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ORIGINAL ARTICLE

Emergency department staff views and experiences on diagnostic overshadowing related to people with mental illness

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Aims. To investigate recognition of diagnostic overshadowing, i.e., misattribution of physical symptoms to mental illness, among emergency medicine professionals; further, to identify contributory and mitigating factors to diagnostic overshadowing.

Methods. In-depth individual interviews of 25 emergency department clinicians and qualitative analysis using thematic analysis.

Results. Diagnostic overshadowing was described as a significant issue. Contributing factors included: (1) problems of knowledge and information gathering; (2) clinicians' attitudes toward people with mental illness, substance misuse and frequent attenders; and (3) difficulties in working with mental health services in the context of a 4-h target for discharge from the emergency department. Avoidance of patients with a psychiatric diagnosis was also described, due to fear of violence.

Conclusion. The physical health care of people with mental illness in emergency departments may be adversely affected by diagnostic overshadowing and avoidance by clinical staff, along with difficulties created by the illness, medication and the emergency department environment. Greater joint working between psychiatric and emergency department staff is suggested as one way to reduce diagnostic overshadowing.

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Key words: Diagnostic overshadowing, emergency department, mental illness stigma, medical clearance.

Introduction

People with mental illness die prematurely and have significantly higher rates of medical co-morbidity compared with the general population (Harris & Barraclough, 1998; Wahlbeck *et al.* 2011). One reason is that their physical health care is on average worse than that provided to people without (Disability Rights Commission, 2006), for example lower rates of coronary re-vascularization (Druss *et al.* 2000; Lawrence *et al.* 2003), guideline-consistent treatment for ischaemic heart disease (Kisely *et al.* 2009), hospitalization for diabetes (Sullivan *et al.* 2006) and basic assessments such as blood pressure measurement (Roberts *et al.* 2007). There is a pressing need to better understand the factors contributing to these inequalities.

One factor suggested is discrimination against people with mental illness by health professionals (Jones *et al.* 2008) who share the general public's stigmatizing views towards people with mental illness (Lauber *et al.* 2004; Patel, 2004). One form of such discrimination is 'diagnostic overshadowing', or the misattribution of physical symptoms to pre-existing mental illness (Jones *et al.* 2008). The concept of diagnostic overshadowing as it affects people with learning disabilities has been investigated but has only recently received attention as it pertains to mental illness (Disability Rights Commission, 2006). In a number of cases of maternal deaths, both non-specific physical symptoms and acute confusional states have been misinterpreted as psychiatric illness, prompting the authors of the most recent report on confidential enquiries into maternal deaths to remind clinicians that psychiatric and physical illness can coexist (Wilkinson, 2011). People with a mental illness may feel unwelcome due to staff attitudes or the physical layout of healthcare settings, and may lack sufficient organization or communication skills to keep regular appointments or to follow prescribed treatment plans

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(Felker *et al.* 1996). Participants in a focus group study (Clarke *et al.* 2007) reported feeling 'labelled and triaged as 'psychiatric' regardless of their presenting complaint'.

While understanding patient perspectives of treatment obstacles is important, it is also necessary to explore clinicians' perspectives before intervening. We found no previous studies of clinicians' views of diagnostic overshadowing. The aim of this study was therefore to conduct a preliminary exploration of the views and experiences of clinicians regarding their recognition of diagnostic overshadowing as a problem, what factors make diagnostic overshadowing more or less likely to occur, and what can be done to reduce its occurrence.

Methods

Setting and recruitment

We chose an emergency department setting as this was the focus of previous research with mental health service users (Clarke *et al.* 2007). We invited the clinical staff to take part in individual in-depth interviews on diagnosis of physical illness in people with a mental illness in the emergency department. The study was approved by Moorfields and Whittington Research Ethics Committee, and all participants provided informed consent to participate in audio-recorded interviews.

Data collection

We sought a purposive sample of up to 30 participants, selected on the basis of diversity in professional background and experience, age, gender and ethnicity. Any qualified doctor, nurse or nurse practitioner with patient contact in the department was eligible, excluding mental health professionals. Although this study focused on the process of diagnosis, we included nurses, who were not directly responsible for making diagnoses, as well as doctors and nurse practitioners, for several reasons. First, we were interested in maximizing the perspectives on cases of diagnostic overshadowing reported. Second, nurses are responsible for initial triage decisions. Finally, we wished to include nurse managers, as they could discuss relevant departmental policies. We aimed for proportionate recruitment by profession, which gave targets of 15 nurses, 5 nurse practitioners and 10 doctors. Interviews took place over 3 months in 2010 and lasted 25 min to 1 h.

Participants were asked to describe any case they recalled from the department where an existing psychiatric disorder interfered with diagnosis of a physical illness. This broad approach was taken so that diagnostic overshadowing could be understood in the context of other barriers to diagnosis related to mental illness. The term 'psychiatric disorder' was not further defined, so participants were free to discuss any cases they felt relevant. The interviewer probed for factors the participant thought had impeded establishing the diagnosis, including factors about the patient, the professionals involved and the emergency department setting. Subsequent questions concerned whether and, if so, how the process of diagnosis of a physical illness differed between patients with and without a mental illness; perceived impact of diagnostic overshadowing; what might be done to reduce the risk of diagnostic overshadowing; and barriers and facilitators to make a physical illness diagnosis in a patient with a mental illness. The interviewer presented a case vignette of diagnostic overshadowing adapted from an incident known to one of the clinical researchers, usually towards the end of the interview. It was presented earlier that if participants could not think of a case or had difficulty in understanding how a psychiatric illness could influence the process of making a physical diagnosis. (The interview guide is available from the authors.)

Data analysis

Our aim was to gain conceptual insights into the phenomenon of diagnostic overshadowing through thematic analysis of the narrative accounts of health care professionals who worked in a setting where this was likely to occur. Our approach to analysis was both inductive and informed by concepts identified in a preliminary literature review. The interview transcriptions were read and compared with the recordings to ensure accuracy. QSR International (2011) was used to facilitate coding and identification of common themes and triangulation of themes across professional groups. Three researchers (A.v.N., J.M. and C.H.) coded three of the earlier transcripts to develop the initial coding framework together. A later transcript was also coded by three researchers to ensure consistency. The rest of the transcripts were then coded by one researcher (A.v.N.), and six of these were reviewed by a second researcher to ensure consistency of coding (T.G.). Similar codes were arranged into themes and were reviewed by three members of the research team (A.v.N., T.G. and C.H.).

Results

Sample

Twenty-five clinicians were interviewed; 15 nurses, two nurse practitioners and eight doctors. We quote

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both nurses and nurse practitioners as 'nurses' as specifying seniority and gender would violate the anonymity of the nurse practitioners. Level of professional experience is described as senior (5 years or more) and junior (<5 years). There were 14 female and 3 male nurses, while 15 were senior and 2 junior. There were 2 female and 6 male doctors, and 2 were senior and 6 junior. Participants' ethnicities included white, Asian, African Caribbean and African. Some e.g. trainee doctors had joined the department recently, while others had spent 20 years. Some participants refer to the emergency department as the 'Accident and Emergency Department' (A&E), a term commonly used in the UK.

Recognition of diagnostic overshadowing

Diagnostic overshadowing was commonly acknowledged as a significant phenomenon (16 participants felt this did take place, 5 were unsure and 4 did not feel that diagnostic overshadowing was an issue). Familiarity with cases of diagnostic overshadowing was more evident among senior professionals as might be expected; this was the only difference by demographic or professional variables observed.

> 'In terms of serious complications that result, it's certainly not frequent, or it's not even occasional, it probably happens I would say 1 out of 100–200 cases, in terms of serious complications. But I am sure it's far more frequent that physical problems that probably will have a self- limiting course, we probably ignore, and put it down to the person being a bit overly dramatic through his or her psychiatric problem.' *Doctor, male, senior* (4)

Some participants, however, felt that it was not a significant problem.

> 'It hasn't happened very often at all.' *Nurse, male, senior* (15)

The most serious incident was mentioned by more than one participant:

> 'She was discharged and then returned in less than 24 hours… and she actually didn't survive as a result of that… the decision was that her behaviour seemed compatible with the pre-existing mental health problem and therefore there was no need to investigate, it wouldn't have revealed anything, or wasn't expected to reveal anything untoward…' *Doctor, male, senior* (4)

Other serious incidents discussed included failure to identify life-threatening head trauma.

> 'There was one person who was known to have mental health problems, and I think the story was that he had had a fall…. But he was known to the mental health team at x-, and again I think it was something along the lines of schizophrenia. And he was assessed by us, because he was behaving a bit oddly, and it was presumed to be entirely related to his schizophrenia, and he was referred and admitted to the mental health ward, and he then was a bit too quiet with them, so they sent him back to us the next day to be reassessed, and he had a scan… which proved that he actually had brain injury from his fall, and had bleeding, and had to be referred to the neurosurgeons to relieve the bleeding, so that's a story that was brought to mind from this.' *Doctor, male, senior* (4)

Potential contributing factors to diagnostic overshadowing

We discerned eight categories of determinants of differential care, summarized in Table 1. All of these factors were suggested by participants who agreed that diagnostic overshadowing is a problem as contributors to it; among those that did not, they were also described as difficulties in treating people with mental

Table 1. *Determinants of differential treatment and their mitigating factors*

Determinants with examples	Mitigating factors
Problems getting a history:	Presence of a carer
Symptoms	Performing additional investigations
Medication side effects	
Problems with examination	–
Suspicion	
Patient agitation	
Clinicians' lack of knowledge about mental illness	Seniority of assessing clinician
Lack of education	Parallel working with psychiatry
Lack of experience with patients	
Environmental problems	–
Lack of privacy	
Noise	
Distressing setting	
Labelling and Stigma	–
Mental illness	
Frequent attender	
Substance misuse	
Fear of violence and avoidance	Presence of security staff
Avoidance after getting psychiatric history	Use of sedation
Time pressure	–
Delay in acceptance of referral	
Delay in transfer	
Lack of implementation of parallel working with psychiatry	–
Psychiatric requirement for medical clearance	

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illness in the emergency department. We identified mitigating factors for three of these determinants.

Problems obtaining a history

As one participant put it, 'in medicine, 95% of the diagnosis is in the history'. Several participants noted that psychiatric illness can make it difficult for patients to answer questions asked by clinicians, due to any of the medication side effects, withdrawal, apathy or distraction caused by psychotic symptoms.

> 'If the patient is unwilling to talk which can often be the case, and depressed patients who don't care or psychotic patients who are more… who are psychotic. And who are therefore, not really wanting to give a list of any physical symptoms and are more concerned about things that they're hearing or things that they're being told to do.' *Doctor, male, junior* (3)

In some cases, patients required sedation, making further information gathering and assessment nearly impossible.

> 'He was behaving completely inappropriately, so straight away of course you think that there is a mental health problem, but he was actually very hot to touch…so we knew that whatever there was there was a medical problem as well, it was just not clear whether the medical problem was causing him to behave like that or whether it was both, whether it was a red herring and he was really difficult to manage and needed to be restrained, but people didn't want to sedate him until we'd got a history from the psychiatric team and also until we could try and ascertain whether we needed any more information from him, but in the end we had to sedate him.' *Nurse, female, senior* (8)

One recognized facilitator of the diagnostic process was the presence of a carer able to provide medical history and to advise clinicians whether or not current symptoms were consistent with past manifestations of psychiatric illnesses.

> 'They would tend to know what her symptoms are usually, and if she has psychotic episodes, is this what she normally presents like?' *Doctor, male, senior* (6)

Running extra tests was also described as a way to compensate for an inadequate history. However, it was then more difficult to conclude with confidence that physical illness had been ruled out.

> 'If you can't get a more detailed history, you may do an endoscopy and think well, actually, their symptoms, I'm not that clear about their symptoms, and they could easily be coming from somewhere else, so you find yourself less confident that okay, you've done this test, this is the test you were asked to do, but actually, does the patient need more investigating, because they're not able to give you such an accurate description of the symptoms. That's a big block to diagnosis, I think.' *Doctor, male, senior* (6)

Problems with examination

Beyond the difficulties associated with verbal communication, physical examination and investigations were also said to be more difficult, either due to agitation or suspicion.

> 'They may just not let you examine them properly.' *Doctor, male, junior* (3)

Clinicians' lack of knowledge about mental illness

There was a general acknowledgement of insufficient knowledge about mental illness, and that this causes discomfort in working with patients with mental illness.

> 'I think, for, for, a lot of clinicians, it's not necessarily a fear of the unknown but of unfamiliarity with that aspect of things, that strangely it makes them a bit more uncomfortable.' *Doctor, male, junior* (1)

Thoughts on how this should be addressed varied. Some believed that an understanding of mental illness was difficult to provide through courses, and that this is best acquired through experience. Others felt that insufficient training was provided.

> 'Most people, unless they have an interest in psychiatric illness… may not be adequately prepared to deal with psychiatric issues, at the front line.' *Doctor, male, junior* (1)

Seniority was described as mitigating against lack of knowledge, leading to greater comfort with patients and awareness of the dangers of attributing symptoms to a mental illness without first determining that a physical illness was not present.

> 'If someone is more experienced and then when they do see something that's slightly abnormal, they might want to make sure it was not something… else.' *Doctor, male, junior* (1)

> 'A&E middle grade doctors tend to look at people in terms of you know, if they could be sick and if they're not, I think it would be more our middle grade doctors that put it all down to mental health.' *Nurse, female, senior* (13)

Environmental problems

No participant felt that emergency departments are suitable for patients with psychiatric illness. The lack of privacy and noisiness were described as very distressing to patients.

> 'There's a lot of noise and a lot of movement, there's always people running around, there's

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always something happening, and I think for an acutely disturbed person, whether it be organic or psychiatric, it's very, very distracting and can be quite frightening.' *Doctor, male, senior* (6)

Awareness of the negative effects of the department on patients led to attempts to discharge or refer quickly if a physical illness could not be readily identified.

[It was thought he may have had chest pain, but] 'I think part of the registrar's thinking was, it's unlikely, it's much more likely to be reflux, at the moment we're probably doing him more harm than good by keeping him here [due to his distress]. But I don't know, it's difficult to say whether that was the right thing to do or not, it's hard to know.' *Doctor, female, junior* (5)

Labelling and stigma

Participants commonly spoke of the way their thinking was influenced by knowledge that the patients had a psychiatric illness, and the way in which this influenced possible diagnoses they considered and worried about excluding.

'If you presume the worst, presume that there is a real condition until you know that there isn't then you are much safer, but I know not everybody does that – people do make judgements – they shouldn't, but they do sometimes.' *Nurse, female, senior* (8)

Labels played an important and negative role in influencing the diagnostic process.

'Once you have been labelled as having a psychiatric illness, it's very difficult to put that label to one side and to try essentially to deal with what you have in front of you.' *Doctor, male, junior* (1)

Even if patients did not already have a psychiatric diagnosis, if they exhibited symptoms of a mental illness this was said to distract clinicians from the presenting physical complaint.

'I think sometimes we focus too much on the mental illness more than the physical... So if a patient comes in and they've got mental problems, like they come in with a broken leg... And they've got mental illness, then we probably focus more on the mental illness than the broken leg. Because it's the behaviour which we see more than the actual broken leg... So I think sometimes that's a bit of a shame because it's like you, you automatically put them in a box, OK, the mental illness, um, without sort of like focusing on the physical pain and what they're actually going in- I think sometimes the mental illness overlooks the physical, of what they are actually coming in with.' *Nurse, female, junior* (9)

Participants described how labelling resulted in people with mental illnesses being stigmatized in the emergency department:

'There probably is some degree of stigma, you know, because they can be very challenging patients to deal with.' *Doctor, male, junior* (2)

Besides the label of mental illness, two further labels were associated with stigma and reduced likelihood of receiving more thorough examination and investigations. One was the label of being a frequent attender.

'If you look in the top right corner [of the card with the patients' history of previous attendances] and you see psychiatric problem, psychiatric problem, psychiatric problem ... and a total of 50 attendances, the tendency is to start already becoming prejudiced as to likely that this is a psychiatric related attendance.' *Doctor, male, senior* (4)

The second label that was often mentioned as having an effect was patients' use of drugs and/or alcohol.

'Maybe not now... but a lot of people have been passed off as alcohol intoxication and they've been found to have bleeds.' *Doctor, male, junior* (1)

These two labels, 'frequent attender' and 'substance abuser', often co-occurred.

Fear of violence and avoidance

Fear of patients with mental illness was linked to avoidance, which in turn was said to lead to patients being less informed about their care. Although security staff were identified as mitigating the risk of violence, it was noted that there were too few of these.

'Previously I know I've spoken to the psych liaison and that, then I won't go back near the patient.... I was probably scared... because, at the end of the day you don't want the patient kicking off and getting angry.' *Nurse, female, senior* (12)

Time pressure

The most frequently discussed environmental factor was that of time pressure. Owing to the need to meet a national government target to see, treat and admit or discharge patients within 4 h, clinicians often felt forced to make a determination about whether the patient had a medical or psychiatric problem before they were ready to do so.

'You're trying to keep to the target, you don't want the department to fail, and so the pressure is on you, to... do it, yeah, to stick to the target time. So, you ask the questions and there's this... you know, it becomes a formal set of questions that you ask the patient, you're doing the obs and you're asking them, you know, what's... they, you're letting them tell you what's wrong, while you're typing that up and then you've got to ask them what their medical problems are, any medical problems and if they just don't choose to tell you, you haven't got the time to

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probe or even, even if you feel there's something much more dramatic or sinister going on, um, your time target doesn't allow it.' *Nurse, female, senior* (19)

However, most breaches of the 4 h target occurred due to difficulties in the actual referral and transfer of these patients, rather than during the initial diagnostic process. Although it was often described as a source of pressure, several participants noted that the target had led to important improvements, as patients waited for less time to be assessed. This was said to be particularly significant for patients with a mental illness, as the added challenges of referral for these patients had previously meant particularly long delays for their assessment and care.

'If you, we have challenges now with the patients um, because of 4 h target, it was worse before, because before there were no level of accountability, and they could be here for hours and hours.' *Nurse, female, senior* (13)

Lack of implementation of parallel working with psychiatry

Participants consistently identified parallel working between staff from the psychiatric unit and staff from the emergency department as the best way to manage people with mental illness. In one case, the involvement of the psychiatrist in the patient's assessment led to the discovery of a physical illness.

'There was a patient that was acting extremely psychotic, you know, but from the history that we could gain... Um, there seemed no physical, apparent reason, and the um, psychiatrist, it was on a nightshift and, the psychiatrist that came down was very adamant that actually, thought that it was...from a physical presentation, um, we were all not convinced... you know again, it was that joint working...they ended up having a stroke in one particular sort of, in an area of their brain, that caused them to start acting like this. Which was you know, that experience was quite – um, yeah, quite a learning curve really.' *Nurse, female, senior* (14)

A parallel policy had been suggested but not implemented due to funding constraints; this failure was perceived by senior staff members as due to lack of political support for funding mental health services.

'Whatever political or strategic reforms we've had in our health service, mental health has never really featured highly on that, it has always been lowest priority... the three vulnerable groups: children, there's much more awareness of them; the elderly, better, I'm not saying perfect; mental health, still the very poor relation, so I think it comes right from the top, the political drive is not there.' *Nurse, female, senior* (13)

Discussion

Summary of results

This study is the first to explore clinician perspectives on the barriers and facilitators to making a correct physical illness diagnosis in patients with a psychiatric history. Although participants did not all agree that diagnostic overshadowing occurred, we identified multiple barriers to diagnosis and management, many of which were common to most of the interviews; discrepant views were noted above whenever present, while for all other themes, there was consensus in views. Those participants who acknowledged diagnostic overshadowing cited these barriers as likely contributory factors to diagnostic overshadowing as well as reducing the quality of care in other ways.

Among the barriers to diagnosis are two components of stigma, namely problems of knowledge (lack of knowledge in this case) and of attitudes (prejudice following labelling in this case) (Thornicroft *et al.* 2007). Compounding the lack of knowledge about mental illness are the difficulties of information gathering due to the effect of patients' psychiatric symptoms or medication side effects on history taking and examination, the nature of the environment and the lack of joint working with psychiatric staff. Similarly, negative attitudes towards frequent attenders and those with substance misuse problems combine with mental illness stigma, especially fear of people with mental illness and the distinction made between 'real', i.e., physical symptoms and those that are not. These attitudes may be intensified by the difficulties of working with mental health services in the context of the need to meet a statutory 4 h discharge target. Participants described both avoidance due to fear of violence and under-investigation due to misattribution, i.e., diagnostic overshadowing. These behaviours constitute the third facet of stigma along with problems of knowledge and attitudes (Thornicroft *et al.* 2007) in that they are forms of discrimination. The facilitators of the diagnostic process identified by participants include ways to compensate for the lack of knowledge, e.g., the presence of a carer to provide collateral information, and ways to compensate for both lack of knowledge and fear or discomfort, i.e., the involvement of senior clinicians and psychiatrists, both of whom have more experience of working with people with mental illness.

Weick *et al.* caution against excessive efforts to produce causal explanations and logical conclusions from experiences (Weick *et al.* 2005). With this in mind, we found two inconsistencies in our data. Several

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interviewees expressed the fear that frequent attendance is a risk factor for diagnostic overshadowing; however, although some delays in diagnosis and care were mentioned for this group, the most serious examples of diagnostic overshadowing that were provided occurred in patients who did not attend often. It may be that frequent attenders are actually at less risk of diagnostic overshadowing due to clinicians' familiarity with their pattern of presentation. However, because of the overlapping stigmas of frequent attendance and psychiatric illness, patients with psychiatric illness not well known to clinicians may be under-investigated as if they were a frequent attender, and thus are at greater risk. Second, people with a psychiatric diagnosis were perceived as a threat to the 4 h target for discharge from the department because they were more difficult to assess; however, it was the difficulty of liaising with mental health services that contributed to this delay according to senior clinicians. It thus appears that attitudes to a patient group can be affected by the relationship with the service providing their specialty treatment.

Strengths and limitations

The strengths of this study are the inclusion of a range of participants with respect to profession, length of experience, gender and ethnicity. As demographic characteristics can be a cause of discrimination as well as mental illness, professionals sharing these characteristics may have different views from those who do not; therefore it is important to include professionals with the range of these characteristics. Another strength is the involvement of multiple researchers in the analysis process: early coding, assessment of consistency and development of a thematic framework (Barbour, 2001).

This study has identified a number of factors that impede diagnosis generally among people with mental health problems, and shown how these factors may relate to diagnostic overshadowing in the view of those interviewed. However, we are not able to determine the extent to which each of these different barriers contribute to diagnostic overshadowing or their relative importance, either in general or in any specific case. This limits our ability at this point to prioritize specific interventions.

As this was an exploratory study based in one emergency department, it is possible that the findings are not generalizable to other departments, e.g., those which have different arrangements for working with mental health services. On the other hand, professional training and policies such as the 4 h target are uniform throughout the UK, suggesting many of the themes we identified would be apparent elsewhere.

Implications for policy

Understanding clinician perspectives regarding these challenges is an important first step in developing a strategy to address them. Ultimately we expect this work to lead to recommendations for changes in the training of emergency department clinicians and to the management of people with psychiatric and physical illness in emergency departments and potentially other health care settings.

Implications for research

The first step following this study is to validate and expand our findings through replication at other sites. There are then two strands of research implicated by this study. First, regarding diagnostic overshadowing *per se*, a case study design could provide a richer understanding of incidents of diagnostic overshadowing and its causes. This could then be used to develop educational interventions targeted at this particular problem. Such interventions could then be tested to see whether they lead to fewer diagnostic errors and delays. Second, regarding the factors contributing to diagnostic overshadowing, it is important to establish a consensus among physical and mental health professionals about how to address these factors. This could be informed by quantitative studies of their prevalence, but ultimately consensus development should lead to the development and testing of interventions to address these factors and determine whether they result in an increase in rates of guideline consistent care among people with mental health problems. These could include one or more of: in service training to address discrimination and its impact in this setting (Kassam *et al.* 2010, 2011); educational outreach visits aimed to improve quality of care (O'Brien *et al.* 2007); changes to the service interface between physical and mental health care such as parallel working; and changes to the design of emergency departments.

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