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RESEARCH ARTICLE

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Healthcare provider perceptions of support provision for people with stroke: a qualitative study

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ABSTRACT

Purpose: This study aimed to explore healthcare providers' perceptions of support provision for people who have experienced stroke.

Materials and Methods: A qualitative descriptive study was conducted. Snowball sampling was used to recruit Australian healthcare workers providing care to people with stroke. Semi-structured one-on-one interviews were audiotaped and transcribed. An inductive thematic analysis of all transcripts was undertaken by two authors.

Results: Fourteen participants who worked across the care continuum in three Australian states were interviewed. Responses fit into three overarching themes: (1) attitudes to supports; (2) availability and accessibility of supports; and (3) awareness of supports. These themes encompassed perceptions of the support options available for people with stroke and the factors affecting support provision decision making among healthcare providers.

Conclusions: The healthcare providers in this study thought people with stroke would benefit from a greater range of available supports. Supports should take into account the diverse experiences and acute and long-term needs of people with stroke, as well as be accessible to people from all cultural, linguistic, and socioeconomic backgrounds. Healthcare providers and people who have experienced stroke may benefit from a roadmap for post-stroke support that clearly outlines where responsibility lies for support provision.

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Stroke; post-stroke; after stroke; support; rehabilitation; long-term needs; healthcare providers; qualitative

IMPLICATIONS FOR REHABILITATION

- Healthcare providers across the care continuum feel that current post-stroke supports and services do not adequately serve the diversity of experiences and needs of stroke survivors.
- Stroke survivors who do not attend rehabilitation, including those with "mild" stroke or who do not fit within limb-focused rehabilitation services, may be missing out on key post-stroke information and support.
- The development of a roadmap for post stroke support that identifies minimum support provisions and where responsibility lies for provision could benefit healthcare providers, stroke survivors and their carers.

Introduction

Stroke continues to be a major public health concern as the third leading cause of death and disability globally [1], with one in four people experiencing a stroke in their lifetime [2]. In Australia, there are over 39,000 stroke events per year [3] and more than 445,000 people living with the effects of stroke [4]. The number of people living with stroke in Australia is predicted to nearly double by 2050 based on current trends and data [4]. The effects of stroke are vast and can affect physical, psychological, and cognitive health in the short and long term and may include functional and language deficits. These effects do not always follow a linear pattern of improvement and the long-term severity of these effects can sometimes be determined by the support individuals receive following the stroke [5,6].

In the context of this paper, post-stroke support refers to the range of services, resources, and interventions healthcare providers can offer to people with stroke to aid in recovery, rehabilitation, and reintegration into the community following stroke. This support aims to address the physical, psychological, cognitive, functional, and social consequences of stroke and improve the quality of life of those affected. Post-stroke support can be delivered across the care continuum by a range of services from acute care and rehabilitation through to community health organisations and online supports. Post-stroke support may include: healthcare referrals to directly address physical, functional, cognitive, or language deficits; mental health support; secondary prevention information provision and behaviour change support; connection with stroke community groups; assistance in hospital to rehabilitation to community

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transitions; and linking in with transport and financial assistance to aid patients in accessing relevant services [7–10]. Australia has diverse organisational and funding structures that underpin services to people with stroke. Free and universal acute public healthcare is provided under Medicare government funding. Medicare and private health insurance also subsidises general practitioner costs as well as other allied health services that may be required after a stroke. People with significant permanent disability may also apply to receive additional funding through the government National Disability Insurance Scheme (NDIS) to support payment of private disability-related services. Specialised inpatient and/or outpatient stroke units have been established in some regions. In metropolitan hospitals, 83% of people admitted with acute stroke receive care in specialised stroke units compared to 35% in outer regional hospitals [11]. Due to Australia's vast geographical expanse, limited services are provided in some rural and remote communities and may include fly-in fly-out models of care where healthcare providers fly to an under-resourced community for days to weeks at a time to provide limited periodic health services. Despite the range of services available, Australia struggles to meet the burden resulting from stroke, particularly in rural and remote communities where availability and access to timely and appropriate healthcare and support are compounded [4,12].

As has been reported in other first world countries [13], Australian healthcare providers have identified multiple barriers to the implementation of clinical practice guidelines for stroke in acute and rehabilitation settings including workload and time constraints, contradictory attitudes to stroke guidelines, inadequate knowledge or skills, an absence of infrastructure to support referrals and access to services, and language and communication barriers [13,14]. Healthcare providers have also reported on barriers to referring patients to community-based programs including a lack of time to educate patients about these services, perceived lack of available community programs, belief that it is outside of their role, and patients being resistant to attending programs not directly related to improving physical function [15,16]. In addition to these barriers, qualitative studies with stroke healthcare providers have identified ineffective professional communication between primary and secondary healthcare providers due to the "silos" they work in [17,18].

It is possible that these healthcare provider barriers to care provision may be related to the significant deficits in provision of post-stroke support in Australia as identified in the most recent Stroke Foundation Audit. The audit reported that every state had fallen below achievable benchmarks set for discharge planning and secondary prevention [12]. Further, 84% of Australians with stroke have reported at least one unmet health-related need a year or more after stroke related to cognitive, emotional, or physical problems [19]. Any factor which hinders the efficient or effective delivery of care to people living with stroke with the potential to impact their recovery, outcomes, or quality of life should be explored.

While there have been previous papers reporting on healthcare providers' provision of clinical care after stroke, this study expands on the literature to report on Australian healthcare provider perceptions of all types of support provision important for stroke recovery, including those that may technically fall outside of their role or "usual care." This study aimed to explore:

1. What support options across the care continuum were healthcare providers aware of, what did they refer patients to and why or why not;
2. What support options healthcare providers would like to see become available for people who have experienced stroke; and
3. How healthcare providers would like to find out about supports they can offer to people with stroke.

Materials and methods

Study design

A qualitative descriptive study was conducted to investigate healthcare provider perceptions of support provision for people living with stroke. This overarching methodological approach lends itself to health care research by allowing analysis and interpretation to remain closely linked with the data and provide direct descriptions of phenomena to inform and influence health care provision [20,21].

Semi-structured interviews were conducted with healthcare providers between June 2019 and September 2020 using a discussion guide and brief survey of participant demographics. During the interview, participants were also asked about their perceptions of the role of carers of people living with stroke, the data of which will be reported elsewhere. The Consolidated Criteria for Reporting Qualitative Research (COREQ) [22] standards were utilised as a guide for research design and reporting.

The study received approval from the Hunter New England Human Research Ethics Committee (Reference No. 2018/ETH00583) and the University of Newcastle Human Research Ethics Committee (Reference No. H-2018-0357).

Participant eligibility

Participants were eligible if they were: over 18, able to participate in English, and were or had been a healthcare provider in Australia for people with stroke.

Procedure

Participants were recruited via snowball sampling. Our research team included a neurologist, rehabilitation specialist, general practitioner, physiotherapist, and clinical psychologist. Each were asked to nominate three healthcare providers in their network for interviews. These nominees were sent an ethics-approved email containing the participant information statement and consent form that could be returned *via* email or post. Nominees were then able to choose whether or not to be involved and were encouraged to forward the email onto other health professionals.

One-on-one interviews were conducted with all participants via phone or video call. The interview duration was between 25 and 75 min. There were no repeat interviews. A semi-structured discussion guide was used to prompt answers through open-ended questions exploring the healthcare providers' experiences of providing support to people with stroke (Supplementary File 1). Participants were asked about the types of resources and supports they offered to people with stroke, including referrals to health services (inpatient, outpatient, and community), and prompted with other examples where required (e.g., pamphlets, books, websites, forums, social or support groups).

Interviews were audiotaped and field notes were taken. Audiotapes were transcribed verbatim by a third-party company and crosschecked by BC for transcription accuracy. Interviewees were offered the option of reviewing their transcript. No participants returned transcript comments or corrections.

Participant characteristics

Seventeen healthcare providers expressed interest in the study after being contacted through the snowball sampling method. Three declined due to lack of time or not feeling they worked

with enough people with stroke to participate. Fourteen healthcare providers working across three Australian states participated. In the last three interviews, no new ideas were identified by the interviewer, and this was confirmed when no new themes were identified from these interviews during thematic analysis.

Participants worked across the care continuum including acute care, rehabilitation, and community-based care, with a number of participants reporting on experiences they had working across different settings. No participants dropped out. Participants had between two and 36 years of experience working as healthcare providers to people with stroke. None of the participants identified as Aboriginal or Torres Strait Islander. See Table 1 for participant demographics.

Reflexivity

All interviews were conducted by BC, a female health and medicine Doctor of Philosophy (PhD) candidate and research assistant who held a Bachelor of Health (an exit award for the Bachelor of Medicine). She had participated in small-group qualitative research training with a qualitative expert independent to the study and undertook beginner and advanced training in the use of NVivo software. This research project is part of her PhD thesis on post-stroke support and, with a health background herself, she felt it important to include the healthcare provider perspective. Her health background facilitated rapport-building with participants and interpretation of medical jargon. With no experience working directly in the care of stroke survivors, BC did not have strong preconceived ideas of how stroke care should be delivered when conducting or interpreting the interviews, and this may have limited the depth of detail extracted on care and support provision compared to an interviewer with more expertise in stroke care provision.

For the most part, BC had no prior relationship with the interviewees beyond enrolment and arranging interviews. Three interviewees had previously contributed to the design of the initial study, which had a single core topic for the discussion guide, and grant acquisition. BC joined the research team after funding was secured and contributed to expanding the study's scope by adding a second core topic for exploration. The three interviewees who were involved in the initial design of the study were not involved in developing the discussion guide for the second core topic, which is the focus of this paper, and BC had no face-to-face and only minimal email contact with these participants prior to the interviews. Additionally, one participant worked in the same office as BC and they shared regular contact outside of the interview. This was the only participant aware of BC's personal background and motivations. In order to address potential interviewer bias, the ethics-approved discussion guide was adhered to when conducting the interviews.

Table 1. Participant demographics ($N = 14$).

Variable	Mean (range)
Age (years)	45.5 (32–62)
Variable	**Frequency, n (%)**
Gender	
Woman	9 (64%)
Years of experience working with people with stroke	
<10 years	5 (36%)
10–24 years	6 (43%)
25+ years	3 (21%)
Area of clinical practice	
Neurology	3 (21%)
Occupational therapy	3 (21%)
Physiotherapy	2 (14%)
Speech pathology	2 (14%)
General practice	1 (7%)
Nursing	1 (7%)
Dietetics	1 (7%)
Psychology	1 (7%)
State*	
New South Wales	9 (64%)
Northern Territory	3 (21%)
Victoria	2 (14%)

*State refers to the state in which they worked with stroke survivors.

Analysis

The analysis for this study was guided by Braun and Clarke's six-step thematic analysis method [23].

An inductive, semantic, realist approach was taken to analysis [23]. That is, the codes were derived directly from the data, rather than utilising a pre-existing coding frame, and on the assumption that participants' answers reflected their reality. Themes were developed based on the surface meaning of participant responses in order to identify patterns, the significance and broader implications of which are reflected on in the discussion.

Two authors (BC and AG) read the transcripts with the research questions in mind to familiarise themselves with the data. The two then independently prepared an initial set of codes before meeting to compare. There was a high level of similarity between the two coders, and any discrepancies in interpretation were discussed.

The first author collated the codes into potential themes. This was an iterative approach involving multiple meetings between BC and AG, where the proposed themes were revised and refined, with regular referral back to the original data and coded extracts. For analyst triangulation [24], all authors were consulted periodically during this process and contributed to defining the final themes.

The qualitative data were analysed and organised using the NVivo12 software.

Results

Participants offered a variety of support options to their patients, including: referrals to allied health; verbal information; written materials (e.g., Australian Stroke Foundation "My Stroke Journey"[25]); online resources; and, when locally available, multidisciplinary stroke-focused community services.

Three themes encompassed the participants' perceptions of support options for people with stroke and factors influencing their ability, and decisions to provide those support options: attitudes to supports, availability and accessibility of supports, and awareness of supports. To maintain anonymity of participants, against each quote we have only included information related to years of experience (YOE) as a healthcare provider to people with stroke and healthcare provider role. Where the role didn't clearly convey their underlying area of clinical practice (e.g. rehabilitation service manager) we included the area of clinical practice. Any additional information relevant to understanding the context of the quote has been provided in the text in a way that will not compromise participant anonymity.

Attitudes to supports

Hesitancy to provide information and resources in early stages of stroke

Participants perceived patients with stroke as not always being "able to digest" information in the early stages of stroke. Healthcare

providers made decisions about when and what support to provide in an effort not to overwhelm patients, and only sometimes reported including patients in this decision making.

> It's difficult knowing how much information to give at times. (P7, rehabilitation service manager, occupational therapy, 10–24YOE)

> We lead them to ask questions, but we don't specifically direct them to something because my experience is there are times you can over inform and … it becomes even more overwhelming. (P9, stroke coordinator, nursing, 10–24YOE)

Attitudes towards online resources are mixed

There were mixed attitudes towards the suitability of online resources as a means of offering support to patients with stroke. Most participants were offering online resources to their patients through websites such as the Stroke Foundation or other peak body websites relating to their discipline. These participants believed online resources "definitely" have a place as an adjunct to in-person care and provide an opportunity for people with stroke to link in with communities of people with similar lived experience. Some would make an extra effort to step patients through logging into resources or looking up services and websites.

> [I use] online resources like Stroke Foundation and EnableMe and really try to get people to connect with more online communities. (P1, rehabilitation team manager, occupational therapy, 10–24YOE)

> We might sit together and look up, on my phone, the quit line service, or might look up the exercise physiologist in the area that was bulk billing. (P5, occupational therapist, <10YOE)

There were also some participants less certain of the value of online resources. Some were not sure there was an evidence base yet to support their use, while others perceived their patients as preferring face-to-face interactions rather than online consultations or resources, or as having barriers to internet use.

> The patients I've seen tend not to be too keen on using the apps for dietary advice, they tend to prefer the face to face advice and exploration of diet with someone who can advise rather than get things off an app. (P3, neurologist, 25+YOE)

> I think there's things like data and storage and stuff like that on people's phones, are probably limitations … phones often being replaced, frequently replaced in the [remote] setting that I work in. (P12, physiotherapist, <10YOE)

Perceptions of responsibility in delivering secondary prevention supports are mixed

Participants had varying opinions on who they felt was responsible for providing secondary prevention-related support options for patients after a stroke. Half of the participants, most of whom were allied health, preferred a multidisciplinary approach. It was also acknowledged this approach relied on consistent messaging.

> I think it's everybody's business … [it's the best option] as long as there's consistent messaging. So if you've got three people talking to the person about smoking, that everybody's giving the same message. (P5, occupational therapist, <10YOE)

Other participants felt secondary prevention was one of the aspects of support that did not fall into their role. This was primarily among those working in acute care citing time limitations and a focus on treatment and assessment of immediate concerns. Doctors felt comfortable their team would handle any support provision required outside of the acute problem. Fly-in fly-out workers also felt local health clinics were better placed for conversations about ongoing support and secondary prevention.

> I leave [my] team, who usually come up with more accurate, or in-depth assessment, to select or choose what [resource or referral] they think is most appropriate. (P3, neurologist, >25YOE)

Availability and accessibility of supports

Problematic access to and availability of services across Australia

Australia is a large country and it is difficult to provide adequate health services to many of the communities located outside of major cities. This was a frustration raised by multiple participants who talked about standard services and resources they would like to link their patients to that weren't available within a reasonable travelling distance. Healthcare providers who had visited rural and remote communities through a fly-in fly-out service particularly emphasised the extremely poor availability of post-stroke care and health services in these regions.

> Some of these [rural and remote] communities, there's absolutely nothing in terms of accessibility for them. (P11, physiotherapist, 25+YOE)

> We might not see [rural stroke patients] for two and half years … sometimes [the patient's] function had really deteriorated by the time we'd seen them. They hadn't been in any contact with other health professionals in that time. (P5, occupational therapist, <10YOE).

Even participants working in urban parts of Australia reported a shortage in allied health services to which they could make referrals. In some cases they also reported delays in patients receiving services due to long waiting times.

> They've got very limited access here [in an urban area] to psychiatry services. (P7, rehabilitation service manager, occupational therapy, 10–24YOE)

> [Speech pathology is] really lacking in terms of inpatient availability. So they generally will have a long waiting list too, and that's a really big gap. (P14, dietician, 10–24YOE)

Even when services were geographically accessible, participants reported that some of their patients still experienced financial barriers to care and difficulty obtaining funding to support their access to services.

> It's people's pressing financial needs, and that often trumps a complete sub-acute rehab process and precludes people from tertiary stroke education. (P1, rehabilitation team manager, occupational therapy, 10–24YOE)

> I think it's really hard to get NDIS funding. We've had people who are so in need and … they've been knocked back. (P14, dietician, 10–24YOE)

Dissatisfaction with available supports not being appropriate for all people with stroke

Participants expressed a desire for more resources reflecting the diversity of populations, needs, and experiences among people living with stroke.

> People that have had a stroke, just like everybody else, there's a range of interests and abilities. We just need to have a gamut of resources for those people so that they can choose and use what's suitable to their abilities and their interests … everybody just has really different needs. (P5, occupational therapist, <10YOE)

Limited availability of culturally-appropriate resources was raised as an important point by a participant who worked with remote Indigenous communities. They felt many stroke resources

were not appropriate to provide because they did not depict the experiences of the local Indigenous population. However, there were a small number of printed resources developed in a rural community with a large Indigenous population the healthcare provider was more inclined to provide because the resources were more relatable for their patients.

> Anything [Indigenous patients] receive has to be in language … In the setting that I work in [remote Indigenous communities], something that's meaningful to them, that they come up with themselves …. something about being on their own country and involving whoever's in that family unit, or in the community … functional tasks … that are relevant to their daily activities or in their home… in their family. (P12, physiotherapist, <10YOE)

> [Talking about the resources they preferred to use] They'd have more appropriate pictures. So, they'd have someone who was coloured, rather than being a white person, in a black-relevant environment, so it would look more like someone's home versus something that you might see in an urban city. And simple … if they weren't in language, they just have limited written instructions, or they would use pictures. (P12, physiotherapist, <10YOE)

Barriers specific to younger persons who have experienced stroke were discussed. Participants felt there was sometimes a hesitancy from younger people towards accessing services due to a focus on returning to work and "normal life," a belief symptoms would pass, or not feeling a need to connect with other people who had experienced stroke. This is seen to be compounded by many services not being geared towards younger people, or excluding them entirely based on age requirements.

> There is a gap with those services in that they're for over 65 year olds. So if you're a younger stroke, it's really hard to get services. (P14, dietician, 10–24YOE)

Participants expressed their frustrations about the lack of follow up and support available for people who have experienced a "mild" stroke, or whose symptoms did not fall into what was sometimes perceived as limb-focused rehabilitation.

> You can have someone quite aphasic, but a medical officer who just comes at it from the point of view of the need for beds and discharging patients … because [the patient] can move their arms and legs equally, they're not considered appropriate for rehab." (P7, rehabilitation service manager, occupational therapy, 10—24YOE)

Inadequate availability of long-term supports

A strong message from the interviews was many people with stroke are missing out on long-term support and care. This message came from across disciplines and from participants in both acute and post-acute working environments. It was often described that a patient with stroke might be doing "well" during their acute and subacute periods between hospital and rehabilitation, but a range of new concerns and issues can arise when they arrive home and attempt to return to their previous life. Participants wanted to see home-based rehabilitation and more "check-in" style supports available in the months to years after stroke to assess how their patients are coping physically and psychologically.

> "Home based rehab … that's crucial. … the issue is that the patients, they always overestimate how well they are doing, because in the hospital, they don't do anything. But when they go back home, they find all these limitations, and then probably they have no one to run these limitations by. Like, you know, a strategist about how to manage issues in the daily life. (P6, neurologist, 10–24YOE)

> We should have resources for longer term stroke survivors that GPs, or us as specialists can refer into directly, but we don't have that … [there is a need for] "top-up therapies" so that there's early recognition of deterioration and referral to specialized services … every one to three years after discharge. (P3, neurologist, 25+YOE)

Participants also expressed a desire for better communication between services and a supported transition between services for patients. One suggestion raised by a few participants was to have a stroke coordinator as a central point of access for both healthcare professionals and stroke patients.

> A stroke coordinator role to help bridge those gaps. 'Cause a lot of the individual services are great, but it's the gaps between the services that's the thing for me. (P8, psychologist, <10YOE)

Awareness of supports

Patients perceived to have low awareness of available supports

Participants felt a significant barrier for their patients with stroke was not knowing what they could get help for, or where to go for support when they need it. Some participants believed this could be linked to traditional stereotypes of patients as "passive recipients of care" and patients not feeling comfortable asking healthcare providers questions about support options and advocating for themselves if they need additional supports.

> The carers of the stroke survivors basically said to us, "We don't know who to talk to when we have a question. We don't know where to go." (P8, psychologist, <10YOE)

> For people that don't have those skills to advocate for themselves or identify their own needs, I think those people really fall through the gaps. (P5, occupational therapist, <10YOE)

Desire to be aware of supports local to the patient

Appropriate resource provision depended on participants having knowledge of what support options were local to their patient. Participants who did locum work relied on handovers from other staff and community notice boards to understand what services were available in the various locations they worked. Some participants in urban environments also took extra steps to ensure patients from out of area were provided with follow up resources closer to home.

> Occasionally we will get people from out of area, so we look at generally tying them in with a local resource so that they're followed up. (P7, rehabilitation service manager, occupational therapy, 10–24YOE)

Preferences for being made aware of new supports

We asked participants about their preferences for receiving information about new and existing post-stroke support options. The majority mentioned emails as the preferred option to stay up to date and appreciated something "landing in [their] inbox" to save them from actively having to go searching for information on new resources and services. One participant expressed a negative view of receiving information through emails as they felt they were cluttering their inbox and was "sick of emails that are just stuff."

Participants also favoured the idea of a website as a single point of contact to find the resources they were looking for and to check for updates. Some were already accessing the Stroke Foundation website for this purpose, or another similar national body related to the resources they were after.

> A repository that I know is very robust, it'd be really helpful, because the hours that you can spend [trying to] find something, it takes you away from the other work that you could be doing, even though, you know, you're looking 'cause you think it's important. (P9, stroke coordinator, nursing, 10–24YOE)

An allied health participant had honed their Facebook newsfeed to use as a resource for updates and found it to be a helpful resource. Others also mentioned things like community notice boards, conferences, journals, regional stroke facilitators, word of mouth, and in-services as ways they frequently found out or sought out updated information on available supports.

Discussion

The participants of this study shared a range of positive experiences, frustrations and limitations, and hopes for the future regarding post-stroke support provision. Three themes around decision making for support provision were identified from the data: (1) attitudes to supports; (2) availability and accessibility of supports; and (3) awareness of supports. These results offer an opportunity to reflect on what changes can be made to our current stroke care models to assist healthcare providers in providing appropriate support options to their patients.

The health professionals in our study identified a need for greater availability and accessibility of long-term supports, which fits with the experience of people with stroke who have reported feeling "abandoned" post-discharge [26,27]. Prior research aligns with our findings that long-term support options need to be flexible, patient-centred [27], offered in multiple formats, over multiple time points [28,29], and operated by multidisciplinary stroke care teams [30]. Scrivener et al. [31] proposed people who experience ongoing disability after stroke be recognised and treated by the disability sector, rather than the health sector, to allow better accessibility for ongoing services irrespective of age or disability [31].

Regardless of sector or place on the care continuum, stroke services need to ensure the supports they offer are accessible to all patients, including those with diverse cultural backgrounds, languages, cognitive and language impairments, and financial and transport restrictions. The Stroke Foundation in Australia is taking steps to provide resources accessible to a broader range of stroke survivors including a greater variety of in-language resources [32], culturally-representative resources for Indigenous Australians [33], and a website designed for younger people with stroke [34].

Healthcare provider-held attitudes on post-stroke recovery and support options can affect the delivery of optimal care provided for people with stroke. A notable example from this study is our participants' perceptions of what information patients can digest in the acute stage. A qualitative study based in the United Kingdom found similar hesitancies towards information provision in acute care by healthcare providers to people who experienced transient ischaemic attack [26]. Stroke survivors also self-report struggles with absorbing information in the first few days following the stroke event [28]. While here it may seem both patient and provider perceptions are in line, this becomes more complicated further along the continuum of care. As we found, healthcare providers can have different understandings of who is responsible for providing support options [26]. They commonly feel too time-pressured in their own roles to provide support extraneous to the presenting issue [35], and can be less likely to follow best practice guidelines if they are perceived as "'too idealistic', not feasible, too time intensive for the 'real world'" [13]. In an absence of clear communication between primary and secondary healthcare providers about what information and support patients have or have not received in the acute stage of stroke, patients can fall through the gaps [17]. Clearer guidelines for responsibility and a timeline of post-stroke support provision may be of assistance to healthcare providers for people with stroke.

We found support options healthcare providers offered to their patients tended to vary between individuals, teams, services, and geographical areas based on the accessibility of, awareness of, and attitudes towards supports. This was not a surprising finding, as aside from the My Stroke Journey pack from the Australian Stroke Foundation [36] there is currently no standardised approach to post-stroke support provision. Whether or not a patient receives rehabilitation services also affects what information and support they are provided, and, in Australia, people discharged directly home after acute stroke are more likely to be readmitted to hospital and report more mobility problems than those discharged to inpatient rehabilitation facilities [37]. The development of a roadmap or guidelines for support provision after stroke which extends to long-term support may be useful in addressing some of the inconsistencies in support provision between regions and services by providing health services with a framework to implement, monitor, and evaluate post-stroke support provision [38]. A practical, evidence-based roadmap designed to integrate with healthcare providers' existing routines, offer specific guidelines on support provision (including role clarity), and emphasise the diversity and fluctuating nature of patient needs may be well-received by healthcare providers [13]. A roadmap accessible to patients could encourage self-advocacy, participation in care decisions, and provide an awareness of supports to request access to. By outlining the specific types of support that should be available to stroke survivors at different time points and the responsibilities of various healthcare providers and services in enabling access to these supports, a roadmap could help to promote more consistent and comprehensive support provision across the care continuum.

Our study has both strengths and limitations. We were able to recruit diverse healthcare providers from a range of geographical areas, including those who worked in rural and remote regions in both permanent and fly-in fly-out roles. A significant portion of the recruitment was conducted during COVID-19 which made recruitment more difficult. Notably, we were unable to recruit a social worker to interview which limits the understanding of post-stroke support provision. This may also have been affected by the absence of someone with a social work background in our wider research team. In Australia, social workers can offer support to people with stroke related to optimising physical, emotional, social, and spiritual wellbeing through counselling and information provision and patient advocacy both during hospitalisation and in the community. Given some of the data was collected during the COVID-19 pandemic, it is also possible the views, opinions, and experiences captured during the interviews may be less reflective of standard care. Due to the snowball sampling method, the locations participants worked clustered as people tended to forward the study to colleagues. Some participants were not directly involved with stroke patients at the time of the interview and their experiences were recalled from previous years, which may have affected how they responded compared to other participants. This study reflects only the Australian context and further research should be done to understand differences in perceptions of post-stroke support provision globally.

Conclusion

This study documents a range of positive experiences, frustrations and limitations, and hopes for the future Australian healthcare providers held regarding post-stroke support. Three themes underlie the modifiable determinants of their decisions in providing support options to their patients with stroke: (1) attitudes to

supports; (2) availability and accessibility of supports; and (3) awareness of supports. Post-stroke support options should consider both the diverse acute and long-term needs and experiences of people with stroke, as well as accessibility for people from all cultural, linguistic, and socioeconomic backgrounds. We feel healthcare providers and people who have experienced stroke alike may benefit from a roadmap for post-stroke supports clearly outlining where responsibility lies for provision.

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