

Reframing Neurodiversity in Medicine:

A Medical Student's Perspective on Belonging, Barriers & Change

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Abstract

A “Neurodiversity” describes cognitive variations beyond the “neurotypical,” or the standard developmental profile, encompassing individuals with learning and information-processing differences, including autism spectrum disorder, attention-deficit/hyperactivity disorder, and dyslexia.¹ Like other populations underrepresented in medicine, neurodivergent students are essential to the evolving physician workforce and to the patients we serve in modern healthcare.² Yet, the systemic uncertainty around cognitive differences and lived experiences seems to drive conformity to traditional educational norms rather than cultivating the strengths learners bring to clinical practice.

While accommodation systems exist, inconsistencies remain between educational and employment realities and the technical standards and policies set by medical schools, residency programs, and hospital systems, leaving neurodiverse students to face ongoing disparities within the curriculum compared to their neurotypical peers. Through integration of lived experiences with a focused review of the literature, this perspective explores the value of neurodiversity in future physicians, examines the current accommodation landscape and cultural barriers within medical training, and advocates for institutional reform toward a more equitable and sustainable learning environment for all medical students.

Keywords: medical education, reasonable accommodation, physician workforce, internship and residency, learning differences

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Introduction

Medical education is evolving, but not at the same pace as the growing population of neurodiverse learners. Neurodivergence demonstrates the natural variations and perspectives in processing of the world and is “unrelated to intellectual ability, race, gender, or social class.”³ With increasing recognition of cognitive diversity, however, the medical education system and its current framework remain largely structured according to the standards of neurotypical norms.

The American Medical Association (AMA) reported longitudinal survey data demonstrating a 69% increase in reported disabilities among allopathic (MD) medical students between 2016 and 2019, similar to osteopathic (DO) medical students. ADHD represented the highest percentage, followed by learning differences, psychological disabilities, and sensory impairments.⁴ Traits commonly associated with neurodivergence, such as pattern recognition, hyperfocus, systems-level thinking, and unconventional problem-solving skills align with the demands and expectations of modern medicine, including shifts in high-information environments, growing interdisciplinary teams, and integration of artificial intelligence into clinical practice.

However, misconceptions around neurodevelopmental conditions continue to

be framed as incompatible with medicine. Physicians with neurodevelopmental or physical disabilities make up only 3.1% of the workforce,⁴ and neurodiverse physicians remain disproportionately represented as liabilities and unfit for medicine, despite offering unique perspectives and meaningful representation for patients.⁵ As of 2025, no legal case has demonstrated patient harm attributed to a physician with a disability, further increasing the gap between policy and practice and undermining the rising rates of burnout, physician shortages, and workforce attrition among this marginalized group.

The Current State of Accommodations in Medical Schools

While the Americans with Disabilities Act of 1990, 42 U.S.C. § 12101 et seq. (1990) provides the legal framework to protect neurodivergent students with disabilities, it does not control the operations nor write the policies that differ across both MD and DO programs. Institutional variability complicates access to accommodations even further, where students face structural and cultural barriers in their medical education. Structural barriers include challenges interpreting technical standards documenting required abilities to complete a medical degree

—underreporting, likely driven by difficulty obtaining diagnoses or finding available support.”

and understanding the accommodation services offered, while the cultural barriers reflect the attitudes and beliefs about the profession, capabilities, and identities of physicians.⁴

Disclosure of disabilities poses a substantial barrier. Aitken et al. noted that students perceive this as risky, as revealing a disability could raise questions about competence and professional identity.⁵ For instance, first-generation and Black students who need accommodations may forgo pursuing a diagnosis or accommodations due to concerns about bias, discrimination, and incompatibility with certain specialties.⁶ Still, only 4.6% of medical students requested accommodations.⁴ The true prevalence of disabilities is underestimated due to underdiagnosis and underreporting, likely driven by difficulty obtaining diagnoses or finding available support.^{5,6} In some cases, students report that their school lacks clear processes for requesting accom-

modations, underscoring gaps in transparency within disability services.⁷ The gap between policy and practice is evident: while accommodations exist, longitudinal guidance is often difficult to find.

Current accommodation processes are not only time-consuming, but inaccessible, costly, and never guaranteed. The AMA reported that MD schools provide recommended timelines for students seeking accommodations for the United States Medical Licensing Examination (USMLE) through the National Board of Medical Examiners (NBME), yet no equivalent guidance is provided for DO students navigating the National Board of Osteopathic Medical Examiners (NBOME) accommodations for the Comprehensive Osteopathic Medical Licensing Examination (COMLEX).⁴

Students must prepare necessary longitudinal medical records and documentation to support their needs. For the NBOME, this includes a personal statement, complete academic history with standardized test scores, and current comprehensive neuropsychological evaluation from a qualified professional, typically costing thousands of dollars out of pocket as they are not deemed medically necessary by health insurance. Approved accommodations vary but may grant reduced-distraction environments, extended time, and facilitated learning support, including text-to-speech or

speech-to-text technology.⁸

Assessments and evaluations, however, accentuate this disparity. Studies show that reliance on high-stakes written exams poses disproportionate barriers for neurodivergent students, especially those with dyslexia or processing differences.⁹ Accommodation access varies by institution, leaving the process largely ambiguous.⁵ Students frequently resort to utilizing the “biomedical deficit model”, which puts impairments forward and minimizes strengths to be eligible for support.⁹ This reinforces a view of disability as a pathology rather than an environmental misalignment,¹⁰ risking selection into honor societies or matching into desired competitive specialties.⁷

Why does this matter? Losing neurodivergent students in the current educational structure is a loss of diversity, innovation, and empathy in medicine. Diverse teams engage more effectively with patients and are more likely to recognize explicit and implicit discrimination.¹ Navigating their perceived value within the system, neurodiverse trainees and physicians who persistently mask behaviors and symptoms are at a higher risk of mental health challenges.^{1,11} Shear et al. showed that more than 75% of autistic physicians reported having suicide ideations and about half reported self-harm, with worse outcomes

among those with little to no representation in clinical settings.¹⁰ These findings suggest that structural misalignment and burnout affect academic progression, professional identity, wellbeing, and retention particularly within this growing population.^{5,12}

Accommodation systems may mitigate burnout by reducing cognitive and emotional loads experienced by neurodivergent trainees navigating systemic strain. Without support, trainees undergo repetitive justification of deficits in addition to mastery of content that compromises their autonomy and dignity.⁶ Advancements in assistive technology, such as amplified stethoscopes, dictation software, and educational frameworks, like the Universal Design for Learning model discussed later, provide tools to support students in meeting clinical standards and entering practice, demonstrating that mastery can be achieved through alternative methods without compromising rigor.⁴

Navigating a System Built for Neurotypical Norms

As a first-generation Chinese American high school graduate, navigating the U.S. education system came without a roadmap. Higher education was a marker for prestige, and I was expected to succeed, but success did not come

easily for me as it did for others. I internalized the shame of not meeting academic standards set by my family and teachers. Recurrent gaps between expectations and performance consistently felt like failures, and doing my best was “not good enough.” Vulnerability was labeled as an excuse, while remediations quietly reinforced the external belief that I was “never going to have a future.”

I learned to mask and blend in through forced eye contact and self-awareness. As described by Hamilton and Petty, this was to avoid confrontation and judgment.⁹ However, it comes with the cognitive load and emotional costs that link to anxiety, depression, and exhaustion, as studies have shown.¹³ Music has helped me cope, and the environment it fosters, both immersive and forgiving, allows me to express my strengths compensating for the challenges I previously did not understand.

As a music major, I thrived in performance evaluations over timed written exams. Sounds were my focus, rather than a distraction, and my mastery was accurately reflected through rehearsals without the pressure of time, which I held the power to manipulate. Transitioning into a master’s program in biochemical sciences and learning at a much higher rigor exposed the challenges I once compensated for in my adolescence, all while navigating my ADHD diagnosis shortly

before starting my journey as an osteopathic medical student.

For most of my pre-clinical years, this felt isolating. My fear of disclosure was brought by the misconception that accommodation provides an advantage rather than equitable conditions, which only heightened my self-doubt regarding competence as a medical student.

Despite tutoring services, medication trials, weekly therapy, and the accommodations I received for my ADHD, I hit a plateau, followed by a downtrend in metrics and mental health. I would ask the same questions: why were hundreds of lecture slides difficult to follow or my interpretations of questions stems derailing me from answers I conceptually understood? How could my peers respond to Kahoot questions at, what felt like, the speed of light?

During my second year, I underwent a comprehensive neuropsychological evaluation and was diagnosed with a Specific Learning Disorder with reading and processing impairment. Although there are no resets in life, I have since grown as a medical student at my own pace, finding a community at school and navigating my diagnoses in positive ways. I have even felt empowered to take actionable steps to promote accessibility, transparency, and meaningful inclusion in medical education.

M **My Contributions and Resources**

While preparing for COMLEX Level 1, I noticed an absence of a formal guide for navigating the NBOME’s accommodations application process. Inspired by a webinar series by Docs with Disabilities supporting trainees with disabilities who are navigating the NBOME accommodations process, I translated my lived experience into practical infrastructure and developed a peer-to-peer workshop to demystify the application process. The introductory workshop is intended to be delivered in a virtual presentation format for asynchronous access and future scalability, outlining timelines ([Figure 1](#)), documentation requirements, eligibility considerations, and strategies for time management alongside coursework and extracurricular demands.

Serving as a medical student representative on Marian University’s Neurodiversity Advisory Council (NAC) has helped bring awareness and create space for neurodivergent representation campuswide. While I focus on institutional gaps to ensure students have the resources and opportunities that best fit their learning needs, I have also learned about the Universal Design for Learning (UDL) framework and become interested in its applicability to medical education. Several peers and I have started discussions on organizing a panel of neurodiverse



Figure 1. Liu's NBOME accommodations application timeline for COMLEX-USA Level 1.

individuals to engage our classmates, increase early awareness, and minimize uncertainties surrounding neurodivergence and patients with disabilities in our future practice. These are important steps but are largely reactive instead of proactive.

Future Directions & Recommendations

Medical education reform relies on meaningful change at the institutional, cultural, and structural levels to better support neurodivergent trainees. We must not expect students to navigate disability and face barriers at the onset of failure when sustainable initiatives have been designed to celebrate cognitive diversity and promote competency demonstrated by their true capabilities.

Early identification of neurodivergence should be a priority at the onset of matriculation. Students who are diagnosed after matriculation are significantly less likely to receive preclinical accommodations.⁶ While normalizing and increasing awareness of disability presentations, offering voluntary neuropsychological screening to all students at the time of matriculation could promote early identification of potential challenges and improve access to support earlier in their training.

However, a significant gap remains prevalent in the lack of disability professionals within medical school

administration. Only 9% of U.S. medical schools employ a dedicated Disability Resource Professional (DRP), leaving many to independently navigate the complexities of the accommodation processes.⁷ Students report that the process of requesting accommodations is too difficult and poses a significant barrier to access, suggesting that DRPs could anticipate barriers and shift the paradigm from a reactive measure to a proactive one.⁵ Additionally, standardizing accommodation processes across institutions and national licensing organizations could provide better access, consistency, and a reduction of administrative strain in substituted roles.

Designing curricula implementing UDL principles is an approach to decrease the need for retroactive accommodations. Its focus on flexible pedagogic styles demonstrated through various verbal, visual, or written modalities fosters learner engagement through autonomy and choice.⁹ Supporting an environment that is inclusive and innovative can alleviate disparities encountered during preclinical training, particularly those disproportionately affecting nontraditional or underrepresented students.¹⁴ By training faculty to recognize early signs of distress and tailoring expectations highlighting students' strengths, rather than suppressing them, UDL anticipates cognitive diversity and contributes to an adaptive learning

experience that aligns with innovation in medicine worth exploring.

Furthermore, physicians who are supported and transparent in their identities provide critical affirmation for students and patients navigating similar paths; yet members of these communities remain disproportionately underrepresented in medical leadership.⁹ Even transparency from educators about personal challenges helps students disclose and seek support.⁸ Without visible role models, neurodivergent students may face incongruencies at the intersection of their neurodivergent and professional identities.¹¹ Consequently, cognitive diversity remains hidden and the internalization of stigma perpetuates, jeopardizing the psychological safety and belonging of the student.

Reform must also extend beyond the institutional level. The AMA called upon the NBME, NBOME, and specialty licensing boards to improve their accommodation review processes by eliminating the evidence of prior accommodations or academic failure before support is considered.⁴ Since this has not yet been implemented, students may delay processing documentation and hinder the progression of medical training. The emphasis should be to affirm accommodations as tools for equity, not as a reward for struggle.

Finally, differences between allopathic and osteopathic institutions must be warranted. There are especially limited research and data examining the prevalence of neurodivergence among DO students,¹² opening additional gaps and barriers to disclosure compounded by the existing stigma comparing them to MDs in the medical education systems.¹⁵ Therefore, future research should also explore the variability in administrative infrastructures between private-funded osteopathic schools and state-funded allopathic schools, as well as their resource allocations that may influence the accessibility and transparency of accommodations across programs.

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Conclusion

Neurodiversity is all around us and present in medicine, but the question remains whether our healthcare and education systems are built to strengthen or suppress it. The future physician workforce would benefit by valuing cognitive diversity over uniformity, so providers can better serve the patients they represent. However, as neurodivergence grows in the general population, medicine risks losing valuable inclusion and innovation within the workforce through inconsistent practices and unclear policies at the institutional, cultural, and structural levels. The misconceptions about accommodations must further be dismantled, as they are not advantages, but rather tools that measure competence without interference from symptoms. While grassroots efforts are addressing these gaps, lasting change must extend past the undergraduate medical education level through research and reform.

My hope extends to those navigating similar paths: be empowered to seek evaluation early, find community, and advocate for your success.

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Conflict of Interest Statement:

The authors declare no conflict of interest.

REFRAMING NEURODIVERSITY



HOW SUPPORTING COGNITIVE DIVERSITY
SHAPES THE FUTURE OF HEALTHCARE

1 IN 5

medical students are neurodivergent

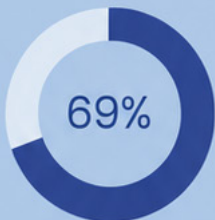


Rising Prevalence

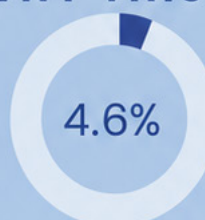
KEY BARRIERS IN MEDICAL EDUCATION:

- Emotional & Financial Burdens
- Inconsistent Policies & Unclear Processes
- Stigma & Fear of Disclosure
- Underdiagnosis & Underreporting

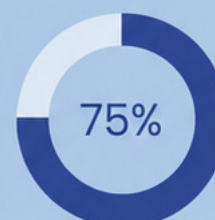
WHY THIS MATTERS



increase in reported
disabilities among
MD/DO students from
2016-2019



medical students
with documented
diagnoses requested
accommodations



autistic physicians
reported suicidal
ideations

Disability Resource
Professionals (DRP)

9%

of U.S. medical schools have
dedicated employment of DRPs
within administration



WHAT HELPS

- Early Evaluation & Intervention
- Education & Awareness
- Representation & Community
- Universal Design for Learning

HOW WE MOVE FORWARD



Train educators &
leaders



Stronger
healthcare for
everyone

Normalize
disclosure



Build and design
learning for all
students

