

Disability in Interventional Radiology

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Semin Intervent Radiol 2021;38:500–503

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Disability is often not a major focus of those in healthcare, not alone interventional radiology (IR). If anything, disability is viewed as something to fix or avoid. Consider the infamous mantra about the three As of a good IR: availability, affability, and *ability*. This narrative can leave little room for those who have or develop an impairment in our specialty. One is left to assume that if they do not have the same ability as others, they must not be a good IR, or perhaps IR is no longer a good fit.

However, disability is not uncommon, both among clinicians and patients. Approximately one in five Americans live with a disability¹ and we all share the potential to become disabled. This may be particularly true for specialties like IR, where one works standing and wearing lead with regular exposure to ionizing radiation and blood-borne pathogens. For example, reported rates of lower back and neck issues range from 21 to 70% among image-guided proceduralists across studies.^{2–4} IR work can also entail demanding schedules and environments that can lead to mental/emotional distress with rates of burnout among IRs as high as 72%.⁵ Like other minority groups, people with disabilities continue to face discrimination in professional pursuits as well as in access to and quality of healthcare they receive.^{1,6,7} Such experiences are not only the result of difficulties finding practices able/willing to accommodate them but persistent and pervasive stigma. For clinicians, this can mean being devalued and marginalized.⁸ For patients, this propagates disparities resulting in worse health and healthcare outcomes. This article provides a view into an underdiscussed topic in IR and considers how we should support clinicians and patients with disabilities in our specialty.

First, it is important to distinguish between “impairment” and “disability.” These terms are often used interchangeably but are not synonymous. Impairment refers to a deviation in physiologic function, whereas disability refers to a limitation in activity.⁹ For example, consider Dr. S., a private practice IR in Oregon. She was 3 years out from training, working toward partnership when she noticed occasional numbness in her right hand. At first, she wrote it off, perhaps sleeping in an odd position or gloves being too tight. However, she then noticed herself dropping wires and needles. She was ulti-

mately diagnosed with multiple sclerosis. The numbness and weakness in Dr. S.’s hand is an impairment. Her inability to thread a wire with that hand is a disability.

There are also many types of impairment and disability. They can be temporary, chronic, or involve physical function, mental health, learning ability, and senses. Impairment tends to have a pathologic connotation, in that it should be fixed or corrected if possible.⁹ Although disability can also be temporary, it can be integral to a person’s sense of identity and offensive to assume that someone’s disability needs to be corrected merely because it differs from a given norm.¹⁰ Such an understanding is part of what differentiates the social versus medical model of disability and is the spirit behind the Americans with Disabilities Act (ADA). The idea is that someone’s disability is not merely the result of a physical or mental impairment but how that impairment fits within their environment. With the right accommodations and environment, someone’s impairment may no longer substantially limit their abilities.^{11,12}

The ADA requires practices to make reasonable accommodations for their employees and patients, but many clinicians and patients with disabilities still face discrimination.^{1,8} Certainly, there are impairments not currently compatible with IR practice, but technology continues to provide means of altering environments to allow more people to fit in IR. Consider standing wheelchairs, weightless lead, and robotics. Despite this, clinicians may struggle to find training programs or practices that truly align with the spirit of the ADA and are willing to support them. Those who develop a disability as a clinician frequently struggle to collect disability claims and get support while fearing that disclosure of an impairment could cost them their career.^{8,13}

These struggles are complicated by medical culture, which tends to celebrate ability, perfectionism, and stamina.¹⁴ This has historically discouraged people with disabilities from entering healthcare and can make it challenging for a clinician who develops an impairment to seek accommodations or ask for help. They assume they either have what it takes or not. Perhaps IR or medicine is no longer a good fit. Consider a

Table 1 Considerations for training programs

<p>Physical environment</p> <ul style="list-style-type: none"> • Could facilities accommodate someone who uses a wheelchair or other assistive device (e.g., curb cuts, hallway/door width, elevators, exam/procedure room tables, work rooms) • Are there means of having an aid/medical assistant assist with certain tasks <p>Cultural environment</p> <ul style="list-style-type: none"> • Can the program help trainees find accommodations or assistive devices like standing wheelchairs or extra time for standardized exams • Are there current or past faculty with a disability that could serve as a mentor • Are services and support for substance use disorders and other mental illnesses readily available, anonymous, and protected • Are resources/support accessible and asking for help supported • Is information available for people with visual or hearing impairments
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resident who starts hearing voices as he begins his final year of IR training. He feels crazy and tries to cope with it by working harder and drinking alcohol. He waits to see a psychiatrist until he develops suicidal ideation because that will make it real and end his career. In reality, mental illness is more common among clinicians than among the general public and is often manageable if the person is empowered with the support they need,¹³ even severe mental illnesses.¹⁵

Some may question why support a diversity of ability in a specialty where technical skill is often praised as a key virtue? Certainly, an impairment can limit one's ability to perform clinical tasks, particularly in more procedural specialties. However, disability can also be a driving force behind someone's decision to practice medicine and passion for innovation. It can allow clinicians to better connect with patients and provide unique perspectives that broaden the diversity of thought in a field.^{6,8} Furthermore, an impairment may not substantially limit one's clinical abilities in the right environment.

To support IRs with disabilities, we should consider representation, mentorship, community, and available resources. For example, the Society of Interventional Radi-

ology's Diversity and Inclusion committee has strived to foster a culture of inclusiveness, and Women in IR and Underrepresented Minority Sections have created communities for minority groups in the specialty. We believe diversity of ability should be included in those efforts to establish a sense of representation and community for clinicians with disabilities in the specialty. Likewise, it would be helpful to establish means of connecting IRs who develop a disability with others who may serve as mentors. Perhaps our societies could develop resources to help these members of our community navigate disability insurance claims or requests for accommodations? Finally, training programs should consider what ways they can make their program inviting to and supportive of trainees with a disability. Would a trainee be able to use a stranding wheelchair in the procedure rooms? Are there effective and accessible ways for trainees to access mental health services without fear of retribution? Is the privacy of these resources reinforced and protected? ►**Table 1** provides a list of additional potential considerations for training programs.

Table 2 Considerations for practices and training programs

<p>Physical environment</p> <ul style="list-style-type: none"> • Mobility <ul style="list-style-type: none"> ◦ Could facilities accommodate someone who uses a wheelchair or other assistive device (e.g., curb cuts, hallway/door width, elevators, exam/procedure room tables, work rooms) ◦ Lifts available for safe transfers ◦ Extra devices available for temporary use (e.g., canes, walkers, wheelchairs) • Communication—Information available for people with visual or hearing impairments <p>Cultural environment</p> <ul style="list-style-type: none"> • Patients are asked about any special needs during scheduling • Staff trained to take care of patients with disabilities • Staff allow extra time as needed for patients • Use person-first language • Avoid assuming someone with a disability needs help or wants their disability “corrected” • Address the patient rather than their aids. Ask them what they need <p>Clinical environment</p> <ul style="list-style-type: none"> • Consider reaching out to clinician familiar with any medical issues that may arise during the procedure or periprocedural care • Have a plan for common needs such as sensitivity to anesthesia/sedation, contractures, or autonomic dysreflexia • Be comfortable screening for conditions such as substance use disorder, depression, or anxiety that may arise in consulting with a patient
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Practices should also consider whether they have an accessible, supportive, and safe environment for patients with disabilities.¹⁶ Some of this environment is physical, including curb cuts, large enough hallways and doorways to accommodate wheelchairs, or low enough exam tables with safety rails. Are there available lifts for safe transfers, Braille or sign language services for communication, or staff trained to care for people with disabilities? Other aspects of an accessible, supportive, and safe environment are social/cultural. IRs should use people-first language (e.g., person who uses a wheelchair rather than wheelchair user). We should address the patient rather than their aid or assume patients need an aid or support just because they have a disability. For example, it is helpful to offer assistance if you see someone struggling, but it can be offensive to assume someone's wheelchair needs pushed for them just because they use one. Often it is best to be as proactive as possible. For example, when scheduling a procedure or clinic visit, new patients can be asked whether they have any special needs that the practice may accommodate. **Table 2** provides a list of additional potential considerations for practices.

Finally, there are also medical aspects to consider in creating a safe IR practice for patients with disabilities. Consider, for instance, a 27-year-old man with a C3 spinal cord injury who develops ruptured appendicitis with a periappendiceal abscess. IR is consulted for percutaneous drainage. Shortly after numbing the skin and inserting a 19-G coaxial needle into the peritoneal cavity, the patient becomes tachycardic to 120 bpm with a blood pressure of 200/130 mm Hg (previously 58 bpm and 110/75 mm Hg). The patient progressively becomes confused as the IR team struggles to bring down the blood pressure.

Patients with high spinal cord injuries (mid-thoracic spine and above) are at risk of life-threatening autonomic dysreflexia when noxious stimuli occur below the level of their injury. These episodes are not uncommon, and patients may know what works for them if the injury is remote, but a good general approach acutely is to sit the patient up and place 0.5 to 1 inch of nitroglycerin gel on their forehead or chest.¹⁷ This treatment is advantageous because the gel can simply be wiped off if there is overcorrection of the heart rate or blood pressure.

Other specific examples include being aware that patients with cerebral palsy tend to be more sensitive to sedation and anesthesia, so starting with low doses can be helpful.¹⁸ These patients also tend to be prone to hypothermia, hypotension, delayed emergence, and trouble with airway protection during procedures, so it is important to be proactive with warming blankets and anesthesiology support.¹⁸ Given that there are many different types of impairments and disabilities, patients' needs and preferences can vary substantially. Thus, it can be invaluable to invest a little time and effort upfront asking the patient about their needs/preferences and checking with their primary care provider or other clinician who would be most familiar with potential medical needs that may arise when caring for the patient.

In summary, patients and clinicians with impairments and disabilities are not uncommon but still face substantial barriers and stigma in healthcare. IR tends to value ability

and technical skill, but we should also foster an environment that does not exclude valuable potential members of our community or IRs who develop a disability during their career. Similarly, we should consider whether our practices are accommodating for the many people with disabilities that may need IR care. This involves considering not only physical barriers but cultural and clinical ones as well. By adjusting these environments, IR can further expand its diversity of experience and thought while better caring for an important and often overlooked portion of our patient population.

Funding
None.

Conflicts of Interest
The authors have none to disclose.

Acknowledgments
This work was supported by the SIR and SIO Applied Ethics Working Group.

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