Evaluation of Discharge Medicine Service (DMS) referrals from mental health Trusts to community pharmacies in the East of England

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Introduction

Evidence suggests that 25% of people aged over 60 years have two or more long-standing health conditions [1]. These long-term conditions present a burden as an increasing number of chronic health conditions are strongly associated with negative health-related quality of life measurements [2]. These people are usually prescribed a number of medications; used for the 'treatment and prevention' of the relevant health condition. In 2009, the Care Quality Commission (CQC) identified that information shared between healthcare providers when patients are discharged from hospital is often incomplete and not shared in a timely enough manner, which can result in unintended changes in medication, intended changes in medication not being implemented and continuation of medication that had been stopped [3]**.**

Around 60% of patients admitted to hospital will have three or more changes to their current prescribed medication during their stay. It has been found that poor transfer of care leads to an increased risk of adverse drug reactions [4]. Similarly, 20% of patients have reported adverse events within three weeks of discharge of which 60% could have been avoided. Approximately 30-70% of patients experience unintentional changes to their treatment or an error is made because of a lack of communication or miscommunication [5]. Patients over 65 years old are less likely to be readmitted to hospital if they are provided with additional help with their medication after discharge from hospital [6].

Ineffective care transition processes can lead to adverse outcomes for patients, caused by medication errors and lack of post-discharge follow up. Adequate transfer of care around medicines between the hospital and community setting identifies patients at high risk for hospital readmission, allowing the use of specific interventions to minimise potential adverse effects and reduce 30-day readmission rates [7, 8]. To improve negative outcomes that can occur from poor patient information or when a patient's medication is not updated upon discharge from hospital, Transfer of Care Around Medicines (TCAM) services have been introduced nationally with different regions opting for different approaches to implementation. Hospital pharmacy teams electronically send medication discharge information details to the patient's community pharmacist which enables them to cross reference with the patient's medication record and repeat medication list. They can then communicate any discrepancies to the GP for resolution [9].

A systematic review of this type of service identified that pharmacists felt it was a valuable, beneficial to those who are vulnerable and can minimise errors during a patient's clinical transition, by allowing community pharmacists to identify and communicate any discrepancies to the GP following hospital referral [7]. Overall, there has been a good engagement with TCAM services, with studies showing both hospital and community pharmacy staff are supportive of this service because it benefits the patient by improving knowledge, adherence and reduces errors. However, there are some struggles with patient and pharmacist engagement and completion of service data sets [10].

TCAM services (named the electronic medicines optimisation (EMOP) service in the East of England) are the precursors to a new national service called the discharge medicines service (DMS). This became an essential service that all pharmacy contractors have to provide on the 15th of February 2021 [6]. The DMS aims to reduce the adverse effects caused due to the transfer of care process. The service is not restricted to older adults. This service allows for hospital clinicians to identify patients admitted to hospital that might benefit from being referred to their community pharmacy at discharge. Regional implementation of the DMS service has now been completed for acute Trusts within the East of England. However, implementation with mental health Trusts is taking place currently with each organisation at a different stage of readiness. It is anticipated that all Trusts will have implemented the referral system by the end of March 2022.

Referral of patients from mental health Trusts to community pharmacies is something that is new to the DMS and was not part of the predecessor service (EMOP). This provides community pharmacists with a distinctly different group of patients which may require their help and with whom they may have had relatively little interaction to date. It is important to investigate the current implementation of DMS referrals from mental health Trusts from both the perspective of Trust pharmacists and pharmacy technicians and community pharmacists to identify areas where DMS roll-out can be improved and pharmacists and patients better supported.

Aim
To evaluate the process of transfer of medicines information from secondary (mental health) to primary care on discharge, using the DMS.

Objectives
- To describe the nature of referrals *i.e.,* changes in patient's drug therapy/treatment, and the interventions performed following the referral
- To explore the training requirements of community pharmacists in providing this service
- To explore the implementation of DMS services by pharmacists
- To explore the views of pharmacy professionals implementing the DMS services
- To see how implementation could have been improved and how this will affect the future practice of the Discharge Medicines Service (DMS) in this group of patients.

Method
This study involved a series of focus groups and interviews with key stakeholders across the East of England. We also descriptively analysed DMS activity data to date.

Study approvals
Ethical approval for this service evaluation was obtained from the Faculty of Medicine and Health Sciences Ethics Committee.

Recruitment
All community pharmacies in the East of England where the service is active were sent an e-mail invitation and participant information sheet via the LPC (Local Pharmaceutical Committee). This is so that we did not have access to the pharmacies email addresses to ensure confidentiality. This was also sent to mental health Trusts (in order to recruit secondary care pharmacists and pharmacy technicians) through links with LPCs, chief pharmacists and the EAHSN. Repeat e-mails were sent once after two weeks and again after a further two weeks to increase response rate. AHSN colleagues, as part of their normal role, had access to data indicating which pharmacies are providing this service across the region. As a second approach to recruitment, the AHSN identified these pharmacies and asked LPCs to send a more targeted version of the invitation e-mail, named specifically for them. The team at UEA did not have access to this data and did not know who had been approached.

Inclusion criteria
The inclusion criterion for this project was all community and mental health pharmacists and technicians in the East of England, who have engaged with the referral service as part of the DMS scheme. Pharmacists needed to have experience with the service to be included in the project.

Exclusion criteria

The exclusion criterion for this project was if pharmacies have never engaged with the service. This is because we were interested in listening to pharmacists who understand the service and have experience to form an opinion.

Data collection
We used a semi-structured topic guide composed of three sections to guide the focus group: the pharmacist's experience with the DMS service, the impact of the service on both patients and pharmacy professionals and potential improvements that can be made to the DMS service. The discussion was audio-recorded. We conducted one focus group for hospital colleagues and two focus groups for community LPC colleagues to gather qualitative data about the insights of pharmacy professionals working in community pharmacies and hospital pharmacies in terms of their implementation and experience using the DMS service in a mental health context. Given the pandemic and pressures on community pharmacists we offered the opportunity to conduct interviews in the place of the two focus groups if preferred by participants.

In addition to these focus groups and interviews, we also undertook a discussion with the existing DMS Community of Practice (CoP) group that currently meets on a monthly basis to discuss implementation (facilitated by the EAHSN). This group consists of senior community pharmacy and mental health Trust representatives from across the East of England. Members of the group were sent the e-mail invite, participant information sheet and consent form in advance of a CoP meeting.

All data were stored electronically on a secure OneDrive folder hosted by UEA and accessible by only the evaluation team. All data were stored in accordance with the GDPR 2018 requirements and UEA's Research Data Management policy.

Anonymised service activity data was sent to the research team in the form of an Excel spreadsheet on 21st April 2022 and included nine month's of DMS activity.

Data analysis
Service data was analysed using Microsoft Excel. Focus groups and interviews were transcribed and accuracy checked by the evaluation team. They were analysed using a basic thematic analysis. The evaluators reviewed the data and created a coding framework that was then applied to the transcripts [11].

Results
From July 2021 to April 2022, only one Trust referred mental health patients to the DMS in community pharmacy. Over this time period 22 referrals were made. The majority of referrals contained information to the community pharmacy about making ongoing supplies, particularly in relation to monitored dosage systems (MDS)/blister packs.

Six pharmacists attended one of three focus groups to discuss the implementation of DMS for mental health patients in their locality. Two pharmacists were from Mental Health Trusts and four represented LPCs (to provide a community pharmacy perspective). No community pharmacists were recruited who had provided the DMS to mental health patients. Analysis of the focus groups identified four key themes regarding implementation: workforce, managing expectations, the need for collaboration and system processes.

Theme 1: Workforce to support implementation
Both community and hospital pharmacists identified that workforce issues both within the Trusts and community pharmacies had made implementation difficult. In some Trusts a lack of specific role to move the implementation forward had further compounded this problem as colleagues also had their 'day-job' to focus on.

> *"But it's just that the trust at our trust itself, uhm, you know, obviously we've with their issues and you know locally the workforce issues within the hospitals. And I know we're across our three hospitals, two of them have really struggled" Participant 4*

> *"So I'm able to stay and work on this DMS project and different people with different expertise within those groups are able to advise and help on things. So. And I think it I think it's been really helpful. For a specific role like that and and then it helps also because then I'm sort the key person for X and I can liaise with other people at other trusts and learn from them and and there's lots of similar groups that we joined. So I think it's I think it's important to recognize and that role." Participant 5*

This pharmacist's role (participant 5) was dedicated to making DMS implementation work and this allowed protected time to liaise with colleagues and learn from others. This role is not common across Trusts and colleagues are therefore having to implement the system on top of their existing responsibilities. There was also a mention that resource or skills around digital health within the Trust helped to progress with DMS implementation, since this service fell under this remit and was given some dedicated investment of time.

Theme 2: Managing expectations around implementation and mental health
A significant theme arose from discussions around colleagues managing expectations both with regards to the extent of implementation and the community pharmacists' role in supporting people with mental health problems.

Trust colleagues highlighted taking a slow approach to implementation to iron out any difficulties at an early stage. They described focussing on one or two wards in the Trust with a small number of pharmacists and technicians being trained to undertake referrals.

> *"I think because it's it's a brand new service. We don't want to rush into it with with too many things, it's there's a lot going on within our department in the moment… But you want to just take it easy, make sure we can… So we'll do a very small start, check it, reassess it… There was only with one ward and their relevant technician, pharmacists." Participant 6*

Another aspect of managing expectation centred on the role of community pharmacists in the care of patients with mental health problems. Community colleagues were particularly anxious at the start about the nature of the referrals and how they could access help quickly if needed.

> *"I think there is a concern from pharmacy teams that this is a specialist service rather than a generally service… I think there's more concern about. And maybe the discussions that you might have with the patient, how to manage that if it doesn't feel as if it's just about being referred out, it's about the fact that they're not getting the support they need or that they might be heading for another crisis. And how do you then connect them back to where they need to be? So I think it is the whole, it's the whole comfort zone bit about dealing with patients that have got specific mental health challenges and we don't really feel connected enough into the system, so. Is it*

> *the GP that you should be ringing? Will you have a number to go back to a a crisis team?" Participant 1*

The training provided was well received by community colleagues as it focussed less on teaching them about mental health conditions and more about what were the expectations of Trust colleagues when referring patients through the system and what the limitations of the service were likely to be. Community pharmacy colleagues were reassured that the expectation was really about connecting with those patients after discharge in a way they would usually do, but it was about doing it in a proactive and more informed way.

> *"I think most of the obvious concerns because we had those early meetings where expectations were clear and set out that we were doing exactly what we would do for any other patient... And I think then when we had the engagement, X was able to address those concerns and it is present at you know he shared the presentation with me" Participant 3*

> *"Yeah, basically people to get there, right medication, make sure titration happened here. The bare basics of what I would say pharmacy, I think the community pharmacies were wondering whether they were going to be asked to do something more complex. With this type of patient and actually. 'cause obviously from [our] perspective, we didn't want to have pharmacy is doing anything more complex because that wasn't the remit of the national contract, so. I think expectation management was actually a lot easier" Participant 3*

Theme 3: Need for collaboration

All the pharmacists discussed the concept of collaboration as part of implementing the DMS. They referred to the role of the EAHSN in facilitating collaboration and generating discussions that would have been difficult otherwise.

> *"I think this is where the Eastern Academic Health Science Network are quite good actually. They brought us together and discuss some of those issues and we've all agreed kind of a template first webinar event where you're you're basically describe where your contact details and give that contact information to community pharmacies." Participant 2*

Building relationships as part of service implementation was seen as particularly useful and valuable.

> *"So I'm and obviously the relations 'cause. If I have, I mean I don't working community pharmacy just stopped quite recently but if ever I had a patient and you know I I I think nothing of calling you know X if it was a huge issue or whoever the pharmacist was in X. So I think that relationship building has been really helpful." Participant 3*

> *"There's something about, you know, we're all pharmacists working in often these organizations. And I think the nice thing I've always liked about email was about*

> *actually the pharmacist talking to each other and realizing they're supporting some of the same patients and increasing some of those communications." Participant 2*

> *"Discussions we have with people with DMS have said or having anything now picking the phone up and saying oh, it's so and so from X pharmacy and it's nice to speak to you and some of them are on first name terms, you know with with the pharmacists in the hospital. So it's it's definitely helped with those local relationships." Participant 4*

It was clear from conversations that DMS has provided a space for colleagues across the system to talk to one another, learn and appreciate each other's roles and responsibilities and build relationships to support collaborative working.

Theme 4: System processes

Finally, system processes were highlighted as a particular issue with regards to DMS that impact not just mental health trusts but all referrers and providers of the service. Participants commented on the difference between integrated and manual referral using the web-based platform.

> *"Well, quite often they just attach the discharge letter so you get a PDF discharge letter which is the same information that goes through to the practice, which is why you actually see more information. As 2 said, the issue with the integrated one is that often you don't see what's being stopped or why. Whereas if you've got the discharge letter attached, you do actually see more of the narrative around the admission and discharge." Participant 1*

This participant highlighted that although the perception was that the integrated system would be better for the level of detail received, the opposite was actually true. The manual web-based entry system appeared to provide greater detail to the community pharmacy teams as hospital colleagues routinely attached the discharge letter, something that was not always apparent from those Trusts with an integrated system.

There were also issues of multiple systems for reporting in community pharmacy that increased the administrative burden for colleagues.

> *"Actually I don't think it helps that because a lot of these are set up with Pharm outcomes, it's not integrated to make your payments. So actually I've got quite a few pharmacies who don't record the interventions on pharm outcomes, which is a real shame in terms of the data and demonstrating it. And they just submit it up by MYS because you don't have to use the pharm outcomes system. So a lot of them are sitting there. And I keep on going or why haven't you accepted and why haven't you complete? And they're gonna have, I just haven't put it on the system." Participant 2*

This participant is highlighting not only the increased administrative burden surrounding DMS provision but also the downstream impact of recording data in different places and being able to demonstrate outcomes as a result of the service.

From a Trust perspective, setting up the system and gaining approval to implement DMS posed numerous difficulties particularly in relation to information governance (IG).

> *"they really wanted a justification on why community pharmacists need that information and and, you know, I had to explain their role and what they're doing and how it's pretty similar to how we send things to the GP and the action in the same information. So I think it was trying to get them to understand what the services and the importance of it and it was also useful speaking to come. X and 6 and everyone else and to see what discussions they've had and how they were able to justify that. And so, yeah, I think it was more of an understanding of the service and the benefits of it." Participant 5*

As this was a new type of service for mental health Trusts, it became apparent that IG leads were not just focussed on the service and information leaving the Trust but part of the problem also centred on explaining the role of community pharmacies within the NHS and how they should be treated in the same manner as general practices.

Discussion

The region is still in the early days of implementation, with very few DMS referrals having been generated from only one Trust. Referrals also appear to be relating to issues around medicine supply for community colleagues to consider and take action.

Generally, community pharmacy representatives relay positive experiences about the wider preparation and support provided to introduce mental health referrals through DMS. The training provision was reported to be engaging and reassuring, with some concern raised by community colleagues about ongoing training and/or support in managing more clinical mental health issues. It is clear that the approach has been to implement DMS in a gradual way; where community pharmacists are being provided information through the referral to connect with patients post-discharge in a manner that they are probably already accustomed to. It would be interesting to see if the nature of referrals change over time, where community pharmacy colleagues are challenged with more clinically focused post-discharge scenarios to follow-up and action. This could trigger the need for further connectivity across the system to enable easier referral pathways to appropriate services, but also the need for community pharmacist training in the management of mental health conditions.

Convening with representatives across the system leading up to DMS implementation was reported as invaluable to setting the foundations for relationships and connections to support the service implementation. It appears that DMS has provided an opportunity for integration, at least of a formative nature, to occur. NHSE, in the DMS toolkit, articulate that DMS is considered as a strategy towards improving integration. If this is indeed the case, and these initial reports are sustained, it would be encouraging to capitalise further with the introduction of more joined up clinical services and integrated working.

There have been obvious workforce challenges due to the pandemic that has hindered the progress of DMS. The reference to skills and resource for digital health within the Trust as a facilitator, is interesting and could warrant further consideration if more services or care generally relying on technology are to be introduced and implemented.
The technicalities about the platforms and systems to generate and send referrals and then the data entry at the community pharmacy are adverse effects of the unfortunate lack of

digital integration within the NHS and organisations which interface with it. There is a missed opportunity, and significant difficulty, to monitor the impact of DMS on patient experience and outcomes. This poses a risk for the profession to demonstrate and evidence their clinical contribution and patient impact through the DMS.

This very contained piece of work is based on a limited number of participants from one region in England. Findings have provided some insight into the implementation and delivery of the DMS. The observations and discourse are not intend to be more widely generalisable (as is the acknowledged case with all qualitative studies), however, there have been some key findings that could warrant further reflection and consideration:

- System-wide relationship building is key to supporting DMS implementation and delivery
- Investing time to set expectations of all stakeholders is likely to facilitate smoother service implementation and delivery
- Finding an approach to normalise the service initially seems like an effective approach to consolidate relationships and enhance integrated working
- Training needs may change as the service matures in-situ
- With more care being supported with technology, more dedicated investment may be warranted on roles in digital health
- Services aiming to integrate care need to be supported with digital integration across the patient pathway

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