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Hospital clinical pharmacists' perspectives on suboptimal pharmaceutical care: a qualitative study.

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Abstract

Background

While clinical pharmacists are responsible for medicines optimisation and provision of pharmaceutical care, there is a lack of literature focusing on what constitutes 'suboptimal' pharmaceutical care.

Aim

To explore the perceptions and experiences of hospital clinical pharmacists of the delivery of suboptimal pharmaceutical care, and the determinants influencing their behaviours.

Method

This study adopted a phenomenological qualitative design. Participants from one health board in Scotland were recruited purposively, and interviewed until data saturation was reached. The semi-structured interview schedule focused on behaviours associated with participant's experiences and perceptions of suboptimal pharmaceutical care. Behavioural determinant items were derived from the Theoretical Domains Framework (TDF). Transcripts were analysed using a thematic approach.

Results

Ten participants were interviewed to achieve data saturation. Behaviours were observed in different phases of the process: identifying, responding to, reporting and reflecting on suboptimal pharmaceutical care. The themes from the analysed data showed potential influences from environmental context and resource factors such as time management and prioritisation which influenced both the identification and reporting of suboptimal pharmaceutical care, and social and professional role and identity factors including professional embarrassment and hierarchical barriers which influenced reporting on suboptimal pharmaceutical care.

Conclusion

This study suggests that the concept of suboptimal pharmaceutical care can be used to describe events and episodes that pharmacists perceived as being less than the desired standard of care for patients. Factors such as time management, prioritisation and system related barriers often prevented pharmacists reporting suboptimal pharmaceutical care.

Impact On Practice Statements

Hospital clinical pharmacists can identify episodes of suboptimal pharmaceutical care in their own and in others' practice, where suboptimal describes being care that is less than the desired standard. Barriers exist within clinical pharmacy services in relation to reporting episodes of suboptimal pharmaceutical care made by self and others, and relate to social and professional barriers including professional embarrassment and hierarchy, and environmental factors such as time management and prioritisation.

Introduction

There is a dearth of published research regarding the quality assurance of clinical pharmacy services [1, 2]. Establishing the desired level of quality can be difficult when there is a lack of a uniform or consistent description of clinical pharmacy and related activities. In 1999, Calvert identified that the lack of a uniform description or definition of a clinical pharmacy service, and a paucity of research into service effectiveness, had resulted in clinical pharmacy services that developed in the UK based on opinion rather than evidence [1]. Onatade et al in 2018 similarly described the lack of agreed priorities, measures or defined outcomes for hospital clinical pharmacy in the UK as a barrier to services being delivered effectively and consistently [2]. Li et al have described role ambiguity, role uncertainty and conflict as barriers to clinical pharmacists taking on extended roles in developing countries, including China [3].

The lack of a standard description or definition of clinical pharmacy services has made quality assurance or quality management programmes difficult to implement. Such a programme may include for example, evidence-based improvement measures based on an evaluation of incident reports from within the clinical pharmacy service. There have been efforts to define clinical pharmacy previously; Dreischulte et al in 2022 used consensus methodology to define the role of clinical pharmacy, for the ESCP (European Society of Clinical Pharmacy) [4]. The ESCP definition of clinical pharmacy, with optimisation of medicines utilisation as core, acknowledges that practice and research will help to meet the twin aims of achieving person-centred and public health goals. Clinical pharmacy practice is defined as comprising cognitive, managerial and interpersonal activities, and is undertaken by pharmacists in multiple settings. Research generates knowledge to support clinical decision making, and practice and policy around the use of medicines. The definition gives the potential for a common understanding of clinical pharmacy and the potential for studies to use this core definition when describing research within clinical pharmacy going forwards, and for the development of quality assurance or quality management programmes.

Clinical pharmacy activities can be described under the philosophical umbrella of pharmaceutical care. Pharmaceutical care was described in the USA by Hepler and Strand in 1990 as: 'the responsible provision of drug therapy for the purpose of achieving definite outcomes which improve the patient's quality of life' [5] and this definition has been widely accepted worldwide as a description for the philosophy by which clinical pharmacists' practice. The Pharmaceutical Care Network Europe (PCNE) consensus definition offers the following definition: 'Pharmaceutical care is the pharmacist's contribution to the care of individuals in order to optimize medicine use and improve health outcomes' [6]. An adaptation of the original Hepler and Strand definition was coined by the Scottish Government in the document Prescription for Excellence [7] and incorporated reference to minimising adverse events with medicines- 'a model of pharmacy practice which requires pharmacists to work in partnership with patients and other health and social care professionals to obtain optimal outcomes with medicines and eliminate adverse events where possible.' These definitions refer to outcomes, but there is currently no consensus on what outcome measures should be used nor on what constitutes optimal pharmaceutical care.

Whilst pharmacists are often regarded as proficient at reporting medication incidents, [8, 9] and at resolving medicine related issues [10], there is a paucity of evidence that medication type incidents, (including those related to pharmacist prescribing) within clinical pharmacy practices are being reported. A medication incident can be described as any preventable event that may cause or lead to inappropriate medication use or patient harm, while the medication is in the control of the health care professional, patient, or consumer. Reporting, sharing and learning from adverse events within pharmaceutical care practices could therefore be lacking, contrary to guidance for pharmacists in the UK [7; 11–15] and elsewhere [16–18]. Additionally, pharmacists may not be undertaking the professional responsibilities expected of them within their clinical pharmacy practice, for example being candid, and following professional standards and guidance, as described in the UK [15], in the USA [16, 17] and globally [18].

The terms 'optimal' and 'suboptimal' have not been adequately defined in relation to pharmaceutical care. The term 'suboptimal' mean 'not at the best possible level or standard' [19], and in the context of this study adequately described

the gap between pharmaceutical care as intended and pharmaceutical care as delivered. There is an associated inference, from studies in nursing, that suboptimal care can be improved [20, 21]. Understanding the factors and influences that affect behaviours related to optimal and suboptimal pharmaceutical care will enable services to develop targeted improvements, using the behaviour change techniques, ensuring that optimal pharmaceutical care delivery for patients is maintained.

Aim

To explore the perceptions and experiences of hospital clinical pharmacists of the delivery of suboptimal pharmaceutical care, and the determinants influencing their behaviours.

Ethics Approval

This study was approved by the Research Ethics committee of Robert Gordon University (Ref: S67) in February 2017.

Method

The study was qualitative, using one to one interviews. The sample population was all registered hospital clinical pharmacists from one Health Board in Scotland. Recruitment used convenience and purposive sampling, with initial contact by email to all those eligible to take part. All participants were sent study information prior to them giving consent. Demographic data (age, gender, level of experience) were captured in advance of the interviews.

The sampling plan aimed to recruit 10 participants, from a sample size of 128 potential recruits, and assess data saturation after interviews had been conducted. This is in accordance with known methods of reaching data saturation in qualitative research [22].

A semi-structured interview schedule was developed by the research team, with questions structured around the 14 domains of the TDF designed to capture data on the perceptions and experiences of hospital clinical pharmacists in relation to suboptimal pharmaceutical care. (Table 1) The semi-structured interview schedule was piloted, and changes made and approved by the research team.

TDF has the advantage of being suitable for use both in design and in analysis, and having the ability to facilitate the understanding of behaviours and behavioural determinants. Understanding of behaviours and behavioural determinants enables the design of suitable behaviour change interventions., TDF has been extensively validated [23] and used as a research tool in healthcare research [24, 25], and in pharmacy practice research [26].

Table 1
Interview schedule using the TDF domains

TDF Domain		Sample Questions
1	Knowledge	What would you describe as suboptimal pharmaceutical care? Do you know how to identify report or act on suboptimal pharmaceutical care in context of your own practice? What does it mean to you?
2	Skills	What skills, attributes or information do you think you need to be able to identify or report suboptimal pharmaceutical care? Have you been trained in any of these skills?
3	Social/professional role and identity	Who do you think would be best at identifying suboptimal pharmaceutical care? Who should report, and who should develop actions to take
4	Beliefs about capabilities	How would your ability to identify suboptimal pharmaceutical care be affected by external factors? e.g. time, access to patient data. How confident are you that you can overcome the barriers?
5	Optimism	With regard to identifying, reporting or acting on suboptimal pharmaceutical care, are you optimistic about the task?
6	Belief about consequences	Will there be any disadvantage to you if identifying, reporting or acting on suboptimal pharmaceutical care? (treat as 3 questions)
7	Reinforcement	Do you think there will be recognition from within Pharmacy or within the multidisciplinary team if you identify report or act on suboptimal pharmaceutical care? Would that be positive? Negative?
8	Intentions	Have you intended to report or escalate an episode where suboptimal pharmaceutical care has been a concern, in yourself or in another? How strong was the intention? Were there barriers? What would you expect outcome to be?
9	Goals	When thinking about identifying reporting or acting on suboptimal pharmaceutical care, how often is something else higher on your agenda?
10	Memory, attention and decision making	How often do you forget to complete a task, or lack the focus that is needed to complete a task? Would you consider that to be suboptimal?
11	Environmental context and resources	Would resources or a different work environment make a difference to your likelihood to identify report or act on suboptimal pharmaceutical care? Time? Computer access? Other team members availability?
12	Social influences	Who would benefit from pharmacists identifying reporting or acting on suboptimal pharmaceutical care? Who would influence or affect the reporting
13	Emotion	Are there instances when your reflection on an example of suboptimal pharmaceutical care has caused anxiety? Or where optimal pharmaceutical care has led to feeling of satisfaction?
14	Behavioural regulation	How do you reflect personally on your delivery of pharmaceutical care? How do you track your personal progress in the delivery of pharmaceutical care to patients?

[INSERT Table 1: Semi-structured interview schedule using TDF domains]

Study conduct: Interviews

Interviews were conducted with participants at a time and place convenient for them, during 2018, in locations with adequate privacy to assure confidentiality. All interviews were carried out by the lead investigator, and were audio-recorded, transcribed and thematically analysed using the TDF. Interviews took 35–55 minutes.

In accordance with the sampling plan, the researcher and a member of the research team reviewed emerging themes after interview 3,6 and 10 using field notes taken during and after the interviews, in order to determine whether data saturation was reached. After interview 10, data saturation was deemed to have been achieved, with no new themes emerging.

Results from the interviews were independently mapped to the TDF by three members of the research team, and subthemes identified from within some TDF domains. Mapped data was then allocated by researchers into four key areas described as: identifying, responding to, reporting and reflecting on suboptimal pharmaceutical care (Fig. 1).

[INSERT Fig. 1 The four phases within suboptimal pharmaceutical care process]

Results

Demographics of participants:

Demographic data was collected during recruitment and consent processes. Participants were recruited purposively from a range of staff bands, (where Band 6 is a junior pharmacist and Band 8 has greater responsibility and experience), age bands, and from each of 5 different hospital sites. Age and gender were representative of the total sample population; numbers recruited from sites were representative of the relative sample population (staff numbers) at each site.

[INSERT Table 2 Demographics of study participants]

Table 2
Demographics of study participants

Study Participant	1	2	3	4	5	6	7	8	9	10
Staff band	8	8	6	8	8	7	8	8	7	7
Age (years)	45– 55	25– 35	25 – 24	35– 45	35– 45	25– 35	35– 45	25– 35	35– 45	45– 55
Gender	F	F	F	F	F	F	F	F	M	F
Site	4	1	2	1	1	2	2	3	4	5

Table 3

Description of TDF Domain and themes within the four phases where suboptimal pharmaceutical care was described by participants

Phase of process: Identifying suboptimal pharmaceutical care		
TDF domain: Knowledge	Theme: Lack of knowledge	Expansion: Pharmacists are more likely to identify instances suboptimal pharmaceutical care from less experienced pharmacists
TDF Domain: Environmental context and resources	Theme 1: Not seeing patients as planned	Expansion: Participants felt that not seeing 'prioritised' patients was classed as suboptimal pharmaceutical care
	Theme 2: Efficiency versus thoroughness conflict	Expansion: Participants felt conflicted when seeing priority patients meant doing a less thorough review of others.
Phase of process: Responding to suboptimal pharmaceutical care		
TDF Domain Social and professional role and identity	Theme: 'Fixing' as a response to identifying suboptimal pharmaceutical care	Expansion: Participants were more likely to fix an instance of suboptimal pharmaceutical care than report it, or provide feedback
TDF Domain: Emotion	Theme: Individual's emotional response to suboptimal pharmaceutical care:	Expansion: Participants felt anxiety and shame over instances of suboptimal pharmaceutical care
Phase of process: Reporting on suboptimal pharmaceutical care		
TDF Domain: Social and professional role and identity	Theme 1: Severity influencing likelihood of reporting	Expansion: Participants were more likely to report/provide feedback on more serious events/near misses
	Theme 2: Hierarchy	Expansion: Participants were less likely to report or provide feedback on events where the originator is a more senior pharmacist
	Theme 3: professional embarrassment	Expansion: Participants were less likely to report own errors; more likely to just fix them.
TDF Domain: Environmental context and resources	Theme: Time constraints influencing likelihood of reporting	Expansion: Participants described how they were more likely to fix something than report or provide feedback when time was constrained.
TDF Domain: Behavioural regulation	Theme: Promoting behavioural regulation in others	Expansion: Participants described using feedback to others to help them to develop better practices
Phase of process: Reflecting on suboptimal pharmaceutical care		
TDF Domain: Behavioural regulation	Theme 1: Self-reflection leading to behavioural regulation	Expansion: Participants described how they used their own experiences with suboptimal pharmaceutical care to change their own or influence other's behaviour

Phase of process: Identifying suboptimal pharmaceutical care	
Theme 2: Group/shared learning:	Expansion: Participants felt there would be shared learning from wider reporting of suboptimal pharmaceutical care examples, in a supported environment.

The key findings are presented, for the predominant TDF domains and themes, for the four key phases where suboptimal pharmaceutical care was described by participants.

Identifying Suboptimal Pharmaceutical Care

Participants were able to describe examples where they had identified suboptimal pharmaceutical care in their own practice, or in others. Examples provided during interviews included slips, lapses, and errors, such as missing interactions, giving incorrect advice, not seeing patients in time, not documenting or communicating actions, not following up care issues, making prescribing errors, incorrect checks. This list is not exhaustive.

TDF Domain: Knowledge

Theme: Lack of knowledge

Participants described scenarios where they identified suboptimal pharmaceutical care in others, generally when they saw a patient downstream as part of continuing pharmaceutical care. In this situation, participants described, for example, pharmaceutical care issues or prescribing errors having been missed during previous pharmacist input, as an example of suboptimal pharmaceutical care

'Working on a downstream ward I'd maybe pick up a patient where the possibly less experienced person before you has either a) done something wrong, not picked up something or b) not had time to do something' [Interviewee 7, Band 8 Pharmacist]

When describing how suboptimal pharmaceutical care would be identified in their own or others practice, participants described the situation where they or others may not see patients as planned, due to time constraints.,

TDF Domain: Environmental context and resources

Theme 1: Not seeing patients as planned

Participants described not seeing patients as planned, where patients had already been identified as requiring pharmaceutical care, using a priority coding tool:

'If we or a professional colleague has screened a patient for care issues, and in their judgement, feel there are enough issues going on with that patient that we should check their status every day.... ensure that they are appropriately monitored... So, if we're not doing that? It's suboptimal' [Interviewee 1 Band 8 Pharmacist]

Theme 2: Efficiency versus thoroughness conflict

There was an indication that there was a balancing act between being thorough and being efficient: the priority coding tool used within the organisation encourages efficiency but individuals were not all in agreement that efficiency was always the priority, with some describing the conflict that then arises:

'I always think it's better to see less patients and try and finish what you're doing with each patient' [Interviewee 4 Band 8 Pharmacist]

Responding to suboptimal pharmaceutical care

Participants in the study described how they responded to identifying suboptimal pharmaceutical care in self and others – what actions they took at the time or subsequently, and how they felt at the time.

TDF Domain: Social and professional role and identity

Theme: 'Fixing' as a response to identifying suboptimal pharmaceutical care:

Several participants described how they would respond to identifying suboptimal pharmaceutical care in their own or in another pharmacist's practice by immediately correcting the issue. Participants described how acting in the moment to fix the error was a dominant behaviour; the description of 'fixing' something that was observed in another's practice was referred to several times, and included 'fixing' across multiple grades and experience of pharmacist. Fixing errors seemed to have become an established work process that had developed amongst pharmacists.

'you see something, you fix it' [Interviewee 4 Band 8 Pharmacist]

'I would probably go and fix it [Interviewee 3 Band 8 Pharmacist]

TDF Domain: Emotion

Theme: Emotional response to suboptimal pharmaceutical care:

Participants described their emotional response to self-identifying, or being made aware of an episode of suboptimal pharmaceutical care in their own practice. Emotions expressed included 'feeling terrible' when discovering they have made an error:

'I felt terrible, I felt...I felt like I hadn't paid enough attention to the patient and that could've caused them serious harm' [Interviewee 2 Band 8 Pharmacist]

And similarly, feeling 'terrified' that there would be harm to a patient:

'I was terrified! I mean oh my goodness, I made that error quite early on when I was prescribing' [Interviewee 6 Band 7 Pharmacist]

Participants then described how different factors would then determine the next steps – whether that was providing feedback where the episode was from other's practice, or reporting when in their own.

Reporting on suboptimal pharmaceutical care

Participants described factors that influenced whether they would report instances of suboptimal pharmaceutical care. Discussion on reporting on suboptimal pharmaceutical care was divided between *informal* reporting, frequently referred to by participants as *feedback*, and *formal* reporting, which could be self-reporting or reporting of others, and tended to be written, or data entry. Informal reporting was discussed in relation to different hierarchies of feedback, including providing feedback to peers, or to those more junior or senior than the participant

TDF Domain: Social and professional role and identity

Theme 1: Severity influencing likelihood of reporting

Participants used their own judgment to decide whether to provide feedback, depending on the perceived severity of the issue:

'to be honest unless it was something I suppose, a near miss or something very serious, generally you wouldn't feedback to the person who had seen the patient before you'. [Interviewee 7 Band 8 Pharmacist]

'I would probably go and fix it, and then I'd just catch them whenever I next saw them and just kind of say... well if it was something that would harm the patient I would definitely highlight it to them' [Interviewee 3 Band 8 Pharmacist]

Theme 2: Hierarchy

However, whilst the informal feedback approach worked well with more junior colleagues or those in training, some participants identified that they may feel less comfortable doing so with their peers or those who were more senior :

'I think when it comes to probably giving feedback to others, I will say it will be probably easier to do that with the people who are junior compared to someone who has a lot more experience than you, because people can sometimes see it as a criticism' [Interviewee 9 Band 7 Pharmacist]

'I would feel more comfortable feeding back more junior colleagues than more senior, or my peers' [Interviewee 6 Band 7 Pharmacist]

The theme of *hierarchy* was therefore created to capture the influence of the relative grades of the pharmacists involved, on the likelihood of giving feedback on suboptimal pharmaceutical care.

Different influences were described when participants were discussing the likelihood of reporting on suboptimal pharmaceutical care that they identified in their own practice.

Theme 3: Professional embarrassment

Discussion around self-reporting of suboptimal pharmaceutical care when self-identified revealed barriers. A theme of *professional embarrassment* was identified that captured discussions around feelings within the shame spectrum of emotion as barriers to self-reporting:

'I think that professional embarrassment is a barrier in lots of ways to reporting' [Interviewee 4 Band 8 Pharmacist]

Interviewee 1 also described the culture change that would be required to make disclosure of suboptimal pharmaceutical care acceptable:

'it would require a culture change for it to be accepted, I mean it's just nature isn't it, everyone's individual reaction is you know, oh I'm getting told off or I've done something wrong and you're having to disclose and you're airing your dirty laundry' [Interviewee 1 Band 8 Pharmacist]

Another participant discussed their experience of disclosure, and suggested that if they had made a mistake or an error, they would be selective about who they shared that with, due to professional embarrassment:

'you might sort of tell people you know well and trust, but you don't necessarily want to, won't necessarily tell everyone...' [Interviewee 4 Band 8 Pharmacist]

This statement indicates there may be barriers to pharmacists sharing lessons learned from errors more widely, and this is discussed further below.

TDF Domain: Environmental context and resources

Theme: Time constraints influencing likelihood of reporting

A participant described how time constraints would influence the reality of feeding back:

'...feeding that back to people, there could be a time constraint of actually having to, you see something, you fix it and you've got to remember to go back to somebody.' [Interviewee 4 Band 8 Pharmacist]

TDF Domain: Behavioural regulation

Theme: Promoting behavioural regulation in others

Other participants saw the opportunity to promote behavioural regulation in others, and therefore perceived feedback as useful:

'I would definitely do it [provide feedback] from a training point of view. Definitely. I would see that as a priority, because if they start developing habits, not intentionally, but missing that sort of thing they're never gonna learn...' [Interviewee 5 Band 8 Pharmacist]

The benefit and usefulness of informal feedback was acknowledged by a recipient:

'when you're a junior you really benefit from that informal peer review, sort of feedback session' [Interviewee 7 Band 8 Pharmacist]

Reflecting On Suboptimal Pharmaceutical Care

Participants described how they experienced reflecting on suboptimal pharmaceutical care. Reflection was described for self-reflection (learning from own experience) and for group, or shared learning.

TDF Domain: Behavioural regulation

Theme 1: Self-reflection/behavioural regulation:

One participant described how they had used their personal experience of suboptimal pharmaceutical care to provide knowledge to others, as an example of reinforcing the learning they had received themselves:

'I definitely use what I have learnt to give examples to people' [Interviewee 2 Band 8 Pharmacist]

Other participants described how they used their personal experiences of suboptimal pharmaceutical care to change their own practice:

'certainly, after that I was incredibly careful when I was checking' [Interviewee 1 Band 8 Pharmacist]

Or, that reflecting on suboptimal pharmaceutical care made them realise that internal process checks were flawed:

'it made me realise that maybe some of my subconscious warning systems were not working' [Interviewee 4 Band 8 Pharmacist]

Theme 2: Group/shared learning:

Participants felt the consequence of wider reporting on suboptimal pharmaceutical care could be positive, where there were lessons that could be shared:

'I think there could be some good learning from it' [Interviewee 2 Band 8 Pharmacist]

whilst another participant acknowledged that the opportunity to share their own experiences related to suboptimal pharmaceutical care could provoke anxiety, but that there would be benefits to be gained:

'I think initially I'd be quite nervous about it, because then like everyone's basically seeing your mistake essentially, but then in the long run it would be better overall' [Interviewee 3 Band 6 Pharmacist]

The opportunity for sharing experiences within the wider community was further discussed in relation to suggestions for how sharing the learning from reporting of suboptimal pharmaceutical care might translate into practice, and what benefits there may be:

'It just sort of prompts everyone to maybe be that little bit tighter in their care or approach to care and maybe change their practice a little bit' [Interviewee 8 Band 8 Pharmacist]

'... it would be worthwhile, because then it would identify if everyone was having the exact same problem' [Interviewee 3 Band 6 Pharmacist]

Discussion

Statement of Key findings

As far as is known, this is the first research study to have explored suboptimal pharmaceutical care as a concept, and to identify behavioural determinants relating to the delivery of optimal and suboptimal pharmaceutical care as described by study participants. The study analysis found that there were some key TDF domains that best described the behavioural determinants identified; these were knowledge and skills; social and professional role and identity; environmental context and resources; emotion and behavioural regulation.

Strengths and Weaknesses

The novel approach taken in the study ensures the content is unique, providing a unique exploration of pharmacists' perceptions and experiences of suboptimal pharmaceutical care. The study was limited by the availability of participants across a range of experiences, and from recruiting from just one health board, and from the hospital setting. Wider participation from pharmacists in other settings, or a larger sample size may have allowed for additional themes, and may have enhanced the transferability of findings.

As a phenomenological study, the research asked participants to reflect on their individual experiences retrospectively, by using one to one interviews, and this relied on their recall of events. This may be a limitation of study design.

The interviews were structured around a framework (TDF) that focussed on behavioural determinants. The use of an alternative framework, for example organisational theory, may have produced an alternative set of findings. Use of the TDF theoretical foundation was selected in order to support a framework that would facilitate the development of behaviour change interventions.

Interpretation

Potential influences that dominated participant descriptions when identifying suboptimal pharmaceutical care were around knowledge and skills. Less experienced pharmacists were perceived as being less likely to identify suboptimal pharmaceutical care, and this was expected due to the stage they were in their career, with the informal feedback process adding to their knowledge and skills.

In this study, time constraints were referred to as a challenge to providing optimal pharmaceutical care. Of note, there was discussion on time management skills, and on finding the balance between being efficient and being thorough. This dilemma has been described as the *efficiency thoroughness trade off* (ETTO) [27], and has been previously described in the healthcare setting [28–30]. McNab et al [30] describe how when things go well, healthcare practitioners

are judged on efficiency, but when things go wrong they are judged on thoroughness. In the context of suboptimal pharmaceutical care, clarity around expectations of senior managers was deemed by participants as being influential.

Participants described how time constraints were a factor in not reporting instances of suboptimal pharmaceutical care. In the context of this study, reporting included the provision of informal verbal feedback. In a UK study on pharmacists' attitudes towards giving feedback to junior doctors, recruits to focus groups described barriers of time and workload as influencing the likelihood that they would provide feedback on a prescribing error to a doctor [31]. Other influences were the severity of the error, with the likelihood of providing feedback increasing with the perceived severity of the error, and this was also identified in this study.

Senior pharmacists acknowledged that responding to and reporting back to junior members of the team on instances of suboptimal pharmaceutical care was important for the junior pharmacist's development, whilst acknowledging that they did not have an equivalent process for themselves as senior pharmacists. Senior pharmacists also identified that they were aware that there were inconsistencies in the process of providing feedback to junior pharmacists, citing time constraints as leading to a 'fix and forget' culture. 'Fix and forget' has previously been described [32] in relation to patient safety incident reporting: the qualitative case study designed research found that most of the doctors interviewed fixed patient safety incidents themselves, and rarely reported on incidents unless there was actual harm. The authors concluded that better criteria could be set to guide practitioners about what and how to report [32] and this was reflected by the findings of this study, with lack of knowledge of what and how to report being frequently cited by participants as barriers to reporting.

Participants in this study described that they were less likely to provide feedback on instances of suboptimal pharmaceutical care to those more senior than themselves, although they may still act on those instances, to 'fix' them. This was described as a hierarchical barrier. In a systematic review of barriers to reporting of adverse events by nurses, personal and professional barriers, including the power hierarchies that exist in healthcare were reported as barriers to reporting [33] and is supported by the findings of this study.

Participants in this study expressed barriers to the self-reporting of episodes or incidents in their own practice. Professional embarrassment was cited as a factor. In a study looking at barriers to the reporting of adverse events by doctors, embarrassment was cited as a critical barrier [34]. The study suggested that the embarrassment barrier could be overcome by case reporting, regularly, in a non-threatening environment, and getting feedback [34]. A further study with doctors, on the disclosure of adverse events and perceived barriers, cited professional embarrassment, a lack of training, and the emotional impact of reporting as being barriers to disclosing and reporting adverse events [35]. Professional embarrassment was also a barrier identified in a Scottish study examining the significant event analysis (SEA) process that GPs use, where GPs also expressed a reluctance to share events that may expose them to professional embarrassment [36]. There was a paucity of studies from within the pharmacy profession to act as comparators

Further Research

This study suggests that the concept of suboptimal pharmaceutical care can be used to describe events and episodes that pharmacists perceived as being less than the desired standard of care for patients. More research is needed to identify whether the terminology is applicable in other settings, and in other countries, and expansion beyond this small scale qualitative study may provide broader insight, identify other influences, and enable the development of interventions to support optimal pharmaceutical care delivery. A large scale survey using a positivist philosophy and quantitative methodology could be used to generate data, for example, a cross-sectional online survey of pharmacists across different sectors: hospital, general practice and community pharmacy.

Conclusion

The findings from the one to one interviews suggested that participants were able to identify suboptimal pharmaceutical care in their own and in other's practice. Participants described challenges in knowing how, and whether to report on instances of suboptimal pharmaceutical care. The majority of participants would opt to 'fix' an episode of suboptimal pharmaceutical care, but the likelihood of going on to report or provide feedback was influenced by professional embarrassment, hierarchy and time constraints. Using the TDF domains to describe behavioural determinants enables targeted behaviour change methods to be suggested to counter these behaviours.

Declarations

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Conflicts of Interest – Derek Stewart is Editor-in-Chief and Vibhu Paudyal Associate Editor of the International Journal of Clinical Pharmacy. They had no role in handling the manuscript, specifically the processes of editorial review, peer review and decision making.

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Figures

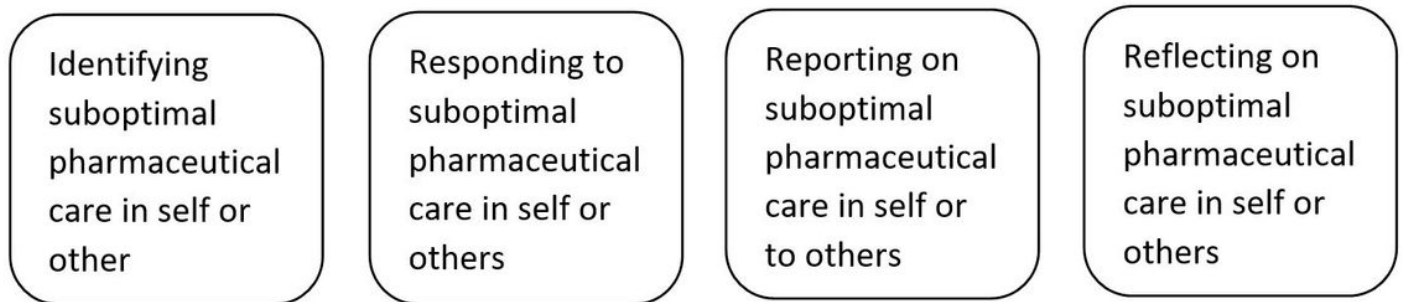


Figure 1

The four phases within suboptimal pharmaceutical care process.