



U.S. Department of Veterans Affairs

Public Access Author manuscript

Am J Phys Med Rehabil. Author manuscript; available in PMC 2024 October 01.

Published in final edited form as:

Am J Phys Med Rehabil. 2024 October 01; 103(10): 911–917. doi:10.1097/PHM.0000000000002484.

Discovering Provider Awareness of Mobility Assistive Technologies and Clinical Guidelines- A Comparative Analysis with Consumer Responses

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Abstract

Objective: This study aims to enhance the accessibility and quality of mobility assistive technology (MAT) by investigating and bridging knowledge gaps between MAT providers and consumers with ambulatory limitations.

Design: A survey was conducted among MAT providers in the United States, consisting of sections on awareness, knowledge importance and desire, and knowledge sources. The responses were compared to data collected from consumers in a previous study.

Results: A total of 144 MAT providers participated, with 60% having received academic or professional training in relevant fields. Analysis revealed significant knowledge gaps between providers and consumers, particularly in AT assessment tools and knowledge sources. Moderate gaps were also observed in areas such as clinical practice guidelines, desired MAT information, and knowledge sources. However, the gaps in other areas were relatively small.

Conclusion: This study highlights the knowledge gaps between MAT providers and consumers, hindering the optimal utilization and fulfillment of user needs. Providers possess valuable information that consumers may lack, positioning them as primary knowledge sources. Addressing these gaps through targeted interventions, improved communication channels, and enhanced education can enhance the utilization of MAT and improve outcomes for individuals with ambulatory limitations.

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Author contributions: All authors significantly contributed to the manuscript.

Author disclosure:

Conflicts of Interest: The authors declare no conflict of interest.

Keywords

Information dissemination; Knowledge; Self-help devices; Wheelchairs

1. Introduction

As of 2021, 20.6 million Americans have ambulatory limitations, accounting for 6.8% of the United States population.¹ Loss of mobility is associated with reduced independence, increased social isolation, and decreased quality of life.^{2,3} Mobility assistive technology (MAT) is the most common way to compensate for mobility limitations. MAT encompasses not only mobility devices, such as wheelchairs, scooters, canes, crutches, and walkers, but also includes accessories for mobility devices. These accessories include wheelchair cushions, wheelchair casters and wheels, and power assist devices that aid in wheelchair propulsion, both directly and indirectly supporting the mobility of individuals. Approximately 5.5 million Americans use wheelchairs, and 18.4 million use other MAT to participate in daily activities.⁴

MAT is critical to enabling consumers to interact with the environment and engage in meaningful activities.³ While MAT is often effective, it may not always meet all the needs of consumers.⁵ This can be due to a variety of factors, such as limitations in technology or design, or individual differences in user needs and preferences.⁶ By including the voices of consumers in the development of MAT, researchers can better understand the needs and perspectives of consumers and develop more advanced and effective technology that meets their specific needs. This approach can help to overcome barriers to user mobility and improve their quality of life.^{7,8}

Another potential reason why MAT may not meet all the needs of consumers is due to the disparity in knowledge of MAT between providers, including healthcare professionals and MAT suppliers, and consumers.⁵ To reduce knowledge gaps, both providers and consumers can play a role. For example, providers can offer training or educational materials to help consumers understand and choose the most appropriate MAT, and consumers can take proactive steps to improve their knowledge of new MAT by conducting their own research and reading reviews from other consumers or industry experts. However, in addition to these efforts, it is important to identify the reasons for knowledge gaps, such as differences in awareness of new technology and knowledge sources, and to address them fundamentally.

A previous study identified users' knowledge of MAT, including awareness of new technology and its importance, awareness of relevant laws, standards, assistive technology (AT) assessment tools, and clinical practice guidelines, and their knowledge sources, as well as which MAT knowledge they desired most.⁵ The purpose of the present study was to collect similar information from providers and to identify the knowledge gaps between providers and consumers. We expect that the findings of this study will inform the development of education and training resources aimed to reduce the knowledge disparity between providers and consumers.

2. Method

2.1. Participants and data collection

Inclusion criteria were: (1) Individuals aged 18 years old or older; (2) individuals who currently work within the process of providing mobility related AT devices in the US. There were no exclusion criteria. We aimed to recruit at least 100 survey participants, based on previous literatures on survey sample sizes stating that the minimum sample size to obtain meaningful results is 100.^{9,10} Participants were recruited through in-person contact (i.e., approaching potential participants directly), as well as through fliers, email lists, and targeted advertising on social media platforms, magazines, and newsletters, and the website of the Human Engineering Research Laboratories (HERL). Survey responses were collected between August 29, 2018, and December 24, 2019.

2.2. Survey

The survey was described in a prior publication.⁵ The survey developed for providers in this study was based on three sections of the prior survey: awareness, knowledge importance and desire, and knowledge sources.

2.2.1. Awareness—This section consisted of the awareness of new technology and the awareness of laws and standards, AT assessment tools, and clinical practice guidelines for people using MAT. New technologies include technologies related to the entire wheelchair (e.g., frame, wheels, cushions, and accessories), exercise equipment for people using MAT, and a scale for people using MAT. For the awareness of laws and standards, the Americans with Disabilities Act Accessibility Guidelines (ADAAG), Air Carrier Access Act (14 CFR 382), and International Organization for Standardization (ISO/TC 173) were used. The AT assessment tools included tools assessing wheelchair maneuverability, the functioning level of people using MAT, and the physical transfer between surfaces. For the clinical practice guidelines, established guidelines for disabilities that relate to using MAT, including spinal cord injury, traumatic brain injury, stroke, lower extremity amputation, and multiple sclerosis were used.

2.2.2. Knowledge importance and desire—For this section, participants were surveyed to assess the importance they placed on three key values related to their work in the field. These values included: (1) staying informed about AT (“How important is it for you to know about new assistive technology?”), (2) educating their clients about the available AT options (“How important is it for you to educate your patients/clients about the availability of new assistive technology?”), and (3) ensuring that their clients can effectively use the AT devices they are prescribed (“How important is it for you to ensure that patients/clients have appropriate skills in using their prescribed assistive technology before they leave the clinic/hospital/office?”). Participants were requested to rate their responses using a 4-point Likert scale, with 1 indicating “not important,” 2 indicating “minor importance,” 3 indicating “important,” and 4 indicating “critical.” In the knowledge desire section, participants were asked to identify the specific types of MAT in which they felt deficient and desired more information or education.

2.2.3. Knowledge sources—Participants were provided with a comprehensive list of potential sources from which they could obtain information about AT. These sources included the internet, social media, events, television, newspapers, newsletters, scientific and clinical journals, physicians, physical or occupational therapists, conferences, research studies, and family/friends who use AT. Participants were instructed to check the corresponding box for each source they utilized to gather AT information. To gather more specific details, participants were asked to select sub-options for each chosen source. For example, if a participant selected the internet as a source, they were prompted to choose from sub-options such as WheelchairNet.org, SpinLife, and Wikipedia. If a specific source was not listed among the sub-options, participants were encouraged to provide an open-ended response to account for all potential sources.

2.3. Protocol

To conduct our study, an online survey was created using the REDCap software. Participants were invited to complete the survey by accessing a provided internet link. The survey homepage contained comprehensive information about the study and clear instructions for participants to follow. Prior to proceeding with the survey, participants were required to provide informed consent by checking ‘Yes’ to confirm their understanding and agreement to participate in the study.

Upon completion of the survey, we collected essential demographic information from the participants, including age, gender, ethnicity, education level, and professional background, among other relevant factors. The survey was designed to be time-efficient, with an estimated completion time of less than 15 minutes. The study protocol received approval from the Institutional Review Board of the University of Pittsburgh under the identifier STUDY19060136, complying with ethical standards and guidelines for human research. This study conforms to all Strengthening the Reporting of Observational studies in Epidemiology (STROBE) checklist guidelines and reports the required information accordingly (see Supplementary Checklist).

2.4. Statistical analysis

The survey responses were analyzed using descriptive statistical techniques, including mean, standard deviation, frequency, and percentage. For open-ended responses, answers provided were categorized and the count for each category was recorded. To assess the magnitude of the gaps between MAT providers and consumers, disparities were classified into different categories based on the percentage differences. Minimal gaps were defined as disparities below 10%, small gaps were defined as disparities equal to or greater than 10% but less than 25%, moderate gaps were defined as disparities equal to or greater than 25% but less than 50%, and large gaps were defined as disparities equal to or greater than 50%. All data analysis was performed using Stata 16 software, ensuring rigorous and standardized analytical procedures.¹¹

3. Results

3.1. Participants

The survey was completed by a total of 153 participants, but nine responses were incomplete and excluded from the final analysis. Therefore, the final sample size consisted of 144 complete responses. The majority had academic or professional training in the field of occupational therapy, orthotics, physical therapy, and prosthetics (58.8%); and were employed full-time (66.0%). Thirty-three individuals (23.6%) held the Assistive Technology Professional (ATP) credential from the Rehabilitation Engineering and Assistive Technology Society of North America (RESNA). Detailed demographic information is presented in Supplemental Table 1.

3.2. Awareness

Table 1 presents participants' awareness of new and emerging technologies, and descriptions and pictures of the technologies are presented in Supplemental Table 2. Among the technologies examined, the Quadtro Select cushion was the most widely recognized by participants (n=114), followed by iBot (n=103). The technologies that participants were least familiar with were Pathlock (n=16) and Big-Rigs Fork (n=20).

Comparing awareness levels of providers and consumers, it was found that providers generally exhibited higher levels of awareness regarding new technologies. For certain products, such as Game Cycle (46.5% vs. 28.0%), SmartWheel (56.3% vs. 38.0%), and Virtual Seating Coach (45.8% vs. 28.0%), providers had approximately 18% greater awareness than consumers, indicating a small gap between the two groups. However, this pattern did not hold true for all products. For instance, providers had lower awareness compared to consumers for the Natural-Fit Handrim (66.7% vs. 72.0%, minimal gap), Surge Handrim (38.9% vs. 61.0%, small gap), Glide Suspension Fork (26.4% vs. 28.0%, minimal gap), PneuChair and PneuScooter (20.8% vs. 25.0%, minimal gap), and Strong Arm (18.1% vs. 26.0%, minimal gap).

Overall, providers exhibited a greater level of awareness of new technologies compared to consumers, although there were a few exceptions, in which providers were less informed. These findings highlight the knowledge disparities and variations in awareness between providers and consumers within the realm of new and emerging technologies.

Participants were asked about awareness of laws and standards, AT assessment tools, and clinical practice guidelines related to people with disabilities (Table 2). More than half of the participants reported that they were aware of Americans with Disabilities Act Accessibility Guidelines (n=123) and Air Carrier Access Act (n=88) among laws and standards; Transfer Assessment Instrument (n=142) and Functional Mobility Assessment (n=82) among AT assessment tools; and a guideline for spinal cord injury, 'Early Acute Management in Adults with Spinal Cord Injury: A Clinical Practice Guideline for Health-Care Providers' (n=88) among clinical practice guidelines.

Compared to users' awareness of laws and standards, a lower percentage of providers were aware of ADAAG (85.4% vs. 91%), while more providers were aware of Air Carrier

Access Act (61.1% vs. 59.0%) and ISO (41% vs. 36%). For AT assessment tools, a higher percentage of providers compared to consumers were aware of tools. The Functional Mobility Assessment (56.9% vs. 31%, moderate) and the Transfer Assessment Instrument (98.6% vs. 48%, large) had the largest gaps. For the clinical practice guidelines, we were able to compare only two guidelines (i.e., spinal cord injury and spina bifida) to identify awareness between providers and consumers. Providers had a better awareness of both guidelines (moderate gaps).

3.3. Knowledge importance and desire

Table 3 displays the participants' responses regarding the importance of knowledge about new technology. Most participants, specifically 133 individuals (92.4%), indicated that having knowledge about new AT is either critically important or important. Moreover, 127 participants (88.2%) emphasized the critical importance or importance of educating their patients/clients about the availability of new AT. Additionally, 128 participants (88.9%) expressed that it is either critically important or important to ensure that patients/clients possess sufficient and appropriate skills to utilize prescribed AT before leaving the clinic/hospital/office. These findings underscore the importance staying informed about new AT, as well as the crucial role played by healthcare professionals in educating their patients/clients and ensuring their competency in utilizing the prescribed AT effectively. The overwhelming majority of participants recognized the importance of these factors, indicating a collective acknowledgment of their impact on enhancing patient care and promoting optimal outcomes.

Table 4 presents the participants' responses regarding the MAT about which they need more information. Among the participants, the two most reported MATs for which they desired more information were powered wheelchairs (n=69) and manual wheelchairs (n=58). However, it is worth noting that a significant number of participants, specifically 62 individuals, expressed that they did not feel the need for any additional information about MAT.

3.4. Knowledge sources

Of the knowledge sources, internet-based (79.9%), non-social media sources, was the most frequently used to obtain knowledge of MAT, followed by Physical or Occupational Therapists (70.8%), Conferences (70.1%), and Scientific and Clinical Journals (62.5%). Detailed information on the use of each knowledge source and sub-source is shown in Supplemental Table 3.

4. Discussion

This study aimed to examine the disparities between providers and users in awareness levels, considering the diverse range of MAT products. Furthermore, the professional background and work settings of providers were explored to understand potential factors contributing to the knowledge gap between providers and users. Overall, providers demonstrated a higher level of knowledge and awareness of new technology compared to consumers, although this trend was not consistent across all products. The findings suggest that work setting, and specialization of providers can influence their level of awareness and knowledge of new

MAT. Providers working in clinical settings that specifically focus on MAT may have greater exposure and access to information regarding new developments. Conversely, practitioners in general clinical settings, not specialized in providing MAT services, may face challenges in staying updated with emerging MAT due to limited exposure. This knowledge gap may result in users often being more knowledgeable about new MAT than their providers.

Both providers and consumers demonstrated a similar trend of awareness regarding laws and standards relevant to MAT. The most recognized laws and standards among both groups were the Americans with Disabilities Act Accessibility Guidelines (ADAAG), followed by the Air Carrier Access Act and the International Organization for Standardization (ISO) standards. Importantly, the gaps in awareness between providers and users regarding these laws and standards were minimal, suggesting consistent understanding among both groups. Regarding the awareness of AT assessment tools, providers exhibited a higher level of awareness compared to users. This finding is expected, as providers are responsible for administering these tools during assessments, while users are the individuals being evaluated. However, notable differences were observed for specific assessment tools. The Functional Mobility Assessment and Transfer Assessment Instrument showed larger gaps in awareness between providers and consumers, with moderate to large differences. This could be attributed to the popularity and prominence of these tools in clinical practice and research.

Providers exhibited the highest level of awareness for the guideline targeting people with spinal cord injuries, which accounted for a substantial portion of MAT users. In contrast, awareness levels varied for other guidelines, with approximately 20% to 40% of providers being familiar with each guideline. When comparing the awareness of two specific guidelines, namely early acute management in people with spinal cord injury and the Guidelines for the Care of People with Spina Bifida, moderate gaps were observed between providers and consumers. The observed gaps in awareness may be attributed to the characteristics of the consumers included in a previous study.⁵ While a considerable proportion of consumers had spinal cord injuries, their awareness primarily focused on guidelines related to subacute or long-term management aspects such as bladder management, pressure ulcer prevention and treatment, preservation of upper limb function, and sexuality and reproductive health. This emphasis on long-term self-management could explain the moderate gaps in awareness between providers and consumers regarding early acute management guidelines for spinal cord injuries. For the spinal bifida care guideline, notably, the previous study did not include individuals with spina bifida, leading to significantly lower awareness of the spina bifida care guidelines among users compared to other guidelines. Consequently, this significant disparity resulted in a moderate gap in awareness between providers and consumers for spina bifida care guidelines. These findings underscore the importance of comprehensive education and training for both providers and consumers, ensuring a better understanding of guidelines across the spectrum of MAT. By addressing these awareness gaps, healthcare professionals and users can enhance collaboration and communication, leading to improved care and outcomes in the field of MAT.

Both providers and consumers obtain MAT information from various sources, albeit through different means and approaches. Providers favor specific non-social media websites, while consumers predominantly rely on Google's general search engine and social media. This highlights the distinction in information-seeking preferences, with providers demonstrating a more targeted approach compared to consumers. In addition, users demonstrate a higher propensity to acquire information from events than providers, indicating their active engagement and interest in seeking knowledge in this domain. Providers, on the other hand, display varied attendance patterns at events, with a preference for events that target both providers and consumers, such as Abilities Expos and Paralympics. Conversely, providers were less likely to attend events primarily focused on consumers, such as the National Disabled Veterans Winter Sports Clinic and Adaptive Sports. Additionally, providers reported acquiring MAT information from television, newspapers, and newsletters. However, it is important to note that the absolute number and proportion of providers obtaining information from these sources were not substantial. Consequently, the impact of gaps found in these sources on the overall knowledge gap between providers and users is likely insignificant. Peer-reviewed journals were found to be frequently used as sources of knowledge in the field of MAT. However, their usage proportion was slightly smaller compared to more commonly utilized sources such as the internet (79.9%) and academic conferences (70.1%). This finding is expected considering the professional nature of scientific and clinical journals. Consumers exhibited a preference for acquiring information from friends rather than therapists or physicians. The presence of a significant number of therapists in the study suggests that some providers may obtain information through peer consultations, while others may seek guidance from therapists with certifications such as the ATP (Assistive Technology Professional). These findings indicate the importance of professional networks and collaboration within the field of MAT. Providers rely on colleagues as valuable sources of knowledge, likely due to their specialized expertise and experience in working with AT. Conversely, users tend to rely more on their personal networks, seeking advice and information from friends who may have firsthand experience with MAT. This suggests that enabling users to obtain more information may require improving communication with experts who have specialized expertise and experience in MAT.

To enhance knowledge sharing and dissemination, it is essential to foster strong connections and communication channels among professionals in the field. A multidisciplinary approach, including engineers, healthcare providers, industrial designers, and business and marketing, may ensure that these MAT are technologically sound, address the diverse needs of users, facilitate access to product/technology information, and are effectively integrated into society. In addition, creating and utilizing platforms for knowledge exchange, such as conferences and online forums, could facilitate the flow of information and expertise. MAT providers could share tutorial videos to help consumers better understand products. Additionally, MAT users should be encouraged to provide and share genuine customer reviews and ratings, allowing other potential consumers to learn about MAT products.

Furthermore, providers could be encouraged to obtain AT-related certifications – such as ATP, the Seating and Mobility Specialist (SMS), and Rehabilitation Engineering Technologist (RET) certifications accredited by RESNA –to promote current knowledge

and skills in the field of MAT. Attending continuing education courses, webinars, and other learning opportunities could allow providers to stay updated on MAT knowledge. In addition, MAT users should be encouraged to attend MAT conferences and expos, as well as visit local MAT provision centers to conduct their own MAT product research.

There are several limitations to consider regarding this study. First, the sampling method employed resulted in certain groups of providers and users being oversampled, such as occupational and physical therapists comprising approximately 30% of the participants, as well as orthotists and prosthetists. This implies that the findings should be interpreted with caution, as they may not fully represent the entire population of providers and users. Second, it is important to acknowledge that the criteria for knowledge and awareness may differ between providers and users. Providers who possess in-depth knowledge on certain topics may be more inclined to report their awareness of products, laws and standards, assessment tools, and clinical guidelines. This potential bias should be considered when interpreting and comparing the levels of knowledge reported by providers and users. Lastly, it should be noted that the survey's content may not cover all emerging products, guidelines, tools, and standards in the field of MAT. As the field continues to evolve rapidly, new advancements and developments may have emerged after the survey was conducted. Therefore, there may be additional information and resources that were not captured in the study. Future research should strive to include a comprehensive range of concepts and topics to provide a more complete understanding of the knowledge landscape in the field. By acknowledging these limitations, future studies can build upon these findings and address potential gaps in sampling, measurement, and scope to further enhance the knowledge base in the domain of MAT.

5. Conclusion

Awareness and knowledge of MAT can vary between providers and consumers. Providers generally have a higher level of knowledge and awareness of new technology compared to consumers, although this trend is not consistent across all products. Providers working in general clinical settings, which are less specialized MAT settings, may have limited exposure to emerging technologies. Providers exhibit higher awareness of AT assessment tools compared to consumers, indicating their professional role in administering these assessments. However, there are differences in awareness of specific tools, potentially due to their prominence in clinical practice. Providers show higher awareness of guidelines relevant to early acute management and MAT, particularly for spinal cord injuries, while consumers are more aware of guidelines related to long-term management. When acquiring MAT information, providers use targeted approaches to access specific websites, while consumers rely on general internet searches and social media. There is also variation in attending events, with providers attending events targeting both providers and consumers, while users prefer events specifically for consumers. Scientific and clinical journals are used as knowledge sources, although less frequently than the internet and academic conferences. Providers tend to rely more on therapists for knowledge, while users seek information from friends. Overall, fostering interdisciplinary collaboration, enhancing knowledge exchange platforms, and promoting specialized certifications can bridge the knowledge gap and improve awareness of MAT.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments:

This material is the result of work supported with resources and the use of facilities at the VA Pittsburgh Healthcare System. The contents do not represent the views of the U.S. Department of Veterans Affairs or the United States Government. The contents of this paper do not represent the views of Paralyzed Veterans of America, Rehabilitation Research and Development Center, US Department of Veterans Affairs. This paper was initially submitted to the journal when the first author was a postdoctoral researcher at the University of Pittsburgh.

Funding:

This research was funded by Paralyzed Veterans of America; Rehabilitation Research and Development Center, US Department of Veterans Affairs (B2988C).

Data Availability statement:

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

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What is known:

Awareness and knowledge of mobility assistive technology (MAT) can vary between providers and consumers.

What is new:

Fostering interdisciplinary collaboration, enhancing knowledge exchange platforms, and promoting specialized certifications can bridge the knowledge gap and improve awareness of MAT

Table 1.

Awareness of new technology (n=144)

“Are you aware of the following technology?”	Yes N (%)	Gaps [†]
Pathlock	16 (11.0)	Minimal (E)
MEBot	75 (52.1)	Minimal (P)
Game Cycle	67 (46.5)	Small (P)
SmartWheel	81 (56.3)	Small (U)
Natural-Fit Handrim	96 (66.7)	Minimal (P)
Virtual Seating Coach	66 (45.8)	Small (P)
Surge Handrim	56 (38.9)	Small (U)
Programmable Power Wheelchair Joystick	99 (68.8)	Small (P)
Glide Suspension Fork	38 (26.4)	Minimal (U)
VARILITE Cushion	96 (66.7)	Minimal (P)
E-scale	27 (18.8)	Small (P)
PneuChair and PneuScooter	30 (20.8)	Minimal (U)
Strong Arm	26 (18.1)	Minimal (U)
iBot	103 (71.5)	(-)
RehabWall	24 (16.7)	(-)
Big-Rigs Fork	20 (13.9)	(-)
Fit Grips	75 (52.1)	(-)
Quadro Select Cushion	114 (79.2)	(-)

Note.

[†](P)= Provider>Users, (U)=Users>Providers, (E)=Providers=Users, (-)=No comparison (This technology was not listed in the user survey).

Table 2.

Awareness of laws and standards, assistive technology assessment tools, and clinical practice guidelines
(n=144)

“Are you aware of the following . . .”	Yes N (%)	Gaps [†]
Laws and standards		
Americans with Disabilities Act Accessibility Guidelines	123 (85.4)	Minimal (U)
Air Carrier Access Act (14 CFR 382)	88 (61.1)	Minimal (P)
International Organization for Standardization (ISO/TC 173)	59 (41.0)	Minimal (P)
Assistive technology assessment tools		
Functioning Everyday with a Wheelchair	42 (29.2)	Minimal (P)
Functional Mobility Assessment	82 (56.9)	Moderate (P)
Power Mobility Clinical Driving Assessment Tool	36 (25.0)	Minimal (P)
Power Mobility Screening Tool	31 (21.5)	Minimal (P)
Transfer Assessment Instrument	142 (98.6)	Large (P)
Clinical practice guidelines		
Spinal Cord Injury: Early Acute Management in Adults with Spinal Cord Injury: A clinical Practice Guideline for Health-Care Providers	88 (61.1)	Moderate (P)
Traumatic Brain Injury: Concussion-mild Traumatic Brain Injury	59 (41.0)	(-)
Stroke: Early Management Acute Ischemic Stroke	65 (45.1)	(-)
Upper Extremity Amputation: Management of Upper Extremity Amputation Rehabilitation	49 (34.0)	(-)
Lower Extremity Amputation: Transdisciplinary Amputation Care Team Approach (TACT), Primary Care Follow-up and Lifelong Care	53 (36.8)	(-)
Multiple Sclerosis: (Fatigue, Urinary Dysfunction, Immunizations, Disease Modifying Therapies, or Spasticity Management	52 (36.1)	(-)
Amyotrophic Lateral Sclerosis: Amyotrophic Lateral Sclerosis: Multidisciplinary Care, Symptom Management, and Cognitive/Behavioral Impairment	44 (20.6)	(-)
Muscular Dystrophy: (Diagnosis and Treatment of Limb-Girdle and Distal Dystrophies, Congenital Muscular Dystrophy, and Facioscapulohumeral Muscular Dystrophy	39 (27.1)	(-)
Guidelines for the Care of People with Spina Bifida	37 (25.7)	Moderate (P)
Cerebral Palsy: Dystonia in CP, Early Detection of CP, Hip Surveillance in CP, Osteoporosis in CP, Sialorrhea in CP	42 (29.2)	(-)
Osteo/Rheumatoid Arthritis: Axial Spondyloarthritis, Extrarenal Lupus, Glucocorticoid-Induced Osteoporosis, Gout, Juvenile Idiopathic Arthritis, Lupus Nephritis, Osteoarthritis, Perioperative Management, PMR, Psoriatic Arthritis, Reproductive Health in Rheumatic Diseases, Rheumatoid Arthritis, Vasculitis	32 (22.2)	(-)

Note.

[†](P)= Provider>Users, (U)=Users>Providers, (-)=No comparison (These were not listed in the user survey).

Table 3.

Importance of knowledge of new technology (N=144)

“How important is it for you to...”	Mean (SD)	1 [†] N (%)	2 [†] N (%)	3 [†] N (%)	4 [†] N (%)	Missing N (%)
Know about new assistive technology	3.5 (0.6)	1 (0.7)	8 (5.6)	56 (38.9)	77 (53.5)	2 (1.4)
Educate your patients/clients of the availability of new assistive technology?	3.4 (1.8)	5 (3.6)	8 (5.6)	58 (40.3)	69 (47.9)	4 (2.8)
Ensure patients/clients skills using their prescribed assistive technology is appropriate before they leave the clinic/hospital/office?	3.6 (0.7)	3 (2.1)	8 (5.6)	34 (23.6)	94 (65.3)	5 (3.6)

Note.

[†]: 1= not important, 2=minor importance, 3=important, and 4=critical

Table 4.

Mobility assistive technology information desired (n=144)

Do you feel that you need more information/education on any of these mobility technologies? (Select all that apply)	Yes, N (%)	Gaps[†]
Manual wheelchair	58 (40.3)	Moderate (U)
Powered wheelchair	69 (47.9)	Minimal (P)
Scooter	36 (25.0)	Minimal (P)
Lower extremity prosthetic	49 (34.0)	Moderate (P)
Lower extremity orthotic	46 (31.9)	Moderate (P)
Other assistive devices	5 (3.5)	(-)
Pediatric walkers/crutches/wheelchairs	1 (0.7)	
Walkers	1 (0.7)	
Sports specific chairs	2 (1.4)	
Cushion	1 (0.7)	
I do not feel that I need any additional information	62 (43.1)	Moderate (P)

Note.

[†](P)= Provider>Users, (U)=Users>Providers, (-)=No comparison.