Original Paper

Attitudes Toward Digital Health Technology in Neurological Conditions: Qualitative Study of Patients, Caregivers, and Health Care Professionals

Sarah Fearn[1,2], PhD; John Spreadbury[1,2], PhD; Christopher Kipps[1,3], MBBS, PhD

[1]Faculty of Medicine, University of Southampton, Southampton, United Kingdom

[2]NIHR Applied Research Collaboration Wessex, Southampton, United Kingdom

[3]Wessex Neurological Centre, University Hospital Southampton NHS Foundation Trust, Southampton, United Kingdom

Corresponding Author:
Sarah Fearn, PhD
Faculty of Medicine
University of Southampton
Institute for Developmental Sciences (IDS) Building, Tremona Road
Southampton General Hospital
Southampton, SO16 6YD
United Kingdom
Phone: 44 (0)23 8120 5253
Email: S.Fearn@soton.ac.uk

Abstract

Background: Digital health technology is increasingly applied across neurological conditions and is now widely accessible from both individual and formal health care perspectives. Nevertheless, comprehensive evidence on attitudes toward digital health technology in this population remains limited.

Objective: This study aimed to investigate attitudes toward digital health technology from the perspectives of people living with neurological conditions, caregivers, and health care professionals.

Methods: An in-depth qualitative design was used, consisting of semistructured interviews with 35 participants (15 people with neurological conditions, 13 caregivers, 7 health care professionals) across multiple neurological conditions. Inductive thematic analysis, guided by a realist approach, was applied separately to each participant group.

Results: Five themes emerged across all 3 groups: (1) openness to use; (2) digital literacy, experience, and ability to use; (3) hesitancy, uncertainty, and perception of benefit; (4) user age and access to technology; and (5) continued need for access to health care professionals. Participants were generally open to digital health technology but reported important caveats, including variable digital literacy, uncertainty about benefit, concerns about age-related access, and a persistent preference for in-person clinical contact. Three findings were particularly significant. First, most participants across all 3 groups were unaware of what digital health tools were available for their neurological condition. Second, neurological symptoms themselves, including fatigue, cognitive impairment, tremor, and photosensitivity, were identified as barriers to technology use that are distinct from, and additional to, the digital literacy barriers documented in the general population. Third, a cross-group comparison revealed that while attitudes were broadly shared, each group evaluated digital health technology from a different perspective: people living with neurological conditions considered it in relation to personal utility and condition-relevance; caregivers in relation to reliability and the ability to escalate concerns; and health care professionals in relation to evidence base and service capacity.

Conclusions: Most participants were open to the uptake and use of digital health technology. The awareness gap and the neurological symptom barrier represent findings with immediate relevance to practice. Active promotion of available, evidence-based digital health tools directed simultaneously at people living with neurological conditions, caregivers, and health care professionals is a prerequisite for meaningful engagement. Digital health tools should be co-designed to account for the specific symptom profiles of people living with neurological conditions and should complement rather than replace in-person care relationships. Implementation strategies should engage all 3 stakeholder groups simultaneously, as meeting the needs of one does not guarantee meeting the needs of another.

(JMIR Hum Factors 2026;13:e107517) doi: 10.2196/107517

XSL•FO
RenderX

KEYWORDS

neurological conditions; nervous system diseases; digital health; telemedicine; attitudes; attitude to health; qualitative research; patients; caregivers; health care professionals; mobile phone

Introduction

Neurological conditions are the leading cause of disability-adjusted life years worldwide, affecting over 3 billion people worldwide and representing a significant and increasing health burden for individuals, families, and health systems [1,2]. Digital health technology has emerged as a promising means of extending, personalizing, and supporting neurological care beyond the clinic. Digital health technology is an umbrella term, encompassing labels such as eHealth, mobile health (mHealth), and digital tools, and refers broadly to the application of digital, mobile, and wireless technologies to health and health care [3].

In the United Kingdom, digital transformation has become a strategic priority. The National Health Service (NHS) 10 Year Health Plan for England (2025) outlined a major shift toward digitally enabled, community-based care delivery, and NHS England has invested significantly in digital transformation [4,5]. Potential benefits of this transformation include reduced care inequalities, earlier identification of those at risk of poorer outcomes, and enhanced condition self-management and personalized care. For health services, the anticipated benefits include improved efficiency, better resource allocation, and more integrated care pathways.

Despite significant policy investment and the proliferation of digital tools, variation in uptake and use remains substantial [6]. Understanding the factors that influence whether digital health technologies are adopted and sustained in routine use is therefore a pressing research priority. Attitudes represent a potentially important influence on uptake and use. For the purposes of this study, attitudes are understood as the views, beliefs, and experiences that shape how individuals respond to and engage with digital health technology. A recent systematic review applying the capability, opportunity, and motivation–behavior (COM-B) model to digital health adoption among older adults found that perceived usefulness, social support, and user-centered design were among the most consistent facilitators, while digital literacy gaps, infrastructural barriers, and privacy concerns were among the most prominent obstacles [6]. How these factors interact in the specific context of neurological conditions, however, remains poorly understood.

In the neurological condition context, digital health technology has been applied across a broad range of conditions, including multiple sclerosis, epilepsy, stroke, Parkinson disease, and headache and migraine [7,8]. Existing research indicates that some may exert a positive influence on areas such as mental health, caregiver burden, fatigue, and self-efficacy [9-13]. A rapid review of patient and public involvement (PPI) in the development of digital health technologies for neurological conditions found that the perspectives of people living with neurological conditions were mostly gathered through one-off consultation and that involvement has been inconsistently reported [14]. The range and accessibility of tools continue to expand, yet relatively few are described in the existing literature, and significant uncertainty persists regarding their real-world uptake, effectiveness, and sustainability [7].

Research specifically examining attitudes toward digital health technology in neurological conditions has grown in recent years, though a comprehensive evidence base remains lacking. Existing studies suggest interest in digital health technology and some indication of its use [15-19], as well as a recognition of its potential to improve understanding, self-management, and communication [15,18-20]. More recently, Reid et al [21] found that people with neurodegenerative conditions and their caregivers were broadly supportive of digital technology for health monitoring, while also identifying the complexity of proposed technology and data security as key barriers. However, research also continues to identify negative experiences and concerns, including anxiety, stigma, and stress [18-20]; data privacy and confidentiality [15,18-20]; and mistrust and skepticism [18-20].

Significant gaps remain in this literature. A comprehensive understanding of attitudes toward digital health technology in neurological conditions is lacking, particularly with respect to the nature and sources of those attitudes, the factors perceived to facilitate or hinder engagement with digital tools, and how the perspectives of health care professionals and caregivers compare with those of people living with neurological conditions. The present study was designed to address these gaps by investigating attitudes toward digital health technology in neurological conditions from the perspectives of people living with neurological conditions, caregivers, and health care professionals.

Methods

Design

This study used an in-depth qualitative design consisting of semistructured interviews to investigate attitudes toward digital health technology in the context of neurological conditions. A convenience sampling approach was adopted, whereby participants, after becoming aware of the study, volunteered to participate. Interviews were conducted individually with each participant, with one exception: in 1 caregiver interview, the participant's spouse, who was living with Parkinson disease, was present and contributed to the discussion. This dyadic interview is acknowledged in the relevant quote attribution, and contributions from both speakers were included in the thematic analysis and treated as data from the caregiver context. For the purposes of this study, the term "attitude" was used to encompass the views, beliefs, and experiences of participants in relation to digital health technology. Data were collected between 2022 and 2023, during and shortly after the COVID-19 pandemic. This study is reported in accordance with the COREQ (Consolidated Criteria for Reporting Qualitative Research) checklist. The completed checklist is provided in Multimedia Appendix 1.

XSL•FO
RenderX

Participants

A total of 35 participants, consisting of people living with neurological conditions, caregivers, and health care professionals, were recruited from across England.

A broad range of recruitment strategies were used. The majority of people living with neurological conditions and caregivers were recruited through collaboration with national neurological condition support groups and charities, which disseminated study adverts via their websites, member emails, and newsletters. Additional recruitment occurred via the University Hospital Southampton My Medical Record online personal health record, regional neurological condition and caregiver groups, and personal approaches to individuals known to the research team. Health care professionals were recruited via email approaches. Participants varied in neurological condition and in their experience of digital health technology, ranging from those with little or no prior use to those with substantial experience.

Each participant group was analyzed separately. Saturation for each group was considered to have been reached when later interviews yielded few new codes or insights, and a comprehensive account of participant attitudes could already be established. Given the small size of the health care professional group (n=7) and its limited professional and gender diversity, this saturation claim is more tentative for this group than for the patient and caregiver groups.

Materials

Separate semistructured interview schedules were developed for people living with neurological conditions, caregivers, and health care professionals. Questions were grouped into the following sections: use of digital health technology; opinions of digital health technology in general and in the specific neurological condition context; positive and negative aspects of digital health technology; suggestions for improvement; and, where applicable, experience of the My Medical Record online personal health record, used at University Hospital Southampton.

Each schedule also included hypothetical vignettes comprising short scenarios featuring a fictitious third person in a digital health technology and neurological condition context. These were designed to serve as a common stimulus to facilitate discussion of sensitive topics and to reduce social desirability bias. Vignettes depicted scenarios including the introduction of an online care platform, searching for and sharing health-related information, and computer-based medical assessment and advice.

Sociodemographic and neurological condition information was also collected.

A project steering group and PPI contributors reviewed and piloted the interview schedule questions and hypothetical vignettes, providing feedback that informed revisions before their implementation.

Procedure

Interested participants contacted the research team by email or telephone. A researcher then provided access to a participant information sheet and informed consent form, created and stored electronically in REDCap. Interviews were conducted by telephone, lasting between 46 and 125 (mean duration 60, SD 21) minutes. TTelephone interviews were chosen in preference to in-person or video-based interviews to maximize accessibility for participants, because the study was designed during the COVID-19 pandemic when in-person contact was restricted, and to include those without reliable access to online video technology. Interviews followed the same structure: participants first responded to the semistructured interview schedule; those with experience of My Medical Record were then asked supplementary questions specific to that platform (4 of 15 people living with neurological conditions and 2 of 13 caregivers reported experience of the platform); and finally participants responded to the hypothetical vignettes. Participants were given an opportunity at the end of the interview to add any further information. Interviews were recorded using a digital voice recorder and then transcribed verbatim.

Analysis

Thematic analysis was conducted following the framework of Braun and Clarke [22], guided by a realist epistemological position: participant accounts were treated as broadly reflective of their actual attitudes and experiences, rather than as purely discursive constructions of the interview context. Vignette-elicited responses were not analyzed separately from direct interview responses. They were designed to serve as a common stimulus to facilitate discussion of sensitive topics and were therefore integrated fully into the thematic analysis alongside responses to direct questions. Three separate analyses were conducted, one for each participant group. Initial codes were developed inductively by JS through conducting interviews, listening to recordings, and reading transcripts. JS is a male psychologist with formal training and extensive experience in qualitative methods. He approached the data with an interest in understanding the full range of participant attitudes, including those skeptical of or indifferent to digital health technology, and actively sought divergent and negative cases. To establish an initial coding framework, the first 12 transcripts, comprising 6 from people living with neurological conditions, 4 from caregivers, and 2 from health care professionals, were analyzed by hand. At this stage, SF and CK independently reviewed the same 12 transcripts, and the 3 authors met to discuss and compare emerging themes. JS revised the initial coding in light of these discussions. Following these discussions and revisions, JS analyzed the remaining transcripts electronically using NVivo (Lumivero). Each group's transcripts were coded separately, with a distinct set of codes, categories, and subthemes developed for each group. Overarching themes were then derived independently for each group to capture and represent participant attitudes toward digital health technology. JS shared the coding with SF and CK, and themes were refined through further team discussion to explore both the convergence across groups and the distinct perspectives within each. Throughout the analytical process, JS maintained an audit trail of coding decisions and analytical memos. Negative cases and divergent views were actively considered within each theme. The prior professional familiarity of some members of the research team with health care professional participants was

XSL•FO
RenderX

acknowledged and reflected upon during team discussions to mitigate potential influence on interpretation.

Ethical Considerations

Overview

This study received NHS research ethics approval (research ethics committee reference 22/PR/0457; Integrated Research Application System project ID 310073). The study was not exempt from ethics review, and no exemption policy was applied.

Informed Consent

Interested individuals were given a participant information sheet and an electronic informed consent form via REDCap, and all participants gave informed consent before taking part. Participants were told that participation was voluntary and that they could withdraw at any time without giving a reason, but that any data collected up to that point would be retained. Consent to audio recording was confirmed in the consent form and verbally at the start of each interview. In the one dyadic caregiver interview, the caregiver's spouse, who was present and contributed, also gave informed consent.

Privacy and Confidentiality

Interviews were audio-recorded and transcribed verbatim. Each participant was assigned a unique study identifier, and names and other directly identifying details were removed from the transcripts and the quotations reported. Contact details and consent forms were stored separately from the transcripts on secure, access-restricted University of Southampton systems, accessible only to the research team. Quotations are reported with limited descriptors (participant group, condition, and gender), and participant age is given in the text only where it is relevant to the finding, to reduce the risk of identification.

Compensation

Participants received no financial compensation for taking part.

Results

People Living With Neurological Conditions Group

Participants Living With Neurological Conditions

Fifteen people living with neurological conditions were recruited to the study. The mean age of participants was 54.8 (range 19-93, SD 19.3) years; the group included 7 males and 8 females. Neurological conditions represented were epilepsy (n=3), Parkinson disease (n=3), multiple sclerosis (n=3), motor neuron disease (n=3), Huntington disease (n=2), and migraine (n=1).

Five themes represented the attitudes of people living with neurological conditions toward digital health technology: (1) openness to use; (2) digital literacy, experience, and ability to use; (3) hesitancy, uncertainty, and perception of benefit; (4) user age and access to technology; and (5) continued need for access to health care professionals. Each theme below is illustrated with a representative quotation. Further illustrative quotations for each theme and participant group are provided in Multimedia Appendix 2.

Theme 1: Openness to Use

The majority of people living with neurological conditions expressed a broadly positive view of digital health technology, but openness was consistently conditional rather than unconditional, contingent on the technology being genuinely useful, easy to use, and relevant to their specific condition. Underlying motives included a belief that technology could be useful in some way, the perception that health care professionals can take an interest in the patient's condition through digital health technology, and personal interest in using the technology. Reported advantages included speed and efficiency, improved access to information, medication management support, and reduced need to travel to appointments.

> *The main thing is that it's reducing my fatigue levels because I'm not having to travel, I'm not having to walk into the hospital, sit there, and the stress levels of sitting there – thinking, oh, you know, are they going to be running late… yes, it does help the stress levels.* [Patient, multiple sclerosis, male]

Negative aspects reported included technical problems, difficulty remembering to use the technology, perceived excessive complexity, loss of contact with health care professionals, and concerns about misleading information encountered through online health searches and social media.

Theme 2: Digital Literacy, Experience, and Ability to Use

Digital literacy and prior technology experience were identified as key determinants of uptake, but the data revealed an additional and distinctive dimension: for people living with neurological conditions, the condition itself was a potential barrier to technology use, independent of prior digital experience.

> *I've got photosensitivity with my migraine so I cannot look at a screen. When that photosensitivity improves I can, and I can turn the brightness down, so with that feature of my phone…I can just about manage a short interaction.* [Patient, migraine, female]

> *Until I had a disability, I didn't realize how difficult it can be trying to hold a phone with one hand and shaking, whilst trying to stab at some tiny combo box on a webform.* [Patient, Parkinson disease, male]

Theme 3: Hesitancy, Uncertainty, and Perception of Benefit

People living with neurological conditions indicated some hesitancy toward digital health technology. However, the most prominent source of this hesitancy was not resistance to technology but an absence of awareness. Many were uncertain about what tools existed for their specific condition, and some doubted that available technology would be of genuine benefit given the nature of their condition.

> *Just really not aware of what's possible, and why I would need to, I guess… there's nothing that can be done for me, at least at the moment. You think, having got a disease like this there will be all kinds of modern*

XSL•FO
RenderX

tech, but no, there's nothing really at all. [Patient, Parkinson disease, male]

Theme 4: User Age and Access to Technology

Age-related barriers to digital health technology were identified in ways that were both first-person and third-person in character. Some older participants themselves reported limited digital confidence or engagement: one participant aged 70 years with Parkinson disease described using technology minimally and feeling no inclination to develop further digital skills, while a participant aged 81 years described feeling terrified by a video consultation experience and unable to manage without her daughter's help. Other participants, including one aged 70 years with motor neuron disease who reported no personal difficulty, projected barriers onto those older than themselves, describing digital exclusion as a generational issue affecting people beyond their own age group. Concerns were also expressed about equitable access, particularly for those without smartphones or reliable internet access.

I know this is about, you know, neurological [conditions], but the more elderly patients, what do they do? If they don't have a smartphone... You assume that everyone's got the technology, don't we?... There's a lot of poverty here as well, and deprivation… There has to be an alternative. [Patient, multiple sclerosis, female]

Theme 5: Continued Need for Access to Health Care Professionals

Despite openness to digital health technology, the majority of people living with neurological conditions consistently positioned digital health tools as adjuncts to, rather than replacements for, in-person care. Central to this was a desire to be known by their clinician and to have their condition assessed face-to-face, something participants felt could not be replicated digitally. People living with neurological conditions also noted a concern that important clinical information might be missed via remote contact, a preference for face-to-face communication, and a desire for reassurance that they believed could not be adequately provided digitally.

I prefer when I see a consultant or a doctor to see them face to face, in person. I don't like online consultations. And I don't think your GP or anyone can know what's really wrong with you unless you're sitting in front of them. [Patient, epilepsy, female]

Caregiver Group

Caregiver Participants

Thirteen caregivers were recruited to the research. The mean age of caregivers was 65.2 (range 47-77, SD 9.1) years; the group included 6 males and 7 females. Caregiver participants supported people with Huntington disease (n=5), Parkinson disease (n=4), young-onset Parkinson disease (n=1), mixed Parkinson disease and Lewy body dementia (n=1), multiple sclerosis (n=1), and the posterior cortical atrophy variant of Alzheimer disease (n=1).

Five themes represented caregiver attitudes: (1) openness to use (supporting people living with neurological conditions); (2) digital literacy, experience, and ability to use; (3) hesitancy, uncertainty, and perception of benefit; (4) user age and access to technology; and (5) continued need for access to health care professionals.

Theme 1: Openness to Use: Supporting People Living With Neurological Conditions

The majority of caregivers reported openness toward digital health technology, motivated by its perceived potential to be helpful or to offer an easier, quicker, or more efficient means of interacting with health services compared with existing methods. A distinctive finding was that caregivers were also open to supporting the digital health technology use of people living with neurological conditions, including reminding them to use the technology, setting up equipment, explaining information, and mediating communications with health care professionals.

But, um, (wife) has struggled with it just because she's not particularly…technically minded and lacks the confidence, I think, to actually use the thing; to use any of those sort of, err, communication channels on her own. So, I'm always there just to help set them up. Err, for meetings and everything else, but once she's on there it's fine. [Caregiver, Parkinson disease, male]

Theme 2: Digital Literacy, Experience, and Ability to Use

Caregivers identified digital literacy, IT skills, and experience with technology as important determinants of uptake. Those with greater technical ability were seen as more likely to adopt digital health tools with relative ease. Previous negative experiences with technology were highlighted as a deterrent to future engagement.

Previous bad experiences would make them hesitant. Or lack of experience. Anybody that uses it regularly would go straight for it. [Caregiver, Huntington disease, male]

Caregivers also observed how the symptoms of the condition they were supporting created barriers to technology use. One caregiver described watching the person they supported using an iPad:

He has an enormous amount of patience because it takes him ages to get to where he wants to be…with touching the wrong buttons… [Caregiver, Huntington disease, female]

Theme 3: Hesitancy, Uncertainty, and Perception of Benefit

Although most caregivers reported adequate digital skills, many described hesitancy due to experiences of burden or fatigue when using digital health technology. In some instances, this provoked frustration and a preference for direct contact with a health care professional. Frequent software updates, complex forms, and unreliable systems were cited as compounding

XSL•FO
RenderX

sources of burden. Several caregivers reported that existing digital health technology offered minimal practical benefit, and some expressed that investment in medical research to treat the underlying neurological condition was of greater priority.

> *For god's sake stop changing. Because we used to be signed on for the web app... it seems to change every, on average every year. We have been off it for so long now I can't remember. After two or three incidences when you are starting to get it working again, we have just walked away.* [Caregiver, Parkinson disease, male]

Skepticism, partly grounded in prior disappointment with technology that had failed to meet expectations, was also apparent, as was uncertainty about what digital health tools were available in the context of specific neurological conditions.

Theme 4: User Age and Access to Technology

Caregivers, like people living with neurological conditions, perceived that age and access to technology would influence uptake and use. Younger users with greater digital socialization were seen as better equipped to adopt digital health tools. Concerns about the capacity of older adults, including those with progressive neurological decline, to maintain or acquire digital skills were prominent.

> *If they don't have computers at home, if they don't have digital [technology], they just got left out… they are missing out an age range where people basically don't want to know. And people are dropping out of technology, not opting in.* [Caregiver, Parkinson disease, male and patient, Parkinson disease, female]

Theme 5: Continued Need for Access to Health Care Professionals

The majority of caregivers emphasized the continued importance of in-person access to health care professionals, for reasons including the risk of following inaccurate online information, the difficulty of communicating complex concerns digitally, concerns about the technology's capacity to detect serious health changes, and the desire for human reassurance.

> *It's got a lot of potential. One of the things that we've found both of us was that it's nice to meet a person up front and personal first. Then go on to the technology because you feel as if you've built up a rapport with someone before. Otherwise, it just seems a little distant.* [Caregiver, Huntington disease, female]

Health Care Professional Group

Health Care Professional Participants

Seven nurse specialists were recruited to the research as health care professionals. The mean age of this group was 47.0 (range 33-54, SD 6.9) years; all 7 were female. Clinical expertise was varied across multiple sclerosis (n=2), neurological disorders (n=1), epilepsy (n=1), Huntington disease (n=1), motor neuron disease (n=1), and Parkinson disease (n=1). Six participants worked in a hospital-based clinical role and 1 in a community-based advisory role. The sample was modest in size and had limited professional and gender diversity. For this reason, findings from this group should be interpreted as indicative of nurse specialist perspectives rather than as representative of health care professionals in neurology more broadly.

Five themes represented health care professional attitudes: (1) openness to use (promoting self-management and managing caseloads); (2) digital literacy, experience, and ability to use; (3) hesitancy, uncertainty, and perception of benefit; (4) user age and access to technology; and (5) continued need for access to health care professionals.

Theme 1: Openness to Use: Promoting Self-Management and Managing Caseloads

Health care professionals appeared open to the increasing amount of digital health technology being used in their role and for people living with neurological conditions. They identified promotion of self-management among people living with neurological conditions, caseload triage, facilitation of shared decision-making, and symptom monitoring as primary functions of digital health technology in their practice. Online platforms such as My Medical Record were used for messaging, questionnaire administration, sharing treatment information, and enabling people living with neurological conditions to review their own health records. Wearable devices, seizure monitors, and GPS-enabled alarms were also mentioned for supporting the independence of people living with neurological conditions in the community.

> *I absolutely love [the online personal health record]. I think it's the future, and we have to really embrace that. Because our patient numbers are increasing every year, and the only way to keep on top of that is digital. Our patients all have long-term neurological conditions, so they need to be promoted and self-managed.* [Health care professional, multiple sclerosis, female]

Theme 2: Digital Literacy, Experience, and Ability to Use

The majority of health care professionals considered their own digital skills adequate to very good, with several noting that these had improved through use of digital health platforms in their clinical roles.

> *…it's been a hard fast learning curve. Yes, so, I'm, I'm definitely not a tech phob, but I'm equally not an IT expert. So, I'm probably somewhere in the middle, um, but I feel that… I've got to know this system very well and also; I work very closely with the MyMedicalRecord team learning how things work.* [Health care professional, neurological disorders, female]

Health care professional attitude toward digital technology was also identified as likely to influence uptake.

When discussing the digital literacy of their patients, health care professionals identified the progressive nature of some neurological conditions as a particular challenge.

XSL•FO
RenderX

> *There's the perhaps physical or cognitive barriers to using [technology]…people with weak upper limbs, or cognitive effects, the ability to learn new information.* [Health care professional, motor neuron disease, female]

Theme 3: Hesitancy, Uncertainty, and Perception of Benefit

A sense of initial hesitancy or trepidation toward newly introduced digital tools was discernible, particularly when these were introduced alongside existing established working practices. Concerns about workload, time, and the perceived value of new technology were common. Participants indicated that adequate training, ongoing support, clear rationale, and an explanation of anticipated benefits were necessary to facilitate uptake and continued use. Technical difficulties, including system crashes, slow performance, and difficulty locating information, were frequently reported.

> *There's very little research about how useful things really are, so it's very difficult for us to advise patients on 'Yep, you need to get this one', because there's very little evidence base about whether they're useful or effective.* [Health care professional, epilepsy, female]

The majority of health care professionals also acknowledged uncertainty about which digital health tools were available to people living with neurological conditions and expressed reluctance to make specific recommendations without a robust evidence base to draw upon.

Theme 4: User Age and Access to Technology

Health care professionals perceived that user age, access to appropriate technology, and financial resources would meaningfully influence digital health technology uptake and use. People living with neurological conditions who are older, particularly those with progressive conditions affecting cognitive function, were identified as facing significant challenges. The absence of guidance on which technologies to purchase and limited evidence for device efficacy were noted as additional barriers.

> *I think most of us would think of cognition, but actually in reality, access to the actual digital device is the barrier. Not everyone has a smartphone, a tablet, or a laptop; not everyone can afford a computer.* [Health care professional, multiple sclerosis, female]

Theme 5: Continued Need for Access to Health Care Professionals

Health care professionals recognized that digital health technology should function in tandem with, rather than as a replacement for, in-person clinical interaction. Situations in which in-person contact remained necessary included cases where technology use had been unsuccessful, where people living with neurological conditions or caregivers were unable to use digital tools, where immediate clinical decision-making was required, and where the nature of the condition, or individual preference, made in-person consultation more appropriate.

> *I suppose perhaps a concern I would have is that if it were sort of too readily there to replace face-to-face discussions, appointments, that kind of thing... I would see online resource guides as in tandem with conversation. I wouldn't see it as replacing.* [Health care professional, motor neuron disease, female]

Discussion

Principal Findings

This study reports 3 separate qualitative analyses of attitudes toward digital health technology from the perspectives of people living with neurological conditions, caregivers, and health care professionals. Despite separate analyses, 5 themes cut across all 3 groups. These themes of openness to use, digital literacy, hesitancy and perception of benefit, concerns about user age and access, and the desire to preserve in-person contact largely confirm and extend existing evidence and are discussed accordingly. However, 3 findings within and across the themes are particularly noteworthy. First, participants across all 3 groups were largely unaware of what digital health tools were available for their specific neurological condition. This is a finding with direct and immediate practical implications. Second, neurological symptoms themselves, including fatigue, cognitive impairment, tremor, and photosensitivity, were identified as barriers to technology use that are distinct from, and additional to, the digital literacy barriers well documented in the general population. Third, comparison across the 3 groups showed that people living with neurological conditions, caregivers, and health care professionals approached digital health technology from different perspectives, reflecting their respective roles and relationships within care.

Theme 1: Openness to Use

Across all 3 participant groups, the predominant attitude toward digital health technology was one of openness and receptivity. This finding is consistent with the broader literature. A survey of people with neurodegenerative conditions and their caregivers attending a specialist neurology clinic found that participants were supportive of using digital technologies to complement standard clinical care [21]. A qualitative study of patients who had had a stroke similarly identified generally receptive, if mixed, attitudes toward digital health, with participants seeing technology as a convenient means of providing condition-related information and supporting self-management and care access [23]. The present study extends this evidence by capturing the perspectives of people living with neurological conditions, caregivers, and health care professionals simultaneously across a broad range of neurological conditions and by demonstrating that openness extends beyond people living with neurological conditions to include those who support and deliver their care. Openness was consistently conditional rather than unconditional, contingent on the technology being genuinely useful, easy to use, and, notably, relevant to the specific condition. This conditionality is discussed further below in the context of the awareness gap identified across all 3 groups.

XSL•FO
RenderX

Theme 2: Digital Literacy, Experience, and Ability to Use

Personal digital literacy and experience with technology emerged as important determinants of uptake and use across all 3 groups, with greater digital familiarity associated with greater ease of adoption. This is consistent with the literature, including a qualitative study of informal caregivers that identified lack of training as the most common challenge in using digital health technologies [24] and an umbrella review of barriers to health care professional adoption of digital technologies [25]. Previous research has also begun to identify neurological symptoms as barriers to digital health technology use. A literature review of mHealth use in multiple sclerosis identified difficulties with vision, dexterity, and memory as condition-specific barriers, depending on disease progression and severity [26], while a systematic review of digital health technology implementation in neurological rehabilitation identified fatigue, ataxia, pain, limited mobility, and cognitive status among the most frequently reported barriers to patient engagement [27]. Our findings suggest that, in the neurological condition context, digital literacy cannot be understood solely as a function of experience or education. Rather, the ability to use digital health technology was also shaped by the effects of neurological conditions, which could reduce a person's capacity to use digital tools even when they had previously been able to use these with ease. This distinction is important because difficulties using digital health technology may not reflect limited digital literacy in the conventional sense but changes in the physical, sensory, or cognitive capacity required to use the technology. Participants described how photosensitivity and fatigue reduced the time and cognitive resources available for screen use; how tremor and dexterity problems made physical interaction with mobile devices difficult; and how cognitive effects of neurological conditions, including reduced ability to learn and use new platforms, created additional barriers for some. These barriers were identified not only by people living with neurological conditions themselves but also by caregivers managing digital tasks on behalf of the patient and by health care professionals who saw these difficulties as underappreciated in digital health design. Digital health technologies therefore need to accommodate both differences in prior digital experience and the fluctuating, condition-specific effects of neurological symptoms through adaptive and accessible design.

Theme 3: Hesitancy, Uncertainty, and Perception of Benefit

Hesitancy toward digital health technology was evident across all 3 participant groups, underpinned by uncertainty about what was available, skepticism about whether existing tools would be genuinely useful, and, particularly among caregivers, a sense of disappointment with technology that had previously failed to meet expectations. An updated systematic review of digital health adoption among older adults with chronic diseases found that hesitancy was a motivational barrier, driven by mistrust of digital systems, concerns about data privacy, and anxiety about using unfamiliar technology. Conversely, prior positive experiences were identified as a motivator [6]. The difficulty of knowing what is available may be particularly relevant in neurological conditions. A comprehensive review of digital health technology in neurological conditions noted that the landscape remains difficult to navigate, with relatively few tools described in the published literature and uncertainty about which remain in active use [7].

Our findings suggest that this uncertainty extends beyond the complexity of the digital health landscape itself. Participants across all 3 groups (people living with neurological conditions, caregivers, and health care professionals) were largely unaware of the digital health tools available for their specific neurological condition. This awareness gap was evident across the neurological conditions represented in the sample and was reported independently by all 3 participant groups,, suggesting that it is not confined to a particular condition or care setting. Notably, health care professionals, who might be expected to signpost people to available tools, were themselves often uncertain about what was available and reluctant to recommend tools without a stronger evidence base. As a result, people living with neurological conditions and caregivers may be unlikely to identify relevant tools independently, while professionals may also be reluctant to recommend them. Improving awareness may therefore be an important and relatively immediate target for supporting uptake. This needs to involve people living with neurological conditions and caregivers, but also the health care professionals who may be best placed to introduce and signpost relevant tools. In this context, improving access to clear information about available, evidence-based digital health tools may be a more immediate target than attempting to address more established attitudinal and literacy barriers.

Theme 4: User Age and Access to Technology

All 3 participant groups perceived that user age and access to technology would influence uptake, with older users generally seen as less likely to adopt digital health tools. This is consistent with existing literature, but our findings place this issue within the specific context of neurological care. Many neurological conditions disproportionately affect older adults, while progressive disability may further increase the challenges of using technology over time, potentially increasing the risk of digital exclusion. Across all 3 groups, participants emphasized the need to retain nondigital alternatives and identified loaned devices and dedicated support as ways of helping people who might otherwise be excluded.

Theme 5: Continued Need for Access to Health Care Professionals

Despite broad openness to digital health technology, the majority of participants across all 3 groups expressed a persistent desire for in-person access to health care professionals. Digital tools were widely seen as a complement to, rather than a substitute for, direct clinical contact. A mixed methods study of over 1200 people found that 71% preferred in-person visits to telemedicine, with the most common reasons being the perceived ability of clinicians to conduct more accurate examinations and diagnoses in person [28]. A review of digital health implementation from the perspective of health care professionals identified concern about digital health technology impeding the patient-clinician relationship [29]. These issues may be particularly pertinent in neurological condition care, as many conditions involve symptoms that participants felt could only be accurately assessed

XSL•FO
RenderX

face-to-face, such as functional or cognitive decline or fluctuating motor symptoms. It is worth noting that these data were collected in 2022-2023. While the introduction of the NHS 10 Year Health Plan (2025) and subsequent digital investment represent an evolution in the policy landscape since data collection, the findings provide an important perspective on attitudes that may continue to shape the current implementation of digital health.

Cross-Group Comparison

Across the 5 themes, the data revealed both convergence and difference between the 3 participant groups. Convergence was evident in the broad pattern of conditional openness, the identification of digital literacy and access as barriers, uncertainty about what tools were available, concerns about the exclusion of older and less digitally engaged users, and the continued value placed on in-person clinical contact. This consistency across groups suggests that many of the factors shaping views of digital health technology in neurological conditions are shared by those who receive, support, and deliver care.

At the same time, there were also important differences in how the 3 groups approached these issues. People living with neurological conditions considered digital health technology primarily in terms of its personal usefulness: whether it could reduce the burden of managing their condition, support self-management, or reduce the need to travel. Their hesitancy was often related to uncertainty about whether tools existed for their specific condition. Caregivers approached the same issues from the perspective of supporting someone else, considering whether technology would help them provide that support. Their hesitancy more often reflected previous negative experiences with unreliable or frequently changing platforms, as well as concerns that digital-only contact could make it harder to raise concerns directly. Health care professionals tended to consider digital health technology in relation to service capacity and supporting self-management, while their hesitancy centered on a perceived absence of an adequate evidence base, concerns about workload, and uncertainty about how to position digital tools alongside established clinical practice.

The shared desire to preserve in-person contact also reflected these different roles. People living with neurological conditions valued being known by their clinician and having their condition monitored over time; caregivers were concerned that digital tools might reduce their ability to communicate concerns directly and escalate quickly when needed; and health care professionals saw in-person contact as important for clinical assessment and building relationships. These differences are relevant to the design and promotion of digital health tools. Implementation needs to take account of the perspectives of people living with neurological conditions, caregivers, and health care professionals to make sure it meets all 3 groups' needs.

Implications for Practice and Design

Several practical implications follow from these findings. The awareness gap identified across all 3 groups points to a relatively straightforward area for action: improving awareness of available, evidence-based digital health tools among people living with neurological conditions, caregivers, and health care professionals. Health care professionals are particularly important here. They were often as uncertain as patients and caregivers about what tools were available, yet are potentially well placed to introduce and signpost relevant technologies. Clear guidance for health care professionals on available tools may therefore help to improve awareness and support uptake.

The finding that neurological symptoms can act as barriers to technology use, independent of prior digital experience, also has implications for design. Existing accessibility standards do not necessarily address the specific and variable symptoms experienced by people living with neurological conditions. People living with neurological conditions should therefore be involved in the design and testing of digital health technologies, with features such as adjustable screen brightness, voice interaction, simplified navigation, and low-demand interfaces considered as part of the design process rather than added later.

The cross-group comparison also shows that the same tool may be judged against different concerns depending on who is using it. People living with neurological conditions considered personal benefit and relevance to their condition, while caregivers focused more on reliability and whether technology supported rather than replaced direct contact with services. Health care professionals were concerned with the strength of the evidence and the implications for clinical workload. Implementation should therefore take account of all 3 perspectives, and evaluation should consider acceptability to people living with neurological conditions, caregivers, and health care professionals alongside clinical effectiveness.

Finally, the consistent preference for in-person care across all 3 groups suggests that clear communication about how digital engagement will fit alongside, rather than replace, clinical contact may be important in supporting uptake.

Limitations

Several limitations should be acknowledged. The study used a convenience sample, which may limit the representativeness of findings. Recruitment was largely through charities, support groups, and an online personal health record platform and may therefore have underrepresented people who are less engaged with formal support structures or digital technology. Recruitment through neurological condition charities and support groups may also have attracted participants with a stronger interest in their condition, its management, and digital health technology, potentially contributing to the generally positive orientation reported across groups. The recruitment route for participants was not recorded. The choice of telephone interviews may have limited rapport-building and precluded observation of participants' direct interactions with technology and may also have attracted participants more comfortable with telephone as a medium. The relatively small sample size, while consistent with qualitative methodology, precludes quantitative generalization, and the study relied on self-report and may have been influenced by social desirability. Data were collected between 2022 and 2023, during the later stages and immediately following the COVID-19 pandemic. Although subsequent policy developments may have changed the digital health landscape, the findings remain relevant to current implementation,

XSL•FO
RenderX

particularly the structural barriers identified. Findings from health care professionals should be interpreted as indicative of nurse specialist perspectives rather than representative of neurology professionals more broadly, given the modest sample size and limited diversity in gender and professional role. Future research should include more diverse samples, particularly people with limited prior digital engagement and those from lower socioeconomic backgrounds.

Conclusions

The majority of participants were open to the uptake and use of digital health technology, although this openness was consistently conditional. Three findings have particular implications for digital health for people living with neurological conditions. First, many people living with neurological conditions, caregivers, and health care professionals were unaware of what digital health tools were available for their specific condition. Improving awareness may therefore be a relatively immediate and practical target for intervention. Second, the neurological condition itself emerged as a barrier to technology use that is distinct from, and additional to, the digital literacy barriers well documented in the general population but which is not always reflected in current tool design. Third, although the 3 groups shared concerns about digital literacy, uncertainty, perceived benefit, user age and access, and the continuing importance of in-person clinical contact, they approached digital health technology from different positions: personal benefit for people living with neurological conditions, the practical demands of supporting someone else for caregivers, and service capacity for health care professionals. These differences highlight the importance of involving all 3 groups in the design and implementation of digital health tools.

Digital health tools should be co-designed with meaningful input from people living with neurological conditions, caregivers, and health care professionals and should provide evidence-based support while reducing complexity and burden and promoting equitable access, including across neurological symptoms. They should complement rather than replace the in-person care relationships that remain important to this population. Proactive promotion of available tools will also be needed to improve awareness among people living with neurological conditions, caregivers, and health care professionals.

Acknowledgments

The authors gratefully acknowledge the contribution of all study participants, the PPI contributors, the project steering group, and the neurological condition support groups and charities that facilitated participant recruitment, including Parkinson’s UK, the Multiple Sclerosis Society, the Huntington's Disease Association, Epilepsy Action, and the Motor Neurone Disease Association.

Funding

The research was funded by the National Institute for Health and Care Research Applied Research Collaboration Wessex. The funder had no involvement in this study’s design, data collection, analysis, interpretation, or the writing of this paper.

Data Availability

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

Generative AI Use

The authors declare that generative AI was used in the creation of this manuscript. Generative AI (Claude) was used for proofreading, editing, or language polishing, and word count reduction. The authors verified all outputs of the tool(s) used in the preparation of this manuscript and take full responsibility for the final content of the manuscript.

Authors' Contributions

Conceptualization: SF, JS, CK
Formal analysis: JS, SF, CK
Funding acquisition: CK, SF, JS
Investigation: JS
Methodology: JS, SF, CK
Project administration: JS
Supervision: CK
Writing – original draft: JS, SF
Writing – review and editing: SF, JS, CK

Conflicts of Interest

None declared.

XSL•FO
RenderX

Multimedia Appendix 1

COREQ checklist.
[DOCX File , 22 KB-Multimedia Appendix 1]

Multimedia Appendix 2

Illustrative participant quotations by theme and participant group.
[DOCX File , 19 KB-Multimedia Appendix 2]

References

1. Global status report on neurology. World Health Organization. Oct 12, 2025. URL: https://www.who.int/publications/i/item/9789240116139 [accessed 2026-10-23]
2. GBD 2021 Nervous System Disorders Collaborators. Global, regional, and national burden of disorders affecting the nervous system, 1990-2021: a systematic analysis for the Global Burden of Disease Study 2021. Lancet Neurol. 2024;23(4):344-381. [FREE Full text] [doi: 10.1016/S1474-4422(24)00038-3] [Medline: 38493795]
3. Monitoring and evaluating digital health interventions: a practical guide to conducting research and assessment. World Health Organization. Dec 12, 2016. URL: https://www.who.int/publications/i/item/9789241511766 [accessed 2026-10-23]
4. Fit for the future: 10 year health plan for England. Department of Health and Social Care. July 3, 2025. URL: https://www.gov.uk/government/publications/10-year-health-plan-for-england-fit-for-the-future [accessed 2026-10-23]
5. Frontline digitisation: creating the conditions for a digital NHS. The NHS Alliance. Aug 6, 2024. URL: https://www.nhsconfed.org/publications/frontline-digitisation [accessed 2026-10-23]
6. Hepburn J, Williams L, McCann L. Barriers to and facilitators of digital health technology adoption among older adults with chronic diseases: updated systematic review. JMIR Aging. 2025;8:e80000. [FREE Full text] [doi: 10.2196/80000] [Medline: 40934502]
7. Spreadbury JH, Young A, Kipps CM. A comprehensive literature search of digital health technology use in neurological conditions: review of digital tools to promote self-management and support. J Med Internet Res. Jul 28, 2022;24(7):e31929. [FREE Full text] [doi: 10.2196/31929] [Medline: 35900822]
8. Masanneck L, Gieseler P, Gordon WJ, Meuth SG, Stern AD. Evidence from ClinicalTrials.gov on the growth of digital health technologies in neurology trials. NPJ Digit Med. 2023;6(1):23. [FREE Full text] [doi: 10.1038/s41746-023-00767-1] [Medline: 36765123]
9. Blom MM, Zarit SH, Zwaaftink RBMG, Cuijpers P, Pot AM. Effectiveness of an internet intervention for family caregivers of people with dementia: results of a randomized controlled trial. PLoS One. 2015;10(2):e0116622. [FREE Full text] [doi: 10.1371/journal.pone.0116622] [Medline: 25679228]
10. Chiu T, Marziali E, Colantonio A, Carswell A, Gruneir M, Tang M, et al. Internet-based caregiver support for Chinese Canadians taking care of a family member with Alzheimer disease and related dementia. Can J Aging. 2009;28(4):323-336. [doi: 10.1017/S0714980809990158] [Medline: 19925698]
11. D'hooghe M, Van Gassen G, Kos D, Bouquiaux O, Cambron M, Decoo D, et al. Improving fatigue in multiple sclerosis by smartphone-supported energy management: the MS TeleCoach feasibility study. Mult Scler Relat Disord. 2018;22:90-96. [doi: 10.1016/j.msard.2018.03.020] [Medline: 29649789]
12. Fischer A, Schröder J, Vettorazzi E, Wolf OT, Pöttgen J, Lau S, et al. An online programme to reduce depression in patients with multiple sclerosis: a randomised controlled trial. Lancet Psychiatry. Mar 2015;2(3):217-223. [doi: 10.1016/S2215-0366(14)00049-2] [Medline: 26359900]
13. Hixson JD, Barnes D, Parko K, Durgin T, Van Bebber S, Graham A, et al. Patients optimizing epilepsy management via an online community: the POEM Study. Neurology. 2015;85(2):129-136. [doi: 10.1212/wnl.0000000000001728] [Medline: 26085605]
14. Hanrahan M, Wilson C, Keogh A, Barker S, Rochester L, Brittain K, et al. How can patients shape digital medicine? A rapid review of patient and public involvement and engagement in the development of digital health technologies for neurological conditions. Expert Rev Pharmacoecon Outcomes Res. Feb 2025;25(2):137-154. [FREE Full text] [doi: 10.1080/14737167.2024.2410245] [Medline: 39376020]
15. Bruno E, Simblett S, Lang A, Biondi A, Odoi C, Schulze-Bonhage A, et al. RADAR-CNS Consortium. Wearable technology in epilepsy: the views of patients, caregivers, and healthcare professionals. Epilepsy Behav. Aug 2018;85:141-149. [doi: 10.1016/j.yebeh.2018.05.044] [Medline: 29940377]
16. Gandy M, Karin E, Fogliati V, Meares S, Nielssen O, Titov N, et al. Emotional and cognitive difficulties, help-seeking, and barriers to treatment in neurological disorders. Rehabil Psychol. 2018;63(4):563-574. [doi: 10.1037/rep0000241] [Medline: 30247055]
17. Marrie RA, Leung S, Tyry T, Cutter GR, Fox R, Salter A. Use of eHealth and mHealth technology by persons with multiple sclerosis. Mult Scler Relat Disord. 2019;27:13-19. [doi: 10.1016/j.msard.2018.09.036] [Medline: 30296732]

XSL•FO
RenderX

18. Simblett SK, Bruno E, Siddi S, Matcham F, Giuliano L, López JH, et al. RADAR-CNS Consortium. Patient perspectives on the acceptability of mHealth technology for remote measurement and management of epilepsy: a qualitative analysis. Epilepsy Behav. Aug 2019;97:123-129. [doi: 10.1016/j.yebeh.2019.05.035] [Medline: 31247523]
19. Simblett SK, Evans J, Greer B, Curtis H, Matcham F, Radaelli M, et al. RADAR-CNS consortium. Engaging across dimensions of diversity: a cross-national perspective on mHealth tools for managing relapsing remitting and progressive multiple sclerosis. Mult Scler Relat Disord. Jul 2019;32:123-132. [doi: 10.1016/j.msard.2019.04.020] [Medline: 31125754]
20. Winberg C, Kylberg M, Pettersson C, Harnett T, Hedvall P, Mattsson T, et al. Feeling controlled or being in control? Apps for self-management among older people with neurological disability. Disabil Rehabil Assist Technol. Aug 2021;16(6):603-608. [FREE Full text] [doi: 10.1080/17483107.2019.1685017] [Medline: 31711351]
21. Reid K, Beswick E, Tam J, Symonds A, Lyle D, Newton J, et al. Perceptions of digital technology use for monitoring health in people living with neurological disorders. J Neurol Sci. 2024;462:123072. [doi: 10.1016/j.jns.2024.123072] [Medline: 38885541]
22. Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol. 2006;3(2):77-101. [doi: 10.1191/1478088706qp063oa]
23. Bally ELS, Cheng D, van Grieken A, Sanz MF, Zanutto O, Carroll A, et al. Patients' perspectives regarding digital health technology to support self-management and improve integrated stroke care: qualitative interview study. J Med Internet Res. 2023;25:e42556. [doi: 10.2196/42556] [Medline: 37014677]
24. Zainal H, Xiaohui X, Thumboo J, Seah SJ, Leng LL, Kok Yong FK. Exploring caregiver challenges, digital health technologies, and healthcare support: a qualitative study. Front Digit Health. 2025;7:1587162. [FREE Full text] [doi: 10.3389/fdgth.2025.1587162] [Medline: 40547053]
25. do Nascimento IJB, Abdulazeem H, Vasanthan LT, Martinez EZ, Zucoloto ML, Østengaard L, et al. Barriers and facilitators to utilizing digital health technologies by healthcare professionals. NPJ Digit Med. 2023;6(1):161. [doi: 10.1038/s41746-023-00899-4] [Medline: 37723240]
26. Gromisch ES, Turner AP, Haselkorn JK, Lo AC, Agresta T. Mobile health (mHealth) usage, barriers, and technological considerations in persons with multiple sclerosis: a literature review. JAMIA Open. 2021;4(3):ooaa067. [FREE Full text] [doi: 10.1093/jamiaopen/ooaa067] [Medline: 34514349]
27. Jarvis K, Thetford C, Turck E, Ogley K, Stockley RC. Understanding the barriers and facilitators of digital health technology (DHT) implementation in neurological rehabilitation: an integrative systematic review. Health Serv Insights. 2024;17:11786329241229917. [FREE Full text] [doi: 10.1177/11786329241229917] [Medline: 38690403]
28. Moulaei K, Sheikhtaheri A, Fatehi F, Shanbehzadeh M, Bahaadinbeigy K. Patients' perspectives and preferences toward telemedicine versus in-person visits: a mixed-methods study on 1226 patients. BMC Med Inform Decis Mak. Nov 15, 2023;23(1):261. [FREE Full text] [doi: 10.1186/s12911-023-02348-4] [Medline: 37968639]
29. Oudbier SJ, Souget-Ruff SP, Chen BSJ, Ziesemer KA, Meij HJ, Smets EMA. Implementation barriers and facilitators of remote monitoring, remote consultation and digital care platforms through the eyes of healthcare professionals: a review of reviews. BMJ Open. 2024;14(6):e075833. [FREE Full text] [doi: 10.1136/bmjopen-2023-075833] [Medline: 38858155]

Abbreviations

COM-B: capability, opportunity, and motivation–behavior
COREQ: Consolidated Criteria for Reporting Qualitative Research
mHealth: mobile health
NHS: National Health Service
PPI: patient and public involvement

Edited by Y Gong; submitted 20.Jul.2026; peer-reviewed by MS Ranaiy, P Liu; comments to author 10.Sep.2026; revised version received 01.Oct.2026; accepted 19.Oct.2026; published 19.Nov.2026

Please cite as:
Fearn S, Spreadbury J, Kipps C
Attitudes Toward Digital Health Technology in Neurological Conditions: Qualitative Study of Patients, Caregivers, and Health Care Professionals
JMIR Hum Factors 2026;13:e107517
URL: https://humanfactors.jmir.org/2026/1/e107517
doi: 10.2196/107517
PMID:

XSL•FO
RenderX

©Sarah Fearn, John Spreadbury, Christopher Kipps. Originally published in JMIR Human Factors (https://humanfactors.jmir.org), 19.Nov.2026. This is an open-access article distributed under the terms of the Creative Commons Attribution License (https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work, first published in JMIR Human Factors, is properly cited. The complete bibliographic information, a link to the original publication on https://humanfactors.jmir.org, as well as this copyright and license information must be included.

XSL•FO
RenderX