

# **People with Disabilities: Information on the Health Care Workforce and Provider Training**

GAO-24-106789 Q&A Report to Congressional Requesters

## Why This Matters

People with disabilities are less likely to be employed and may be underrepresented in certain health care occupations compared to people without disabilities. People with disabilities also experience challenges accessing health care and are at increased risk of health disparities, such as lower life expectancy. Due to these and other concerns, the National Council on Disabilities and other organizations have called for action to improve health care for people with disabilities, including a focus on provider engagement during treatment, care planning, and addressing health disparities.

We were asked to examine the prevalence of people with disabilities in the health care workforce, and to describe how providers are trained to meet the health needs of people with disabilities. This report describes the prevalence of people with disabilities in the United States by type of disability, employment status, and certain occupation groups. It also describes examples of training providers receive to meet the health care needs of people with disabilities, as well as the related perspectives of 14 stakeholder organizations including those representing educators, trainees, researchers, providers, and the disability community.

### **Key Takeaways**

- People with disabilities comprised an estimated 6.0 percent of employed people in the United States in 2021, according to our analysis of Annual Disability Statistics Compendium data. Among the standard occupation groups related to health care, people with disabilities comprised 8.0 percent of those employed in health care support, such as home health aides, and 4.2 percent of health care practitioners and technicians in 2021.
- Stakeholders we interviewed noted that disability training for health care providers is not widely required or standardized by organizations that set standards and accredit provider training programs. While we identified several disability-related training programs, including some supported by the Department of Health and Human Services (HHS), nearly all stakeholders said that providers need additional training. Stakeholders also noted that limited provider training can affect the care that people with disabilities receive and may contribute to health disparities, delays in receiving care, or the need to travel long distances for care.
- Stakeholders identified several best practices for disability training:
  - o Incorporate disability content into existing training.
  - o Offer direct engagement with the disability community.
  - o Target provider bias and disability stereotypes.

### What is the prevalence of people with disabilities in the United States by type of disability and employment status?

An estimated 13.0 percent of people in the United States reported having a disability in 2021, according to the Annual Disability Statistics Compendium analysis of U.S. Census Bureau data.<sup>1</sup> The U.S. Census Bureau defines a disability as a physical, mental, or emotional condition that causes vision or hearing impairments, or makes it seriously difficult for a person to perform activities such as walking, climbing stairs, dressing, bathing, concentrating, remembering, or running errands alone.<sup>2</sup> Among people reporting a disability, an estimated 48.0 percent reported having an ambulatory disability, which was the most common disability type reported in 2021.<sup>3</sup> Respondents also reported cognitive, independent living, hearing, and other disabilities. (See fig. 1.)





Source: GAO analysis of estimates reported in the Annual Disability Statistics Compendium. | GAO-24-106789

Notes: The Rehabilitation Research and Training Center on Disability Statistics and Demographics, part of the University of New Hampshire's Institute on Disability, uses data from the U.S. Census Bureau's American Community Survey to develop these estimates for the compendium. Noninstitutionalized civilians by disability type: all ages for hearing and vision; ages 5+ for cognitive, ambulatory, and self-care disabilities; and ages 15+ for independent living disabilities. According to the U.S. Census Bureau, a disability is a physical, mental, or emotional condition that causes vision or hearing impairments, or makes it seriously difficult for a person to perform activities such as walking, climbing stairs, dressing, bathing, concentrating, remembering, or running errands alone. Totals exceed 100 percent as people could report having more than one type of disability. All estimates have a margin of error no greater than +/-0.2 percentage points at the 95 percent level of confidence.

Regarding employment status, our analysis of compendium estimates found that an estimated 6.0 percent of employed people in the United States reported having a disability in 2021.<sup>4</sup> (See app. I for related compendium estimates for 2018 and 2019.)

What is the prevalence of people with disabilities employed in health care occupations?	People who reported disabilities in 2021 comprised an estimated 8.0 percent of those employed in health care support and 4.2 percent of those employed as health care practitioners and technicians, based on our analysis of compendium data. <sup>5</sup> Occupations in the health care support group include home health aides, physical therapy assistants and aides, and dental and medical assistants. Occupations in the health care practitioners and technicians group include physicians, registered nurses, and surgeons.
	Compared to other standard occupation groups, the prevalence of people employed in health care support who reported having a disability was among the highest. Conversely, the prevalence of people employed as health care practitioners and technicians who reported having a disability was among the lowest. (See fig. 2.)





# Figure 3: Estimated Distribution of Employed People with and without Disabilities Across Standard Occupation Groups, 2021

Source: GAO analysis of estimates reported in the Annual Disability Statistics Compendium. | GAO-24-106789

Notes: The Rehabilitation Research and Training Center on Disability Statistics and Demographics, part of the University of New Hampshire's Institute on Disability, uses data from the U.S. Census Bureau's American Community Survey to develop these estimates for the compendium. Noninstitutionalized civilians aged 18 to 64 employed in a set of standard occupation groups established by the Office of Management and Budget (OMB) in a "Standard Occupation Classification System." In addition to the two standard occupation groups that relate specifically to health care—health care practitioners and technicians, and health care support—OMB's community and social services occupation group includes certain occupations that may relate to health care, such as social workers, rehabilitation counselors, and mental health counselors. All estimates have a margin of error no greater than +/-0.3 percentage points at the 95 percent level of confidence. Among health care occupations, the margin of error is within +/- 0.2 percentage points for people with disabilities, and +/- 0.1 percentage points for people without disabilities.

What are some examples of health care provider training that incorporate disabilityrelated content? We identified several examples of disability training for health care providers; these demonstrate a range of approaches and are tailored to different provider types. (See table 1.) Health care provider training includes the formal training and education that prepare people for careers as licensed health care providers, such as nurses, physicians, home health aides, and physical therapists. Such training can occur through a variety of educational settings, including classrooms; clinical

settings, such as teaching hospitals; or through continuing education courses like virtual webinars.

Educational setting	Description
Nursing school	At different points throughout a graduate course, nursing students received lectures from developmental disability nurses about autism spectrum disorder (ASD) and common comorbidities; participated in online modules on epidemiology, and medical and diagnosis issues related to ASD; and were matched with a young person with autism.
Medical school	Medical and physical therapy students participated in a 3 hour 30 minute interprofessional clinical experience that included an encounter with a patient with a disability. The training content focused on knowledge development about interacting with people with disabilities and included an orientation, the performance of a neurological exam, and a follow-up group discussion.
Medical school	First-year medical school students received presentations about deaf people's experiences in health care from clinicians who are themselves deaf. Students also participated in a role-reversal simulation exercise with deaf volunteers acting as health care providers and the students acting as patients without speaking. Students were encouraged to use alternative forms of communication, such as interpreters, American Sign Language, gestures, or notes. Finally, students participated in small-group debriefing sessions.
Medical school	Students received an introductory lecture about disability health care, followed by a discussion of a series of videos featuring people with disabilities. Students participated in a set of simulated provider-patient training scenarios with people with disabilities.
Medical school residency	The Special Care Optimization for Patients and Education (SCOPE) voluntary training program pairs a child with special health care needs with a pediatric resident and faculty mentor. The SCOPE team works with the patient, family, and current health care providers over several months. The program includes monthly communication with the family, a home visit, one or more in-person meetings facilitated by a toolkit that develops care plans and goals of care, and case-based discussions.
Continuing education	Critical care providers completed an online workshop with information on working with people with developmental disabilities. Content included an overview of developmental disabilities, training on communication, and identification and interaction techniques.
Continuing education	A one-hour online webinar covering general elements of health care for people with disabilities, including basics of disability law and ways to create more accessible clinical environments.
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#### Table 1: Examples of Disability Training for Health Care Providers

Source: GAO analysis of disability trainings identified in research studies, online training repositories, as well as stakeholder interviews. | GAO-24-106789

Note: These examples do not represent the universe of related provider training. The nursing school and medical school examples are specific to individual institutions, and we did not review the extent to which similar trainings are available in other institutions or educational settings. While we also did not review the availability of the continuing education examples, such courses are often available to a broader audience.

### How does the Department of Health and Human Services support disability training?

HHS supports disability training in several ways, including through grant funding and cooperative agreements with states for the development and delivery of disability-related training programs.<sup>7</sup>

Examples of such HHS efforts include the following:

- Primary Care Training and Enhancement-Language and Disability Access. HHS's Health Resources and Services Administration (HRSA) provides grants to organizations to develop curricula and train medical students, physician assistant students, and primary care medical residents to provide high quality primary care services to people with physical disabilities, intellectual and developmental disabilities, or limited English proficiency. According to HHS, in September 2023, HRSA awarded \$8.2 million to 18 organizations to develop these programs.
- **Developmental-Behavioral Pediatrics Training.** HRSA provides grants to support medical schools and hospitals' training efforts aimed at enhancing providers' ability to "evaluate, diagnose or rule out developmental disabilities, including autism." According to HHS officials, in the spring of 2023, HHS issued \$3.4 million in awards to 13 organizations to provide such training.

	• Leadership Education in Neurodevelopmental and Related Disabilit (LEND). HRSA administers grants to support LEND programs, which typ operate within a university system and offer training to a range of professionals, including health care providers, on caring for people with neurodevelopmental and other developmental disabilities. LEND trainee participate in academic, clinical, leadership, and community opportunitie receive training in cultural and linguistic responsiveness, and family and person-centered approaches to care. According to HHS officials, in May 2021, HHS issued \$36.6 million in awards to 60 LEND programs across country.					
	• Improving the Health of People with Mobility Limitations and Intellectual/Developmental Disabilities through State-based Public Health Programs. HHS's Centers for Disease Control and Prevention funds this program in 10 states, which supports two online provider continuing education training modules: <i>Responsive Practice: Providing Health Care &amp;</i> <i>Screenings to Individuals with Disabilities</i> , and <i>Responsive Practice:</i> <i>Accessible and Adaptive Communication</i> . The modules are designed to train providers to recognize health disparities and barriers that people with disabilities face when accessing health care, as well as help providers effectively communicate with patients that have a disability.					
Could providers benefit from additional training to meet the health care needs of people with disabilities?	Yes, according to representatives from nearly all of the14 stakeholder groups we interviewed who said that providers need additional training to meet the health care needs of people with disabilities. <sup>8</sup> Given the prevalence of people with disabilities in the United States, most stakeholders noted that providers likely will care for a person with a disability at some point in their health care career and would benefit from additional training.					
	Stakeholders also discussed how inadequate training may affect provider behavior toward people with disabilities and the care they receive. For example					
	<ul> <li>Most stakeholders said that providers may be uncomfortable or hesitant to provide care to people with disabilities.<sup>9</sup> They also said that providers may not recognize their biases about the health care needs of people with disabilities or stigmatize individuals with disabilities.</li> </ul>					
	<ul> <li>Most stakeholders said providers may not use effective communication strategies, such as interpreter services, or conduct examinations using accessible medical equipment, such as a lift to facilitate patient transfers.</li> </ul>					
	• Most stakeholders noted that limited provider training may contribute to health disparities experienced by people with disabilities, such as higher rates of mortality. <sup>10</sup>					
	• Many stakeholders told us that people with disabilities may fear or mistrust health care encounters, due to prior experience with inadequately trained providers. In such cases, people with disabilities may, for example, avoid or delay preventive care, or need to travel longer distances to find a provider that meets their needs.					
	• Several stakeholders noted a risk that inadequately trained providers may attribute a person's medical symptoms to a disability, even if unrelated, which is known as diagnostic overshadowing.					

What factors may affect the extent to which health care providers receive disability	Many stakeholders told us that disability training is not widely required or standardized by the various organizations that set standards and accredit provider training programs. <sup>11</sup> As a result, according to many stakeholders, the decision to incorporate disability training is often left to each training program.				
training?	Many stakeholders noted that accrediting organizations could require disability training. Many stakeholders also suggested including disability-related questions on provider certification assessments as an option to increase the likelihood that provider training programs incorporate more disability content. <sup>12</sup> However, they pointed out that the resources (time, funding, and equipment) required to develop and implement training programs should be considered in the context of competing priorities.				
What best practices did stakeholders identify for training providers to	Nearly all stakeholders told us that training programs should incorporate disability content throughout provider training, including in classroom and clinical training environments. For example, many stakeholders suggested				
meet the health care needs of people with	<ul> <li>integrating core competencies on disabilities, such as including a person's functional status in clinical decision making, into health care training;<sup>13</sup> and</li> </ul>				
disabilities?	<ul> <li>training providers in clinical settings using accessible medical equipment, such as low-transfer-height exam tables, when available.</li> </ul>				
	Most stakeholders considered direct engagement and inclusion of people with disabilities in health care training, such as their participation in the developmen of training programs, to be a best practice. For example, many stakeholders noted that directly engaging people with disabilities outside of traditional clinical settings could improve providers' ability to treat people with disabilities. In addition, many stakeholders suggested educators include a person with a disability as an actor in a simulated provider-patient training scenario that focuses on medical symptoms unrelated to their disability.				
	Many stakeholders suggested that training programs could target cultural bias and stereotypes about people with disabilities. For example, one stakeholder suggested addressing instructor-held stereotypes about the quality of life, abilities, and value of people with a disability. Another stakeholder suggested training programs frame disability as a common experience that will likely affect most people at some point in their lifetime, such as sensory or mobility disabilities related to aging.				
Agency Comments	We provided HHS with a draft of this report. HHS provided technical comments, which we incorporated as appropriate.				
How GAO Did This Study	To describe the prevalence of people with disabilities in the U.S. health care workforce, we reviewed and analyzed information in the Annual Disability Statistics Compendiums published from 2019 through 2023. At the time of our review, the 2023 compendium's analysis of 2021 data was the most recently available. Along with other federal sources, the compendium analyzes data from the U.S. Census Bureau's American Community Survey (ACS) to estimate the population and percent of people with disabilities in the United States overall, as well as by type of disability and employment status. <sup>14</sup> The compendium also provides employment estimates for a set of standard occupation groups identified by the Office of Management and Budget (OMB), two of which specifically relate to health care: (1) health care practitioners and technicians (e.g., physicians, registered nurses, and surgeons), and (2) health care support (e.g., home health				

aides, physical therapy assistants and aides, and dental and medical assistants).  $^{\rm 15}$ 

In its reporting of 2019 estimates, the compendium changed the source data it used for certain estimates from the ACS 1-year estimates to the ACS public use microdata sample (PUMS).<sup>16</sup> Due to differences in these data sources, as well as differences in the published age range of the population, we determined it was not appropriate to compare compendium data across years.<sup>17</sup>

To assess the reliability of the compendium data, we reviewed relevant documentation (e.g., design and methodology documentation of the ACS); interviewed the author of the compendium; and compared estimates to the ACS and other federal data. Based on these steps, we determined that the compendium estimates based on the 2018, 2019, and 2021 ACS data were sufficiently reliable for our purposes. We excluded compendium estimates from the 2020 ACS, because the U.S. Census Bureau determined that these data did not meet statistical quality standards.

To identify examples of disability training available to providers, we reviewed research studies and online training repositories, conducted web-based research, and interviewed stakeholders and HHS officials.

To describe how providers are trained to meet the health care needs of people with disabilities, we identified stakeholder organizations representing a range of perspectives, including educators, trainees, researchers, providers, and the disability community. We interviewed a nonprobability sample of 14 such organizations to obtain their perspectives on providers' level of training, gaps in training and contributing factors, opportunities to improve training, and best practices.

Based on these interviews, we identified themes and summarized the number of stakeholders that raised similar issues. Throughout the report, we use the following qualitative groupings of organizations and people: "several" refers to two to four stakeholders; "many" refers to five to seven stakeholders; "most" refers to eight to 11 stakeholders; and "nearly all" refers to more than 11 stakeholders. This information is specific to the stakeholders we interviewed and is not generalizable. In addition, we did not independently verify information provided by stakeholders, nor assess the feasibility of any suggestions they provided.

We conducted this performance audit from April 2023 to April 2024 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

List of Addressees	The Honorable Bernard Sanders Chair Committee on Health, Education, Labor and Pensions United States Senate				
	The Honorable Robert P. Casey, Jr. Chairman Special Committee on Aging United States Senate				

	The Honorable Sherrod Brown United States Senate								
	The Honorable Tammy Duckworth United States Senate								
	The Honorable Kirsten Gillibrand United States Senate								
	The Honorable Patty Murray United States Senate								
	The Honorable Elizabeth Warren United States Senate								
	As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies to the appropriate congressional committees, the Secretary of Health and Human Services, and other interested parties. In addition, the report will be available at no charge on the GAO website at https://www.gao.gov.								
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Annendix I: Estimated									
Prevalence of People	Table 2: Estimated Prevalence of People with Disabilities by Employment Status and Disability Type in 2018 and 2019								
with Disabilities by	Year	Population	Employment	-	Preva	lence of pe	ople by disabi	lity type ou	t of
Employment Status and		prevalence	prevalence	all people with disabilities					
Disability Type	2040	10.6%	E 29/	20 40/	10 70/	27.00/	50.9%	10.6%	living
	2018	12.0%	J.∠‰	28.4%	18.7%	37.9%	50.8%	19.0%	30.∠%
	2019	12.7%	5.4%	28.0%	18.2%	38.4%	50.7%	19.4%	36.5%
	Sources: G	AO analysis of est	imates reported in th	e Annual Disa	bility Statist	tics Compendium	n.   GAO-24-106789	Dama	
	NOTES: 1	ne Kenabilitat	ion Kesearch a	na i raining	g Center	on Disability	Statistics and I	Demographi	cs, part of the

University of New Hampshire's Institute on Disability, uses data from the U.S. Census Bureau's American Community Survey to develop these estimates for the compendium. We excluded compendium estimates from the 2020 American Community Survey (ACS), because the U.S. Census Bureau determined that these data did not meet statistical quality standards. Population and employment prevalence estimates are not comparable for 2018 and 2019 due to differences in the source data used by the compendium. According to the U.S. Census Bureau, a disability is a physical, mental, or emotional condition that causes vision or hearing impairments, or makes it seriously difficult for a person to perform activities such as walking, climbing stairs, dressing, bathing, concentrating, remembering, or running errands alone.

Data are for noninstitutionalized civilians. Employed persons meet conditions established by the U.S. Census Bureau and ACS data collection methodologies. All ages for hearing and vision; ages 5+ for cognitive, ambulatory, and self-care disabilities; and ages 15+ for independent living disabilities. Disability type estimates exceed 100 percent as people could report having more than one type of disability. All estimates have a margin of error no greater than +/- 0.3 percentage points at the 95 percent level of confidence.

### Endnotes

<sup>1</sup>The compendium is issued by the Rehabilitation Research and Training Center on Disability Statistics and Demographics, part of the University of New Hampshire's Institute on Disability, and uses data from the U.S. Census Bureau's American Community Survey (ACS) and other federal sources to develop its estimates. At the time of our review, the compendium's analysis of 2021 data was the most recently available.

The population described throughout this report does not include individuals in institutions, including jails, prisons, nursing homes, and hospitals.

<sup>2</sup>The ACS and other federal disability surveys categorize disabilities into six main types: cognitive, ambulatory, hearing, vision, self-care, and independent living.

<sup>3</sup>Disability types reported in the compendium are not mutually exclusive. Reported estimates include all ages for hearing and vision disabilities; ages 5+ for ambulatory, cognitive, and self-care disabilities; and ages 15+ for independent living disabilities.

<sup>4</sup>The compendium's employment estimates include noninstitutionalized civilians ages 18-64 years who meet employment conditions established by the U.S. Census Bureau and ACS data collection methodologies. See U.S. Census Bureau, *American Community Survey* (2022): 69, accessed November 21, 2023, https://www2.census.gov/programs-surveys/acs/tech\_docs/subject\_definitions/2022\_ACSSubjectDefinitions.pdf.

<sup>5</sup>These two occupation groups are among a set of standard occupation groups identified by the Office of Management and Budget in its "Standard Occupation Classification System." The margins of error for these estimates are +/-0.3 percentage points for health care support occupations and +/-0.2 percentage points for health care practitioners and technicians.

<sup>6</sup>The margin of error for both occupation groups' estimates is no greater than +/- 0.2 percentage points for people with disabilities, and no greater than +/- 0.1 percentage points for people without disabilities.

<sup>7</sup>HHS also directly and indirectly funds medical education—most commonly through Medicare and Medicaid Graduate Medical Education payments to accredited physician residency programs and teaching hospitals. In addition, HHS is available to provide technical assistance to providers and health care organizations. For example, the Centers for Medicare & Medicaid Services' Office of Minority Health offers health equity technical assistance on improving care for minority populations, including people with disabilities, as well as other resources. See Centers for Medicare & Medicaid Services, Office of Mental Health, accessed April 15, 2024, https://www.cms.gov/priorities/health-equity/minority-health.

<sup>8</sup>We interviewed a nonprobability sample of 14 stakeholder organizations representing a range of perspectives, including educators, trainees, researchers, providers, and the disability community. When characterizing stakeholder responses, "several" refers to two to four stakeholders; "many" refers to five to seven stakeholders; "most" refers to eight to 11 stakeholders; and "nearly all" refers to more than 11 stakeholders.

<sup>9</sup>Researchers have also explored provider perspectives on treating people with disabilities. See, for example, L. I. lezzoni et al., "Physicians' Perceptions of People with Disability and Their Health Care," *Health Affairs*, vol. 40, no. 2 (2021): 297-306, https://doi.org/10.1377/hlthaff.2020.01452. See also T. Lagu et al., "I Am Not the Doctor for You': Physicians' Attitudes About Caring for People With Disabilities," *Health Affairs*, vol. 41, no. 10 (2022): 1387–1395, https://doi.org/10.1377/hlthaff.2022.00475.

<sup>10</sup>In September 2023, the National Institutes of Health designated people with disabilities as a population that experiences health disparities for the purposes of its research.

<sup>11</sup>For example, the Accreditation Council on Graduate Medical Education sets standards and accredits residency training programs; the Liaison Committee for Medical Education establishes standards and accredits medical schools; and the Commission on Collegiate Nursing Education accredits nursing schools.

<sup>12</sup>While not widespread, several stakeholders noted that some providers, such as occupational therapists and developmental behavioral pediatricians, may have some training or experience working with people with disabilities. In addition, the standards established by the Commission on Dental Accreditation—the organization that accredits dental education—state that graduates must be competent in assessing and managing the treatment of people with disabilities.

<sup>13</sup>For an example of core competencies, see Alliance for Disability in Health Care Education, *Core Competencies on Disability for Health Care Education*, (Peapack, N.J.: Alliance for Disability in Health Care Education, 2019).

<sup>14</sup>The ACS is an annual survey based on a sample of about 3.5 million housing unit addresses. The compendiums we reviewed examined ACS data from 2018 through 2021. Because the ACS is a sample survey, results presented in this report are estimates and we present our confidence in the precision of the estimates at a 95 percent confidence level. This is the interval that would contain the actual population value for 95 percent of the samples that could have been drawn. All estimates presented in this report no greater than +/- 0.7 percentage points at the 95 percent level of confidence.

<sup>15</sup>OMB's community and social services occupation group also includes certain occupations that may relate to health care, such as social workers, rehabilitation counselors, and mental health counselors.

<sup>16</sup>Each year, the U.S. Census Bureau publishes ACS 1-year estimates for geographic areas with populations of 65,000 or more. PUMS data typically includes about two-thirds of the sample of the ACS with disclosure protection enabled so that respondents cannot be identified.

<sup>17</sup>Data on occupation is published for ages 16+ in 2018, and ages 18-64 for 2019 and 2021.