

Research Article

Delivering a Specialised Best Practice Service for People with Functional Neurological Disorder: An Australian Qualitative Descriptive Study

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Specialised functional neurological disorder (FND) clinics are emerging as the preferred way of providing best practice care to people with FND. However, questions remain around optimal care pathways, service provision, and resources. This study aimed to identify (1) service characteristics of Australian FND models of care; (2) barriers and enablers to implementing a specialised FND service; and (3) enablers and barriers to providing best practice management for people living with FND. Clinicians were recruited from Australian public and private healthcare organisations identified as leading best practice for adults with FND. Clinicians completed a structured interview via phone. A descriptive content analysis was used. Five out of 12 healthcare organisations interviewed had a specialised multidisciplinary FND service. All specialised FND services were outpatient programs, but the structure and referral pathways varied. Barriers identified by organisations with an FND service included “funding” and “staff and service fragility,” while enablers included “engaging stakeholders” and having a clear “service driver.” “Diagnosis delay” and “insufficient access to staff” were identified as barriers to implementing best practice by organisations without a specialised FND service. Despite specialised clinics being recognised as a practical way to deliver care to people with FND, only a few services operate in Australia. Timely and educated diagnosis and access to an interdisciplinary team consisting of neurology, physiotherapy, and psychology are central pillars for FND services. Further work to establish clinically and economically effective delivery models is required to facilitate the provision of best practice care for people living with FND.

1. Introduction

Functional neurological disorder (FND) is a complex and disabling condition at the intersection of the neurology and psychiatry fields, with patients presenting with a myriad of

signs and symptoms including gait disturbance, paraesthesia, weakness, and seizures [1]. In recent years, FND has become increasingly recognised as a medical condition with diagnostic tools and treatment options that can improve patient quality of life [2]. An Australian study found that FND

patients constitute approximately 15% of all outpatient neurology presentations [3]. Despite greater awareness and advances in treatment, diagnosis is often delayed and treatment is poorly managed. Along with under-recognition and a lack of clinical expertise, the prognosis of FND remains collectively poor if untreated, with disability persisting or even worsening over time [4].

Current best practice recommendations suggest that an interdisciplinary approach following common FND therapy principles incorporating psychology, physiotherapy, occupational therapy, and speech pathology based on the biopsychosocial model can positively impact recovery and quality of life by reducing symptom duration [5–7]. Specialised FND services are emerging across a range of settings, as an innovative way of providing comprehensive care to this population; however, there is a lack of evidence on the best model of care for FND services [8]. Within the Australian context, questions remain around protocols, pathways, and service provision within the existing specialist FND services. A perceived lack of patient-centred care has led to dissatisfaction with the healthcare experience and is likely reflective of the problems with these unidentified clinical care pathways for people with FND, alluding to the need for improved or specialised services [9].

Despite the expert consensus, there is an absence of empirical evidence to guide the structure of an FND service; therefore, this study aimed to characterise specialised FND models of care existing within metropolitan public healthcare networks and private organisations across Australia, including identifying service characteristics such as funding models, professional disciplines involved, referral source, program duration, and management following discharge. A secondary aim was to identify the perceived barriers and enablers to implementing specialised FND services. As is recognised, the majority of FND patients present in non-specialised services, such as tertiary health settings, primary care, and private practice, therefore the final aim of the study was to explore the clinician's experiences of the barriers and enablers of delivering FND best practice in services without an established FND service model.

2. Methods

2.1. Design. This qualitative descriptive study explored health service provision and barriers and enablers to providing best practice care through a telephone interview with clinicians. Clinicians were interviewed once between May 2022 and January 2023.

2.2. Participants. Clinicians were recruited from a range of Victorian metropolitan healthcare networks and selected Australian public and private healthcare settings. Clinicians within these organisations were identified as leading the translation of evidence-based practice for patients with FND through purposive sampling. This was based on reputational expertise, as judged by the investigators and members of a multidisciplinary team working clinically in the area. Investigators contacted senior clinicians and managers from the

selected health organisations and asked them to identify FND clinical experts within their organisation, regardless of profession. These individuals were then contacted directly by the investigators via telephone to complete the interview. Snowball sampling allowed participants to identify and recommend further experts either within their health service, in a different discipline or clinical setting, or external to their service. These clinicians were also invited to complete the interview. Data collection was ceased when the investigators reached a sufficient depth of understanding. Response was voluntary, and informed consent was sought from participants verbally prior to the telephone interview. This project was deemed a quality assurance activity, and an exemption from ethics approval was obtained from Monash Health Human Research Ethics Committee (HREC) QA/82278.

2.3. Data Collection. Participant responses were entered into a data collection template (Microsoft Forms) by three of the five investigators (LP, GT, and CS) during the telephone interview. Responses to the open-ended questions were typed by the clinicians but not transcribed verbatim. Instead, a “fair note” approach was taken where investigators typed field notes of what the respondents answered, which closely represented most of what they said, but not verbatim as no audiorecording equipment was used [10]. Field notes were typed during the interview as the participants were responding. This approach to fair notes has been described as a way to balance timely data collection with quality in public health research and pragmatically addresses the challenges faced in public health settings [10]. The interview included a mix of open-ended and forced-choice questions relating to demographic details. The interview was designed so participants with a specialised FND service were asked about the barriers and enablers to implementing a service, while those without an FND service were asked to describe the barriers and enablers to providing best practice management to patients with FND. The interview guide is shown in Appendix 1.

2.4. Data Analysis. Participant demographic details were analysed using descriptive statistics. To explore the barriers and facilitators and the participant's experiences of implementing specialist FND service and delivering best practice, common characteristics in the organised data were identified. These descriptions may have been shaped by the research team's own clinical experiences of working with patients with FND. Data were analysed by qualitative content analysis using an inductive approach to generate categories using both NVivo and Excel. The process outlined by Vaismoradi [11] was followed: (i) immersing in the data; (ii) organising into categories; (iii) developing and reviewing categories; and (iv) describing and naming the categories.

2.5. Strategies to Enhance Rigour. The initial codes and categories developed by the first two investigators (LP and PP) were peer-reviewed by all team members using an ongoing dialogue to further develop the categories. This iterative and reflexive process continued for several meetings

with all team members contributing to category generation and description that acknowledged the underlying assumptions of clinical experience, subjectivity, and functional reflexivity [10]. The investigators used direct quotes from their field notes to demonstrate the link between participant's experiences and the descriptions of categories. A further general assumption of the researcher team was that a specialist FND service is the gold standard of evidence-based FND best practice [12–14].

3. Results

3.1. Participating Health Services. The project team contacted a total of 19 organisations across Australia. Clinicians from 17 organisations responded with a total of 21 clinical experts agreeing to participate in the interviews. Respondent demographics are described in Table 1. Four healthcare networks were represented by two different staff members from differing disciplines. Five healthcare services (six participants) had a FND-specific multidisciplinary program, and 12 healthcare networks (15 participants) did not have a dedicated FND service. There were no differentiating characteristics between private and public funded models.

3.2. Specialised FND Service Characteristics. The characteristics of specialised FND services are outlined in Table 2. All specialist FND services were in an outpatient setting. Service delivery was either face to face or a hybrid model combining face to face and telehealth. Private models included funding from various sources, including Australia's National Disability Insurance Scheme (NDIS), WorkSafe Victoria, the Victorian Transport Accident Commission (TAC), or the individual's private health insurer. Most services required a referral from a medical practitioner, either neurologist or general practitioner (GP), with one service allowing a self-referral by the client. Three services had defined inclusion criteria for program eligibility, with diagnosis by a neurologist or a specialist being the common criteria across services. One of the three services with set referral criteria excluded people with pain or fatigue as the only symptom, while one service excluded people with chronic pain or chronic fatigue. None of the services excluded patients based on the manifestation of FND (motor, nonepileptic seizure, or other presentation) [15]. Service delivery models varied. Three of the programs were time-limited models, with a range of 2–16 sessions. One service offered individual assessment sessions, followed by therapy delivered via a generic community rehabilitation program, while another service delivered two-hourly sessions twice a week, for eight weeks.

Each service utilised a multidisciplinary model; however, a medical specialist (neurologist or rehabilitation consultant), a physiotherapist, and a mental health specialist (neuropsychologist, clinical psychologist, or psychiatrist) were the only staff consistently available to all specialised services. The remaining team members varied and comprised different allied health professionals, as portrayed in Table 3.

TABLE 1: Participant and health service details.

Participants ^a	Without an FND service <i>n</i> , (%)	With a FND service <i>n</i> (%)
Discipline		
Physiotherapist	10 (67)	3 (50)
Neurologist	2 (13)	1 (16)
Occupational therapist	3 (20)	1 (16)
Psychologist	0 (0)	1 (16)
Setting		
Acute hospital	9 (37.5)	0 (0)
Inpatient rehabilitation	7 (29)	0 (0)
Community rehabilitation	4 (16.75)	0 (0)
Outpatient service	4 (16.75)	6 (100)
Funding source		
Public funded	13 (86.5)	4 (67)
Private funded	2 (13.5)	2 (33)
State		
Victoria	10 (67)	1 (16)
New South Wales	3 (20)	2 (33)
Queensland	2 (13)	1 (16)
Tasmania	0 (0)	2 (33)

^aTotal number of respondents was 21, with 17 organisations represented.

3.3. Implementing a Specialised FND Service. Inductive qualitative content analysis of the data identified four key categories that influenced the implementation of FND services. Participants from organisations with a specialised service described two categories that acted as barriers, namely, funding and service fragility, and two categories that acted as enablers, namely, engaging stakeholders and service drivers, as shown in Figure 1.

3.4. Barriers to Implementing a Specialised FND Service

3.4.1. Funding. Funding was a clear barrier to service implementation for those with a specialised FND service. Participants described a lack of access to continuous and stable financial support. Access to funding was influenced by the service's ability to prove the value of a specialised service. Participants reported that healthcare networks had a cost-benefit analysis approach to services and were influenced by financial justification. Participants described having to utilise resources already available to them.

Funding is always an issue. A FND clinic is not necessarily going to make the hospital money (Participant 4)

The cost-benefit approach was most evident in privately funded models where funding influenced the client directly as costs were passed onto them when accessing the service. This specific challenge for private paying patients resulted in perceived inaffordability, limiting ongoing access to, and participation in, the program. Participants believed having executive and key financial stakeholder support to mitigate the challenges of the initial FND service setup and continued ongoing funding was important. Participants also reported that clinicians had a key role in advocacy for ongoing funding.

TABLE 2: Functional neurological disorder (FND) outpatient service characteristics ($n = 5$).

Delivery format	Referral source	Eligibility criteria	Number of program sessions	Discharge options
Mixed	Self-initiated, GP, neurologist	No	Indefinite	Self-management
Face to face	GP, clinicians from acute hospital	No	Indefinite	NDIS, private allied health services
Mixed	Neurologist	No	6	GP, NDIS, private allied health services
Face to face	GP, neurologist, neuropsychologist, rehab physician, clinicians from acute hospital, clinicians from inpatient rehabilitation unit, pain specialist	Yes	16	GP, NDIS, private allied health services
Mixed	Neurologist, GP	Yes	2	Community rehabilitation, community health, NDIS, pain clinics, private allied health services

TABLE 3: Disciplines involved in the specialised FND services.

Discipline	Frequency of discipline involved (n (%)) ^a
Neurologist	5 (100)
Physiotherapist	5 (100)
Psychologist (neuropsychologist or clinical psychologist)	5 (100)
Occupational therapist	3 (60)
Speech pathologist	3 (60)
Neuropsychiatrist	1 (20)
Rehabilitation consultant	2 (40)
Dietitian	1 (20)
Social worker	1 (20)
Exercise physiologist	1 (20)
Allied health assistant	1 (20)

^aThe total number of organisations with a FND service was 5.

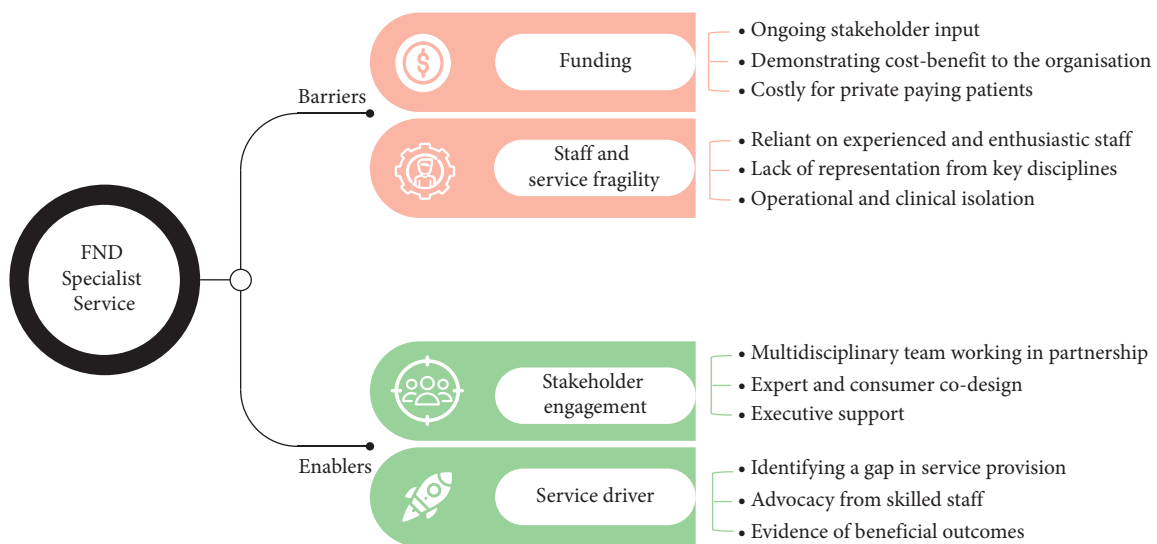


FIGURE 1: Barriers and enablers for specialised FND services. *Note.* Infographic representing organisations with a specialised FND service.

Having the right people, both clinicians and executive, getting the business case and justification right and especially show it's financially feasible (Participant 10)

Not having a neurologist directly engaged in service causes breakdown in the coordination and collaboration of service (Participant 20)

3.4.2. Staff and Service Fragility. Participants described significant concerns around staff and service fragility when there was no coordinated multidisciplinary team approach. This was a barrier shared across private and public health organisations. Participants reported that their FND service was reliant on one or two senior clinicians to provide the required healthcare. A lack of representation from key multidisciplinary team disciplines, such as clinical psychologists, resulted in a breakdown of service provision. Participants also described operational isolation as clinicians working across different teams found it more difficult to successfully connect, collaborate, and coordinate patient care. This was particularly evident in privately funded specialised FND services.

Making sure there is links with psych, speech pathologists and neurologists who are not in-house (Participant 1)

Participants highlighted the need for the right mix of staff with interest, drive, training, and experience in the area. This was typically represented by a perceived need for more “senior” staff. FND services were also impacted by staff shortages and turnover. There was a significant concern when senior staff members central to the service operation, particularly in the absence of adequate funding, left the team as they contribute substantial clinical experience and interest in FND.

3.5. Enablers to Implementing a Specialised FND Service

3.5.1. Stakeholder Engagement. The key category that enabled specialist FND service function was stakeholder engagement. This was viewed as an essential part of the implementation process. Stakeholder engagement included having executive support and backing from key members of

the multidisciplinary team, advocacy from experts in the field, consideration of co-design with service users, and engaging stakeholders from the outset. Participants believed the multidisciplinary team was best placed when working in partnership with stakeholders to develop a service business case, capitalising on clinician drive and enthusiasm to work with FND clients.

Support from politicians to obtain funding and liaising with psychology, neurology and the rehabilitation service to create a business case (Participant 4)

Having a motivated rehabilitation doctor who was keen to facilitate set up of the outpatient clinic (Participant 19)

3.5.2. Service Driver. A second enabler was the need for a clear service driver. Recognising that there was a healthcare service gap that left patients with FND dissatisfied was the driving force behind creating a specialised FND service. Participants understood there was a known gap in providing the best healthcare for clients with FND, with unmet needs identified by both the client and the clinician.

Knowing there was a great need after having completed focus groups with patients (Participant 2)

Recognising unmet needs required clinicians to be sufficiently skilled and trained to identify these gaps in order to create a convincing business case that included the cost and benefits of the program, with outcomes such as reducing hospital presentation and length of stay, along with ongoing staff training to maintain the programs and advocate for a specialised service.

Reduce acute stay and ED admissions as an enabler in the future (Participant 10)

Better psych assessment in outpatient FND clinic could identify psychosocial factors earlier and ensure appropriate psychiatric management (Participant 20)

3.6. Delivering Best Practice for People with FND without an Established FND Service Model. For clinicians working in an organisation without a specialised service, barriers to delivering best practice management for people with FND were identified in the following two key categories: diagnosis delay and access to staff. Enabling categories were viewed as collaborative MDT approach and staff attitudes and knowledge. This is depicted in Figure 2.

3.7. Barriers to Implementing FND Best Practice in Services without an Established FND Service Model

3.7.1. Diagnosis Delay. Diagnosis delay was identified as a significant barrier to best practice care for patients with FND. The delay was described as both a reluctance to provide a FND diagnosis by some medical staff and a delay in communicating the diagnosis to clients. Poor

communication, inadequate description of the diagnosis, and insufficient education provision regarding the diagnosis further exacerbated the delay in diagnosis.

Lack of clear diagnosis, sometimes put forward as a potential diagnosis instead of definitive. Sometimes the diagnosis is not given at all. It is difficult to give appropriate education if no diagnosis given (Participant 18)

There are limited neurologists, and registrars are reluctant to diagnose (Participant 21)

Participants expressed that diagnosis delay resulted in differing interpretations by the patient and multidisciplinary team, leaving patients ultimately unclear of the diagnosis. The absence of a diagnosis impacted goal setting, multidisciplinary team input, and length of stay and also made it difficult to refer to specialist services, such as FND outpatient services.

Not being provided a formal diagnosis in the acute setting by neurologists limits the ability for multidisciplinary team to provide education as per gold standard. This also means allied health cannot educate family who may perpetuate the presentation further (Participant 8)

3.7.2. Access to Staff. The second key barrier to providing best practice management to patients with FND was insufficient access to staff who are specifically skilled and experienced in the management of FND. This theme particularly highlighted the issue of limited access to psychology, which plays a critical clinical role in education, diagnosis, and treatment delivery.

Minimal access to clinical psychology as they are on site once or twice a week - this limits progress, particularly if the team are wanting therapy doubles (Participant 12)

Psychology are only in inpatient rehabilitation twice a week and cover the whole rehabilitation ward, so FND patients are often seen infrequently (Participant 13)

Limited access to staff training and ongoing FND education for upskilling was suggested to further compound the issue, while some teams were said to be working in isolation. This impacted on the continuity of care and resulted in poor referral pathways as the patient was less connected with key multidisciplinary team members who specialised in FND.

Broadly not all staff have a good understanding of FND and best management strategies. There's a lack of time to complete upskilling and professional development (Participant 18)

3.8. Enablers to Implementing FND Best Practice in Services without an Established FND Service Model

3.8.1. Collaborative Multidisciplinary Team. A collaborative multidisciplinary team approach emerged as a clear enabler

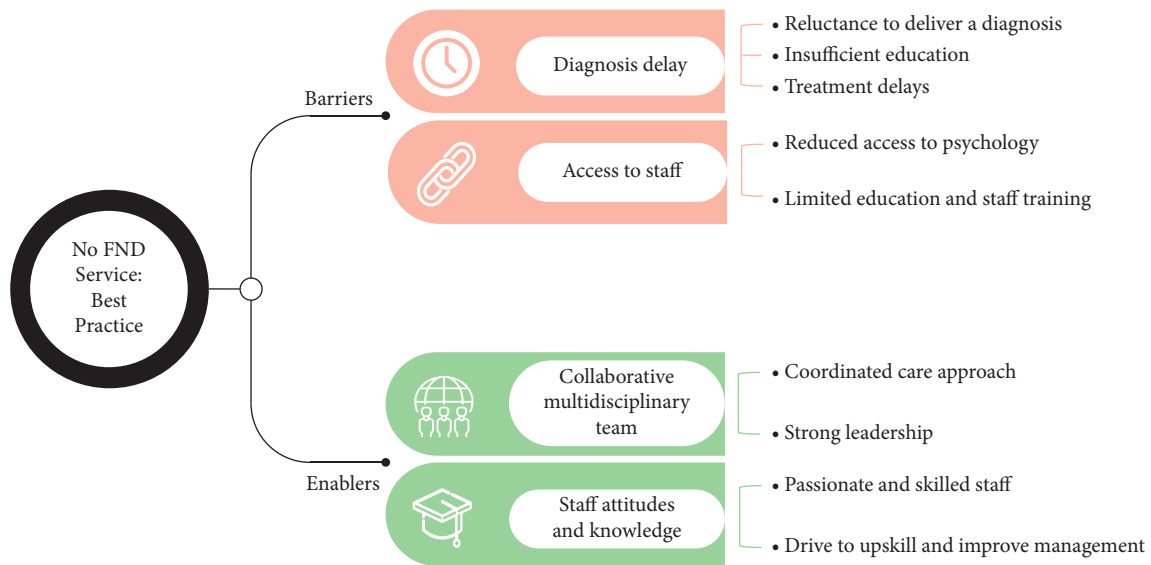


FIGURE 2: Barriers and enablers for best practice management. *Note.* Infographic representing organisations without a service delivering best practice management.

that increased the efficiency and effectiveness of client care. The benefits of the multidisciplinary team working in partnership for a coordinated treatment approach and care planning were identified by participants as being required for effective care.

Functional based treatment planning and goal setting for the whole multidisciplinary team (Participant 14)

Having access to multidisciplinary team in each setting who work well together (Participant 18)

The importance of strong leadership and advocacy for patients and family was emphasised as it facilitated FND evidence-based treatment.

Strong allied health team with seniors who can recognise FND before the medical team and facilitate those conversations (Participant 8)

3.8.2. Staff Attitudes and Knowledge. Staff attitudes and knowledge was seen as a strong enabler for the provision of best practice management. Participants explained that having motivated clinicians who are passionate about optimising management and outcomes for patients with FND was a positive driver of quality service provision.

Very engaged and keen allied health team managing these patients that want to provide better care. (Participant 6)

Having skilled staff who had experience working with FND was seen as an enabler to providing best practice. Respondents described training and education sessions aided in improving staff knowledge, which enabled the provision of best practice management.

Upskilling of staff, ongoing mentoring, fortnightly complex case discussion and being part of a FND teaching group (are ways we strengthen provision of best practice). (Participant 3)

4. Discussion

This study aimed to describe current FND service models within the Australian context to identify common elements of specialised FND services. The findings demonstrate only a small number of organisations offer specialised FND services in outpatient settings, and the model of care within these services varies. Our findings indicate that the consistent features of a specialised FND service are the passionate and experienced staff who drive the service in the absence of health data, executive support, and access to an interdisciplinary team consisting of neurology, physiotherapy, and psychology as the central pillar for service delivery. For health organisations without a specialised FND service, the most significant challenge to care was timely diagnosis and subsequent limitations to an open and transparent discussion with the patient and family about the diagnosis. This failure will ultimately impact recovery, resulting in poor clinical outcomes and a greater healthcare burden in the long term.

The lack of gold standard practice for FND service delivery is evident in the variability seen across organisations in this study. Current evidence suggests specialised FND clinics are more cost-effective than generic inpatient programs [16] and are currently viewed as the most practical and holistic model of care [13]. Moreover, patients with FND also acknowledge that existing inpatient models are not effective [9]. Despite the established need for specialised FND services and delivery, it is difficult to confidently establish effective specialist programs without clear guidance on the ideal structure. This study found that all existing

specialised FND services in Australia are delivered in outpatient settings. The program format and duration, inclusion criteria, funding source, and referral pathways, both into and following on from the program, were inconsistent. Participants reported that Australian FND services have difficulty securing adequate and ongoing funding to both implement and sustain programs. Building a robust business case is challenging when the ability to monitor clinical outcomes for people with FND is limited. A UK study confirmed that non-coding is very common in FND [17]. In Australia, a prospective observational study by Petrie and colleagues [18] found that 89% of inpatients managed on non-neurosciences wards did not have a diagnosis communicated and 58% did not have it documented. These challenges may result from the reluctance to provide a formal diagnosis, FND being wrongly viewed as a diagnosis of exclusion, and poor knowledge of FND among non-neurology teams. Access to accurate data would allow for comprehensive health economic analysis and would assist in establishing whether there are reduced organisational costs associated with running an outpatient clinic. Certainly, specialist clinics would alleviate the demands on costly inpatient care, reserving it for patients with nursing and medical needs. The clinical benefit is also apparent, supporting the application of FND education and symptom management techniques into daily activities performed in the home environment and community setting [13].

Expert consensus [19, 20], along with a small number of interventional trials and systematic reviews [13, 14, 21–26], promote best practice as collaborative interdisciplinary rehabilitation that addresses the biopsychosocial influences, with a focus on continued education of the diagnosis. A multidisciplinary approach is often cited in the literature, but in traditional models of FND care, such as inpatient rehabilitation, the multidisciplinary team members involved are often dependent on available resources [21]. Our study found that Australian FND services are being driven by passionate and skilled senior clinicians who have the experience to identify unmet clinical needs and can utilise the resources available to them to advocate for specialised service provision. Having a “collaborative multidisciplinary team” was highlighted as an enabler by expert clinicians who did not have a specialist service, with a lack of access to staff, specifically neurology and psychology, seen as a significant barrier to delivering best practice care. These disciplines were also recognised as two of the three central pillars to running a specialised FND service with all participants reporting that their specialised FND services had representatives from neurology, physiotherapy, and psychology. Neurologist involvement is the first critical step to providing successful care as they have a distinct role in communicating a FND diagnosis [27, 28] and providing ongoing education and monitoring. Given the high rates of functional motor disorder presentations in patients with FND, having a physiotherapist involved in the makeup of a specialist clinic is seen as essential. A review by Aybek and colleagues [29] of three specialist assessment clinics in the UK, Switzerland, and Canada demonstrated that 61% of patients were referred to physiotherapy.

Psychologists are pivotal in assisting patients with FND, and the multidisciplinary team, to understand the clinical formulation underlying the FND presentation, giving context to their condition [27]. Furthermore, treatment of psychological comorbidities such as anxiety may be essential to ensure the patient can engage in other therapies to optimise their function. Our findings indicate that a key platform for the design of a specialised clinic is the interdisciplinary inclusion of a medical specialist (neurologist or rehabilitation consultant), physiotherapy, and psychology as the three main disciplines central to the management of FND, with direct links to other allied health disciplines, including occupational therapy and speech pathology, to optimise individualised care.

Diagnosis delay was a resounding barrier for those delivering best practice management without the structure of a specialised FND service. Without a clear and unambiguous diagnosis, the multidisciplinary team is unable to provide thorough education, complete goal setting, and implement strategies for symptom management. Moreover, without a clear diagnosis many patients with FND cannot access services. A third of the specialised FND services required a FND diagnosis to establish eligibility for their program, suggesting that timely diagnosis by non-specialist services would help facilitate access to existing specialist FND programs with a comprehensive model of care. Diagnosis delay can result in patients bouncing between specialists and services in search for answers, exacerbating the chronicity of symptoms and reducing patient confidence in healthcare professionals, all of which are associated with poor outcomes [27] and likely contribute to high healthcare costs. People with FND are asking for a timely and well-informed diagnosis [9]. Evidence suggests that an open and timely communication of diagnosis is an important initial step of best practice management [28]. As part of delivering a diagnosis, it is important to gauge the person’s understanding of the disorder, provide reassurance that FND is genuine and can be treated, with the potential for reversibility [19]. Pepper and colleagues [16] highlight the importance of communicating the diagnosis to allow the patient time to build understanding and acceptance. Critically, acceptance of the diagnosis by the patient is needed to facilitate improvement. Non-specialised settings often do not have skilled staff present to support the ongoing education that is integrated into FND rehabilitation [30]. A key practice point from our findings was the need for education, training, and opportunities to filter knowledge from “expert clinicians” to the wider multidisciplinary team. Staff training, education, and capacity building should be built into healthcare services professional and workforce development programs to ensure the delivery of best practice and to sustain specialist programs.

A limitation of this benchmarking study was that interviewee responses were not transcribed verbatim, but rather a fair note approach [10] was taken where the investigators expanded on field notes of interviewee responses. As the investigators were clinicians experienced in FND service delivery, summarising the data may have

skewed it to reflect their beliefs. Bias was avoided given that qualitative content analysis acknowledges that researchers bring their own functional and personal reflexivity into the data interpretation [31]. Ideally, audiorecording sessions and transcribing verbatim would have allowed for a rich immersion of the data, and a deeper understanding of the participants' experiences, and possibly the generation of different categories; however, it can be assumed that the findings are representative of FND services across Australia given the consistency of participant responses. A second limitation was that this study was restricted to healthcare services known to the investigators, the multidisciplinary team, or by association with the identified experts and therefore may not represent all Australian healthcare services providing FND care. The recruitment was undertaken by four of the investigators, all of whom were clinical physiotherapists, which may have influenced both the healthcare services approached and agreement to participate in the study. However, although all specialised FND services employed a physiotherapist, none specified FND type in their referral criteria. This suggests most patients with the motor phenotype are accessing these services. Lastly, selecting healthcare networks with FND expertise may have led to respondents not addressing all the barriers and enablers to implementing an FND service in Australia. This narrowing of perspectives may have missed barriers identified by clinicians who are unfamiliar with FND best practice guidelines but inevitably manage these patients. A strength of this study was the inclusion of healthcare organisations without a specialised service acknowledging that patients with FND are being managed in various non-specialised settings. Participants identified consistent enablers and barriers across these settings.

5. Conclusion

This study identified the barriers and enablers to implementing specialised FND services and best practice care for people with FND accessing private and public healthcare services in Australia. Without consensus on best practice models of care, healthcare organisations provide service models dependent on available resources and stakeholder engagement, and are highly dependent on expert clinicians to provide the service and drive the implementation. To assist with understanding service drivers, feasibility studies and health economic analyses are urgently required to establish cost-effective structures and delivery models. Further research is also needed to establish the clinical effectiveness and patient experience of this service delivery model. These future directions are critical in guiding pragmatic and best practice care, which will make a positive impact on the quality of life of people living with FND.

Data Availability

Quotes of participant responses have been made available within the article. The data used to support the findings of this study are made available from the corresponding author upon reasonable request.

Disclosure

This research project was performed as part of the employment of the authors at Monash Health.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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Supplementary Materials

Appendix 1. Benchmarking survey of Australian functional neurological disorder (FND) models of care. (*Supplementary Materials*)

References

- [1] D. L. Drane, N. Fani, M. Hallett, S. S. Khalsa, D. L. Perez, and N. A. Roberts, "A framework for understanding the pathophysiology of functional neurological disorder," *CNS Spectrums*, vol. 26, no. 6, pp. 555–561, 2020.
- [2] M. Hallett, J. Stone, and A. J. Carson, "Functional neurologic disorders: vol 139 of 'handbook of clinical neurology,'" *Handbook of Clinical Neurology*, vol. 139, 2016.
- [3] O. Ahmad and K. E. Ahmad, "Functional neurological disorders in outpatient practice: an Australian cohort," *Journal of Clinical Neuroscience*, vol. 28, pp. 93–96, 2016.
- [4] A. J. Espay, S. Aybek, A. Carson et al., "Current concepts in diagnosis and treatment of functional neurological disorders," *JAMA Neurology*, vol. 75, no. 9, pp. 1132–1141, 2018.
- [5] B. Demartini, A. Batla, P. Petrochilos, L. Fisher, M. J. Edwards, and E. Joyce, "Multidisciplinary treatment for functional neurological symptoms: a prospective study," *Journal of Neurology*, vol. 261, no. 12, pp. 2370–2377, 2014.
- [6] A. A. Jordbru, L. M. Smedstad, O. Klungsoyr, and E. W. Martinsen, "Psychogenic gait disorder: a randomized controlled trial of physical rehabilitation with one-year follow-up," *Journal of Rehabilitation Medicine*, vol. 46, no. 2, pp. 181–187, 2014.
- [7] R. McCormack, J. Moriarty, J. D. Mellers et al., "Specialist inpatient treatment for severe motor conversion disorder: a retrospective comparative study," *Journal of Neurology, Neurosurgery & Psychiatry*, vol. 85, no. 8, pp. 895–900, 2014.
- [8] G. S. Gilmour, G. Nielsen, T. Teodoro et al., "Management of functional neurological disorder," *Journal of Neurology*, vol. 267, no. 7, pp. 2164–2172, 2020.
- [9] National Mental Health Commission, "Experiences of functional neurological disorder: summary report," 2019, <https://www.mentalhealthcommission.gov.au/getmedia/88ac2549-00ab-44f2-8fe5-9b6005f84aad/Experiences-of-Functional-Neurological-Disorder-NMHC-Summary-Report.pdf>.

- [10] Z. Hill, C. Tawiah-Agyemang, B. Kirkwood, and C. Kendall, "Are verbatim transcripts necessary in applied qualitative research: experiences from two community-based intervention trials in Ghana," *Emerging Themes in Epidemiology*, vol. 19, no. 1, p. 5, 2022.
- [11] M. Vaismoradi, H. Turunen, and T. Bondas, "Content analysis and thematic analysis: implications for conducting a qualitative descriptive study," *Nursing and Health Sciences*, vol. 15, no. 3, pp. 398–405, 2013.
- [12] D. D. G. Palmer, M. Gamble, M. Higgins, J. Maley, and E. Watson, "Outcomes of an integrated multidisciplinary clinic for people with functional neurological disorder," *Movement Disorders Clinical Practice*, vol. 10, no. 6, pp. 967–973, 2023.
- [13] P. Petrochilos, M. S. Elmalem, D. Patel et al., "Outcomes of a 5-week individualised MDT outpatient (day-patient) treatment programme for functional neurological symptom disorder (FNSD)," *Journal of Neurology*, vol. 267, no. 9, pp. 2655–2666, 2020.
- [14] T. Schmidt, G. Ebersbach, H. Oelsner et al., "Evaluation of individualized multi-disciplinary inpatient treatment for functional movement disorders," *Movement Disorders Clinical Practice*, vol. 8, no. 6, pp. 911–918, 2021.
- [15] S. Kola and K. LaFaver, "Functional movement disorder and functional seizures: what have we learned from different subtypes of functional neurological disorders?" *Epilepsy & Behavior Reports*, vol. 18, 2022.
- [16] E. Pepper, A. Mohan, K. Butcher, M. Parsons, and J. Curtis, "Functional neurological disorders: an Australian interdisciplinary perspective," *Medical Journal of Australia*, vol. 216, no. 10, pp. 501–503, 2022.
- [17] L. D. Herbert, R. Kim, A. A. Hassan, A. Wilkinson-Smith, and J. L. Waugh, "When neurologists diagnose functional neurological disorder, why don't they code for it?" *CNS Spectrums*, vol. 26, no. 6, pp. 664–674, 2021.
- [18] D. Petrie, A. Lehn, J. Barratt et al., "How is functional neurological disorder managed in Australian hospitals? A multi-site study conducted on acute inpatient and inpatient rehabilitation wards," *Movement Disorders Clinical Practice*, vol. 10, no. 5, pp. 774–782, 2023.
- [19] G. Nielsen, J. Stone, A. Matthews et al., "Physiotherapy for functional motor disorders: a consensus recommendation," *Journal of Neurology, Neurosurgery & Psychiatry*, vol. 86, no. 10, pp. 1113–1119, 2015.
- [20] C. Nicholson, M. J. Edwards, A. J. Carson et al., "Occupational therapy consensus recommendations for functional neurological disorder," *Journal of Neurology, Neurosurgery & Psychiatry*, vol. 91, no. 10, pp. 1037–1045, 2020.
- [21] G. S. Gilmour and J. D. Jenkins, "Inpatient treatment of functional neurological disorder: a scoping review," *The Canadian Journal of Neurological Sciences/Journal Canadien des Sciences Neurologiques*, vol. 48, no. 2, pp. 204–217, 2021.
- [22] M. Gutkin, L. McLean, R. Brown, and R. A. Kanaan, "Systematic review of psychotherapy for adults with functional neurological disorder," *Journal of Neurology, Neurosurgery & Psychiatry*, vol. 92, no. 1, pp. 36–44, 2020.
- [23] A. Lehn, J. Gelauff, I. Hoeritzauer et al., "Functional neurological disorders: mechanisms and treatment," *Journal of Neurology*, vol. 263, no. 3, pp. 611–620, 2016.
- [24] G. Nielsen, M. Buszewicz, F. Stevenson et al., "Randomised feasibility study of physiotherapy for patients with functional motor symptoms," *Journal of Neurology, Neurosurgery & Psychiatry*, vol. 88, no. 6, pp. 484–490, 2017.
- [25] G. Nielsen, L. Ricciardi, B. Demartini, R. Hunter, E. Joyce, and M. J. Edwards, "Outcomes of a 5-day physiotherapy programme for functional (psychogenic) motor disorders," *Journal of Neurology*, vol. 262, no. 3, pp. 674–681, 2015.
- [26] C. Greiner, A. Schneider, and B. Leemann, "Functional neurological disorders: a treatment-focused review. Swiss Archives of Neurology," *Psychiatrie und Psychotherapie*, vol. 167, no. 08, pp. 234–240, 2016.
- [27] K. Bennett, C. Diamond, I. Hoeritzauer et al., "A practical review of functional neurological disorder (FND) for the general physician," *Clinical Medicine*, vol. 21, no. 1, pp. 28–36, 2021.
- [28] Healthcare Improvement Scotland, "Stepped care for functional neurological symptoms: a new approach to improving outcomes for a common neurological problem in scotland," *Report and Recommendations*, NHS Scotland, Edinburgh, TX, USA, 2012.
- [29] S. Aybek, S. C. Lidstone, G. Nielsen et al., "What is the role of a specialist assessment clinic for FND? Lessons from three national referral centers," *Journal of Neuropsychiatry and Clinical Neurosciences*, vol. 32, no. 1, pp. 79–84, 2020.
- [30] A. Lehn, D. Navaratnam, M. Broughton et al., "Functional neurological disorders: effective teaching for health professionals," *BMJ Neurology Open*, vol. 2, no. 1, 2020.
- [31] V. Braun and V. Clarke, "Using thematic analysis in psychology," *Qualitative Research in Psychology*, vol. 3, no. 2, pp. 77–101, 2006.