and facilitating access to wellness services

The considerations for fostering a culture that is welcoming and inclusive of learners with disabilities emphasize professional development, awareness, and openness. Specific considerations include:

- Regularly assessing institutional polices, processes, services, and physical space

- Providing ongoing professional development for faculty and staff

- Integrating best practices in disability inclusion, as well as accessible and respectful language, into curricula and pedagogy

- Integrating disability into diversity and inclusion initiatives

- Making information about disability services and accommodations easily accessible

- Reviewing recruitment and hiring practices

- Taking a universal design approach to both physical space and learner activities and experiences

Diversity and inclusion in the medical student body are associated with greater self-rated preparedness to care for minority patients and a stronger commitment to equitable access to care. Additionally, increased physician diversity has resulted in positive effects on patient care and access for marginalized groups, such as low-income people, racial and ethnic minorities, and nonnative English speakers. Our belief is that similar benefits can result from educating and employing physicians with disabilities.

We hope that you embrace the spirit and findings of the report, especially where we discuss the mechanisms by which medical educators can reduce barriers. We hope that this report sparks discussions, the sharing of experiences, the adoption and enhancement of promising practices, and the continued exploration into how best to provide meaningful access and support to learners and physicians with disabilities.

In the process of conducting interviews, the research team heard stories of resilience, persistence, struggle, and success. The impact of medical educators and administrators on learner success was indisputable, the need for change undeniable. This report represents only the beginning of the work needed in this area. We hope the findings will prompt leaders in academic medicine to augment their efforts to improve the state of disability in medical education.

Notes

1. The current conception of disability supported by the ADA Amendments Act of 2008 comprises a broad range of disabilities: physical, sensory, learning, psychological, and chronic health conditions.

2. Meeks LM, Herzer KR. Prevalence of self-disclosed disability among medical students in U.S. allopathic medical schools. *JAMA*. 2016;316(21):2271-2272.

3. *Culture* is a pattern of shared basic assumptions members have learned as the organization solved its problems of external adaptation and internal integration. The pattern of shared basic assumptions has worked well enough to be considered valid and, therefore, to be taught, either deliberately or tacitly, to new members as the correct way to perceive, think, and feel in relation to those problems.

4. *Climate* is the meaning organizations attach to policies, practices, and procedures they experience and the behaviors they observe getting rewarded, supported, and expected in the organization.

Chapter 1. Current State of Disability in U.S. Undergraduate Medical Education

> *Society as a whole and, I feel, education and health care professionals have, for too long, viewed students with disabilities as a problem to be managed. As a first-year medical student, I repeatedly heard William Osler's maxim that the good physician treats the disease, but the great physician treats the patient. Osler's caution, I believe, was to not rely exclusively on a biomedical model. I fear that sometimes when medical schools encounter applicants or students with disabilities, they do not see the whole individuals; they do not see possibilities. Instead, looking through the lens of that same biomedical model, they focus narrowly on the disabilities and, as a result, see only impairments.*
>
> **— Herzer 2016**

Introduction

The authors of this report embarked on a journey to understand the current state of disability services in undergraduate medical education (UME). Although we include a short section on the resident experience in the report and address some issues that extend to graduate medical education (GME), the primary focus of this report is the UME experience.

In informal conversations with medical education administrators and disability service providers (DSPs)[1] across the country, we learned that practices for review and provision of disability accommodations were inconsistent. Medical education administrators and DSPs reported that their practices were informed by isolated experiences within their programs. No known network or mechanism for sharing disability practices between UME programs existed until recently.[2] DSPs and medical school administrators throughout the country also reported feeling unprepared to address increasing and complex disability-related cases on their campuses.

Overarching Concerns About Disability and U.S. UME

Through these informal conversations, we identified three major concerns about disability and UME that informed the need for this report:

- **Inconsistent policies and procedures:** A lack of standardization in the disability disclosure and accommodation processes was common across medical schools. Self-reported practices varied widely, with no clear guidance in the field to inform them. In an effort to support medical educators on the topic of disability, the AAMC provided guidance in their publication *Medical Students With Disabilities: Resources to Enhance Accessibility* (Hosterman et al 2010). *The Guide to Assisting Students With Disabilities: Equal Access in Health Science and Professional Education* (Meeks and Jain 2015) provided updated guidance for health science education that reflects the current legislative standards and evolved disability service practice. The AAMC also provided support in a series of webinars on disability service for medical education (see Appendix B).

- **Inconsistent support across campuses:** When UME programs have only a small number of medical students with disabilities, demand for student support is minimal. As a result of low demand, most programs reported, the individual in charge of disability service (evaluating for eligibility and determining accommodations) held dual roles as disability service provider and dean or other administrative role. These individuals provided disability services as one part of their job—often with little to no training in the area. Some schools worked with a central university disability service office, which frequently lacked a specialized understanding of disability accommodations in medical education. Other schools reported a robust disability service office with a trained disability service provider whose primary focus was working with learners in medical education. These inconsistent resources and experiences led to a wide range of support, from minimal to comprehensive support for all stages of undergraduate medical education, including board exams and residency selection.

- **Lack of understanding of the Americans with Disabilities Act (ADA):** The most disconcerting self-reports came from administrators who were unaware of pertinent legislation and case law. Some administrators were also unaware of the institutional obligation to offer a mechanism for student self-disclosure of disability and to determine reasonable accommodations. In fact, some administrators with whom the lead researchers spoke shared a (misguided) practice on their campuses in which all requests for accommodations in clinical settings were uniformly denied. This practice or making blanket policies regarding the provision of accommodations is "not in keeping with the diligent, well-reasoned collaborative process that warrants the accordance of deference by the Office of Civil Rights (OCR) to the judgments of academic institutions" (Kent State University 2014).

Although medical education programs across the continuum (UME and GME) struggle in their efforts to provide meaningful disability services to their learners, one thing was clear from the conversations: All programs want to do the right thing. As the number of individuals with disabilities entering medicine and requesting accommodations increased and key decisions in several high-profile legal cases emerged, program administrators self-reported seeking guidance on how to support this emerging population of learners.

Out of the necessity for guidance, and to address the aforementioned deficits, the Coalition for Disability Access in Health Science and Medicine (the Coalition) was developed. This group, led by disability providers in health science programs, created a network for learning and exchanging information. Currently the leader on the topic of disability in health science education, the Coalition works to disseminate promising practices with the goal of standardization within the field.

Numbers of Individuals With Disabilities

Disability is defined as a mental or physical impairment that substantially limits one or more major life activities as compared with most people in the general population (ADA 1990). Disability is complex, and barriers to full access can be physical, structural, and attitudinal. Examples of barriers are an examination table that does not lower sufficiently to allow a physician using a wheelchair to examine their patients, and a faculty member's belief that a student using a wheelchair presents a patient safety concern. Full access to medical education for learners with disabilities requires UME programs to remove environmental, structural, and social barriers for qualified learners.

In historical research, disability has been characterized in different ways. Because of the conceptions of disability used in research, the prevalence measures of students with disabilities in medical education over time have focused on physical and sensory disabilities. Before the ADA of 1990, using data captured from 1976–1980, researchers found that the prevalence of students with physical disabilities graduating from U.S. medical schools was 0.19% (Wu et al 1996). A later study, conducted after the Americans with Disabilities Act Amendments Act (ADAAA 2008)

was passed, found that 0.15% of graduating U.S. medical students were reported to have a physical or sensory (visual or hearing) disability (Moutsiakis and Polisoto 2010). Just two years later, surveying all accredited American and Canadian medical schools, researchers found that 0.56% of matriculating and 0.42% of graduating medical students reported physical and sensory disabilities (Eickmeyer et al 2012).

The current conception of disability supported by the ADA Amendments Act comprises a broad range of disabilities: physical, sensory, learning, psychological, and chronic health conditions. The most recent study of medical students with disabilities found that 2.7% (1,547) of students from responding U.S. MD-granting programs self-reported a disability to their institutions (Meeks and Herzer 2016). The first to include students with ADHD, learning, psychological, and chronic health conditions, this study found that the prevalence of students with self-reported disabilities is up to four times higher than previous studies indicated.

Despite more comprehensive figures, the overall percentage of students with disabilities in medical education remains low compared with the percentage of people with disabilities in undergraduate (11.1%) and graduate (7.6%) education programs overall (U.S. Department of Education 2010; Snyder and Dillow 2015).

Meeks and Herzer (2016) provided further clarity about the proportions of students with disabilities in U.S. MD-granting programs, reporting the categorical makeup of disability as follows: ADHD, 33.7%; learning disability, 21.5%; psychological, 20%; chronic health, 13.1%; visual, 3.0%; mobility, 2.5%; deaf or hard of hearing, 2.2%; and other functional impairments[3], 3.9%. ADHD, learning, and psychological disabilities were the most prevalent, suggesting that most students with disabilities in medicine have nonapparent (sometimes referred to as *invisible*) disabilities.

Across MD-granting programs, the proportion of students self-reporting disability varied between 0% and 12% (Meeks and Herzer 2016). The reasons for the high variability between programs are unknown; however, anecdotal reports suggest that the degree to which medical schools have dedicated resources and inclusive practices for students with disabilities influences student disclosure.

Notwithstanding the effort to include nonapparent disabilities such as psychological, learning, and chronic health conditions in recent research, there remain concerns that the numbers of people with such disabilities are underreported. Stigma surrounding psychological disabilities and fear of disclosure in this high-stakes environment remain disincentives to disclosure. In a 2015 study, Dyrbye and colleagues found that students do not practice help-seeking behavior because they feel that seeking help is a sign of personal weakness; fear negative attitudes about mental health treatment from program directors, supervisors, peers, and patients; and have concerns about the potential implications on their future of a known diagnosis.

This silent suffering comes at a price. Recent studies suggest that an estimated 27.2% (range, 9.3% to 55.9%) of medical students are depressed and that 11.1% (range, 7.4% to 24.2%) experience suicidal ideation (Rotenstein et al 2016). This underreported population would likely benefit from the supports available through behavioral health professionals and disability service providers. Ensuring that mental health conditions are understood as part of "disability" allows these students to access accommodations and auxiliary aids, develop an understanding of legal protections, and connect with disability communities. Seen from this perspective, student resources (such as wellness teams, deans, learning specialists, first-generation programs, and programs for people in racial and ethnic groups that are underrepresented in medicine (URM)) would do well to develop strong connections with their disability service provider.

Integrating Disability Into Diversity and Inclusion Frameworks

> *What I have come across so many times is that "underrepresented" does not mean disabled. There are a lot of scholarship notices that we get about people wanting diversity in medicine. I always have to scroll down to the bottom, what do they mean by diverse? Filipino, Native American, African American? They never say disabled—ever. There's not even a group of us, there's no support that way…. I feel like my school itself is not thinking disability is a diversity thing. I don't know how to ask in residency interviews, should I consider it a diversity thing, or should I consider [disability] a bad thing? I don't know.*
>
> — Medical student reflecting on disability as diversity

Attention to diversity has been a key focus of medical education. A diverse workforce has been identified as a critical factor in the delivery of high-quality, competent care throughout the nation (AAMC 2014; Nivet 2015), especially when addressing health care disparities (Nivet et al 2016). Despite this focus, disability is rarely included in medical education diversity initiatives (DeLisa and Lindenthal 2016).

The omission of disability as an aspect of diversity in medical education is a missed opportunity. People with disabilities experience significant barriers to health care, including inaccessible facilities, poor-quality treatment, discriminatory attitudes, and denied care (DREDF 2014; WHO and World Bank 2011). As a result of these barriers, people with disabilities worldwide experience significant health care disparities and unmet needs when compared with nondisabled people (WHO and World Bank 2011). As has been seen with physician-patient concordance in other patient populations, increasing the number of medical professionals with disabilities could have a positive effect on patient care and could reduce health care disparities for patients with disabilities through increasing patient satisfaction, changing attitudes, and enhancing the medical school curriculum.

Increased Patient Satisfaction and Compliance

When health care providers have life experience that more closely matches the experiences of their patients, patients tend to be more satisfied with their care and to adhere to medical advice. This effect has been seen in studies addressing racial, ethnic, and sexual minority communities when the demographics of health care providers reflect those of underserved populations (e.g., Traylor et al 2010). Iezzoni (2016) has suggested, similarly, that medical students who identify as having a disability during training carry a disability identity that informs their clinical practice and leads to more culturally competent care.

I know that regardless of what I do, I can take my experiences and say, "Hey, I know what it's like to be a patient. Most recently, I know what it's like to have a really terrible thing that you have to deal with on a daily basis, or a disorder, a disease, illness that you have to deal with, and [I can tell you] what I've learned from it. I can help you from what I've learned. Whether I support you or just know from my understanding … what kind of doctor I responded well to, or what it felt like having people tell me, 'You're overreacting' or 'You're not allowed to be upset because you have [a disability].'"

— Medical student discussing how personal disability experiences will inform their patient care

Increasing the number of students of color and women in medicine through pipeline programs and fostering inclusive institutional climates and culture are two of many mechanisms that attempt to address this need for physician-patient concordance in these demographics. Despite suggestions that an increase in the number of physicians with disabilities might yield similar reductions in health care disparities for patients with disabilities (Iezzoni 2016; Ouellette 2012), there are currently no specific pipeline programs for this population (Laird-Metke et al 2016). In fact, access to the profession for people with disabilities has rarely been included in the decades-long focus on diversity in medicine.

Attitude Change Prompted by Equal-Status Relationships

Perhaps the most dramatic learning can come when it is a peer who is disabled, rather than a patient. Learning alongside a student who is a wheelchair user or has restricted growth or is deaf can challenge negative assumptions directly, as well as broaden the pool of qualified people entering the health professions.

— Shakespeare et al 2009

Physician perceptions regarding disability can be presumptive and grounded in stereotypes and may inform their attitudes about the lives, preferences, values, and expectations of people with disability. This mindset can negatively affect patient care (Iezzoni 2016). The most effective method for combating these stereotypes may be to train alongside a physician with a disability. Physician educator Kristi Kirschner, MD, suggests that through these equal-status relationships, normative culture and attitudes are actively transformed and challenged (personal communication, January 4, 2017).

Being in the program was a learning situation for [my peers] as well because it really allowed them to understand what accommodations are needed and how to work with somebody that has these sorts of challenges…. It also teaches the other residents a lot about working with patients, to work with me, which I definitely found from third and fourth year [of medical school], working with my classmates. I think a lot of my classmates who were on my small teams interacted differently with patients after working with me for eight weeks.

— Resident reflecting on how they influenced peer learning about disability

Research into attitude change supports this sentiment. One literature review found that close cooperative relationships between nondisabled and disabled people, such as what occurs between peers in medical education, can work to change attitudes about disability (Hannan 2007). In this way, increased exposure to people with disabilities as peers in medical education could enhance the ability of physicians to provide effective medical care to patients with disabilities and level the relationship between physician and patient.

Including Disability in the Curriculum

Curriculum initiatives focused on teaching medical students about disability have also been shown to shift attitudes toward disability (Shakespeare and Kleine 2013). The length and nature of the published curricular initiatives in this area have varied widely. They include curricula that examine bias toward disability; people with disabilities teaching from an expert perspective; exposure to people with disabilities in their homes and communities; and standardized-patient encounters focused on skill building in communication and psychosocial aspects of disability (e.g., Bu et al 2016; Minihan et al 2004; Sarmiento et al 2016; Woodard et al 2012). The most comprehensive disability curricular initiative published in the literature is at the State University of New York at Buffalo, School of Medicine and Biomedical Science, where a comprehensive longitudinal curriculum is embedded into all four years of UME study and has persisted for nearly 10 years (Symons et al 2009; Symons et al 2014).

Despite calls for standardized objectives in medical school curricula (Kirschner and Curry 2009; Minihan et al 2011), implementation has lagged, with some medical schools including no specific training about disability (Seidel and Crowe 2017). To achieve improved health outcomes for patients with disabilities by ensuring that physicians are well equipped to serve this population, comprehensive medical school curricula about disability are needed. Meaningful inclusion of disability in the curriculum, delivered from a social-model perspective, could help shift the culture of the medical profession around disability, thus improving the experience for students with disabilities.

Legal Framework for Inclusion

Legislation and Recent Case Law

Section 504 of the Rehabilitation Act of 1973 prohibits programs or activities receiving federal financial assistance (which necessarily encompasses most medical schools) from "exclud[ing] from participation, deny[ing] the benefits of, or subject[ing] to discrimination" any "otherwise qualified individual with a disability … solely by reason of her or his disability." In 1990, Congress extended this prohibition to the private sector through the ADA. Section 504 and the ADA are intended to be read in concert with one another, and today, most medical schools are covered by both acts and, in some cases, may also be covered by local (state or municipal) rules around inclusion of individuals with disabilities.

A commitment to disability inclusion was exemplified by the U.S. Congress in the 2008 amendments to the ADA. In the ADA Amendments Act (ADAAA), the description of disability was expanded to promote broad coverage for people with disabilities. What constitutes a "major life activity" was clarified to include a wide range of activities, including concentrating, communicating, and thinking. This clarification elucidated the range of conditions that may be understood as disabilities and warrant accommodation by postsecondary schools (including, for example, learning disabilities and psychological conditions). The ADAAA also underscored that the determination of whether an individual's impairment qualifies as a disability under the law should not require extensive analysis.

Recent directives from the National Institutes of Health (NIH) and the National Institute of General Medical Sciences (NIGMS) further address federal support for the inclusion of people with disabilities in health science education. All grant requests and renewals, including T-32 grants and Medical Science Training Programs (MSTPs), must include a recruitment and retention plan to enhance diversity that includes individuals with disabilities (NIH 2015; NIGMS 2016).

The aforementioned changes have brought renewed focus to the inclusion of people with disabilities in medical education. In light of these developments, there may be a need to update school policies and practices to ensure that they are inclusive of this broader range of qualified individuals with disabilities in admissions, in the classroom, and on campus. The recent legal cases described below illustrate issues that could be litigated in medical education. These cases can be helpful to medical education programs when evaluating requests for accommodations and determining appropriate technical standards, effective accommodations, the role of patient safety in determining accommodations, and decisions about academic dismissal.

Undue Hardship

Understandably, administrators may have concerns about the cost of implementing accommodations. The cost of accommodations varies considerably depending on the nature of the accommodation and resources needed for implementation. One study showed that although 50% of accommodations cost between $1 and $5,000, a full 33% of accommodations had zero cost (Churgay et al 2015). In their survey of medical schools, Meeks and Herzer (2016) found that the majority of accommodations provided to students in UME were extra time on exams, which bears little if any cost relative to a school's overall budget. Schools must plan, however, for the small costs associated with space and staffing for the offices that manage implementation.

Under the ADA, accommodations must not cause an "undue hardship" on the institution, including both financial and administrative hardship. The recent decision in *Argenyi v. Creighton University* (2013) provides an example of how one court recently applied the concept of "undue hardship." In this case, the cost of $50,000–$60,000 per year for an accommodation of Communication Access Real-time Translation (CART, a form of live captioning) for a medical student was not considered an undue hardship where the accommodation was "necessary" for the student's "meaningful access" to education and when cost was compared with the institution's entire budget.

Fundamental Alteration and Technical Standards

According to the ADA, a qualified student with a disability must be able to meet the technical standards set out by the institution, as long as these are not discriminatory in nature. Accommodations that allow students to meet technical standards and other essential functions, furthermore, must not "fundamentally alter" the curriculum. Two recent cases illustrate how courts may evaluate a program's technical standards and assess whether or not providing accommodation would constitute a fundamental alteration. In *Palmer College of Chiropractic v. Davenport Civil Rights Commission* (2014), the college was required to modify its technical standard of "sufficient use of vision" for "the review of radiographs" based on evidence that many chiropractors routinely outsourced the interpretation of radiographic images to others. This decision represented a rejection of the school's assertions that providing a reader for radiographs would constitute a fundamental alteration of the program and that eyesight is a necessary component of practice (as represented by the program's technical standards).

Contrary to *Palmer*, in *McCulley v. University of Kansas School of Medicine* (2014), the court considered the university's assertion that providing a student whose disability caused her to have limited upper-body strength with a surrogate to perform certain tasks, such as lifting patients and performing CPR, would fundamentally alter the nature of its program. The court deferred to the school's technical standards, saying, "Accommodating McCulley's disability would require it to make substantial changes to its educational program that go beyond what the [ADA] requires." However, the court expressly stopped short of holding that providing a surrogate would never be a reasonable accommodation, saying, "Our disposition should not be read as holding that medical schools cannot reasonably admit McCulley or other students with similar disabilities." In fact, other prominent medical schools have concluded that allowing a surrogate for a medical student is a reasonable accommodation—those schools' technical standards do not require that their physician trainees do the physical labor of conducting CPR or lifting patients themselves.

Patient Safety

Patient safety is often at the core of concerns about students with disabilities in medical education. The ADA does not require programs to make accommodations that would result in a threat to the health or safety of patients. What a school deems a safety risk and what the courts have determined is a safety risk, however, may be at odds with one another. Two recent cases considered patient safety with regard to the use of sign language interpreters in a clinical environment. In *Featherstone v. Pacific Northwest University of Health Sciences* (2014), the court held that providing a sign language interpreter in the clinic would not fundamentally alter the educational program nor pose a threat to the safety of patients or others. Similarly, the court in *Searls v. Johns Hopkins Hospital* (2016) ruled against a hospital that refused to hire a deaf nurse, noting that decisions grounded in concern for patient safety must be based on an individualized assessment of safety risks and reasonable medical judgment, not "stereotypes or generalizations," as occurred in this case. Of note, in both cases the institutions also cited an "undue hardship" defense, which was denied by the courts.

Effective Accommodations and Adjustments to Policy

Programs should be aware that it is not enough to simply engage in an interactive process—discussed in the next section—or provide accommodations. Rather, programs need to ensure that accommodations are effective in mitigating program barriers (as determined on a case-by-case basis) and that existing policies do not interfere with providing reasonable and effective accommodations. Sometimes, the only accommodation needed by a student may be a modification to an existing policy. In *Dean v. University at Buffalo School of Medicine and Biomedical Sciences* (2015), the appeals court ruled that the school had not demonstrated that it had provided an effective accommodation on par with what was provided to other students (namely, modification of program schedule to allow for additional time to study for the Step 1 test). The court held that the medical school, in rejecting Dean's requested schedule modification for Step 1 preparation, failed to diligently assess whether the requested modification was a reasonable accommodation (i.e., whether it would impose undue financial and administrative burdens on the school or would require a fundamental alteration to the academic caliber of the program's offerings).

Upholding Academic Dismissal

When effective disability accommodations are in place and a student is still struggling, the school should evaluate the student's performance through the standard process. A recent case confirmed that students with disabilities, when properly accommodated, are also subject to the academic policies of the institution and can be dismissed for poor performance. In *Maples v. University of Texas Medical Branch at Galveston* (2012), a physician assistant student's request for a "second chance" after failing to submit an end-of-the-term paper for a clinical rotation,

which counted for 30% of the grade, was not considered to be a reasonable accommodation. The student had received, among other accommodations, testing accommodations and was dismissed when she repeatedly failed to meet academic requirements for progressing in the program—for reasons deemed unrelated to her disability.

These recent cases demonstrate the nuances inherent in determining fundamental alteration, undue hardship, threat to patient safety, and dismissal while ensuring equal access for students with disabilities. It is necessary for programs to ensure that policies and technical standards do not unintentionally become barriers to individuals with disabilities. In undertaking regular reviews of anti-discrimination and reasonable accommodation policies and practices, medical schools should look not only at statutes, regulations, guidance, and recent case law, but also at practical learnings such as those discussed in the pages ahead. Often, a change in the law is prefaced by a change in available technology or new evidence about whether an accommodation has been shown to be practicable, safe, or sufficiently "effective."

Interactive Process for Determining Reasonable Accommodations

The ADA requires schools (UME) and employers (GME) to reasonably accommodate the documented disabilities of their students and employees unless doing so would fundamentally alter a program or result in an undue hardship. Reasonable accommodations are designed to bridge the gap between a barrier to the program (referring to both UME and GME programs) and the qualified individual with the disability. An *interactive process* is the process that programs must engage in to determine reasonable accommodations.

Steps in the Interactive Process

1. The program should determine its essential functions.

2. The program and the individual with the disability should work together to identify the programmatic barriers and their impact on the ability to perform an essential function.

3. The program, working with the individual with a disability, should identify a range of possible accommodations that have the potential to remove the barriers and allow the individual to perform the essential functions.

4. The program should assess the effectiveness of each accommodation and the preference of the individual to be accommodated.

5. The program should evaluate whether or not provision of accommodation(s) would impose an undue administrative or financial hardship on the program.

6. Once implemented, the program should review the effectiveness of the accommodation in removing the barrier. If ineffective, the program should enter back into the interactive process to review potential alternative accommodations.

Documentation and Confidentiality

A program may request documentation to establish whether the person has a disability. Such documentation, however, must be used only for purposes of establishing the existence of a qualifying disability, to show that the individual needs a reasonable accommodation, or to help determine effective options. Requests for documentation must be reasonable and specific to the need for the accommodation.

All documents collected by programs must be kept confidential and maintained separately from an individual's educational or personnel file. This includes the fact that an accommodation request was made or approved and information about individuals' functional limitations.

Notes

1. Disability service providers (DSPs) are the individuals designated by the institution to review, assess, and determine a student's disability-related services and reasonable accommodations.

2. The Coalition for Disability Access in Health Science and Medical Education was founded in spring 2013 and now has more than 500 members.

3. Disorders not related to mental health that did not fall into one of the prescribed categories of disability but that resulted in a functional impairment for the student and rendered them eligible for accommodations and protection under the Americans with Disabilities Act. For example, the loss of a limb may result in the need for assistive technology but may not cause mobility or chronic health issues.

4. "The institution must analyze the appropriateness of an aid or service in its specific context. For example, the type of assistance needed in a classroom by a student who is hearing-impaired may vary, depending upon whether the format is a large lecture hall or a seminar. With the one-way communication of a lecture, the service of a note taker may be adequate, but in the two-way communication of a seminar, an interpreter may be needed. College officials also should be aware that in determining what types of auxiliary aids and services are necessary under Title II of the ADA, the institution must give primary consideration to the requests of individuals with disabilities." *https://www2.ed.gov/about/offices/list/ocr/docs/auxaids.html*

Chapter 2. The Lived Experience Project Design and Methods

Introduction

Although much has been done to understand and address disability inclusion in medical education, additional efforts are urgently needed and must be informed by those individuals who experience it directly—learners and physicians with disabilities. To date, no comprehensive examination of the experiences of medical learners or practicing physicians with disabilities has been conducted, and the incidence of disability is not a demographic currently captured in the AAMC's Medical School FACTS demographic data. U.S. medical schools use those data to better understand the diversity of their student populations as compared with the national population.

The Lived Experience Project aimed to address this gap. This qualitative research study was conducted by the University of California, San Francisco, School of Medicine in partnership with the AAMC. The goal of this project was to identify the challenges in UME from the perspectives of learners and physicians with disabilities and lay the foundation for a new era of disability inclusion in medical education. (In this report, *learner* is used to describe undergraduate medical students and resident trainees collectively.)

The information gathered through the Lived Experience Project interviews provides first-person accounts of medical education from the perspectives of learners and physicians with disabilities. These accounts point to a role for academic medicine in developing an inclusive educational environment for learners. The remainder of this report explores the major themes from these interviews, highlights existing research, and identifies steps toward improved access and inclusion while helping the reader understand the lived experiences of individuals with disabilities in medical education. Most important, the report amplifies the stories of the interviewees to inform considerations for greater access in academic medicine.

Methods

The institutional review board at the University of California, San Francisco, approved this study.

Questionnaire and Interview Guide

The lead researchers developed a short online questionnaire and a semistructured interview guide to elicit the perspectives and lived experiences of learners and physicians with disabilities. The questionnaire was designed to collect background information about interested potential interviewees, including demographics and educational and accommodation history. To construct the interview guide, the researchers drew from their experiences working with medical students with disabilities, the gaps in existing literature around lived experience of learners and physicians with disabilities, and the experiences of the advisory group members, who assisted in the revision of the guide. The interview questions centered on experiences in each phase of training, including key points in medical training (e.g., admission, first year, transition to clinical years, licensing); relationships with faculty, administration, peers, and supervisors; structural processes (e.g., accommodation process) and the environment; and recommendations for peers and overall improvement of systems.

Recruitment

The researchers interviewed medical students, residents, and physicians with disabilities to encompass the full range of training and practice. Interviews were conducted between June and August of 2016. We solicited interviewees through an announcement on relevant email lists (e.g., AAMC Group on Student Affairs (GSA) and the Coalition for Disability Access in Health Science and Medical Education), through medical school disability service providers who sent the advertisement to registered students, through direct email to known physicians and residents with disabilities, and through email advertisements to relevant groups (e.g., Society of Physicians with Disabilities, Association of Medical Professionals with Hearing Losses, Student Doctor Network, and the Society for Health Care Professionals with Disabilities). We asked all respondents to complete the online questionnaire via Qualtrics to help us prioritize a diverse mix of interviewees with regard to phase of training, disability type, and other intersecting identities.

Interviewees were not compensated for their participation. We did, however, fund any accommodations needed to participate in interviews (e.g., sign language interpreters and Communication Access Real-time Translation, or CART).

Current medical students at the University of California, San Francisco, were excluded from this study to avoid any conflict of interest. We also excluded interested parties currently training or practicing outside the United States. We did not interview some respondents either because they did not complete the questionnaire or due to constraints of time and resources.

Conducting and Analyzing Interviews

Three members of the research team conducted the individual interviews either in person or via Skype. We obtained written informed consent from each interviewee before starting the interview. Interviews lasted between 60 and 180 minutes, and all interviews were audio recorded. A professional service transcribed all recordings.

The research team analyzed transcripts using Dedoose, a software program designed for qualitative data analysis. Our analytical approach was broadly informed by principles associated with constructivist grounded theory (Charmaz 2014). Two members of the team open-coded each interview. The lead researchers reviewed these codes independently to identify and characterize themes, which were then grouped into categories of *barriers, supports*, and *considerations*. Themes were then reviewed and discussed for agreement between the lead researchers, who then triangulated their findings with those of the larger research team.

Interviewee Demographics

Interviews involved 47 individuals with disabilities: 17 medical students, 14 residents, and 16 physicians. Interviewees included 32 women and 15 men who attended or are currently attending 39 medical schools. Five interviewees identified as LGBTQI (lesbian, gay, bisexual, transgender, questioning, intersex), and seven identified as underrepresented in medicine (URM). The 30 residents and physicians interviewed represent 13 specialties and subspecialties. Disability categories were self-reported by interviewees as summarized in Table 1. Twenty of the 47 interviewees self-identified two or more categories of disability (for example, learning disability (LD) and psychological).

Table 1. Interviewees' Self-Identified Disabilities

| Disability Type	Number of Interviewees
Mobility	15
Learning disability	15
Chronic health condition	14
ADHD	13
Psychological	11
Deaf or hard of hearing	9
Visual	2
Autism spectrum disorder	2

Limitations

Any research study must be viewed through the lens of its limitations. First, this study is a product of interviewee self-report and represents individuals' perspectives, which are inherently subjective. Interviewees self-identified for the study and may overly represent negative experiences and those individuals with particular interest in disability-related inclusion in medicine. As a result, findings may not represent the full spectrum of medical learner experiences. Historical bias should also be considered in reviewing this study. Interviewees include physicians and residents who went through medical school and residency years ago, so their experiences may reflect practices that are different from today's. Finally, the size of the study should be noted. The study shares major themes across the experiences of 47 learners and physicians with disabilities, a small proportion of this population. Findings in this study, therefore, may not generalize to the experiences of all medical learners and physicians with disabilities.

Conclusion

For three months, investigators listened to the lived experiences of learners and physicians with disabilities. These stories were uplifting, powerful, and at times painful to witness. Interviewees in the Lived Experience Project reported several mechanisms of support, both personal and structural. Institutional supports were also named, including the culture of the school, institutional knowledge of disability, access to appropriate accommodations, and administrative approach to inclusion.

All interviewees described a barrier of some sort that they experienced during their training and employment. Although many themes emerged within these described barriers, there was a clear trend. Interviewees consistently discussed the impact on their well-being and efficacy of the extraordinary time and efforts required to self-advocate and arrange their own accommodations—especially in the absence of qualified disability service providers.

These findings from the Lived Experience Project serve as a powerful guide to help administrators and disability service professionals improve practices at U.S. medical schools and facilitate access for qualified learners with disabilities. Over the next three chapters, these findings are explored in greater detail and augmented by targeted considerations and examples of promising practices to support action and reflection.
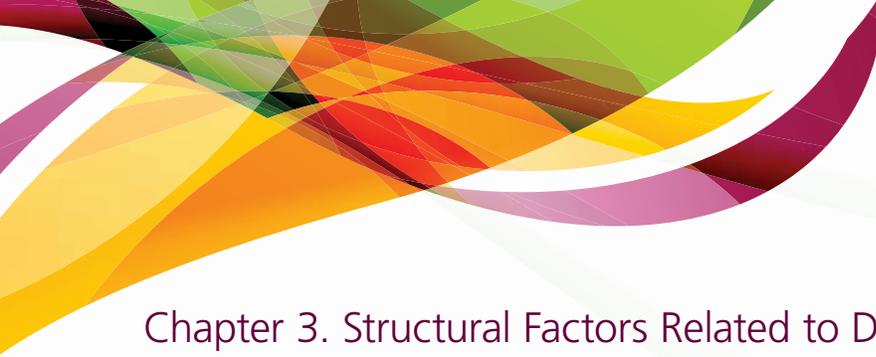
Chapter 3. Structural Factors Related to Disability in UME

People with disabilities—I think we should be a much bigger voice in medicine, and we need these voices and we need diverse voices. We need people with … a variety of experience with a variety of impairments as part of the medical culture. If you can, try to pick a school ahead of time that knows what they're doing [regarding accommodations and students with disabilities].

— Physician, giving advice for students and programs

Introduction

This chapter focuses on findings of the Lived Experience Project related to structural factors that affect access and inclusion for learners with disabilities. There is interplay between institutional culture[1] and climate[2] and the type and range of institutional structures that exist, and these structural elements often have very immediate, specific, and practical implications—both positive and negative—for access. Examples of structural factors include policies and procedures, understanding of clinical accommodations (i.e., access to the clinical setting), disability and wellness support services, and physical environment. In the context of this report, disability service providers, their offices, and their understanding of clinical accommodations were the most integral structural factors that facilitated or impeded access to medical education and a career as a physician.

Disability Services in UME

I think all medical schools should have a separate disability [service office]. Of course, even if they have a separate disability [service] office, not all of those are staffed with people that are truly knowledgeable about what they're doing.

— Resident describing their perspective on the largest barrier to medical education for individuals with disabilities

Existing policies and practices are informed by the professional experiences of disability service providers with limited self-report from physicians with disabilities. While helpful, these experiences vary considerably and may not accurately represent the breadth of lived experiences and challenges of learners. This lack of information leaves programs uninformed and unable to respond to, or prepare for, disability-related needs.

The experiences of the interviewees reinforce this; the lack of disability service providers (DSPs) specialized in medical education was a major theme of this study and identifies a clear need going forward. Interviewees repeatedly reported that DSPs could not conduct a thorough analysis or provide appropriate support due to a lack of knowledge about medical education, curricula, and the clinical environment. Interviewees who worked with DSPs skilled in the nuances of medical education—in particular, in the clinical phase of training—reported higher satisfaction and better inclusion.

I used other people who had already done it as the fill-in for [a qualified disability service office] …
I used other people [who had been through medical school with a similar disability] and just talked
to other medical schools that had someone [with a similar disability]. I said, "How did you deal with this
issue?" They were like, "We just did this," and I'm like, "Oh, good idea." I just used other people as my
model, but I think had there been someone [in disability services], then obviously I would've used them,
but we just didn't have that.

— Resident describing how they learned about appropriate accommodations and strategies without a
   qualified DSP

Often Uninformed Disability Service Providers

I remember citing the ADA and I was like, "I have a 504 plan," and she said, "What's the ADA?"
I thought, "How do you work in the disability office when you don't know what the ADA is?"
I felt like I gave up on that office immediately.

— Resident recounting their first encounter with the medical school DSP

As explored more fully in Chapter 4, physicians with disabilities are viewed as the exception rather than the rule. Given this limited view, national standards to encourage consistency in programmatic policy and practices do not yet exist. Without established guidance practices, disability services can vary considerably between medical education programs.

Interviewees indicated that the knowledge base of DSPs who serve medical students was variable. Many DSPs in central university disability service offices lacked experience with medical school curriculum and culture or had little relationship with the affiliated clinical institution; as a result, they lacked the authority to recommend appropriate or reasonable accommodations. Some medical school administrators who were assigned disability service responsibilities as one part of their job appeared to have insufficient knowledge of disability issues or the principles of accommodation. Regardless of the configuration of services, the lack of informed providers resulted in poor information for students. For example, many students were incorrectly advised that because of patient safety concerns, no accommodations exist in the clinical setting.

As a result of these deficits in DSP knowledge, learners often find themselves serving as ad hoc experts on disability, navigating their training in the absence of appropriate support, policies, and procedures. When that happens, programs often take a passive role, developing practices as needed. This lack of coordinated service places a considerable burden on learners who are already operating at capacity.

I spend a lot of time anticipating. I spend a lot of time trying to manipulate my environment in advance. If I don't have the information I need to know, I try to do it in a nondisturbing way. I try to just by accident end up in the right place rather than having to explain, "Okay, hold on guys, everybody, everybody, deaf girl here."

— Resident describing the additional labor required in an inaccessible environment

Lack of Connection Between Disability Services and Medical School

Multiple interviewees cited a fundamental disconnect between disability services and the medical school when the configuration of services required medical students to work with a central university disability service office. Related to the aforementioned issues of uninformed DSPs, this configuration was often associated with the disability service office and the medical school operating in silos: the DSPs relying primarily on their understanding of traditional, undergraduate academic accommodations and the medical school operating without understanding disability, parameters of case law, and advances in disability service practice.

When the disability service office and the medical school administration failed to work together in a meaningful fashion, learners were left with uncertainty about which office to contact when difficulties arose. This failure to share expertise between a central disability service office (with a budget to fund accommodations, expertise about disability, resources to provide necessary technology, and networks to explore accommodation ideas) and the medical school program (with expertise in the curriculum requirements, clinical settings, and the medical field) also resulted in missed opportunities to offer learners specialized accommodations and support. Overall, the disconnect between the medical school and disability services contributes to 1) the lack of a knowledgeable point of contact, 2) the lack of clear or even existing policies, and 3) missed opportunities to offer learners specialized accommodations and support. It also highlights the need for specialized disability services in medical education.

We contacted the disability office, and they said that accommodations were performed independently by the medical school. I honestly, to this day, I don't know who made what decisions.

— Resident reflecting on the lack of transparency in the accommodation-request procedures in medical school

Lack of Clear Policies

Many learners reported a lack of clarity around policies for disclosing a disability and requesting accommodations. Even when learners were able to register with a specific representative, they reported still experiencing disorganization and lack of clear policies about whom to disclose to (for example, in the clinic) and how. It appeared to learners that many disability-related communications occurred ad hoc or that all the responsibility for communicating about and organizing accommodations was placed on the learner—without guidance from a disability expert.

I think one thing that schools could really improve on is clarifying policies that affect students with disabilities … even if there are only a few students who have disabilities in a class, I think that having clear procedures or ways to handle [provision of accommodations] … is important. For instance, it was hard to have to negotiate a time every week to take my test. I remember it seemed like they were making up rules along the way.

— Medical student on a frustrating experience arranging exam accommodations in the absence of clear policy and procedure

Need for Nuanced Clinical Accommodations and Assistive Technology

For many learners with disabilities, standard accommodations do not translate well into the clinical setting. For example, although American Sign Language (ASL) interpreters, Communication Access Real-time Translation (CART, sometimes referred to as real-time captioning), and FM systems (devices that use FM frequencies to amplify sound) that work to enhance the voice of a primary speaker and reduce background noise work well in nonclinical settings, these standard accommodations often require significant customization to effectively support a deaf or hard-of-hearing learner in a fast-paced clinical environment such as the operating room (Meeks et al 2015). Providing ineffective or inappropriate technology to a deaf or hard-of-hearing learner is an example of how the lack of knowledge about clinical accommodations, medical education, and clinical environments can lead to failure to properly accommodate a learner.

The school of medicine [people] are the people who knew me and knew what their program and their curriculum and their needs were. Their process for disability is a referral to the disability people, who mostly were used to working with undergrads and so they don't have a good understanding of what a clinical person in medical school actually needs in terms of communication. Things they could offer me were ASL interpreting, which of course was useless [for me]; CART, which is closed captioning to lectures, which was perhaps useful though not necessarily more [useful]. They did purchase an FM system for me, which is different than the one I have now. The idea [to get an FM system] was good, but it didn't work particularly well.

— Resident describing their disability service office's lack of understanding of the clinical education environment

Interviewees discussed encounters in the clinic that suggested a strong need for more effective and context-appropriate accommodations. Several interviewees discussed receiving assistive technology that was insufficient for the dynamic nature of the clinic. Learners often shared frustration with the disability service providers' lack of knowledge about the clinical environment (as discussed previously). Similarly, faculty and clinical instructors were at times uncertain about how to support students or react to students who, due to a disability, approached procedures differently.

Physical space, believe it or not, is actually a huge problem … in the clinical setting. Part of the issue was this: The accommodating people at the university's undergraduate institution, the disabilities office, don't know anything about the physical space of a clinical setting and so can't imagine what it is that I need…. The physical space is often very constrained, especially on the floors. There's usually more people than really fit in a room. You're having conversations in hallways. You're having conversations in front of nursing stations where other people are having other conversations. There's always equipment making noises.

— Resident reflecting on the DSP's lack of understanding about accommodating on the wards

I think probably the most important thing being in medical school is to have a disability services provider who has knowledge both about the medical school curriculum and disability services so that students with disabilities will know what to expect in the curriculum. How the disability accommodations apply and specific challenges that we should prepare for in advance, that would have been something I would have found very helpful.

— Medical student responding to a question about the single most important item needed in medical school for students with disabilities.

In some cases, learners who process information differently simply had to find innovative ways to learn on their own.

I wanted to learn about this particular kind of surgery. So … I went and I watched, and I came back and I wrote down everything he did: how he held his hands, what instruments he used, what he requested, why he did this or that. And I still have that file, to this day. And every time I do a case that involves that, I will pull it out and I will review it. So, I would take my visual observations, then record them as a … "how I do it" step-by-step. I wouldn't go read about it. I couldn't. I mean, when I'd read [books about surgery, they didn't help] … I have to see it. And then if I see it … I've taken serial pictures in my brain … or with iPhones and things, I'll take photographs, and put [them] into the file. So, I'll have those, too. When you're doing [this] surgery [on this population] you cut here, and here, and … the written descriptions are … still not as strong as those initial [visual] ones. I think reading about it is much more challenging.

— Physician describing the method they developed to learn surgical techniques with a reading disability

In this study, we found that learners and physicians performed procedures using their own or a modified approach to account for their disabilities. Often, these modifications were minor or involved assistive technology. Clinical instructors who lacked an understanding of modified procedures could deem the learner incapable of performing certain procedures. This lack of flexibility and failure to recognize safe modifications could inhibit learner creativity and learners' full participation in the clinic. Faculty should encourage learners to develop modifications that result in an equivalent, safe approach.

If … people assume … I can't do it in a real patient setting, it gets taken away from me. When I'm doing certain sets of procedures, I look very odd, and I get yelled at all the time about positioning. It's just hard in the heat of the moment to say, "I'm doing this the right [way] for me. I need to keep going."

— Resident with physical disability describing assumptions that they cannot do a procedure using an equally safe but slightly different approach

Impact of Knowledgeable and Supportive DSPs and Disability Service Offices

Though many interviewees described challenges in accessing specialized and welcoming disability service providers, some interviewees described the power that informed DSPs and disability service policy had on their experiences and felt that informed DSPs and policies communicate respect for the learner's intentions in requesting accommodations.

I wrote to the DS office immediately, and actually, it's funny, the DS provider was like, "Oh, you're the first person from the incoming class that I'm meeting. I'll always remember you," or something like that. He was just so kind and welcoming, and he made it easy. He was so nice, so cheery, even in his email, and just welcoming. I had to fill out a one-page form or something, that was it. I was like, "Really? Are you sure?" I had to forward him whatever documents I had. There weren't even requirements for which documents. He asked what accommodations did I think I needed, and there was no question of my motives.

— Medical student on the accommodation process at their medical school

They [the disability personnel] were really receptive and supportive. I met with this anthropology grad student who said the people at [the school] have been amazing. She [said], "You may not know it, but it is so important to have a supportive sort of disability staff."

— Resident on the importance of supportive disability services in medical school

Promising Practice: A Learning Community for Disability Service Providers

The **University of California, San Francisco** (UCSF) addressed this barrier through its contributions to the development of disability service provider (DSP) practices nationwide. Through its in-kind support of the Coalition for Disability Access in Health Science and Medical Education (Coalition), UCSF helped shape leading practices in the area of disability service and medical education. Originally cofounded by Lisa Meeks, PhD, at UCSF, Timothy Montgomery, MA, at Northwestern University, and Gregory Moorehead, EdD, at the University of Chicago, the Coalition serves as a learning community for DSPs working in the health sciences. Currently, the Coalition supports more than 500 members from institutions across the nation with a robust listserve and by producing research and guidance on disability in medical education, developing training modules for faculty and staff, and disseminating leading practices in the field. It now operates independently of UCSF as a nonprofit affiliate of the Association for Higher Education and Disability (AHEAD).

In an effort to grow the knowledge base of medical educators and DSPs, UCSF also produced open-access educational resources in partnership with DSPs from peer institutions and national organizations. These initiatives included a joint AAMC-UCSF webinar series on topics relevant to DSPs and administrators working in this context; the UCSF Disability Training Series, consisting of short training modules on key topics for faculty; and sharing policies and practices for adaptation with colleagues. AHEAD joined forces with the Coalition in 2017 to develop a specialized training and certificate program in health science disability services based on the UCSF model of practice.

Considerations for Supporting Disability Service Providers in Medical Education

Follow promising practices:

- ☐ Proactively work with students to identify necessary accommodations in the classroom and clinic, and support their implementation in a timely manner.

- ☐ Educate yourself on the nuances of medical education and clinical rotations. Spend time shadowing faculty and students in the clinic to better understand the environment—in advance of the need to determine accommodations for a specific student.

- ☐ Work with the medical school administration to develop effective and reasonable accommodations for learners.

- ☐ Offer support to students who wish to request accommodations for licensing exams.

- ☐ Maintain privacy and develop trust with learners to support disclosure.

- ☐ Exchange ideas and knowledge with peer institutions.

- ☐ Connect to national networks that have the goal of sharing ideas, resources, and strategies across schools and programs (see Appendix B).

- ☐ Share promising practices developed on your campus related to classroom and clinical accommodations.

Access to Appropriate Accommodations

A major theme in the interviews was the benefit of implementing appropriate and effective accommodations. Learners who experienced full and immediate access to appropriate accommodations described the power of having full and equal access, thereby being able to learn and perform like other students, even while "doing things differently."

> *I started going in advance of every rotation and meeting the clerkship director and saying, "This is who I am." … Most of those [meetings] went really well. The clerkship director in anesthesia … there was no question in either of our minds, I was not going to be an anesthesiologist … but he set out, and spent the entire rotation, trying to give me the richest experience possible. It was amazing. Before they had all those monitors, it turns out, the anesthesiologists all wore a little earplug with a tube down to, basically, a stethoscope that they would tape onto the patient's chest. They would just listen to them breathe and listen to their heartbeat throughout the whole surgery…. He dug one of those things up and it's, like, "This is how we used to do it. You do it this way."*
>
> — **Physician recounting a positive experience with creative accommodations**

Simple Solutions

Simple changes to the structure of required activities, such as standardized-patient exams like the objective structured clinical examination (OSCE), often provided the most elegant outcomes for learners.

> *They made it so that I didn't have to go room to room for the OSCE. I would leave the room, and then the patient would enter from the back door, and they would keep rotating through my room…. I could just hang out there instead of jumping from room to room because they wanted to make sure I could reach the items, had access to the portable otoscope…. They were very good about that."*
>
> — **Resident describing a structural accommodation provided for OSCE exams in medical school**

Innovative and Effective Accommodations

When medical school faculty took the time to identify innovative ways of achieving necessary functions, the learning experience was greatly enhanced.

I said to the residency program …, "If I want to do this, we need to try something different because I know that it's too fast-paced." I asked if we could try a scribe. We found a fourth-year student, who they paid a little stipend to, and he came—and I had been fantasizing about this all along, what would it be like if—a scribe implies that they just write for you. What I was imagining and what he did was also data gathering….

I would say [to the scribe], "Has this person had an echo[cardiogram]?" Then he would go [to the patient chart on an inaccessible computer] and just look and say, "Yes, he had echo last year." I would say, "Just read me the report." Or [the scribe would say], "No, he's never had one" or [I would ask], "Has he ever been here before?" … just like basics that anyone else would have gathered very quickly. I knew it would take me a long time. To be able to ask somebody [and] have him tell me while I'm not breaking continuity and I'm still examining the patient, it was amazing. It was so much fun. I just felt like this lightened…. It was a fantastic experience.

[It's a] really strong illustration of what you could do with this one type of pretty major accommodation …. At the same time, it's not a radical accommodation in terms of the learning that you want, the experience that you want a resident to get. Yeah. That was a nice contrast. That was really the only accommodation … apart from a large screen—that was the only accommodation that I asked for in residency. Because it went so well, it made me feel like I probably should have [had] similar things [earlier in my training].

— **Physician reflecting on a solution-oriented accommodation in residency**

Learners who were shepherded through clerkships without attention to the rigor or richness of their experience because of assumptions about their ability to pursue a specialty due to the nature of their disability reported frustration. In fact, many learners expressed a desire for their clinical experiences to be taken seriously—even when they did not believe they would ultimately choose the specialty. When program leaders thought innovatively, creating novel accommodations for clinical rotations that allowed for a full and rich experience for the learner with a disability, it often resulted in improved access for all learners.

In obstetrics, I actually wanted a richer experience, I think, but got shunted to the place you go if you're not going to be an obstetrician. That person just didn't really, I think, take the time to talk through what specifically I was going to be able to do or not. I'm just trying to go through the different rotations.

— **Physician on being placed in a less demanding rotation due to disability**

Ease in Accessing Services

Interviewees continually reinforced the fact that when accessing accommodations was both easy and normalized within the school, their experience and willingness to access needed accommodations was greatly enhanced. Interviewees recounted ease of access and appreciation when the disability service office was responsive to requests. Equally important was the need for disability service offices to honor the learner's expertise and to understand their disability and related needs. Finally, interviewees reported that having assistive devices readily available or on quick order was also a major catalyst to access in clinical experiences.

There was a very well-developed disability office at the university. They were very strong proponents of accommodation for people with disabilities, students with disabilities, irrespective of type of disability, physical, emotional, mental, whatever. It doesn't matter. It's the point where one of the directors of the disability office was actually somebody who's blind, and, obviously, they need to accommodate him to do his work because he has to have Braille and so forth. It was normalized. I took my exams separately. I went to the disability office, and that's where I took my exams. No big deal."

— **Physician recounting their experience with disability services**

Knowledge of Clinical Accommodations and Medical Education

Learners entering the clinical setting are unlikely to understand all their needs upfront. This was reinforced in our interviews and highlighted that an understanding of clinical accommodations coupled with a command of medical education, and its demands and competencies, was a critical component of learner access. When interviewees did not know what accommodations might be possible, having skilled DSPs to lead this inquiry was essential. For learners who had a good understanding of the accommodations they needed, it was important for DSPs to procure these items quickly to avoid any lost time on the wards, in the classroom, or in labs.

If I showed up and said, "I think I need surgical loupes to be successful in anatomy," and anatomy had started that day, they said, "We'll get the company here tomorrow a.m. to fit you, and we'll have them within four days. We'll pay for a rush order, we'll do whatever needs to be done." There wasn't even a question of, "Is this really the right resource?" There was full trust that I know what would be helpful in the setting. I need to have my hands free so I can work. I need something that provides magnification. There was no questioning of, "Why this?" They were very quick to respond and make sure that it didn't affect my experience.

— **Medical student describing the power of a responsive disability service office that honors student expertise and is able to obtain timely assistive technology on request**

The office for students with disabilities was very helpful. It really, for the most part, worked very well. A lot of it was also helped by ... [my asking] to meet with the interpreters in the clinic. I wanted someone who was knowledgeable and already had some experience in the hospital or medical environment. I got to teach them the terminology and come up with signs.

— **Physician recounting the expertise provided for the accommodation process when they were a student**

Meaningful Access

Lack of access to appropriate accommodations, including physical-access modifications, created significant issues. In the worst case, having to work in inaccessible conditions meant interviewees experienced physical strain. As noted earlier in this report, accommodation requests must be addressed in a "timely manner." Programs should aim to respond to requests within a few days and implement accommodations within a two-week period. The following example of a request going unanswered for a year and a half is not considered timely and would have been cause for complaint.

It took me a year and a half to get one … automatic door opener. I was halfway through residency until they put it in, and that door was so heavy, and I had to use it so many times, that I needed a steroid injection in my shoulder.

— Resident describing a struggle to have architectural modifications completed

Legally compliant access and meaningful access may be very different. Lack of physical access in facilities and lack of understanding about meaningful access can not only cause inconvenience, it can also contribute to the feeling of being devalued and disrespected. Planning for accessibility in hospitals is usually done only around patients—not providers.

There was a covered walkway from the garage to the hospital. The door with the covered walkway was not automatic. The automatic door was an uncovered walkway, and [this region] is known for heavy rainstorms. I said, "I'd really like if we could put a button on this door, so I am not in the rain. I'd like to use the same walkway as everybody else instead of the main door, [because] more staff use this other door with the covered walkway." The diversity guy said something like, "Technically, we don't have to because you do have this door." I said, "The ADA says that I am privy to equal access, like whatever other staff have, I should have," and he said, "The ADA doesn't say anything about having to have a covered walkway." That's what he said to me, and this is supposed to be the diversity guy.

— Resident illustrating the difference between compliant and meaningful architectural access

It's frustrating even to me now looking back … I would have two choices. I would either disappear to this annexed room that was several steps away and miss the action so I could use a computer, or I would get ridiculously close, which is sort of … socially conspicuous…. I mean, I have such a strong memory of a group of maybe 10 people in an emergency room pulling up someone on a computer with an old 13-inch display and looking at the chart together, someone scrolling, and the group standing in a semicircle maybe five feet away from it all reading it. They all go away, and then I walk up to like two inches away from it and then read it one line at a time. The difference in my time to process what was in that chart versus theirs [because of the inaccessibility] is just like, I don't know, 20-fold or something. It's really pretty extreme.

— Physician on navigating clinical rotations with an inaccessible computer display

Challenges of Organic Technical Standards

A cursory search of medical school technical standards shows that many programs leading to an MD degree subscribe to the concept of the undifferentiated medical school graduate: All students get the same degree, and the MD degree attests to the student having met the requirements set out by the school to be a physician prepared for any GME program.

Then, pretty fortunately … I talked to [the DSP] … and he basically said, "Number one, you sound really interesting, and somebody that we would be interested in working with, because we don't know the answers to the questions you're asking." No one [had] really said that [thus far]. He said, "Yeah, those technical standards really, the way we should be interpreting that is all that stuff with reasonable accommodation, you need to be able to do all that stuff with reasonable accommodation." That was a huge light bulb, [an] inflection point. I met [the DSP], and then he introduced me to, I think early on, [the] histology [professor] …, so the "microscope professor," and [the] anatomy professor, and then [the] dean of student life, and then [the] associate dean of student life, [and the] associate dean for education until he … and I were sort of starting to get satisfied that things might be possible.

— **Physician recalling an administrator's support in interpreting technical standards before matriculation**

Technical Standards

I had this little problem, this thing called technical standards, and I read it through about 20 times, and I tried to decide if I could sign it without lying, and I decided I could. [The school] wants to know if you can use your hands. It doesn't say to do what or how well I can use my hands. It says, "Can you communicate in writing?" and I decided that "communicate in writing" does not mean words in ink on paper. "Communicate in writing" means putting something into word format that somebody who is not with you at that time can read and understand at a later date, so that includes typing. I decided I wasn't lying when I signed technical standards, and I saw technical standards like a thinly veiled attempt to circumvent the Americans with Disabilities Act, and I currently feel that it's a not so thinly veiled attempt to absolutely do an "end run" around the Americans with Disabilities Act. I wanted to go to medical school, and I decided that I could sign it without lying, so I signed it without lying.

— **Physician describing the need to carefully interpret technical standards that did not take into account accommodations**

Technical standards, the nonacademic criteria used for admission, continuation, and graduation of students in medical school, may be considered problematic to the inclusion of people with disabilities in medicine—in particular, those with hearing, mobility, and visual disabilities (Eickmeyer et al 2012; Wainapel 2015; Zazove et al 2016). Over time, and initially using the 1979 *Report of the AAMC Special Advisory Panel on Technical Standards for Medical School Admission*, technical standards have been used to establish requirements involving the physical, cognitive, and emotional abilities of candidates for admission, promotion, and graduation. The current Liaison

Committee for Medical Education (LCME) requirements reflect this evolving understanding of technical standards, which they define as "a statement by a medical school of the: 1) essential academic and nonacademic abilities, attributes, and characteristics in the areas of intellectual-conceptual, integrative, and quantitative abilities; 2) observational skills; 3) physical abilities; 4) motor functioning; 5) emotional stability; 6) behavioral and social skills; and 7) ethics and professionalism that a medical school applicant or enrolled medical student must possess or be able to acquire, with or without reasonable accommodation, in order to be admitted to, be retained in, and graduate from that school's medical educational program" (LCME 2016). Additionally, LCME Element 10.5 requires medical schools to develop and publish their technical standards "in accordance with legal requirements."

In keeping with legal guidance, the standards should avoid language that suggests that any particular type of disability is incompatible with participation in an MD program and should recognize the role accommodations have in ensuring access for people with disabilities. For example, the UCSF School of Medicine uses the following inclusive language:

> *Candidates must be able to* acquire information from *demonstrations and participate in experiments of science, including but not limited to such things as dissection of cadavers; examination of specimens in anatomy, pathology, and neuroanatomy laboratories; and microscopic study of microorganisms and tissues in normal and pathologic states. Candidates must be able to accurately* acquire information from *patients and assess findings. They must be able to perform a complete physical examination in order to integrate findings based on this information and to develop an appropriate diagnostic and treatment plan. These skills require the use of vision, hearing, and touch* or the functional equivalent. *[Emphasis added.]*
>
> **— UCSF School of Medicine Technical Standard for Observation**

Technical Standards: A Recent Study

In a nationwide study, Zazove and colleagues (2016) found that in their published technical standards, numerous MD and DO programs do not explicitly refer to reasonable accommodations, many prohibit the use of intermediaries, and some do not have technical standards readily available on their websites. McKee and colleagues (2016) argued that the *organic technical standards*—those specifying that physical, cognitive, behavioral, and sensory abilities must be demonstrated without assistance—should be replaced by *functional technical standards*—those focusing on outcomes, clarifying that such abilities may be demonstrated with or without accommodations including assistive technology.

> *I was very concerned about disclosing any disabilities or anything, or even disclosing that I had accommodations for testing always, and maybe that I did things a little bit differently. I had significant concerns about that. I know that many schools are very strict about the technical standards, and, in my opinion, there should be a disclaimer saying, "We have accommodations," or something, but there are no schools that put that [guidance about disability accommodations] in their program out there.*
>
> **— Resident describing disability disclosure concerns and technical standards**

Impact of Biased or Confusing Language in Technical Standards

Many of the interviewees challenged the principle of the undifferentiated physician and shared frustration about the wording and accessibility of technical standards, which many thought contained biased language.

Disability researchers have also expressed frustration with the absence of language regarding reasonable accommodations in programs' technical standards. Overall, interviewees found the language of technical standards difficult to understand and, at times, limited in its flexibility. However, some schools have developed more comprehensive and nuanced technical standards that could serve as models for other schools.

Access to Health Care and Wellness Supports

Traditionally, psychological disability has been highly stigmatized and treated as a criterion for exclusion from the medical profession. Although leaves of absence may be necessary for some students with psychological disabilities to achieve stabilization, some medical schools identify a leave of absence or dismissal as the only solutions for students with chronic psychological conditions. This approach fails to recognize the highly stressful nature of medical education that may trigger mental health episodes (Dyrbye et al 2011; Slavin 2016) and the possibility of having a productive medical career with a mental health condition (e.g., Jamison 1997), and it does not consider accommodations as a possible support for students with psychological disabilities.

Medical schools are beginning to focus on the mental health needs of students proactively, with several schools integrating wellness programs into their curriculum (e.g., Slavin et al 2014). The LCME has long-standing requirements about the accessibility and proximity of mandatory health services for medical schools to follow (LCME 2016). In addition, faculty and administrators must understand that mental health conditions may qualify as disabilities requiring reasonable accommodations to remove barriers to access for learners.

Ease of Access

Ease of access to health services encompasses several components, including cost, distance, and, critically, release time for medically necessary appointments. Many of the interviewees for this report shared similar difficulties accessing necessary health and wellness-related care. The financial cost of accessing specialist services and finding specialist care providers was also problematic. Even when they found appropriate providers, learners often had to travel a distance to a specialist. For graduate medical students who were dependent on the Match, this became more critical because they did not always have control over their matched location or the availability of specialists. In some instances, interviewees endured significant inconvenience, with some traveling a long distance to access care.

> *I was getting sicker and sicker. I had no continuity of care. They didn't understand [that] I get a procedure done every three months by a neurologist. That's my medication … without that medication, I was so nauseated, I was so dizzy, I was throwing up. It was just not very good. I had lost 30 pounds in three months.*
>
> — Resident reflecting on a period of training when seeing a specialist was not possible because the residency was too far from a major medical center

Once a learner locates a provider and tends to transportation, they require release time to attend appointments. Medical school and residency schedules can be unforgiving, and getting leave from shifts to attend their own medical appointments is a challenge. Some interviewees felt they had to choose between seeking care and getting a poor performance evaluation because they left the clinical setting for personal medical appointments.

Promising Practice: Evaluating Technical Standards

Faculty and administrators at the **University of Michigan Medical School** (UMMS) informed by Zazove et al (2016) research developed a comprehensive revision of their technical standards. Steven Gay, MD, dean of UMMS, suggests that when a program wants to revise its technical standards, faculty and administrators question the purpose of medical education and then work to align technical standards with that. During the revision at UMMS, faculty and administrators determined that their goal for undergraduate medical education is to create leaders and change agents in health care. With that in mind, UMMS faculty and administrators reconfigured their technical standards to include a functional technical standards approach and to highlight the interactive and individualized nature of accommodation determination. These changes reflect the administration's willingness to work with students on new approaches to meet program requirements.

In making these changes, Gay stated that UMMS had two goals: 1) to delineate the skills required and give students adequate opportunity to find ways to exhibit those skills via accommodations and 2) to provide clear guidance for reporting and receiving accommodations. These goals represent a promising approach to inclusive practice that addresses some barriers identified in the course of this study.

Considerations for Evaluating Technical Standards

Follow LCME Element 10.5, which states that medical schools should develop and publish technical standards for the admission, retention, and graduation of applicants or medical students with disabilities in accordance with legal requirements.

Follow Office of Civil Rights (OCR) recommendations on making technical standards available to applicants and students.

> *OCR recommends that the University provide students clear notice of these requirements, in order to prevent misunderstandings about the expectations for the Program.*
>
> — Appalachian State University 2006

Ensure that technical standards rely on current technology and medical standards.

Give careful consideration to what is truly essential.

- ☐ Focus on "the what" (competency) and not "the how" (how the skill is to be completed), keeping in mind that "the how" may be accommodated.

- ☐ Consider McKee and colleagues' (2016) proposal to move from *organic technical standards*—those specifying that physical, cognitive, behavioral, and sensory abilities must be demonstrated without assistance—to *functional technical standards*—those focusing on outcomes and clarifying that such abilities may be demonstrated with or without accommodations including assistive technology.

Need for Confidentiality

Interviewees also discussed the need for confidentiality in available health care services, a requirement also mandated by the Liaison Committee for Medical Education (LCME, Element 12.5; see below). They noted that it was a disincentive to receive care in places where they may complete a rotation later on or where peers were rotating. Locating confidential services (i.e., in places where their providers were not also future teachers or where colleagues were rotating) proved difficult, and many learners particularly feared the stigma associated with seeking psychological or psychiatric assistance—especially in their home medical center.

Interviewees shared their stories and experiences about well-being and access to care, focusing on the lack of privacy:

> *I have [the school's] health insurance, and most of the benefits are … centered around the university's health system. It incentivizes you to go and use the [services] on [the school's] main campus and all the outpatient services that [the school] has. I felt a little awkward going into … the mental health hospital.… They have an outpatient floor, and it's on the same floor as one of the main rotations for all third- and fourth-year medical students. It was a little awkward for me, just going there, and then on multiple occasions, running into people that I knew from medical school. It's not like I'm embarrassed or anything, it's just an awkward situation, I don't know … I think the breaking point for me in terms of not wanting to go there for services was sitting in the waiting room, and [a classmate] thought it was okay to just sit in the waiting room with me and try to have a conversation. I'm like, I don't know, "I'm trying to have a private … I'm trying to get mental health services and you're kind of intruding upon my privacy." … I just worked around it by going to other sites that weren't as convenient, that were further away.*
>
> — Medical student discussing barriers to accessing confidential mental health care

Several interviewees described primary and secondary mental health conditions that required regular treatment and concerns regarding release time to access ongoing care and maintain their wellness. With about 20% of medical students with disabilities reporting psychological disabilities (Meeks and Herzer 2016), programs need to consider structural approaches to meet these students' needs. For example, programs can provide confidential services for students who need ongoing psychological treatment—services that are separate from the medical school faculty and administration—and release learners from clinic so they can access appropriate mental health support.

Guidance From Accrediting Agencies

The accrediting agencies for MD programs in both UME and GME recognize the importance of institutional supports for wellness and learner well-being. These agencies have, accordingly, offered guidance for medical educators implementing UME and GME programs.

LCME Guidance on Wellness

The LCME recognizes the need for well-being, access to care, and privacy and provides medical education programs with guidance on expected practices. The LCME has included standards for personal counseling, well-being, and health care service programs for learners in their accreditation of MD programs. Every accredited MD program must follow these guidelines.

Elements 12.3 and 12.4 of the LCME standards address student well-being and access to health care (LCME 2016). These standards explicitly state that schools must permit students to be excused from educational experiences to seek needed care:

12.3 Personal Counseling/Well-Being Programs: A medical school has in place an effective system of personal counseling for its medical students that includes programs to promote their well-being and to facilitate their adjustment to the physical and emotional demands of medical education.

12.4 Student Access to Health Care Services: A medical school provides its medical students with timely access to needed diagnostic, preventive, and therapeutic health services at sites in reasonable proximity to the locations of their required educational experiences and has policies and procedures in place that *permit students to be excused from these experiences to seek needed care.* [Emphasis added.]

Element 12.5 recognizes the need to avoid conflicts of interest and to protect learner privacy (LCME 2016). This standard explicitly states that providers of medical student counseling must not have other evaluative or substantive roles in the learner's education:

12.5 Non-Involvement of Providers of Student Health Services in Student Assessment/Location of Student Health Records: The health professionals who provide health services, including psychiatric/psychological counseling, to a medical student have no involvement in the academic assessment or promotion of the medical student receiving those services. A medical school ensures that medical student health records are maintained in accordance with legal requirements for security, privacy, confidentiality, and accessibility.

Although medical schools must follow LCME standards requiring that all students have easily accessible and confidential access to all types of health care treatment, including regular mental health care, interviewees' reports implied there is variability in compliance with these standards and how well programs manage these services. When schools' policies comport with LCME standards, students' concerns about confidentiality, proximity, and release to access care were attenuated.

ACGME Guidance on Wellness

The Accreditation Council for Graduate Medical Education (ACGME) is also committed to addressing physician well-being in the clinical learning environment. In 2017, the ACGME added a new well-being focus area to its *CLER Pathways to Excellence* and ACGME Common Program Requirements that recognizes that safe and effective patient care can only be realized when the well-being of clinical care providers is ensured. ACGME provides guidance to residency programs such as these well-being (WB) pathways, which include measurable actions:

WB Pathway 1: Clinical learning environment promotes well-being across the clinical care team to ensure safe and high quality patient care

WB Pathway 2: Clinical learning environment demonstrates specific efforts to promote the well-being of residents, fellows, and faculty members

WB Pathway 3: Clinical learning environment promotes an environment where residents, fellows, and faculty members can maintain their personal well-being while fulfilling their professional obligations

WB Pathway 4: Clinical learning environment demonstrates system-based actions for preventing, eliminating, or mitigating impediments to the well-being of residents, fellows, and faculty members

WB Pathway 5: Clinical learning environment demonstrates mechanisms for identification, early intervention, and ongoing support of residents, fellows, and faculty members who are at risk of or demonstrating self-harm

WB Pathway 6: Clinical learning environment monitors its effectiveness at achieving the well-being of the clinical care team

The ACGME also has a website with resources for programs, institutions, residents, and fellows that helps promote a culture of physician well-being and provides support in the case of burnout, depression, or suicide: *acgme.org/What-We-Do/Initiatives/Physician-Well-Being/Resources*. The website includes guidance on developing a well-being plan, an educational video presented by Mayo Clinic and the American Foundation for Suicide Prevention (AFSP), and a guidebook to help programs support their staff and students in the case of suicide.

There's a lot of silent suffering. That's why we have suicides, because no one asks. No one even checks in. They don't really tune in to that. I remember doing a lot of silent suffering and wondering why no one could ever just check in, or ask me. It's not there. Especially when you work so hard, taking care of everyone, you can't take care of yourself. That's really hard. I've always had this overdeveloped sense of obligation and [am] very, very dedicated to my patients. I want everything to be done right, but then you have all these demands. You don't have the support. No one even checks to see if you're okay.

— **Physician discussing the lack of attention to self-care and of concern for well-being among physicians**

Access to People With Shared Experiences and Support

Personal Networks

When asked what resources would help learners with disabilities, many interviewees responded that the ability to connect with others—other students, residents, and disability service providers—was needed for sharing knowledge of accommodations in medical education. A "rich network" of information and strategy sharing, they said, would provide access to innovative accommodation solutions and access to others who have experienced similar barriers.

[In a perfect world,] there would ... be a rich network available of, for example, practicing physicians with disabilities, alums with disabilities. If the question came up, "How do I deliver a baby?" it wouldn't be the student trying to solve that problem on their own. It would be someone from the [disability services office] saying, "Dr. So-and-So graduated three days ago," or they might not know, [so] they might email a colleague at some other university and say, "I've got a student here with these impairments. They want to know how to do this." They would put people in touch either with the other faculty who did it or the student who's now a practicing physician themselves, but there would be some of that give and take. There would be, "Here's some adaptive equipment that exists. I don't know if it's going to work for you, but here's how [we do it here]."

[For example,] my medical school figured out [accommodations] for me, and I met a student at another school who used a wheelchair, and her school figured out how to get her into surgery, and they got her a wheelchair for it. I met a student with another impairment at a different school, and she and her school solved this problem. [These accommodations are] happening. [The problem is,] we're not talking to each other, and our departments aren't talking to each other ... so I should not attempt to reinvent how to hold a hemostat, how to hold a speculum, how to draw blood, how to intubate, how to do this, how to do that, how to do the other thing because I didn't know how to do any of those things, let alone figure out how to adapt them. There should be a much richer network within a school and, if necessary, within the local and global medical community of [physicians with disabilities and disability service providers].

— **Resident reflecting on the need for a national network of information-sharing about accommodations**

Promising Practice: Focusing on Mental Health

At the **University of Minnesota**, reducing the stigma of psychological conditions and addressing the associated barriers experienced by students has been a focus for nearly 18 years. Addressing the medical school climate for students with psychological disabilities took shape with the help of foundation funding.

In 2009, a Marcus Foundation grant provided an opportunity to expand the reach of training around mental health to the medical school environment. Funding supported research to examine barriers and identify strategies for undergraduate and graduate learners with invisible disabilities, including ADHD and psychological and learning disabilities, at the **University of Minnesota Medical School** (UMNMS). Through this research, a need for antistigma work was identified, with a particular focus on the lived experience of psychological disability among medical professionals. The research outcomes informed the inclusion of disability as a category of diversity in a new UMNMS initiative to examine the school's climate for diverse students. The Disability Resource Center (DRC) also used the research findings to plan innovative programming for the community, improve their web presence, and develop a robust form of communication between the DRC and the school.

The research identified a need for greater awareness among medical school administrations about accommodations and other supports available through the DRC. The DRC standardized a yearly protocol to strengthen its relationship with the medical school liaison, providing an opportunity to review current practices and concerns at the school and the disability service office. Barbara Blacklock, program coordinator at the DRC who works with the medical school, explained that the tool has been invaluable in maintaining a strong link between the DRC and UMNMS, even during staff transitions. This practice ensures that the school liaison is confident in the DRC's way of working, and the DRC is well versed in the medical school's requirements and curriculum. Blacklock noted that a result of the trusting relationship has been an increase in the number of direct referrals from the school and growth in the number of registered students with disabilities at the medical school.

Through their evidence-based approach to examining the experiences of students on their campus, the University of Minnesota DRC has gained high-level support from university administrators to advance their campus mental health climate. This work has firmly established the DRC as a key support for students with mental health conditions and has promoted a strong relationship between the DRC and the medical school.

Considerations for Promoting Wellness

Be visible. Make sure learners are aware of the available support services for all students, and note that accommodations are available for students with psychological disabilities.

Acknowledge the challenges of completing a medical degree. Acknowledge that health science programs are hard and can be emotionally exhausting. Support services should be advertised throughout the course of programs in a manner that normalizes their use, beginning with statements at admission and matriculation, and repeated throughout the program, particularly at critical junctures where students may experience increased stress and distress (e.g., at the beginning of clinical rotations).

Normalize help-seeking behavior. Encourage learners to seek mental health services, and make sure these are confidential and convenient to campus and clinical sites.

Support student release for appointments. Release of time for appointments should be an available accommodation or part of the accepted culture for all learners, in keeping with LCME and ACGME standards.

Support placement within the geographical area to support continuation of care. Learners should have access to health care that is a reasonable distance away. Through a formal accommodation designation, ensure that learners maintain access to continuity of care with their provider by excluding rotations that make attending appointments prohibitive. Alternatively, provide time and space for learners to meet with their provider via Skype or phone.

Ensure that the leave of absence process only requires a physician attestation of need. The leave-request process should not be a deterrent to accessing health care. An attestation from the supporting physician is all that should be required. Learners will forego care rather than disclose a mental health issue to their administration if they are required to provide deans and faculty with detailed information about their mental health and other unnecessary details.

Integrate wellness into the curriculum. Discuss mental health and provide opportunities for learners to share stories of mental health and resilience. Provide time for wellness in the curriculum and reward learners for taking time to attend to self-care.

Student Organizations

After being involved as an interviewee in this project, a learner reported they worked with peers to create a disability advocacy network within their program in order to raise awareness of and eliminate barriers faced by individuals with disabilities in medical education and in health care settings. After initial success on their own campus, the student connected with other programs to find peers interested in developing a similar model on other campuses. Currently, a group of learners from programs across the country is formalizing a national network with the goal of advocating for improvements to student disability support in medical education and inclusion of disability curricula for all learners. The group also provides peer support and feedback to the broad medical education community.

One thing that I was talking about last week with the dean for diversity and inclusion was how there is a lack of a national organization for students with disabilities, similar to how there are for underrepresented groups in medicine…. We thought that would be something to explore to try to normalize the culture a bit more, towards including people with disabilities.

— Student and cocreator of a new medical school group focused on students with disabilities

Notes

1. *Culture* is a pattern of shared basic assumptions members have learned as the organization solved its problems of external adaptation and internal integration. The pattern of shared basic assumptions has worked well enough to be considered valid and, therefore, to be taught, either deliberately or tacitly, to new members as the correct way to perceive, think, and feel in relation to those problems.

2. *Climate* is the meaning organizations attach to policies, practices, and procedures they experience and the behaviors they observe getting rewarded, supported, and expected in the organization.

Chapter 4. Effect of Culture and Climate on Lived Experiences of Disability in UME

The notion that an individual with a disability cannot go to medical school or practice medicine is not a fact, it is a belief, and beliefs can change.

— Kurt Herzer, MD, PhD, at the 2016 Access in Health Science and Medicine Symposium

Introduction

Culture (the overarching attitudes, beliefs, and values of a medical school) and the *climate* (the manifestation of culture that affects learners, teaching practices, policy, diversity, and relationships) are critical aspects in determining whether learners with disabilities feel welcome in a particular medical school environment.

Cultures driven by legal compliance obligations to provide reasonable accommodations often fail to recognize the value of educating and training learners with disabilities and, as a result, contribute to a negative climate for learners with disabilities. Conversely, cultures that integrate disability as a meaningful dimension of diversity benefit greatly from the contribution of learners with disabilities in their teaching, learning, and practice, creating a climate where learners with disabilities feel welcome and valued.

Many of the themes of the Lived Experience Project findings resonate with those of other marginalized groups. Interviewees discussed feeling the need to perform twice as well as their peers and to advocate for themselves; constant struggles with bias and stigma; fear of making any errors; and the covert and overt messages that they do not belong. Many of the strategies used to build an inclusive culture for diverse students with respect to race, ethnicity, gender, and sexuality may also be applicable for students with disabilities.

Role of Program Climate on Learner Experience

Individuals with disabilities often evaluate the climate of a program when determining where to apply, whether to attend once admitted, and whether to disclose their disability and access disability supports once they matriculate. The climate tells the learner something about the culture of the program, including perceived knowledge and attitudes about disability, and is a major part of this evaluation process.

Structural support, including disability-related policy and practice, also informs the climate. For example, if students must disclose their disability to someone who later has an evaluative or supervisory role in their education in order to access accommodations, they may have privacy concerns and be less inclined to access necessary supports.

I didn't necessarily decide based on the disability services as much as what I thought would be the best fit for me, and a big part of that was community. The program had a very strong community, which, looking back on it, affected how they viewed students with disabilities…. It may have been a thought in the back of my mind that a place that was that welcoming and that warm in general to all of their students would have been a place that just wants to see people succeed regardless of what it takes. That sense of community extended to me as a person with a disability. They were very willing to give me the accommodations that I needed, and they weren't treating me strangely. You know, they weren't treating me like some weird, strange, foreign creature. They still treated me like a person, in spite of [my disability], so that was a big part of [selecting the program].

— Resident reflecting on the choice to attend a particular medical school

Interviewees also described schools whose climate conveyed a welcoming and inclusive spirit, noting that these schools were particularly attractive.

The admissions dean, the dean who interviewed me … she is a big reason why I loved [the school] right away. Her attitude about everything and really the whole admissions office, their whole attitude…. Everybody was just very supportive and very much, "Whatever we have to do to help you, we'll do and it's not a big deal." I think it was a part of it … the attitude about the disability, and it wasn't a big deal to anybody … in the program.

— Resident considering the choice of one medical school over others

Some interviewees expressed that their disability and available disability supports were a primary factor in selecting a medical program.

What I ended up deciding in conversations with schools was that … the disability portion was going to have to be a big part of how I decided where I went to medical school. The way one person put it was, "You can either ignore disability in your decision [about where to attend medical school] and then spend every day thinking about it and fighting for accommodations … or you can make your decision based on your disability and not have to worry about it again." That sounded like a better option to me.

— Medical student reflecting on an approach to medical school interviews

For other interviewees, a more general spirit of community and mutual support was indicative of a program that was, by extension, a program that supported learners with disabilities.

Conversely, schools where students with disabilities had experienced poor treatment or discrimination and schools that had been the subject of litigation or official complaints deterred students. Interviewees reported gauging a school's culture through feedback garnered from an informal network of physicians, residents, and students with disabilities and via blogs and online forums.

I avoided schools where I had spoken to people that had a personal bad experience. I talked to a guy who [has a disability similar to mine] who's at [school]. He sounded miserable. I didn't apply there. I talked to a woman who went to [a second school]; it sounded like a bad experience…. I talked to somebody with a good experience at [a third school]. I talked to several people that had a good experience that was constant at [the third school]. I based all my applications off of where I had talked to people [with a disability similar to mine] who had good experiences.

— Medical student discussing one factor in the decision about where to apply

Attempts to build a culture of disability inclusion are often driven by learners with specific disability needs. Allowing students to drive cultural shifts and allowing individual students to become the "voice" of disability for their program can be easy. Just as single members of other marginalized populations should not be expected to represent all individuals in that population, a single student with a disability should not be held as an example of inclusion or a representative for all disability-related matters. Even within a disability category (e.g., mobility, sensory, psychological, learning, chronic health), learners have very different experiences and needs. We caution educators against evaluating the inclusivity a program through the experience of a single student. We urge programs to, instead, consider a broad perspective when attempting to build a culture that is inclusive of disability, one that does not rely on or require an individual or small group of students to lead change.

If you're not perseverant, you suffer…. If you're not ridiculously persistent and dogged and determined to be heard or listened to, you have no hope at all. If you are not willing to find your way yourself, you won't make it. Such high standards are not required of students without disabilities, and that's not fair.

— Student with a disability describing their experience in medical school

Impact of Attitudes on Lived Experience

Attitudinal barriers are defined as pervasive negative perceptions or personal beliefs that focus on a person's disability rather than their ability and other valued characteristics. In medical education, the medical model of disability contributes to these barriers because disability is often equated with being a patient and physicians inherently feel called to "treat" or "fix" patients. (The medical model of disability centers on the individual as the problem, with the solution as curing or managing illness. By contrast, the social model of disability centers on societal barriers as the problem, with the solution as barrier removal and attitude change.)

Interviewees expressed their desire to "hide" disability in the wake of an us (physicians) against them (patients) mentality.

I think attitudinal for me is always the hardest [barrier] to overcome, because it's the one that you have the least control over, if that makes sense. You can't really control other people's unconscious bias…. It's not just the people running the school. It's patients. It's nurses. I had a lot of that. I had a nurse in the emergency room be like, "Why are you playing in that wheelchair?" I was like, "What are you talking about?" She was like, "Whose wheelchair did you take?" and I was like, "It's mine." She was like, "But you're a doctor," and I was like, "Yes. Yes, and you're a nurse." To have a nurse still have that attitude is very frustrating.

— Student discussing unconscious bias among colleagues in the clinic

Promising Practice: Inclusion—Not Just Equal Access

As a result of ongoing efforts, faculty and administrators at **Rush University** intentionally focused on creating a culture of inclusion—not just access. As noted by one of their students with a disability, "Rush University doesn't just talk the talk, they walk the walk." They have ensured that buildings are universally designed for access, they actively recruit students and employees with disabilities, and they recently hosted a symposium to highlight the 25th anniversary of the ADA. Rush faculty are also leaders in the field of disability inclusion and include disability in their ongoing research agendas. Sarah Ailey, PhD, APHN, a professor in the College of Nursing, is a leader in inclusion of patients and students with disabilities and coauthor of the 2016 white paper *Technical Standards for Nursing Education Programs in the 21st Century*, a call to action for nursing programs to revamp their technical standards for greater inclusion.

This decades-long commitment by Rush includes an assurance that every person—patients, providers, employees, and students—is given equal access. Rush was one of the first schools to establish a committee to guide the institution's accessibility efforts, within the first year of the ADA's enactment. Rush not only embraces the letter of the law, it captures the intended spirit of the ADA and has been honored for its efforts by multiple organizations, including the Robert Wood Johnson Foundation, which cited Rush as an institution that is "setting the standard of excellence" on health care for people with disabilities; the Labor Department, which awarded Rush University the EVE Award (Exemplary Voluntary Effort) celebrating Rush's efforts to create an "inclusive environment and enhance equal opportunities for veterans, persons with disabilities and others"; and, most recently, through a 2016 Access Living's Lead ON Award, which recognizes individuals and organizations that have increased the empowerment and inclusion of people with disabilities.

At Rush, this commitment starts at the very top. Rush President and CEO Larry J. Goodman, MD, has made it his mission to ensure that Rush remains at the forefront of the disability rights movement.

> *Because Rush is both an academic medical center and a university, we have a special mandate to ensure that this commitment to an environment of inclusion is evident not just to our community and our patients, but also to our employees, students, faculty and physicians.*
>
> — Larry J. Goodman, MD, Rush president and CEO

In 2016, under the leadership of Gayle Ward, JD, senior associate provost of educational affairs, Rush was first in line to adopt the leading practices in disability service. It recommitted resources to disability services to ensure that the leading practices in health science are being used. To promote further inclusion and ensure alignment with these practices, Rush revamped its technical standards to align with the functional approach (see Chapter 3, Technical Standards: A Recent Study section); hosted disability events for faculty, staff, and the community; and developed innovative methods for inclusion of health science students with disabilities. These actions support the continued legacy of Rush as a leader in disability service.

Considerations for Fostering an Inclusive Institutional Culture

A call for inclusion from institutional leadership that is embraced throughout the institution is needed. Expressing a commitment to full access in the core values of a medical program is a critical first step, and communicating these values to all members of the community is essential to show commitment to a culture of inclusion. This call for inclusion should include dedicated financial and human resources to ensure real, measurable progress, not just rhetoric.

Conduct a programmatic assessment. Make systemic changes, beginning with an assessment of services by an outside expert and through soliciting feedback from existing community members with disabilities. Although students with disabilities should be included in an assessment process, institutions should not require students to lead this process. Efforts should occur proactively, and measures should be taken to ensure that students already working at capacity are not disproportionately burdened.

Provide professional development training for faculty and staff on multiple topics, including:

- ☐ Communication with and about persons with disabilities

- ☐ Principles of disability and accommodations from a social-model perspective

- ☐ Integrating culturally appropriate content about disability into curricula, standardized-patient scenarios, and case studies

Evaluate curricula and pedagogy to assess whether language and content.

- ☐ Reflect best practices in disability

- ☐ Are accessible

- ☐ Are respectful to persons with disabilities.

Conduct awareness training that highlights successful individuals with disabilities in the medical profession.

Educating [students, faculty, and administration] about the value of diversity [and,] I think, continuing to profile successes [of students with disabilities] and why that had worked.

— Resident responding to the question about how to improve medical education for students with disability

Work toward full accessibility for clinicians, learners, and patients.

- ☐ Incorporate a universal design approach for instruction and physical space across the institution, with attention to access for all users from the start of all new design or renovation projects. (*Universal design* refers to broad-spectrum ideas meant to produce buildings, products, and environments that are inherently accessible to people with and without disabilities.)

- ☐ Develop an institutional design guide that includes architectural and interior design features to maximize usability beyond legally required access. For example, require automatic door openers in all key learning spaces and bathrooms even if code compliance does not require them.

☐ Create an action plan for proactive physical accessibility improvements as well as a responsive approach to individual student and staff requests.

☐ When designing a new curriculum, instituting new technology, or developing other new initiatives, use a universal design for the instructional approach, and ensure that disability is considered from the beginning so that accessibility is guaranteed.

☐ Ensure that the SIM lab and the clinic use accessible medical equipment.

☐ For all the above action items, include people with disabilities in planning and decision making.

Integrate disability into diversity initiatives, efforts, and language.

☐ Ensure that diversity initiatives explicitly include disability as an aspect of diversity valued in institutions.

☐ Meaningfully integrate disability into diversity trainings.

☐ Count individuals with disabilities in diversity measures, identify trends in the numbers of learners and staff with disabilities, and use these metrics as an indication of improved efforts for inclusion.

☐ Develop recruitment and retention efforts specific to individuals with disabilities.

☐ Identify (or develop) scholarships and support programs for students with disabilities in medicine.

☐ Integrate disability into pipeline and recruitment programs and policies.

☐ Develop campus programming that includes disability in medicine. Work with DSPs and programs to develop programming that honors disability culture and addresses from a social justice perspective the challenges the disability community faces in accessing health care.

☐ Create an environment where disabilities are acknowledged and respected. Develop recruitment and retention efforts specific to individuals with disabilities.

This is actually true for med school, residency, and just going into life as a physician in general: I think there's a lot of unconscious barriers as well as "us against them." There are the physicians and the medical professionals on one side, and there are patients on the other side, and there's a very big divide between us as the medical professionals and them with the medical illness…. I think that a lot of the infrastructure is set up with the understanding that the person with the disability or the person that is ill … is only utilizing things on that side, and they forget about the other side. It's stupid things like where the gloves are placed, where the sharps containers are placed, where the supplies needed to perform … are not set up for universal access. The things that are "accessible" in the hospital are only on the patient side of things [and not on the health care provider side], and so for me, I think everything should be universal design.

— **Resident on the configuration of hospital access being oriented toward patients, not health care providers**

Include disability competency in the core cultural competency curriculum.

☐ For suggested core competencies that can guide learning objectives, see Kirschner and Curry (2009).

☐ For an example of a fully integrated, longitudinal disability curriculum developed and delivered with participation from community members with disabilities, see the program at the State University of New York at Buffalo School of Medicine (Symons et al 2009).

Hire faculty, administrators, and clinicians with disabilities. The availability of individuals with disabilities in established roles on campus may contribute to a better understanding of disability and positively affect the culture toward disability. These faculty and staff may be willing to serve as skilled mentors for students with and without disabilities.

Designate a disability service provider (DSP) for the medical school.

☐ Assign a specialized DSP—someone with specialized training in disability services and disability law— for the medical school. This person could be situated in one of several possible offices (e.g., under the umbrella of diversity and inclusion, student wellness, or academic support). The most important elements to consider in determining placement include ensuring confidentiality of student documentation, avoiding any conflict of interest (i.e., no supervision by someone in an evaluative role over registered learners with disabilities), and ensuring that placement aligns with positive messaging about equal access.

☐ Ensure that the DSP has a designated liaison in the medical school at the assistant or associate dean level who can serve as a source of information and referral to specialist educators within the medical programs, where needed.

☐ In systems where a centralized campus disability service office serves students with disabilities in medical programs, a specific staff member from the centralized office should be designated to work with medical students. This professional should receive specialized training in the requirements of the medical school curriculum, with special attention paid to the clinical components of the curriculum.

Publicize disability service policies and procedures.

☐ Post clear information about the policy for requesting and accessing accommodations in a manner and location(s) that are easily accessible and ensure that the information is also posted on the program's website.

☐ Include a supportive statement encouraging students with disabilities to register and request services in student handbooks, clinic handbooks, and course syllabi.

The student handbook would have a comprehensive section on disability. Not just learning disability, not just testing accommodations, and not just "you need to supply this documentation." It was all, like, students with learning disabilities need to supply documentation within the last two years of this, that, and the other. It wouldn't be like that. It would be, "We support our students with disabilities. Accommodations may be needed in preclinical and clinical years including test accommodations, physical alterations of facilities, adapted equipment. We will work with you." There would be a statement like that in writing.

— Physician describing the type of language that would communicate support for students with disabilities

» *Example Statements Communicating Openness to Disability*

UCSF School of Medicine

The University of California San Francisco has a proud history of training physicians with disabilities and provides reasonable accommodations for all qualified individuals with disabilities who apply for admission to the MD degree program and who are enrolled as medical students. Otherwise qualified individuals will not be excluded from admission or participation in the School of Medicine's educational programs and activities based solely on their status as a person with a disability.

Rush Medical College

Rush University is committed to diversity and to attracting and educating students who will make the population of health care professionals representative of the national population.

Our core values—ICARE—Innovation, Collaboration, Accountability, Respect and Excellence translate into our work with all students, including those with disabilities. Rush actively collaborates with students to develop innovative ways to ensure accessibility and creates a respectful accountable culture through our confidential and specialized disability support. Rush is committed to excellence in accessibility; we encourage students with disabilities to disclose and seek accommodations.

Case Western Reserve School of Medicine

Case Western Reserve University's School of Medicine is committed to providing all students with opportunities to take full advantage of the educational and academic programs. The School of Medicine recognizes that students with documented disabilities may require reasonable accommodations in order to achieve this objective and/or meet the technical standards.

Stereotypes and Stigma

I didn't anticipate [my disability] being an issue at all because … at that point, I thought, "It's medicine, so they're not going to be discriminatory about a disability. It's ridiculous. It's hypocritical." That is really, really not true. I had an admissions person … I had met this woman way in the past … I had gone up to her and just introduced myself because I knew I was interested in the school. I got on the phone with this woman, and immediately she tells me she remembered meeting me, and that I'm a "very cute little girl," very condescending. She asked me if I had a backup plan. I said, "Yes, I think that if I don't get in, I will apply to DO school next time as well, because I didn't apply, I only applied MD." She said, "No, I mean a backup plan for medicine." I just remember her telling me, "I wanted to be an astronaut, but I get motion sickness, so this was my backup plan." Then she went on to tell me how I would be an excellent teacher. This is all from somebody who didn't know me at all; she didn't know anything about me.

— Resident in a highly competitive subspecialty recounting an experience with stereotype when applying to medical school

Many interviewees described the attitudes of peers, faculty, and administrators toward disability as the most significant barriers during their training. The stereotypes and stigma related to disability were often at play, as well as the archetype of a physician who does not comport with notions of disability. Interviewees suggested that the way disability was discussed in medical school classrooms often reinforced these stereotypes. Interviewees shared that even if the medical school environment was more progressive, once they entered the clinic, they experienced uninformed attitudes about disability and frequent microaggressions. Keller and Galgay (2010) described disability microaggressions as "distorted assumptions and beliefs that fuel negative attitudes and behaviors toward [people with disabilities] … operat[ing] in a … subtle, secretive, and covert manner, often outside the level of awareness of well-intentioned perpetrators." Unfortunately, good intentions do not rid microaggressions from further "fuel[ing] negative attitudes and behaviors toward [students with disabilities]," Keller and Galgay wrote.

Attitude towards disabilities … there's a stigma. Historically, there's been a stigma of … "You're not normal. You're not complete. You're not whole." You've got something against you, basically. It's looked on as a negative, as you're broken…. When trying to attain a certain goal and having that little fear in the back of the head saying, "Oh, but they're going to find out about this, and it's going to cause some…." They may not overtly say, "We don't want you." They may, in [a] more subtle tone, say, "Not the right candidate," kind of thing.

— Physician on the stigma of disability in medicine

A lot of people are very understanding and don't portray judgment based on the knowledge of having a disability or whatever, but there's a lot who definitely do perpetuate the stigma. You can tell that they think a little less of you. I had told a couple of my mentors [at school] very vaguely what I was going through, and some were really, really supportive and wonderful about it. There [were] some that clearly indicated their negative judgment in their affect and body language. I quickly realized, they didn't want me to be saying any of this to them right now. So, I thought, "Okay, so I just won't ever mention it again. I'll act like I never brought it up to begin with." Then, suddenly we were all good again. Immediately, my one mentor, especially, was much more happy and seemed less confused. It's the subtle ways in which [stigma] comes out that are disheartening.

— Medical student describing disclosure to mentors

The fear around disclosure of disability is very real. Research suggests that most students with disabilities in medical education will not disclose due to fear of judgment, bias, and skewed perception of ability. In a study of medical student attitudes toward disability and support for disability in medicine, researchers found that two-thirds of students with disabilities had not sought support despite experiencing disability-related difficulties in their training (Miller et al 2009). That study also found that 12% of students in their study reported feeling discriminated against. Microaggressions were also reported, including comments made by medical staff or other students who were not aware the student had a disability. These microaggressions included derogatory comments about disability accommodations and the assumption that young people (e.g., a medical student with arthritis) do not have medical issues because of their age (Miller et al 2009).

These findings were reflected in the experiences of interviewees in this study.

There was this guy who was a resident. I was like, "You have a limp. What's going on for real?" Then he told me. He said, "Don't tell anyone. I don't want any problems in my residency program." I replied, "Don't worry, I won't tell anyone. I have my own things, and I'm not going to tell anyone. You're a good resident. There's no reason why someone should be judging you based on something like that when you do a really good job." He was a really good physician and he was a really good teacher. I'm very glad he got his fellowship and everything, but not a lot of support.

— Resident speaking about a "code of secrecy" around disability

Disclosure

Some students suggested that being able to disclose disability at the outset would improve the climate for students with disabilities. A recent letter to the editor by Schwarz (2017) reflected this sentiment, stating that increased disclosure is the "swiftest path to normalization" for students with disabilities in medicine. In response to Schwarz's suggestion that disclosure itself is likely to change the attitudes and cultural norms of medical education with regard to students with disabilities, Herzer (2017), a medical student with a visual disability, noted the complex relationship between disclosure and culture: "Fear of disclosure and the culture that precipitates that fear are likely jointly determined: lack of disclosure may contribute to a less-inclusive culture for students with disabilities, but that culture

may also breed a fear of disclosure." Instead, Herzer suggested that institutional stakeholders must be trained to work with students with disabilities. Institutions must also develop inclusive policies and procedures that support a culture of respect and inclusion for people with disabilities, including learners and faculty. Interviewees reported sensing this type of cultural shift, which tended to make them feel safer in disclosing their disability and seeking support.

> *When I graduated, I didn't want to be viewed by my colleagues, or my future colleagues, as an individual who is any less capable or competent than they are. There are subtle biases that exist within the profession of medicine, and, as such, you cannot give into it…. I took care of this woman surgeon, a very famous individual, and she was telling me about how you basically can't, she was never able to, show weakness you just can't.*
>
> **— Resident describing the culture of medicine**

The "Clinicalized" Culture

> *"Nobody here has a peripheral neuropathy." They would say that in lecture. I [would say], "Well, what if somebody does?" They [would say], "Why do you need to say that?" If nobody's going to say, it doesn't teach us anything. If somebody does, they don't belong. Somebody said, "Here's a scale of physical functioning. Four is you guys, no limitations." I said, "But I have limitations." [She said], "Well you should feel complimented that I think you didn't." I responded, "It's not a compliment for a person to be nondisabled."*
>
> **— Physician describing stereotypes of physicians as nondisabled that were perpetuated during training**

Many interviewees spoke about concerns in the classroom when learning about disability or specific diagnoses—especially when the topic reflected their personal experiences but the manner in which it was discussed did not. For some, the *clinicalization* of disability in the absence of a more humanistic, rights-based, social-model understanding of disability is a disservice to both the clinician and the patient. This clinicalization became more salient on the wards where patients were often referred to by their diagnosis and, at times, were referenced in disrespectful ways or had their concerns dismissed (e.g., "she's just crazy" or "the lupus patient"). This clinicalized approach to teaching supports the medical model of disability, leaving learners who do not have disabilities with a limited understanding of disability as it relates to the patient's life, employment, relationships, and daily functioning. When learners do not understand patients' lives holistically and merely focus on the disability, they fail to understand how to best treat patients and support their recovery. For learners with disabilities, this clinicalized discussion of disability also resulted in alienation and created a climate in which, at times, it felt unsafe to disclose or to discuss the lived experience of disability.

> *Then there's the other problem, too…. Every single time, with very few exceptions, chronic disability was brought up in lecture, it was awful. Really, so many horrible things were being said in lecture halls, and nobody's thought about them. It's like one minute, the professor will say, "Women with this gene will develop breast cancer," which was a statement of fact, and we'd all write it down and nod, and the next minute they'd say, "Whatever genetic condition is absolutely devastating," which is an opinion, not a statement of fact, and everyone would just nod and write it down.*
>
> — Physician recounting the model of disability taught in medical school

> *Create [a] more inclusive culture that makes people feel more comfortable and a little bit less stigmatized [due to] the medical approach [that focuses] on conditions to be treated…. We have physicians that are very good at coming up with problems but not seeing strengths of people.*
>
> — Physician describing the need to change the approach to disability in medicine

> *I had one student with rheumatoid arthritis tell me that her experience of the lecture on this topic was alienating. The professor talked about "them," the people with the disease, without any sense that someone in the class might have the disease. Her suggestion for the faculty member was, "At all times, assume someone in your class has the disease you're talking about or has a family member with the disease."*
>
> — Disability service provider recounting a student's reaction to hearing their disability described by a faculty member

Needing to Be Twice as Good: Counteracting Stigma

A need to prove oneself in order to counteract stigma or perceptions was also a theme among interviewees. It was common for learners to feel that they had to outperform their peers and the expectations about their abilities.

> *I felt like I had to prove myself above and beyond what my peers had to do. It was like a little bit of impostor syndrome, to prove that I was worthy of being there, despite my disability.*
>
> — Resident on experiencing the pressure to perform as a student with a disability

In most hospitals, there's a lot of talk, and people will find out [about the disability], but you are just hoping to prove yourself enough that they can say, "Okay, well, she's very smart. She's very good with patients. She knows her stuff. She works well. We don't care if she has whatever." It almost feels like you have to prove yourself extra to get to that point where people accept you.

— Resident discussing a need to be known by the quality of patient care delivered to counteract stereotype about disability

Some learners felt caught between advocating for their own needs and remaining "likable" enough that they could pave the way for students with disabilities to be accepted into the school in the future.

I feel, personally, an interesting tension between being an easy student and making this a more accessible place for the next student. I'm pretty aware that I'm the first student [with this disability type at this school].... I think this might be an overblown concern, but I think this needs to be an easy experience for the school because [if it is,] I think they're more likely to accept the next [student with the same type of disability].

— Medical student on balancing self-advocacy with advocacy for future medical students with disabilities

Impact of Peer Attitudes

For many interviewees, the attitudes of peers were the most concerning, anxiety provoking, and saddening. Some interviewees reported that they did not use accommodations because of the disdain expressed by their peers toward students with disabilities.

I feel like people, or my fellow students, … really tend to have a very negative view. Or the way they talk about people with ADHD and them having accommodations, I think that really made me hesitant toward wanting to take a test in a separate room because I didn't want people to think that I was having unfair advantage or whatnot. Especially among my friends or people in my year, I think a lot of them would talk about, like, "How can so-and-so have a diagnosis of ADHD? He's so successful. It's not fair, because not only does he have a prescription for performance enhancing drugs, but he's given time and a half on these exams, and screw him. That's not fair."

— Medical student on classmates' attitudes about disability

Attitudes of peers also influence the organization of social events, a critical part of community building. Learners were hurt, understandably, when peers did not consider accessibility in their planning.

[They wanted to hold an event at an inaccessible venue.] People are used to me going with the flow and making it work, but that's only if you have to. You don't have to, in this case. You could pick a different venue.… I said, "I'm really uncomfortable with going there. It's not accessible. It just doesn't work. Please pick another place." [They] didn't want to. I was like, "So I don't count as part of our class?" [They said], "Yeah, but you're one person." Basically, [they] said, "But you're one person [and your] needs shouldn't override other people's." I'm like, "I'm not telling you [we] can't have a party." [They said], "Well, but this is the one that has availability and is in our budget." I'm like, "You're telling me in [a major city], there isn't a single venue that meets your needs besides this one that I've specifically told you is not accessible.… I feel hugely disrespected and marginalized."

— Resident on confronting classmates' attitudes toward inclusion of all students for a major event

Being Counseled Out of Specialties

For some students, their program welcomed them, but there were preconceived notions about the type of medicine they would practice. Many interviewees reported being told they could only ever practice in one field because of their disability.

His response was that maybe I should consider an alternate career path. If you tell me, "I just don't think you're going to be able to do [the specialty] with [that disability]," [I think,] Okay, I made it this far. I made it through clerkship. As far as I'm concerned, our clerkships are just as grueling [as] a residency. They make us stay with the residents all day. We don't get there after the residents and leave before them. We stay the whole time that they are there. Especially for OB, we are on shift work. You are there from 5 am to 6 pm. You are there, and you walk in with the residents and you walk out with the residents. They don't just let you go. It's not, "We'll just give you the easy route." You do nights, you do [labor and delivery], you do a little bit of high risk. You do all of it so you get expectation of what it's like. When he said that to me, I said, "I don't plan on finding an alternate career path. This is what I'm going to do. I would like your help to do it." He said, "Okay. I can't make you do a dual application, but that's what I suggest." When I left there, I thought maybe I should find someone else to advise me.

— Medical student describing an advisor's assumptions about the ability to match in a specialty based on disability and not on actual performance

Interviewees welcomed the opportunity to determine through experience which specialties were of interest to, and feasible for, them—rather than being counseled out on perceptions and stereotypes about disability.

I tested peds at, really, three different times: … my third-year rotation, which includes some outpatient and inpatient; and then this subspecialty rotation; and then my sub-I in peds, all to ultimately conclude that I couldn't [specialize in it], that it wouldn't be the right call. The reason is pretty simple; … in pediatrics, there are times when a) children don't tell you what's wrong and b) the sign that gives you the clue is so incredibly subtle or small that I couldn't [be sure I wouldn't miss it], and that can be true in any [pediatric] setting. It can be true in outpatient work, in ambulatory work. Once I'd seen that a couple of times, I knew that I was never going to feel totally confident, and I knew that I wanted to be somewhere where I felt like I'm good at my job.

— Physician discussing their deliberations in choosing a specialty

Embracing Disability Through Education

Having a holistic understanding of disability from a social-model perspective is essential to inclusive programs. Such an understanding is important because it is needed to counteract the attitudes explored in the previous section.

Interviewees described a variety of experiences related to faculty and administrator knowledge about disability. While some interviewees reported encounters suggesting that the disability knowledge base among faculty and administrators was purely clinical, others reported encounters colored by stereotypes of disability. Other interviewees described encounters that suggested that program faculty and staff in both UME and GME had limited exposure to individuals with disabilities. The most positive experiences for learners happened when faculty and administrators had a well-informed understanding of disability from a rights-based perspective.

I was explaining to someone the other day, "It's the teamwork. It's about you take and you give." They were saying how [if a team member has] a disability, then the other person would have to pick up the slack of this person. That shook me to my core. I was like, "No, no. What do you think of people? Would the [disabled person] get to be where they are because people caught them slacking?" I started laughing. I'm like, "No, no, no, no, no. We need to sit down, and we need to talk about this." They need to understand disability.

— Medical student describing assumptions about disability and team contributions

Openness in Medical School Admissions

Openness and a thorough understanding of disability will lead to greater willingness to admit students with known disabilities into programs. Many interviewees with apparent disabilities noted the importance of being open and communicative about their disability during the admissions process in order to gauge the knowledge base of the school and share a critical part of themselves.

I did disclose. I'm very open about it. They're going to see me on interview day. I don't want to surprise them.... My main point is, it's who I am. It's what makes me—me; it's part of me. I disclosed and I told them how I had radically changed my views in life and how I react to other people [based on my experience as a person with a disability]. It was very straightforward when I applied.

— Medical student describing their decision to disclose in interviews

At least from my approach, the more awareness raising the better, because I had chosen to be fully disclosed and because I felt that … it was much more smooth for me when people really understood rather than just wondering, like, "What's wrong with that guy, why is that guy two inches from the computer screen?" There were so many times where I just felt, like, if I just have like a sign around my neck, all of this would be okay.

— Physician on the benefits of disclosure

A program's ability and willingness to communicate with learners about disability and disability-related needs are critical to building a relationship where learners feel comfortable requesting accommodations. Faculty and administrators benefit from appropriate preadmission and matriculation discussions. Allowing space for an open dialogue to occur, including interviewee-led questions about potential challenges and accommodations, can be mutually beneficial. Left unsaid, these concerns go unaddressed and can leave both parties feeling unprepared to make a determination about an applicant's fit for a program. In admissions interviews, attitudes toward disability came up frequently:

You show up to interviews, and you're treated either really differently than other students, or people are surprised that you're there and seem displaced, and sometimes people are surprised but in a way that it's almost insulting like, "I can't believe, oh my god, this is so amazing."

— Medical student on reactions to their apparent disability during admissions interviews

Of course, when admissions personnel and interviewers lack an understanding of disability or make assumptions, admissions experiences can be disheartening for students with disabilities.

I had a couple … interviews where people sort of reacted negatively to [my hearing disability].... One of [the interviewers] was from a foreign country. He had a really thick accent. I did have to ask him to repeat himself sometimes but not, like, excessively. He was looking at my CV and said, "You have done so many things. You've had so many interesting experiences." Basically, "Why did you want to go into a field where verbal communication is such a part of it when that is something that's so hard for you?" I don't even know what I said [in response].... I was just really stung by that.

— Resident recounting their experience in the admissions interview

Need for Knowledge in Support Staff

Some learners reported that knowledge of disability among administrators was critical for them to benefit from program resources. Although beneficial resources such as tutoring, counseling, and career planning may be available, staff may not be equipped to respond to the particular needs of a learner with a disability.

> *I tried tutoring initially in my first year…. I knew I would struggle, but it wasn't something that I really benefited from because the office of academic resources and support, they're really great people, but they have a very single-minded track as far as the methods that they use and the ways they teach you to learn…. I was seeing [the learning specialist] every single week during my first and second year of medical school. It was a losing battle from the beginning because [the learning specialist would] say, "Research shows this," and I'm like, "That's great. Research doesn't really work for me." I was like, "Do you have any resources on surviving medical school with ADHD?"*
>
> — **Medical student on the need for disability knowledge in support programs**

Role of Interpersonal Relationships

A major theme this study uncovered was the importance of having a role model or mentor, someone "in their corner," whether a peer, a faculty member, an outside clinician with a disability, or a disability service provider. Indeed, many interviewees spoke of one or two individuals who made a significant impact on their decision to enter medicine, the quality of their experience while in the program, or their choice of specialty.

Role of Support Networks

Many learners reported feeling alone on their journey. The absence of a supportive network was a significant barrier both to understanding whether medical school might be possible for a person with a disability and for navigating training. Interviewees reported that having someone who believed in the possibility of being a physician with a disability was a powerful source of support. These supporters included people with and without disabilities. Meeting, or even seeing, a physician or current student with a similar disability and learning how they navigated training was particularly helpful.

> *Was I even going to be able to go to medical school? I had figured out that there had been a couple of other people that had done it. I saw this girl in a PowerPoint … presentation in a public health class. The presenter said, "These are med students that came to Guatemala with me." There was a girl who was using a wheelchair in the picture. I went to the professor after that. I was like, "Was she a medical student?" He said, "Yeah," and I said, "Can you give me her name?" I tried to find her on the Internet. I figured one person has done it, so it could be done…. I did a lot more research on my own to try to figure out how many people I could find that had used wheelchairs that had gone to medical school and particularly been accepted [while using a] wheelchair, because there's other people I found that had been injured [after their training]. That I think helped a lot in the application process, explaining to people that it's been done before, which surprised a fair number of people.*
>
> — **Medical student on the moment medicine seemed possible**

Other times, the best support came from peers with disabilities. Students reported that having a peer with disabilities, even if they are at other institutions, helped provide ongoing support and reduce isolation.

My first year, I really got to know a student … who graduated the same year I did who has a [significant chronic health condition]. She and I, we got to know each other and I think our focus was more on what it's like to be a patient and then transitioning to a physician, but I know she also had barriers.

— Resident on how a classmate with disabilities was a support

A strong connection with an advisor, a faculty member, or a DSP was also a common source of support throughout training. Interviewees reported that a trusted administrator or a faculty member to whom they were able to disclose their disability served as a source of support and was essential to their success.

I want to grow in a program. I am going to school to learn and to grow, and to become who I want to be. If you can't go to your superiors for help and advice, and to go to them with problems, how can you learn and how can you grow?

— Medical student on the necessity of supportive superiors

Role of Physicians

For young people with disabilities, their dream of becoming a physician often feels out of reach. The people in their lives may assume that the goal of becoming a doctor is not possible, because of the low profile of many physicians with disabilities and stereotypes about physicians and the nature of medical school. Interviewees reported that published stories about successful physicians with disabilities were a powerful tool to make the impossible seem possible. Once they found these stories, interviewees described seeking a direct connection with physicians with disabilities who had a public profile. Often, interviewees developed a long connection with these physicians, corresponding with them throughout training for guidance in identifying ideas for accommodations and for moral support.

*I was advised by a number of people that medicine was a very unreasonable occupation for me....
I sought out a network and tried to find other people like myself that were successful in their careers …
it was helpful to me to see people who were succeeding. I started to think more seriously about medicine....
I started shadowing patients to see if it was doable and reached out to other deaf doctors. Phillip Zazove was one. I read his book, When the Phone Rings My Bed Shakes, and reached out to him early on.*

— Physician on looking for other deaf physicians as mentors

In other cases, interviewees were able to gain confidence to seek a career in medicine through the support of physicians without disabilities who simply believed in their potential to become a doctor. These examples point to the possibility that any physician can help a person with a disability gain confidence to enter the profession simply

through positive support, encouragement, and information. For many interviewees, the very doctors who treated them became the mentors who supported their desire to attend medical school.

When I was in high school, I saw a geneticist…. She could tell I was just so interested in the things and genetic conditions and what made people different. She invited me to just come start shadowing her in her clinic. This was when I was like 15 or something. She gave me this huge encyclopedia of all genetic conditions involving hearing in some way. It was a huge book … about the different conditions and symptoms and the different genetic differences that caused them. I was just fascinated by it and would read it in my room at night. I knew I was interested in people and, specifically, sort of medical conditions, physical conditions."

— **Resident on how a treating physician supported a passion for medicine**

Commitment From the Top Down

Administrators leading programs and making policy around disability have a powerful role in the lives of learners with disabilities. When students had an affirming experience with administrators, it had a substantial impact on their experience.

He said, "I think you are going to do something impactful. We want to have you here. If that doesn't look like what it looks like for other students, that's fine." I really felt settled with where I was with that school after that conversation.

— **Medical student reflecting on a conversation with the dean of admissions**

If you are in there talking to [someone in the dean's office], that doesn't mean that you were having difficult times in medical school. They just want you to come in and update them and talk to them about how you're doing so that you feel like that's your extended family at school and that these are people you can talk to. Just get advice about anything at all, and if they don't know, they are very good about pointing us in the right direction.

— **Medical student on the benefit of having a positive and welcoming dean's office**

I found that just being able to talk about it was support for me. It helps me, it helped my mental health…. It boils down to medical student services is really the first and probably the only place I went for help, and they were able to definitely help.

— **Medical student on medical student services**

Considerations for Enhancing Points of Contact with Learners

There are several "points of contact" where students with disabilities benefit from programmatic knowledge and communication about disability and disability-related needs. These are especially critical during admissions and matriculation. Of course, ongoing specialized support is also critical to the retention and persistence of students with disabilities.

Applicants

☐ **Discuss questions about your ability to meet technical standards with the responsible disability service provider.**

☐ **Use support organizations to assess prospective medical schools' climate around disability (see Appendix B).**

☐ **Review requirements for accessing disability service supports before applying.**

Admissions Office Staff

Admissions offices play a critical role in ensuring that applicants with disabilities are aware of services, supports, and requirements for admission, including the technical standards. Mehta and Clifford (2017) suggest the following guidance for admissions offices:

☐ **Train admissions officers on accessibility in admissions.** For an example of this type of training, see the UCSF/CWRU module on Accessible Admissions (*sds.ucsf.edu/working-students-disabilities*).

☐ **Post information about disability services on the admissions website.** Admissions websites should include easy-to-find information about disability services and how to contact the disability service office alongside information about other student support services.

☐ **Post technical standards online.** Technical standards should include information about how to contact the disability service provider.

☐ **Advertise a process for confidential accommodation requests during the admissions process.** Communication from admissions personnel, pre- and postacceptance, should include statements about how to request disability accommodations.

☐ **Delineate roles.** Admissions officers should not make program accommodation determinations. Instead, such decisions should be routed to the program DSP.

☐ **Set a welcoming and inclusive tone.**

○ Include disability in a statement about welcoming diverse applicants on your admissions website, such as that used at the University of California, San Francisco (UCSF).

» *Example of Welcoming Language: Commitment to Diversity*

UCSF School of Medicine

"The School of Medicine welcomes all applicants without discrimination. The School of Medicine has a long-standing commitment to increasing the number of physicians from historically underrepresented racial and ethnic populations. As a result, over the last 35 years, UCSF has had one of the highest enrollment and graduation rates of underrepresented medical students in the U.S. UCSF's commitment to diversifying the physician workforce also includes LGBT populations, socio-economically disadvantaged populations, and individuals with disabilities."

○ Use welcoming language when discussing disability in technical standards, such as that used by the UCSF and Stanford schools of medicine.

» *Examples of Welcoming Language: Technical Standards*

UCSF School of Medicine

"The University of California San Francisco has a proud history of training physicians with disabilities and provides reasonable accommodations for all qualified individuals with disabilities who apply for admission to the MD degree program and who are enrolled as medical students. Otherwise qualified individuals will not be excluded from admission or participation in the School of Medicine's educational programs and activities based solely on their status as a person with a disability."

Stanford

"Stanford Medicine has an institutional commitment to provide equal educational opportunities for qualified students with disabilities who apply for admission to the MD degree program or who are enrolled as medical students. Stanford Medicine is a leader in student diversity and individual rights, with a strong commitment to full compliance with state and federal laws and regulations (including the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and California law (Civil code 51 and 54))."

☐ **Consider accessibility for students with disability on interview days**. Take a universal design approach to ensure that all aspects of the experience, from physical space planning to handouts and activities, are accessible.

Student Affairs Staff and Orientation Planners

☐ **Set a welcoming and inclusive tone.**

○ Ensure that activities and spaces are accessible to students with disabilities.

○ Include disability in any discussion or celebration of the diversity of incoming students.

☐ **Consider accessibility for students with disability in planning orientation activities.** Take a universal design approach in which all activities are planned to be accessible from the outset, not just in response to specific requests. Use the same approach when considering everything from physical space to handouts.

☐ **Advertise the availability of accommodations for orientation activities through an explicit statement, with a clear contact person for accommodation requests.** Identify any access features that are already planned. For example, "All orientation venues and activities are fully wheelchair accessible. If you require any additional accommodations to fully participate, please do not hesitate to contact [*name of responsible person*] at [*their email address and phone number*] by [*specify date by which requests should be made*]."

☐ **Include disability in orientation activities.**

○ Many orientation programs include social justice–oriented activities that discuss implicit bias and privilege. Such activities should include disability and introduce a social-model understanding of disability to set the tone of the program.

○ Introduce disability services: The disability service provider (DSP) should have time to introduce themselves to learners and explain the available services. The statement should indicate the range of disabilities that might require accommodation and the range of accommodations that might be provided (including clinical accommodations). The DSP should invite students who are unsure whether they may need accommodations to speak to them with any questions.

Exclusion of students in these "bonding" moments can have lasting effects, as noted by an interviewee:

I was thrilled that we began our training with such a deep and thoughtful investigation into how racial, cultural, socioeconomic, gender, and sexual identities impact the practice of health care. My school's commitment to diversity, cross-cultural communication, and the social determinants of health is why I chose [school] for my medical education. Unfortunately, our orientation did not include any mention of disability, ableism, or how to interact with people with disabilities in learning or interprofessional environments. This omission felt marginalizing to me and to other first-year students. A communal lack of awareness about disability has significantly impacted my educational experience, in part through the kinds of microaggressions that were modeled in our training. Disability should be explicitly recognized and explored as an essential element of identity and in our patient population, as well as in our profession. Orientation activities can include thorough examples of microaggressions against those with chronic illness or disability, in interprofessional environments that students will encounter.

— Medical student reflecting on the first-year orientation experience

Learners

☐ **Keep a copy of all disability-related records.** To meet the current requirements for accommodation requests on licensing exams, learners should keep a thorough record of accommodations and disability-related information from kindergarten through medical school and beyond. Develop a file of documentation and ensure that it is readily accessible to you. The request for accommodations does not end in medical school; you will need to request accommodations throughout your professional career.

☐ **Seek support.** If you are unsure whether you qualify to receive accommodations, or if you are simply unsure how to address a difficulty you are experiencing in training, reach out and seek support. Find allies who will help you to carry the load in your advocacy efforts.

☐ **Practice self-care.** Being a trailblazer can be exhausting and disheartening. To prevent burnout, make time to do things that renew your spirit.

☐ **Seek out other students, physicians, and other health care professionals with disabilities.** Develop a network of support among students, physicians, and other health care professionals with disabilities who you can turn to for advice, venting, and mutual support.

☐ **Pursue your dreams.** Despite existing challenges, people with disabilities are succeeding and actively changing the face of health care. For students with disabilities considering a career in medicine, know that your goals are possible.

☐ **Know the resources.** Know the resources available to you. Check the resources list in this document (Appendix B).

When you feel you are not receiving the support that you need, or appropriate accommodations are not provided, educate yourself about possible avenues of appeal. Every school must post appeal and grievance procedures.

> *For current learners, we wish to convey our continued support in your pursuits:*
> *You are seen, and you are heard.*

Faculty

☐ **Educate yourself about disability, including accommodations, etiquette, and language.** Programs should make training available to faculty about principles of disability and accommodations, disability from a social-model perspective, and disability etiquette and language.

☐ **Develop awareness by investigating existing resources (see Appendix B).**

☐ **Understand the available disability services in your program or on your campus.**

☐ **Use syllabus statements.**

  ○ Include a supportive statement on course syllabi to direct students who require accommodations to the disability office.

  ○ Convey a willingness to implement accommodations approved by the DSP.

> ### » Sample Syllabus Statement
>
> [*Name of School*] is committed to providing equal access to learning opportunities to students with documented disabilities. To ensure access to this class, and your program, please contact [*designated contact person for disability services*] to engage in a confidential conversation about the process for requesting accommodations in the classroom and clinical settings.
>
> Accommodations are not provided retroactively. Students are encouraged to register with [*name of office responsible for disability services*] as soon as they begin their program. [*Name of school*] encourages students to access all resources available through [*name of office responsible for disability services*] for consistent support and access to their programs. More information can be found online at [*disability services website*], or by contacting the office at [*disability services phone number*].
>
> —Meeks and Jain 2015

- ☐ **Plan for students with disabilities.** Plan exam schedules, course schedules, and room bookings, including those for standardized-patient exams, with extended time accommodations in mind.

- ☐ **Innovate solutions for all learning, classroom, and research settings.** Work with the DSP and students to innovate accommodations for all learning settings, including classroom, simulation, research, clinical, and community.

- ☐ **Include disability in your teaching with a holistic, rights-based orientation.**

- ☐ **Include elements of disability in problem-based learning and case study exercises, with a social-model perspective on disability.**

- ☐ **Include disability in your research agenda.**

  - ○ Research about patient care should consider how people with disabilities experience care.

  - ○ Research opportunities should be accessible to individuals with disabilities.

    - • Ensure that surveys, websites, and locations are all accessible to all people with disabilities, particularly people with physical and sensory disabilities who are often excluded due to lack of access.

    - • Include people with disability on research project advisory groups to ensure that the research design is inclusive and culturally sound.

    - • Model behavior that supports the autonomy and capabilities of individuals with disabilities.

Chapter 5. Graduate Medical Education

Introduction

Though not the focus of this report, interviewees reported on their experiences of applying to and completing residency. Their stories highlight some of the unique challenges that exist when transitioning from full-time learner to full-time practitioner, with ever increasing responsibilities and autonomy. Structural barriers to accessibility in GME were similar to those found in UME, including the lack of clearly defined policies and processes, a knowledgeable and identifiable point person, and a solid understanding of the legal and policy landscape. Likewise, elements such as promoting physician wellness, communicating openness to disability, valuing the unique contributions of residents and physicians with disabilities, and incorporating universal design into clinical, laboratory, and office environments were identified as practices that contribute to an inclusive culture and climate. The road maps to meaningful access are similar for students, residents, and physicians.

Residency Application Process

Several interviewees discussed the residency matching process, revealing both benefits and challenges. For some, the application process for residency presented an opportunity to "shop around" for a program that was most open to providing innovative accommodations—particularly when the program was actively recruiting the learner.

> *The residency application process is a little bit more candid, and if a program really wants you, they're trying to pitch themselves to you as well. With me, I was candidly asking about different things that I was thinking about in terms of [the accommodations I might need for my disability]. It's very clear that I wanted to be somewhere that wanted me there. That, I knew, was going to take some work on their part. I wanted to be somewhere that was interested in doing that. There were just a few places that I felt were interested enough in me that we would make that leap to actually solving all of the problems in a positive way.*
>
> **— Physician describing their approach to residency interviews**

> *My program director here, we talked frankly about the disability during my [application and interview for residency]. Again, you know, I wasn't going to bring it up, but she said, "I want you to know that we are going to make this work for you." I don't think I would have said, "How are you going to make this work for me?" because I wanted to match there so badly that I wasn't going to do that. I wasn't going to say that, but then she did. She was like, "Our incoming chief resident actually had a disability, and here's how we worked with her. We had a resident a couple years before with a disability." She put me in touch with those people, and we got in touch. It was reassuring.*
>
> **— Resident recounting a positive experience with disclosure during the residency interview**

For other interviewees, the Match presented specific problems. One issue raised was that the learner was not in complete control of the residency location. For example, the location might not be close to appropriate medical care or specialists. This was especially problematic for students who developed their disabilities in residency. A larger issue expressed by interviewees was if and how to disclose to residency (i.e., in the interview and/or after the Match). Learners described feeling vulnerable—they might not match if they are forthcoming about their disability, but without an understanding of a program's "disability friendliness," how could they accurately rate a program?

> *How I [disclosed] in the residency interviews? Well, I showed up for all these interviews with a cane, and 2 out of the 17 people asked me about it…. You can't say, "That's an illegal question sir," because they'll never offer you the job…. What do you do? Do you disclose? Do you tell people you have trouble with handwriting? Do you tell them or not tell them? The best advice I got from the disability office in college way back … was, unless you need accommodations at the interview, the best time to disclose a disability is after they make the offer and before you accept it, but that's not a possibility for a residency and fellowship [due to the Match process].*
>
> — **Physician describing challenges with the Match process**

Residency

In speaking about their experiences in residency, interviewees identified many challenges similar to those found in UME (e.g., unclear policies, lack of accountable points of contact, concerns about stigma and stereotypes). They also identified some barriers that were particular to GME and the classification of residents as employees.

Unclear Policies and Processes

When interviewees discussed their residency experiences, the policies and procedures varied widely. In many cases, it was unclear who in the program was responsible for accommodations and where residents could go to resolve disability-related concerns. Interviewees reported being shuffled between human resources, program directors, and UME disability service providers—all of whom pointed to another staff person as the responsible party for determining accommodations. Other interviewees reported that even when there was an official assigned to manage disability services, they were not equipped to receive a request for accommodations; in fact, many officials did not have previous experience with a resident with a disability.

Disclosure to Supervisor

Many residents reported a structure that required them to disclose their disability status to their program director or a senior resident in order to access accommodations. Oftentimes, residents felt compelled, either because they were asked directly or because they felt they had to justify the request, to disclose all the details of their disability.

I've seen for most programs, they do not have an ADA person that deals with [disability]. You usually have to go directly to the program director or your senior resident, or sometimes they'll shuffle you down and [say], "I'm not talking to a resident about this." They even wanted me to go to a primary care [appointment] with one of their attendings, and that was [more confidential from their perspective] because I wouldn't be with a resident. I'm like, "I'm not telling half the residents or any of the attendings any of my medical history because they will be like, 'Why is she working here?'" I was like, no, this is absolutely not going to happen.

— Resident on the experience of asking for accommodations in residency

Understanding Responsibility and Obligation for Accommodations

Part of the lack of clarity about who is responsible for resident accommodations has to do with the variety of administrative and governance structures among residency programs. In some cases, the medical school is the residency sponsor with ACGME; in others, a hospital is the sponsor. At other times, the residents are employed by the hospital or by the medical school, or a separate entity serves as the sponsor and employer.

Another issue is that many residents believed that accommodations were not available in residency, so they did not request them. Others noted that even after a formal request for an accommodation, it was never provided. In other reports, interviewees got the impression that even if available, the cost and implementation of accommodations were not the responsibility of their program. Many residency programs, it seemed, did not have a clear understanding of their institutional obligation to provide accommodations and implement them in a timely manner. Nor, in some cases, did they seem to work with any centralized accommodation specialist at the medical center to implement accommodations.

Lengthy Request Process

Residents with apparent disabilities were more likely to request, or be offered, needed accommodations. For residents with non- or less-apparent disabilities, however, the lack of set policy and procedure led to potentially uncomfortable conversations (if disclosure happened at all) and prolonged delay to access accommodations.

[Negotiating accommodations for residency was] hard because I didn't have a coordinator, so I was by myself trying to advocate for myself to my bosses, having to advocate to my program director and to the hospital administrative people, and [an accommodation process] wasn't well publicized. If there was an ADA person, I didn't know about it. I know about the office of diversity, but they didn't mention anything about disabilities, so I felt it was an area very neglected as a resident.

— Resident on not having a clear point person for disability-related needs

Residents' Eligibility for Reasonable Accommodations

This lack of clear process for requesting and implementing accommodations left some interviewees uncertain about whether accommodations would be possible in the residency context. Residents are protected from discrimination on the basis of disability under Title I of the Americans with Disabilities Act. The ADA requires residency programs to engage in the same type of interactive process described for medical school students and to provide reasonable accommodations to an otherwise qualified individual with a disability (Regenbogen and Recupero 2012).

Interactive Process for Residents

The interactive process differs across residency programs and may include the human resources department in partnership with the program director. Program directors, administrators, and GME leadership should be aware of their responsibilities in the process. For example, a thorough six-step model for evaluating eligibility and reasonable accommodations for residents with disabilities, including a case study, is offered by Aboff et al (2017). The Equal Employment Opportunity Commission (EEOC) suggests that reasonable accommodations may include possible time off, granting breaks, part-time schedule (often resulting in extending program length), reassignment of overnight call to day call, assistive or adaptive technology, removing architectural barriers, providing accessible parking, providing documents in alternate format, providing American Sign Language (ASL) or Communication Access Real-time Translation (CART), modified work schedules, room modifications, and increased supervision and guidance (EEOC 2002). Residents must continue to meet ACGME Core Competencies, and, as with medical students, accommodations must not compromise patient safety.

Legal Obligations and Cost

Regardless of the structure of the residency program, there is a legal obligation for programs to engage in an interactive process to determine reasonable accommodations. The cost of any approved accommodations (if not personal in nature) is the responsibility of the employer or educational program. Although programs can argue that the cost of an accommodation is prohibitive and therefore an undue hardship (see this Chapter 1 section: The legal framework for inclusion), case law suggests that this argument is rarely successful. (See, for example, *Searls v. Johns Hopkins Hospital* 2016.) Programs should be aware that financial hardship is generally determined in consideration of the full financial resources of the institution (e.g., the entire university or hospital system), not just the department or medical school.

> *Using the computers that all have right-handed mice and a flat keyboard and nonergonomic stuff, when I was working a lot I'd just get a ton of pain because I have really bad bones. I would just bear with it and then take a lot of ibuprofen to compensate. I don't think anyone was like, "Oh, we could make you a left-handed spot." … The arm thing and the keyboards is really frustrating. I have a really hard time, and … there's not been an exact offer to set up Dragon or anything like that. I don't have access to [reading software in residency], either, which I didn't even think about asking for as a [resident]. It's just an example of "I'm a worker now, I'm not a [student]," so I don't even think about it.*
>
> — Resident describing their lack of understanding of residency accommodations

Considerations for Graduate Medical Education, Practice, and Continuing Medical Education

To maintain the pipeline of physicians with disabilities from medical education to practice, it is essential to ensure that residency programs are accessible to learners with disabilities. Residents who are not appropriately accommodated may be at risk for dismissal, leaving residency, and experiencing other challenges. Appropriate reasonable accommodations and support have been recognized as catalysts for career success for residents who experience disability-related barriers (Fitzsimons et al 2016).

Many of the effective practices and considerations suggested for UME can be adopted or adapted for both residency and practice, thus helping to create a consistent and accessible continuum for students, residents, and practicing physicians.

Institutions and Residency Programs

Conduct a programmatic assessment. Make systemic changes, beginning with an assessment of services by an outside expert and/or through soliciting feedback from existing community members with disabilities.

Provide professional development training for faculty, residents, and staff on multiple topics, including:

- ☐ Communication with and about people with disabilities

- ☐ Principles of disability and accommodations from a social-model perspective

- ☐ Integrating culturally appropriate content about disability into curricula, standardized-patient scenarios, and case studies

Conduct awareness training that highlights successful physicians with disabilities.

Make residents aware of networks for physicians with disabilities (see Appendix B).

Work toward full accessibility for clinicians, learners, and patients.

- ☐ Incorporate a universal design approach for instruction and physical space across the program, with attention to access for all users from the start of all new design or renovation projects. (*Universal design* refers to broad-spectrum ideas meant to produce buildings, products, and environments that are inherently accessible to people with and without disabilities.)

- ☐ Develop an institutional design guide that includes architectural and interior design features that maximize usability beyond legally required access. An example is a requirement for automatic door openers in all key learning, employee, and practice spaces, including bathrooms, even if code compliance does not require them.

- ☐ Create an action plan for proactive physical accessibility improvements, as well as a responsive approach to resident, employee, and patient requests.

- ☐ Use a universal instructional design approach when teaching new skills and developing continuing medical education programming to ensure that learners with disabilities are considered from the beginning and accessibility is guaranteed.

- ☐ Ensure that accessible medical equipment is standard in practice and learning spaces.

- ☐ For all the above action items, include people with disabilities in planning and decision making.

Set a welcoming and inclusive tone.

- ☐ Make a statement about valuing diversity (including disability) in the residency program to reduce the stigma around disclosing disability.

- ☐ Ensure that interview activities and spaces are accessible to applicants with disabilities.

- ☐ Include a clear statement about how to request accommodations in invitations for interviews, including a specific contact person. State what measures you have already taken to ensure access for interviewees (e.g., all interview spaces are wheelchair accessible).

> ### » *Example Statement for Requesting Accommodations in Interview Invitations*
> "If you require any accommodations to participate in the interview process, please contact [*name of contact*] at [*email and phone*] at least two weeks before your interview date. All interview locations are wheelchair accessible."

Consider accessibility for residents and physicians with disabilities in planning orientation and onboarding events and activities.

Have a clear process for requesting accommodations that does not involve direct disclosure to a colleague or supervisor. Residency programs can use the University of Connecticut GME policy as a template for developing communication to applicants (*gme.uchc.edu/pdfs/policybook/54.pdf*).

Employ someone with knowledge of disability, disability rights law, and accommodations in a clinical setting to facilitate the interactive process.

Develop and disseminate a clear understanding of the financial obligation to provide accommodations, and ensure that accommodations are adequately funded.

Integrate disability into diversity initiatives, efforts, and language.

- ☐ Ensure that diversity initiatives explicitly include disability as an aspect of diversity valued in institutions.

- ☐ Meaningfully integrate disability into diversity trainings.

- ☐ Count individuals with disabilities in diversity measures, identify trends in the number of staff with disabilities, and use these metrics as an indication of improved efforts for inclusion.

- ☐ Create an environment where disabilities are acknowledged and respected.

Make wellness services and programming visible. Make sure residents and employees are aware of the available support services through employee assistance programs (EAPs) or specialized wellness programs for residents.

Acknowledge the challenges of residency and medical practice, and normalize help-seeking behavior.
Acknowledge that residency and medical practice is difficult and emotionally exhausting. Residency program directors should normalize help-seeking behaviors and provide a positive learning and working environment that encourages work-life balance. Lead by example by engaging in wellness activities and encouraging residents to do the same, and highlight the resources available to residents.

Offer protected time for health appointments. Release of time for health appointments, including regular mental health appointments, should be an available accommodation (or part of the accepted culture) for all residents and employees.

Improve opportunities for coverage. Residents should have the option of taking time off, as needed, without the added weight of burdening their colleagues. The use of nurse practitioners or physician assistants, in lieu of a jeopardy system in which residents cover for each other, can remove the guilt that keeps many residents working through crisis and would encourage help-seeking behavior.

Integrate wellness into the residency curriculum and workplace culture. Discuss mental health and provide opportunities for residents and employees to share stories and support one another. Provide time for wellness in the curriculum, and reward residents and employees for taking time to attend to self-care.

Applicants to Residency

Consider explaining any disability-related gaps in training on the application (ERAS).

Consider discussing accommodations immediately after the Match (or for physicians, after a job offer) to allow time for the program to effectively implement scheduling changes or accommodations.

Know your rights, and request the supports needed to fully access your training and employment.

Chapter 6. Conclusion

Over several months, the researchers listened to reports of struggle, support, success, and incredible resilience shared by medical students, residents, and physicians with disabilities. Drawing from these lived experiences and the interviewees' recommendations, this report provides the reader with a snapshot of the state of disability inclusion in medical education.

Many medical schools are actively seeking guidance and promising practices. This report is a response to these requests and serves as a guide for school administrators, faculty, and disability service providers in their efforts to embrace not only the letter of the law but the spirit of the law.

It is an exciting time for medical education on many fronts, including enhancing the diversity of the learner population. We challenge medical schools to reevaluate their expectations of people with disabilities and their images of the ideal physician, and we applaud the commitment to build a more diverse physician workforce. We hope that the commitment to diversity that includes people with disabilities continues to grow and spread.

Next Steps for the Academic Medical Community

The researchers who conducted the Lived Experience Project invite schools to act on the considerations that emerged from the interviews and to use the resources referenced in this report to educate stakeholders about their obligations to provide full and meaningful access to learners with disabilities. Despite the increased interest in disability inclusion, learners in medical education continue to maneuver in environments that send implicit and explicit messages suggesting that learners with disabilities do not belong in the medical school landscape. These messages often leave learners in a continually defensive state over perceived presumptions of their inability. Developing clear policies and procedures to facilitate inclusion and providing education about the benefits of inclusion are, among other approaches described in this report, critical to consider for countering these messages and helping improve the medical school culture for students with disabilities.

To achieve meaningful inclusion across the profession, medical educators cannot rely on the dedication and practices of individual medical schools, residency programs, and teaching hospitals alone; rather, consistent practices are needed across programs to ensure equal access for all learners. On the basis of the interviewees' lived experiences and recommendations, the researchers identified several steps the medical education community could take to improve accessibility and inclusion for learners with disabilities, including:

- Foster a nationwide community focused on shepherding and moving forward work within academic medicine.

- Identify and engage disability liaisons within relevant AAMC affinity groups and advisory committees.

- Reinforce the integration of disability into diversity and inclusion initiatives, language, and frameworks.

- Add disability to demographic queries in research involving medical students, residents, and faculty, as appropriate.

Appendix A compiles all the considerations from throughout the report into a single checklist. We hope that this guidance provides medical schools with the information they need to effect change on their campuses.

Future Research Directions

This report is merely the beginning of the work to increase the numbers of people with disabilities in medical education. We believe that further research in this field is needed to enhance understanding of outcomes, impacts, and effective supports.

Understanding the Performance Trajectory of Learners With Disabilities

Previous work that examined differences in performance, board scores, graduation, and Match rates between disabled and nondisabled learners has been incomplete and nondefinitive. More work in this area using robust measures and cohorts that came after the ADA Amendments Act is needed. This research would help the community understand what, if any, gaps in performance exist and allow for greater attention to areas for enhanced support.

Identifying Which Supports and Accommodations Are Most Effective for Learners With Various Disabilities

Currently, most accommodations and supports are implemented based on traditional, undergraduate academic environments and on trial and error. The need for nuanced accommodations for clinical settings, in particular, was a strong theme in the interviews. Evaluation of support services and practices designed to create a welcoming climate and to support student performance in medical education is also needed. Expansion in this area of research would provide better support to students and assurance to schools of the best options to enhance the training environment.

Enhancing Understanding of the Experiences of People With Disabilities in Residency and Subsequent Employment

Studies examining the experiences of health care professionals with disabilities and the experiences shared by residents and physicians in this study point to continued barriers and the need for change in residency and employment settings. Longitudinal studies that follow learners over the course of their training and employment could be valuable to improving understanding of barriers and practices throughout the arc of training into a medical career.

Examining the Impact of Physicians With Disabilities on Patient Care

Currently, researchers and medical educators hypothesize that increasing the number of physicians with disabilities in the physician workforce will better serve the many patients with disabilities in the general population. Studies to explore this hypothesis could mirror those conducted with other minority groups, which suggest that patient health, satisfaction, and compliance with treatment increase with patient-physician concordance.

Examining Peer Perceptions About Disability That Develop When Learning Alongside a Peer With a Disability

Studies show that health professionals' perceptions of the needs, lives, and desires of patients with disabilities are poor, particularly when the professionals have limited exposure to people with disabilities other than patients. Equal-status relationships, however, promise to help change erroneous perceptions of the abilities and lifestyles of individuals with disabilities. Future research should explore the impact of training alongside a learner with disabilities on the perceptions of, and care for patients with disabilities.

Afterword

The Americans with Disabilities Act was designed to ensure equal opportunities in education and employment for qualified individuals with disabilities (ADA 1990). Today, physicians with disabilities contribute to the medical field in small but measurable numbers. Now at the juncture of legal obligation and social justice, the medical education community can either view disability access as a mechanism of compliance or fully embrace inclusion.

No one is better equipped than physicians, health care professionals, and medical educators to recognize disability as part of the human experience. Together, the AAMC, the Coalition for Disability Access in Health Science and Medical Education, and the programs highlighted in this report are leading efforts to improve the medical school experience for students with disabilities through thoughtful admissions processes, innovative approaches to wellness, and revamped policies and practices.

With the right policies and procedures, supportive infrastructure, and institutional leadership in place, learners with disabilities can more readily enter and complete medical school. By graduating more physicians with disabilities, the field of medicine will be more diverse and representative of the patients it serves.

Achieving full inclusion will require that the medical community educate itself about the benefits of inclusion and how to support all learners, including those with disabilities and those from other marginalized groups. Educational efforts to reduce the impact of stereotypes and biases against disability, like those sponsored by UCSF and the AAMC, must be readily available to the medical education community. Greater connection between students and physicians with disabilities must occur on a national level, through mentoring and recognized affiliation groups.

Finally, medical schools must lead by example, advancing the inclusion of learners with disabilities. Advancing diversity and fostering truly inclusive institutions and environments is a core value of the AAMC. Medical schools, community stakeholders, and the AAMC can build a more diverse and inclusive physician workforce for the 21st century together— one that embraces physicians with disabilities.

— *Lisa and Neera*

Researcher Biographies

Principal Investigators

Lisa M. Meeks, PhD
University of Michigan Medical School
Lisa is on faculty at the University of Michigan Medical School in the Department of Family Medicine and is an Institute for Healthcare Policy and Innovation (IHPI) fellow. Her research interests include improving access to medical education for learners with disabilities, medical student and resident well-being, disability curriculum in medical education, reducing health care disparities in patients with disabilities, and the performance and trajectory of learners and physicians with disabilities. Lisa is the cofounder and current president of the Coalition for Disability Access in Health Science and Medical Education, codeveloper of both the AAMC Disability Webinar Series and the UCSF Disability Training Series for Faculty and Administrators, and coeditor and author of the seminal text on disability in health science, *The Guide to Assisting Students With Disabilities: Equal Access in Health Science and Professional Education.*

Neera R. Jain, MS, CRC
University of Auckland, Faculty of Education and Social Work
Neera is a rehabilitation counselor by training and a passionate advocate for inclusion in higher education based in Aotearoa, New Zealand. She was the first dedicated staff member to serve students with disabilities at the Columbia University Medical Center campus and the University of California, San Francisco. Neera is the policy advisor to the Coalition for Disability Access in Health Science and Medical Education, coeditor and author of *The Guide to Assisting Students With Disabilities: Equal Access in Health Science and Professional Education*, and codeveloper of both the AAMC Disability Webinar Series and the UCSF Disability Training Series for Faculty and Administrators. She is currently a doctoral candidate at the University of Auckland Faculty of Education and Social Work. Her thesis focuses on how students with disabilities navigate the social environment of several U.S. medical schools and the creation of a culture of access.

Research Team

Stacy C. Jones
Harvard Medical School, Harvard Graduate School of Education
Stacy is an MD-EdM candidate at Harvard. Prior to medical school, she studied Spanish and American Sign Language at the University of Pittsburgh and worked as a Westmoreland Volunteer Corps member at MobileMed, a health safety net clinic system in Montgomery County, Maryland. She is a member of the Harvard Medical School Wellness and Mental Health Initiative, collaborating with peers, faculty, and administrators to strengthen student disability, academic support, and mental health services. Passionate about visibility, peer support, and collaboration, Stacy is working with peers to establish a student disability alliance across all Harvard schools and nationally. Stacy is eager to use her training as a clinician-advocate and educator to support children with disabilities, families, and educators within school systems and to continue working toward access and inclusion in medical education.

Mijiza M. Sanchez, EdD
Stanford School of Medicine
Mijiza is the associate dean, Office of Medical Student Affairs, at the Stanford School of Medicine. She has worked in higher education and the health sciences for more than 15 years with a commitment to diversity and inclusion, gender equity, and leadership development. She is a qualitative researcher, and her research is focused on creating pipelines for underrepresented minorities in the health sciences. Mijiza is a student advocate, lifelong learner, and scholar and is committed to changing the culture and climate of higher education in order to reflect the communities we serve.

Alice Wong, MS
Disability Visibility Project
Alice is a sociologist, media maker, research consultant, and disability activist based in San Francisco, California. She previously worked at the University of California, San Francisco, as a staff research associate at the Community Living Policy Center. Her areas of interest are qualitative methods, Medicaid policies and programs, and disability. She is also the founder of the Disability Visibility Project (DVP), a community partnership with StoryCorps and an online community dedicated to creating, amplifying, and sharing disability stories and culture.

Appendix A. Considerations

This appendix contains the full collection of considerations from throughout this report. While not requirements, these considerations offer approaches for institutional leaders and committees to use as they work to create policies, practices, actions, and approaches that sustain inclusive and accessible environments for learners with disabilities.

Fostering an Inclusive Institutional Culture

A call for inclusion from institutional leadership that is embraced throughout the institution is needed. Expressing a commitment to full access in the core values of a medical program is a critical first step, and communicating these values to all members of the community is essential to show commitment to a culture of inclusion. This call for inclusion should include dedicated financial and human resources to ensure real, measurable progress, not just rhetoric.

Conduct a programmatic assessment. Make systemic changes, beginning with an assessment of services by an outside expert and through soliciting feedback from existing community members with disabilities. Although students with disabilities should be included in an assessment process, institutions should not require students to lead this process. Efforts should occur proactively, and measures should be taken to ensure that students already working at capacity are not disproportionately burdened.

Provide professional development training for faculty and staff on multiple topics, including:

- ☐ Communication with and about persons with disabilities
- ☐ Principles of disability and accommodations from a social-model perspective
- ☐ Integrating culturally appropriate content about disability into curricula, standardized-patient scenarios, and case studies

Evaluate curricula and pedagogy to assess whether language and content.

- ☐ Reflect best practices in disability
- ☐ Are accessible
- ☐ Are respectful to persons with disabilities.

Conduct awareness training that highlights successful individuals with disabilities in the medical profession.

Work toward full accessibility for clinicians, learners, and patients.

- ☐ Incorporate a universal design approach for instruction and physical space across the institution, with attention to access for all users from the start of all new design or renovation projects. (*Universal design* refers to broad-spectrum ideas meant to produce buildings, products, and environments that are inherently accessible to people with and without disabilities.)
- ☐ Develop an institutional design guide that includes architectural and interior design features to maximize usability beyond legally required access. For example, require automatic door openers in all key learning spaces and bathrooms even if code compliance does not require them.

☐ Create an action plan for proactive physical accessibility improvements as well as a responsive approach to individual student and staff requests.

☐ When designing a new curriculum, instituting new technology, or developing other new initiatives, use a universal design for the instructional approach, and ensure that disability is considered from the beginning so that accessibility is guaranteed.

☐ Ensure that the SIM lab and the clinic use accessible medical equipment.

☐ For all the above action items, include people with disabilities in planning and decision making.

Integrate disability into diversity initiatives, efforts, and language.

☐ Ensure that diversity initiatives explicitly include disability as an aspect of diversity valued in institutions.

☐ Meaningfully integrate disability into diversity trainings.

☐ Count individuals with disabilities in diversity measures, identify trends in the numbers of learners and staff with disabilities, and use these metrics as an indication of improved efforts for inclusion.

☐ Develop recruitment and retention efforts specific to individuals with disabilities.

☐ Identify (or develop) scholarships and support programs for students with disabilities in medicine.

☐ Integrate disability into pipeline and recruitment programs and policies.

☐ Develop campus programming that includes disability in medicine. Work with DSPs and programs to develop programming that honors disability culture and addresses from a social justice perspective the challenges the disability community faces in accessing health care.

☐ Create an environment where disabilities are acknowledged and respected. Develop recruitment and retention efforts specific to individuals with disabilities.

Include disability competency in the core cultural competency curriculum.

☐ For suggested core competencies that can guide learning objectives, see Kirschner and Curry (2009).

☐ For an example of a fully integrated, longitudinal disability curriculum developed and delivered with participation from community members with disabilities, see the program at the State University of New York at Buffalo School of Medicine (Symons et al 2009).

Hire faculty, administrators, and clinicians with disabilities. The availability of individuals with disabilities in established roles on campus may contribute to a better understanding of disability and positively affect the culture toward disability. These faculty and staff may be willing to serve as skilled mentors for students with and without disabilities.

Designate a disability service provider (DSP) for the medical school.

☐ Assign a specialized DSP—someone with specialized training in disability services and disability law— for the medical school. This person could be situated in one of several possible offices (e.g., under the umbrella of diversity and inclusion, student wellness, or academic support). The most important elements to consider in determining placement include ensuring confidentiality of student documentation, avoiding any conflict of interest (i.e., no supervision by someone in an evaluative role over registered learners with disabilities), and ensuring that placement aligns with positive messaging about equal access.

☐ Ensure that the DSP has a designated liaison in the medical school at the assistant or associate dean level who can serve as a source of information and referral to specialist educators within the medical programs, where needed.

☐ In systems where a centralized campus disability service office serves students with disabilities in medical programs, a specific staff member from the centralized office should be designated to work with medical students. This professional should receive specialized training in the requirements of the medical school curriculum, with special attention paid to the clinical components of the curriculum.

Publicize disability service policies and procedures.

☐ Post clear information about the policy for requesting and accessing accommodations in a manner and location(s) that are easily accessible and ensure that the information is also posted on the program's website.

☐ Include a supportive statement encouraging students with disabilities to register and request services in student handbooks, clinic handbooks, and course syllabi.

Supporting Disability Service Providers in Medical Education

Follow promising practices:

☐ Proactively work with students to identify necessary accommodations in the classroom and clinic, and support their implementation in a timely manner.

☐ Educate yourself on the nuances of medical education and clinical rotations. Spend time shadowing faculty and students in the clinic to better understand the environment—in advance of the need to determine accommodations for a specific student.

☐ Work with the medical school administration to develop effective and reasonable accommodations for learners.

☐ Offer support to students who wish to request accommodations for licensing exams.

☐ Maintain privacy and develop trust with learners to support disclosure.

☐ Exchange ideas and knowledge with peer institutions.

☐ Connect to national networks that have the goal of sharing ideas, resources, and strategies across schools and programs (see Appendix B).

☐ Share promising practices developed on your campus related to classroom and clinical accommodations.

Enhancing Points of Contact with Learners

There are several "points of contact" where students with disabilities benefit from programmatic knowledge and communication about disability and disability-related needs. These are especially critical during admissions and matriculation. Of course, ongoing specialized support is also critical to the retention and persistence of students with disabilities.

Applicants

- ☐ **Discuss questions about your ability to meet technical standards with the responsible disability service provider.**

- ☐ **Use support organizations to assess prospective medical schools' climate around disability (see Appendix B).**

- ☐ **Review requirements for accessing disability service supports before applying.**

Admissions Office Staff

Admissions offices play a critical role in ensuring that applicants with disabilities are aware of services, supports, and requirements for admission, including the technical standards. Mehta and Clifford (2017) suggest the following guidance for admissions offices:

- ☐ **Train admissions officers on accessibility in admissions.** For an example of this type of training, see the UCSF/CWRU module on Accessible Admissions (*sds.ucsf.edu/working-students-disabilities*).

- ☐ **Post information about disability services on the admissions website.** Admissions websites should include easy-to-find information about disability services and how to contact the disability service office alongside information about other student support services.

- ☐ **Post technical standards online.** Technical standards should include information about how to contact the disability service provider.

- ☐ **Advertise a process for confidential accommodation requests during the admissions process.** Communication from admissions personnel, pre- and postacceptance, should include statements about how to request disability accommodations.

- ☐ **Delineate roles.** Admissions officers should not make program accommodation determinations. Instead, such decisions should be routed to the program DSP.

- ☐ **Set a welcoming and inclusive tone.**

  - ○ Include disability in a statement about welcoming diverse applicants on your admissions website, such as that used at the University of California, San Francisco (UCSF).

  - ○ Use welcoming language when discussing disability in technical standards, such as that used by the UCSF and Stanford schools of medicine.

- ☐ **Consider accessibility for students with disability on interview days**. Take a universal design approach to ensure that all aspects of the experience, from physical space planning to handouts and activities, are accessible.

Student Affairs Staff and Orientation Planners

- ☐ **Set a welcoming and inclusive tone.**

  - ○ Ensure that activities and spaces are accessible to students with disabilities.

  - ○ Include disability in any discussion or celebration of the diversity of incoming students.

☐ **Consider accessibility for students with disability in planning orientation activities.** Take a universal design approach in which all activities are planned to be accessible from the outset, not just in response to specific requests. Use the same approach when considering everything from physical space to handouts.

☐ **Advertise the availability of accommodations for orientation activities through an explicit statement, with a clear contact person for accommodation requests.** Identify any access features that are already planned. For example, "All orientation venues and activities are fully wheelchair accessible. If you require any additional accommodations to fully participate, please do not hesitate to contact [*name of responsible person*] at [*their email address and phone number*] by [*specify date by which requests should be made*]."

☐ **Include disability in orientation activities.**

○ Many orientation programs include social justice–oriented activities that discuss implicit bias and privilege. Such activities should include disability and introduce a social-model understanding of disability to set the tone of the program.

○ Introduce disability services: The disability service provider (DSP) should have time to introduce themselves to learners and explain the available services. The statement should indicate the range of disabilities that might require accommodation and the range of accommodations that might be provided (including clinical accommodations). The DSP should invite students who are unsure whether they may need accommodations to speak to them with any questions.

Learners

☐ **Keep a copy of all disability-related records.** To meet the current requirements for accommodation requests on licensing exams, learners should keep a thorough record of accommodations and disability-related information from kindergarten through medical school and beyond. Develop a file of documentation and ensure that it is readily accessible to you. The request for accommodations does not end in medical school; you will need to request accommodations throughout your professional career.

☐ **Seek support.** If you are unsure whether you qualify to receive accommodations, or if you are simply unsure how to address a difficulty you are experiencing in training, reach out and seek support. Find allies who will help you to carry the load in your advocacy efforts.

☐ **Practice self-care.** Being a trailblazer can be exhausting and disheartening. To prevent burnout, make time to do things that renew your spirit.

☐ **Seek out other students, physicians, and other health care professionals with disabilities.** Develop a network of support among students, physicians, and other health care professionals with disabilities who you can turn to for advice, venting, and mutual support.

☐ **Pursue your dreams.** Despite existing challenges, people with disabilities are succeeding and actively changing the face of health care. For students with disabilities considering a career in medicine, know that your goals are possible.

☐ **Know the resources.** Know the resources available to you. Check the resources list in this document (Appendix B).

When you feel you are not receiving the support that you need, or appropriate accommodations are not provided, educate yourself about possible avenues of appeal. Every school must post appeal and grievance procedures.

> *For current learners, we wish to convey our continued support in your pursuits:*
> *You are seen, and you are heard.*

Faculty

☐ **Educate yourself about disability, including accommodations, etiquette, and language.**
Programs should make training available to faculty about principles of disability and accommodations, disability from a social-model perspective, and disability etiquette and language.

☐ **Develop awareness by investigating existing resources (see Appendix B).**

☐ **Understand the available disability services in your program or on your campus.**

☐ **Use syllabus statements.**

○ Include a supportive statement on course syllabi to direct students who require accommodations to the disability office.

○ Convey a willingness to implement accommodations approved by the DSP.

> ## » *Sample Syllabus Statement*
>
> [*Name of School*] is committed to providing equal access to learning opportunities to students with documented disabilities. To ensure access to this class, and your program, please contact [*designated contact person for disability services*] to engage in a confidential conversation about the process for requesting accommodations in the classroom and clinical settings.
>
> Accommodations are not provided retroactively. Students are encouraged to register with [*name of office responsible for disability services*] as soon as they begin their program. [*Name of school*] encourages students to access all resources available through [*name of office responsible for disability services*] for consistent support and access to their programs. More information can be found online at [*disability services website*], or by contacting the office at [*disability services phone number*].
>
> —Meeks and Jain 2015

☐ **Plan for students with disabilities.** Plan exam schedules, course schedules, and room bookings, including those for standardized-patient exams, with extended time accommodations in mind.

☐ **Innovate solutions for all learning, classroom, and research settings.** Work with the DSP and students to innovate accommodations for all learning settings, including classroom, simulation, research, clinical, and community.

☐ **Include disability in your teaching with a holistic, rights-based orientation.**

☐ **Include elements of disability in problem-based learning and case study exercises, with a social-model perspective on disability.**

☐ **Include disability in your research agenda.**

○ Research about patient care should consider how people with disabilities experience care.

○ Research opportunities should be accessible to individuals with disabilities.

- Ensure that surveys, websites, and locations are all accessible to all people with disabilities, particularly people with physical and sensory disabilities who are often excluded due to lack of access.

- Include people with disability on research project advisory groups to ensure that the research design is inclusive and culturally sound.

- Model behavior that supports the autonomy and capabilities of individuals with disabilities.

Evaluating Technical Standards

Follow LCME Element 10.5, which states that medical schools should develop and publish technical standards for the admission, retention, and graduation of applicants or medical students with disabilities in accordance with legal requirements.

Follow Office of Civil Rights (OCR) recommendations on making technical standards available to applicants and students.

Ensure that technical standards rely on current technology and medical standards.

Give careful consideration to what is truly essential.

☐ Focus on "the what" (competency) and not "the how" (how the skill is to be completed), keeping in mind that "the how" may be accommodated.

☐ Consider McKee and colleagues' (2016) proposal to move from *organic technical standards*—those specifying that physical, cognitive, behavioral, and sensory abilities must be demonstrated without assistance—to *functional technical standards*—those focusing on outcomes and clarifying that such abilities may be demonstrated with or without accommodations including assistive technology.

Promoting Wellness

Be visible. Make sure learners are aware of the available support services for all students, and note that accommodations are available for students with psychological disabilities.

Acknowledge the challenges of completing a medical degree. Acknowledge that health science programs are hard and can be emotionally exhausting. Support services should be advertised throughout the course of programs in a manner that normalizes their use, beginning with statements at admission and matriculation, and repeated throughout the program, particularly at critical junctures where students may experience increased stress and distress (e.g., at the beginning of clinical rotations).

Normalize help-seeking behavior. Encourage learners to seek mental health services, and make sure these are confidential and convenient to campus and clinical sites.

Support student release for appointments. Release of time for appointments should be an available accommodation or part of the accepted culture for all learners, in keeping with LCME and ACGME standards.

Support placement within the geographical area to support continuation of care. Learners should have access to health care that is a reasonable distance away. Through a formal accommodation designation, ensure that learners maintain access to continuity of care with their provider by excluding rotations that make attending appointments prohibitive. Alternatively, provide time and space for learners to meet with their provider via Skype or phone.

Ensure that the leave of absence process only requires a physician attestation of need. The leave-request process should not be a deterrent to accessing health care. An attestation from the supporting physician is all that should be required. Learners will forego care rather than disclose a mental health issue to their administration if they are required to provide deans and faculty with detailed information about their mental health and other unnecessary details.

Integrate wellness into the curriculum. Discuss mental health and provide opportunities for learners to share stories of mental health and resilience. Provide time for wellness in the curriculum and reward learners for taking time to attend to self-care.

Graduate Medical Education, Practice, and Continuing Medical Education

To maintain the pipeline of physicians with disabilities from medical education to practice, it is essential to ensure that residency programs are accessible to learners with disabilities. Residents who are not appropriately accommodated may be at risk for dismissal, leaving residency, and experiencing other challenges. Appropriate reasonable accommodations and support have been recognized as catalysts for career success for residents who experience disability-related barriers (Fitzsimons et al 2016).

Many of the effective practices and considerations suggested for UME can be adopted or adapted for both residency and practice, thus helping to create a consistent and accessible continuum for students, residents, and practicing physicians.

Institutions and Residency Programs

Conduct a programmatic assessment. Make systemic changes, beginning with an assessment of services by an outside expert and/or through soliciting feedback from existing community members with disabilities.

Provide professional development training for faculty, residents, and staff on multiple topics, including:

- ☐ Communication with and about people with disabilities

- ☐ Principles of disability and accommodations from a social-model perspective

- ☐ Integrating culturally appropriate content about disability into curricula, standardized-patient scenarios, and case studies

Conduct awareness training that highlights successful physicians with disabilities.

Make residents aware of networks for physicians with disabilities (see Appendix B).

Work toward full accessibility for clinicians, learners, and patients.

- ☐ Incorporate a universal design approach for instruction and physical space across the program, with attention to access for all users from the start of all new design or renovation projects. (*Universal design* refers to broad-spectrum ideas meant to produce buildings, products, and environments that are inherently accessible to people with and without disabilities.)

- ☐ Develop an institutional design guide that includes architectural and interior design features that maximize usability beyond legally required access. An example is a requirement for automatic door openers in all key learning, employee, and practice spaces, including bathrooms, even if code compliance does not require them.

- ☐ Create an action plan for proactive physical accessibility improvements, as well as a responsive approach to resident, employee, and patient requests.

- ☐ Use a universal instructional design approach when teaching new skills and developing continuing medical education programming to ensure that learners with disabilities are considered from the beginning and accessibility is guaranteed.

- ☐ Ensure that accessible medical equipment is standard in practice and learning spaces.

- ☐ For all the above action items, include people with disabilities in planning and decision making.

Set a welcoming and inclusive tone.

- ☐ Make a statement about valuing diversity (including disability) in the residency program to reduce the stigma around disclosing disability.

- ☐ Ensure that interview activities and spaces are accessible to applicants with disabilities.

- ☐ Include a clear statement about how to request accommodations in invitations for interviews, including a specific contact person. State what measures you have already taken to ensure access for interviewees (e.g., all interview spaces are wheelchair accessible).

> **» Example Statement for Requesting Accommodations in Interview Invitations**
>
> "If you require any accommodations to participate in the interview process, please contact [*name of contact*] at [*email and phone*] at least two weeks before your interview date. All interview locations are wheelchair accessible."

Consider accessibility for residents and physicians with disabilities in planning orientation and onboarding events and activities.

Have a clear process for requesting accommodations that does not involve direct disclosure to a colleague or supervisor. Residency programs can use the University of Connecticut GME policy as a template for developing communication to applicants (*gme.uchc.edu/pdfs/policybook/54.pdf*).

Employ someone with knowledge of disability, disability rights law, and accommodations in a clinical setting to facilitate the interactive process.

Develop and disseminate a clear understanding of the financial obligation to provide accommodations, and ensure that accommodations are adequately funded.

Integrate disability into diversity initiatives, efforts, and language.

- ☐ Ensure that diversity initiatives explicitly include disability as an aspect of diversity valued in institutions.

- ☐ Meaningfully integrate disability into diversity trainings.

- ☐ Count individuals with disabilities in diversity measures, identify trends in the number of staff with disabilities, and use these metrics as an indication of improved efforts for inclusion.

- ☐ Create an environment where disabilities are acknowledged and respected.

Make wellness services and programming visible. Make sure residents and employees are aware of the available support services through employee assistance programs (EAPs) or specialized wellness programs for residents.

Acknowledge the challenges of residency and medical practice, and normalize help-seeking behavior.
Acknowledge that residency and medical practice is difficult and emotionally exhausting. Residency program

directors should normalize help-seeking behaviors and provide a positive learning and working environment that encourages work-life balance. Lead by example by engaging in wellness activities and encouraging residents to do the same, and highlight the resources available to residents.

Offer protected time for health appointments. Release of time for health appointments, including regular mental health appointments, should be an available accommodation (or part of the accepted culture) for all residents and employees.

Improve opportunities for coverage. Residents should have the option of taking time off, as needed, without the added weight of burdening their colleagues. The use of nurse practitioners or physician assistants, in lieu of a jeopardy system in which residents cover for each other, can remove the guilt that keeps many residents working through crisis and would encourage help-seeking behavior.

Integrate wellness into the residency curriculum and workplace culture. Discuss mental health and provide opportunities for residents and employees to share stories and support one another. Provide time for wellness in the curriculum, and reward residents and employees for taking time to attend to self-care.

Applicants to Residency

Consider explaining any disability-related gaps in training on the application (ERAS).

Consider discussing accommodations immediately after the Match (or for physicians, after a job offer) to allow time for the program to effectively implement scheduling changes or accommodations.

Know your rights, and request the supports needed to fully access your training and employment.

Appendix B. Resources

AAMC Webinar Series on Disability

https://www.aamc.org/members/gsa/learningopportunities/427068/archivedwebinars.html

Webinar Topics:

1. Helping Medical Schools Assist Students with Disabilities: An Introduction to The Coalition for Disability Access in Health Science and Medical Education
2. Disability Law 101: What Faculty Need to Know About Student Accommodations
3. Separating Fact From Fiction: Debunking Disability Myths and Addressing Legitimate Concerns
4. Clinical Accommodations: Upholding Standards While Creating Equal Access
5. Putting it in Writing: The Value of Creating Clear and Effective Policies for Students with Disabilities
6. Creating a Balance: Professionalism, Communication, and Students with Disabilities
7. Disabilities Webinar Questions and Answers from the Series
8. Accommodating Students with Psychological Disabilities
9. Disclosure at all points, UME and GME: Guidance on disability disclosure for learners
10. Supporting your students' request for accommodations on high-stakes exams

AAMC Resources

Collection of *Academic Medicine* articles on disability:
https://www.aamc.org/download/328092/data/disabilityarticlesinacademicmedicine.pdf

General web resources for well-being in academic medicine:
https://www.aamc.org/initiatives/462280/wellbeingacademicmedicine.html

Twenty-Minute Modules: The UCSF Faculty Training Series

https://sds.ucsf.edu/working-students-disabilities

UCSF Medical Student Disability Services (MSDS) and UCSF Student Disability Services (SDS), in partnership with colleagues from around the country (Case Western Reserve University; Duke University; Northwestern University; Samuel Merritt University; Stanford University School of Medicine; University of California, Irvine; University of Washington; and Weill Cornell Medicine), developed the UCSF Faculty Training Series, an eight-part online, video training series to guide health science faculty who work with students with disabilities.

Module topics include:

- *Guidelines for faculty who work with students with disabilities*
- *Communication 101: Best practice for communicating with students around disability-related needs*
- *Keeping it confidential: Guidance for working with students with disabilities*
- *Accessible admissions practices: Making sure students with disabilities are addressed*

- *Microaggressions: What they are and how they affect students with disabilities*
- *ADA 101: The basic laws that govern disability services*
- *Full circle in the diversity initiative: Inviting disability to the table*

Association of Medical Professionals With Hearing Loss

https://amphl.org

The Association of Medical Professionals with Hearing Losses (AMPHL) is a nonprofit organization whose mission is to provide information, advocacy, and mentoring for individuals with hearing loss working in health care fields.

Coalition for Disability Access in Health Science and Medical Education

http://hsmcoalition.org

The goal of the Coalition has three parts:

- *To develop best practices for facilitating access within graduate health science and medical education programs*
- *To advance these practices through innovative ideas and research to ensure equal access to programs*
- *To disseminate these practices within the fields of disability services and graduate health sciences and medical education*

Job Accommodations Network

https://askjan.org

The Job Accommodation Network (JAN) is the leading source of free, expert, and confidential guidance on workplace accommodations and disability employment issues. Working toward practical solutions that benefit both employer and employee, JAN helps people with disabilities enhance their employability and shows employers how to capitalize on the value and talent that people with disabilities add to the workplace.

Society of Physicians with Disabilities

http://www.physicianswithdisabilities.org

The Society of Physicians with Disabilities is a group within the Society of Healthcare Professionals with Disabilities.

The Society of Healthcare Professionals with Disabilities provides resources and support for disabled physicians, physician assistants, and students. The mission of the society is to foster a supportive community and to provide resources and tools for disabled health care professionals and students, their family members, and their friends.

Student Doctor Network

http://www.studentdoctor.net

The educational mission of SDN is to assist and encourage all students through the challenging and complicated health care education process and into practice.

Society for Healthcare Professionals with Disabilities

http://www.disabilitysociety.org

The Society of Healthcare Professionals with Disabilities provides resources and support for disabled physicians, physician assistants, and students. The mission of the society is to foster a supportive community and to provide resources and tools for disabled health care professionals and students, their family members, and their friends.

Books

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