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Clinical challenges associated with managing work-related mental health conditions in general practice

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Clinical challenges associated with managing work-related mental health conditions in general practice

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ABSTRACT

Objective Most patients with work-related mental health conditions (MHCs) seek care from a general practitioner (GP). The GPs role intersects clinical care, patient advocacy and assessment of work-participation, and they can experience difficulty representing these sometimes competing roles. A clinical guideline was being developed to assist GPs in providing this care, so it was necessary that the guideline addressed clinical challenges experienced by GPs. Our aim was to identify the clinical challenges that GPs face when diagnosing and managing patients with work-related MHCs.

Design Qualitative research

Setting This study was conducted in general practice and workers' compensation schemes across Australia.

Participants A total of 25 GPs, seven psychiatrists (who were independent medical examiners for compensation schemes) and nine compensation scheme workers. GPs were eligible to participate if they were actively treating or had treated (within the previous three years) patient(s) who had submitted a workers' compensation claim for a MHC. Psychiatrists and compensation scheme workers were eligible to participate if they were active in these roles.

Method Participants were invited by letter to participate in qualitative semi-structured telephone interviews. Prior to each interview, participants were asked to reflect on two case-vignettes that each depicted a patient's illness trajectory over 12 months. Data were thematically analysed using an inductive approach and then categorised by stages of clinical reasoning.

Results Participants reported clinical challenges across four key areas: 1) Diagnosis (identifying appropriate diagnostic tools, determining the severity and work-relatedness of a MHC, and managing the implications of labelling the patient with MHC). 2) Management (determining optimal treatment, recommending work-participation). 3) Referral (ambiguity of communication pathways within compensation schemes). 4) Procedure (difficulties navigating compensation systems).

Conclusion The clinical challenges described in this study have informed the topics in new clinical guidelines for GPs on the diagnosis and management of work-related MHCs.

Keywords general practice, compensable injury, mental health, clinical challenge, guideline

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Strengths and limitations of the study

- This study identified the clinical dilemmas faced by GPs when diagnosing and managing mental health conditions that have arisen due to work.
- It illuminates what topics should be included in clinical guidelines that aim to support GPs to diagnose and manage work-related mental health conditions.
- Triangulating the views of GPs, psychiatrists, and CSWs strengthened the study as it enabled verification and/or explanation of the GPs clinical dilemmas.
- A limitation of this study is that the case studies (which we used to stimulate the conversation in interviews) were limited by diversity of patient stories.

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INTRODUCTION

Mental health conditions (MHCs) that have arisen as a result of work, or “work-related MHCs” are increasing,[1]. These conditions may arise where work factors contribute directly to the development of a MHC or as a comorbid or secondary stressor,[2]. People who have an accepted claim for a work-related MHC take on average three times longer to RTW than the median time for all claims,[3]. Work-related MHCs not only have deleterious effects on a patient’s psychological and physical health but at an estimated at $5.3 AUD billion per year also represent a substantial economic and social cost,[4]. Given the association between poor mental health and long-term disability, this represents an important social and economic concern.

In Australia, 97% of injured workers seek care from a general practitioner (GP, also known as family doctor),[5] perceiving their GP as clinician, advocate, care coordinator, and navigator of the health and compensation systems,[6]. These roles are recognised by GPs who also describe their role as gatekeepers to workers’ compensation schemes through certification of work capacity,[7, 8].

Many GPs face challenges in enacting these roles. Our previous work revealed wide discrepancies in the amount of time off work GPs certified for work-related MHC as opposed to physical injuries,[9]; difficulties in assessment and diagnosis challenging because of the invisibility of MHCs; concern that the patient may face stigma at work; and concern for patients if managing the claim through compensation or returning patients to work exacerbated the MHC,[8, 10, 11]. To address these barriers, GPs wanted clarity around certification and guidance on how to diagnose and manage work-related MHCs,[6, 8]. These findings are echoed internationally,[12], emphasising that across primary care settings, the challenges with managing patients with work-related MHC are consistent, and that GPs internationally might benefit from the development of clinical guidelines to assist in the diagnosis and management of work-related MHCs.

Currently, there are no clinical practice guidelines available to assist GPs in overcoming the clinical challenges with diagnosing and managing patients with work-related MHCs. To be useful in clinical practice, clinical guidance must be relevant to the end users, easy to understand and easy to implement in practice,[13]. However, the existing body of evidence does not identify the specific aspects of clinical care that are difficult in practice, which a guideline should explicitly address. The present study sought to determine the clinical dilemmas that GPs face when diagnosing and managing patients with work-related MHCs to inform the development of a new guideline and ensure the relevance of the guideline to GPs.

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METHODS

Patient and Public Involvement

This research was informed by a qualitative study with patients, employers and GPs who described sub-optimal care for work-related mental health conditions,[6, 8]. In this present study, we explored care delivery from the perspective of clinicians who provide the care (i.e. GPs) to better understand clinical challenges that resulted in sub-optimal care for patients. Interviews were based on previously validated case vignettes that described the de-identified actual patient experiences of two patients with their GP over a period of 12 months,[7].

No patients were involved in the recruitment to and conduct of the study. However, a patient member of the project governance team was involved in analysis of the findings.
The findings of this study have been disseminated to participants as a summary in the published clinical guideline,[14].

Participants and Design

Semi-structured phone interviews were undertaken across Australia with GPs, psychiatrists (who work with compensation schemes to provide independent assessment of patients and advice regarding rehabilitation and work participation), and compensation scheme workers (CSW; who review applications for compensation claims and oversee the case-management for people with accepted claims). Together, these groups are familiar with the clinical challenges experienced by GPs with regards to work-related MHCs.

GPs were purposively sampled by geographical location, rurality and gender and were eligible to participate if they were actively treating or had treated (within the previous three years) patient(s) who had submitted a workers' compensation claim for a work-related MHC. GPs were recruited from the Australasian Medical Publishing Company (AMPCo) database. The AMPCo database contains a list of approximately 29,000 GPs who practice across Australia, and who have consented to receive invitations to participate in research.

Initially, a postal invitation that explained the purpose of the study and intention to utilise study results to inform the development of a guideline, along with an expression of interest to participate was mailed to 242 GPs on the AMPCo database. Follow-up occurred by telephone at two weeks to non-responders. Finally, we used snowballing to enhance recruitment, whereby participating GPs were encouraged to pass the study information onto their eligible colleagues.

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Psychiatrists and CSWs were also purposively sampled by geographical location. Psychiatrists were eligible to participate if they were active as independent medical examiners with a compensation scheme and CSW were eligible to participate if they were active in the role of managing claims for work-related MHCs. Psychiatrists and CSWs were recruited through the existing networks of the project team and project sponsors, which included compensation agencies in Australia. To recruit psychiatrists and CSWs, project team members and sponsor representatives distributed an explanatory letter and a consent form agreeing to be contacted by the research staff to psychiatrists and CSWs in their networks who fit the eligibility criteria. Interested psychiatrists or compensation scheme workers returned the completed form directly to the researchers. A member of the research team then provided the potential participant with a detailed explanation of the study and sought their consent to participate. Recruitment and data analysis were conducted concurrently so that recruitment could stop when data saturation occurred.

In line with clinical consulting rates, participating GPs and psychiatrists were reimbursed for their time with a gift voucher for $150 AUD, while participating CSWs, who were salaried, did not receive reimbursement. All interviews were audio recorded and professionally transcribed.

Interviews were conducted from July-September 2016. Prior to the interview, each participant was given two case vignettes. [Supplementary File: Boxes 1 and 2] The two vignettes were also made available to participants at the time of the interview.

Participants used these vignettes to reflect on their own experiences regarding diagnosis and management of patients with work-related MHCs in the general practice setting. This included how GPs determine appropriate diagnostic tools, their management style, their attitude towards certifying patients and recommending RTW, and their perceived challenges and knowledge gaps.

Case vignettes and interview questions were refined following piloting with an advisory panel of GPs, (clinical educators at the Department of General Practice, Monash University) for clinical accuracy and also with a recruited GP, psychiatrist and CSW. Minimal revisions were made to the written vignettes. Consequently, pilot interview data included in the analysis.

Analysis

De-identified interview transcripts were imported into NVivo 11,[15] and thematically analysed. Two researchers conducted three iterative rounds of coding to develop the code list. After finalising the code list, the remaining transcripts were coded by a single researcher with new codes discussed

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between the researchers and discrepancies resolved by third party. Thereafter codes were then clustered thematically according to the process of clinical reasoning,[16, 17].

Clinical reasoning is a systematic process used by clinicians to diagnose and manage care in practice,[16, 18, 19]. The diagnostic phase involves history taking, physical and mental examination, and investigations. The management phase includes explaining the diagnosis to the patient and providing relevant, prescribing treatment, conducting procedural activities, specialist referral and monitoring progress in the patient's condition. The research team met to discuss the final interpretation of the data.

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RESULTS

Demographics

Altogether, 25 GPs, seven psychiatrists and nine CSWs were interviewed. Participants were between 28 and 69 years old, and were from all states of Australia except the Australian Capital Territory. Interviews lasted 25-55 minutes. GPs, psychiatrists and CSWs identified clinical challenges at all stages of the clinical reasoning pathway for patients with work-related MHCs (Table 1). The three groups identified similar clinical challenges associated with diagnosis and management of work-related MHCs but there was some variation in the identified clinical challenges that were also impacted by systemic influences.

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Table 1. Clinical dilemmas associated with diagnosing and managing work-related mental health conditions in general practice

Stage of Clinical reasoning	**Clinical dilemma**	**Description of dilemma**
Diagnosis Taking the patient's history	History taking for new patients.	GPs described the importance of a good clinical history. For new patients, a related procedural dilemma was that patients rarely requested a long consultation, which is what is necessary to take a good clinical history.
	Early detection of MHC in patients with a musculoskeletal injury.	GPs described the importance of a clinical history in the early detection of MHC in patients with a physical injury.
Undertaking the physical and mental examination	Knowledge of screening tools that are available and appropriate for assisting with making a diagnosis of a work-related MHC.	GPs use a range of tools to assist in making a diagnosis of a MHC, and some do not use any tools.
	GPs over medicalising normal distress or /misdiagnosing a condition.	Compensation scheme workers described concerns about GPs making incorrect diagnoses, without the patient meeting diagnostic criteria, and the impact that such a diagnosis has on the patient. This was supported by GPs' description of factors considered when making diagnoses for some conditions.
Conducting investigations	Determining whether work factors have contributed to a condition.	Understanding drivers and the causations and reasons behind the condition in order to address underlying problems.
		Understanding when to refer to a psychiatrist for diagnosis.
Management Explaining the diagnosis to the patient	Managing patient sensitivities about receiving a diagnosis of a MHC following an initial work-related physical injury.	GPs and psychiatrists described a challenge faced by GPs with discussing the diagnosis of a MHC in patients with a prior work-related physical injury.
Providing education to the patient about the diagnosis	Concern about risk with providing a provisional diagnosis.	GPs described being conscious of language they use in discussion with patients and on certificates. In particular, they considered how a diagnosis may affect the patient – including how a provisional diagnosis or referral to a psychiatrist may effect the patient. Psychiatrists concede this concern but emphasise that GPs are well placed to perform this role.
	Lack of educational materials to share with patients and compensation schemes to describe the diagnosis, treatment and recovery expectations.	However, some GPs described the potential value of a patient information product to use in conversation with the patient.
Prescribing treatment	Managing MHC that has arisen due to work factors, within a compensation system.	GPs noted that managing a MHC within a compensation scheme required a significant time and administrative requirement, which sometimes led to less adherence to best-practice care.

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	Lack of confidence with determining the work options of a patient with MHC, especially if work has been the cause of the MHC.	
	Lack of knowledge about best-practice treatment approaches.	Psychiatrists stated that while GPs have a crucial role in managing patients (not all will attend a psychologist or psychiatrist), they require greater knowledge about the condition and recovery and treatment approaches.
	Managing a MHC concurrently with comorbid conditions such as musculoskeletal injury, pain, opioid addiction, sleep disturbance, social isolation.	Flags that may suggest that a person with a musculoskeletal injury is developing a MHC (e.g. extended time off work, sleep disturbance, repeat opioid scripts). Some GPs said that they would refer the patient, but others were less confident. CSWs stated that GPs were less knowledgeable about what to do.
Conducting procedural activities	Influence of the compensation system on GP care.	GPs and psychiatrists described contradictory views about the value of GPs in the person's claim. Some GPs described concerns about the implications that their actions may have on a person's claim. While psychiatrists emphatically recognised the important role that GPs have in recovery from a work-related condition.
	Lack of education about working with compensation systems.	A number of GPs felt that they don't know enough about the claims process and that this impacted on their certification practices, diagnoses, referrals and treatment approaches. Psychiatrists and CSWs agreed, suggesting that education and training might assist in improving GP engagement with other stakeholders to enhance patient outcomes.
Referring patients to members of the care team	When should a GP refer a patient to a psychologist or psychiatrist?	GPs commonly described uncertainty about when to refer a patient and to whom? In particular, they were concerned about over-medicalising a condition.
	What mode of communication is appropriate between a GP and other members of the patient's care team?	A common issue that most GPs mentioned was lack of communication between b/w GP, employer, insurer and patient (together)
Monitoring progress in a patient's condition	What flags indicate poor recovery? What to do when a patient's mental health does not improve?	GPs and psychiatrists described the value of monitoring. However, GPs requested guidance about what flags indicate protracted recovery from both physical and MHCs, and when these flags should prompt a GP to take further action.

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All three groups acknowledged the complexity of the GP role, the importance of the GP as coordinator of care and challenges with service availability. Key clinical challenges for GPs were (a) Absence of tools to form an accurate diagnosis in relation to work; (b) How to discuss a diagnosis of

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a MHC with a patient; (c) Setting patient expectations for recovery and RTW; (d) Uncertainty about time-frames for referral to other specialists; (e) Determining whether work-participation could be included in the treatment approach; (f) Using pharmacological treatments appropriately; (g) Providing clinical care that is not hindered by the anticipation of procedural impacts on the patient; and (h) monitoring and facilitating recovery. We expand on these challenges below.

(a) Absence of tools to form an accurate diagnosis in relation to work

Some GPs were confident in their choice of a diagnostic tool, with preference given to DSM-5,[20] criteria, and the use of the Kessler 10-item or Depression and Anxiety Stress Scales-21 item questionnaires. Others were less confident and felt guidance in this area would be helpful:

> *"I'd like to know what sort of depression scale would be more useful or what sort of questionnaire score that could guide the GPs as well. Saying look, if they use those scaling scores …it will give you an indication if it's above this, you know…"* GP12.

Psychiatrists and CSWs described concerns about inappropriate diagnostic methods and the impact of an incorrect diagnosis for the patient:

> "*The first diagnosis will stick. And it may be only much later that we revise the diagnosis and that sometimes complicates things*."P3

A consistent challenge, described by the majority of GPs, was difficulty in ascertaining the role of work in contributing to the MHC, particularly in patients where symptoms might be caused or exacerbated by non-work factors:

> *"I think all GPs would have difficulty, if [a patient] was having some other external stressors, actually separating out, is this just work-related, is there something else going on? Has she had depression before and is this an exacerbation triggered by perhaps work?"* GP2.

Several GPs felt that they did not know enough about the claims process, which affected their certification practices, diagnoses, referrals and treatment approaches.

> *"How do I approach employers? Is there a format, a method, a pathway that allows me to contact the employer? Is there any obligation on the employer to discuss issues? I mean, obviously with patient's consent…. But I don't know of any pathway if there is one."* GP11

Some participants noted that, in the absence of sound communication procedures with workplaces and others, GPs relied on patient reports in ascertaining whether work factors had contributed to the condition, however they were cautious about the accuracy of this method:

> *"If the GP uncritically accepts the patient's perspective, that can be very illness-affirming*." P4

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(b) How to discuss a diagnosis of a MHC with a patient

GPs were conscious of their language when discussing MHCs, treatment and recovery expectations with a patient. They were also conscious of the impact of a diagnosis and referral to a psychiatrist, noting a lack of published materials to facilitate discussions with patients. GPs perceived patient information products to use in conversation with the patient as important:

> *"'I think there could be a screening tool to assist with discussing mental health in patients who present with a physical injury… people say 'it wasn't even my fault this happened, and now my life's stuffed, and how am I ever going to have control of my life again?' "* GP21

(c) Setting patient expectations for recovery and RTW

The majority of participants noted that it was important to set positive RTW expectations early with the patient. However, some GPs were concerned that discussing recovery expectations, particularly RTW, could undermine their therapeutic relationship with the patient, as the patient may feel that their MHC is invalidated by their GP. Some GPs suggested that this could result in the patient doctor-shopping, or compliance issues:

> *"Patients don't always at [12 months after a musculoskeletal injury] like that idea [of formulating a RTW plan and gradually going back], I find. I've had one or two [patients] that have actually gone to see another doctor, because I've been pushing the back to work plan too much."* GP1

(d) When to refer the patient to other specialists

The majority of GPs, psychiatrists and CSWs agreed that early referral was key to ensuring a patient with a work-related MHC was appropriately managed:

> *"The biggest thing for me that stands out… is the early treatment, early referral."* CSW9

Where a person with a musculoskeletal injury is developing a MHC, some GPs said that they would refer the patient, but CSW described GPs as being less confident:

> ***"…**the GPs that I deal with and again the registrars are not quite sure what to do when they hear those flags.**"*** CS7

On the other hand, some participants expressed concern over premature referral, noting the possible negative implications for the patient:

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"Your patient then has a label … "It's confirmed, I'm sick… And look, I've been referred to a psychiatrist... The GP wouldn't have done that if he wasn't concerned about my health." CSW1

It was suggested that guidance should be included around appropriate timeframes for GPs to make referrals during diagnosis and management:

"I think it would be helpful for guidelines to state how quickly to involve others in the care… or when that should take place. Because often those sorts of assessments take place a long time after the initial contact with the patient." GP1

Commonly, rural GPs noted limited availability of specialists in their community. As a result, some rural GPs suggested role-splitting with a different practitioner in their town:

"If there are no other services available and you're trying to manage being the therapist as well as being the coordinator that is actually really difficult to do…I would suggest that you as the GP should make yourself the coordinator and the person who coordinates the rehabilitation, treatment and the RTW process, and that you actually get the therapy and the management of the actual problem addressed by a different practitioner" GP6.

GPs, psychiatrists and CSWs described case-conferences and exchanging letters as useful methods of communication with other health professionals. GPs however highlighted problems finding a suitable time for the case-conferences and compensation for the GP's time:

"Well you can hear everybody's point of view... Everybody else can hear everybody else's point of view, and then it gets them all problem solving together…. It's a much more effective way of doing things" GP4

Across the three groups, there was consensus that GPs should continue to coordinate patient care after referral:

"GPs care for people as a whole person… Generally, the role is to be the primary care provider, coordinate care including RTW. That includes diagnosis, assessment and so on…" GP24.

"The GP as the senior medical person, the senior treating person, apart from the specialist, should be guiding things aggressively or assertively from day one. They should be setting the pace and they should have the confidence to do this" P1.

"..the GP should be the coordinator of a care team." CSW1.

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(e) Using pharmacological treatments appropriately

All groups described challenges related to GPs overseeing pharmacological approaches. While all three groups agreed that medication should not be used as a first-line treatment for non-severe MHCs, CSW and psychiatrists remained cautious about GPs over-medicalising MHC and some GPs provided examples of their own non-evidence-based pharmacological use:

> *"I think it's important that the GP doesn't medicalise on the first instance something that might not be medical."* P6

> "I've got a basic rule of thumb that says if you're the depressive sort that is very emotional, in tears and verging on panic attacks I'll use an SSRI. If you're a depressive type that goes and locks themselves in their room or withdraws from company I'll use SNRI. Not very scientific but it seems to work." *GP11*

(f) Determining whether work participation can be included in the treatment approach and facilitating safe RTW

Most GPs recognised the health benefits of safe work and felt comfortable communicating this to their patients. GPs, however, described practical concerns associated with ensuring safe RTW, and that this concern led them to restrict duties:

> *"[We]… get that people need to get back to work, and to be at work, but then I think when it comes to the practicalities of making that happen, sometimes it's easier to just give them some time off."* GP21

A related procedural challenge was GPs perceived limited authority of their role when discussing RTW with other clinicians, employers, insurers and patients:

> "*GPs generally struggle with this tripartite (GP, patient, workplace) relationship, and a lot of them don't like doing workers' comp for this reason because they feel like they're unduly influenced by the insurer or the employer.*" GP24

> *"I have as a medical practitioner, I have limited power to say to someone in a company or organisation, hey you need to get this fixed."* GP14

(g) Monitoring and facilitating recovery

GPs described recovery largely in terms of RTW, either at the original workplace or a different workplace.

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> *"She's not been at work for six months... I'd be really quite worried about - that's treatment failure, to me."* GP5

GPs and psychiatrists also described challenges with monitoring recovery when treatment was provided by a range of health professionals.

> *"It is said to be a major lack of specialities, particularly psychiatry, in that we do not communicate. If a GP is not getting a letter back in a timely fashion from the psychiatrist, he should be ringing that psychiatrist and saying where's my…letter?"* P1

(h) Providing clinical care that does not negatively impact financial, employment and societal prospects for the patient

GPs in rural locations described specific clinical challenges, and some benefits, associated with managing claims where patients and employers live in close proximity.

> *"I've managed [a claim] where the manager is actually a good friend of mine and so all of those things in remote places, it always just complicates things a little bit more, and because usually there isn't anybody else to refer it to".* GP6

> *"I tend to know, you know a lot of these [employers who have had numerous workers with claims] – when someone moves from one organisation to another there tends to be this little trail of fallout often."* GP9

Overall GPs were concerned about the impact of their procedural activities with the compensation system on patient outcomes, which led some GPs to temper their approaches and hesitate with care decisions such as, what to write on certificates, when to refer patients to members of the care team, and how to monitor progress in a patient's condition. Psychiatrists, in contrast, recognised the important role that GPs have in recovery from a work-related condition.

> *"They [GPs] are an integral part of this process. I think sometimes they may feel quite disempowered in their ability to guide and support their patients."* P3

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DISCUSSION

This study identified clinical dilemmas faced by GPs when diagnosing and managing patients with work-related MHCs throughout the clinical reasoning pathway. Dilemmas were found during initial assessment and diagnosis (e.g. determining which diagnostic tools are relevant, determining the severity and work-relatedness of a patient's MHC, and managing the implications of labelling the patient as having a mental health disorder); devising and actioning a management plan (including considering whether a patient can engage in work, appropriate communication with the patient's workplace in order to facilitate recovery to good work, appropriate prescription of medication, and determining when and to whom referrals should be made); and monitoring a patient's recovery. In addition to clinical dilemmas GPs described procedural difficulties that also impeded care (e.g. difficulties navigating conversations with employers, understanding the compensation system, and access to care from other health professionals).

Strengths and weaknesses

Triangulating the views of GPs, psychiatrists, and CSWs strengthened the study as it enabled verification and/or explanation of the GPs clinical dilemmas. They also help to explain some of the tensions regarding the role of the GP: e.g. CSW were concerned about over-diagnosis and over-medication by GPs whereas psychiatrists regarded the GP's role in their patient's care as important. In addition, the views of these other key stakeholders enabled us to identify further dilemmas that GPs themselves did not describe, but were facing in practice. One limitation of the study, however, is that case studies (which we used to stimulate the conversation in interviews) were limited by the number and diversity of stories.

Comparison with existing literature

Results expand on the previously described clinical challenges in general practice. For instance, while the clinical issue of diagnosis has been described previously,[6-8] this study demonstrated that some of these diagnostic challenges might be a result of inconsistent use of appropriate tools to assist in diagnosis and determination of the work-relatedness of a condition. Further, this study highlighted challenges faced by some GPs when conveying a diagnosis of a MHC to patients; including setting appropriate expectations regarding treatment and recovery with the patient. Additionally, whilst issues around care coordination and management are described in the literature,[6] this study highlighted specific challenges associated with coordinating and monitoring treatment strategies, ensuring appropriate use of medications, and influencing work-participation as a treatment option for patients. Finally, this study provided greater insight into the differences in clinical dilemmas faced by rural GPs compared with their metropolitan counterparts. GPs in rural and remote Australia

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described additional complexities relating to managing workers' compensation care in small communities and referral for psychological and workplace rehabilitation services. Furthermore, GPs in rural settings described managing patient concerns about stigma and mis-trust in the community, as well as conflicts of interest where an employer might also be the GP's patient. However, close proximity was also advantageous, with rural GPs describing a good awareness of the community and the workplaces. This close relationship was considered useful for overcoming clinical challenges, and is in line with similar positive experiences from occupational physicians who are engaged closely with workplaces,[21].

One notable inconsistency between this study and previous studies was that the results did not reveal any clinical dilemmas about alcohol or substance misuse, which are highly prevalent comorbidities for patients with MHCs,[22]. This may be due to the content of the two patient case studies used in the interviews, which did not discuss substance misuse in detail.

Implications for research and practice

This study directly informed the development of clinical guidelines for GPs on diagnosing and managing work-related MHCs,[14]. By using clinical reasoning as a thematic framework to categorise these challenges, we were able to arrange these challenges according to the practical stages of a clinical consultation. This layout was applied to the presentation of topics in the guideline to create a guideline that aligns with the progression of clinical dilemmas that GPs are likely to face during consultations with patients. We anticipate that this user-centred approach will enhance guideline implementation, which is important given the frequently low uptake of clinical guidelines especially in general practice,[13].

Whilst this study was undertaken in Australia, delivery of care for people with work-related MHCs remains a challenge internationally,[23-25]. Many systemic changes have been made to improve certification practices including revising sick notes to fit-notes,[12] and providing guidelines to implement use of revised certification,[26], however these have been met with limited effectiveness on patient outcomes. The clinical challenges described in this present study have not, to our knowledge, been investigated internationally, yet they align with the vast and complex determinants of sickness absence that are described in the literature,[27]. Therefore, it is possible that GPs internationally face similar challenges to those described in this study, and could benefit from guidelines that are developed to assist with overcoming these challenges.

Furthermore, by using the clinical reasoning framework we were able to separate clinical issues from systemic ones so that the clinical dilemmas could be addressed in the guideline. For instance, as developers of a guideline, we were cognisant of the policy and geographical context in which GPs

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would be using the guideline (e.g. broader factors in the compensation system such as red-tape, staff turn-over, independent medical examination etc). Similarly, we recommend that clinical guidelines are not the only mechanism to assist GPs in diagnosing and managing work-related MHCs. Further collaboration between researchers, GPs, patients, employers and importantly, compensation systems, should focus on making systemic improvements to assist GP to provide optimal care to these patients.

Conclusion

This study identified clinical dilemmas GPs face when diagnosing and managing patients with work-related MHCs. We found that GPs experienced clinical challenges at all stages of care for people with work-related MHCs. We were also able to identify systemic and procedural issues that influence a GP's ability to provide care for patients with work-related MHCs. The clinical challenges identified in this study directly informed the development of a new clinical guideline for GPs on the diagnosis and management of work-related MHCs.

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Competing Interests

DM, BB and SC currently receive funding from the Australian Government Department of Jobs and Small Business and Comcare, Office of Industrial Relations — Queensland Government, State Insurance Regulatory Authority (NSW), ReturntoWorkSA and WorkCover WA.

Funding

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Ethical Approval

Approval for this study was obtained by the Monash University Human Research Ethics Committee (MUHREC number: CF16/203520162001022).

Author Contributions

SC led the study design, oversaw the acquisition of data, data analysis, interpretation of data, and was involved in drafting the final manuscript. JC led the data collection and was involved in data analysis. EI was involved in data analysis and preparing a draft manuscript. BB and DM were involved in the study design and interpretation of data. All authors read and approved the final manuscript.

Research Team and Reflexivity

The researcher team's credentials, at the time of data collection, are listed below:

SC (PhD) is an implementation scientist and guideline developer. She has substantial experience designing and undertaking qualitative research in general practice.

BB is an associate professor and social anthropologist, with significant experience designing and undertaking qualitative research in primary care. At the time of data collection BB was an Adjunct

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Associate Professor with the Department of General Practice and Director of Social Gerontology at the National Aging Research Institute.

DM is a professor of general practice, Head of Department of General Practice and a practicing GP. She has significant experience designing and undertaking qualitative research in primary care.

JC is a research assistant for the project. JC was mentored by SC, BB and DM. At the time of data collection JC was developing her expertise in conducting and analysing qualitative research.

EI was a medical student at Monash University. EI was mentored by SC, BB and DM. At the time of data analysis EI was developing his expertise in analysing qualitative research.

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Box 1. *Case vignette A* – A female patient who has experienced workplace bullying and has sought help from her GP for a primary work-related MHC.

Name: Sarah (Pseudonym) Gender: Female Age: 48yo

Injury type: Psychological injury (workplace bullying and harassment)

Nature of work: Administrative, computer based

Injury duration: >6 months

Back at work: No

Onset of injury (initial appointment)

Sarah is a 48 year old woman, working in an administration role in a large institution. At her GP appointment Sarah is tearful. She says she feels depressed and cannot sleep. She says that her work is very stressful, that her new boss is making excessive demands on her. She feels he treats her differently from other staff. She feels bullied and says that she cannot cope.

This has been going on for six-months and Sarah says that she cannot see anything changing in the near future. She fears it will only get worse. She feels very anxious at the thought of being in the office and is adamant that she can't RTW.

6 months after injury

It has been six-months since Sarah first talked to her GP about her mental health. After the first consultation the GP did a certificate of capacity stating Sarah was unfit for any duties. The firm she works for did not investigate the claim but instead handed her claim over to the insurer.

Sarah was sent for an independent review by a psychiatrist and the insurer accepted the claim. Her GP referred her to a psychologist for counselling, whom she has been attending as well as attending the GP for her monthly certificate of capacity. She currently does not feel like she has any capacity for work. She was also assigned an occupational rehabilitation provider by the insurer who advised that she should be retrained. Sarah agrees but is informed that she is only eligible for the program if she is unemployed for at least 12 months.

12 months after injury

After nearly 12 months Sarah is contacted by her employer to have a meeting. Sarah is asked at the meeting whether she has any jobs in mind that she thinks she can undertake on her RTW. Sarah is upset that her employer has asked her this later rather than sooner. By this time she has lost trust in her employer and her workplace and she states that she will never be able to RTW with that employer.

Meanwhile the occupational rehabilitation provider she was assigned has left. Sarah is also informed that she is no longer eligible for the retraining program and that she should start looking for work. She is frustrated and feels that her time has been wasted through dealing with the bureaucracy of the system.

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Box 2. *Case vignette B* – A male patient who experienced a physical injury at work and subsequently displayed symptoms of a secondary MHC during his recovery.

Name: Robert (Pseudonym) Gender: Male Age: 54yo
Injury type: Musculoskeletal
Nature of work: Manual
Injury duration: 10 months
Back at work: No

Background

Nearly five months ago Robert (Rob) injured his right shoulder after falling off a large box at work. He was sent to imaging which demonstrated no fracture or dislocation but ultrasound showed a supraspinatus tear. For the injury Rob has been receiving care from his GP and a physiotherapist. Communication between these health providers is good and they often exchange notes about Rob's recovery. The GP has certified Rob's work capacity as 'unfit' and typically writes on his certificate, “patient moving shoulder better but pain and restriction is still present and he still needs physio.” Several work colleagues have phoned and visited Rob so he still feels connected and a part of his workplace.

5 months after injury

Five months after his injury Rob comes in complaining of a flare in his shoulder pain; the nature of his original injuries prevents him from lying flat for long periods of time and so he has taken to sleeping on his couch. This has exacerbated his shoulder pain and adversely affected his sleep. The GP had prescribed a regular dose of Panadol Osteo to help manage the pain but Rob has been using some panadeine forte he had in the cupboard and wants a repeat script. The GP refers Rob to a specialist who recommends that Rob have shoulder surgery.

10 months after injury

Rob had arthroscopic rotator cuff repair surgery 8 weeks ago. The surgery was successful. However Rob’s recovery is slow and he complains of ongoing pain in his shoulder. At his GP appointment Rob asks for a repeat prescription of opioids to help manage the pain. He says that he is feeling down because recovery is taking longer than he expected. He has become lethargic, spending most of his time on the couch at home and is not motivated to do much. He also feels guilty about not being able to contribute at home because of his injury.

Rob wants to RTW only when he is 100% fit because of fear of re-injury.

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Consolidated criteria for reporting qualitative studies (COREQ): 32-item checklist

No	**Item**	**Guide questions/description**	**Location in manuscript**
Domain 1: Research team and reflexivity			
Personal Characteristics			
1.	Interviewer/facilitator	Which author/s conducted the interview or focus group?	P18, Authors contributions
2.	Credentials	What were the researcher's credentials? *E.g. PhD, MD*	P18, Authors contributions
3.	Occupation	What was their occupation at the time of the study?	P18, Authors contributions
4.	Gender	Was the researcher male or female?	P18, Authors contributions
5.	Experience and training	What experience or training did the researcher have?	P18, Authors contributions
Relationship with participants			
6.	Relationship established	Was a relationship established prior to study commencement?	Pg 5, paragraphs 2 & 3 Recruitment of participants
7.	Participant knowledge of the interviewer	What did the participants know about the researcher? e.*g. personal goals, reasons for doing the research*	Pg 5, paragraphs 3 & 4 Recruitment of participants
8.	Interviewer characteristics	What characteristics were reported about the interviewer/facilitator? e.g. *Bias, assumptions, reasons and interests in the research topic*	Pg 4 paragraph 4 Introduction
Domain 2: study design			
Theoretical framework			
9.	Methodological orientation and Theory	What methodological orientation was stated to underpin the study? *e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis*	Pg 6 paragraph 5 & 6
Participant selection			
10.	Sampling	How were participants selected? *e.g. purposive, convenience, consecutive, snowball*	Pg 5, paragraphs 3 & 4 Recruitment of participants

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11.	Method of approach	How were participants approached? e.g. *face-to-face, telephone, mail, email*	Pg 5, paragraphs 3 & 4 Recruitment of participants
12.	Sample size	How many participants were in the study?	Pg 7, paragraph 1
13.	Non-participation	How many people refused to participate or dropped out? Reasons?	Pg 5, paragraph 3
Setting			
14.	Setting of data collection	Where was the data collected? e.g. *home, clinic, workplace*	Pg 5, paragraph 1
15.	Presence of non-participants	Was anyone else present besides the participants and researchers?	Unable to determine.
16.	Description of sample	What are the important characteristics of the sample? *e.g. demographic data, date*	Pg 5-7.
Data collection			
17.	Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested?	Pg 6, paragraph 1-3 and supplementary file
18.	Repeat interviews	Were repeat interviews carried out? If yes, how many?	No.
19.	Audio/visual recording	Did the research use audio or visual recording to collect the data?	Pg 5 paragraph 5
20.	Field notes	Were field notes made during and/or after the interview or focus group?	N/A
21.	Duration	What was the duration of the interviews or focus group?	Pg 7 paragraph 1
22.	Data saturation	Was data saturation discussed?	Pg 5 paragraph 4
23.	Transcripts returned	Were transcripts returned to participants for comment and/or correction?	Pg 6, paragraph 4
Domain 3: analysis and findings			
Data analysis			
24.	Number of data coders	How many data coders coded the data?	Pg 6, paragraph 5
25.	Description of the coding tree	Did authors provide a description of the coding tree?	Pg 6, paragraph 4
26.	Derivation of themes	Were themes identified in advance or derived from the data?	Pg 6, paragraph 5

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27.	Software	What software, if applicable, was used to manage the data?	Pg 6, paragraph 4
28.	Participant checking	Did participants provide feedback on the findings?	Participants were offered the opportunity to comment when a draft of the guideline, incorporating the findings from this study, was circulated nation-wide.
Reporting			
29.	Quotations presented	Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? e.*g. participant number*	Pg 10-14 Results
30.	Data and findings consistent	Was there consistency between the data presented and the findings?	Table 1
31.	Clarity of major themes	Were major themes clearly presented in the findings?	Pg 10-14 Results, and Table 1
32.	Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes?	Pg 10-14 Results, and Table 1

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What clinical challenges are associated with diagnosing and managing work-related mental health conditions? A qualitative study in general practice.

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What clinical challenges are associated with diagnosing and managing work-related mental health conditions? A qualitative study in general practice.

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ABSTRACT

Objective When providing care for patients with work-related mental health conditions (MHCs), the GP's role includes clinical care, patient advocacy and assessment of a patient's ability to work. GPs can experience difficulty representing these competing roles. As clinical guidelines were being developed to assist GPs in providing this care, our aim was to identify the clinical challenges GPs experience when diagnosing and managing patients with work-related MHCs.

Design Qualitative research

Setting This study was conducted in general practice and workers' compensation settings across Australia.

Participants Twenty-five GPs, seven psychiatrists and nine compensation scheme workers. GPs were eligible to participate if they were actively treating (or treated within the previous three years) patient(s) who had submitted a workers' compensation claim for a MHC. Psychiatrists and compensation scheme workers were eligible to participate if they were active in these roles, as they are best placed to identify additional clinical challenges GPs themselves did not raise.

Method Participants were invited by letter to participate in qualitative semi-structured telephone interviews. Prior to each interview, participants were asked to reflect on two case-vignettes, each depicting a patient's illness trajectory over 12 months. Data were thematically analysed using inductive and deductive techniques and then categorised by stages of clinical reasoning.

Results Participants reported clinical challenges across four key areas: 1) Diagnosis (identifying appropriate diagnostic tools, determining the severity and work-relatedness of a MHC, and managing the implications of labelling the patient with MHC). 2) Management (determining optimal treatment, recommending work-participation). 3) Referral (ambiguity of communication pathways within compensation schemes). 4) Procedure (difficulties navigating compensation systems).

Conclusion We found that GPs experienced clinical challenges at all stages of care for people with work-related MHCs. We were also able to identify systemic and procedural issues that influence a GP's ability to provide care for patients with work-related MHCs.

Keywords general practice, compensable injury, mental health, clinical challenge, guideline

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Strengths and limitations of the study

- This study identified the clinical dilemmas faced by GPs when diagnosing and managing mental health conditions that have arisen due to work.
- It illuminates what topics should be included in clinical guidelines that aim to support GPs to diagnose and manage work-related mental health conditions.
- Triangulating the views of GPs, psychiatrists, and CSWs strengthened the study as it enabled verification and/or explanation of the GPs clinical dilemmas.
- A limitation of this study is that the case studies (which we used to stimulate the conversation in interviews) were limited by diversity of patient stories.

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INTRODUCTION

Mental health conditions (MHCs) that have arisen as a result of work, or "work-related MHCs" are increasing(1). These conditions may arise where work factors contribute directly to the development of a MHC or as a comorbid or secondary stressor(2, 3). People who have an accepted claim for a work-related MHC take on average three times longer to return to work (RTW) than the median time for all claims(4). Previous studies in primary care found prevalence estimates of common mental disorders among working age people (18–65 years) ranging from 26% (5) to 50%(6-8).

Australian general practitioners (GPs, also known as family doctors) have a long-established role in work capacity certification(9, 10), and are often conflicted in their dual role as patient advocates and gatekeepers to workers compensation schemes. In Australia, 97% of injured workers seek care from a GP(11) perceiving their GP as clinician, care coordinator, and navigator of the health and compensation systems(12). In their role, GPs often work with compensation schemes and independent medical examiners to help determine if a patient is eligible to receive workers' compensation and when a patient can return to work.

Many GPs describe challenges in enacting these roles. Our previous work revealed wide discrepancies in the amount of time off work GPs certified for work-related MHC as opposed to physical injuries(13); difficulties in assessment and diagnosis because of the invisibility of MHCs; concern that the patient may face stigma at work; and concern that the claims process itself or untimely return to work exacerbated patient's MHC (9, 14, 15). To address these barriers, GPs wanted clarity around certification and guidance on how to diagnose and manage work-related MHCs(9, 12). These findings are echoed internationally(16), emphasising that across primary care settings, the challenges with managing patients with work-related MHC are consistent, and that GPs internationally might benefit from the development of clinical guidelines to assist in the diagnosis and management of work-related MHCs.

Until recently, there were no clinical practice guidelines available to assist GPs in overcoming the clinical challenges with diagnosing and managing patients with work-related MHCs. To be useful in clinical practice, clinical guidance must be relevant to the end users, easy to understand and easy to implement in practice(17). However, the existing body of evidence did not identify the specific aspects of clinical care that are difficult in practice, which a guideline should explicitly address. The present study sought to determine the clinical dilemmas that GPs face when diagnosing and

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managing patients with work-related MHCs to inform the development of a new guideline and ensure the relevance of the guideline to GPs.

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METHODS

Patient and Public Involvement

This research was informed by qualitative research with patients, employers and GPs who described sub-optimal care for work-related MHCs(9, 12). In this present study, we explored care delivery from the perspective of clinicians who provide the care (i.e. GPs) and those who support GPs to provide this care (i.e. independent medical examiners and compensation scheme workers), to better understand clinical challenges that resulted in sub-optimal care for patients. Interviews were based on previously validated case vignettes that described the de-identified patient experiences of two patients with their GP over a period of 12 months(10).

No patients were involved in the conduct of the study. However, a patient member of the project governance team was involved in analysis of the findings. The findings of this study have been disseminated to participants as a summary in the published clinical guideline(18).

Participants and Design

Semi-structured phone interviews were undertaken across Australia with GPs, psychiatrists (who work with compensation schemes to provide independent assessment of patients and advice regarding rehabilitation and work participation), and compensation scheme workers (CSW; who review applications for compensation claims and oversee the case-management for people with accepted claims). Together, these groups are familiar with the clinical challenges experienced by GPs with regards to work-related MHCs. By including psychiatrists and compensation scheme workers in this study we anticipated that these groups might identify additional clinical challenges that GPs themselves did not raise.

Sampling

GPs were purposively sampled by geographical location, rurality and gender and were eligible to participate if they were actively treating or had treated (within the previous three years) patient(s) who had submitted a workers' compensation claim for a work-related MHC. GPs were recruited from the Australasian Medical Publishing Company (AMPCo) database. The AMPCo database contains a list of approximately 29,000 GPs who practice across Australia, and who have consented to receive invitations to participate in research.

Psychiatrists and CSWs were also purposively sampled by geographical location. Psychiatrists were eligible to participate if they were active as independent medical examiners with a compensation

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scheme and CSW were eligible to participate if they were active in the role of managing claims for work-related MHCs. Psychiatrists and CSWs were recruited through the existing networks of the project team and project sponsors, which included compensation agencies in Australia.

Ethical approval for this study was provided by the Monash University Human Research Ethics Committee (MUHREC number: CF16/203520162001022) and participants provided consent in writing prior to the telephone interview.

Procedure

A postal invitation that explained the purpose of the study and intention to utilise study results to inform the development of a guideline, along with an expression of interest to participate and a consent form, were mailed to 242 GPs on the AMPCo database. Follow-up occurred by telephone at two weeks to non-responders. Finally, we used snowballing to enhance recruitment, whereby participating GPs were encouraged to pass the study information onto their eligible colleagues.

To recruit psychiatrists and CSWs, project team members and sponsor representatives distributed an explanatory letter and a consent form agreeing to be contacted by the research staff to psychiatrists and CSWs in their networks that met the eligibility criteria. Interested psychiatrists or CSWs returned the completed form directly to the researchers. A member of the research team then provided the potential participant with a detailed explanation of the study and sought their consent to participate. Recruitment and data analysis were conducted concurrently so that recruitment could stop when data saturation occurred.

In line with clinical consulting rates, participating GPs and psychiatrists were reimbursed for their time with a gift voucher for $150 AUD, while participating CSWs, who were salaried, did not receive reimbursement. Interviews were audio recorded and professionally transcribed.

Interviews were conducted from July-September 2016. Prior to each interview, participants were given two case vignettes [Supplementary File: Boxes 1 and 2]. The vignettes were also made available to participants at the time of the interview.

Participants used these vignettes to reflect on their own experiences of care for patients with work-related MHCs in the general practice setting. This included how GPs determine appropriate diagnostic tools, their management style, their attitude towards certifying patients and recommending RTW, and their perceived challenges and knowledge gaps.

Case vignettes and interview questions were refined following piloting with an advisory panel of GPs, (clinical educators at the Department of General Practice, Monash University) for clinical accuracy

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and also with a recruited GP, psychiatrist and CSW. Minimal revisions were made to the written vignettes. Consequently, pilot interview data was included in the analysis.

Analysis

De-identified interview transcripts were imported into NVivo 11(19) and thematically analysed using inductive and deductive techniques(20, 21). Two researchers conducted three iterative rounds of coding to develop the code list. After finalising the code list, the remaining transcripts were coded by a single researcher with new codes discussed between the researchers and discrepancies resolved by a third. Thereafter codes were categorised according to the process of clinical reasoning(22, 23) and then clustered thematically (see Table 1).

Clinical reasoning is a systematic process used by clinicians to diagnose and manage care in practice(22, 24, 25). The diagnostic phase involves history taking, physical and mental examination, and investigations. The management phase includes explaining the diagnosis to the patient and providing relevant treatment, conducting procedural activities, specialist referral and monitoring progress in the patient's condition. The research team met to discuss the final interpretation of the data.

RESULTS

Demographics

Altogether, 25 GPs, seven psychiatrists and nine CSWs were interviewed. Participants were between 28 and 69 years old, and were from all states of Australia except the Australian Capital Territory. GPs were located across metropolitan and rural regions in Australia, with 16 GPs based in metropolitan Australia (e.g. major capital city or other region with a population of 100,000 or more), and 9 GPs based in rural Australia (in region with a population of 10,000 to 100,000), but no GPs were located in remote Australia. GPs had a median of 14 years of experience working with patients who have work-related injuries, while psychiatrists and CSWs had a median of 17 years of experience working in compensable injury.

Main findings

Interviews lasted 25-55 minutes. GPs, psychiatrists and CSWs acknowledged the complexity of the GP role, the importance of the GP as coordinator of care and challenges with service availability. Yet all three groups identified challenges throughout the clinical reasoning pathway for patients with

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work-related MHCs (Table 1). The three groups largely identified similar themes associated with diagnosis and management of work-related MHCs in general practice but there was some variation in the identified challenges that were also impacted by systemic influences.

The key themes that influenced GPs' practice in relation to work-related MHCs were (a) Forming an accurate diagnosis of a MHC in relation to work; (b) How to discuss a diagnosis of a MHC with a patient; (c) Setting patient expectations for recovery and RTW; (d) Knowing when to refer the patient to other specialists; (e) Determining whether work-participation could be included in the treatment approach and facilitating safe RTW; (f) Using pharmacological treatments appropriately; (g) Providing clinical care that is not hindered by the anticipation of procedural impacts on the patient; and (h) monitoring and facilitating recovery. We expand on these challenges below.

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Table 1. Clinical dilemmas associated with diagnosing and managing work-related mental health conditions in general practice as described according to the stages of clinical reasoning

Stage of Clinical reasoning	Clinical dilemma	Description of dilemma	Relevant theme(s)
Diagnosis Taking the patient's history	History taking for new patients.	GPs described the importance of a good clinical history. For new patients, a related procedural dilemma was that patients rarely requested a long consultation, which is what is necessary to take a good clinical history.	(a) Forming an accurate diagnosis of a mental health condition in relation to work
	Early detection of MHC in patients with a musculoskeletal injury.	GPs described the importance of a clinical history in the early detection of MHC in patients with a physical injury.	(a) Forming an accurate diagnosis of a mental health condition in relation to work
Undertaking the physical and mental examination	Knowledge of screening tools that are available and appropriate for assisting with making a diagnosis of a work-related MHC.	GPs use a range of tools to assist in making a diagnosis of a MHC, and some do not use any tools.	(a) Forming an accurate diagnosis of a mental health condition in relation to work
	GPs over medicalising normal distress or /misdiagnosing a condition.	Compensation scheme workers described concerns about GPs making incorrect diagnoses, without the patient meeting diagnostic criteria, and the impact that such a diagnosis has on the patient. This was supported by GPs' description of factors considered when making diagnoses for some conditions.	(a) Forming an accurate diagnosis of a mental health condition in relation to work (d) When to refer the patient to other specialists
Conducting investigations	Determining whether work factors have contributed to a condition.	Understanding drivers and the causations and reasons behind the condition in order to address underlying problems.	(a) Forming an accurate diagnosis of a mental health condition in relation to work
		Understanding when to refer to a psychiatrist for diagnosis.	(a) Forming an accurate diagnosis of a mental health condition in relation to work
Management Explaining the diagnosis to the patient	Managing patient sensitivities about receiving a diagnosis of a MHC following an initial work-related physical injury.	GPs and psychiatrists described a challenge faced by GPs with discussing the diagnosis of a MHC in patients with a prior work-related physical injury.	(b) How to discuss a diagnosis of a work-related MHC with a patient

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Providing education to the patient about the diagnosis	Concern about risk with providing a provisional diagnosis.	GPs described being conscious of language they use in discussion with patients and on certificates. In particular, they considered how a diagnosis may affect the patient – including how a provisional diagnosis or referral to a psychiatrist may effect the patient. Psychiatrists concede this concern but emphasise that GPs are well placed to perform this role.	(b) How to discuss a diagnosis of a work-related MHC with a patient (c) Setting patient expectations for recovery and RTW
	Lack of educational materials to share with patients and compensation schemes to describe the diagnosis, treatment and recovery expectations.	However, some GPs described the potential value of a patient information product to use in conversation with the patient.	(b) How to discuss a diagnosis of a work-related MHC with a patient (c) Setting patient expectations for recovery and RTW
Prescribing treatment	Managing MHCs that have arisen due to work factors, within a compensation system.	GPs noted that managing a MHC within a compensation scheme required a significant time and administrative requirement, which sometimes led to less adherence to best-practice care.	(d) When to refer the patient to other specialists
	Lack of confidence with determining the work options of a patient with MHC, especially if work has been the cause of the MHC.		(d) When to refer the patient to other specialists (f) Determining whether work participation can be included in the treatment approach and facilitating safe RTW
	Lack of knowledge about best-practice treatment approaches.	Psychiatrists stated that while GPs have a crucial role in managing patients (not all will attend a psychologist or psychiatrist), they require greater knowledge about the condition and recovery and treatment approaches.	(d) When to refer the patient to other specialists (e) Using pharmacological treatments appropriately (f) Determining whether work participation can be included in the

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			treatment approach and facilitating safe RTW
	Managing a MHC concurrently with comorbid conditions such as musculoskeletal injury, pain, opioid addiction, sleep disturbance, social isolation.	Flags that may suggest that a person with a musculoskeletal injury is developing a MHC (e.g. extended time off work, sleep disturbance, repeat opioid scripts). Some GPs said that they would refer the patient, but others were less confident. CSWs stated that GPs were less knowledgeable about what to do.	(d) When to refer the patient to other specialists
Conducting procedural activities	Influence of the compensation system on GP care.	GPs and psychiatrists described contradictory views about the value of GPs in the person's claim. Some GPs described concerns about the implications that their actions may have on a person's claim. While psychiatrists emphatically recognised the important role that GPs have in recovery from a work-related condition.	(h) Providing clinical care that does not negatively impact financial, employment and societal prospects for the patient
	Lack of education about working with compensation systems.	A number of GPs felt that they don't know enough about the claims process and that this impacted on their certification practices, diagnoses, referrals and treatment approaches. Psychiatrists and CSWs agreed, suggesting that education and training might assist in improving GP engagement with other stakeholders to enhance patient outcomes.	(f) Determining whether work participation can be included in the treatment approach and facilitating safe RTW (d) When to refer the patient to other specialists
Referring patients to members of the care team	When should a GP refer a patient to a psychologist or psychiatrist?	GPs commonly described uncertainty about when to refer a patient and to whom? In particular, they were concerned about over-medicalising a condition.	(d) When to refer the patient to other specialists
	What mode of communication is appropriate between a GP and other members of the patient's care team?	A common issue that most GPs mentioned was lack of communication between b/w GP, employer, insurer and patient (together)	(f) Determining whether work participation can be included in the treatment approach and facilitating safe RTW

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Monitoring progress in a patient's condition	What flags indicate poor recovery? What to do when a patient's mental health does not improve?	GPs and psychiatrists described the value of monitoring. However, GPs requested guidance about what flags indicate protracted recovery from both physical and MHCs, and when these flags should prompt a GP to take further action.	(g) Monitoring and facilitating recovery

(a) Forming an accurate diagnosis of a MHC in relation to work

Some GPs were confident in their choice of a diagnostic tool, with preference given to DSM-5 criteria (26), and the use of the Kessler 10-item or Depression and Anxiety Stress Scales-21 item questionnaires. Others were less confident and felt guidance would be helpful:

"I'd like to know what sort of depression scale would be more useful or what sort of questionnaire score that could guide the GPs as well. Saying look, if they use those scaling scores …it will give you an indication if it's above this, you know…" GP12.

Psychiatrists and CSWs described concerns about inappropriate diagnostic methods and the impact of an incorrect diagnosis for the patient:

*"The first diagnosis will stick. And it may be only much later that we revise the diagnosis and that sometimes complicates things."*P3

A consistent challenge, described by the majority of GPs, was difficulty in ascertaining the role of work in contributing to the MHC, particularly in patients where symptoms might be caused or exacerbated by non-work factors:

"I think all GPs would have difficulty, if [a patient] was having some other external stressors, actually separating out, is this just work-related, is there something else going on? Has she had depression before and is this an exacerbation triggered by perhaps work?" GP2.

Several GPs felt that they did not know enough about the claims process, which affected their certification practices, diagnoses, referrals and treatment approaches.

"How do I approach employers? Is there a format, a method, a pathway that allows me to contact the employer? Is there any obligation on the employer to discuss issues? I mean, obviously with patient's consent…. But I don't know of any pathway if there is one." GP11

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Some participants noted that, in the absence of sound communication procedures with workplaces and others, GPs relied on patient reports in ascertaining whether work factors had contributed to the condition, however they were cautious about the accuracy of this method:

"If the GP uncritically accepts the patient's perspective, that can be very illness-affirming." P4

(b) How to discuss a diagnosis of a MHC with a patient

GPs were conscious of their language when discussing MHCs, treatment and recovery expectations with a patient. They were also conscious of the impact of a diagnosis and referral to a psychiatrist, noting a lack of published materials to facilitate discussions with patients. GPs perceived patient information products to use in conversation with the patient as important:

"'I think there could be a screening tool to assist with discussing mental health in patients who present with a physical injury… people say 'it wasn't even my fault this happened, and now my life's stuffed, and how am I ever going to have control of my life again?' " GP21

(c) Setting patient expectations for recovery and RTW

The majority of participants noted that it was important to set positive RTW expectations early with the patient. However, some GPs were concerned that discussing recovery expectations, particularly RTW, could undermine their therapeutic relationship with the patient, as the patient may feel that their MHC is invalidated by their GP. Some GPs suggested that this could result in the patient doctor-shopping, or compliance issues:

"Patients don't always at [12 months after a musculoskeletal injury] like that idea [of formulating a RTW plan and gradually going back], I find. I've had one or two [patients] that have actually gone to see another doctor, because I've been pushing the back to work plan too much." GP1

(d) Knowing when to refer the patient to other specialists

The majority of GPs, psychiatrists and CSWs agreed that early referral was key to ensuring a patient with a work-related MHC was appropriately managed:

"The biggest thing for me that stands out… is the early treatment, early referral." CSW9

Where a person with a musculoskeletal injury is developing a MHC, some GPs said that they would refer the patient, but CSW described GPs as being less confident:

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> ***"…****the GPs that I deal with and again the registrars are not quite sure what to do when they hear those flags.****"*** CS7

On the other hand, some participants expressed concern over premature referral, noting the possible negative implications for the patient:

> *"Your patient then has a label … "It's confirmed, I'm sick… And look, I've been referred to a psychiatrist... The GP wouldn't have done that if he wasn't concerned about my health."* CSW1

It was suggested that guidance should be included around appropriate timeframes for GPs to make referrals during diagnosis and management:

> *"I think it would be helpful for guidelines to state how quickly to involve others in the care… or when that should take place. Because often those sorts of assessments take place a long time after the initial contact with the patient."* GP1

Commonly, rural GPs noted limited availability of specialists in their community. As a result, some rural GPs suggested role-splitting with a different practitioner in their town:

> *"If there are no other services available and you're trying to manage being the therapist as well as being the coordinator that is actually really difficult to do…I would suggest that you as the GP should make yourself the coordinator and the person who coordinates the rehabilitation, treatment and the RTW process, and that you actually get the therapy and the management of the actual problem addressed by a different practitioner."* GP6

GPs, psychiatrists and CSWs described case-conferences and exchanging letters as useful methods of communication with other health professionals. GPs however highlighted problems finding a suitable time for the case-conferences and compensation for the GP's time:

> *"Well you can hear everybody's point of view... Everybody else can hear everybody else's point of view, and then it gets them all problem solving together…. It's a much more effective way of doing things." GP4*

Across the three groups, there was consensus that GPs should continue to coordinate patient care after referral:

> *"GPs care for people as a whole person… Generally, the role is to be the primary care provider, coordinate care including RTW. That includes diagnosis, assessment and so on…"* GP24

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"The GP as the senior medical person, the senior treating person, apart from the specialist, should be guiding things aggressively or assertively from day one. They should be setting the pace and they should have the confidence to do this." P1

"..the GP should be the coordinator of a care team." CSW1

(e) Using pharmacological treatments appropriately

All groups described challenges related to GPs overseeing pharmacological approaches. While all three groups agreed that medication should not be used as a first-line treatment for non-severe MHCs, CSW and psychiatrists remained cautious about GPs over-medicalising MHC and some GPs provided examples of their own non-evidence-based pharmacological use:

"I think it's important that the GP doesn't medicalise on the first instance something that might not be medical." P6

"I've got a basic rule of thumb that says if you're the depressive sort that is very emotional, in tears and verging on panic attacks I'll use an SSRI. If you're a depressive type that goes and locks themselves in their room or withdraws from company I'll use SNRI. Not very scientific but it seems to work." GP11

(f) Determining whether work participation can be included in the treatment approach and facilitating safe RTW

Most GPs recognised the health benefits of safe work and felt comfortable communicating this to their patients. GPs, however, described practical concerns associated with ensuring safe RTW, and that this concern led them to restrict duties:

"[We]… get that people need to get back to work, and to be at work, but then I think when it comes to the practicalities of making that happen, sometimes it's easier to just give them some time off." GP21

A related procedural challenge was GPs perceived limited authority of their role when discussing RTW with other clinicians, employers, insurers and patients:

"I have as a medical practitioner, I have limited power to say to someone in a company or organisation, hey you need to get this fixed." GP14

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(g) Monitoring and facilitating recovery

GPs described recovery largely in terms of RTW, either at the original workplace or a different workplace.

> *"She's not been at work for six months... I'd be really quite worried about - that's treatment failure, to me."* GP5

GPs and psychiatrists also described challenges with monitoring recovery when treatment was provided by a range of health professionals.

> *"It is said to be a major lack of specialities, particularly psychiatry, in that we do not communicate. If a GP is not getting a letter back in a timely fashion from the psychiatrist, he should be ringing that psychiatrist and saying where's my…letter?"* P1

(h) Providing clinical care that does not negatively impact financial, employment and societal prospects for the patient

GPs in rural locations described specific clinical challenges, and some benefits, associated with managing claims where patients and employers live in close proximity.

> *"I've managed [a claim] where the manager is actually a good friend of mine and so all of those things in remote places, it always just complicates things a little bit more, and because usually there isn't anybody else to refer it to".* GP6

Overall GPs were concerned about the impact of their procedural activities with the compensation system on patient outcomes, which led some GPs to temper their approaches and hesitate with care decisions such as, what to write on certificates, when to refer patients to members of the care team, and how to monitor progress in a patient's condition. Psychiatrists, in contrast, recognised the important role that GPs have in recovery from a work-related condition.

> *"They [GPs] are an integral part of this process. I think sometimes they may feel quite disempowered in their ability to guide and support their patients."* P3

DISCUSSION

This study identified clinical dilemmas faced by GPs when diagnosing and managing patients with work-related MHCs throughout the clinical reasoning pathway. Dilemmas were found during initial assessment and diagnosis (e.g. determining which diagnostic tools are relevant, determining the

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severity and work-relatedness of a patient's MHC, and managing the implications of labelling the patient as having a mental health disorder); devising and actioning a management plan (including considering whether a patient can engage in work, appropriate communication with the patient's workplace, appropriate prescription of medication, and determining when and to whom referrals should be made); and monitoring a patient's recovery. In addition to clinical dilemmas GPs described procedural difficulties that also impeded care (e.g. difficulties navigating conversations with employers, understanding the compensation system, and access to care from other health professionals).

Comparison with existing literature

Results expand on the previously described clinical challenges in general practice. For instance, while the clinical issue of diagnosis has been described previously(9, 10, 12) this study demonstrated that some of these diagnostic challenges might be a result of inconsistent use of appropriate tools to assist in diagnosis and determination of the work-relatedness of a condition. Further, this study highlighted challenges faced by some GPs when conveying a diagnosis of a MHC to patients; including setting appropriate expectations regarding treatment and recovery with the patient. Additionally, whilst issues around care coordination and management are described in the literature(12) this study highlighted specific challenges associated with coordinating and monitoring treatment strategies, ensuring appropriate use of medications, and influencing work-participation as a treatment option for patients. Finally, this study provided greater insight into the differences in clinical dilemmas faced by rural GPs compared with their metropolitan counterparts. GPs in rural and remote Australia described additional complexities relating to managing workers' compensation care in small communities and referral for psychological and workplace rehabilitation services. Furthermore, GPs in rural settings described managing patient concerns about stigma and mis-trust in the community, as well as conflicts of interest where an employer might also be the GP's patient. However, close proximity was also advantageous, with rural GPs describing a good awareness of the community and the workplaces. This close relationship was considered useful for overcoming clinical challenges, and is in line with similar positive experiences from occupational physicians who are engaged closely with workplaces(27).

One notable inconsistency between this study and previous studies was that the results did not reveal any clinical dilemmas about alcohol or substance misuse, which are highly prevalent comorbidities for patients with MHCs(28). This may be due to the content of the two patient case studies used in the interviews, which did not discuss substance misuse in detail.

Strengths and weaknesses

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Triangulating the views of GPs, psychiatrists, and CSWs strengthened the study as it enabled verification and/or explanation of the GPs clinical dilemmas. They also help to explain some of the tensions regarding the role of the GP: e.g. CSW were concerned about over-diagnosis and over-medication by GPs whereas psychiatrists regarded the GP's role in their patient's care as important. In addition, the views of these other key stakeholders enabled us to identify further dilemmas that GPs themselves did not describe, but were facing in practice. However, there was a limited range of case studies (which we used to stimulate the conversation in interviews) in both number and diversity of stories. A second limitation was that only GPs who had treated patients who submitted a claim were eligible to participate in the study (rather than GPs who had treated someone with a work related MHC). This sampling characteristic may influence the findings of the study, as the experience of supporting a patient through a workers' compensation claim could affect the experience of these GPs(29). Finally, we should note issue of reflexivity. As this is a qualitative paper, there is a possibility that the researchers themselves may have influenced the data collection and analysis with their own previous experience of qualitative data on this topic (or personally managing work-related mental health conditions(9) in general practice).

Implications for research and practice

This study directly informed the development of clinical guidelines for GPs on diagnosing and managing work-related MHCs(18). By using clinical reasoning as a thematic framework to categorise these challenges, we were able to arrange these challenges according to the practical stages of a clinical consultation. This layout was applied to the presentation of topics in the guideline to create a document that aligns with the progression of clinical dilemmas that GPs are likely to face during consultations with patients. We anticipate that this user-centred approach will enhance guideline implementation, which is important given the frequently low uptake of clinical guidelines especially in general practice(17).

Whilst this study was undertaken in Australia, delivery of care for people with work-related MHCs remains a challenge internationally(30-32). Many systemic changes have been made to improve certification practices including revising sick notes to fit-notes(16) and providing guidelines to implement use of revised certification(33). However, these changes have had limited effect on patient outcomes. The clinical challenges described in the present study have not, to our knowledge, been investigated internationally, yet they align with the vast and complex determinants of sickness absence that are described in the literature(34). Therefore, it is possible that GPs internationally face

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similar challenges to those described in this study, and could benefit from guidelines developed to assist with overcoming these challenges.

Furthermore, by using the clinical reasoning framework we were able to separate clinical issues from systemic ones so that the clinical dilemmas could be addressed in the guideline. For instance, as developers of a guideline, we were cognisant of the policy and geographical context in which GPs would be using the guideline (e.g. broader factors in the compensation system such as red-tape, staff turn-over, independent medical examination etc). Similarly, we recommend that clinical guidelines are not the only mechanism to assist GPs in diagnosing and managing work-related MHCs. Further collaboration between researchers, GPs, patients, employers and importantly, compensation systems, should focus on making systemic improvements to assist GP to provide optimal care to these patients.

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Conclusion

This study identified clinical dilemmas GPs face when diagnosing and managing patients with work-related MHCs. We found that GPs experienced clinical challenges at all stages of care for people with work-related MHCs. We were also able to identify systemic and procedural issues that influence a GP's ability to provide care for patients with work-related MHCs. This study directly informed the development of a new clinical guideline for GPs on the diagnosis and management of work-related MHCs(18), where evidence-based care recommendations were made in relation to each identified clinical challenge.

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Competing Interests

DM, BB and SC currently receive funding from the Australian Government Department of Jobs and Small Business and Comcare, Office of Industrial Relations — Queensland Government, State Insurance Regulatory Authority (NSW), ReturntoWorkSA and WorkCover WA.

Funding

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Ethical Approval

Low-risk approval for this study was obtained by the Monash University Human Research Ethics Committee (MUHREC number: CF16/203520162001022).

Author Contributions

SC led the study design, oversaw the acquisition of data, data analysis, interpretation of data, and was involved in drafting the final manuscript. JD led the data collection and was involved in data analysis. EI was involved in data analysis and preparing a draft manuscript. BB and DM were involved in the study design and interpretation of data. All authors read and approved the final manuscript.

Data Availability Statement

De-identified participant data are available upon reasonable request from the corresponding author.

Research Team and Reflexivity

The researcher team's credentials, at the time of data collection, are listed below:

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SC (PhD) is an implementation scientist and guideline developer. She has substantial experience designing and undertaking qualitative research in general practice.

BB is an associate professor and medical anthropologist, with significant experience designing and undertaking qualitative research in primary care. At the time of data collection BB was an Adjunct Associate Professor with the Department of General Practice and Director of Social Gerontology at the National Aging Research Institute.

DM is a professor of general practice, Head of Department of General Practice and a practicing GP. She has significant experience designing and undertaking qualitative research in primary care.

JD is a research assistant for the project. JD was mentored by SC and DM. At the time of data collection JD was developing her expertise in conducting and analysing qualitative research.

EI was a medical student at Monash University. EI was mentored by SC and DM. At the time of data analysis EI was developing his expertise in analysing qualitative research.

Disclaimer

The details of the two cases described in Supplementary Boxes 1 and 2 are only fictional and not pertaining in the real life situations.

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Box 1. *Case vignette A* – A female patient who has experienced workplace bullying and has sought help from her GP for a primary work-related MHC.

Name: Sarah (Pseudonym)   Gender: Female   Age: 48yo

Injury type: Psychological injury (workplace bullying and harassment)

Nature of work: Administrative, computer based

Injury duration: >6 months

Back at work: No

Onset of injury (initial appointment)

Sarah (pseudonym) is a woman in her late 40's, working in an administration role in a large institution. At her GP appointment Sarah (pseudonym) is tearful. She says she feels depressed and cannot sleep. She says that her work is very stressful, that her new boss is making excessive demands on her. She feels he treats her differently from other staff. She feels bullied and says that she cannot cope.

This has been going on for six-months and Sarah (pseudonym) says that she cannot see anything changing in the near future. She fears it will only get worse. She feels very anxious at the thought of being in the office and is adamant that she can't RTW.

6 months after injury

It has been six-months since Sarah (pseudonym) first talked to her GP about her mental health. After the first consultation the GP did a certificate of capacity stating Sarah (pseudonym) was unfit for any duties. The firm she works for did not investigate the claim but instead handed her claim over to the insurer.

Sarah (pseudonym) was sent for an independent review by a psychiatrist and the insurer accepted the claim. Her GP referred her to a psychologist for counselling, whom she has been attending as well as attending the GP for her monthly certificate of capacity. She currently does not feel like she has any capacity for work. She was also assigned an occupational rehabilitation provider by the insurer who advised that she should be retrained. Sarah (pseudonym) agrees but is informed that she is only eligible for the program if she is unemployed for at least 12 months.

12 months after injury

After nearly 12 months Sarah (pseudonym) is contacted by her employer to have a meeting. Sarah (pseudonym) is asked at the meeting whether she has any jobs in mind that she thinks she can undertake on her RTW. Sarah (pseudonym) is upset that her employer has asked her this later rather than sooner. By this time she has lost trust in her employer and her workplace and she states that she will never be able to RTW with that employer.

Meanwhile the occupational rehabilitation provider she was assigned has left. Sarah (pseudonym) is also informed that she is no longer eligible for the retraining program and that she should start looking for work. She is frustrated and feels that her time has been wasted through dealing with the bureaucracy of the system.

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Box 2. *Case vignette B* – A male patient who experienced a physical injury at work and subsequently displayed symptoms of a secondary MHC during his recovery.

Name: Robert (Pseudonym) Gender: Male Age: early 50's
Injury type: Musculoskeletal
Nature of work: Manual
Injury duration: 10 months
Back at work: No

Background

Nearly five months ago Robert (pseudonym) injured his right shoulder after falling off a large box at work. He was sent to imaging which demonstrated no fracture or dislocation but ultrasound showed a supraspinatus tear. For the injury Rob (pseudonym) has been receiving care from his GP and a physiotherapist. Communication between these health providers is good and they often exchange notes about Rob's (pseudonym) recovery. The GP has certified Rob's (pseudonym) work capacity as 'unfit' and typically writes on his certificate, "patient moving shoulder better but pain and restriction is still present and he still needs physio." Several work colleagues have phoned and visited Rob (pseudonym) so he still feels connected and a part of his workplace.

5 months after injury

Five months after his injury Rob (pseudonym) comes in complaining of a flare in his shoulder pain; the nature of his original injuries prevents him from lying flat for long periods of time and so he has taken to sleeping on his couch. This has exacerbated his shoulder pain and adversely affected his sleep. The GP had prescribed a regular dose of Panadol Osteo to help manage the pain but Rob (pseudonym) has been using some panadeine forte he had in the cupboard and wants a repeat script. The GP refers Rob (pseudonym) to a specialist who recommends that Rob (pseudonym) have shoulder surgery.

10 months after injury

Rob (pseudonym) had arthroscopic rotator cuff repair surgery 8 weeks ago. The surgery was successful. However Rob's (pseudonym) recovery is slow and he complains of ongoing pain in his shoulder. At his GP appointment Rob (pseudonym) asks for a repeat prescription of opioids to help manage the pain. He says that he is feeling down because recovery is taking longer than he expected. He has become lethargic, spending most of his time on the couch at home and is not motivated to do much. He also feels guilty about not being able to contribute at home because of his injury.

Rob (pseudonym) wants to RTW only when he is 100% fit because of fear of re-injury.

Disclaimer – The two cases described above are only fictional and not pertaining in the real life situations.

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Consolidated criteria for reporting qualitative studies (COREQ): 32-item checklist

No	**Item**	**Guide questions/description**	**Location in manuscript**
Domain 1: Research team and reflexivity			
Personal Characteristics			
1.	Interviewer/facilitator	Which author/s conducted the interview or focus group?	P22, Authors contributions
2.	Credentials	What were the researcher's credentials? *E.g. PhD, MD*	P122, Authors contributions
3.	Occupation	What was their occupation at the time of the study?	P22, Authors contributions
4.	Gender	Was the researcher male or female?	P22, Authors contributions
5.	Experience and training	What experience or training did the researcher have?	P22, Authors contributions
Relationship with participants			
6.	Relationship established	Was a relationship established prior to study commencement?	Pg 7, paragraphs 1 & 2 under 'Procedure'
7.	Participant knowledge of the interviewer	What did the participants know about the researcher? e.*g. personal goals, reasons for doing the research*	Pg 7, paragraphs 1 & 2 under 'Procedure'
8.	Interviewer characteristics	What characteristics were reported about the interviewer/facilitator? e.g. *Bias, assumptions, reasons and interests in the research topic*	Pg 4 paragraph 4 Introduction
Domain 2: study design			
Theoretical framework			
9.	Methodological orientation and Theory	What methodological orientation was stated to underpin the study? *e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis*	Pg 8 paragraph 1 & 2 under 'Analysis'
Participant selection			
10.	Sampling	How were participants selected? *e.g. purposive, convenience, consecutive, snowball*	Pg 6, paragraphs 1 & 2 under 'Sampling'
11.	Method of approach	How were participants approached? e.*g. face-to-face, telephone, mail, email*	Pg 7, paragraphs 1 & 2 under 'Procedure'

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12.	Sample size	How many participants were in the study?	Pg 8, paragraph 1 under 'Results'
13.	Non-participation	How many people refused to participate or dropped out? Reasons?	Pg 8 paragraph 1 & 2 under 'Analysis'
Setting			
14.	Setting of data collection	Where was the data collected? e.*g. home, clinic, workplace*	Pg 7, paragraph 1 under 'Procedure'
15.	Presence of non-participants	Was anyone else present besides the participants and researchers?	Unable to determine.
16.	Description of sample	What are the important characteristics of the sample? *e.g. demographic data, date*	Pg 8, paragraph 1 under 'Results'
Data collection			
17.	Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested?	Pg 7, paragraph 5-6 under 'Procedure' and supplementary file
18.	Repeat interviews	Were repeat interviews carried out? If yes, how many?	No.
19.	Audio/visual recording	Did the research use audio or visual recording to collect the data?	Pg 7 paragraph 3 under 'Procedure'
20.	Field notes	Were field notes made during and/or after the interview or focus group?	N/A
21.	Duration	What was the duration of the interviews or focus group?	Pg 8 paragraph 1 under 'Main findings'
22.	Data saturation	Was data saturation discussed?	Pg 7 paragraph 2 under 'Procedure'
23.	Transcripts returned	Were transcripts returned to participants for comment and/or correction?	Pg 7 paragraph 3 under 'Procedure'
Domain 3: analysis and findings			
Data analysis			
24.	Number of data coders	How many data coders coded the data?	Pg 8, paragraph 1 under 'Analysis'
25.	Description of the coding tree	Did authors provide a description of the coding tree?	Pg 8, paragraph 2 under 'Analysis' and Table 1

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26.	Derivation of themes	Were themes identified in advance or derived from the data?	Pg 8, paragraph 1 under 'Analysis'
27.	Software	What software, if applicable, was used to manage the data?	Pg 8, paragraph 1 under 'Analysis'
28.	Participant checking	Did participants provide feedback on the findings?	Participants were offered the opportunity to comment when a draft of the guideline, incorporating the findings from this study, was circulated nation-wide.
Reporting			
29.	Quotations presented	Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? e.g. *participant number*	Pg 13-18 Results
30.	Data and findings consistent	Was there consistency between the data presented and the findings?	Table 1
31.	Clarity of major themes	Were major themes clearly presented in the findings?	Pg 13-18 Results, and Table 1
32.	Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes?	Pg 13-18 Results, and Table 1

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