Exploring the implementation of Discharge Medicines Review referrals by hospital pharmacy professionals: A qualitative study using the consolidated framework for implementation research

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ABSTRACT

Background: The Discharge Medicines Review (DMR) is a community pharmacy service in Wales that aims to reduce medicines-related harm after care transitions, including hospital discharge. To undertake a DMR, the Community Pharmacist must receive a patient's discharge medicines information, either electronically, by fax or presented by the patient. Although the DMR has evidenced benefits for improving patient safety, its evaluation showed inconsistent uptake, which Community Pharmacists partially attributed to hospitals not providing the necessary information.
Objective: Aiming to develop recommendations to improve hospital engagement to DMR referrals, this study explores hospital pharmacy professionals' views of the service.
Methods: Qualitative focus groups, using hermeneutic phenomenology, were conducted in 16 hospitals across Wales, using a quota sampling method to include 61 Pharmacists and 31 Pharmacy Technicians. To understand the suboptimal engagement to DMR referrals, framework analysis was undertaken using the Consolidated Framework for Implementation Research (CFIR).
Results: The data were mapped onto all five CFIR domains, each containing barriers and facilitators to engagement with DMR referrals and suggestions for improvement. Only one hospital had successfully implemented DMR referrals, with many participants lacking any knowledge of the service or how to refer to it. Specific barriers included a clear absence of processes to implement referrals and engage hospital pharmacy professionals. A considerable barrier was many participants' perceptions that Community Pharmacist roles were less clinically orientated and patient-centred than their own, viewing them almost as a different profession.
Participants believed that local champions for DMR referrals could promote engagement and integrate them into the workflow of hospital pharmacy professionals. Further recommendations to improve engagement was staff training for DMRs and regular feedback of its value.
Conclusion: Policymakers may use the findings and recommendations from this study to promote hospital pharmacy staff engagement to similar community pharmacy services like the Discharge Medicines Service in England.

1. Introduction

Medicines are the most commonly used intervention in healthcare and the leading cause of avoidable harm.[1] Acknowledging this, the World Health Organization set a global challenge to halve preventable medicine-related harm by 2022 in their Medication Without Harm report, highlighting several key healthcare system attributes[1] including patients and the public; medicines; healthcare professionals; systems and practices of medication. One specific area they focussed on was hospital discharge, a care transition frequently associated with medicines discontinuity and harm.[2]

International healthcare systems have paid significant attention to the role of Community Pharmacists in reducing these risks through the delivery of transfer of care interventions, typically medicines

reconciliation and adherence support.[3] A few healthcare systems have subsequently integrated post-discharge support into existing commissioned community pharmacy post-discharge services; examples include the MedsCheck service in Canada,[4] the hospital-initiated Home Medication Review in Australia,[5] and Medication Therapy Management services in the United States of America.[3] In contrast, the Discharge Medicines Review (DMR) is a national and bespoke community pharmacy post-discharge service in Wales. The DMR was conceptualised by the Welsh Government and supported by Community Pharmacy Wales, the national negotiating body for pharmacies in Wales, and implemented in November 2011. Initial implementation of the DMR involved a letter to all pharmacy contractors from the Chief Pharmaceutical Officer introducing the service and outlining the accreditation requirements for pharmacists; namely, to be trained and accredited for an existing commissioned medicines review service and to complete a self-declaration of competency.[6] An implementation payment was also offered to pharmacies that delivered 15 DMRs within the first two financial years. Furthermore, each community pharmacy in Wales was initially contracted to deliver up to 140 DMRs annually and reimbursed for each service provided[6]; since April 2021, this annual cap has been removed.[7]

The DMR, as described in Fig. 1, is a complex intervention involving several stages across multiple settings. In brief, medicines-specific information from the discharge advice letter (DAL), either in electronic, paper or fax format, must be provided to the Community Pharmacist, who will reconcile it against the first prescription from the General Practitioner (GP) practice post-discharge.[8] Following rectification of any discrepancies, an adherence-focused discussion between the Pharmacist and the patient or carer should occur.

Evaluation of the DMR has consistently demonstrated its patient safety benefits,[6,9] with the initial evaluation identifying, on average, 1.3 discrepancies between the DAL and the first post-discharge prescription and a 3:1 return on its economic investment.[6] However, it has also identified an inconsistent uptake of the service and several barriers to engagement from community and Hospital Pharmacists. Community Pharmacists were challenged by identifying patients who had recently been discharged, whereas most Hospital Pharmacists were unaware of the service itself, and those who were aware of it wanted regular feedback on DMR outcomes for the patients they referred.

To overcome difficulties in patient identification and to improve information quality and availability across healthcare sectors, NHS Wales Informatics Service (now Digital Health and Care Wales (DHCW)) developed a digital functionality for an electronic version of the DMR in *Choose Pharmacy* (the existing national IT infrastructure for recording services in community pharmacies in Wales). This functionality is interoperable with the national electronic hospital discharge system, Medicines Transcribing and electronic Discharge (MTeD), which continues to be rolled out across hospitals in Wales, having started in 2012. With patient consent, when a patient is discharged from a ward where MTeD is available, the Community Pharmacist is emailed to notify them of the discharge, prompting them to securely access the electronic Discharge Advice Letter (eDAL) via Choose Pharmacy.

Evaluation of the electronic DMR functionality revealed high satisfaction of Community Pharmacists with the changes,[10] but they suggested they rarely received notification of patient discharges and perceived this was because the hospitals were not referring patients. In 2018, a brief analysis of DMR provision showed that only 0.7% of all commissioned DMRs (of the annual limit of 140 per pharmacy at that time) were being undertaken.[11] This suboptimal uptake needs to be addressed since the patient safety value of the DMR has been further evidenced by Mantzourani et al. who found, through national routine data linkage, that having a DMR was associated with a reduction in risk of hospital readmission within 40 days.[9]

Since the hospital can be considered the start of the DMR referral system and there have been considerable changes to DMR referrals since the initial evaluation in 2013, this paper aimed to explore perceptions of hospital pharmacy professionals through the lens of an implementation framework, to understand any barriers and facilitators that impact engagement with DMR referrals and hence make recommendations for improvement.

2. Methods

A qualitative methodology with a hermeneutic phenomenology design was employed, with focus groups as a data collection method. In line with recommendations in the Medical Research Council framework for evaluating complex interventions, key stakeholders from the Welsh Government and senior pharmacy leaders across NHS Wales were

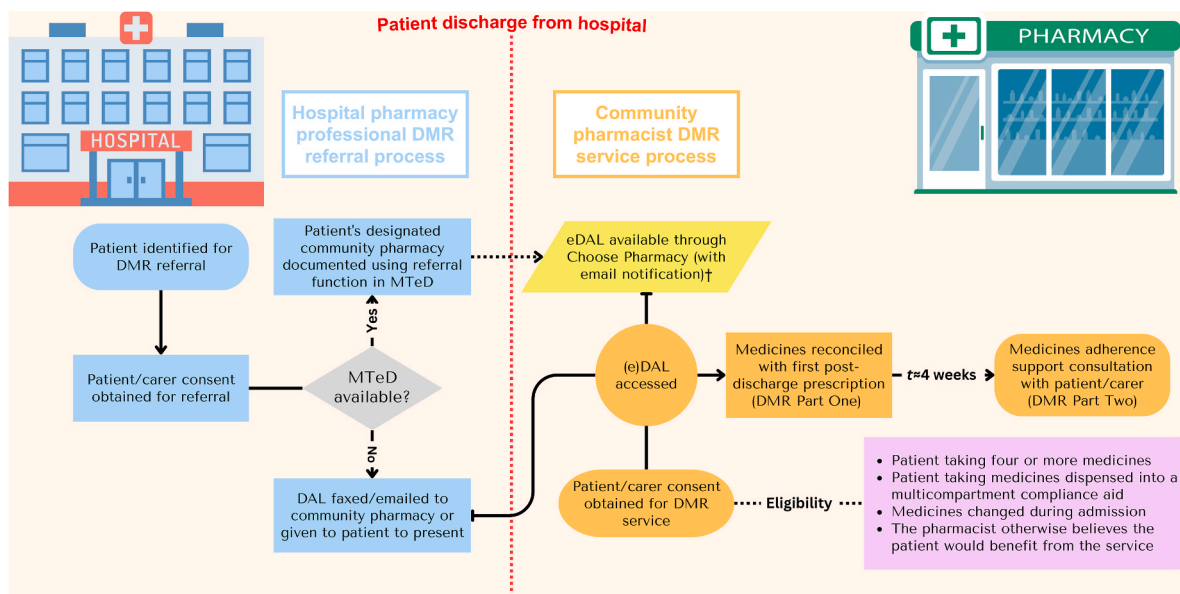**Fig. 1.** Process for the Discharge Medicines Review Service and its Referrals (created in Canva®).
MTeD = Medicines Transcribing and electronic Discharge. eDAL = electronic Discharge Advice Letter.
†An eDAL will also be available after discharge if a patient is discharged from a ward using MTeD and the community Pharmacist has pre-registered the patient for the DMR service on Choose Pharmacy.

Table 1
Study results mapped onto the consolidated framework for implementation research.

Construct	Definition	Barrier	Facilitators	Strategies for Improvement
1. Innovation Characteristics				
Innovation source	Perception of key stakeholders about whether the innovation is externally or internally developed.	Not discussed by study participants.		
Evidence strength and quality	Stakeholders' perceptions of the quality and validity of evidence supporting the belief that the innovation will have desired outcomes.	✓	✓	✓
Relative advantage	Stakeholders' perception of the advantage of implementing the innovation versus an alternative solution.	✓	✓	
Adaptability	The degree to which an innovation can be adapted, tailored, refined, or reinvented to meet local needs.	✓	✓	
Trialability	The ability to test the innovation on a small scale in the organization, and to be able to reverse course (undo implementation) if warranted.	Not discussed by study participants.		
Complexity	Perceived difficulty of the innovation, reflected by duration, scope, radicalness, disruptiveness, centrality, and intricacy and number of steps required to implement.	✓		
Design package and quality	Perceived excellence in how the innovation is bundled, presented, and assembled.	✓	✓	✓
Cost	Costs of the innovation and costs associated with implementing the innovation including investment, supply, and opportunity costs.	✓		
2. Outer Setting				
Needs and resources	The extent to which the needs of those served by the organization (e.g., patients), as well as barriers and facilitators to meet those needs, are accurately known and prioritised by the organization.	✓		✓
Cosmopolitanism	The degree to which an organization is networked with other external organisations.	✓		✓
Peer pressure	Mimetic or competitive pressure to implement an innovation, typically because most or other key peer or competing organisations have already implemented or are in a bid for a competitive edge.	Not discussed by study participants.		
External policies and incentives	A broad construct that includes external strategies to spread innovations including policy and regulations (governmental or other central entity), external mandates, recommendations and guidelines, pay-for-performance, collaboratives, and public or benchmark reporting.			✓
3. Inner Setting				
Structural characteristics	The social architecture, age, maturity, and size of an organization.	✓	✓	✓
Networks & communications	The nature and quality of webs of social networks, and the nature and quality of formal and informal communications within an organization.	✓		
Culture	Norms, values, and basic assumptions of a given organization.	✓	✓	
Implementation climate	The absorptive capacity for change, shared receptivity of involved individuals to an innovation, and the extent to which use of that innovation will be rewarded, supported, and expected within their organization.	✓	✓	✓
Readiness for implementation	Tangible and immediate indicators of organizational commitment to its decision to implement an innovation.	✓		✓
4. Characteristics of individuals				
Knowledge and beliefs about the intervention	Individuals' attitudes toward and value placed on the innovation, as well as familiarity with facts, truths, and principles related to the innovation.	✓	✓	✓
Self-efficacy	Individual belief in their own capabilities to execute courses of action to achieve implementation goals.	✓	✓	✓
Individual stage of change	Characterization of the phase an individual is in, as s/he progresses toward skilled, enthusiastic, and sustained use of the innovation.	Not discussed by study participants.		
Individual identification with organization	A broad construct related to how individuals perceive the organization, and their relationship and degree of commitment with that organization.	Not discussed by study participants.		
Other personal attributes	broad construct to include other personal traits such as tolerance of ambiguity, intellectual ability, motivation, values, competence, capacity, and learning style.	Not discussed by study participants.		
5. Process				
Planning	The degree to which a scheme or method of behavior and tasks for implementing an innovation are developed in advance, and the quality of those schemes or methods.	✓		
Engaging	Attracting and involving appropriate individuals in the implementation and use of the innovation through a combined strategy of social marketing, education, role modeling, training, and other similar activities.	✓	✓	✓
Executing	Carrying out or accomplishing the implementation according to plan.	✓	✓	✓
Reflecting and evaluating	Quantitative and qualitative feedback about the progress and quality of implementation accompanied with regular personal and team debriefing about progress and experience.	✓		✓

involved in study development to ensure feasibility and that the findings would be disseminated to influence policy.[12]

Seven Local Health Boards (LHBs) and 2 NHS Trusts are responsible for providing NHS health services in Wales. Acknowledging that pharmacy services and practices vary between LHBs and Trusts and between hospitals within them, it was decided to conduct focus groups in each major acute hospital in Wales (hospitals containing an emergency department [n = 16]). Since one LHB did not have any major acute hospitals, it was also decided to conduct a focus group with the team of hospital pharmacy professionals travelling around the region's district hospitals providing a roaming service (n = 1). Completing 17 focus groups for this study aligns with the principles of information power[13] since it was essential to consider the varying views across Wales.

The population was all Pharmacists and Pharmacy Technicians from these 17 sites directly involved in the discharge process. Each focus group aimed to include 6 participants. A quota sampling method aimed to recruit two Senior Pharmacists (defined as band 8+ on the NHS agenda for change scale), two Junior Pharmacists (band 6–7) and two Pharmacy Technicians per focus group.[14] This sampling approach ensured a balanced representation of professional characteristics and tenure, increasing the likelihood of including staff who remembered the implementation of the DMR.

As there was no publicly available sampling frame for the population, gatekeepers were employed to disseminate the invitation to participate in the focus groups at each site. An email was sent to all potential participants with a participant information leaflet and a

consent form. A reminder email was sent two weeks after the initial invite. A suitable date and time for each focus group was arranged once sufficient participants provided their signed consent forms. The gatekeepers facilitated the local arrangements for the focus groups, which were all held face-to-face.

Focus groups were audio recorded, with consent, and facilitated by a focus group schedule, which was designed by the research team with input from the external stakeholders. The schedule was designed to broadly explore the implementation of DMR referrals, including specific prompts designed to investigate barriers identified from the original DMR evaluation: the lack of routine feedback from referrals and knowledge of the service. A focusing exercise was undertaken, where the group was asked to make a flow chart of the process of referring a patient for a DMR at their site. This, which acted as an icebreaker, and subsequent questions promoted discussion on current practices, barriers and facilitators and unveiled some group dynamics.[14]

Each focus group was conducted with a moderator (RJ, a PhD student with previous focus group experience) and an assistant moderator (one of two undergraduate pharmacy students). Both undergraduate students undertook background reading regarding qualitative research and focus groups before data collection began, alongside several discussions with the research team to ensure their understanding of their role and how to undertake it. Furthermore, both students assisted the moderation of the first focus group, which was followed by a research team debrief to ensure ongoing quality and consistency.

The audio recordings were transcribed *ad verbatim* either by one member of the research team or professional transcription services, quality assured and de-identified. As the aim of the research was to understand why the implementation of the DMR has been suboptimal and to make recommendations for improvement, framework analysis using the Consolidated Framework for Implementation Research (CFIR) was undertaken to analyse the data.[15] CFIR consists of five domains; innovation characteristics, outer setting, inner setting, characteristics of individuals, and process.[16] The data were mapped to the 26 constructs that sit within these domains, which are described alongside the results in Table 1. The authors did not map data to any CFIR subconstructs as they were considered too granular to facilitate a cohesive and integrated narrative. Initial mapping of data was undertaken primarily by KH and EM, which was refined by RJ, after which all research team members reviewed the final version to increase credibility.

Using the Health Research Authority guidance,[17] this study was defined as a service evaluation; therefore, it did not require NHS ethics approval. University approval was obtained from the Cardiff School of Pharmacy and Pharmaceutical Sciences Research Ethics Committee, who reviewed the study's protocol and all associated documentation. The study was registered in line with each LHB's requirements.

This report has been based on the Standards for Reporting Qualitative Research (Appendix 1).[18]

2.1. Reflexivity

The research team consisted of RJ (PhD student at time of study responsible for data collection), KH and EM (experienced researchers involved in transfer of care services). RJ and EM are registered Pharmacists with extensive community pharmacy experience in Wales. KH is a previously registered Pharmacist. Acknowledging that these characteristics could influence the interpretation of the data, quotations are used to increase trustworthiness and each member was involved in reviewing the analysis to challenge any interpretation grounded in preconceptions rather than the data.[19]

3. Results

Fifteen focus groups were completed in major acute hospitals, and one was completed in the roaming pharmacy service in the rural LHB. One major acute hospital did not participate due to low recruitment. In

total, 92 participants were included in the focus groups, comprising 31 Pharmacy Technicians (PhTs), 30 Junior Pharmacists (JPs), and 31 Senior Pharmacists (SPs). Appendix 2 outlines the details and composition of each focus group.

Following framework analysis, the data were mapped onto all five domains of CFIR. Table 1 describes the 26 CFIR constructs and whether the analysis identified associated barriers, facilitators and potential strategies for improvement for DMR referrals.

3.1. Construct 1: innovation characteristics

3.1.1. Evidence strength and quality/cost

Some Senior Pharmacists were sceptical of the published evidence[6] supporting the DMR, specifically the patient safety benefit of identifying discrepancies between the DAL and the first post-discharge prescription, a clear barrier for referrals. Most participants were unaware of the published evidence regarding the DMR's association with reduced hospital readmissions. When informed of this evidence, many participants' views of the DMR changed.

> LHB1-H3-SP1: "Maybe they [pharmacy staff] are not aware of the data 'cos I have not heard of that specific data being quoted otherwise I would think post-discharge MUR [Medicines Use Review] is a good thing."

Many participants discussed the opportunity cost of completing a referral, prioritising other tasks that they perceived were more valuable. Therefore, to improve the perceived value of the DMR, participants in all focus groups wanted feedback from referrals, with outcomes focusing on hospital readmission rates and improvements in adherence and adverse drug reaction rates. Participants in most groups felt that feedback presented as case studies would encourage them to refer more patients.

> LHB5-FG3-JP2: " … if there was like a case study [of a DMR] it would be quite nice, because then you could see a very specific example of the difference it's making. Numbers are great, and they do push us, but I always like a nice, specific, feel-good example of how we've helped someone".

Additionally, participants believed feedback on any economic consequences of the DMR would encourage hospital management to prioritise referrals.

3.1.2. Relative advantage

In four LHBs, participants described routine collaboration with Primary Care Pharmacists (Pharmacists who work in General Practice) for post-discharge support and, therefore, considered the DMR unnecessary work duplication. However, participants in two focus groups said they did not have Primary Care Pharmacists working in their area routinely. Therefore, they felt community pharmacies could provide the most consistent post-discharge support.

The participants working routinely with Primary Care Pharmacists perceived that this method of post-discharge support was superior to the DMR; this was grounded in the perception that Primary Care Pharmacists had more dedicated time for post-discharge support than Community Pharmacists, whom they perceived as too busy. Some felt this could be improved by allowing Pharmacy Technicians to complete DMRs.

> LHB3-FG2-PhT1: "I would choose a Primary Care Pharmacist [for post-discharge support] because I feel like they would follow up promptly, rather than a business that can squeeze it in".

Furthermore, some participants felt Primary Care Pharmacists provided more comprehensive support than Community Pharmacists. These views were grounded in the perception that Primary Care Pharmacists had greater clinical acumen, had access to the patient's clinical record and were more likely to be prescribers; therefore, they could rectify discrepancies themselves. This view was contrasted with Community

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Pharmacists acting as middlemen between the patient and the GP.

3.1.3. Complexity/design package and quality/adaptability

Communicating the discharge information to a patient's community pharmacy is core to the DMR service. Participants described different ways this has occurred in their day-to-day practice, demonstrating adaptable elements. These included patients delivering a copy of the discharge advice letter to the community pharmacy, electronic distribution via national and local IT infrastructure, and sending discharge information via fax and telephone. A specific example mentioned multiple times was when the discharge involved medicines being supplied via a multi-compartment compliance aid (MCA). The IT infrastructure available delayed this information being sent promptly; however, different approaches were used to overcome this, for example, using a fax machine.

LHB4-H3-T2: "So when we say about faxing if they [the community pharmacy] want to see something upfront to do a tray. If you choose pharmacy [electronically refer the patient], they're not going to be able to have that information to work on until the patient's gone home."

These alternative methods were considered too time-consuming for routine DMR referrals.

Most participants perceived the DMR to be a complex intervention for several reasons, grounded in a lack of knowledge of the service requirements and how these applied to their role. The area highlighted most as complex was obtaining consent from a patient to share their discharge information with a community pharmacy because of low patient awareness of the service, which they believed led to lengthy conversations. Additionally, many participants shared frustrations when they could not identify the patient's regular community pharmacy. However, Pharmacy Technicians in two focus groups proposed that consent for electronic information transfer would not take much time since they already ask patients for consent to access their GP records at admission. Nonetheless, a few participants were critical of the consent requirements altogether, suggesting that they should be eased.

LHB2-FG1-SP2: "One of the barriers to the transfer of information are the consent laws […] It's a bit different than sending them to the person who manages the local Lidl [UK supermarket chain] or something, because they're [Community Pharmacist] involved with the patient's care".

A further referral barrier was that participants were unaware of which services each pharmacy was registered to provide and whether the Pharmacists had the appropriate accreditation to provide the DMR. For a few Pharmacy Technicians, this barrier was grounded in their experience of failed attempts to refer for a DMR.

LHB4-FG2-PhT2: "We've had a couple of pharmacies recently that haven't been able to do it [the DMR service] so we've got one that hasn't got a suitable premises and then we had another incidence where he said 'oh, well I don't think we can do it.'"

All participants were positive about electronic transmission of discharge information and considered it superior to paper, with perceived improvements in quality, timeliness, and information security. However, many participants described frustrations with MTeD due to a perceived lack of user-friendliness.

LHB2-FG2-SP1: "The [electronic discharge] systems need to be slick and quick because as I alluded to before, MTeD is incredibly cumbersome and clunky".

Furthermore, the implementation of electronic discharge systems was varied. This lack of uniformity existed on a spectrum, with LHB2 using the same system on most wards in contrast to one hospital, which used three different systems concurrently, including paper transmission. Many participants suggested that the lack of system uniformity limited

DMR referrals because they could not be ingrained into daily routines. The wards without MTeD were typically described as admission wards that did not have resources to facilitate change due to their fast patient turnaround. In addition, one LHB had not adopted MTeD, electing to their in-house electronic discharge system instead. The national implementation of MTeD and improvements to its usability were often discussed to optimise engagement to DMR referrals.

3.2. Construct 2: outer setting

3.2.1. Needs and resources

Participants perceived that they, and Primary Care Pharmacists, met patient needs and were patient-centred, unlike Community Pharmacists, whom they perceived as business-orientated. This perception existed on a spectrum, with most participants being somewhat sceptical of the motives behind community pharmacy services, which was a barrier to referrals. Some stated that Community Pharmacists would provide DMRs to uncomplicated patients to meet service targets.

LHB7-FG1-SP2: "So my concern, if cynical, is that community pharmacies aren't going to pick up the ones [DMRs] needed, they're going to pick up the ones that are quick wins for money".

Pharmacists in all groups thought patients knew little about community pharmacy services, including the DMR. They suggested that patients would not engage with the DMR if they did not understand its value. Numerous patient advertising methods were discussed, including TV adverts, posters in GP surgeries, or speaking with the patient to describe the service and its benefits. Participants in one focus group suggested creating leaflets and videos to 'sell' the service to patients while in the hospital.

LHB2-FG3-SP1: "We need to sell it [the DMR] to the patients […] they need to see the point of it because if I see the point of it that's fine, and the community pharmacy sees the point of it. But if the patient doesn't, then they don't really engage".

3.2.2. Cosmopolitanism

Participants who had experience collaborating with Primary Care Pharmacists cited their personal relationship as influential in referring to them preferentially for post-discharge support, as it facilitated better communication and instilled accountability for actioning referrals. Participants in some groups described how Primary Care Pharmacists were often trained in hospitals, meaning they belonged to the same peer group with shared experience and capabilities.

LHB2-FG2-JP2: "I think because we know the Practice Pharmacists, quite a lot of them have gone from the hospital background, they get it. We speak the same language with the Practice Pharmacists … and we know what they're able to do".

In contrast, Senior Pharmacists in a few groups did not consider themselves in the same peer group as Community Pharmacists, referring to them as 'chemists' rather than Pharmacists. These participants also held sceptical views about community pharmacy in general and the benefits of the DMR. Participants in all groups discussed how they lacked a strong working relationship with Community Pharmacists, which was a referral barrier.

Most participants, except those with community pharmacy experience, were unfamiliar with the community pharmacy sector, which was a barrier to collaboration. This lack of familiarity included what services Community Pharmacists could provide, their professional limitations, and what information they could access. Participants acknowledged the need to raise their awareness of all pharmacy sectors to improve cross-sector collaboration and DMR referral engagement. Methods to improve this were conceptualised as cross-sector training for Pharmacists and Pharmacy Technicians or networking events where Community Pharmacists would present DMR case studies to hospital staff.

3.2.3. External policies and incentives

No external policies for minimising harm at discharge were discussed in any focus group. Some participants perceived that Community Pharmacists are incentivised to complete DMR services via service remuneration, but the hospital has no incentive to promote DMR referrals. Furthermore, many participants felt that if the hospital could receive information on the percentage of patients at discharge referred for a DMR, this may create competition between hospitals and, as such, may act as an incentive to increase referrals.

3.3. Construct 3: inner setting

3.3.1. Structural characteristics

Across the focus groups, it was clear that the structural characteristics of hospital pharmacy departments varied considerably. In some focus groups, participants suggested the skill mix on the wards was a barrier to DMR referrals, as they were often diverted to cover other departments or roles. Most notably, in the context of DMR referrals, participants suggested that the availability of Pharmacy Technicians to complete referrals was a facilitator. The importance of this skill mix was evidenced in LHB4-FG2 (the hospital that routinely referred for DMRs), which had a Pharmacy Technician-led referral process.

LHB4-FG2-JP2: "I mean, if it wasn't for the technicians taking up the bulk of it [DMR referrals], I don't think many would be done at all because I don't think anybody has the time".

3.3.2. Networks and communication

In several instances throughout the focus groups, participants described a lack of communication regarding internal systems and procedures. As described elsewhere, many participants were uncertain of any hospital policy for DMR referrals or whether they were still active. Furthermore, in some hospitals without MTeD availability, participants suggested they were reluctant to develop new policies since they were unaware when MTeD would be implemented.

3.3.3. Culture/implementation climate/readiness for implementation

In most focus groups, it was evident that the organization's leaders had not communicated the responsibility to refer patients for DMRs, resulting in a culture of disinterest or lack of prioritisation of tasks surrounding discharge.

LHB1-FG1-SP1: "The reason it's [DMR referrals] low down in our priority list there is that Community Pharmacists aren't going to come in and see the acute patients for us personally; [...] if I've only got X amount of time, I need to do my work before what I perceive to be **their** work".

Only the participants from LHB4-FG2 discussed how referrals were their responsibility since adequate post-discharge care was essential to continue their work.

Many participants suggested they did not consider DMR referrals because they were not part of their usual workflow and processes, nor was it normalised. Participants felt that integrating referrals into their work processes would be a facilitator and that their management should endeavour to complete this while considering local workflow and context.

LHB4-FG1-SP1: " … maybe somebody who looked at the way **we** work and made it [DMR referrals] an easy part of your day, not an extra thing. I think if somebody saw it as 'you want me to do this as well?' then it doesn't get done".

A suggestion to improve workflow proposed by participants in many focus groups was for Pharmacy Technicians to take a leading role in DMR referrals and start the process at admission rather than wait until discharge. Some participants suggested that to successfully integrate referrals into the workflow, they would need to refer every patient rather than choosing who would be appropriate. However, some participants were concerned that this workflow could overwhelm the capacity of Community Pharmacists, who would need to triage more referrals.

In hospitals without MTeD, time was identified as one of the main DMR referral barriers. In contrast, in hospitals with this functionality, participants suggested that the lack of workflow integration was the barrier, not time, since referring was quick.

LHB4-FG2-SP2: "If there was a simpler process for us [to refer for the DMR] that's quite quick, not the whole faxing that was very time-consuming, if it's literally just identification of a patient that would benefit from it and a tick box consent, in terms of the whole time that we spend doing the discharge, I think is very small and wouldn't be a barrier".

Participants in many focus groups also discussed how suboptimal staffing levels, such as on weekends and out-of-hours, reduced the capacity for DMR referrals. When most participants were short on time or staff, they felt DMR referrals were not a priority since they did not consider them valuable compared with other tasks that they were directed to complete by management. The extent of this perception varied across hospital sites.

LHB4-FG3-PhT1: " … we are quite understaffed, and then we're being told by senior members of staff that our priority is to see these new patients to do our discharges and that's all you can do".

One group's participants discussed a recent pilot for a dedicated Pharmacist and Pharmacy Technician on their ward. They perceived this pilot as the ideal staffing level to facilitate additional service provisions, such as DMR referrals. The lack of priority organisations had placed on DMR referrals was reflected by the fact that most participants were unaware if standard operating procedures existed for them. Where they existed, participants frequently stated they were out of date.

It was clear from the focus groups that there was a lack of formal training about the DMR and its referrals, both during the induction of new staff and ongoing education. Participants felt this was a significant barrier to engaging with referrals because it limited their knowledge of the service and how to refer for it. However, participants in one focus group described how DMR referrals are included in their Pharmacy Technician training module. The participants in this group were far more knowledgeable and optimistic about the DMR than other groups, reflecting the degree to which this organization had a clear goal and communicated it to staff. Conversely, in one focus group, the lack of training for the DMR gave the impression to staff that referrals were not a priority.

LHB1-FG1-SP1: " … because it's [DMR referrals] not included in things like the induction, […] so it's not really flagged as an important thing from a hospital perspective cos [sic] we're trying to do all the other things".

Without formalised training, participants gained most of their knowledge about the DMR and its referral process through personal community pharmacy experience or word of mouth. Some participants knew about electronic DMR referrals since their role included working with MTeD. However, there was no routine dissemination of this information to other staff. Participants in all groups described that since other stakeholders could refer for DMRs, like nurses and doctors, they should be educated about the benefits of the service.

3.4. Construct 4: characteristics of individuals

3.4.1. Knowledge and beliefs about the intervention

A clear barrier to DMR referrals was the profound lack of knowledge of the DMR service found across the focus groups.

LHB7-FG1-JP1: "I've been here for eighteen months, so I've not been here a long time, but I wasn't even aware it [the DMR] was a thing".

Some Pharmacists with community pharmacy experience perceived the DMR as valuable for improving patient safety by reducing post-discharge discrepancies and hospital readmissions, improving their motivation to refer. In contrast, a few Pharmacists remained sceptical of the DMR's benefits, even when the evidence was described. Some scepticism was likely caused by the participants' common mis-conceptions about the service specification and scope. For example, some participants believed the DMR involved making clinical decisions about patient care. Therefore, they were reluctant to refer when they doubted Community Pharmacists' clinical acumen and commitment to patient care (see Construct 1: relative advantage). Many participants thought that the DMR could not be delivered to housebound patients, including those who had medication collected on their behalf.

LHB6-FG1-PhT1: "Some of my patients that I think it [a DMR] might be useful for, you then discover 'oh I get my medicines delivered', so they never actually step foot in the community pharmacy".

Despite mixed opinions on the DMR's value, most participants felt that Community Pharmacists should be aware when their patients are admitted to hospital and have access to all their patients' discharge medicines information for reference, even if not for DMRs. Some Senior Pharmacists disagreed with this, suggesting Community Pharmacists would not benefit from information about acute medicines and that the patients would not consent. Many participants said that for a DMR referral to be meaningful and improve communication, they should be able to stipulate a referral reason.

LHB4-FG2-JP2: "The whole point of this [DMR referrals] is to pro-mote the communication […] but if we can't even write a note as to what we want them [Community Pharmacists] to specifically look at, then it diminishes the value of it".

3.4.2. Self-efficacy

Participants in all focus groups, except LHB4-FG2, lacked familiarity and confidence with DMR referrals, including who and how to refer, demonstrating low self-efficacy. Most participants in hospitals using MTeD described a lack of confidence in using the system and were un-sure of the consequences of making a referral; this made them reluctant to refer.

LHB5-FG3-PhT2: "I feel like I'm a little bit afraid to use Choose Pharmacy [function for DMR referrals] just because I don't know what it looks like. You don't know what the system is like and what it entails and how to use it".

Although most participants suggested they would be confident in knowing whom to refer for DMRs using their professional judgement, they were unaware of any hospital referral policy or the eligibility criteria for the DMR service.

Some participants highlighted that new staff members or Pharmacy Technicians might benefit from referral criteria to aid their judgement. However, many participants highlighted that strict referral criteria would prevent some patients from receiving a DMR.

3.5. Construct 5: implementation process

3.5.1. Planning/executing

Limited evidence of fidelity to planned courses of action was pro-vided during the focus groups. Only participants in one focus group identified a routine process for DMR referrals, whereas the others did not routinely refer.

LHB3-FG2-SP1: "Yeah I don't think there's any more a proactive DMR referral made. I'd be very surprised if there was."

In one hospital, participants described that their electronic discharge system automatically printed off a DAL for the patient's Community Pharmacist. Discharging practitioners routinely placed the DAL in each patient's medicines bag in an envelope marked *"to be taken to your community pharmacy"*. Participants in other focus groups discussed how their hospital had previously used similar letters to encourage patients to attend their community pharmacy for a DMR. However, they were uncertain whether these letters were still available.

Unlike DMR referrals, participants in all focus groups discussed robust processes for transmitting discharge information for patients who have their medication dispensed into MCAs. Fax transmission of discharge information was used regardless of whether the discharging ward could transmit electronically to facilitate the timely preparation of an MCA in the community pharmacy after discharge. Routine commu-nication with community pharmacies was also commonplace for other patient populations, including those with restricted medicines supply or who receive a Medicines Administration Record chart.

3.5.2. Engaging

Senior Pharmacists in most groups discussed an initial concerted pilot to promote DMR referrals when the service was introduced. Even though these pilots were considered positive, interest waned over time since the hospital management did not sustain these efforts.

LHB2-FG3-SP2: " … there was a specific technician [Pharmacy Technician] dedicated to work on MTeD to roll it out and so on [LHB2-FG3-PhT1: 'and she was good'] and then it fizzled out".

These initial concerted efforts to promote DMR referrals were often facilitated by a champion, often an individual undertaking post-graduate study or whose role involved working with the electronic discharge systems. This concept of having a champion was generally perceived as helpful, and it would successfully achieve a renewed in-terest in promoting DMR referrals.

3.5.3. Reflecting and evaluating

There was no evidence that any evaluation efforts had taken place for the implementation of DMR referrals in the hospitals where the focus groups were conducted. Many participants felt that feedback regarding the uptake of DMRs from community pharmacies would encourage them to refer patients. This feedback was conceptualised as the proportion of completed referrals or automated feedback to show that the Community Pharmacist acknowledged their referral via email or a read receipt in-tegrated into the electronic discharge system.

LHB1-FG1-PhT2: "If we had referred 100 patients a month, it would be nice for us to find out how much value was in referring that one hundred. Did 99 uptake, which means that the value's there? Or did we refer 100 out and now one up took? [one DMR was completed]".

All participants agreed that outcomes of the DMR consultation with the Community Pharmacist should be made available to hospitals, allowing other practitioners to review them when providing care to that patient. Not only was this perceived to have the potential to prevent work duplication and improve care, but to normalise DMRs amongst the hospital workforce.

4. Discussion

This study aimed to explore the perceptions of hospital pharmacy professionals to understand barriers and facilitators that impact their engagement with DMR referrals. The CFIR framework was utilised as it provided a structured approach to evaluate the implementation of the DMR, which is a complex service.[16] Whilst data mapped against most CFIR constructs, four appeared to underpin most barriers to the imple-mentation and sustained use of DMR referrals: 'knowledge and beliefs about the intervention', 'executing', 'engaging' and 'cosmopolitanism'. Although some of these constructs were identified in the initial DMR

evaluation, considerable system changes necessitated further investigation and the passage of time, alongside the application of CFIR, facilitated findings regarding the absence of sustained engagement with the DMR.

The study found that although the DMR has been in place since 2011, a major contributing factor to the low number of DMR referrals was the lack of awareness of the DMR service and its benefits to patient care. These findings are reflected in the DMR's initial evaluation, which suggested that Hospital Pharmacists felt 'out of the loop' with the service development and had not been 'sold' the benefits of them referring patients to the service.[6] Furthermore, a lack of hospital professional awareness was perceived as a barrier to the uptake of the similar hospital-initiated Home Medication Review in Australia.5 Interestingly, when this study's participants saw value in exchanging information with community pharmacies, for example, all patients requiring an MCA, they provided relevant information as part of their core role but did not perceive this to be a DMR referral. Some participants' opinions of DMRs seemed to change when the research demonstrating its link to readmissions was discussed, demonstrating the importance of planning evidence dissemination across pharmacy sectors and hospitals to ensure the research-practice gap does not occur.[20]

Participants' misunderstandings about the DMR's scope may partly explain their scepticism of its benefits. The DMR service is strictly for medicines reconciliation and adherence support[8]; however, many participants thought that the DMR involved the Community Pharmacist making clinical decisions about the patient's care. Some participants felt that Community Pharmacists were ill-equipped or unable to do this. The latter has also been found in a recent study exploring the barriers to providing a similar electronic referral system in England.[21]

Pharmacy professionals explained that a contributing factor to their lack of motivation was the absence of feedback on the outcome of the DMR referral, i.e. whether it was undertaken and, if it was, what happened. This lack of feedback was identified in the original DMR evaluation as a significant barrier[6] and has been identified as a barrier for similar systems in England.[21,22] The current study participants suggested that the DMR's outcomes could be uploaded to the national clinical record repository so all healthcare professionals could access them; DHCW has subsequently actioned this recommendation.[23] However, it is unknown how often this information is accessed by pharmacy staff. The 'Refer to Pharmacy' community pharmacy referral system in East Lancashire takes a different approach; there is an automated email to the referring practitioner once the referral has been actioned, identifying the service accessed by the patient, its outcome and whether it prevented a discrepancy, saved time or money.[24] A key informant involved in implementing and sustaining the use of this system believed this feedback facilitated engagement for hospital pharmacy professionals referring appropriate patients for post-discharge follow-up with the community pharmacy.[24] Other suggestions from the focus group participants to improve referral engagement and motivation included specific case discussions within teams and possible benchmarking of DMR referrals. Both may help in shifting the social norms[25,26] by allowing feedback discussions to help practitioners to reflect on the effectiveness and value of the DMR, which is an important aspect for the successful embedding of healthcare technology interventions.[27]

Alongside the lack of knowledge of the service, participants commented that they did not know how to refer. For those hospitals where MTeD is available, referral consists of gaining patient consent and clicking a button. However, as described in the original DMR evaluation,[6] gaining patient consent was identified as a barrier to referrals due to the time commitment to explain the service to patients who were perceived as having low awareness, which was also identified in a recent study investigating public perspectives of community pharmacy post-discharge services.[28] This low awareness could be improved through educational videos, such as those embedded into referral systems like Refer to Pharmacy in England[24] and those recently developed

in Wales for the DMR.[29] In Wales, three videos have recently been developed: for patients, community pharmacy teams and hospital pharmacy professionals. It is anticipated that these will improve the knowledge of the service, its benefits and how to refer to it.

Another barrier to DMR referrals was the lack of engagement with and execution of DMR referral implementation. It was clear that hospital management had not prioritised DMR referrals or incorporated them into the standard workflow for pharmacy professionals. Only one hospital had a process for DMR referrals, and participants from this hospital typically better understood the service and how to refer. To implement and sustain DMR referrals across Wales, participants suggested having a champion in each hospital to encourage local engagement and provide feedback on DMR referrals within the LHB. Utilising local champions has been widely supported in implementation literature to aid the sustained use of an innovation and specifically to promote engagement with community pharmacy referrals.[24,30]

The findings emphasised the importance of shared understanding, respect and trust within all sectors of the pharmacy profession to ensure patient-centred care is provided. Throughout the focus groups, it was evident that some hospital pharmacy professionals viewed Community Pharmacists primarily as dispensers in contrast to their own role and considered hospital and community pharmacy as almost two different professions, with a culture of 'their work' and 'our work'. They perceived Community Pharmacists would not be confident to provide DMRs, nor would they be motivated to complete them. Khayyat and Nazar[21] also identified the latter in their recent study investigating a similar referral system in England, but this contrasts with the findings of the original DMR evaluation,[6] where Community Pharmacists wanted more referrals because they enjoyed the service and felt it was a good use of their skills. From their realist synthesis of international pharmacist-led post-discharge medication reviews similar to the DMR, Luetsch et al.3 suggested that Community Pharmacists inviting hospital professionals to collaborate in post-discharge care could change these perceptions through legitimation. Other comments centred on some participants' views that Community Pharmacists prioritise business commitments over patient-centred care, a view also identified in the literature to be held by GPs.[31] Participants' perception of Community Pharmacists as less professional may be explained by their lack of familiarity with Community Pharmacist roles and responsibilities. In contrast, they considered Primary Care Pharmacists as equal peers, having often trained in the hospital setting with them. Altman et al.[32] described similar Hospital Pharmacist views that Community Pharmacists were less professional, but the results from this study demonstrate a clear detriment to collaboration because of these views, with participants choosing to refer to Primary Care Pharmacists for post-discharge support, instead of a DMR. A recent study involving student dentists and dental hygienists has shown that fostering a shared professional identity can modestly increase collaborative work.[33] The recent changes to the initial education and training of Pharmacists and Pharmacy Technicians in Wales will hopefully develop these shared identities as trainees will move from predominantly training in one sector to training in multiple sectors.[34,35] The University of British Columbia has developed a standardised approach to intra-professional pharmacy collaboration, emphasising the need for education on patient care roles and a culture shift underpinned by trust and shared goals.[36] This study's results indicate that a similar culture shift is needed for hospital pharmacy departments to facilitate DMR referrals.

The Welsh Government has already acknowledged community pharmacy's important and expanding role in their vision document Pharmacy: Delivering a Healthier Wales.[37] This document also emphasises the need for patient-centred care by deconstructing the traditional siloed working between all sectors. To achieve this for DMR referrals, transfer of care needs to be prioritised and considered part of the hospital pharmacy's core role.

4.1. Strengths and limitations

Using focus groups was a considerable strength, generating discussion between participants about their employing organization and processes. While the qualitative nature of the study does not generate generalisable findings, the relatively large sample size (n = 92) and all-Wales representativeness may enable stakeholders to transfer the findings to other hospital settings internationally.

As the participants were self-selecting, the results are subject to selection bias since population members with strong views on DMR may have been more likely to participate.[19] However, this is unlikely to have influenced the findings, given the lack of DMR awareness in most focus groups. The heterogeneous nature of the focus groups may have prevented honest discourse between the members; however, whilst this effect cannot be dismissed, Pharmacy Technicians and junior Pharmacists were typically the most engaged participants.

One acute site did not engage with the research; however, as all LHBs were represented in the 16 focus groups, this should not have significantly influenced the findings.

This study is the first use of CFIR to investigate the DMR service, which was valuable in organising rich qualitative data to identify service barriers and facilitators, as has been highlighted in other pharmacy services literature.[15] The authors acknowledge the updated version of CFIR, which was published subsequent to the analysis included in this manuscript.[38] Future work should endeavour to use the updated CFIR to validate its use in pharmacy services research.

5. Conclusion

This study successfully explored hospital pharmacy professionals' engagement with DMR referrals using CFIR. These factors varied between hospitals but rarely between local health boards and professional groups. Underpinning all the barriers identified through the study has been the fundamental lack of understanding of the DMR and organizational strategy for its implementation. Policymakers have acknowledged this and the evidence base of its benefits, and there is a dedicated group across Wales tasked with increasing uptake of the service. The findings of this study, summarised by the following recommendations, can be utilised by policymakers globally to target the WHO challenge of reducing medication-related harm.

6. Recommendations

1. There must be specific education and training to explain community pharmacy post-discharge service to all staff. It must include information on the scheme's patient benefits, how to refer and local engagement with the scheme.
2. Referral to community pharmacy post-discharge support services must be integrated into the core role of hospital pharmacy professionals.
3. Organisations should nominate champion(s) to sustain interest and motivation to refer patients for post-discharge support services. This should include developing integrated referral processes and providing feedback on the general outcomes of post-discharge community pharmacy services.
4. Organisations must have sufficient skill mix and capacity to support referral and electronic systems to promote seamless transfer of care.
5. Hospital pharmacy professionals must appreciate the importance of transfer of care and collaborating across care boundaries to allow community pharmacies to optimise patient care.

Author statement

Robert James: Conceptualization, Methodology, Formal Analysis, Investigation, Writing – Original Draft, Writing – Review & Editing, Visualization. Karen Hodson: Conceptualization, Methodology, Formal Analysis, Investigation, Writing – Original Draft, Writing – Review & Editing, Visualization, Supervision, Funding acquisition. Efi Mantzourani: Conceptualization, Methodology, Formal Analysis, Investigation, Writing – Original Draft, Writing – Review & Editing, Visualization, Supervision, Funding acquisition. Duncan Davies: Methodology, Resources, Writing – Review & Editing, Supervision, Project administration.

Declaration of competing interest

None.

Appendix 1. Standards for Reporting Qualitative Research Checklist

	Line no(s).
Title and abstract	
Title - Concise description of the nature and topic of the study Identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended	N/A
Abstract - Summary of key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results, and conclusions	1–35
Introduction	
Problem formulation - Description and significance of the problem/phenomenon studied; review of relevant theory and empirical work; problem statement	40–99
Purpose or research question - Purpose of the study and specific objectives or questions	100–104
Methods	
Qualitative approach and research paradigm - Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., postpositivist, constructivist/interpretivist) is also recommended; rationale**	106–111
Researcher characteristics and reflexivity - Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results, and/or transferability	170–177
Context - Setting/site and salient contextual factors; rationale**	54–90

(continued)

	Line no(s).
Sampling strategy - How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale**	121–127
Ethical issues pertaining to human subjects - Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues	163–166
Data collection methods - Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings; rationale**	135-150, and Appendix 2
Data collection instruments and technologies - Description of instruments (e.g., interview guides, questionnaires) and devices (e.g., audio recorders) used for data collection; if/how the instrument(s) changed over the course of the study	135–143
Units of study - Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	Appendix 2
Data processing - Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymization/de-identification of excerpts	151–152
Data analysis - Process by which inferences, themes, etc., were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale**	152–162
Techniques to enhance trustworthiness - Techniques to enhance trustworthiness and credibility of data analysis (e.g., member checking, audit trail, triangulation); rationale**	160–162
Results/findings	
Synthesis and interpretation - Main findings (e.g., interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	177–514
Links to empirical data - Evidence (e.g., quotes, field notes, text excerpts, photographs) to substantiate analytic findings	177–514
Discussion	
Integration with prior work, implications, transferability, and contribution(s) to the field - Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application/generalizability; identification of unique contribution(s) to scholarship in a discipline or field	515–626
Limitations - Trustworthiness and limitations of findings	627–646
Other	
Conflicts of interest - Potential sources of influence or perceived influence on study conduct and conclusions; how these were managed	N/A
Funding - Sources of funding and other support; role of funders in data collection, interpretation, and reporting	N/A

*The authors created the SRQR by searching the literature to identify guidelines, reporting standards, and critical appraisal criteria for qualitative research; reviewing the reference lists of retrieved sources; and contacting experts to gain feedback. The SRQR aims to improve the transparency of all aspects of qualitative research by providing clear standards for reporting qualitative research.

**The rationale should briefly discuss the justification for choosing that theory, approach, method, or technique rather than other options available, the assumptions and limitations implicit in those choices, and how those choices influence study conclusions and transferability. As appropriate, the rationale for several items might be discussed together.

Appendix 2. Details and composition of each focus group

Hospital	Time	Date	Participant	Notable Characteristics
LHB1-FG1	1:38	29/10/19	PhT1	Medicines management Pharmacy Technician (PhT).
			PhT2	Principal PhT for hospital.
			JP1	Previous Community Pharmacist.
			JP2	Rotational Pharmacist.
			SP1	Senior manager and works with informatics.
LHB2-FG1	1:53	17/10/19	PhT1	Medicines management PhT.
			JP1	None noted.
			JP2	None noted.
			SP1	Experience working as a Primary Care Pharmacist.
			SP2	Specialist Pharmacist. Locums in community pharmacy.
LHB2-FG2	1:43	17/10/19	PhT1	Medicines management PhT.
			PhT2	Medicines management PhT.
			JP1	Locums in community pharmacy.
			JP2	Trained in England.
			SP1	Senior manager.
			SP2	Specialist Pharmacist.
LHB2-FG3	1:46	05/11/19	PhT1	Senior PhT.
			PhT2	None noted.
			JP1	Rotational Pharmacist.
			SP1	Medicines information Pharmacist.
			SP2	Specialist Pharmacist.
LHB3-FG1	1:19	21/11/19	PhT1	Works with informatics.
			JP1	Rotational Pharmacist.
			JP2	Elderly care Pharmacist.
			SP1	Specialist Pharmacist.
			SP2	Specialist Pharmacist.
			SP3	Specialist Pharmacist.
			SP4	Senior manager.
LHB3-FG2	0:58	07/11/19	PhT1	Medicines management PhT. Previously worked in community.
			PhT2	Medicines management PhT. Previously worked in community.
			JP1	Paediatric Pharmacist.
			JP2	New to LHB.
			JP3	Specialist Pharmacist.
			SP1	Specialist clinical Pharmacist manager.
LHB4-FG1	1:24	20/11/19	PhT1	Medicines management PhT.

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(*continued*)

Hospital	Time	Date	Participant	Notable Characteristics
			PhT2	Medicines management PhT.
			SP1	Respiratory Pharmacist.
LHB4-FG2	1:41	19/11/19	PhT1	Medicines management PhT.
			PhT2	Medicines management PhT.
			JP1	Newly qualified Pharmacist.
			JP2	Community pharmacy experience.
			SP1	Senior manager with community pharmacy experience.
			SP2	Medicines information Pharmacist.
LHB4-FG3	1:33	06/11/19	PhT1	Medicines management PhT.
			PhT2	Medicines management PhT.
			JP1	Surgical Pharmacist, experience in primary care.
			JP2	Surgical Pharmacist.
			SP1	Specialist Pharmacist.
LHB5-FG1	1:00	14/11/19	PhT1	Medicines management PhT.
			PhT2	None noted.
			JP1	Pharmacist undertaking their diploma in clinical pharmacy.
			JP2	Previous community experience.
			SP1	Emergency department Pharmacist. Limited experience in community pharmacy.
			SP2	Senior manager.
LHB5-FG2	1:28	13/11/19	PhT1	Senior PhT.
			PhT2	Medicines management PhT.
			JP1	Previous experience in community pharmacy.
			JP2	None noted.
			SP1	Senior manager.
			SP2	Senior manager. Previous experience in community pharmacy.
LHB5-FG3	1:16	26/11/19	PhT1	None noted.
			PhT2	None noted.
			JP1	Pharmacist undertaking their diploma in clinical pharmacy with previous community pharmacy experience.
			JP2	None noted.
			SP1	Senior manager.
			SP2	Specialist Pharmacist.
LHB5-FG4	1:30	25/11/19	PhT1	Medicines management PhT.
			PhT2	Senior PhT.
			JP1	Experience in community pharmacy and primary care.
			SP1	Specialist Pharmacist.
			SP2	Specialist Pharmacist. Previous experience in community pharmacy.
			SP3	Senior manager.
LHB6-FG1	1:32	05/12/19	PhT1	None noted.
			PhT2	None noted.
			PhT3	Locum medicines management PhT.
			PhT4	None noted.
			JP1	None noted.
			JP2	None noted.
			JP3	Locum Pharmacist.
			SP1	Senior manager.
LHB7-FG1	1:36	12/11/19	PhT1	Senior PhT.
			PhT2	None noted.
			JP1	Locums in community pharmacy.
			SP1	Senior manager. Previous experience in community pharmacy.
			SP2	Specialist Pharmacist. Previous experience in community pharmacy.
LHB7-FG2	1:35	26/11/19	PhT1	Senior PhT.
			PhT2	None noted.
			PhT3	Previously worked in community pharmacy.
			JP1	Pharmacist undertaking a diploma in clinical pharmacy.
			JP2	Trained in community pharmacy.
			SP1	Senior manager.
			SP2	Specialist Pharmacist.

Key: PhT Pharmacy Technician; JP Junior Pharmacist (NHS band 6–7); SP Senior Pharmacist (NHS band 8a and above).

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