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Tearing down walls to deliver a dedicated ward pharmacy service

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How East Lancashire Hospitals NHS Trust introduced a pharmacy service that comprises one pharmacist delivering pharmaceutical care to one ward to help implement a range of innovations in the field.

Courtesy of Alistair Gary

Farhat Yasmin, specialist pharmacist, speaks with a patient on the respiratory ward at Royal Blackburn Teaching Hospital.

You may often hear at conferences, what would a hospital pharmacy service look like if all the many innovations developed in recent years were implemented at one site?[1] Implementation may not be feasible for many local reasons, but, at East Lancashire Hospitals NHS Trust (ELHT), the pharmacy team has been given the opportunity to explore several possibilities with the introduction of the dedicated ward pharmacy (DWP) service.

DWP comprises one pharmacist delivering pharmaceutical care to one ward, with appropriate pharmacy technician and assistant support. While this style of working is not unique — this pharmacist–patient ratio is seen in the niche specialisms provided by large tertiary centres — the DWP aims for a 1:1 pharmacist/ward service that is delivered to all specialities (and in some cases 2:1), and at a typical district general hospital. The DWP service's history has been detailed elsewhere[2].

DWP mandates that pharmacists routinely participate in consultant-led rounds on all wards delivering the service, so pharmacists influence decisions at the point of prescribing. They also acquire tacit knowledge of wider issues relating to patients' ongoing care, discharge arrangements and social issues.

'Discharge planning' is seen as an oxymoron by some; DWP empowers the pharmacy team to effectively plan for discharge, which has resulted in patients being discharged earlier in the day. For example, two surgical wards showed an immediate doubling in discharges in the morning and a 10% reduction in discharges after 5pm.

Our pharmacy technicians have been instrumental in improving patient flow by organising and preparing the medicines sections of the electronic discharge letter (eDL) in advance. And, on two pilot wards, pharmacists regularly write the clinical narrative for the eDL too. Both of these tasks free up junior doctor time and invariably lead to content of a higher quality.

DWP may sound like something from the Carter Review, and in many ways this is true; our outputs match the findings of some pharmacy elements in Lord Carter's report, which recommended that pharmacists spend 80% of their time on clinical duties[3]. ELHT has achieved this through staff investment and process change, despite the complexity of defining 'clinical'. Around 84% of ELHT pharmacists' time will be spent on clinical activities by December 2017.

How did we make it happen?

This long journey started with small-scale testing on single wards. Our greatest challenge was the four-ward pilot, undertaken in January 2016, which aimed to change the way the pharmacy team worked at ward level. It also aimed to change views of the pharmacy service across the trust — we should be recognised not merely as a discharge function but as skilled individuals who, given the opportunity, have a big impact on patient safety, experience and flow.

The pilot was achieved through an agreed staff overspend, and its outcomes allowed us to put forward a successful business case for the recruitment of an additional 21 pharmacists, 11 technicians and 2 assistant technical officers (ATOs)[2]. Funds were moved to the pharmacy budget from unfilled vacancies elsewhere in the trust on the condition that the money would be phased over three periods, with each subsequent release dependent on validated outcomes from the previous release.

Phase 1 (an extra eight pharmacists and six technicians) allowed us to expand the DWP service to incorporate eight wards by November 2016. Phase 2 funding was approved in May 2017, and over the summer seven extra pharmacists and two ATOs were recruited, and all new staff were inducted by the end of November 2017.

Improvement science

The work we have undertaken has generated interest not only within the trust, but also outside our organisation. Greater Manchester Academic Health Science Network (GMAHSN) was alerted to the DWP project, which led to the opportunity to attend a year-long Improvement Science for Leaders course run by Haelo, with our places funded by GMAHSN. The course has allowed us to apply new improvement science skills and principles to the delivery of phase 2 of the DWP project[4].

Funding has also been secured for the School of Pharmacy at Manchester University to carry out a research project on the DWP service. During this project, which is currently at an early stage, the research team will quantitatively analyse the outcome data from the service, and complete qualitative analyses through observational study and interviews.

Over this journey, there has been a great deal of data collection to support our claim that we improve length of stay, readmissions, medicines reconciliation, discharge times and drug costs. New data are generated daily, and it has become laborious to interrogate all our information, but it is important that we can demonstrate that the service continues to perform to our expectations, especially as it expands. Fortunately, the trust has bought a Microsoft application called PowerBI, which pulls together data from multiple sources and displays in a dashboard view. At the time of writing, we are developing the first reports.

Support from all levels

Innovation relies on a change in the traditional notion of pharmacy roles, and what pharmacists can do (given the funding) to support outstanding patient care. Working collaboratively, a core project team of three pharmacists and two technicians focused on key themes of:

- Staff engagement; for example, clarifying senior pharmacist and pharmacy technician roles;
- Improving visibility of performance through meaningful graphs and statistics;
- Reviewing and changing the recruitment and induction processes;
- Improving communication by using an online communication tool;
- Encouraging a supportive environment to allow for innovation;
- Setting a clear project mandate for success through interactive staff meetings.

Our staff are the most valuable resource, and it was essential to engage them and work towards a shared goal. Several people enrolled on an engagement training programme. Weekly medicines optimisation meetings were set up for all ward-based staff, which are brief and interactive. The core project group also meet weekly to review PDSA cycles and data outputs.

Engagement was measured through staff retention levels, sickness rates and the national staff survey results, all of which showed positive outputs compared with previous years.

The level of support and buy-in from the trust board and senior clinicians, who agreed to fund the project, has been vital to the pharmacy team's success.

What DWP means to service users

We have sought feedback from patients and staff during the implementation of the DWP, which has been met with overall positivity — examples are detailed in Box 1.

Box 1. What dedicated ward pharmacy means to service users

Anonymous patients:

"I have a better understanding of why I am taking what I am taking."

"Went through all medications. I feel happier now."

“Explained everything in simple terms, gave easy to understand instructions on the ease of the new combinations. Has been very good. Explained everything.”

Yasmin Farhat, clinical pharmacist:

“I have become much more integrated within the multidisciplinary team, and I get the opportunity to see what factors influence prescribing decisions. This is especially true in complicated patients or patients with multiple co-morbidities. The medical team usually treat a combination of things, rather than just one condition or symptom; as a result, I do not find myself challenging why we started one medication over the other at a later stage in the patient’s journey because I have been involved in the decision-making process from the start.

Now I am on the ward rounds, I can ensure essential therapeutic monitoring from the point of prescribing. Patients are getting the most out of their medicines without unwanted side effects, and this gets them home quicker.

I also see the dedicated ward pharmacy’s benefit for the image of the profession; patients see me influencing prescribing decisions on ward rounds. Now more than ever, patients ask me questions and to explain things further after the ward round.

The dedicated ward pharmacy helps me get to know the patients and identify anyone who would benefit from extra counselling or referrals to other services.”

Mubarak Chen, pharmacy technician:

“Dedicated ward pharmacy enables us to provide a much safer and outstanding quality of care for our patients. The roll-out of dedicated ward pharmacy has enhanced the role of a pharmacy technician by allowing us to work closely with a dedicated ward pharmacist. We can achieve medication reconciliation for all patients in a timely manner; this has allowed us to reduce costs and has given us the opportunity to help and encourage the use of patients’ own drugs on wards.

Discharge times have been reduced immensely as we play a vital role in helping to create electronic discharge letters. We can pre-empt medication ready for discharge, which allows faster patient flow throughout the hospital.”

William Wilkinson, pharmacy assistant technical officer:

“Dedicated ward pharmacy gives me a better working relationship with the pharmacist and technicians because I have been working on the wards as part of the team. By dispensing medications at ward level, patients can be discharged in a timely manner.”

Michelle Turner, ward manager (general surgery ward):

“While on the ward round, pharmacists look at all prescription charts to check that all regular medications are prescribed; check the course length of antibiotics; check that VTE (venous thromboembolism) prophylaxis is prescribed; check contraindications in the prescription; and check blood results. From this short list alone, you can see that they are promoting safety and reducing harm on a great scale. Previously, I have always tried to predict discharge dates and arrange TTOs (To Take Outs) for the day before discharge, but junior doctors are so stretched that doing TTOs for the following day was never on the top of their agenda. Since the dedicated ward pharmacy started, all the TTOs I have requested for the following day have been done, which has resulted in a faster turnover and earlier discharges. The knowledge of these pharmacists is second to none. They are there to help in any situation and pick up on things that someone else may not have thought that could be contributing to a patient’s condition.”

Sandra Bain, ward manager (respiratory):

"This is an amazing service. It certainly meets the safe, personal and effective vision for the trust. I can honestly say it is one of the few changes that have made a significant improvement in service delivery that I have been involved with over the years. It actually meets the needs of the service."

Daren Subar, consultant general surgeon:

"This is a fantastic service provided by very dedicated pharmacists. It has been very interactive and educational for me. Long may it continue!"

Refer-to-Pharmacy and readmissions reduction

ELHT innovated Refer-to-Pharmacy, a hospital-to-community pharmacy electronic referral system, which alerts community pharmacists to a patient's admission to hospital and subsequent discharge, and provides a copy of their discharge letter.

Refer-to-Pharmacy is one of the main reasons that we have observed a decrease in readmissions. There was a 0.8% reduction in readmission rates for people at 28 days with the same diagnosis during January to July 2017, compared with during the same period in 2015, before Refer-to-Pharmacy was live. This equates to 100 fewer people readmitted annually; the Carter Review determined an average hospital stay to cost £3,500 per person[3]. Hospital admission notifications went live in February 2017 and improvements were made (Table 1).

Table 1. Refer-to-Pharmacy outcomes March to September 2017

Number of referrals made	4,927
Net time saved by community pharmacies **not** dispensing prescriptions	140 hours
Harm prevented through identification of unintentional GP prescribing errors	81 patients
Net items **not** dispensed and wasted at average item cost of £8.78[5]	334 items

What next?

Changing behaviours and practice is difficult. With the current economic climate in the NHS, there will be obstacles, but we can persistently implement small-scale changes and use data to demonstrate the benefits we provide as a profession; we have changed practice, attitudes and mind-sets within our trust.

The service will continue to evolve, and, over the 2017 winter period, we aim to deliver the service on 24 wards and demonstrate that DWP is a sustainable must-have service, through data and feedback. We hope that in 2018 the trust will fund the final phase, which will lead to DWP being delivered on every ward, Monday to Friday, and with extra resources to support consultant-led ward rounds at weekends.

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