

## Supplemental Digital Appendix 1

### Coding Scheme Used to Assess Medical School Technical Standards, from a Study of 161 M.D.- and D.O.-Granting Medical Schools' Compliance with the Americans with Disabilities Act, 2012–2014

Code	Definitions, inclusions	Exclusions	Examples
<b>Overarching Codes</b>	<b>To be coded for all schools</b>		
<b>Willingness to accommodate</b>	<b>Code MUST be used for all schools</b>		
Supportive	Positive, supportive, encouraging wording about accommodating vision, hearing, or mobility disabilities are present. Emphasizes willingness to find accommodate. May state explicitly about not discriminating based on disabilities, or conditions that would exclude extreme degrees of disability. May mention previous experience accommodating disabilities. Focuses on ability to meet achievement standards of all students. Provides documentation about how to accommodate.	ONLY statements about restrictions, or LACKS a specific statement about restrictions	“School <b>will not discriminate</b> against individuals with disabilities, and <b>shall provide reasonable accommodation and support</b> to qualified disabled individuals. Technological compensation can be made for some handicaps in certain areas... School will <b>attempt to maximize the opportunity for success</b> of every applicant and student while maintaining the integrity of the educational program and the ability of the program to accommodate the individual's particular disability and/or handicap.
Restrictive	Use of <b>negative, non-supportive, discouraging</b> wording about accommodating disabilities of vision, hearing, or mobility Emphasizes restrictions on accommodating. Wording may also emphasize criteria used for rejection of applicants. May frame dependence on technology in negative ways. Focus is functions or mechanisms required to achieve.	Any positive wording relative to willingness to accommodate, support or encouragement of applicants with disabilities. Must have discussion of accommodations.	Should a candidate have a condition that would place patients or others at significant risk, that ... may be the basis for <b>denial</b> of admission ... or for <b>dismissal</b> from the medical education program. ... On this basis, "reasonable" accommodations, which might be widely accepted in other types of educational programs, <b>may not be approved</b> by School or within other medical school programs at affiliated sites.

Equivocal	Use of neutral wording “relative to” willingness like “can be made” to accommodate applicants with disabilities of vision, qualified willingness to accommodate applicants with disabilities. However, may also have stipulations and qualifications about how applicant <b>must</b> or <b>should</b> perform. There may be <b>conflicting or contradictory statements</b> relative to the use of positive and negative language.	Meets criteria for supportive or restrictive	Such observation and information acquisition necessitates the functional use of visual, auditory and somatic sensation... In any case where a candidate's ability to observe or acquire information through these sensory modalities is compromised, the candidate <b>must demonstrate alternate means and/or abilities</b> to acquire and demonstrate the essential information <b>conveyed in this fashion</b>
Absent	No statement of willingness to accommodate applicant with disabilities OR no statement on restrictions that would be made for any disability of vision, hearing, mobility or mental illness.	Exclude if a statement re: willingness to accommodate under some circumstance or restrict admission under any circumstance.	---
<b>Method of locating technical standards</b>	<b>Refers to whether the school has the technical standards available, if so where.</b>	<b>EXCLUDES</b> sources that fail to provide text stating that it applies to medical school applicants	Examples
Online	Technical standards criteria or document available online		
Available upon request – Responded to request	Standards not online and not readily available for viewing, but website indicates they are available on request, school responded to a request with technical standards		
Available upon request – Did not respond to request	Standards are not online, but website indicates they are available on request. School has not responded to a request		
Not online – Responded to request	Technical standards not available online, no information on how to obtain. General statement provided that school can be contacted with questions. School responded to request with technical standards		

Not online – Did not respond to request	No technical standards available online or information on how to obtain. General statement provided that school can be contacted with questions. School has not responded to request with technical standards		"If you have any questions, please e-mail admissions@xxx.com."
<b>Ease of finding technical standards</b>	<b>Definitions, inclusions</b>		
Easy	Found within five minutes		
Moderately difficult	Moderately difficult (took five to twenty minutes)		
Very difficult	Very difficult (took greater than twenty minutes)		
Not found online	No technical standards available online		
<b>Codes that are disability-specific</b>	<b>Each disability (hearing, vision, mobility) must be coded</b>		
<b>Functional level required</b>	<b>Definitions, inclusions</b>		<b>Examples</b>
Full function required, no accommodation allowed	Functional level described as necessary for admission is characterized by terminology that is absolute and unconditional for performance of functions for a matriculated student without any disabilities. Includes wording that describes the necessary function as: "must", "requires", "unimpaired", "necessary", "clearly", "prerequisite" If there is absolutist terminology, this should be coded as absolute. Includes statements that forbid accommodation, or statements that simply require full function.		-“Sensory skills <b>necessary</b> to perform a physical examination are <b>required</b> ...include <b>functional</b> vision, hearing, smell, and tactile sensation.” (Hearing) -“Candidates and students <b>must</b> be able to observe a patient ... Observation <b>necessitates</b> the <b>functional</b> use of the sense of vision and other sensory modalities.” (Vision) -“Students <b>must</b> have <b>sufficient</b> motor function and tactile ability to attend and participate in all classes... <b>sufficient</b> strength and <b>effective</b> coordination of both gross and fine muscular movements, equilibrium” (Motor)
Function as student without any disabilities, with reasonable accommodation	Functional level described as necessary is characterized by terminology that is relative, qualified, softer, or conditional. Includes wording that describes necessary functions as: “adequate”, “sufficient”, “should”, “may” The statements are open to alternative means to compensate for the disability. Includes wording “demonstrate alternate means”		“Observation and information acquisition <b>necessitates</b> the <b>functional</b> use of visual, auditory and somatic sensation...where a candidate's ability to observe or acquire information through sensory modalities is <b>compromised</b> , the candidate must <b>demonstrate alternate</b> means and/or abilities to acquire and demonstrate the essential information conveyed in this fashion”
No information	School does not provide specific information on the level of function necessary for admission/performance.		---

<b>Locus of responsibility</b>	<b>Locus of responsibility refers to who primarily is held accountable to provide the pertinent accommodation.</b>	<b>Exclusions</b>	<b>Examples</b>
Student only	School includes specific statement that accommodation procedures for disabilities are the sole responsibility of the student applicant.	School that expresses they will implement procedures or steps to make accommodation	"...it is expected that <b>obtaining and using such alternate means and/or abilities will be the responsibility of the student.</b> "
School only	School includes specific statement that accommodation procedures are the sole responsibility of the school	Statement with requirement that student make accommodations	"The School has interest and experience in <b>accommodating</b> certain disabilities without compromising the integrity of the curriculum or the academic achievement <b>required</b> of all students."
Both	School includes specific statement that accommodation procedures for disabilities are a shared responsibility or to be worked out between the school and applicant. Order of listing does not matter. The relative weight of the responsibility does not matter		"While compensation, modification, and accommodation <b>can be made for some disabilities....</b> candidates must be able to perform the duties of a student and of a physician in a reasonably independent manner"
Absent or no information	No statement on who will be responsible for the procedures to accommodate applicant with disabilities is made.		---
<b>Means of Accommodation</b>			
<b>1. Intermediary</b>	<b>An intermediary is a third-party that provides some sort of service between the student with a disability and their medical school curriculum</b>		
Not allowed	No intermediary to provide reasonable accommodation is permitted		"(we) <b>do not allow</b> for the <b>use of intermediaries</b> in a medical education at our institution" -"The faculty believes that visual impairments severe enough to require a <b>medically trained intermediary cannot be accommodated.</b> Reliance on an intermediary trained to perform physical exams for a student with a severe physical disability would also be unacceptable"
Allowed	An intermediary as reasonable accommodation is permitted		Qualified students with documented disabilities are <b>readily provided with reasonable accommodations</b> and <b>those accommodations sometimes involve an intermediary or an auxiliary aid</b> "
Absent or no information	No statement about intermediaries		

<b>2. Auxiliary Aids</b>	<b>Auxiliary aids are technology used to allow the student with a disability to complete functions they are otherwise unable to complete.</b>		
Not allowed	No auxiliary aids/technological compensation as reasonable accommodation is permitted		
Allowed	Auxiliary aids/technological compensation to provide reasonable accommodation is permitted		“Qualified students with documented disabilities are <b>readily provided with reasonable accommodations...</b> and <b>those sometimes involve an intermediary or an auxiliary aid, a paraplegic student might use aids</b> such as a standing wheelchair or a variable - height table in order to examine a patient.”
Absent or no information	No statement about auxiliary aids or technological compensation as reasonable accommodation		