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# Working With People With Disabilities: An Interactive Video/ Lecture Session for First- and Second-Year Medical Students.

Sandra L Hearn

Pamela J Hearn
*Medical Transcriptionist, Providence Health and Services.*

# Working With People With Disabilities: An Interactive Video/Lecture Session for First- and Second-Year Medical Students

Sandra L. Hearn, MD*, Pamela J. Hearn, AAS

*Corresponding author: slhearn@med.umich.edu

## Abstract

**Introduction:** Negative physician attitudes toward people with disabilities create barriers to health care for these individuals. Barriers can include withholding of standard medical and preventive care, provision of inferior treatment, and patient mistrust of the health care system. Thus, preparing medical students to care for people with disabilities is especially important. Educating health care providers early in their careers can shape their interactions while their approach to patients is still deliberate. **Methods:** We developed an interactive introductory session for first- and second-year medical students on how to approach individuals with observable disability in clinical settings. In the session, we explored—through a combination of lecture, discussion, and patient perspective—how negative physician behavior can create health care barriers, as well as proposed a framework for approaching patients with disability. We presented this session in two formats: (a) a slide deck with instructions that a presenter can use to deliver the session and (b) a stand-alone video introduction with reflective questions. **Results:** The session was evaluated by 151 first-year medical students, with 79% reporting either somewhat or much more comfort approaching individuals with disability following the session. **Discussion:** The integration of patient and physician perspectives, as well as the use of reflective questions, provides the opportunity for students to actively explore reasons for provider discomfort with disability and delineate clinical setting strategies to approach patients with disability.

## Keywords

Disability, Communication, Barriers, Video, Attitudes, Disparities, Reflection, Health Equity, Diversity, Inclusion

## Educational Objectives

By the end of this session, learners will be able to:

1. Discuss the concept of disability.
2. Describe barriers to effective health care for individuals with disability.
3. List several possible causes of provider discomfort in caring for individuals with disability.
4. Delineate a four-part framework for approaching individuals with disability in a clinical encounter.
5. Appraise personal comfort level and preparation to approach a patient with disability pre- and postsession.

## Introduction

Disability is defined as "a physical or mental impairment that substantially limits one or more major life activities."[1]

Observable disability in the health care setting, such as the use of a wheelchair, can influence health care provider impressions and expectations of the individual.[2] The influence extends beyond aspects directly relevant to the disability and may unduly influence social and moral impressions of the individual.[3] Research indicates that health care providers' attitudes toward people with disability constitute a significant health care barrier.[4] Specifically, provider attitudes can result in withholding of standard medical care, provision of inferior treatment, or neglect in offering general preventative care, such as birth control or tobacco use counseling.[5] Patients with disabilities perceive these differences in care. Data from a national survey have shown that people with disabilities are more likely to perceive that physicians fail to (a) listen to their medical concerns, (b) explain treatments in a way that they understand, (c) treat them with respect, (d) spend sufficient time with them, and (e) involve them in treatment decisions.[4] Patients' subsequent mistrust in providers may discourage them from seeking needed medical care, perpetuating the gap between health care needs and care provided.[5] For these reasons, health care provider education in disability management has become a priority in medical education in recent years.[6]

While disability education for physicians is important, the topic faces several unique challenges regarding integration into a medical school curriculum. In particular, no one domain within a traditional medical school curriculum owns the topic, as disability spans organ systems and disease processes. Because patients with disabilities face challenges that often intersect more with culture than with medical science, traditional science-based curricula may offer inadequate preparation for these challenges.[6] Physicians prepared by a traditional curriculum may view disability-related concerns as beyond their purview, belonging instead in the social work domain.[7] Fortunately, in recent years, medical education has placed greater focus on development and integration of disability curricula, with examples including stand-alone sessions,[8] a blended curriculum on examination of neuromusculoskeletal disabilities,[9] and longitudinal curricula.[10-12] Among these, "Introduction to Disability and Health for Preclinical Medical Students: Didactic and Disability Panel Discussion" by Rogers et al. is a stand-alone disability session available in *MedEdPORTAL* that explores disability within a sociocultural context and harnesses shared student reflection so that students can understand and develop their own attitudes.[8]

A systematic review of health care providers' attitudes toward people with disabilities conducted in 2012 concluded that attitudes were generally favorable, but that that some students and health care providers experienced "discomfort or anxiety when challenged with the responsibility of treating a person with physical disabilities."[13] These findings raise the question of whether low comfort level and limited familiarity with disability—more so than overt undervaluation of individuals with disability—may frequently underlie suboptimal care. In particular, an individual's sense of discomfort and unfamiliarity when encountering someone perceived as different[14] may limit that individual's ability to communicate effectively in a clinical encounter. Furthermore, a lack of understanding of what life is like with disability can lead physicians to underestimate the degree to which patients with disabilities participate in society and need relevant health care and counseling to maintain a high quality of life.[15] Because these barriers center on internal perspectives and personal experience, a traditional didactic lecture focusing on facts and instruction, but lacking human stories, could fail to adequately connect with and develop an individual's internal perspective. In building an introductory session focused on working with people with disabilities, our goals were to (a) humanize disability by integrating the perspective of someone with a visual impairment, (b) give students the opportunity to recognize and understand their own biases and feelings of discomfort, and (c) through the process,

enable students to better care for individuals with differing abilities. Like the session designed by Rogers et al., our session employs reflective learning to understand and develop student attitudes and perspectives. Our session complements the Rogers et al. session, which explores disability within the context of society, by focusing on how students may feel and respond when meeting an individual one-on-one in the clinical setting.

### Target Audience

Our target audience comprised first- and second-year medical students, whose identities and approaches as care providers were developing and still malleable. Ideally, students should have experienced some interaction with patients in the clinic and hospital settings and be familiar with the process of obtaining a medical history, performing a physical examination, and conveying impressions and recommendations to patients and families.

## Methods

### Session Development

We developed a session coled by a physical medicine and rehabilitation (PM&R) physician and an individual with a disability. We offered this joint perspective in order to present a humanistic look at disability while anchoring on a health care provider role and approach. We introduced Pamela J. Hearn as an individual with a disability, and shared parts of her personal life to illustrate the common human features that individuals with disability share with everyone (e.g., working, having children, and interacting socially). By incorporating Pamela J. Hearn's narrative experiences through video clips embedded in PowerPoint slides, our session lends itself to use by any physician who has experience working with individuals with disability and a passion for education in this domain.

### Conceptual Framework

We developed a lecture-based, large-group interactive session to introduce the concept of disability, prompt medical students to explore their own perspectives on approaching disability, illustrate health care barriers faced by patients, and provide a framework for approaching a clinical encounter with a patient with disability. Features that distinguish this session from a traditional lecture format include the interwoven patient perspective, as well as built-in reflection moments that call upon students to process the material. In humanizing disability, stimulating personal reflection, and illustrating—through personal anecdotes—how barriers form, we developed a session to shape how students think, feel toward, and approach patients with disability.

Session Context
The session was implemented at the University of Michigan Medical School for first- and second-year medical students (approximately 180 students in each class). Two in-person sessions were delivered to first-year medical students, with each session comprising approximately 86 students. Sessions took place in a large lecture hall and were facilitated by a PM&R physician, who used a PowerPoint slide deck with embedded reflection questions and videos (Appendix A). For instructions regarding the PowerPoint slide deck, see Appendix B. Student participation was mandatory. For the second-year class, due to scheduling constraints, the session was offered in video format as an independent viewing assignment (Appendix C). For instructions regarding the video, see Appendix D.

Session Implementation: Live, Facilitated Format
A physician facilitator, Sandra L. Hearn, led the 50-minute session, using the PowerPoint presentation to present the material, including embedded reflection questions (Appendix E) and video clips featuring the narratives of an individual with a visual disability (Pamela J. Hearn). We added pre- and postsession questions (Appendices F and G) to an active learning platform, enabling students to submit answers in the lecture hall using their laptops. Providing students with pre- and postsession questions on paper would be an alternative method.

The session consisted of four parts:

- Part 1: Introduction and reflection—The physician facilitator introduced the session, prompting students to use their laptops to answer the presession question: "How comfortable would you feel approaching a patient with a disability in the clinic or hospital?" Next, using the PowerPoint slides as a guide, the facilitator defined disability, introduced Pamela J. Hearn through the embedded video clip, and explained how health care provider attitudes constitute an important barrier to health care for individuals with disabilities. During this portion of the session, the facilitator proposed two reflection questions (Appendix E), which were cued in the PowerPoint slides. At indicated points in time, students were invited to pause and consider, first individually and then in pairs or small groups, (a) what distinguishes a disability from an illness, as well as (b) why they might feel uncomfortable approaching patients with disability. This portion of the session applied the Think-Pair-Share collaborative learning strategy,[16] an active learning method that helps focus attention and prompt reflection in a safe environment. Helpful reflection and mindfulness methods that students

can use during the session include critically examining and understanding their own feelings and belief systems.[17] Bringing such unconscious factors into consciousness can allow practitioners to better understand what drives their behaviors and allow them to consciously shape interactions and communications with patients. For each topic, after approximately 5 minutes of reflection and sharing in pairs, the facilitator invited volunteers to share insights in a large-group discussion lasting 3 minutes. The goal of this reflection-based format was for students to consider the perspectives of individuals with disabilities, as well as become aware of their own feelings, attitudes, and reactions when encountering disability in the clinical setting.

- Part 2: Barriers faced by patients—This portion of the session centered around video clips embedded in the PowerPoint presentation in which author Pamela J. Hearn shared personal narratives exemplifying barriers that provider attitudes can create for patients with disabilities. Discussion of the barriers centered around her perspective to render them credible and authentic. Before or after each video clip narrative, the physician facilitator reviewed the nature of the barrier and placed it in the context of health care provider attitudes.

- Part 3: An applicable framework approach—Drawing from established communication competencies,[18] we assembled and provided a practical framework for approaching a clinical encounter with a patient with disability: treat the patient with respect, focus on the patient's goals, communicate effectively, and enlist the patient in developing the plan of care. In the session, the facilitator reviewed this framework and included examples of how to effectively communicate with patients.

- Part 4: Reflection and session evaluation—We concluded the session by presenting the concept of disability as a spectrum of abilities across humanity and invited students to look beyond disability to address the human being. Following insights from the physician facilitator, as well as from Pamela J. Hearn through the associated video clip, we concluded the session with a postsession survey (Appendix G). Students used their laptops to submit responses, which were collected through an active learning platform. The postsession survey served three goals: (a) to evaluate the session, (b) to enable students to identify their perceived change in comfort level in approaching patients with disability, and (c) to prompt students to reflect on how their approach to patients with disability would change in future interactions, thus encouraging cognitive application of the

learning material to facilitate retention and carryover into clinical practice.

Alternative Delivery Format: Video for Independent Viewing
As an alternative to implementing the session with a live facilitator, we also developed a video format (Appendix C) for independent viewing by students, either asynchronously or synchronously. An earlier version of the 28-minute video was delivered to second-year medical students as an independent viewing assignment. The video format can be assigned by instructors as a stand-alone experience, or as preparation for a clinical experience or other interactive session, in a manner akin to a flipped classroom model. The video prompts students or the instructor to pause the video at two points and write reflections. If using the video in a group setting, the instructor should provide about 3 minutes at each of the two pause points for students to reflect and discuss responses with adjacent peers in the lecture hall. The instructor may then invite a larger group discussion, if desired.

Evaluation Strategy
We developed the presession question (Appendix F) to gauge the range of student comfort levels in working with patients with disabilities. The postsession survey (Appendix G) prompted students to rate the session's perceived effectiveness, as well as to identify their perceived change in comfort level working with individuals with disabilities through a retrospective pre-post question.

The postsession survey also invited students to reflect on and share examples about how their approaches to patients with disability would change in future patient interactions.

Institutional Review Board (IRB) Approval
We submitted a proposal to the University of Michigan IRB Committee for collection and study of student responses obtained before, during, and after the session. The study was determined to be exempt. We reviewed deidentified responses in aggregate.

## Results

We did not collect data from the session version administered as an independent assignment to second-year medical students. We pooled data from the two in-person sessions delivered to first-year medical students (151 respondents). Prior to the session, students reported varying levels of comfort in working with patients with disabilities (Figure 1), underscoring the importance of education in this area. After each session, 79% of students indicated they were either somewhat or much more comfortable approaching patients with disability (Figure 2). This was a sizable percentage considering that prior to the session, 14% of students had already self-identified as "quite comfortable" with this population. Students also indicated the session served as an effective foundation for working with patients with disability; 78% percent of students rated this session as either quite effective or highly effective.

The themes shown below were drawn from narrative student comments regarding how their approaches to patients with disability would change in future patient interactions.

- Being mindful of the whole person and not just the disability; getting to know the person better and understanding his/her view of his/her disability.
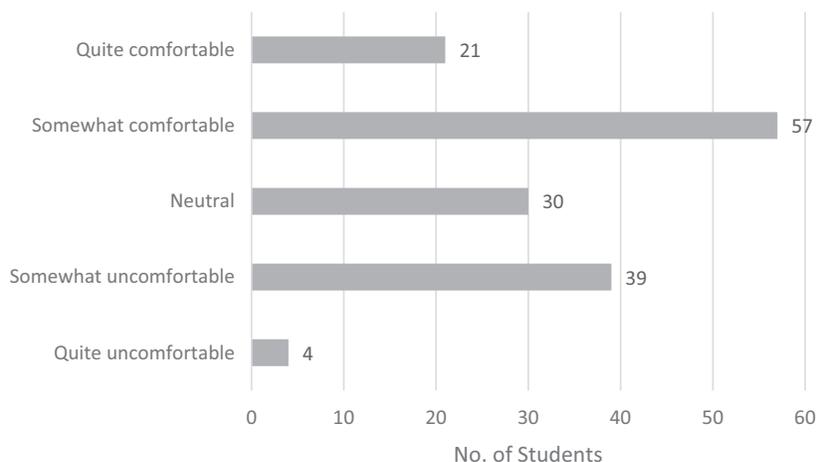


**Figure 1.** Students' perceived comfort level approaching a patient with a disability. A presession question showed that first-year students displayed a wide range of comfort levels prior to the session, with 21/151 (14%) feeling already quite comfortable, and 43/151 (28%) reporting at least some discomfort approaching a patient with disability.
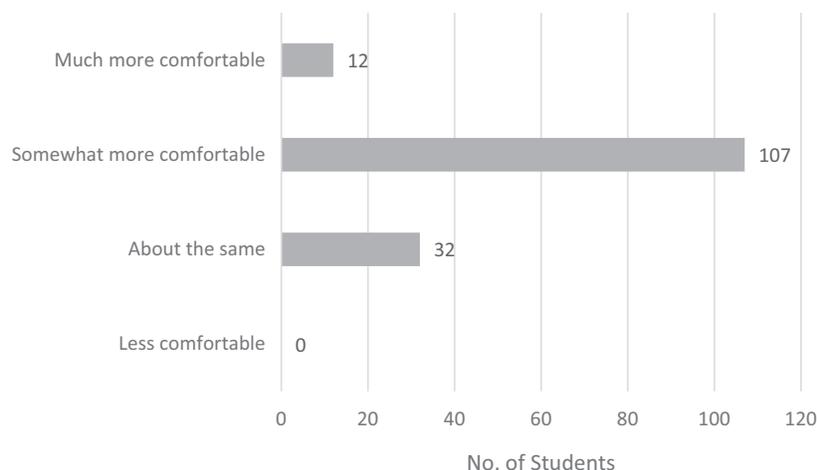
**Figure 2.** A retrospective question in the postsurvey showed that 119/151 students (79%) perceived themselves as more comfortable approaching a patient with a disability after the session.

- Including the patient as an expert in the decision-making and in developing appropriate medical recommendations; acknowledging one's own knowledge gaps; learning from the patient.
- Focusing less on self and self-consciousness and more on the patient.
- Greater comfort centering on the patient's goals and needs, without excessive focus on the disability; letting the patient's concerns guide the encounter.
- Greater openness to talking with the patient and eliciting his/her perspective (about his/her disability and abilities, how to help, sensitive topics, treatment plans).
- Being aware of one's own assumptions and biases and avoiding prejudgments.
- More flexibility and creativity in approach to the patient; adapting to the patient's needs.
- Practical applications and person-first language; examples of phrases to enlist patient input.

Student reflections largely echoed the key points from the lecture, including the importance of focusing on the patient as a whole person, as well as engaging and enlisting the patient's expertise during the medical encounter. Many students reflected on having a greater comfort level, such as in directing conversation with the patient to establish understanding, as well as being less self-conscious or inhibited. Some students highlighted practical phrases and person-first language. The following representative comments illustrate students' reflections on how their approach to patients with disability would change:

- "I would make sure to focus on first getting to know the patient as a person and what his or her concerns, goals,

and needs are. I have a better understanding of how to approach asking them about their disability. I would make sure to try and be aware of any assumptions or biases I might make or have as well."
- "I would make an effort to work with the patient to find solutions that work best for them, as they are an expert on their condition, and not assume they can or can't do certain things based on their disability without asking or getting more information."
- "I would feel much more comfortable [after this session] and when the provider/ medical student feels more at ease it projects into the interaction to help make it run more smoothly with the patient."

The session was also well received by individuals with disabilities who witnessed the session. One parent of a son with cerebral palsy wrote to us:

I wanted to reach out and say, as a parent, I was so thankful we came early enough to hear your presentation. There were so many times I wanted to stand up, clap and say "Yes!" and "Bravo" during your lecture. Your presentation gave the students a great balance of research and practical advice, such as the person-first language. And perhaps most importantly giving them permission to face and discuss their discomfort. I listened to the students around us discussing... in their small groups how and why they might be uncomfortable. It was fascinating. I believe by discussing the discomfort, bringing it out in the open, will help them in the future when they experience it. They may say, yes, I remember that I might feel this way. It's

okay and we will begin to see that barrier removed one doctor at a time. Thank you for your work to advance the health care and well-being of people with disabilities.

## Discussion

To address the need to enhance medical student comfort with and understanding of disability, we developed an interactive session to humanize disability, stimulate personal reflection, illustrate how barriers form, and provide a framework for health care providers to interact effectively with patients with varying abilities. A strength of the large-group session format is that it introduces a patient perspective and prompts student reflection and active learning while requiring less time from facilitators and experts than would multiple small-group workshops.

The session used reflective learning to prompt students to explore and understand their role with regard to a patient's disability and to contemplate why they may feel uncomfortable approaching a patient with disability in the clinical setting. Definitions of reflection emphasize "purposeful critical analysis of knowledge and experience, in order to achieve deeper meaning and understanding."[19] By reflecting on the difference between illness and disability, students were led beyond a definition to grapple with a nuanced distinction that integrates medical and sociocultural elements and to explore the physician (i.e., medical expert) role with regard to disability. During the second period of reflection, students focused on their personal comfort levels in working with individuals with disability. Students explored their experiences and responses to arrive at a deeper understanding of potential barriers to providing effective care for individuals with disability. By helping students understand and process their own reactions to, and possible discomfort with, caring for individuals with varying abilities, this reflection process serves to normalize an emotional response, which can then be recognized and modulated. The reflection process also enables health care providers to own the problem and solution rather than to ascribe the problem to a small group of incompetent or inappropriate physicians.

In the process of developing and evaluating the session, we learned that students had a wide range of comfort levels with, and prior exposure to, disability, making optimization of a single session challenging. When asked how their approaches to disability would change following the session, some students noted they had never worked with an individual with disability, making it hard to know how their approach would change. Other students noted they felt very comfortable working with individuals with disabilities prior to the session and/or described growing

up with a family member with a disability. The use of paired student reflection was one strategy to broaden applicability of the session, allowing students with a higher comfort level to explore barriers by listening to and understanding their peers. In the future, the presenter may be able to more effectively engage experienced students by verbally acknowledging the presence of differing levels of experience in the room. The experienced students could be encouraged to use the session to better understand others' perspectives and further develop as advocates and coaches for individuals with disabilities.

There are several limitations inherent in this introductory lecture. For example, the patient anecdotes offered during the session represent the perspective of only one individual with a disability. We suggest embedding this session as an introduction within a longitudinal curriculum that addresses disability with consideration of diverse patient perspectives, includes individuals with varying abilities, and invites students to interact directly with individuals with disabilities. Examples of such curriculum components include patient panels, clinic visit encounters, and home visits to patients with varying abilities. Indeed, upon reviewing student feedback, we learned that students desire practical communication advice and real experience interacting with patients with disabilities. In particular, students would like further instruction on how to bring up the topic of disability with their patients when medically relevant. These findings echo those from the Rogers et al.[8] session, which suggested that previous experience and training in working with individuals with disabilities are associated with better provider attitudes.[13] Further work should seek to equip students with effective tools as they move into clinical settings, as well as to reassess student comfort levels in those settings. Moreover, educators should develop an assessment to evaluate student skills related to better outcomes for patients with disability. Specifically, this assessment should measure a medical student's interactions and communication proficiency with individuals with disabilities across the medical school curriculum, as evaluated by both faculty preceptors and patients.

While the lecture was initially designed for second-year medical students who are familiar with the wards, the clinic, and the general process of meeting a patient in a clinical setting, the feedback collected for this lecture came from first-year medical students with limited exposure to caring for patients in general. Given the lack of experience with clinical interactions, it may have been difficult and unrealistic for many first-year students to feel much more comfortable working with individuals with disabilities following a single introductory session. Further assessment of

this intervention with second-year medical students would be valuable.

Another limitation in evaluating the session is that the retrospective assessment of comfort level did not enable objective measurement of students' comfort levels relative to an external or predefined level. However, compared to a pre- and postsession survey with equivalent questions, our retrospective pre-post question about comfort level offers two primary advantages. One advantage is a decrease in bias that may be introduced when greater understanding of a topic and its challenges during a session leads to a lower confidence level after the session. The second advantage is to avoid a ceiling effect. If *quite comfortable* was the highest category of comfort assessed both before and after the session, a student who began the session feeling quite comfortable working with people with disabilities could gain significant insight and learn new approaches during the session yet remain in the same category of *quite comfortable* afterward. The postsession query requires students to indicate how much their comfort level has changed from before the session.

Understanding that caring for individuals with disability is a responsibility not only of physicians, but also of numerous other health care professionals, a future direction to enhance our session includes partnering with educators in other health care professions. Seeking and incorporating their perspectives to adapt this material for other health care schools, such as nursing, dentistry, and physical and occupational therapy, will increase the session's influence in promoting better health care for individuals with disability.

## Appendices

A. Slide Deck.pptx

B. Slide Deck Lecture Instructions.docx

C. Video.mp4

D. Video Lecture Instructions.docx

E. Reflective Questions.docx

F. Presession Question.docx

G. Postsession Survey.docx

*All appendices are peer reviewed as integral parts of the Original Publication.*

**Sandra L. Hearn, MD:** Assistant Professor, Department of Physical Medicine and Rehabilitation, University of Michigan Medical School

**Pamela J. Hearn, AAS:** Medical Transcriptionist, Providence Health and Services

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