

# Evaluating The Impact Of A Pharmacy Homecare Team At Kettering General Hospital

Anusha Patel, Advanced Pharmacist Homecare Medicines, Kettering General Hospital.

Correspondence to: anusha.patel@nhs.net



Anusha Patel

## Abstract

### Title

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### Author list

Patel A

### Objective

To evaluate the impact of the addition of a Pharmacy Homecare Team at Kettering General Hospital (KGH) in meeting requirements of the Royal Pharmaceutical Society (Professional standards for Homecare Services) and to quantify the benefits.

### Method

All contributions made by the team were recorded in all aspects of homecare management including prescription requests (prescription management), prescription clinical screening, prescription transfer, clinic enquiries, patient enquiries and prescription matching with proof of delivery and processing invoices for payment. A self-assessment against the Royal Pharmaceutical Society Homecare Standards was then performed to be able to demonstrate and quantify improvement.

### Results

Data for a 3 month period were collected. The addition of prescription screening associated with the safe use of medicines showed that an intervention was made on 15.4% of all prescriptions received from clinics. 8.5% of all deliveries made in this period had a discrepancy either due to incorrect delivery schedules made against prescription requirements, expired prescriptions in pharmacy or incorrect patient details on payment documentation. £74,207 worth of financial impact has been identified due to implementation of new financial processes for payment of homecare invoices, which can be extrapolated to £296,829 per annum. The key performance indicator position of KGH with regard to the Royal Pharmaceutical Society Homecare Standards demonstrates our overall impact from 22% prior to the team being in place to 70%.

### Conclusion

Evaluating the impact of a Pharmacy Homecare Team has demonstrated that homecare services are open to many opportunities for improvement with the addition of a specialist team. Experience at KGH authenticates the value added by implementation of the team and that strengthened governance in place will allow for increased homecare activity for a Trust.

**Keywords:** prescription, patient, medication, delivery, incorrect quantities, incidents.

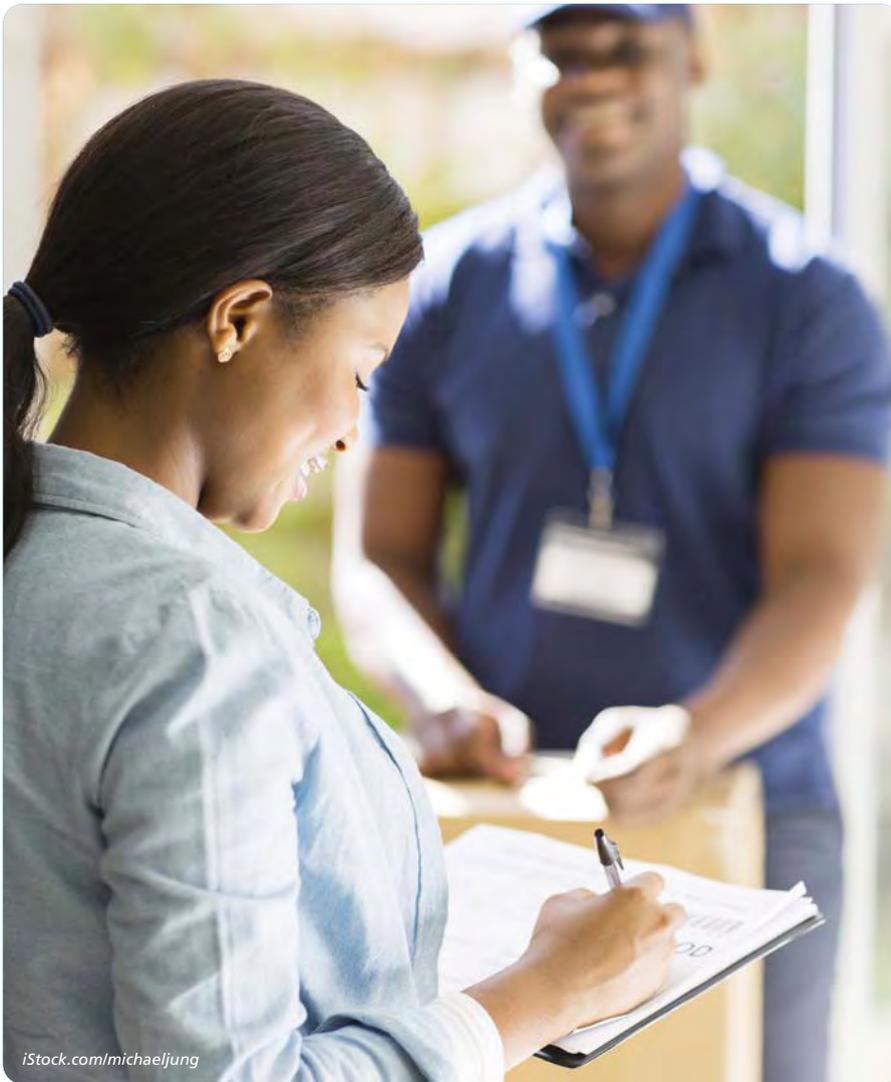
## Introduction

A homecare medicine delivery and service can be described as being one that delivers on-going medicine supplies and, where necessary, associated care initiated by the hospital prescriber direct to the patient's home with their consent.<sup>1</sup> These medications are generally used for treating chronic, long-term conditions. They can be subcutaneous or intravenous

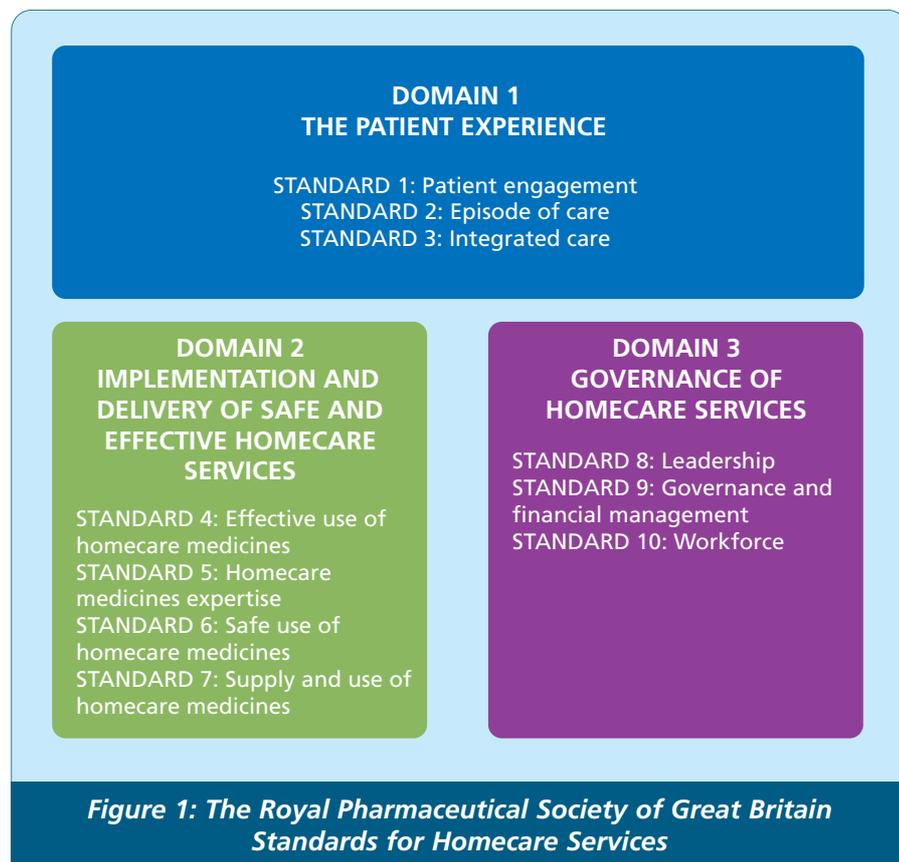
infusions and therefore require ancillary supplies such as sharps bins, swabs and infusion pumps. The consultant will decide to initiate a particular treatment with a patient in clinic, consent the patient for a homecare service and complete a prescription. The patient can return to their home and the prescription is sent to the hospital pharmacy department for processing. The pharmacy department will then post the

prescription to the designated homecare provider who will then dispense and deliver the medication and any required ancillaries. Specialist nurse training can also be provided to patients at their home. This may be provided in the service from the homecare provider or by the pharmaceutical industry which manufactures the product being delivered. This, in turn, can lead to improved adherence to treatment

*“The purpose of the homecare medicines service is to improve patient care and choice of their clinical treatment.”*



through regular contact with a healthcare professional available 24 hours a day via a dedicated telephone number. The purpose of the homecare medicines service is to improve patient care and choice of their clinical treatment. There are potential cost benefits to the National Health Service (NHS) through reduced demand on hospital services and VAT savings on drugs distributed in this manner, which is particularly important due to the increased financial pressures on the NHS today. In addition to this, the additional treatment capacity of clinical homecare means faster access to treatment; the release of hospital beds reduces the risk of hospital acquired infections and, as a result, homecare can be seen as increasingly offering opportunities to redesign the patient pathway, with the medicine playing the key enabler for change. In 2011, the Department of Health commissioned the report 'Homecare Medicines – Towards a Vision for the Future'.<sup>2</sup> The report made a list of recommendations to improve the financial and clinical governance arrangements and highlighted the need for stringent arrangements in place to allow for NHS Trusts to be able to manage medicines. Following this publication, the Department of Health established a Homecare Medicines Strategy Board to oversee national implementation of these recommendations, resulting in the establishment of the Royal Pharmaceutical Society (RPS) Professional Standards for Homecare Services.<sup>1</sup> These standards have been grouped into three domains, as illustrated in Figure 1, and a key performance indicator (KPI) audit tool has been developed by the National Homecare Medicines Committee (NHMC) to allow for NHS Trusts to self-assess how compliant they are to meeting the RPS standards.<sup>3</sup>



A regional collaborative homecare group has also been set-up within the East-Midlands region to aid contracting, procurement and share best practice.

## The scale of the problem

The expansion of the homecare market over the last 10 years has been unexpected and has significantly influenced the position of the medicines market today. Despite attempts to understand the dynamics, there is as yet no accurate data on its existing size. However, the number of patients on homecare services is estimated to be as large as 230,000, with sales expenditure of around £1.5 billion.<sup>4</sup> Although the numbers of patients treated through homecare schemes is relatively small in comparison to the total numbers of patients treated within the NHS every year, the medicines used are often expensive. Hence the total costs of homecare associated medicines is high – estimated in ‘Homecare Medicines - Towards a Vision for the Future’ as £800m out of a total expenditure of £3.9bn, or more than 20% of total costs.<sup>2</sup> Moreover, the field is developing rapidly, with increasing numbers of hospitals implementing homecare services.

## Background to the service evaluation

Historically, the practice at Kettering General Hospital (KGH) had been for homecare providers to approach clinics directly to set-up new services. This led to clinics sending prescriptions directly to providers, with pharmacy only receiving an invoice for payment. Pharmacy involvement had been minimal with no input into the agreed service level, no accuracy checking of prescriptions and most importantly no safety provisions for patients on the medication that they were being delivered.

KGH pharmacy department had significant concerns regarding the lack of oversight, governance and the subsequent risks to their patients therefore submitted a business case for funding for a new Homecare Team, which was successful.

The establishment of a Pharmacy Homecare team in September 2014 consisted of an invoicing administrator

(0.8 WTE), a Homecare Technician (1.0 WTE) and a Homecare Pharmacist (1.0 WTE) - see Box 1 for definitions of these and other aspects associated with the project. The aim of the evaluation reported here was to gather data regarding the impact of the homecare team on meeting the national RPS Standards for Homecare Services. Currently, KGH have approximately 600 patients on homecare; with an annual spend of over £3.5 million (2014).

## Objectives

The objectives of the project were to:

- promote the improvement in safety provided to our patients on current homecare services

- provide assurance of governance improvements at KGH for homecare to demonstrate for any future Trust increase in homecare activity
- improve systems, efficiency and the patient experience for homecare services
- share learning and promote best practice to enable the continual improvement of homecare services
- quantify any financial impact arising from implementation of new financial management processes
- demonstrate the value added to our homecare service users.

### Homecare Provider

Any organisation providing a homecare service.

### Homecare Pharmacist

A hospital pharmacist whose duties are to oversee the provision and administration of homecare services.

### Homecare Technician

A qualified pharmacy technician who supports the Homecare Pharmacist in the management of homecare services.

### Invoice administrator

A qualified pharmacy assistant who processes invoices and reviews proof of deliveries for payment and supports the homecare technician in the day-to-day management of homecare services.

### Responsible Officer

The Trust's Chief Pharmacist who is responsible for all homecare medicines and is accountable for them through the Medicines Committee to the Trust Chief Executive Officer.

### Prescription screening

A pharmacist or suitably qualified technician performing a clinical check of the prescription. This is a new requirement of the RPS Professional Standard for Homecare Services which should be implemented for all homecare services at the earliest opportunity.

### Key Performance Indicators

Quantifiable measurements, agreed beforehand, that reflect the critical success factors of the service/organisation.

*Box 1: Definitions*

## Methods

Intervention recording began in December 2014 for all homecare therapy areas. Contributions made by the team were recorded on data collection forms separated into the grade of staff making the contribution. All contributions were recorded in all aspects of homecare management from prescription requests (prescription management), prescription clinical screening, prescription transfer, clinic enquiries, patient enquiries, prescription matching with proof of delivery and passing invoices for payment. In addition to the above, any activity which would improve quality or add value to the homecare service was recorded.

## Results

Results of the interventions/contributions made have been categorised according to the domain detailed in the RPS Homecare standards that it may address.

### Domain 1: The Patient Experience *Patient Engagement, Episode of Care and Integrated Care*

The additions made to homecare services at KGH which fall into the patient experience domain are as follows:

- The Pharmacy Homecare team reviewing and improving the information (e.g. information leaflets, contact telephone numbers) provided to patients being initiated on a new Homecare Service.
- The Pharmacy Homecare team

contact details provided to patients include a direct telephone line.

- Involvement of the Homecare Pharmacist for assessing suitability of patient cohorts for set-up of new homecare services.
- New communication systems in place to allow all the pharmacy homecare team, homecare provider and clinic to be informed of any change in patient treatment, condition or circumstance to ensure continuity of care and maintain patient safety.

### Domain 2: Implementation and delivery of safe and effective homecare services

#### *Effective use of homecare medicines*

- A ratified Homecare Policy has been disseminated to all homecare stakeholders at KGH ensuring a multidisciplinary approach to homecare services.
- Attendance at a monthly regional homecare collaborative group has assisted the Homecare Pharmacist to ensure KGH homecare prescribing has patient safety at its heart, is evidence-based, consistent with commissioning policies and in line with regional contract awards, whilst utilising this opportunity to collaborate and share best practice. This has allowed homecare procurement to take into account national, regional or locally negotiated contracts and the quality and safety of the products.

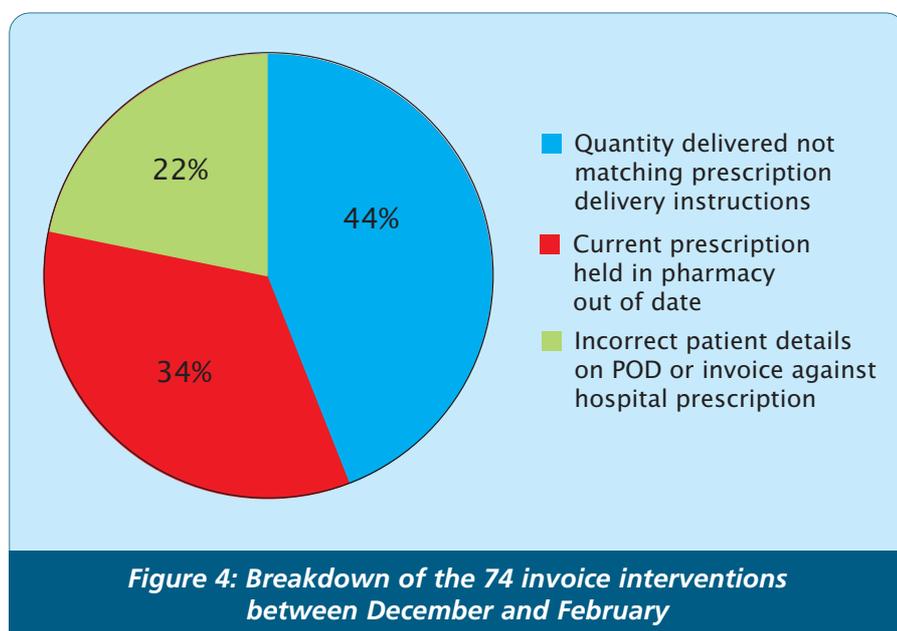
#### *Safe use of homecare medicines*

The addition of homecare prescription clinical screening was assessed in the three month period between December 2014 and February 2015. The team kept a log of all incidents encountered with regard to KGH's invoice, proof of delivery and the prescription reconciliation process.

Table 1 shows the breakdown of 85 interventions made from a total of 552 prescriptions during this period. An intervention was made on 15.4% of all prescriptions processed during this time period (n=85/552).

Intervention	Total
Strength of medication not stated	4
Incorrect/incomplete registration form	6
Delivery schedule not specified	11
Device not specified when multiple available	56
Duplicate prescription received by pharmacy	8
TOTAL	85

**Table 1: Categories of interventions made during prescription screening of homecare prescriptions**



**Figure 4: Breakdown of the 74 invoice interventions between December and February**

From December to February a total of 74 incidents were collected by the Homecare Technician from of a total of 867 deliveries made. Figure 4 shows the breakdown of these interventions.

8.5% of total deliveries made had some form of a discrepancy (n=74/867).

44% of patients' delivery schedules were incorrect (n=45/74), 5.2% of the total number of deliveries for the three month period.

34% of prescriptions held in pharmacy were out of date (n=35/74), 4% of the total.

22% of patients had incorrect details on their proof of delivery or invoice (n=22/74), 2.5% of the total.

**Domain 3: Governance of homecare services**

*Effectiveness of new financial process*

The processes for payment of homecare deliveries before and after implementation of the service are shown in Figures 2 and 3 respectively. .

*Financial Governance*

Contributions by our homecare payment processing demonstrate a financial impact of £74,207 over a three month period as shown in Table 2. This can be extrapolated to financial savings of £296,829 per annum in relation to an annual spend of £3,500,000.

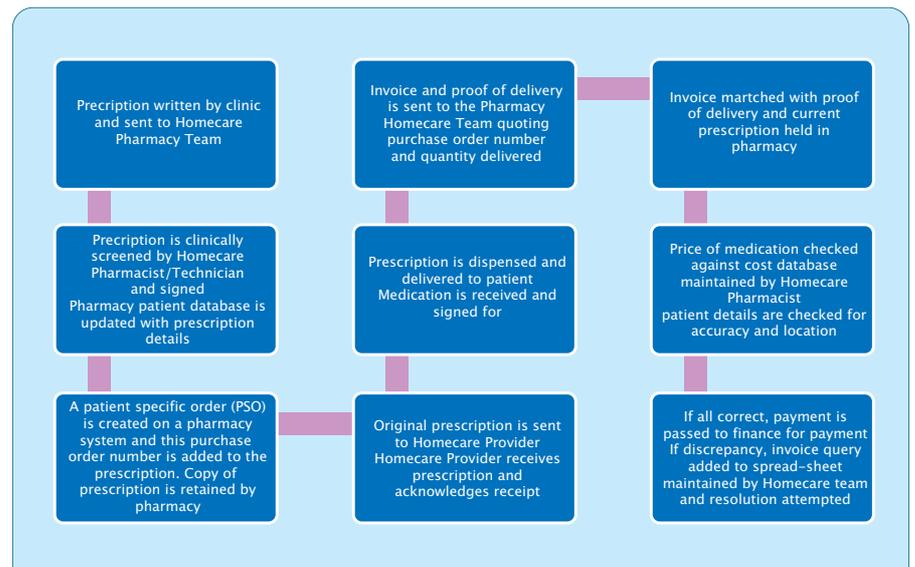
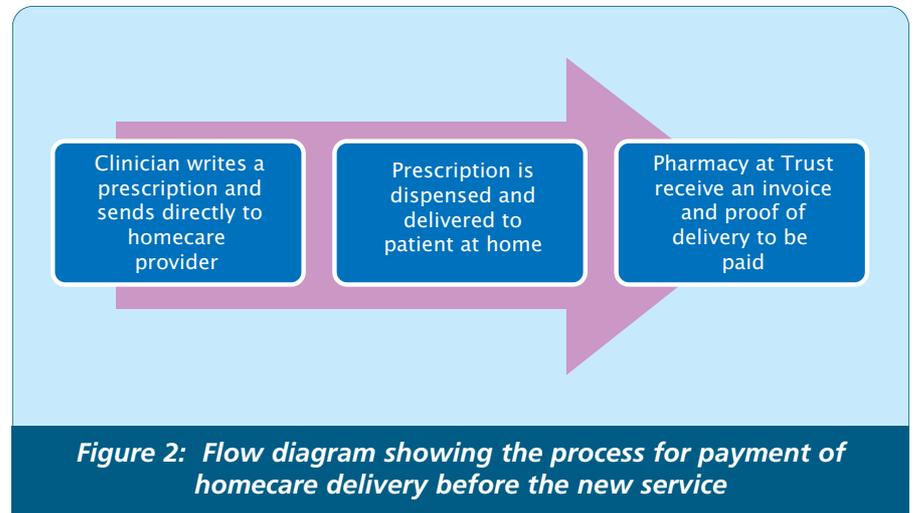
**Discussion**

Results demonstrate the vast amount of added value a homecare team can bring to the homecare service. This value can be demonstrated by KGH's improvement in KPI position from 24% in September 2014 to 70% using the NHMC self-assessment audit tool.<sup>3</sup>

The addition of clinical screening of all homecare prescriptions demonstrated the variety of interventions that can be made. Although none of the interventions led to a change in the prescribed medication, they would all prevent delays for delivery

of the medication to the patient. This would be as the homecare provider would then need to refer back to the clinician or the pharmacy homecare team at the Trust to obtain all the required information. The failure to state the strength of the medication is critical if

more than one strength exists for the product. However, this was not recorded at the time of collecting the data so the four interventions made in this category cannot be classified in terms of significance. Future work could be to address and identify the pharmacy



**Figure 3: Flow diagram showing the process for payment of homecare delivery after the new service**

Incident category	Credit/Saving
Duplicate invoice	£49,838.45
Inappropriate invoice	£1,629.98
Incorrect invoice	£22,034.52
Reclaim of credit	£704.28
<b>Total Savings</b>	<b>£74,207.23</b>

**Table 2: Quantification of financial impact arising from new financial management processes**

homecare team's potential impact directly on clinical care.

The contributions made by our homecare payment processing cannot be underestimated. Over £74,000 was identified for intervention action due to the proper scrutiny of invoices received. Without this role, this value would not have been realised due to the high workload of the pharmacy invoicing clerk who deals with all other invoices as there simply would not have been enough resource to carry out the newly implemented reconciliation process.

A key intervention that was consistently identified was delivery of incorrect quantities of medication against the prescription instructions, for example 4 weekly deliveries made against an 8 weekly prescription. This has an impact on the patient experience as the patient has to wait at home for the delivery more often than required, although it could be argued that longer delivery schedules add to the wastage of medication if changes are made.<sup>5</sup> On investigation with the homecare provider, it was identified that this was because patients were set up on their database using their registration form and first prescription which is 4 weekly to monitor patient response and reduce wastage of high cost medication. The change in frequency on the next prescription was

then overlooked by the homecare provider. All 45 patients (44% of interventions made due to prescription management) were then followed up by our homecare team and were offered to be changed to 8 weekly deliveries when they were next contacted by the homecare provider as requested by the Pharmacy Homecare team.

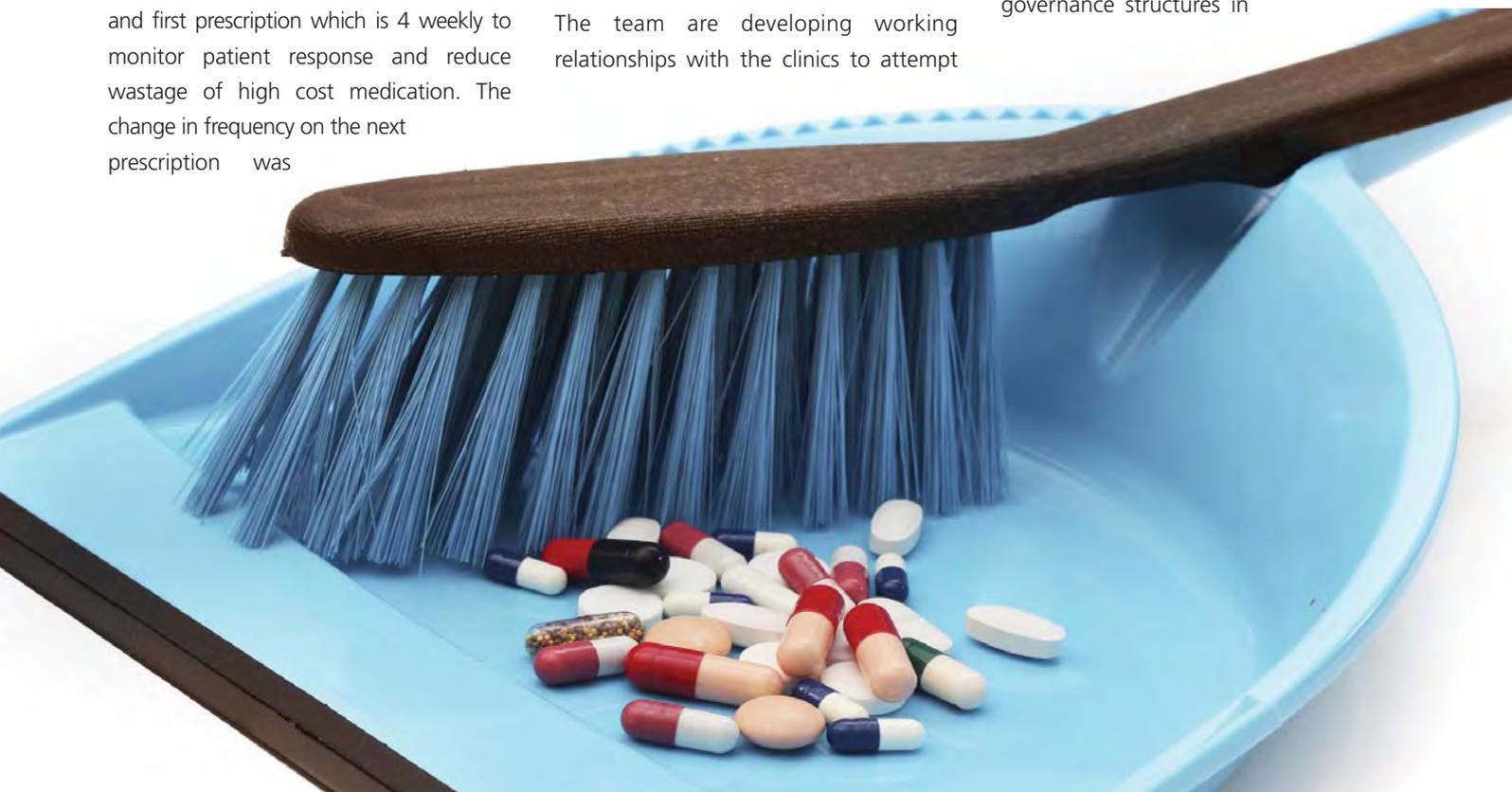
It was not possible to assess the value of discarded medication due to discontinuation/change of patient medication linked to the frequency of delivery or quantity of medication delivered. Additional work is required to capture the extent of homecare medicines and the value of wastage. The Pharmacy Homecare team have begun working on this, and have developed guidance on how the data may be captured to record the value of wastage, which would then lead to recommending ways in which it could be reduced.

Regional collation of homecare incidents across the East Midlands has allowed for NHS Trusts to monitor trends more meaningfully and the Pharmacy Homecare team at KGH have identified that under-reporting of errors is an issue. The team are developing working relationships with the clinics to attempt

to increase Datix reporting for homecare incidents. A standard operating procedure for reporting homecare incidents is currently in development directed specifically to all stakeholders involved in homecare medicines use to encourage reporting. Succession of this will allow for patients' outcomes from and experiences of treatment with homecare services being documented, monitored and reviewed with a process for handling complaints, covering another standard from the RPS Homecare Standards.

The key strength of this report is its broad range of interventions recorded and reported on, highlighting the varied role the pharmacy team plays in an NHS hospital setting. The results are also mapped to the RPS standards for Homecare which make them transferable.

Additional assurance work has taken place at KGH primarily to remove homecare from the Trust's risk register. Quarterly reports are sent to the Responsible officer (Box 1) and are then discussed within the medicine governance structures in



*Additional work is required to capture . . . the value of wastage*

KGH as well as being submitted to commissioners. This report details governance and financial arrangements, financial position, capacity and RPS homecare standard position. These fundamental arrangements should provide confidence in developing new therapies for homecare services.

## Further action

The Pharmacy Homecare team have discussed findings with their clinical teams to highlight the pharmacy role in homecare medicines. The teams are currently working very closely to further improve the prescription processes, management and communication pathways between clinics, pharmacy, homecare providers and patients. Areas which have been identified for action/improvement from this report are:

- Continue clinically assessing all homecare prescriptions.
- Continue attendance to the regional homecare meeting.
- Improve Datix reporting for homecare incidents.
- Improve communication between the clinics and pharmacy on the patients prescription requirements.

- Better education for prescribers on the use of the homecare prescriptions to ensure they are completed fully and accurate.
- Identification of new opportunities.

## Conclusion

This report of evaluating the impact of a Pharmacy Homecare team demonstrates that homecare services are open to many opportunities for improvement with the addition of a specialist team. Although these findings are very broad and specific to KGH, they can represent the issues across the region due to the expansion of this market and limited resources within pharmacy departments.

Experience of KGH authenticates the value added by implementation of the specialist team approach. Strengthened governance allows for increased homecare activity for a Trust. An increase in homecare activity should allow for greater productivity from existing homecare services, allow improvement of the new:follow-up ratio and reduce waiting times for new appointments. This is because patient care is moved closer to home with less need to attend hospitals for follow-up clinics for ongoing

treatment. The Trust is ultimately responsible for this cohort of patients and therefore has a duty to improve the patient safety profile by reducing risks associated with omitted doses of life saving medication, improve the patient experience and improve the medication pathway. This will allow for an increase in therapy areas moving onto the homecare medication pathway at KGH with strengthened governance and overall increased patient safety.

## Acknowledgements

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## Declaration of interests

Anusha Patel has nothing to disclose.

*“ . . . homecare services are open to many opportunities for improvement with the addition of a specialist team.”*

## REFERENCES

1. Barnes S. Health Service Journal. Increase in hospital admissions. November 1. Royal Pharmaceutical Society. Professional Standards for Homecare Services. September 2013. Available from: <http://www.rpharms.com/support-pdfs/homecare-standards-final-sept-13.pdf> .
2. Hackett M. Homecare Medicines. Towards a Vision for the Future. November 2011. Available at: <http://media.dh.gov.uk/network/121/files/2011/12/111201-Homecare-Medicines-Towards-a-Vision-for-the-Future2.pdf> .
3. NHS Toolkit for Medicines Homecare Services. National Homecare Medicines Committee. Section 4 – self-assessment tool for management arrangements of homecare services in provider Health Board/Trusts. December 2011.
4. Managing Homecare in the NHS; A Collaborative Approach. Association of British Pharmaceutical Industry and the National Clinical Homecare Association. May 2014. Available at: [http://www.abpi.org.uk/ourwork/library/industry/Documents/managing\\_homecare\\_nhs.pdf](http://www.abpi.org.uk/ourwork/library/industry/Documents/managing_homecare_nhs.pdf) .
5. Wong SM, Gregory J, Pacey S. Medicines wastage evaluation and prescription management in Nottingham University Hospitals NHS Trust. Eur J Hosp Pharm. 2015;10(1136):1-3. Available from: <http://ejhp.bmj.com/content/22/6/369.abstract> .
6. Royal Pharmaceutical Society. Medicines optimisation: helping people to make the most of medicines. May 2013. Available at: <http://www.rpharms.com/promoting-pharmacy-pdfs/helping-patients-make-the-most-of-their-medicines.pdf> .