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Editor's Note:

Received: October 14, 2004
Accepted: November 5, 2004

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0894-9115/05/8401-0005/0
American Journal of Physical Medicine & Rehabilitation
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DOI: 10.1097/01.PHM.0000153323.28396.DE

ANALYSIS

Physicians with Disabilities and the Physician Workforce:

A Need to Reassess Our Policies

ABSTRACT

DeLisa JA, Thomas P: Physicians with disabilities and the physician workforce: A need to reassess our policies. *Am J Phys Med Rehabil* 2005;84:5–11.

People with disabilities make up about 20% of the population, yet only a tiny fraction of matriculants to medical school have disabilities. Attempts to define core technical standards and competencies have not kept pace with technological changes, diverse specialization, and changing practice options. This has resulted in the inappropriate exclusion of some people with disabilities. Medical schools determine how any qualified applicant, regardless of physical or cognitive ability, can be effectively accommodated and counseled in achieving the most appropriate medical career. A serious effort to redefine the technical standards and core competencies of the 21st century medical education at the undergraduate and graduate levels would likely resolve many of the troubling questions regarding medical students with disabilities. We have made some recommendations to organized medicine for constructing an agenda to address these issues.

Key Words: Disabilities, Medical Education, Medical Student, Accommodations, Competencies

INTRODUCTION

In 1997, Dr. Jordan Cohen, the president of the Association of American Medical Colleges, issued a moral charge to the medical profession: “to take active steps to ensure that our healthcare practitioner community mirrors society’s gender, racial, and ethnic mix.” Why? Because it is a matter of social justice and equality; because it is a means to improve access to health care on the part of the underserved; because it is a way to deliver culturally competent care—particularly to minority populations who are often disproportionately affected by healthcare problems; and because it just makes sense to fully use the rich and diverse pool of our nation’s people to better manage the healthcare system.¹ Recently, Dr. Cohen has expanded the scope of this issue beyond considerations of race, ethnicity, and gender to include issues of disability. His editorial entitled “Reconsidering ‘Disabled’ Applicants” challenges medicine to reconsider what it takes to be a capable doctor.²

We think Dr. Cohen has it right, and we firmly support and applaud his efforts to “bridge the diversity gap” in our healthcare training programs. In particular, we

would like to elaborate on the underrepresentation of people with disabilities who are trained as physicians. Although people with disabilities make up about 20% of the population, only a tiny fraction of matriculants to medical school have disabilities. Though data are limited, best estimates indicate that people with physical disabilities comprise less than 1% of medical school graduates.^{3,4}

The percentage of physicians with disabilities in practice is higher, with estimates ranging from 2 to 10%, suggesting that although getting into medical school is a hurdle for people with disabilities, to the entry point it seems there is a stronger commitment to keep physicians in training or in practice. If disability occurs subsequently, and the age-specific prevalence of major chronic conditions remains unchanged, the absolute number of Americans with functional limitations is expected to rise by more than 300% by 2049.⁵ If we interpolate this data to practicing healthcare providers, we can expect that the number of physicians in practice who become disabled also will increase.

So we are left with the question: why are so few people with disabilities physicians? Is it a lack of ability? Is it a lack of opportunity? Perhaps this argument may have been compelling in the days before diverse specialization, changing practice options, and technological advances, but it is less so today. Attempts to define core technical standards and competencies have not always kept up with these changes, and have resulted in the inappropriate exclusion of some people with disabilities. Given increasing technological resources and the changing scope of medical practice, it is imperative that we embrace these issues head-on. Yet serious attempts by our healthcare training programs to move these conceptual issues forward have not progressed significantly since the July 26, 1990 passage of the Americans with Disabilities Act (ADA), or the 1993 passage of the Rehabilitation Act, both of which established disability as the seventh protected class under federal nondiscrimination law. Individual medical schools have been left to interpret and apply the law, and some schools have done a better job than others in attempting to address this issue. Little guidance has been issued to address critical questions such as the core technical standards and skills that all medical students must possess to meet the demands of current and future medical practice, and what constitutes reasonable modification or reasonable accommodations for individuals with disabilities.

The remainder of this paper will present arguments in favor of a serious effort to include people with disabilities in medical school and postgraduate training programs, as well as more organized strategies for keeping physicians in the profession

after disability occurs. In fact, a serious effort to redefine the technical standards and core competencies of 21st century medical education at both the undergraduate and graduate levels would likely resolve many of the troubling questions regarding medical students with disabilities. We will conclude with some concrete recommendations for constructing an agenda to address these goals.

Definition of Disability

Disability conditions are diverse in their causes, nature, timing, pace, and societal implications. Some are congenital, others are acquired. Some occur suddenly with injury or accident; others arise slowly, with progressive debility.⁶ There are various categories of disability, including physical, mental, sensory (vision and hearing deficits), and developmental disability, each of which impacts a significant portion of the population. It is likely that if you live long enough, you will experience disability at some point in your lifetime.⁷ Disability is a widespread phenomenon, and represents a minority group that everyone is at risk to join. Although there is no single consensus definition of disability, (Table 1), for the purposes of this paper we will reference the definition of disability in the ADA (i.e., a “physical or mental impairment that substantially limits one or more of the major life activities”).⁹

What Does It Mean To Be a Physician in 2004?

The medical profession has arguably seen more changes in the last 50 yr than during the preceding millennium. No longer dominated by primary care solo practitioners, we have become a nation of specialists (about 70% of the practicing physicians work force),¹² highly reliant on technological resources and often working in teams or networks. Nuanced physical examination techniques are being displaced by MRIs and echocardiograms that offer greater precision. Nurse practitioners and physician assistants are playing increasingly important professional and supportive roles within healthcare teams. The medical database is exploding with information defying physicians to keep up, let alone assimilate a morass of complicated and often contradictory studies in an effort to make evidence-based decisions. One of the biggest changes in health care these days is that patients spend much less time in hospitals compared with years past. As such, medical schools have faced considerable difficulty reorienting traditionally inpatient-based training to the new outpatient reality.^{13,14} Much of this world is being dominated by technology and automation.

Medical schools and resident training programs are scrambling to keep pace with these changes.

TABLE 1 Definitions of Disability

Social Security Administration

“The inability to engage in any substantial gainful activity by reasons of any medically determinable physical or mental impairments which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than 12 months (defined in terms of functional limitations as they effect employability).”⁸

Americans with Disabilities Act (ADA): Section 3

“Someone who has: (A) physical or mental impairment that substantially limits one or more of the major life activities; . . . (B) a record of such impairment; or (C) being regarded as having such an impairment.” ADA defines disability from the perspective of physical or mental impairments, but also recognizes barriers, or the failure to provide reasonable accommodations, can give to the denial, or limitation of opportunities.”⁹

World Health Organization

Disability is an “umbrella term for impairments, activity limitations, or participant restrictions” (p. 3); “a person’s functioning and disability (represent) a dynamic interaction between health conditions (diseases, disorders, injuries, traumas, etc.) and contextual factors,” including environmental, social, and personal attributes. (p. 8). This places disability within a broad “biopsychosocial” perspective, integrating the medical and social models.¹⁰

Medical Definition:

The physical disadvantage that results from impairment; the difficulty in performing physical tasks. The individual requires rehabilitation and possibly accommodation to function as well as others.¹¹

Though the core mission of medical schools and training programs has not changed—to train effective, competent and compassionate physicians best able to serve the needs of society—the strategies for achieving these goals have changed. One has only to review curricular changes over the last two decades to appreciate that critical thinking and communication skills are receiving greater emphasis, whereas technical skills and rote memorization have declined in curricular emphasis.^{15,16}

These tensions are far from resolved. One can detect real ambivalence, or, perhaps more accurately, uncertainty about the essential requirements for graduating a physician from medical school. In the absence of a crystallized consensus on this topic, the written standards and guidelines seem somewhat inert and dated, with change occurring slowly. In 1979, an Association of American Medical Colleges (AAMC) advisory panel recommended technical standards to guide admission to medical school. These have been defined as the essential functions for a graduating medical student.

The panel concluded that a candidate for the MD degree must have abilities and skills in the following areas:¹⁷

1. Observation—performed in a reasonably independent manner
2. Communication skills
3. Motor skills—performed in a reasonably independent manner
4. Intellectual-conceptual, integrative, and qualitative abilities
5. Behavioral and social attributes

After the passage of the ADA, the AAMC published a follow-up document on medical school admission requirements in the United States and Canada (1991–1992)¹⁸ It states that “candidates for the MD degree must have somatic sensation and the functional use of senses of vision and hearing.” It further states that a candidate’s diagnostic skills will also be lessened without the functional use of the senses of equilibrium, smell and taste. Additionally, students must have sufficient exteroceptive sense (touch, pain, and temperature), sufficient proprioceptive sense (position, pressure, movement, stereognosis, and vibratory), and sufficient motor function to carry out activities “necessary for education of the physician.” They must also be able to consistently, quickly, and accurately integrate all information received by whatever sense(s) employed, and they must have the intellectual ability to learn, integrate, analyze, and synthesize these data.¹⁸ It would seem that this document did not address psychiatric disability, or learning disabilities.

Though this report was not AAMC policy, it was intended as a guideline for medical schools to use in establishing their own technical standards, indicating that the faculty of each medical school must review its own curriculum and reflect on its own educational goals.¹⁸ The report indicated that schools were to provide reasonable accommodations, but it was vague in defining “reasonable.” Ironically, over the years these principles seem to have had the effect of preventing talented individuals with disabilities from attending American medical schools.¹⁷

Following publications of the 1991–1992 AAMC document, the AAP published a position paper in 1993 entitled “Recommended Guidelines

for Admission of Candidates with Disabilities to Medical School," which delineated reasonable accommodations for students with disabilities.¹⁸ Though never widely adopted, this document provided useful information for medical schools.

The Thorny Issue of Technical Standards

The most recent effort to define appropriate technical standards is contained within the initial 1999 report of the Medical Schools Objectives Project.¹⁹ This report organized medical education goals and objectives into the categories of altruism, knowledge, skills, and sense of duty. Under the heading "Physicians Must Be Skillful," the report outlines technical standards in much the same fashion as the 1979 AAMC report, requiring that graduates be able to perform a complete physical examination, perform and interpret diagnostic tests, and respond appropriately to immediately life-threatening medical conditions. The Medical School Objectives Project report retains an emphasis on physical technical performance, demanding that graduates demonstrate proficiency in such skills as venipuncture, lumbar puncture, and suturing lacerations.¹⁹

Although discussions of medical students with disabilities focus primarily on technical standards, many question the validity of a strong emphasis on technical skills. Reichgott asked several important questions regarding the role of technical skills and their relative importance when compared with other requirements of graduates, such as knowledge/intelligence, professional attitude, and the ability to communicate and interact effectively. For example, "Is the hands-on, personal touching experience afforded by the course in physical diagnosis necessary for the effective integration of basic science knowledge and the understanding of pathophysiology? If a trained assistant does the physical exam and provides data to the student. . . does this really impose a negative 'interpreter' effect?"²⁰ Given the diversity of available specialties, one must even question whether there should be any mandatory physical technical skills in medical school.

Van Matre et al. sent a 3-page questionnaire to faculty, residents and third-year medical students affiliated with Northwestern University's Feinberg School of Medicine. The majority of the survey respondents, regardless of level of training or disability status, believed that disabilities affecting motor skills are less likely to impede the practice of medicine than those that affect the ability to observe or communicate. Technical skills used in interpretation and observation, such as palpation and percussion, were more important to respondents than those that are more procedural, such as inserting an intravenous catheter or tying sutures.²¹

Undifferentiated Graduate vs. Undifferentiated Curriculum

Medical schools have almost exclusively enrolled those students who seem to have the potential to enter any existing field of medicine; these are considered to be the undifferentiated graduate. However, significant differentiation of physicians into various specialties and subspecialties can serve as an argument for less rigidity in demanding that all students demonstrate competence in procedures that are not relevant to their future expected practices. Medical specialization has segmented the physician's workforce from a more homogenous group to one concentrating on specific body systems or disease entities.

Healthcare professionals adequately trained for the future will need to know what informational resources to use; how to gather necessary data; how to integrate complex information, make diagnoses, and develop treatment plans; and how to effectively use changing technological resources, work with teams, and communicate with diverse populations. These skills are largely cognitive and not physical, raising questions about the adequacy of the current approach to medical training. Although applicants with disabilities should meet the same cognitive admission standards as their peers without disabilities, these standards need to be fair and reflective of the essential criteria for the profession, and not serve as a barrier or deterrent to otherwise qualified applicants with disabilities.⁷ Medical schools need to answer several questions, including what it means to be a doctor today, what constitutes good doctoring, and what are the truly nonnegotiable elements comprising a basic medical education.²

However, we absolutely oppose a tracking system, where an individual is admitted to medical school under the presumption that he or she will be designated to a specific postgraduate specialty. Each student must be handled on a case-by-case basis.

Principles in the Training of a Physician with a Disability

Although most medical students take similar courses and clerkships through the first three years, by the fourth year students focus increasingly on their own particular interests. Medical students do not graduate as pluripotent physicians. Each field (specialty) requires different psychological, emotional, verbal, intellectual, and technical skills. Medical school provides students with exposure to help target their eventual practice. Also, over time most practitioners gain new knowledge and skills in focused activities of choice, and are less concerned about knowing all of medicine, or about being skilled in all diagnostic and therapeutic procedures.²⁰

There Are Two Overlying Principles That Must Be Adhered to While Training a Physician With a Disability: Protection of Patients

The person with disabilities (trainee) has the ability to practice at a level comparable with that of the person without impairment. Patient well-being is held sacrosanct by the Hippocratic tradition to “do no harm.” The achievement of technical standards appropriate to the *type of practice* the trainee proposes to pursue is essential (M.G. Stineman, personal communication).

Rights of the Trainee

It is essential to respect the creative solutions that people with disabilities often employ to perform tasks in alternate ways. The ability to perform the task at a defined level of quality should be emphasized rather than the process by which the task is accomplished. We need to be flexible and consider what is possible through hard work and low or high technology (M.G. Stineman, personal communication).

Arguments Against Training People with Disabilities in Medical Education

The health professions have strong societal fiduciary responsibilities that include the protection of patients and the wise use of resources. As part of a “social contract” of sorts, with tax dollars used to supplement the education of physicians, medical schools have a responsibility to ensure that they are training physicians who will be able to best meet the needs of society. Such arguments have been used in the past to counter why more women should not be admitted to medical schools (i.e., there is less value in return for the dollar, given that women historically have not worked as many hours or years as their male counterparts). Given that medical school gender enrollment is now about equal, this gender bias is obviously outdated, and no longer operative. Indeed, the benefits of having women in all aspects of the health professions have been realized. Similar arguments are currently being offered regarding physicians with disabilities.

Arguments in Favor of People with Disabilities in Medical Education

Physicians with disabilities may bring to their practice unique perspectives and empathy because of their personal experience with disability.^{21,22} Misinformation and prejudice about disability abound in the health professions and, indeed, are often perpetuated by healthcare providers. In numerous studies, healthcare professionals have been known to be more negative in their estimates of the quality-of-life of a person with a disability than the

person with the disability him or herself.²³ These negative attitudes can have an effect on the framing of information and the very treatments offered. Yet little time is spent in medical school curricula around issues of disability, despite the fact that practicing clinicians will invariably come into contact with and/or treat a substantial number of people with disabilities during their career. Mutual respect between doctors and patients with disabilities, regardless of how severe the disability may be, seems to be one of the most effective ways to break down barriers and dispel prejudices.

A Survey of the Case Law

A survey of the case law that has developed since passage of the ADA and Rehabilitation Act reveals that these nondiscrimination laws have been used in the medical school context in three primary ways: requests for accommodations in taking examinations, primarily due to various forms of learning disabilities; challenges of denials of admission to medical school based on disability; and challenges to dismissal from medical school based on disability.^{24–26} Although a number of cases have been decided in favor of applicants and students with disabilities, the vast majority of cases do not grant relief to people with disabilities, primarily because it is difficult to prove that the person's disability was the cause of the dismissal, admission rejection, or failure of an examination. This places the burden of meaningfully addressing the lack of medical school applicants and students with disabilities on the medical schools themselves.

Recommendations

The need for program modifications and reasonable accommodations differs for students, residents, and faculty. A student's focus is on educational requirements and on meeting the diverse demands of the basic sciences and clinical years. Faculty members with disabilities can tailor their practices to minimize the need for accommodations. Residency, however, is truly a mixture of service and education, and offers perhaps the greatest challenges in terms of disability considerations. Residents may need to perform in certain services essential to the residency program that would not be necessary for students or faculty members. Even within a specialty, not all programs have the same “service” requirements. Should this work obligation be a barrier to satisfactory completion of residency training? Meier as well as Hartman and Hartman have questioned why an applicant should be denied a chance to practice medicine just because he or she cannot perform certain procedures required of the specialties.^{22,27}

Medical schools determine how any qualified applicant, regardless of physical or cognitive ability, can be effectively accommodated and counseled in achieving the most appropriate medical career. If carefully selected and supported, a student with a significant disability can succeed in a rigorous medical school program. Regardless of whether a person has a disability, each candidate for medical school must demonstrate that he or she has the potential to satisfy the key criteria of intelligence, professional attitude, and the ability to interact and communicate effectively, with or without reasonable accommodations and modifications.

Recommendation 1:

First and foremost, there is a need to reevaluate the goals and expectations of medical education and residency training to be consistent with the practice of medicine in the 21st century. Medical schools should modify the excessively strict technical standards that currently constitute a major barrier to many potential applicants. Indeed, one could argue that physical technical standards should not be required for graduation from medical school, but should be deferred to postgraduate education, where clear standards can be tied to the scope of practice of a particular specialty. The AAMC can help by updating its advisory materials with respect to the ADA experience over the past decade.

Recommendation 2:

More research is needed on people with disabilities in the health profession to determine the number of people with disabilities applying to medical school, and their rates of admission, graduation, and resultant professional experiences. Additional research is needed to identify the primary barriers to medical school and health professions for people with disabilities.

Recommendation 3:

A large, well controlled formal epidemiologic survey should be planned and implemented to accurately ascertain the prevalence of all degrees and types of physical disabilities among practicing physicians and medical students, as well as the effects of such disabilities on medical practice.²⁸

Recommendation 4:

Because of the dearth of medical literature, physicians and medical students with disabilities should be encouraged to document their own experiences and practice strategies to develop successful models. Such documentation would assist medical educators in constructing strategies for approaching reasonable accommodations and program modifications for medical students with disabilities. Such information could also have an effect on peer attitudes.¹¹

Recommendation 5:

Physicians and other healthcare professionals should be educated about the broad definition of disability, and encouraged to take steps to comply with the requirements of the ADA.

Recommendation 6:

Medical and other health professional schools should make a commitment to include and integrate clinical training and resources about disability throughout the educational process. The role and value of screening and preventive care for persons with disabilities needs to be emphasized.

Recommendation 7:

Medical and other health professional schools should integrate a disability curriculum into their medical training programs. With nearly one in every five people having a disability of some kind, it is imperative to raise the level of awareness and, consequently, the level of understanding about disability issues within the medical professions.

Recommendation 8:

Medical and other health professional schools should make meaningful efforts to promote the accessibility of their programs, sending the clear signal that people with disabilities are encouraged to apply—not just that they will be free from discrimination if they do.

Recommendation 9:

The AAMC should incorporate disability-related questions into the AAMC graduation questionnaire, to create benchmarks to measure improvement in this area.

Recommendation 10:

A task force(s) needs to be created to update standards and guidelines with respect to applicants with disabilities for admissions committees, licensure authorities, certifying boards, and privileging organizations. A study should be developed and implemented to determine whether the example of professionals (preferably physicians) with disabilities can effectively motivate patients with disabilities to set higher goals for rehabilitation, community integration, education, and employment.

CONCLUSION

Increasing inclusion of people with disabilities in the healthcare delivery system should not be viewed as an altruistic gesture, but as a matter of basic civil rights. Core principles of the ADA are nondiscriminatory inclusion and reasonable accommodation. For medical schools and training programs, this has profound implications—many

of which have not been fully recognized. Medical schools and other training programs are required to provide equal access to programs in the most integrated setting possible, accessible facilities and transportation, effective communication for teaching and training, and reasonable modifications to policies and procedures, including testing of students.

The ADA does not prevent medical schools from selectively accepting the most highly qualified applicants, nor does it impose any obligation on medical schools to lower their standards. The ADA does, however, protect applicants with disabilities from discrimination based on disability in the application process.²⁰ Similarly, the ADA protects students with disabilities from being discriminated against as they matriculate. Finally, the ADA requires employers (such as hospitals or medical schools) to provide reasonable accommodations to their employees, including faculty and residents.²⁹

In short, the ADA placed disability status on the same level as gender, race, and ethnicity in terms of federal nondiscrimination requirements. Just as it is a moral charge to “take active steps to ensure that our healthcare practitioner community mirrors society’s gender, racial and ethnic mix,” it is equally imperative to extend this charge to people with disabilities. It is no less a matter of social justice and equality to incorporate and accommodate people with disabilities into the medical professions. Similar to race, gender, and ethnicity, incorporation of people with disabilities is a means to improve access to health care on the part of the underserved—people with disabilities. It is also a way to deliver “culturally” competent care—in that the disability community has developed a culture during the past several decades that mirrors those of other minority groups. And, finally, meaningful inclusion of people with disabilities in the medical professions just makes sense, and would fully employ the rich and diverse pool of our nation’s people to better manage the healthcare system.^{8,10}

ACKNOWLEDGMENT

We would like to thank Kristi L. Kirschner, MD, for her input.

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