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Article

Patient Experiences of Community Pharmacy Medication Supply and Medicines Reconciliation at Hospital Discharge: A Qualitative Study

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Abstract: (1) Background: As part of the Scottish Governments five-year recovery plan to address the backlog in NHS care following the COVID-19 pandemic, community pharmacies in Scotland are planned to provide a Hospital Discharge Medicines Supply and Medicines Reconciliation Service. We aimed to qualitatively explore patients' experience of this new service; (2) Method: Adult patients (≥ 18 yrs age) who consented to participate in the Community Pharmacy Hospital Discharge and Medicines Reconciliation Service were invited for interview within 21 days of discharge from hospital. Qualitative, one-to-one, semi-structured, patient interviews were conducted by telephone and audio-recorded using Microsoft Teams®. The interview audio recordings were transcribed verbatim and underwent thematic analysis; (3) Results: 12 patients were interviewed, evenly split by sex and with a median age of 62 years (range; 36 to 88 years). Analysis generated main five themes; Patient Engagement, Stakeholder Communication, Practical Factors, Human Factors, and Comparative Experiences. Many of these were interdependent; (4) Conclusions: Patients appreciated that the service ensured a quicker discharge from hospital. Good stakeholder communication, practical factors (including choice, location, and the realities of obtaining their medication from the community pharmacy), and a pre-existing and trusted relationship in their usual community pharmacy were the key factors that regulated the patient experience. In the main, patients were positive about the introduction of this new service. However, a lack of previous relationship or trust with a community pharmacy, and previous experiences with medication supply problems were factors which had the potential to negatively impact on patient experiences.

Keywords: hospital pharmacy; community pharmacy; medication; qualitative research

1. Introduction

The Scottish government strategy, Achieving Excellence in Pharmaceutical Care, set out the need for transformational change across all areas of pharmacy practice, to ensure safe, effective and person-centred pharmaceutical care, and safer use of medicines [1]. The strategy proposed that an aspirational future model would utilise cross-sector pharmacy resources and infrastructure in an integrated manner during the hospital discharge process, to improve efficiency, enhance quality of care and improve health outcomes [1].

Delays in hospital discharge have been an issue in the National Health Service (NHS) for many years. Such delays contribute to bed pressures and hamper patient flow. In England, the National Audit Office reported that 2.2 million bed days could be attributed to delays in discharge in 1998/99, costing NHS England the equivalent of £1 million a day [2]. The annual estimated cost of delayed discharges in NHS Scotland was £142 million in 2020 [3]. Across NHS Scotland in 2021/22, delayed

discharges accounted for more than half a million additional days spent in hospital [4]. This problem is growing over time with a 4% increase in delayed discharges between 2018/19 and 2019/20. Delays can occur for a variety of reasons, but a recognised contributing factor can be the time taken to prescribe, dispense and deliver discharge medicines to the patient [2].

It is recognised that community pharmacy plays an important role in the provision of pharmaceutical care, providing highly accessible services. Medication review, by patients local and familiar community pharmacy team, could also bring key safety improvements, ensuring intended changes are picked up, screened and discussed with the patient, reducing medicines-related adverse effects [5]. Following the COVID-19 pandemic, the Scottish government's five-year recovery plan, to address the backlog in NHS care, proposed that community pharmacies in Scotland would provide a hospital discharge and medicines reconciliation service to speed up the discharge process and ensure safer use of medicines [6].

A quality improvement programme, conducted in Glasgow Royal Infirmary in 2020, investigated whether a new Community Pharmacy Hospital Discharge Medicines Supply Service was quicker than the standard hospital discharge process. It found that the supply of medication on hospital discharge by community pharmacies resulted in a median time saving of 142 minutes per patient and suggested that the expansion of this service had the potential to deliver a transformational change in bed management and patient flow within the hospital [7]. Qualitative research of this new pathway is needed, however, to investigate lived patient experiences. We also wanted to test the addition of medicines reconciliation. Therefore, the aim of this new study was to qualitatively explore patients' experience of the new Community Pharmacy Hospital Discharge and Medicines Reconciliation Service.

2. Materials and Methods

Setting: This study was conducted in Glasgow Royal Infirmary, a large teaching hospital within NHS Greater Glasgow & Clyde (NHSGGC). NHSGGC is the largest autonomous regional health authority in Scotland. Approximately, 170 pharmacists work across nine hospitals in NHSGGC, providing healthcare to a population of 1.3 million residents [8]. 34% of the most socially and economically deprived areas in Scotland are within the NHSGGC authority [9]. Glasgow Royal Infirmary is located in an inner-city environment with high levels of health and social inequalities. It has around 1000 beds and is home to some 5000 members of staff, including 41 pharmacists [10].

Service Model, including Inclusion / Exclusion Criteria: This service model has already been described in detail [7]. But in summary, community pharmacies from the NHSGGC geographic boundaries near Glasgow Royal Infirmary were invited to participate in the Community Pharmacy Hospital Discharge and Medicines Reconciliation Service. All adult patients within those regions, who required a supply of medication at hospital discharge were screened for inclusion. To participate in the service patients must have been reviewed by a pharmacist during their hospital admission to ensure the discharge medication was clinically appropriate. In addition, patients must have had the required discharge medication prescribed during or before admission.

Patients were excluded if they had significant cognitive impairment, terminal illness or significant social problems and/or severe mental health comorbidity. Any patient requiring supply of a controlled drug schedules 1-4 were also excluded due to restrictions in the law allowing community pharmacies to supply patients medicines without prescription. In addition, patients were excluded from the service if the community pharmacy; was beyond the included health authority regions; did not agree to participate; did not stock the required medication, or if the discharge occurred outside normal working hours.

The hospital healthcare professional (HCP) team established an agreed discharge plan through discussions with the patient and the community pharmacy. Patients were asked about an appropriate choice of community pharmacy and method of obtaining the discharge medication (collection or delivery). The community pharmacy was contacted by telephone to advise them that a patient being discharged was suitable for the service. Discussion with the community pharmacy confirmed whether they were able to a) access the electronic Immediate Discharge Letter (eIDL) on a shared IT

medical record platform, b) supply the discharge medication to the patient by the agreed method, and c) complete the medicines reconciliation. When the patient/carer collected the medication the community pharmacy would discuss or arrange to discuss any new or changed medication within 5 days of discharge.

Sampling: Our convenience sampling strategy aimed to recruit a sample of 12 participants between May 2022 and October 2022. This sample size was estimated to achieve data saturation [11]. No formal saturation checking criteria was set a-priori.

Study Participant Recruitment: Patient information leaflets and consent forms were issued to patients for this qualitative study. Completed consent forms were returned to the lead author and participants were interviewed by the lead author within 21 days of discharge. Interviews continued until the sample size was reached.

Data collection and handling: Prior to interview a semi-structured interview was developed incorporating five questions to qualitatively explore the patients' experience of the service - see Appendix A. Each patient was contacted and invited to participate in a recorded interview using the videoconferencing platform Microsoft Teams®. At interview, each participant reaffirmed their consent verbally and were informed of the aims of the study. All interviews lasted between 10-20 minutes, and were audio recorded; these interviews were subsequently transcribed verbatim and anonymised (RM). These transcripts were then accuracy checked by an independent staff member who did not take part in the study. All electronic data were stored on encrypted and password protected NHS computers. After transcription and validation, all recordings were deleted.

Data analysis: The lead author (RM) was a female pharmacist, with 32 years of experience working in hospital pharmacy. The lead author coded all interviews. Other coders included a male pharmacist with 20 years' experience in primary care (PF), a female pharmacist with 32 years' experience in hospital pharmacy (GS), and a female pharmacist with 24 years' experience across both hospital and primary care pharmacy (AT), and they independently coded ten interviews (PF x 3, AT x3, and GS x 3). All transcribed data underwent thematic analysis using Braun and Clarke's recommended six phases [12,13]. After familiarisation with the raw transcript data, and with a primary focus on the study aim, an inductive approach was used to segment the data into meaningful categories and descriptors (i.e., generating initial codes). A meeting between coders was then arranged to discuss the thematic analysis of the data. From this, a preliminary coding scheme was produced, and applied, across all ten interviews that had been conducted. Using the preliminary coding scheme all the transcripts were reviewed again with comparisons made between the generated codes and the data to allow the incorporation of consistent and differing responses (RM). Patterns of this coded data were collated into broader concepts which linked them together (i.e., themes) [12–14]. The derivation, review, and refinement of themes were discussed (RM and PF). Each theme was defined and had a clear narrative that was relevant to the aim of this study. The agreed themes and subthemes were then critiqued and refined further (AT and GS). Two further interviews were conducted, reaching the sample size of 12 participants. These were then coded and compared against the thematic structure and recruitment finished at that point. The reporting of this study conforms to the consolidated criteria for reporting qualitative studies (COREQ) guidelines [15].

Ethics approval: The NHS West of Scotland Research Ethics Service Scientific Officer advised that ethical review was not required on the basis that this study was a service evaluation aiming to deliver government strategy. Approval was obtained, from local governance teams within the health authority, as this study formed part of a wider pharmacy service evaluation..

3. Results

12 patients were interviewed; their characteristics are presented in Table 1. The patients were evenly split by sex with a median age of 62 years (range, 36 to 88 years). The majority of patients (n=7) lived within the most socio-economically deprived quintile [9]. Patients were discharged from a variety of clinical specialist ward types.

Table 1. Characteristics of participating patients.

Characteristics	Number of patients (n=12)
Median age (range), years	62 (36-88)
Female sex	6 (50%)
Socio-economic Deprivation Quintile *	
1 (most deprived)	7 (58.3%)
2	1 (8.3%)
3	3 (25.0%)
4	1 (8.3%)
5 (most affluent)	0 (0%)
Clinical speciality of ward patient discharged from	
Respiratory	5 (41.6%)
Endocrinology/diabetes	2 (16.6%)
Gastroenterology	2 (16.6%)
General medicine	2 (16.6%)
Cardiology	1 (8.3%)

* = Measured by the Scottish Index of Multiple Deprivation score, based on the post code of the patient's home address.

Analysis generated main five themes; Patient Engagement (sub-themes Motivation, and Perceived reason/need for new discharge service), Stakeholder Communication (sub-themes Hospital HCPs, and Community HCPs), Practical Factors (sub-themes Community Pharmacy Choice, Community Pharmacy Location, and Obtaining Medication), Human Factors (sub-themes Community Pharmacy Relationship, and Professional Trust), and Comparative Experiences. A narrative text of each theme and sub-theme is detailed below, including illustrative quotes.

3.1. Patient Engagement

3.1.1. Motivation

Generally speaking, patients did not want to stay in hospital any longer than necessary, and when well enough to do so, were keen to get home. Most patients expressed this sentiment and this was a key facilitator in patient's motivation to participate in the new service.

"I think everybody is just desperate to get out of hospital" Patient 2 (Female, 79yrs old)

3.1.2. Perceived Reason/Need for New Discharge Service

Aligned to their personal motivation, patients typically understood that the new service was designed to be quicker and more efficient.

"I was told it was for quickness" Patient 6 (Male, 56yrs old)

Numerous patients had personal experience on previous occasions of long delays in discharge whilst waiting for their medication to be supplied by the hospital pharmacy or appreciated this problem through witnessing the inefficiency of other patients/relatives going through the traditional supply model.

“A patient missed her transport waiting on medication” Patient 9 (Female, 79yrs old)- describing witnessed experiences of hospital discharge supply model

“You can be waiting 3, 4 [hours] maybe longer for the prescription coming up” Patient 12 (Male, 59yrs old)- describing previous experiences of hospital discharge supply model

3.2. Stakeholder Communication

3.2.1. Hospital HCP

In the majority of cases, appropriate communication from the hospital team facilitated a smooth community pharmacy supply. This included communication with the patient to understand which community pharmacy they normally used and good communication with the chosen community pharmacy itself.

“a pharmacy person had came and they had checked my medication and they had got in touch [name of usual pharmacy] and arranged everything for me” Patient 7 (Female, 71yrs old)

Effective communication could be challenging; there was numerous distractions within a busy ward environment and although ready to be discharged from hospital, patients are still recovering. “She didn’t get a lot of time because obviously people are there to take your bloods and stuff like that so she was kinda trying to do the best she could to explain “ Patient 4 (Female, 36yrs old)

There was a risk that the patient may not understand or forget the instructions given, particularly when it is unfamiliar.

“I cant mind too much what they said I was that excited about getting out ye know” Patient 8 (Male, 75yrs old)

3.2.2. Community HCP

Many patients described being contacted by the Community Pharmacy to advise them when their prescription would be ready to collect and some patients described having the medication delivered directly to their home.

“the pharmacy phoned my husband and said it would be ready for two o’clock” Patient 4 (Female, 36yrs old)

However, three patients expectations of the service were not met when the community pharmacy had not accessed the patient’s discharge letter in time and did not seem to expect them, or didn’t have their medication ready for collection when the patient arrived.

“I don’t think they’d emailed the actual medication I was supposed to get. They gave me a sheet of paper with all my medication on it so the pharmacy was able to deal with it that way” Patient 1 (Male, 53yrs old)

3.3. Practical Factors

3.3.1. Community Pharmacy Choice

Almost all patients who participated in the study had “their own” community pharmacy. This made it easier to plan their discharge as the patient and community pharmacy were familiar with one another.

“I got it from my ain chemist, I got ma ain chemist to deliver it” Patient 3 (Male, 83yrs old)

3.3.2. Community Pharmacy Location

Ideally, the community pharmacy should be convenient for the patient/carer to use and for most patients this is close to their home. An agreed community pharmacy was chosen for one patient in the study who did not have ‘his own’ community pharmacy. However, the patient experienced an unacceptable travel burden and subsequently made arrangements to collect his prescription from a community pharmacy closer to his home.

3.3.3. Obtaining Medication

Some patients discharge medication was delivered to their home, but most prescriptions were collected in person and frequently this involved the help of a family member.

“ma granddaughter picked it up and a got it right away” Patient 11 (Female, 88yrs old)

The collection of medication may be problematic for patients who are still recovering from acute illness and some patients expressed an understanding of the potential burden of collection on family members

“Ah felt sorry for ma son running about” Patient 9 (female, 79yrs old)

3.4. Human Factors

3.4.1. Community Pharmacy Relationship

A good pre-existing relationship with the community pharmacy was a key enabler. Many patients spoke positively of the staff and the service provided by their pharmacy.

“It actually is a good service. You know what, I’ve been a couple of times now to it and you know they are good, good people” Patient 1 (Male, 53yrs old)

One patient preferred collecting his prescription, over having it delivered, as he valued the personal contact.

3.4.2. Professional Trust

Many patients described receiving helpful information and advice about their medication from their community pharmacy. This could vary from practical help on supply issues to advice about specific medication reconciliation issues.

“She took the aspirin off me. I’ve got tae watch if ah bleed” Patient 9 (Female, 79yrs old)

One patient was happy for appropriate information to be shared between the hospital and his community pharmacy to ensure he was treated as a patient, not a customer.

“They’ve also got a direct link with the hospital so when I get discharged for anything they’ll get a copy of my medical report which I’m quite happy with I don’t mind that, you know, cause then they actually know me rather than just a customer, like a patient if you like.” Patient 12 (Male, 59yrs old)

However, one patient did not like talking about her health in the community pharmacy, implying concerns about privacy and trust. It was also noted that some pharmacies may be more like a business than a healthcare service.

“I’m not one for having a lot of conversations with people in pharmacies and things like that” Patient 5 (Female, 64yrs old)

3.5. Comparative Experience

Most patients found the found the new service quicker and more convenient.

“I actually couldn’t believe how painless it was” Patient 4 (Female, 36yrs old)

For those patients who had an established relationship with their community pharmacy the familiarity of service was greatly valued.

“its easiest for the, for patients... They know that they’ll receive it, you know, by their normal methods” Patient 7 (Female, 71yrs old)

However, the patients experience of the new service was detrimentally affected if they had to wait at the community pharmacy for their prescription, if stock issues necessitated return visit(s) to the community pharmacy or if the agreed pharmacy was inappropriate.

“I had to go back down the next day to collect other medication because they didn’t have it in stock” Patient 1 (Male, 53yrs old)

Most patients expressed a preference for the new service and responded positively towards introducing the new service more widely, although it was recognised that it might not be suitable for everyone.

“better from the community pharmacy, a lot better. I think that would be better for everyone” Patient 9 (Female, 79yrs old)

However, a few were ambivalent and two patients preferred the current hospital discharge service. Whilst acknowledging that it could involve a lengthy wait they felt it was more convenient and trustworthy; you were certain to be given the correct medication (incorporating any changes). "I know ye have to wait on the hospital one for to come but still I think it was better that way" Patient 10 (Male, 79yrs old)

4. Discussion

Patients' experience was dependant on a number of interrelated factors. These included; Patient engagement, stakeholder communication, practical factors, and human factors. The majority of patients expressed positive comparative experiences and a preference for the new service. However, it is also important to consider detrimental experiential factors as these highlight potential areas for service improvement.

All the patients who participated in the study described being discharged from hospital more quickly. This was a key reason for patient engagement. It is well recognised that in the current hospital discharge supply model considerable delays can be experienced by patients waiting to obtain their medicines [16,17]. Many patients find this a frustrating and anxious time [16–18]. In addition, this discharge delay can temporarily block beds [19]. Timely discharge from hospital is an important indicator of quality, person-centred care, and ensures that patients get back to their home or community environment as soon as possible [1,20–22]. The transformation of hospital discharge planning and supply of medicines is a key priority of NHS GGC [23]. In other countries, such as the Netherlands, it is standard practice to send discharge prescriptions directly from the hospital to the community pharmacy where the patient is registered [24,25].

Good communication between stakeholders is essential to plan discharge. Hospital discharge is a complex process and the need for better co-ordination, communication and information sharing between hospital- and community-based HCPs is a recognised challenge [19,26]. Transitions of care (ToC) are a high-risk period for medication-related harm, due to the volume and complexity of medication changes [27,28]. Poor communication between HCPs continues to be a common contributing factor to medication errors [28,29]. Preventable harm from medicines is thought to cost the NHS anywhere between £1 billion and £2.5 billion annually [19]. Prevention of medication errors by improving ToC has become a high priority worldwide and numerous interventions have been designed and delivered to try and address this issue [19,29–31]. Medication reconciliation, the formal process of obtaining a complete and accurate list of each patient's current medication across ToC, has been widely implemented and endorsed to prevent medication discrepancies [24,32]. Patient discharge information should be shared with their nominated community pharmacy and medicines reconciliation in primary care should be carried out as soon as is practically possible, ideally within one week, to enhance patient safety relating to medicines [33,34]. Despite these guidelines the communication of discharge summaries to community pharmacy remains inconsistent, incomplete and lacking in timeliness and the potential for community pharmacy involvement in the discharge process is underutilised [35]. Our study confirms, communication processes between hospital and community pharmacies must be strengthened, standardised and become everyday practice to provide dependable receipt of patient discharge summaries to the community pharmacy [36,37].

The majority of patients found using "their own" community pharmacy to obtain their discharge medicines natural and familiar and many patients described receiving help and advice about their medicines from their community pharmacy. Patients can feel overwhelmed by medication changes which have occurred during hospitalisation and feel that healthcare providers do not always notice the impact this can have and the need for support to cope with these changes [17]. Discharge counselling has been recommended to support adherence; however, providing medicines information at discharge is not always ideal as patients are often distracted, overloaded with information and eager to leave for home, and therefore paying less attention to medication instructions [32,39]. Community pharmacists are well-positioned to provide medicines information after discharge [38,39]. Patients prefer face-to-face consultations with someone who understands their personal issues, preferences and needs and can empathise with them [17]. However, patients

lack of mobility and reluctance to seek community pharmacists advice about their medication are known barriers [39–41]. Communication breakdowns at ToC can have an impact on patients trust in their HCP; they fear medication errors could occur [17]. It has also been reported that patients view their GP as their primary source of information about their medicines and do not understand the value of a community pharmacy medication review [36,39–42]. The importance of long-term relationships between patients and HCPs in primary care is recognised [21]. The strength of the relationship between pharmacist and patient has been identified as a key factor in patients decision to access community pharmacy services [39]. So much so that it has been recommended that to inform the public about the added value of a consultation with a pharmacist and to improve uptake of pharmacy services, awareness campaigns should focus on encouraging patients to build relationships with their community pharmacists rather than targeting and marketing specific services that can be offered [36,39]. Continuity of care with community pharmacy has also been shown to improve medication safety [43].

Two patients preferred the current hospital discharge supply model, despite acknowledging that it could involve a lengthy wait. They believed the hospital pharmacy would dispense their medication without any issues, incorporating any changes, and they regarded it as more convenient as they were already in hospital. They recollected their community pharmacy not stocking items which necessitated a return visit and the hospital wait was also compared to the potential need to wait at the community pharmacy. Reviewing the discharge process is important but in doing so it is valuable to acknowledge that speed of discharge may not be as important as the patient developing a trusted professional relationship with the community pharmacy.

4.1. Strengths and Weaknesses

This novel study used an appropriate qualitative methodology. The study identified potential barriers and facilitators, providing valuable insights into the effectiveness and challenges of this process, from a patient perspective. The study's findings may inform interventions to improve the management of patients discharge from hospital and their subsequent management in the community. The study's use of COREQ guidelines in reporting its findings ensures its findings can be easily replicated and implemented in practice.

There are some limitations to this study. Firstly, no formal saturation stopping criteria were set a-priori, which may have led to a lack of full saturation. The study included mainly elderly patients, who may have different experiences and preferences compared to younger patients. Additionally, most participants had their own community pharmacy, which may limit the generalizability of the findings to patients who do not have an established relationship with a community pharmacy. There is also potential for recruitment bias if patients with a bad experience self-excluded from the study. The limitations of the study should be taken into account when interpreting the study's finding and considering their applicability to other patient populations or settings.

4.2. Further Research

Future studies could investigate the experience of staff members and/or younger patients who do not have an existent relationship with a community pharmacy.

5. Conclusions

Patients appreciated that a service where community pharmacy supplied their discharge medication ensured a quicker discharge from hospital. Good stakeholder communication, practical factors (including choice of pharmacy, location of pharmacy, and the practicalities of obtaining the supply from community pharmacy), and a pre-existing relationship and trust in their normal community pharmacy were the key factors that regulated the patient experience. In the main, patients were positive about the introduction of this new service. However, a lack of previous relationships or trust with a community pharmacy, and previous experiences with medication supply problems were factors which had the potential to negatively impact on patient experiences.

Author Contributions: Rhona Mundell (RM) = Methodology, Investigation (lead researcher), Formal Analysis (lead researcher), Data Curation, Writing - Original Draft (lead author), and Writing – Review & Editing. Derek Jamieson (DJ) = Conceptualization, and Writing – Review & Editing. Gwen Shaw (GS) = Conceptualization, Formal Analysis, and Writing – Review & Editing. Anne Thomson (AT) = Conceptualization, Formal Analysis, Funding Acquisition, and Writing – Review & Editing. Paul Forsyth (PF) = Conceptualization, Methodology, Formal Analysis, Data Curation, Writing - Original Draft, and Writing – Review & Editing, and Supervision.

Funding: Our new service: including this evaluation, was supported by funding from Scottish Government aligned to the NHS Recovery Plan [6].

Institutional Review Board Statement: The NHS West of Scotland Research Ethics Service Scientific Officer advised that ethical review was not required on the basis that this study was a service evaluation aiming to deliver government strategy. Approval was obtained, from local governance teams within the health authority, as this study formed part of a wider pharmacy service evaluation.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Raw data from the study is unavailable due to privacy.

Acknowledgments: We would like to thank Peter Miller for his help with project management and with interview transcript validation.

Conflicts of Interest: The authors declare no conflicts of interest.

Appendix A

Interview Questions Sheet

'Hi my name is and I am one of the research team for the community pharmacy hospital discharge service project. Can I confirm that I am speaking to (Pt name)? Thank you for taking the time to talk to me today. To enable me to write an accurate copy of this interview I am going to record our conversation, is that OK? (Start recording)

I understand you were recently discharged from hospital, and are happy to participate in this study about your experiences of the community pharmacy discharge services? This interview is expected to take around 20 minutes is that ok?"

'I don't need to know any details of this but can I check if you have been admitted to hospital in the past and received medicines on discharge? Can you tell me when this was?"

Question 1 -What is your understanding of why you were offered this service rather than get your medicines from the hospital? (Coherence – is the purpose of the service clear to the patient)

Prompts

What parts do you think or feel were different from what normally happens with medicines at discharge?

Question 2 - Tell me about your experience of the service. (Collective Action)

Prompts

Anything particularly good?

What were the benefits to you/ those that care for you of community pharmacy supplying your medicines; of community pharmacy discussing changes to your medicines with you?

Any aspects that could be improved?

Question 3 – What difference did the service make to your care? (Reflexive Monitoring)

Prompts

Did the community pharmacy team speak to you about your medicines?

Was this discussion about your medicines helpful?

Do you feel this service helped you get out of hospital more quickly?

Question 4 - What are your thoughts about this being the usual process on hospital discharge? (Cognitive)

Prompts

If they don't think it should – why not?

If they do – can they say a bit more about why?

Thank you again for your time to discuss this service. Your responses to the questions will be collated with the other interviews to identify any key themes across all the interviews. Your name and personal information will not be contained within the analysis of key themes and any recordings or written information on the interview will be destroyed in 1 years' time.

References

1. Achieving Excellence in Pharmaceutical Care: A Strategy for Scotland. Scottish Government. Edinburgh : 2017. Available from <https://www.gov.scot/publications/achieving-excellence-pharmaceutical-care-strategy-scotland/> (Accessed)
2. Luo R, Scullin C, and McElnay J. One Stop Dispensing and discharge prescription time. Hospital Pharmacy Europe 2012, (no pagination). Available from <https://hospitalpharmacyeurope.com/news/editors-pick/one-stop-dispensing-and-discharge-prescription-time/#:~:text=One%20study%20reported%20that%20the%20average%20turnaround%20time,one%20minute%20to%20one%20hour%20and%2015%20minutes>
3. Public Health Scotland. Delayed Discharges in NHS Scotland, Annual summary of occupied bed days and census figures: Data to March 2021. Publication date: 16 November 2021. Available from Delayed discharges in NHSScotland annual - Annual summary of occupied bed days and census figures – data to March 2021 (planned revision) - Delayed discharges in NHSScotland annual - Publications - Public Health Scotland
4. Public Health Scotland. Delayed Discharges in NHS Scotland, Annual summary of occupied bed days and census figures: Data to March 2022. Publication date: 28 June 2022. Available from Delayed discharges in NHSScotland annual - Annual summary of occupied bed days and census figures – data to March 2022 - Delayed discharges in NHSScotland annual - Publications - Public Health Scotland
5. Wickware C. Community pharmacy hospital discharge service to launch in Scotland. The Pharmaceutical Journal, August 2021; Vol 307(7952):307. Available <https://pharmaceutical-journal.com/article/news/community-pharmacy-hospital-discharge-service-to-launch-in-scotland>
6. Scottish Government. NHS Recovery Plan 2021-2026. August 2021. Available from <https://www.gov.scot/publications/nhs-recovery-plan/>
7. Tait LA, Cassidy N, Jamieson D, Shaw G, Thomson A, Oswald M, Harrison A, Watt J, Forsyth P, Caldwell G. Medication supply at hospital discharge via community pharmacy: a quality improvement study. Int J Clin Pharm. 2023 Dec;45(6):1309-1316. doi: 10.1007/s11096-023-01635-4. Epub 2023 Sep 28. PMID: 37768432.
8. NHS Greater Glasgow and Clyde [internet]. Who are we. Available from <https://www.nhsggc.scot/about-us/who-we-are/#:~:text=NHS%20Greater%20Glasgow%20and%20Clyde%20%28NHSGGC%29%20is%20the,organisations%20including%20Local%20Authorities%20and%20the%20voluntary%20sector> (Accessed: 28/10 2022).
9. Scottish Government. Scottish Index of Multiple Deprivation 2020: introduction [internet]. Scottish Government, Edinburgh; 2020. Available from: <https://www.gov.scot/publications/scottishindex-multiple-deprivation-2020/>. (Accessed: 08 Dec 2020).
10. NHS Greater Glasgow and Clyde. Glasgow Royal Infirmary Named As Scotland's Best Hospital. 28 June 2021. Available from Glasgow Royal Infirmary Named As Scotland's Best Hospital - NHSGGC
11. Hennink M, Kaiser BN. Sample sizes for saturation in qualitative research: A systematic review of empirical tests. Soc Sci Med. 2022;292:114523. doi: 10.1016/j.socscimed.2021.114523. Epub 2021 Nov 2. PMID: 34785096.
12. Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol. 2006;3:77–101. Available from <https://doi.org/10.1191/1478088706qp063oa>.
13. Nowell LS, Norris JM, White DE, et al. Thematic analysis: striving to meet the trustworthiness criteria. Int J Qual Methods. 2017;16:1–13. Available from <https://doi.org/10.1177/1609406917733847>.
14. DeSantis L, Ugarriza DN. The concept of theme as used in qualitative nursing research. West J Nurs Res. 2000;22:351–72. Available from <https://doi.org/10.1177/019394590002200308>.
15. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int J Qual Health Care. 2007;19:349–57. Available from <https://doi.org/10.1093/intqhc/mzm042>.
16. Scottish Government. Healthcare standards, delayed discharge. Scottish Government, Edinburgh. Available from <https://www.gov.scot/policies/healthcare-standards/delayed-discharge/>
17. Daliri S, Bekker C.L., Buurman B.M., et al. Barriers and facilitators with medication use during the transition from hospital to home: a qualitative study among patients. BMC health services research 2019; 19(1):204. Available from <https://bmchealthservres.biomedcentral.com/counter/pdf/10.1186/s12913-019-4028-y.pdf>
18. Knight D.A., Thompson D., Mathie E., et al. 'Seamless care? Just a list would have helped!' Older people and their carer's experiences of support with medication on discharge home from hospital. Health

- expectations, 2013; 16(3): 277-291. Available from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5060666/pdf/HEX-16-277.pdf>
19. Bullock S., Morecroft C.W., Mullen R., et al. Hospital patient discharge process: An evaluation. *European Journal of Hospital Pharmacy* 2017;24(5):278-282. Available from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6451602/pdf/ejhpharm-2016-000928.pdf>
 20. Public Health Scotland. Delayed Discharges: Background information and glossary. Last updated 27/03/2020. Available from <https://www.isdscotland.org/Health-Topics/Health-and-Social-Community-Care/Delayed-Discharges/Guidelines/docs/Background-of-delayed-discharge-information-and-glossary-of-terms.pdf#:~:text=Reliably%20achieving%20timely%20discharge%20from%20hospital%20is%20an,risk%20increases%20with%20each%20day%20delayed%20in%20hospital.>
 21. Scottish Government. A National Clinical Strategy for Scotland. Scottish Government, Edinburgh; 2016. Available from <https://www.gov.scot/publications/national-clinical-strategy-scotland/>
 22. Scottish Government. Everyone Matters 2020 workforce vision: implementation plan 2016-2017. Scottish Government, Edinburgh; 2015. Available from <https://www.gov.scot/publications/everyone-matters-2020-workforce-vision-implementation-plan-2016-17/pages/2/>
 23. NHS Greater Glasgow and Clyde. Moving Pharmacy Forward. A Strategic Framework-2021/26. Available from [Moving Pharmacy Forward - A Strategic Framework 2021-2026 - NHSGGC](#)
 24. Ensing HT, Koster ES, van Berkel PI et al. Problems with continuity of care identified by community pharmacists post-discharge. *Journal of Clinical Pharmacy & Therapeutics* 2017; 42(2):170-177. Available from <https://onlinelibrary.wiley.com/doi/pdfdirect/10.1111/jcpt.12488>
 25. Hugtenburg JG, Borgsteede SD, Beckerigh JJ. Medication review and patient counselling at discharge from the hospital by community pharmacists. *Pharmacy World & Science* 2009;31(6):630-7. Available from <https://research.vumc.nl/ws/files/522687/237976.pdf>
 26. National Institute for Health and Care Excellence (NICE). Transition between inpatient hospital settings and community or care home settings for adults with social care needs NICE guideline Published: 1 December 2015. Available from www.nice.org.uk/guidance/ng27
 27. Cossette B., Ricard G., Poirier R., et al. Pharmacist-led transitions of care between hospitals, primary care clinics, and community pharmacies. *Journal of the American Geriatrics Society* 2022;70(3):766-776. Available from <https://agsjournals-onlinelibrary-wiley-com.knowledge.idm.oclc.org/doi/pdfdirect/10.1111/jgs.17575>
 28. Royal Pharmaceutical Society. Keeping patients safe when they transfer between care providers – getting the medicines right Final report June 2012. Available from https://www.aomrc.org.uk/wp-content/uploads/2016/05/Keeping_patients_safe_organisational_guidance_0711.pdf
 29. Ferguson J., Seston L., Ashcroft D.M.BMC health services research 2018; 18(1): 424. Available from <https://bmchealthservres.biomedcentral.com/counter/pdf/10.1186/s12913-018-3262-z.pdf>
 30. Sheikh A, Dhingra- Kumar N, Kelley E, et al. The third global patient safety challenge: tackling medication-related harm. *Bull World Health Organ* 2017;95:546. Available from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5537758/pdf/BLT.17.198002.pdf/>
 31. Mantzourani E, Nazar H, Phibben C, et al. Exploring the association of the discharge medicines review with patient hospital readmissions through national routine data linkage in Wales: a retrospective cohort study. *BMJ Open* 2020;10(2):e033551. Available from <https://bmjopen.bmj.com/content/bmjopen/10/2/e033551.full.pdf>
 32. Fernandes B.D., Almeida P.H.R.F., Foppa A.A., et al. Pharmacist-led medication reconciliation at patient discharge: A scoping review. *Research in social & administrative pharmacy* 2020;16(5):605-613. Available from
 33. Scottish Intercollegiate Guidelines Network (SIGN). SIGN 128 • The SIGN discharge document June 2012. Available from <https://www.sign.ac.uk/media/1066/sign128.pdf>
 34. National Institute for Health and Care Excellence (NICE). Medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes. NICE guideline [NG5]Published: 04 March 2015. Available from <https://www.nice.org.uk/guidance/ng5/resources/medicines-optimisation-the-safe-and-effective-use-of-medicines-to-enable-the-best-possible-outcomes-pdf-51041805253>
 35. Jeffries M., Keers R.N., Belither H., et al. Understanding the implementation, impact and sustainable use of an electronic pharmacy referral service at hospital discharge: A qualitative evaluation from a sociotechnical perspective. *PLoS ONE* 2021; 16(12):1-22. Available from [journal.pone.0261153.pdf](https://doi.org/10.1371/journal.pone.0261153)
 36. Nazar H, Howard C, Nazar Z, Watson NW. A rapid review and narrative synthesis of hospital to community pharmacy transfer of care services in England. *International Journal of Pharmacy Practice* 2021; 29(2):96-105. Available from <https://libkey.io/libraries/3071/articles/428141334/full-text-file>
 37. Urban R, Paloumpi E, Rana N, Morgan J. Communicating medication changes to community pharmacy post-discharge: the good, the bad, and the improvements. *International Journal of Clinical Pharmacy* 2013; 35(5):813-20. Available from <https://link.springer.com/article/10.1007/s11096-013-9813-9>

38. Lam MYY, Dodds LJ, Corlett SA. Engaging patients to access the community pharmacy medicine review service after discharge from hospital: a cross-sectional study in England. *International Journal of Clinical Pharmacy* 2019; 41(4):1110-1117. Available from <https://link.springer.com/content/pdf/10.1007/s11096-019-00838-y.pdf>
39. Ensing H.T., Vervloet M., van Dooren A.A., et al. Patient-pharmacist communication during a post-discharge pharmacist home visit. *International Journal of Clinical Pharmacy* 2018; 40(3): 712-720. Available from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5984961/pdf/11096_2018_Article_639.pdf
40. Elson R., Cook H., Blenkinsopp A. Patients' knowledge of new medicines after discharge from hospital: What are the effects of hospital-based discharge counselling and community-based medicines use reviews (MURs)? *Research in social & administrative pharmacy* 2017; 13(3); 628-633. Available from <https://www.ncbi.nlm.nih.gov/pubmed/?term=27283244>
41. Mackridge AJ, Rodgers R, Lee D et al. Cross-sectional survey of patients' need for information and support with medicines after discharge from hospital. *International Journal of Pharmacy Practice* 2018;26(5):433-44. Available from <https://academic-oup-com.knowledge.idm.oclc.org/ijpp/pdf-lookup/doi/10.1111/ijpp.12411>
42. Pileggi C., Caligiuri E., Nobile C.G.A., et al. Information about management of chronic drug therapies prescribed at hospital discharge: does it affect patients' knowledge and self-confidence?. *BMC health services research* 2018; 18(1):105. Available from <https://bmchealthservres.biomedcentral.com/counter/pdf/10.1186/s12913-018-2895-2.pdf>
43. Choi E, Lee IH. Relational continuity of care in community pharmacy: A systematic review. *Health Soc Care Community*. 2022 Jan;30(1):e39-e50. doi: 10.1111/hsc.13428. Epub 2021 May 31. PMID: 34060170.

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