Title: Referral to specialist physiotherapists in the management of whiplash associated disorders: Perspectives of healthcare practitioners

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Referral to specialist physiotherapists in the management of whiplash associated disorders: Perspectives of healthcare practitioners**ABSTRACT**

Background: Guidelines for whiplash associated disorders (WAD) recommend early referral to specialists (e.g. specialist physiotherapists) of people who are not recovering. This recommendation is a key component of a proposed clinical pathway of care for WAD.

Objective: To explore healthcare practitioners' opinions about referral to specialist physiotherapists of people with WAD at high risk of non-recovery.

Design: Qualitative descriptive study.

Methods: Six focus groups were conducted among primary care allied-health practitioners (n=16) and specialist physiotherapists (n=12) in New South Wales and Queensland, Australia. Discussions were audio recorded and transcribed for thematic analysis.

Results: Ten themes were generated from analysis. Practitioners appeared to have good knowledge of indicators for referral; however, referrals were often made to the medical practitioner, less commonly to specialist physiotherapists. There was general support for referral to specialist physiotherapists, which was deemed as a viable alternative for people who are not recovering. Practitioners, however, had differing views about the attributes of a specialist physiotherapist and referral timeframe. A number of factors have been identified to influence the referral process and practitioners expressed specific expectations of the desired outcomes of referral as well as considerations for specialist management approaches. There was strong support for a collaborative approach in management that involved the referring practitioner.

Conclusion: Results support the feasibility of referral to specialist physiotherapists despite limited uptake in practice and recognised barriers to referral. These findings have

implications for further study and adopting strategies to facilitate effective implementation and translation of the proposed pathway into primary care practice.

Key words: Referral and Consultation, Specialists, Primary Health Care, Whiplash Injuries, Focus Groups

INTRODUCTION

Evolving professional roles and changing needs in musculoskeletal healthcare have provided opportunities for healthcare practitioners, such as physiotherapists, to advance practice and provide specialist services. Internationally, countries including the United Kingdom, New Zealand and Canada have introduced clinical specialisation in musculoskeletal physiotherapy (Chartered Society of Physiotherapy, 2001; Canadian Physiotherapy Association, 2011; Physiotherapy Board of New Zealand, 2016). In Australia, physiotherapists who provide specialist services (e.g. peer review, advanced skills and expertise) (specialist physiotherapists) have either completed Fellowship in the Australian College of Physiotherapists (FACP) or appointed by a government insurance regulator as independent consultants.

Clinical specialisation through the Australian College of Physiotherapists (ACP) is a three-tiered process and a mechanism for awarding specialist titles has been in place since 1982 (Van de Meene, 1988; Carr & Shepherd, 1996; Jull & Moore, 2008). FACP specialisation is awarded upon demonstration of advanced knowledge, skills and behaviours in physiotherapy management, and highly developed service delivery skills in an area of practice (e.g. musculoskeletal physiotherapy) (ACP, 2017). Comparatively, independent consultants are appointed based on demonstrated expertise in complex injury management and include physiotherapists, chiropractors, osteopaths and psychologists (Insurance Commission of Western Australia, n.d.; Transport Accident Commission, n.d.; Motor Accidents Insurance Commission, 2012; State Insurance Regulatory Authority, 2016). Independent consultants provide independent clinical

opinion and peer review to assist in claims management and determine appropriateness of treatments (Insurance Commission of Western Australia, n.d.; Transport Accident Commission, n.d.; Motor Accidents Insurance Commission, 2012; State Insurance Regulatory Authority, 2016). FACP and independent consultants provide specialist services to primary healthcare practitioners through referral either within or across disciplines.

To date, the role of specialist physiotherapists is more established in tertiary healthcare settings. In these settings, referral to specialist physiotherapists for low back pain and other orthopaedic conditions has resulted in reduced waiting times for routine appointments and improved resource utilisation, without compromising patient satisfaction with care (Hart & Dobrzykowski, 2000; Rymaszewski et al., 2005; Oldmeadow et al., 2007; Robarts et al., 2008; Blackburn et al., 2009; Desmeules et al., 2012; Murphy et al., 2013). These changes in the tertiary care setting have led to improved service delivery and reduced burden on the medical system through efficient resource utilisation and provision of more appropriate management.

In the primary healthcare setting, referral to specialist physiotherapists could also potentially improve service delivery by reducing unnecessary imaging and treatment and redirecting interventions to improve outcomes. This type of role for specialist physiotherapists has been identified in the management of one of the most complex and costly conditions namely, whiplash associated disorder (WAD). In New South Wales (NSW) and Queensland (QLD) Australia, treatment following a motor vehicle accident can be funded through compulsory third party (CTP) insurance. NSW and QLD operate

under a common law fault-based scheme and CTP insurance is provided by private insurance companies, under license and regulated by the State Insurance Regulatory Authority (NSW) and the Motor Accident Insurance Commission (QLD). Practice guidelines recommend referral to clinicians with expertise in WAD (e.g. specialist physiotherapists) as early as three weeks after injury for people who fail to recover (State Insurance Regulatory Authority, 2014). Similarly, we propose, in a randomised controlled trial, that a clinical pathway of care involving referral to specialist physiotherapists of people at high risk of non-recovery would improve health outcomes in WAD (Rebbeck et al., 2016). This early referral is believed to enable early identification of factors related to non-recovery and early action to address these risk factors. Referral of people at high risk of non-recovery to specialist physiotherapists, however, is seldom acted upon and where it is referral is initiated by insurance companies in the later stages of the injury when barriers to recovery are entrenched (Nicholas, 2016). Moreover, the acceptance, use and perceived value of such referral and an understanding of how the process might work have not been well-explored.

The practice of referring to specialist physiotherapists by other physiotherapists is not common and limited information exists about why this may be the case (Robertson et al., 2003). Barriers to referral to medical specialists and integrated care have been investigated among primary care physicians, specialists and allied health practitioners. These barriers included poor communication, delayed referral, access and disagreement with specialists' role (Akbari et al., 2008; Mehrotra et al., 2011; Pollard et al., 2011). Such factors, however, have not been explored within the context of referral to specialist physiotherapists in a primary care setting.

An exploration of the feasibility of referral to specialist physiotherapists is an important step in translating this pathway of care within the primary healthcare setting to potentially address the burden of complex musculoskeletal conditions. The aim of this study therefore was to explore healthcare practitioners' opinions about referral to specialist physiotherapists of people with WAD at high risk of non-recovery. Insights gained could elucidate on the feasibility and acceptability of the concept of specialist physiotherapist referral and subsequently inform the implementation of the proposed clinical pathway of care.

METHODS

Design

This qualitative descriptive study is part of a larger mixed-methods project, underpinned by phase 2 of the Research Translational Framework (Rubio et al., 2010; Sax Institute, 2016), which investigated the feasibility and acceptability of implementing a proposed clinical pathway of care for WAD. Qualitative description provided a rich, straight summary of the participants' perspectives regarding the topic (Sandelowski, 2000; Neergaard et al., 2009; Sandelowski, 2010). The pathway involved; early screening using a clinical prediction rule to assess risk of non-recovery, provision of matched guideline-based treatments and early referral to specialist physiotherapists of people at high risk of prolonged pain and disability (Rebbeck et al., 2016). This study reports on perceptions around one aspect of this pathway namely, referral to specialist physiotherapists (Figure 1). The study involved semi-structured focus group discussions using methods described by Kitzinger (1994) and Wong (2008). Approval was obtained from [xxxx] (2015/444) and [yyyy] (2015/707) human research ethics committees.

Participants

Participants were recruited using purposive sampling targeting practitioners who treat people with WAD (Creswell, 2007). This was necessary because not all primary healthcare practitioners or specialist physiotherapists regularly see people with WAD. Participants included were; registered physiotherapists, chiropractors and osteopaths working in a primary care setting (generalists), who treat at least 1 patient with WAD per year and physiotherapists with expertise in complex musculoskeletal conditions (specialist physiotherapists) in NSW or QLD, Australia; and available to attend a focus

group discussion on a nominated time. We invited general medical practitioners (GP) in the focus groups; however, none participated. Participant characteristics varied in terms of experience level and practice settings (metropolitan and rural areas) to improve transferability (Shenton, 2004).

Generalists were recruited through email and advertising from research databases, professional organisations and primary health networks. Specialist physiotherapists were recruited through direct email invitation to practitioners known to hold either FACP or independent consultant appointments. All participants provided informed consent for the study, audio-recording, and for publication of de-identified data.

Procedures

Results of a prior online survey (Appendix 1) were used to frame the questions and stimulus material for the focus groups (Table 1). Key issues explored were: current referral practices, perceptions around referral to specialists, factors influencing specialist referral and opinions on specialist management approaches.

Six, two-hour, semi-structured focus groups with four to six participants per group were conducted in offices in Sydney and Brisbane from September to December 2015.

Discussion around specialist referral was allocated 60 minutes of the two-hour sessions.

Separate focus groups were run for generalists and specialist physiotherapists to maximise shared experiences and promote adequate participation and disclosure of opinions (Wong, 2008). Three members of the research team (JK, ANB, TR), with research interest in WAD management and prior focus group experience, facilitated the

discussions. At the time of data collection, JK and ANB were PhD candidates and TR was a research fellow and senior lecturer, with years of clinical and academic experience. Another researcher was present during the discussions to document key observations (field notes) about group dynamics to ensure consistency of data collection and improve dependability (Shenton, 2004). The objectives of the activity and rules on confidentiality were established within the groups to encourage open discussion and minimise coercion to participate (Appendix 2). The proceedings were audio recorded and verbatim de-identified transcripts were produced for analysis to reduce potential bias from researcher-participant relationships. The transcripts were not returned to participants but were independently reviewed for accuracy of transcriptions. No repeat focus group discussions were conducted.

Data analysis

Thematic analysis was employed to explore participants' perceptions and involved inductive and deductive approaches (Braun & Clarke, 2006). Thematic analysis allowed for flexibility in the interpretation of the data and investigation of both surface meanings and underlying assumptions (Braun & Clarke, 2006). NVivo 10 Software (QSR International Pty Ltd, Doncaster, Australia) was used to organise the data during analysis. Analyses were performed separately for specialist physiotherapist and generalist groups. Data saturation was deemed to have been reached upon analysis of the transcripts.

A number of steps were further undertaken to ensure methodological rigour of this study. Two researchers (AL, ANB) individually generated initial thematic codes. Both

researchers discussed initial analyses and negotiated initial coding of emergent themes. The emergent themes were reviewed, compared and then refined. New themes were added and modified whilst the transcripts were revisited to ensure that coded data reflected the themes. This iterative process aimed for a reduced yet accurate representation of the data. Whilst three members of the research team are specialist physiotherapists, members were aware of personal biases throughout the conduct of the study. Personal biases arising from experience in the referral process and preconceived beliefs and hypotheses as specialist physiotherapists could influence analysis and interpretation of data. Peer review through regular meetings among the team was held to challenge initial assumptions and scrutinise findings in order to ensure credibility of results. Lastly, an audit trail was kept to document decisions made during analysis and member check process was employed by inviting one participant from each group (generalist=3; specialist physiotherapist=3) to review the themes for accuracy (Creswell, 2007).

RESULTS

Twenty-eight practitioners including 16 generalists and 12 specialist physiotherapists participated in the study (Table 2). Ten themes arose from the key issues explored. Following member check process, some participants provided feedback that was generally supportive of the themes; hence, no changes were made to the results. Themes, sub-themes and illustrative quotes are summarised in Table 3.

Theme 1: Indicators for referral

There was good knowledge by generalists and specialist physiotherapists of the importance of identifying prognostic factors and recognising patients who were making poor progress as indicators for referral. Both generalists and specialist physiotherapists identified that patients with complex, high risk factors would potentially benefit from referral. Generalists identified factors such as high levels of pain and psychological distress whereas specialist physiotherapists identified specific co-morbidities such as dizziness, or the more complex multi-morbid presentations as indicators for referral.

...the ones that I'm flagging... someone that was in so much pain, so severe.

(Generalist, Participant 11)

Generalists also considered non-recovery as an important indicator with some communicating support for the definition of significant change proposed in the guidelines (i.e. 10% improvement in pain and disability scores) (State Insurance Regulatory Authority, 2014).

If the patient is not responding... Then that's when you would refer for the opinion. (Generalist, Participant 7)

Theme 2: Referral patterns

Generalists described referral patterns for complex and non-recovering patients whereas the specialist physiotherapists reported on their referral sources. Most generalists indicated that they would routinely refer their patients back to the GP. These referrals were usually made for second opinion or to facilitate referral to medical specialists and other healthcare disciplines such as rehabilitation physicians, pain specialists, psychologists and occupational therapists. The specialist physiotherapists reported that they do not routinely receive referrals from generalists. Rather, most referrals were initiated by GPs or insurance companies. Specialist physiotherapists noted that referrals from insurance companies were made for injury and claims management purposes.

I tend to refer back most of my patients to the GP's that they see... (Generalist, Participant 5)

Theme 3: Attitudes about the concept of specialist physiotherapist referral

Generalists and specialist physiotherapists were mostly supportive of the concept of referral to specialist physiotherapists. The positive attitude about specialist physiotherapist referral appeared to be driven partly by negative experiences with referring patients back to the GP.

We got the same old routine... most often the case is you don't know what has happened to the patient. And before we know it, they've had some sort of sub-

optimal treatment or care or advice and then they're sort of lost in the abyss until it recurs again and they're back again. (Generalist, Participant 10)

Most generalists indicated that referring back to the GP sometimes resulted to continuation with a further course of physical treatment or referral for imaging or surgical opinion, which they deemed unnecessary. These measures were believed to lead to patients “getting lost in the system” and saw some practitioners excluded from further patient management.

Generalists and specialist physiotherapists suggested that referral to specialist physiotherapists was a viable option for complex and non-recovering patients.

I just think that if a patient can be better managed by somebody [specialist] then I'm very happy to have that happen and it's why we refer off to others anyway, to get their expert advice and management. (Generalist, Participant 3)

There was also the suggestion that such referral might make an impact on some of the existing problems with managing long-term compensable injuries. Indeed, some generalists provided anecdotes about positive outcome from specialist physiotherapist involvement in the care of their patients.

Theme 4: Referral timeframe

Referral timeframes appeared to vary with most generalists relying on clinical judgement to identify appropriate timing of referral. Some generalists indicated that 3 weeks post-injury as recommended in the guidelines was too early for referral to

specialist care (State Insurance Regulatory Authority, 2014). They considered the period between 6 and 12 weeks post-injury as a more appropriate timeframe. Most specialist physiotherapists supported early referral emphasising the importance of identifying and addressing barriers to recovery before they become entrenched.

I think 3 weeks is too soon. 6 weeks might be more on mark... (Generalist, Participant 10)

I think you need to see them early... so you can help to identify... features that are making them the high risk. (Specialist, Participant 4)

Theme 5: Expectation of outcomes of referral

During the discussion on potential benefits of referral to specialist physiotherapists, the participants expressed specific expectations around the desired outcomes of this referral. Generalists reported that they would appreciate feedback from the specialist about patient management. They felt that the specialist physiotherapist could play a role in education and professional development, and improve their capacity to deal with complex conditions.

If they are specialists, they should be the ones giving us feedback on what we've done well or we haven't done well so that we can improve the next time someone comes in with the same sort of injury. (Generalist, Participant 9)

Likewise, the specialist physiotherapists saw value in providing generalists with information about the results of assessment, in particular, the reasons for poor progress and then assist with addressing barriers to recovery.

Some participants also highlighted a potential role for specialist physiotherapists in patient advocacy. Generalists described occasional difficulties in dealing with insurers and navigating through interdisciplinary care. They envisaged that specialist physiotherapists could play a case-management role and coordinate the care of patients to facilitate access to appropriate treatments. Aligned with this sentiment, some specialist physiotherapists viewed themselves as an intermediary between the generalists and other stakeholders given their experience and referral networks.

I reckon that's where we come in as intermediary. I think they're not against it [funding referral for alternate/interdisciplinary care] provided that you can explain the reason for it. (Specialist, Participant 8)

Theme 6: Barriers

Whilst the majority of the participants indicated support for and acknowledged the potential benefits of referral to specialist physiotherapists, a number of factors were identified that may hinder the process of referral. Some specialist physiotherapists deemed that generalists may not have a strong network to facilitate referral. Aligned with this, generalists reported that they did not have an existing list of specialist physiotherapists or other established mechanism to identify them.

First of, knowing who the specialists are and where they're located. (Generalist, Participant 1)

Moreover, some generalists noted the poor regional and rural coverage of specialists with most specialist services concentrated in metropolitan areas. This meant that

patients from rural areas would incur additional expenses to travel and pay for specialist services.

... if I was to refer on, it's distance, accessibility. So I try and keep it as local as I can. (Generalist, Participant 13)

Some participants also raised professional and commercial issues as barriers to specialist referral. They recognised reluctance to refer if the result of the referral was simply sending patients to a rival business. These participants also acknowledged a barrier if the referral was perceived by the practitioner or the patient to be simply changing to a 'better' therapist due to inexperience or incompetence of the referring practitioner. Another identified barrier reported by specialist physiotherapists was that specialist services are not adequately remunerated. This was a particular issue with providing the case management, stakeholder liaison and advocacy that whilst time consuming, were considered to be potentially of most value.

Some generalists felt that patients might be reluctant to see another provider from the same discipline because it might negatively impact on the therapeutic relationship, or disrupt continuity of care. Conversely, specialist physiotherapists felt that referral of patients with complex presentations and those who are not recovering for specialist care was a component of best practice. Such referral was deemed to be in the patient's best interest, therefore, supportive of therapeutic relationship.

Theme 7: Facilitators

The participants identified a number of factors that would enable the process of referral to specialist physiotherapists. One suggestion was a database made available to generalists or a public registry.

I would probably say, database of who and where they are. So if I've got a patient over in [suburb] or [suburb] and the only specialist is down south or somewhere.

(Generalist, Participant 5)

Generalists and specialist physiotherapists suggested that insurance regulators or professional associations might play a role in managing the database and promoting referral to specialist physiotherapists.

Some generalists and specialist physiotherapists believed that a systematic or even a mandated peer review process would work well in managing complex conditions.

Some generalists suggested that a routine, early peer review or guidelines for dealing with specialist physiotherapist referral might help and others suggested that specialists should not also provide general practice services.

If it was a standard kind of pathway... Maybe that will be tolerated better by everybody, if it was sort of accepted that that's the best possible care. (Generalist, Participant 11)

Communication and mutual trust were identified by both specialist physiotherapists and generalists as key factors in enabling the process of referral.

If it is the specialist that gets referred to... that person then communicates with the practitioner, builds them into the team and not exclude them...

Communication, I think, is key. (Generalist, Participant 10)

Generalists, in particular, wanted to not “be cut out of the loop” and informed of key aspects of management in a collegial, non-threatening manner. Both generalists and specialist physiotherapists deemed that excellent communication facilitates coordinated care and a positive relationship. With mutual trust there is recognition of, and respect for, what both practitioners are able to contribute in terms of competencies.

You are working as a team for the patient, for the good of the patient. (Generalist, Participant 7)

If I send someone to [specialist], and [specialist] found something that I missed, I reckon that's the whole reason why I sent someone to [specialist]. (Specialist, Participant 2)

Theme 8: Attributes of a specialist physiotherapist

There was diversity of opinion regarding the definition and attributes of a specialist physiotherapist. Some generalists equated the term specialist with senior colleagues in a clinic or network with acknowledged expertise in an area of practice. They deemed that a specialist physiotherapist was not defined by the practitioner’s skills or competencies with particular modalities above their own competence in delivering these interventions. Accordingly, some generalists emphasised that a specialist physiotherapist was not necessarily simply a “better” practitioner. Aligned with this, specialist physiotherapists

defined their attributes according to higher qualifications, additional education, or appointments and titles awarded by professional associations rather than any specific expertise with implementing treatment.

Most generalists regarded specialist physiotherapists to be proficient in problem solving and demonstrate advanced clinical reasoning. The generalists indicated that they would appreciate having a specialist physiotherapist see their patients for identification of underlying problems and management of symptoms through more thorough assessments and specialised treatment.

I want to know what I've missed, I want know what it is out there [that is causing poor recovery]... I want to know the diagnosis and management... (Generalist, Participant 3)

Likewise, the specialist physiotherapists' description of themselves and their approaches focused more on ability to discern and deal with complex conditions.

...it's quite a detailed triage at the very beginning that we'll do... (Specialist, Participant 4)

Are there any discrepancies in the presentation? If they don't match up, then what's the reason for that? (Specialist, Participant 6)

Theme 9: Shared-care clinical pathway

There was strongest support for a shared-care clinical pathway, meaning a collaborative approach between the referring practitioner and the specialist physiotherapist in patient

management. Both generalists and specialist physiotherapists identified some considerations that would influence their decision to undertake a shared-care approach.

Specialist physiotherapists deemed that the shared-care approach would be appropriate in situations where the referring practitioner was competent and capable to provide management, and noted the importance of rapport between the referring practitioner and their patient.

It depends, on the treating practitioner, who is currently looking after them, if they have got the skills to treat somebody with cervicogenic dizziness, with you know a neurological problem, a PTSD problem... (Specialist, Participant 1)

The specialist physiotherapists recognised that withdrawing a patient from the care of the referring practitioner may disrupt the existing therapeutic relationship, which may adversely affect treatment response. Similarly, some generalists deemed that the shared-care approach would strengthen the patients' trust on their care provider.

Most specialist physiotherapists have practices in metropolitan areas and were influenced in their process of care by the referral being from either a local or a remote source. For referrals from remote areas, the specialist physiotherapists and some generalists deemed it more pragmatic for the specialist physiotherapist to liaise with the local practitioner than expect the patient to travel long distances for treatment.

I think if I had seen this person [patient] and I had assessed him at the front and there was a physio that lived near this patient that I trusted, I'd be happy to refer [to the physio] and monitor. (Specialist, Participant 10)

Theme 10: Other clinical pathways

Generalists and specialist physiotherapists agreed that it might be more relevant for the specialist physiotherapist to take over the care (specialist care) of a patient in situations where the presentation was more complex or with particular co-morbidities. These conditions included dizziness and nervous system sensitisation, where generalists felt they may not necessarily have the training to address the condition. Some specialist physiotherapists suggested that in cases of complexity, they would, upon referral, provide only a brief course of treatment to address the existing barriers to recovery before returning the patient to generalist care.

Generalists and specialist physiotherapists recognised the role of other disciplines in providing appropriate care for patients with complex presentations (referred care). Specialist physiotherapists and generalists deemed that in some cases, co-morbidities would need to be addressed before physical treatments were provided in order to maximise benefits gained. Hence, in these instances the specialist physiotherapist might facilitate referral to a medical specialist or to other disciplines.

...it's a matter of recognising what your skills are, where your skills will finish and someone else's will cut in. (Specialist, Participant 6)

DISCUSSION

This study demonstrates the potential for building a stronger culture of specialist referral within physiotherapy practice and translating this pathway of care within the primary healthcare setting. Participants were generally supportive of the concept of referral to specialist physiotherapists, despite the practice not being widespread and there being distinct barriers to referral. These results suggest that dealing with existing barriers and creating mechanisms to facilitate and incentivise referral might enhance the feasibility of implementation of this pathway of care.

Several factors were identified that might address barriers and facilitate specialist referral that were consistent with the translation and implementation literature. The importance of access to a referral network identified by the participants is consistent with previous reports in relation to medical management of rheumatoid arthritis where having a network and professional links was highly valued (Pollard et al., 2011). Participants suggested further initiatives to improve access such as a database of specialist physiotherapists, creation of specialist networks and mandated or routine peer-review. Participants also highlighted the need for mutual trust and respect (van Dongen et al., 2016); and the importance of effective communication that addresses organisational barriers, improves working relationships and facilitates understanding of role demarcation and overlap (Molyneux, 2001; D'Amour et al., 2005; Hall, 2005; van Dongen et al., 2016).

Participants articulated clear expectations around the role of specialist physiotherapists

and their contribution to patient care. Participants expected specialist physiotherapists to act as consultants. A consultant is a practitioner who provides expert advice in matters of complexity (Robertson et al., 2003) and assists with management of patients who experience barriers to recovery, requires interdisciplinary care, or in settings with a complex array of stakeholders (Stevenson, 2003). Participants also expected specialist physiotherapists to contribute to practitioner education and professional development in the course of patient care through feedback and peer-review. These practices are consistent with a social interaction approach (Grol, 1997) that has previously been suggested might advance practice and improve patient care (Australian Health Practitioner Regulation Agency, n.d.; French & Dowds, 2008; Chipchase et al., 2012). Participants further identified a role for specialist physiotherapists in advocacy and case management, consistent with elements of high quality care described by van Dongen et al. (2016). These role expectations might help to inform training programs and professional development activities for specialist physiotherapists by emphasising learning outcomes and skill acquisition in communication, negotiation, education, case management and advocacy.

Participants also identified their expectations around the approaches to a clinical pathway of care that involves specialist referral. Whilst initial survey responses reflected diversity in opinion, particularly around preferred approach in care, the deeper and interactive discussion in the focus groups appeared to clarify this issue and a general trend towards a shared care approach was observed. There was support and preference for a collaborative approach that maintains the involvement of the referring practitioner, characterised by shared decision-making and integration of knowledge and

expertise toward a common goal (D'Amour et al., 2005; Chamberlain-Salaun et al., 2013). Participants reinforced the importance of mutual trust, effective two-way communication and role demarcation for individual patients in a shared-care pathway, which could inform future specialist training and professional development programs.

Participants distinguished particular sub-groups of people with WAD that they believed would potentially benefit from specialist services. These included those with complex presentations and demonstrating non-recovery. Whilst participants in this study demonstrated good knowledge of indicators for referral, they described varied referral patterns and timeframes, in line with current practice (Nicholas, 2016) and not with guideline recommendations (State Insurance Regulatory Authority, 2014). Arguably there is a professional responsibility to refer people with complex presentations and those at risk of, or demonstrating non-recovery to address the poor outcomes and the rising costs of WAD. One strategy to improve referral practices would be to develop resources such as an online support tool to assist primary care practitioners to better identify people who would benefit from referral to specialist physiotherapists.

Participants further identified key features of an online support tool that could facilitate appropriate and timely referral to specialist physiotherapists. Features included automation of a risk-assessment tool, guide for communicating risk to patients, database of specialist physiotherapists, and access to evidence-based resources about assessment and management. There is increasing evidence of the effectiveness of using computerised clinical decision support systems like those suggested by our participants (Hunt et al., 1998; Grol & Grimshaw, 2003). Specifically, features suggested such as

automatic decision support at the point of care, and provision of recommendations for management have been shown to significantly improve clinical practice (Grol & Grimshaw, 2003; Gosling & Westbrook, 2004; Garg et al., 2005; Kawamoto et al., 2005). Development of an online support tool with the above features might therefore assist in effective translation of a clinical pathway involving specialist referral.

Limitations of the study

Medical practitioners (GPs) were not represented in the focus groups in this study; hence, we were not able to report on their position on referral to specialist physiotherapists. The aim of the study, however, was focused on specialist referral for the purpose of peer-review to assist with treatment of more complex patients. Some specialist physiotherapists receive direct referral from GPs however this referral path was not explored in this study. Participants in the study comprised practitioners from different professions, with diverse practice experiences. Given the themes have sufficiently captured the data relevant to address the aim of this study, we are confident the diversity of opinions was well represented. The research team included practitioners from different fields of interest, which may have influenced analysis and interpretation of data. However, issues were resolved through regular meetings to ensure results reflected the data.

Implications to practice and research

Results of this study will inform the training of specialists in our clinical pathway of care trial, which will be used to investigate efficacy of the pathway in WAD (phase 3 of the Research Translational Framework). In particular, training will revolve around

emphasising a shared-care approach and how to liaise with generalists. Further a database of specialists will be created in an online tool to support the pathway of care. Results from this study could potentially be generalised to other musculoskeletal conditions, if efficacy of the pathway of care is evidenced after completion of the trial. Future research could also explore the perspectives of medical practitioners; and test the hypotheses generated with a broader and more representative sample through survey and Delphi methods.

In summary, these results support the feasibility of referral to specialist physiotherapists, as proposed in our clinical pathway of care and potentially within a wider context of health service delivery. The reluctance expressed by participants in this study seemed to be influenced by barriers such as challenges with clarification of roles and lack of access to specialist physiotherapists. These barriers could be addressed through creating a network for specialist physiotherapist referral and emphasising a shared-care, collaborative approach in management. Findings have also generated new hypotheses about potential roles for specialist physiotherapists and factors related to overall acceptance of these roles. These findings have implications for further study and adopting strategies to facilitate effective implementation and translation of guideline recommendations and the proposed pathway into primary care practice.

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Table 1: Focus group discussion questions.

Generalist focus group
<p>1. What referral decisions do you currently make in the management of whiplash? <i>Probes:</i> Who do you refer to? Why would you refer? When (after injury) would you usually refer? How do you go about the process of referral? What factors influence your decision to refer?</p> <p>2. We recommend early referral to specialist providers for those likely to develop chronic moderate/severe disability. What do you think about specialist referral? <i>Probes:</i> What factors would impact on specialist referral?</p> <p>3. What should specialists do to help you? <i>Probe:</i> If your patient at high risk was referred to a specialist provider what would you expect the specialist to do to assist you?</p> <p>4. We suggest three potential roles for specialists: (1) shared care through peer review, (2) direct treatment from the specialist, (3) referral to other disciplines/professionals. What factors may influence decisions to undertake any of these actions? <i>Probes:</i> In what circumstances would each of these decisions be chosen by specialist practitioners?</p>
Specialist physiotherapist focus group
<p>1. What decisions do you currently make in the management of whiplash? <i>Probe:</i> What factors influence the decisions you make as specialists?</p> <p>2. We suggest specialists may undertake one of three actions: (1) commence/continue current treatment with primary care provider monitored by a specialist, (2) direct treatment from the specialist, (3) referral to other disciplines/professionals. What factors may influence your decisions to undertake any of these actions? <i>Probes:</i> When would you choose to undertake the action? Why would you choose to undertake the action?</p>

Table 2: Participant characteristics.

	Generalist practitioners (<i>n</i> =16)	Specialist practitioners (<i>n</i> =12)
Demographic variables		
Mean age (SD)	42 (14)	50.5 (9.5)*
Female gender (%)	8 (50)	4 (33)
Profession		
Physiotherapist (%)	7 (43.8)	12 (100)
Chiropractor (%)	6 (37.5)	0 (0)
Osteopath (%)	3 (18.7)	0 (0)
Practice characteristics		
Practice location		
New South Wales (%)	10 (62.5)	8 (66.7)
Queensland (%)	6 (37.5)	4 (33.3)
Mean clinical practice years (SD)	15.6 (14.5)	28.3 (9.03)
Median <i>n</i> of patients with WAD seen per year (IQR)	10 (10)	10 (9)

SD = standard deviation, *n* = number**n*=11

Table 3: Summary of themes, subthemes and illustrative quotes.

Themes	Sub-themes	Quotes
1 Indicators for referral	Complex and high-risk factors	G11: ...the ones that I'm flagging... impact of events is usually what I use... If I had someone that was in so much pain, so severe. S4: ...people who have had other problems like cervicogenic dizziness, psychological distress. S10: ..., they fall into the chronic, so they're people that are presenting with diffuse neck, arm symptoms, dizziness.
	Non-recovery	G11: I guess it depends on how bad they [the patient] are and how much change I'm seeing. If they are really not changing, that would be [an indication to] to refer them on. G7: If the patient is not responding. And you re-assess. Then that's when you would refer for the opinion. G8: I think the guidelines say 10% of each re-assessment. And that's pretty realistic, that's pretty generous. S2: After X number of visits, and that would depend on my assessment, if we're not making progress then I either refer them back to whichever specialist referred them to me in the first place or I go back to the GP or the case manager, whoever is the primary manager, and provide some advice about where they should go from here.
2 Referral patterns	General practitioner	G9: if a patient is not going to be succeeding down the track, you re-communicate with the GP and get them involved in what's going on. G5: I tend to refer back most of my patients to the GP's that they see, so I will refer back to their GP with a letter of "this is what we've found, this is what we've done" S10: I guess part of my exposure to managing complex musculoskeletal problems is that in the clinic that we work in we're not getting referrals from physios, we're getting referrals from GPs for people to see surgeons regarding their problem and a lot of these people have seen physios.
	Other specialists	G10: ...Then this is usually referral out [to medical specialists] or it's for imaging. G14: I'd probably add on to OT or work and rehab specialists for return to work, sitting or whatnot, and if there's any workplace modifications as well. I've referred sort of for pharmacy, in terms of like pharmacy reviews, and sometimes when they're on more than five medications, poly pharmacy, total opiate doses, so pharmacy as well is probably another one, for pharmacy review, and then they write back to their GP, but that's through a different process. G11: I might refer on to someone that specialises in sort of PTSD.
	Insurance companies	S4: The ones that I've seen in recent times as MAA assessments are people who have had other problems... S9: I think in that one New South Wales model, whether it's Work Cover, it's certainly done in their Work Cover model that they will have the specialist physio who relates back to and then they'll refer them elsewhere.
G = generalist, S = specialist, GP = general practitioner (medical), OT = occupational therapy, PTSD = posttraumatic stress disorder, MAA = motor accidents authority (now State Insurance Regulatory Authority)		

Themes	Sub-themes	Quotes
3 Attitudes about the concept of specialist physiotherapist referral	Dissatisfaction with referral back to the GP	<p>G10: We got the same old routine of GP, [we report]: "This is the story of this person, this is what I think is going on, I appreciate your opinion." And usually from there you'd get a phone call back or a letter back, but most often the case is you don't know what has happened to the patient. And before we know it, they've had some sort of sub-optimal treatment or care or advice and then they're sort of lost in the abyss until it recurs again and they're back again.</p> <p>G9: Sometimes there'll be some patients that will go and see their GP who will give them advice that actually contradicts what I will say, like put them in a soft collar. Some of the stuff there is actually not aligned with the guidelines, and I think sometimes seeing a doctor can actually go backwards.</p> <p>G8: you re-communicate with the GP and get them involved in what's going on. Then you say like "Okay, well, he's not recovering as I would like them to recover.." We know that but let's maybe bring in a specialist to come and take that next step. [GP] then says "Well look, you may just need to persevere with what you do at the moment and we'll come good. We'll just need to keep reassuring that it'll all come good." Or "We'll take the next step and send for images and send for consult with a specialist physician."</p> <p>S1: I had a patient this year who was dominant psychosocial referred by a GP to me who I treated several times. [I] referred [the patient] back to the GP and [I] said "I think we need to do X, Y and Z" and he [GP] promptly referred her [patient] on to somebody else [inappropriate]. So that is not an uncommon incident.</p>
	Referral to specialist as alternative to GP review	<p>G3: I just think that if a patient can be better managed by somebody then I'm very happy to have that happen and it's why we refer off to others anyway, to get their expert advice and management.</p> <p>S5: I think when the specialist is involved with a primary carer, better structured outcomes are formulated so there's a real defined period of time where you expect, you know, set out at this period I expect the patient to be doing this level of activity, function, or having improved impairment.</p>
4 Referral timeframe		<p>G6: I think 3 weeks would be difficult. I don't, can't figure out how that would be done. I think definitely, from the specialist point of view, I suppose with anything, that the earlier the better.</p> <p>G10: I think 3 weeks is too soon. 6 weeks might be more on mark. It will depend on how severe the whiplash is.</p> <p>S4: I think you need to see them early, because that's the whole point, you need to see them early so you can help to identify what are those features that are making them the high risk.</p>
5 Expectation of outcomes of referral	Feedback and professional development	<p>G9: If they are specialists, they should be the ones giving us feedback on what we've done well or we haven't done well so that we can improve the next time someone comes in with the same sort of injury.</p> <p>S11: I wonder if there's value in, if a physiotherapist refers to a specialist, I would love it as the referring physio[therapist]... A report at some point... And I suspect a lot of physiotherapists would, if you have an interest in furthering your knowledge then that would be incredibly helpful.</p>
	Advocacy	<p>G14: If you are a specialist in whiplash, hopefully they are hooked up through a system to get them [the patients] the appropriate care at the appropriate time.</p> <p>S8: I reckon that's where we come in as intermediary. I think they're not against it [funding referral for alternate/interdisciplinary care] provided that you can explain the reason for it.</p>

G = generalist, S = specialist, GP = general practitioner (medical), WAD = whiplash associated disorder

Themes	Sub-themes	Quotes
6 Barriers	Lack of access to specialist	G13: ... if I was to refer on, it's distance, accessibility. So I try and keep it as local as I can. G1: First of, knowing who the specialists are and where they're located. S8: I think one of the things that is possibly difficult for the beginning practitioner too is to recognise and to have the network.
	Professional and commercial issues	G8: It's not just the profession, it's the insurers. I would happily be referring more people across to other specialist physios but they're not going to be remunerated properly... That's a barrier as far as I'm concerned. S6: As a profession, there is still a long way for us to go before specialists are recognised in a specialist capacity as opposed to other competitors...
	Therapeutic alliance and continuity of care	G9: Then the patient feels lost because they have built rapport with you, they have built the trust with you... All of a sudden feel like it is abandonment or they got pushed off to the side by the person you just referred to... And so that sort of denigrates what the patient feels, which is a real feeling of trust in their practitioner. And it puts them into this turmoil of [patient thinks] "Who do I trust?" S1: Yeah and I think one of the great under pinning things that patients have with practitioners is you've got a rapport, and if they've got a rapport with somebody and they like them, then I think you'd probably want to just keep them with that person.
7 Facilitators	Database of specialist	G5: I would probably say, database of who and where they are. So if I've got a patient over in [suburb] or [suburb] and the only specialist is down south or somewhere. G9: Maybe if it comes through your associations or on the websites, saying these are your musculoskeletal specialising in x... these are your chiropractors specialising in y.. S3: I think a list of who to refer to will be really nice, like a nice contact...
	Mandated peer review	G11: If it was a standard kind of pathway... and this is where we think something's wrong, you're going, "Let's just get that checked." Maybe that will be tolerated better by everybody, if it was sort of accepted that that's the best possible care. S4: Have the recommendation happen at the level of the insurer when they get the first review form that they then have the option of referring a telephone conversation out of house... to one of the specialists.
	Communication	G10: Coordinate. And communicate with the referring practitioner definitely... If it is the specialist that gets referred to, whether it be a CTP framework, that person then communicates with the practitioner, builds them into the team and not exclude them... Communication, I think, is key. S10: Having some kind of telephone hotline for clinicians to call specialists... or an email, I don't know... It's a nice thing as a clinician if you're not as well versed in something to feel supported by people that are well versed.
	Mutual trust	G7: You are working as a team for the patient, for the good of the patient. S2: If I send someone to [specialist], and [specialist] found something that I missed, I reckon that's the whole reason why I sent someone to [specialist], for exactly that reason.

G = generalist, S = specialist

Themes	Sub-themes	Quotes
8	Attributes of a specialist physiotherapist	<p>G6: <i>I don't think there's any evidence that they [specialist practitioners] are going to be any better at treating the person [patient] than we are.</i></p> <p>S7: <i>It's too easy for clinicians to believe that expertise comes from just seeing lots of patients. They shouldn't believe it. As opposed to recognising that expertise requires searching literature, attending courses.</i></p>
	Trouble-shooter	<p>G3: <i>I want to know what I've missed, I want know what it is out there [that is causing poor recovery]... I want to know the diagnosis and management...</i></p> <p>S4: <i>What we're saying is it's quite a detailed triage at the very beginning that we'll do... So we'll apply a lot of those things right up front, and so if you like, the specialist role may well be at the very beginning to declare that physiotherapy treatment is totally inappropriate because if they're not WAD one or two, if they're a three they're probably not going to stay with you, and if they're at the four they're definitely not going to.</i></p> <p>S6: <i>Are there any discrepancies in the presentation? If they don't match up, then what's the reason for that? Are they at the stage where they should be, and I would expect them to be at? And if not, what's the obstacle for progressing? –on types of decisions made when seeing patients with WAD.</i></p>
9	Shared-care clinical pathway	<p>G9: <i>I think [shared care] is all about reassurance to the practitioner that they're doing the right thing more than anything else. We know what to do, some people are better at doing it than others... the specialists are the ones giving the reassurance to the general therapist who then can reassure the patient that everything's correct.</i></p> <p>S1: <i>It depends, on the treating practitioner, who is currently looking after them, if they have got the skills to treat somebody with cervicogenic dizziness, with you know a neurological problem, a PTSD problem...</i></p>
	Location	<p>G2: <i>The further away you are, it's harder to find the right people to know for sure, inter-disciplinary respect. If it were up to me, it would be a really nice thing [refer back to treating practitioner].</i></p> <p>S10: <i>I think if I had seen this person [patient] and I had assessed him at the front and there was a physio that lived near this patient that I trusted, I'd be happy to refer [to the physio] and monitor.</i></p>
10	Other clinical pathways	<p>G10: <i>If it is someone who's malingering or not responding to care or you know, who's got other factors...</i></p> <p>G3: <i>I would be very happy if the specialist provided the care, then if it tapered off, all the central sensitivity whatever settled back down, and then I can manage that patient.</i></p> <p>S10: <i>I think if it's [presentation] more complex, I think I'd want to manage that person.</i></p> <p>S5: <i>I'm actually in favour of the specialist having 2 or 3 treatments and then once the correct pathway has been established then send them back to the primary carer. I don't think the specialist should be involved in long term treatment.</i></p>
	Scope of practice	<p>G8: <i>I think this model here is something that I do daily. I often refer. If you [the patient] want to be a Olympic champion, it's beyond me.</i></p> <p>S6: <i>I think in terms of referring outside, it's a matter of recognising what your skills are, where your skills will finish and someone else's will cut in.</i></p> <p>S12: <i>Some people need to have their pain sorted or see the psychologist for their posttraumatic stress symptoms before they have treatment.</i></p>

G = generalist, S = specialist, GP = general practitioner (medical), PTSD = posttraumatic stress disorder

Figure 1. Referral to specialist physiotherapists. Decisions that specialist physiotherapists would make for people who are at medium/high risk of experiencing prolonged pain and disability as a component of the proposed clinical pathway of care for WAD.

APPENDIX 1

Background

A survey was conducted prior to the series of focus group discussions to provide some quantitative data about practitioner beliefs and attitudes on a proposed clinical pathway of care for WAD. Specifically, the survey explored practitioner's perceptions on the WAD clinical prediction rule, key messages of the current WAD guidelines and early referral to specialist physiotherapists of people at high risk of non-recovery. This report presents the results of the survey items related to specialist referral, which were used as background/stimulus material for the focus group discussions.

Methods

Participants were identified through purposive sampling. Inclusion criteria were; registered physiotherapists, chiropractors, osteopaths or general medical practitioners working in a primary care setting (generalists) who treat at least 1 patient with WAD per year, and specialist practitioners (specialists) with expertise in complex musculoskeletal conditions in New South Wales or Queensland, Australia. Potential participants were identified through; research databases of practitioners who have participated in previous WAD trials or provided treatment in previous cohort studies, e-mail advertising in professional associations (Australian Physiotherapy Association; Chiropractors Association of Australia), primary health networks, and direct invitation from the researchers' professional contacts.

The survey was administered online using the REDCap survey tool¹. Close-ended and open-ended questions collected demographic and clinical practice information; and

explored opinions on the key components of the proposed clinical pathway of care for WAD. Content specific to specialist physiotherapist referral included questions that explored practitioner's opinions about; approaches for medium / high risk patients, referral to specialist practitioners, and ease of referral (5-point Likert scale); specialist practitioner actions (categorical scale); and indications for referral.

Results

The survey was returned by 94 practitioners (Table 1). Return rate was 11% for generalists (n=68/618) and 67% (n=26/39) for specialists. The majority of participants reported that medium / high risk patients required targeted approaches to care. Respondents were however divided in their opinion about whether this would involve referral to a specialist. Most respondents did not believe that the current process of specialist referral was easy. Table 2 summarises these results.

Table 1: Number of respondents.

Practitioner	Respondents n=94 n(%)
Generalists	68 (72%)
Physiotherapist	29 (30.9%)
Chiropractor	31 (32.9%)
Osteopath	6 (6.4%)
General practitioner	2 (2.1%)
Specialists	26 (28%)
FACP specialist musculoskeletal physiotherapists	16 (17.0%)
APA titled members	4 (4.3%)
Independent consultants	6 (6.4%)
Chiropractors (n=3)	
Physiotherapists (n=3)	

FACP=Fellow of the Australian College of Physiotherapists,
APA=Australian Physiotherapy Association

Table 2: Perceptions of practitioners on a proposed clinical pathway of care for WAD.

	n	Mean	SD
Patients at medium/high risk should receive more targeted interventions.	94	4.04	1.14
responses			
Patients at medium/high risk should be referred to specialist providers for more targeted treatments.	68	3.40	0.96
responses			
The process of referral to specialist providers is easy.	68	2.63	1.06
responses			

Specialist respondents indicated a preference for taking over care rather than other options of advising the primary care provider about treatment or referral for other interventions (Figure).

Figure. Management decisions of specialist physiotherapists.

Both generalists and specialists nominated factors such as slow response to treatment, high pain and disability, symptoms of psychological distress, co-morbid conditions (e.g. headache, dizziness, vestibular/balance, neurologic problems) and compensation issues as indicators of poor recovery and a signal for potential referral.

Discussion

This survey provided preliminary insights on the practitioners' level of acceptance of specialist referral, and was used as stimulus for the focus group discussions. Whilst initial responses to the survey reflected diversity in opinion, the deeper and interactive discussion in the focus groups appeared to clarify issues, address initial concerns and a general trend towards consensus on these questions was seen.

Reference

¹ Harris, P.A., Taylor, R., Thielke, R., Payne, J., Gonzalez, N., & Conde JG. (2009). Research electronic data capture (REDCap) - A metadata-driven methodology and workflow process for providing translational research informatics support. *J Biomed Inform*, 42(2), 377-381.

APPENDIX 2

Facilitator script and focus group rules¹

Welcome and introduction

Thank you for agreeing to be part of our study. I am [name] and I will be your facilitator tonight. With me is [name], who will act as the assistant facilitator.

Purpose of the focus group

The reason we are having this focus group is to gain insights from key stakeholders about whiplash management. This activity is part of a research project that aims to explore perceptions about a proposed clinical pathway of care for whiplash. As practitioners who manage people with whiplash, we need your input and want you to share your honest and open thoughts with us.

Ground rules

Before we start with the focus group, allow me to brief you through our ground rules:

1. We encourage each of you to participate in the discussions and want you to do the talking.
2. We value your insights and believe that your experiences and opinions are important. Hence, there are no right or wrong answers.
3. The discussions will not be disclosed outside of this group. We want you to feel comfortable sharing your views.
4. The discussion will be audio-recorded and we will be taking notes. Rest assured that your identity will be kept confidential and data will be de-identified during analysis and in our report.
5. As in any research, your participation is completely voluntary and you may leave at any point, if the discussion causes discomfort.

6. Lastly, in respect for each other, we ask that only one individual speak at a time in the group

Engagement

To get ourselves acquainted with each other, can you tell the group something about yourself? Tell us your background, experience in working with people with whiplash, and your initial thoughts why you think this discussion is important to undertake.

Exploration

We have recently conducted a survey to explore beliefs and attitudes of stakeholders regarding whiplash management. In this survey, we found a number of interesting preliminary results. [show slides]

We now explore these further (focus group discussion questions).

Exit

[Summarize what has been discussed.]

Is there anything else you would like to say about the topic?

Closing

Thank you for participating in this activity. Your input has been very helpful to our team.

Reference

¹ Eliot and Associates. (2005). Guidelines for conducting a focus group. Retrieved from http://datainnovationproject.org/wp-content/uploads/2017/04/4_How_to_Conduct_a_Focus_Group-2-1.pdf.

Highlights

- Referral to specialist physiotherapists is well-supported.
- Generalists have high expectations of the referral process.
- Shared-care approach involving the referring practitioner facilitates referral.
- Significant barriers to overcome include clarification of roles and lack of access.