



Improving Education for Medical Students about Caring for Patients with Disabilities

Evette Ronner¹, Linda Morris¹, Michaela O'Connor¹, Arvind Suresh¹, Roshini Pinto-Powell, MD^{1,2}, Adam Weinstein, MD^{1,3}.

¹ Geisel School of Medicine at Dartmouth, Hanover, NH.

² Dartmouth-Hitchcock Medical Center, Lebanon, NH.

³ Children's Hospital at Dartmouth-Hitchcock, Lebanon, NH.



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Background

- Patients with disabilities comprise 12-20% of the US population and suffer from lack of access to adequate and equitable healthcare.¹
- These disparities are aggravated by the fact that healthcare providers receive little training to prepare them to care for patients with disabilities.
- Medical students, residents, and attending physicians have demonstrated deficiencies in working knowledge of common forms of disability, such as cerebral palsy and learning disabilities.^{2,3}
- This can be addressed by integrating disability-related education throughout medical school.

Methods

- **Curricular Approach:** integrate disability-related content into the existing curriculum, including:
 - Modification of iBooks used in On Doctoring in the applicable Clinical Skills and Physical Exam syllabi
 - Adaptation of a clinical reasoning case to include a patient with a disability
 - Adding objectives to Problem-Based Learning cases to foster discussion on caring for patients with disabilities
 - Arranging for a patient perspective panel for patients with a condition associated with chronic disability
- **Research Approach:**
 - All changes to the curriculum have been implemented for the Class of 2024,
 - The class of 2023 had no intentional disability education added to their M1 year.
 - A validated survey⁴ was given to the M1 Class (2024) before exposure to any disability-integrated curricular changes and to the M2 Class (2023) at the beginning of the Fall 2020 semester.
 - This survey was designed to assess medical students' comfort levels in caring for patients with disabilities, with higher scores representing higher levels of comfort in a given situation.
 - M2 students were also asked if they were satisfied or dissatisfied with the first-year curriculum with respect to its teachings on caring for patients with disabilities (Figure 3).

Figures

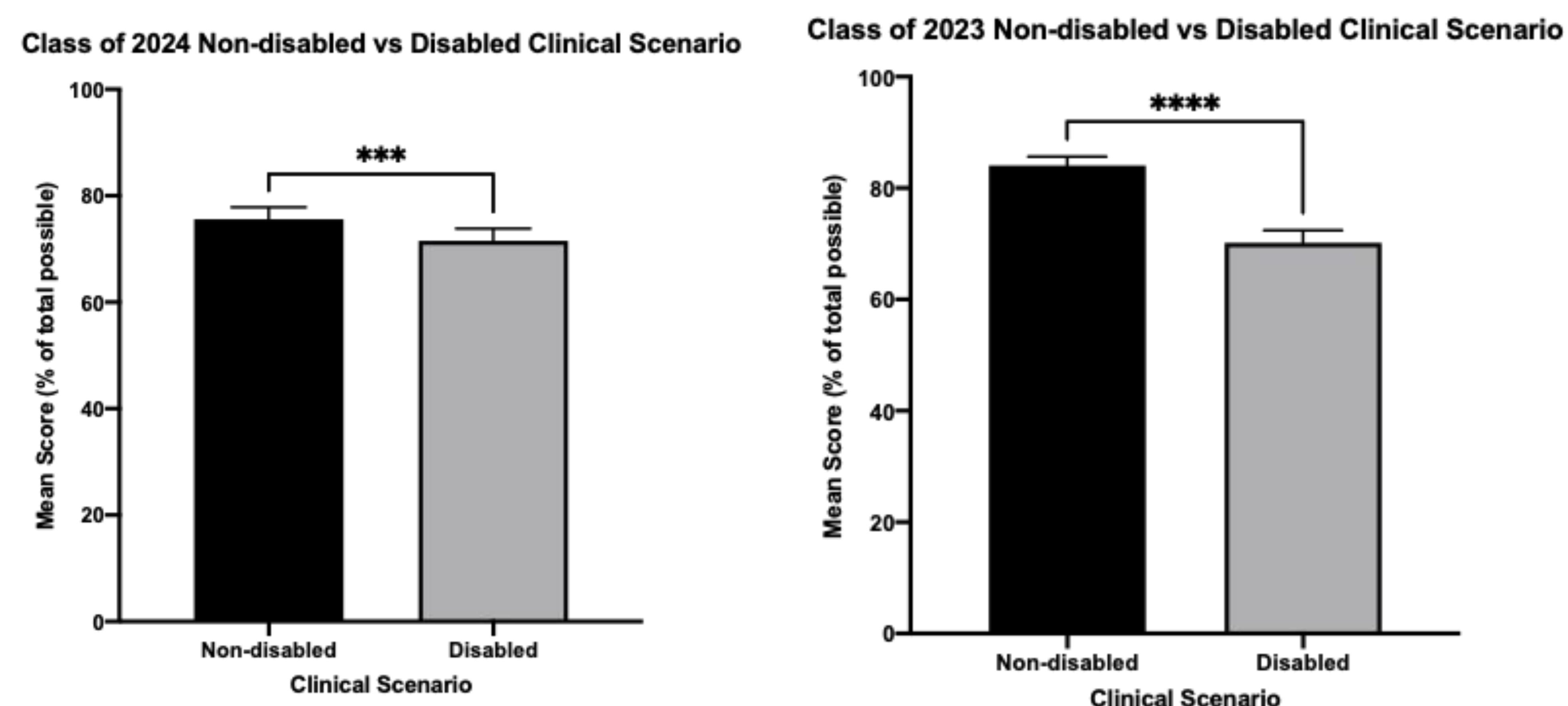


Figure 1. Comparison of two clinical scenarios. Mean survey score indicating student comfort level was significantly higher for the scenario with a non-disabled patient compared to a disabled one. This was observed for both the first and second-year medical students (p=0.0002 and p<0.001, respectively).

Medical Student Attitudes Towards Persons with Disabilities

Please review the following 2 scenarios (A and B) and answer the questions regarding the scenarios. Please circle the appropriate number which best corresponds with how you feel about the statement.

Scenario A:

You enter the exam room. A middle-aged man and woman are there. He tells you he is experiencing chronic abdominal pain.

Scenario B:

You enter the exam room. A middle-aged man is seated in a wheelchair. Standing behind him is a woman of about the same age. The patient in the wheel chair appears to have spasticity in all 4 limbs. He greets you by saying "hello". His speech is somewhat garbled, though intelligible. The woman tells you that the patient is here because he is experiencing chronic abdominal pain.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I have had experiences similar to scenario [A or B].	1	2	3	4
In Scenario [A or B], I would be comfortable determining the role of the man vs. the woman in providing the history of the complaint.	1	2	3	4
In Scenario [A or B], I would be comfortable performing a physical exam on the patient.	1	2	3	4
In Scenario [A or B], I would be comfortable establishing a differential diagnosis for the abdominal pain.	1	2	3	4

Figure 2. Disability scenario questions from validated survey⁴

Second-year students reported significantly higher mean scores for comfort associated with the non-disabled clinical scenario compared to first-year students (p=0.006710). There was no significant difference between classes in mean comfort with the disabled patient scenario.

Satisfaction with Year 1 Disability Curriculum

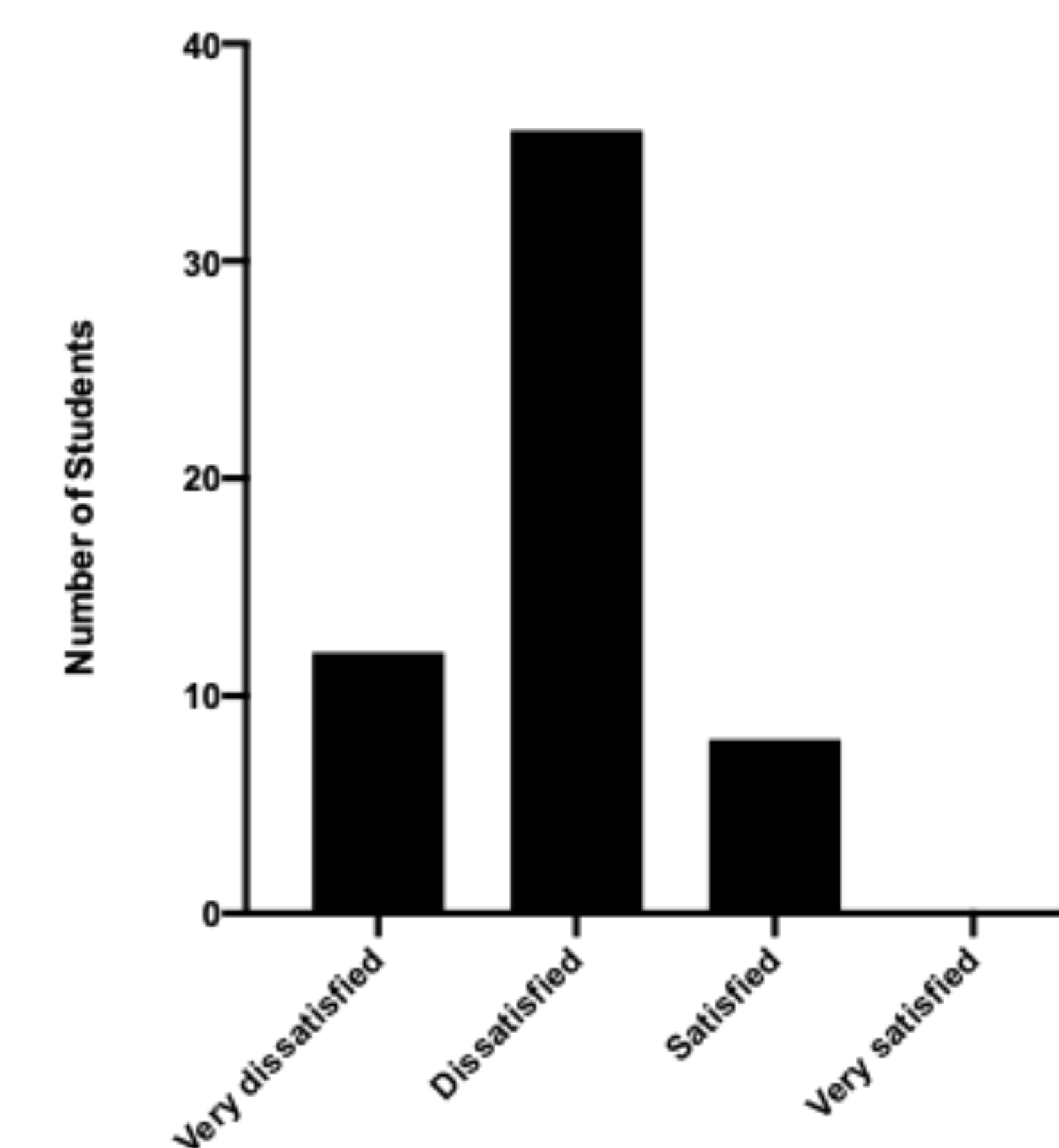


Figure 3. Satisfaction with year 1 disability-related content in the curriculum.

Second-year students reported their level of satisfaction with the M1 disability curriculum. The majority of students (85.7%) were either dissatisfied or very dissatisfied with the disability curriculum in the year before these disability-focused curricular changes were implemented.

Results

- First- and second-year Geisel students were significantly more comfortable caring for a patient without disabilities. This difference was larger in the second-year cohort (Figure 1).
- Second-year students scored significantly higher in caring for patients without disabilities compared to the first-year cohort.
 - It is possible that second-year students became more comfortable caring for able-bodied patients after their M1 year, leading to the higher discrepancy in their comfort levels caring for patients with and without disabilities in the validated questionnaire scenario.

Conclusions

- Lack of student comfort in caring for patients with disabilities indicates that building general clinical skills may not correlate with developing disability-focused clinical skills.
- The dissatisfaction level reported from M2 students reflects a growing awareness of this need amongst medical schools generally and highlights the importance of widespread implementation of this education.

References

1. Krahn GL, Walker DK, Correa-De-Araujo R. Persons with disabilities as an unrecognized health disparity population. *Am J Public Health*. 2015 Apr;105 Suppl 2(Suppl 2):S198-206. doi: 10.2105/AJPH.2014.302182. Epub 2015 Feb 17. PMID: 25689212; PMCID: PMC4355692.
2. Symons AB, McGuigan D, Akl EA. A curriculum to teach medical students to care for people with disabilities: development and initial implementation. *BMC Med Educ*. 2009 Dec 30;9:78. doi: 10.1186/1472-6920-9-78. PMID: 20042110; PMCID: PMC2809044.
3. Ervin DA, Hennen B, Merrick J, Morad M. Healthcare for persons with intellectual and developmental disability in the community. *Front Public Health*. 2014 Jul 15;2:83. doi: 10.3389/fpubh.2014.00083. PMID: 25071739; PMCID: PMC4098023.
4. Symons A, Fish R, McGuigan D, Fox J, Akl E. Development of an instrument to measure medical students' attitudes toward people with disabilities. *Intellect Dev Disabil*. 2012 Jun;50(3):251-60. doi: 10.1352/1934-9556-50.3.251. PMID: 22731974.