

Repeat medication ordering and interventions

Practice-based Audit 2013/14

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Executive Summary

- In the order of 80 per cent of all primary and community care medicines are to people with long-term health problems. In these instances the prescription is signed by the prescriber following a request from a patient for a medicine that has been previously prescribed. However, the patient is often not seen at a consultation.¹
- Pharmacy contractors have sought to implement a variety of systems to aid patients in the ordering and access to repeat supplies of medications. The processes by which such prescriptions are requested by service users, written and verified by GPs and their staff, issued to NHS users or collected and held by pharmacists and ultimately checked and dispensed by them, are varied, complex and changing.
- Pharmacy Voice developed a practice-based audit tool for members to collect data on repeat ordering and dispensing systems as part of the obligations for community pharmacy contractors under the contractual framework.
- A sample of just over a quarter of the total English community pharmacy contractors' population, representing 3,100 pharmacies from 6 different organisations, collated data on the prescriptions of 152,140 patients that were using repeat medication ordering services provided by their local community pharmacy.
- This analysis comprised a total of 651,897 prescription items, 11.3% of which were for 'prn' (*Pro re nata*, or take as required by the patient) medications. The remainder (n=578,289) were for regular repeat medications.
- 1 in every 5 patients (n=31,025) had some sort of query with their prescription that required resolution. The majority of the patients that had queries were dealt with by discussing the medication with the patient (36.04%, n=11,182) or by checking the patient's medication record (35.76%, n=11,094). However 7,075 (22.80%) required contact with the prescriber to resolve the issue. The remaining 1,674 (5.40%) queries were resolved by consulting other reference sources.
- The majority of medications were collected from the pharmacy, either by the patient or their representative. Yet, over 1 in 10 repeat medications were delivered to the patients at their own home (12.91%, 19,639).
- Across the sample of 651,897 prescription items for 152,140 patients, five out of every two hundred prescription items (n=15,650; 2.40%) that were prescribed were not supplied to the patient because they were not needed.
- It was recorded on over 10,000 cases that there were items that the patient was expecting which did not appear on the prescription.

1 Harris C, Dajda R (1996). The scale of repeat prescribing. Br J Gen Pract;46:649-53.

Background

The generation of prescriptions, and subsequent supply of medications, for chronic conditions has led to a marked increase over the last decade in the number of items prescribed in primary care. The supplies of medications used for the treatment of chronic long-term diseases are the main stay of the activities undertaken in community pharmacy settings.² Although there has been no recent assessment of the scale of repeat prescribing it is suggested that in the order of 80 per cent of all primary and community care medicines are to people with long-term health problems. In these cases the prescription is signed by the prescriber following a request from a patient for a medicine that has been previously prescribed; but the patient is not seen at a consultation.³

There are also a number of ways via which patients can receive their dispensed medicines, ranging from self collection to home delivery. In light of the changing landscape of prescribing, pharmacy contractors have sought to implement a variety of systems to enable them to aid patients in the ordering and access to repeat supplies of medications for these chronic conditions. The processes by which such prescriptions are requested by service users, written and verified by GPs and their staff, issued to NHS users or collected and held by pharmacists and ultimately checked and dispensed by them are varied, complex and changing (see, for example, National Prescribing Centre 2004⁴). This may include ordering the medication from the prescriber, collecting the prescription form from the prescriber, and delivering the requested medication to the patient's home. The collective term 'repeat medication systems' is used in this context to include all of these different schemes that are provided by community pharmacies to help ensure that patients continue to have access to an uninterrupted supply of their medications.

Pharmacy contractors have had increasing criticism levied against them for ordering repeat medication for patients and having little or no positive incentive to check that every item is needed⁵; the names of all their drugs, or indeed recognise them if they are supplied in varying presentations. While many patients value the services provided, there continues to be disquiet in primary care; it is believed that they lead to over-prescribing⁶, excessive repeat medicine supply, wasteful dispensing, and stock piling of medications^{7,8}, with some going as far as suggesting that some repeat prescribing processes are poorly managed and potentially dangerous⁹.

Despite limited confirmatory evidence, the systems have been attributed to the build up of unused medicine stocks in the home. However, research conducted by York Health Economics Consortium and UCL School of Pharmacy found that often individuals decide to stop using prn and other medicines (either as part of a recovery process, or on occasions as part of their coming to terms with the ending of life) but continue to collect or have collected repeat prescriptions for fear of later disease progression or return. Such phenomena might in part explain the finding that analgesics are

2 **Davies, Taylor and Barber** (2014) What do community pharmacists do?: results from a work sampling study in London. *Int J Pharm Pract*. 2014 Jan 14. doi: 10.1111/ijpp.12083. [Epub ahead of print]

3 **Harris C, Dajda R.** (1996) The scale of repeat prescribing. *Br J General Practice* 1996;46:649–53.

4 **National Prescribing Centre** (2004). Saving time helping patients – A good practice guide to quality repeat prescribing. Liverpool: The National Prescribing Centre.

5 **Jesson J., R. Pocock, et al.** (2005). "Reducing medicines waste in the community." *Primary Health Care Research and Development* 6(2): 117-124.

6 **Trueman P, Lowson K, Blighe A, Meszaros A, Wright D, Glanville J, et al.** (2010) Evaluation of the Scale, Causes and Costs of Waste Medicines. London: YHEC/School of Pharmacy; 2010.

7 **Bond C, Matheson C, Jones J, Williams S, Ryan M.**(1997) Repeat prescribing study: an evaluation of the role of community pharmacists in controlling and monitoring prescribing, following protocols agreed with the general practitioner. Aberdeen: Department of General Practice and Primary Care, University of Aberdeen; 1997.

8 **Drury VWM.** (1982) Repeat dispensing – a review. *J R Coll Gen Pract* 1982;32:42–5.

9 **Zermansky A.** (1996) Who controls repeats? *Br J Gen Pract* 1996;46:643–7.

amongst the most commonly wasted medicines, even though patients in pain might be expected to use their drugs.^{10,11,12,13}

Furthermore, some suggest the responsibility lies with the patient, who may fear that if they do not request an item it will disappear off their repeat list, so they will not be able to order it in future without another consultation with their doctor. Although this should not occur, it is unquestionably a perceived risk. However, rather than 'blaming' patients, these issues might more appropriately be attributed to system failings such as perverse provider-side incentives and/or poor working practices. Nevertheless, to our knowledge, no studies comparing the detailed costs and benefits of alternative approaches to managing repeat pharmaceutical supply systems have been reported in the literature.

Against this background, Pharmacy Voice, a trade organisation representing over 11,000 community pharmacy contractors in England, sought to work with pharmacy contractors from the large multiple-owned pharmacy businesses to gather some evidence to explore the issues that have been raised with these repeat systems.

Methodological Approach

The contractual framework for pharmacy in England and Wales requires each pharmacy to complete two types of audit each year over a total combined period of 1 week. The first audit is completed at the request of the primary care organisation (Area Team or Health Board) and the second is a practice-based audit conducted by the pharmacy on a topic of their choosing. The Practice-based Audit is a contractual requirement in England and Wales and is part of the Essential Services 8 – Clinical Governance.

Pharmacy Voice has worked with pharmacy owners over the last few years to develop an audit that could be carried out on a large scale across a number of companies and types of community pharmacy to gather results that can be used to gain a picture of an issue at a national level.

This represents the third audit that Pharmacy Voice has carried out in this way and its topic was determined through consultation with Pharmacy Voice members. The first audit looked at the prescription interventions that pharmacists and their teams make as part of their everyday practice (<http://www.pharmacyvoice.com/resource/community-pharmacy-delivering-improved-outcomes-for-patients-in-the-new-nhs>). The second considered high-risk medicines that are subject to close monitoring.

Maintaining and improving service delivery is a crucial factor in operating any pharmacy and Superintendent pharmacists, owners and their pharmacy teams are constantly looking for ways in which learning can be used to enhance pharmacy processes and procedures. Most pharmacies offer some form of repeat collection service and/or repeat dispensing service. The collective term 'repeat medication system' is used to include all of these schemes.

The purpose of this audit was to review current practice with repeat medication systems and assess their contribution to on-going patient care.

The aim was to determine:

- whether repeat medication systems prevent prescribed but unwanted items reaching patients;

10 **Bellingham C.** (2001). How pharmacists can help to prevent wastage of prescribed medicines. *Pharmaceutical Journal* 267(7175): 741-742.

11 **Ersek M., B. M. Kraybill, et al.** (1999). "Factors hindering patients' use of medications for cancer pain." *Cancer Practice* 7(5): 226-32.

12 **Jesson J., R. Pocock, et al.** (2005). Reducing medicines waste in the community. *Primary Health Care Research and Development* 6(2): 117-124.

13 **Zeppetella G.** (1999). How do terminally ill patients at home take their medication? *Palliative Medicine* 13(6): 469-475.

- the number of occasions where counselling and advice was provided to patients with their repeat medication; and
- the number and type of interventions made with repeat medication prescriptions.

The audit collection was designed to track 50 patients' prescription items, ordered using a repeat medication system, that are tracked through the pharmacy over a 2-week period (i.e. not all the data has to be collected on one day).

The results gathered here exclude prescriptions that were not on any form of repeat medication system as well as any patients in care homes, where separate arrangements are in place.

Data were collected manually in each pharmacy and were then entered into electronic systems within each pharmacy group. The collated anonymous data was then analysed centrally. The collated results are reported here.

Results

The audit results are from 3,100 pharmacies that are part of 6 different pharmacy multiples. According to the Health and Social Care Information Centre there were 11,495 community pharmacies in England at 31st March 2013, so this sample is representative of just over a quarter of the total community pharmacy population. The results presented here show the analysis of the prescriptions for 152,140 patients that were using repeat medication ordering services provided by their local community pharmacy.

This analysis comprised a total of 651,897 prescription items, 11.3% of which were for 'prn' (*Pro re nata*, or take as required by the patient) medications. The remainder (n=578,289) were for regular repeat medications. This suggests that on average each patient received 4.3 prescription items through the repeat medication systems.

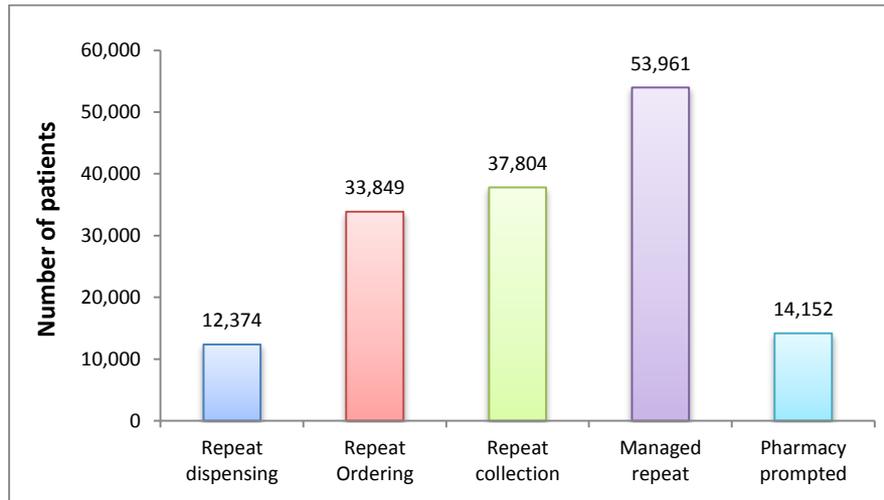
Stability of Condition

Where recorded, 139,300 patients were considered (in the opinion of the pharmacist) to have been stable on their medication for the last six months, of which 34% (n=48,000) had received an MUR in the previous 12 months. By contrast, 12,652 were considered not to be stable on their medication, of which 29.9% (n=3,781) had received an MUR in the previous 12 months. In these cases "stable" was defined as the dosage or strength of the medication having not changed in the previous 6 months.

Type of Repeat Dispensing System

There are a variety of services that fall under the general definition of 'repeat dispensing system'. The majority of the patients sampled here (35.47%, n=53,961) used a managed repeat service, where the patient requests the medication they would like for their next month when they collect the current month's supply. In these services patients are generally requesting their repeat medication 4 weeks prior to collection.

Figure 1 – Types of Repeat Medication System (n=152,140)



24.85% (n=37,804) patients used a repeat collection service, where the patient orders directly with the surgery from which the medication is prescribed and the pharmacy collects the prescription from the surgery for dispensing. 22.25% (n=33,849) used a repeat ordering service, where the patient calls the pharmacy when they need their medicines and the pharmacy orders the prescription from the surgery and then collects the prescription on behalf of the patient.

As shown in Figure 1, only 8.13% (n=12,374) of patients used the formal repeat dispensing service, whereby the pharmacy holds a prescription that is dispensed on a number of occasions, as outlined in Essential Service 2 of the pharmacy contractual framework.

The remaining 9.30% (n=14,152) of patients relied on pharmacy-prompted repeats. In these cases the patient was telephoned by the pharmacy to check what medication they require around an expected 'due date'. The items are then ordered by the pharmacy and either collected by or delivered to the patient.

Medication Queries

The vast majority 79.6% (n=109,267 no query; n=11,848, not recorded) of the patients had no recorded queries with their medication. However 1 in every 5 patients (n=31,025) had some sort of query that required resolution. Reasons for further inquiry included; clarity on dosage instructions or strengths; as well as resolving interactions and contraindications. The majority of the patients that had queries were dealt with by discussing the medication with the patient (36.04%, n=11,182) or by checking the patient's medication record (35.76%, n=11,094). However, 7,075 (22.80%) required contact with the prescriber to resolve the issue. The remaining 1,674 (5.40%) queries were resolved by consulting other reference sources.

Medication Collection

Over 1 in 10 repeat medications were delivered to the patients at their home (12.91%, n=19,639). Medications were generally collected by the patient themselves (58.94%, n=89,664); by their representative, such as a family member (22.19%, n=33,758); or by their carer, such as home help or a community nurse (1.42%, n=2,153). In 177 (0.12%) instances the medications were posted and in 6,749 instances (4.44%) the person collecting was not recorded.

Counselling

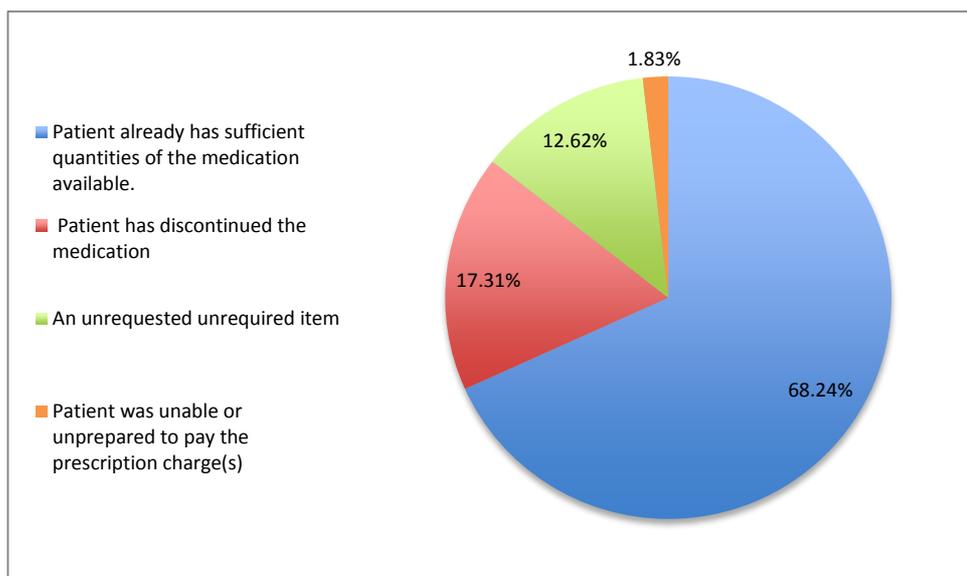
Patients were frequently counselled on their medication. 65,833 pieces of advice were provided as counselling during the audit. Counselling would generally occur when the patient themselves presented, which occurred for 89,664 patients. Therefore in the region of 73% of patients received

counselling. Medications on repeat medication systems are usually for chronic conditions, which patients would be expected to be stable on, therefore it is encouraging that medication use messages are being reinforced. Indeed, where patients were counselled, this was most often on how to take their medication (n=17,596). Other counselling included advising on a prescription query that needed clarification (n=10,567), possible side effects (n=7,130), dosage instructions (n=12,069) or on requirements for testing (e.g. warfarin, lithium etc.) (n=7,406). However, pharmacy teams often used the opportunity to reinforce other healthy living messages and patients were provided with healthy living advice on 11,065 different occasions. This advice included areas such as alcohol consumption, healthy eating and use of tobacco.

Not Required

Across the sample of 651,897 prescription items for 152,140 patients, five out of every two hundred prescription items (n=15,650; 2.40%) that were prescribed and prepared in the pharmacy were not supplied to the patient because they were not needed. At the point of supply the pharmacy team checked if all items that had been dispensed were required. In 14,635 of these cases (93.5%) the reason for the medication not being required was recorded and is shown in the figure below.

Figure 2 – Reasons medications were not required (n=14,635)



In most cases the medication was not supplied because the patient already had a sufficient supply, but on some occasions the medication had been either discontinued or had not been requested by the patient but was prescribed.

For 17% of the patients, the medication that had been ordered had been discontinued and was no longer being taken by the patient. This is indicative of understanding of the patients' current medication regimen by the prescriber. There are opportunities for community pharmacists to address these issues by carrying out Medicines Use Reviews. Invariably medications are stopped during periods where patients have been in hospital. Evidence gathered in Wales has demonstrated the benefit of Discharge MURs being carried out in community pharmacy, and the wider roll out of this service may help to reduce inappropriate prescribing¹⁴.

¹⁴ CPW (2014) <http://www.cpwales.org.uk/News/201404-April/Community-Pharmacy-Discharge-Medicine-Service-to-C.aspx>

The net ingredient cost of the average prescription item in England is £8.37¹⁵, for the items in this sample (15,650) the pharmacy teams helped to save an estimated £130,000 over the period of the data collection, as a result of inappropriate prescribing.

Items Omitted

It was recorded on over 10,000 cases that there were items that the patient was expecting which did not appear on the prescription. This suggests that the systems for communication between the patient and prescriber may not always have been effective. However, due to the nature of the data collection process, it is not clear if this is one item for 10,000 patients, or 10 items for a thousand patients. However, this does demonstrate that often the medications requested do not match the patient's expectations. Pharmacy teams are often left to resolve these concerns from patients, regardless of where in the system the omission had occurred.

Patient Satisfaction

Pharmacists recorded the satisfaction that they perceived their patients had of the service, to which responses for 149,184 patients were recorded. Generally pharmacists believed that patients were satisfied with the service and that all items were dispensed and ready for collection when the patient expected them (n=135,159, 90.60%).

For the one in ten patients where the pharmacist perceived that they were not satisfied with the services (n=14,025, 9.40%), it was generally because not all of the items that the patient needed were on the prescription forms (n=4,696), the patient was owed some items (n=3,952) due to lack of stock; the items were not ready for collection/delivery when the patient expected them (n=3,319) or because the patient's medicine was subject to quota and is in short supply and therefore there was not enough available (n=895). Other reasons for lack of satisfaction were recorded for 890 patients.

Discussion

Previous commentators have criticised the repeat medication systems operated from community pharmacies. The results here generally suggest that patients were perceived to be satisfied with the service and that this led to patients being offered additional counselling and healthy living advice. Therefore, it appears from a patient perspective that these services, which are provided by the pharmacy teams as an aid to patients without additional funding, are in the main a welcome part of their care.

As expected, the majority of the medications supplied through these systems are long-term treatments for chronic diseases; however over one in ten items were for 'as required' medications, the use of which varies from month to month in response to conditions flare ups. This may account for the 30% of patients who were considered by pharmacists to be unstable with their long-term conditions. The flexibility of the variety of systems for managing repeat medications allows these to be taken into account.

It is concerning that 1.8% of requested medications were not supplied because the patient was unable to afford or unwilling to pay for the medication. This is a disturbing finding and suggests that the current pricing system for prescriptions in England may require reform as it is preventing some patients with chronic diseases from accessing medications.

Accusations of over-requesting of medication by community pharmacy teams can be somewhat mitigated by the data. Commentators have suggested that medicines wastage would be reduced if every time a repeat prescription is dispensed the pharmacist or other pharmacy or dispensary staff member involved check with the patient concerned that each medicine is required, and was

¹⁵ **Health and Social Care Information Centre** (2012) General Pharmaceutical Services in England: 2002–03 to 2011–12. HSCIC. London.

adequately motivated to prevent unnecessary supply.¹⁶ The results presented here suggest that counselling and advising frequently occurs. Across this sample of a quarter of all pharmacies in the country they were able to save an estimated £130,000 worth of medicines from being inappropriately supplied. Cautious extrapolation suggests that pharmacies in England could be saving up to an estimated £250,000 per week from medicines being inappropriately supplied. While the margins of error around this figure are large, its value is indicative of the efforts being made by the sector to reduce wastage and inappropriate supply.

Such reviews should allow other reasons for discontinuation to be assessed, including the management of symptoms, side-effects and patients' expectations about their medicine. The audit results suggest that counselling occurred on over sixty-thousand occasions; there is still room for further improvement, where pharmacy teams can become further involved in supporting medicines optimisation and healthy living. Indeed, about a third of patients on these schemes had received an MUR in the previous year.

The previous Pharmacy Voice audit highlighted the lack of monitoring in high-risk medications.¹⁷ This audit has continued to demonstrate the role that pharmacists play in this area, where medication record books were checked and patients using these medications counselled on over 7,000 occasions. The findings from this Pharmacy Voice audit of repeat medications systems continues to demonstrate the contribution that pharmacy practices in England make to medicines optimisation and, most importantly, patient safety.

Indeed, 1 in 5 prescriptions had some sort of problem that required action from the pharmacists before safe supply of the medication could be made. Often this required clarity of the dosage instructions or strength, where the intentions of the prescribers were not always clear. The data found here closely tallies with previous national audits which have shown that pharmacists query 2.22 in every 1000 prescription items.¹⁸

However, the results suggest that pharmacists are generally resolving problems without disturbing the prescriber, generally through use of records or discussion with the patient. Community pharmacists being given access to patient care records could allow them to address more of these problems without going back to the prescriber. The development of pharmacy access to patient records should remain a priority.¹⁹

In the review of waste medicines, over 40 per cent of the waste medicines that respondents identified were dispensed via a repeat prescription system.²⁰ This is, to a certain degree, encouraging, in that overall in excess of 70 per cent of all NHS prescription items are supplied on a repeat basis, and may help to demonstrate how the pharmacy input into these systems actually helps to limit waste.

The results presented here align with previous studies. These show that the 'repeat dispensing' schemes (which allows GPs to issue a 'master' prescription with a set of additional unsigned 'slave' repeats that pharmacists can subsequently dispense against for periods of up to twelve months) had been slow and are not being widely used in primary care.²¹ In this study, only 8% of patients used this scheme. Prescribers have often stated their reluctance to use the relatively new pharmacy repeat dispensing scheme, which allows community pharmacists to manage the repeat prescribing and dispensing process for up to a year. The most often cited reason given for this is that prescribers fear

16 **Jesson J., R. Pocock, et al.** (2005). "Reducing medicines waste in the community." *Primary Health Care Research and Development* 6(2): 117-124.

17 **Pharmacy Voice** (2013) *Practice Based Audit Analysis: 2013*. Pharmacy Voice. London.

18 **Company Chemists' Association** (2012) *Practice Based Audit: Analysis*, CCA. London. April 2012

19 **Pharmacy Voice & RPS** (2014) *Professional position statement: Access to the Patient Health record (England)* Pharmacy Voice. London. Available at

http://www.pharmacyvoice.com/images/resources/Professional_Position_Statement_on_access_to_records_final_-_on_brand.pdf

20 **Trueman P, Lowson K, Blighe A, Meszaros A, Wright D, Glanville J, et al.** (2010) *Evaluation of the Scale, Causes and Costs of Waste Medicines*. London: YHEC/School of Pharmacy; 2010.

21 **Ashcroft, D., Elvey, R., Bradley, F., et al.** (2006) *National Evaluation of Repeat Dispensing by community pharmacists*. Manchester: University of Manchester.

losing touch with their patients' treatment needs. Indeed, GPs are currently not incentivised to use this scheme, although practices can benefit from repeat prescribing related work being shifted to community pharmacies.²² The widespread rollout of electronic repeat systems may also provide an opportunity for the pharmacists to take on greater responsibility for the management of repeat medications.

Over 1 in 10 repeat medications were delivered to the patients at their home by the pharmacy team. These services are currently not funded by the pharmaceutical contractual framework, yet this remains a vital lifeline for patients taking chronic medications.

Pharmacy teams play an important role in helping to support patients in the use of these schemes.

22 Holden J. and Brown G. (2009) International Journal of Pharmacy Practice 17: 249-251

Realising the potential of community pharmacy

In order for community pharmacy to be able to contribute fully to improving outcomes and safety in the new NHS, it will be important to ensure the findings from this audit are effectively used and learnings made.

Actions to embed these findings include:

- **Community pharmacists being given access to patient care records to allow them to more expediently resolve the 1 in 5 prescriptions that had a query.**
- **Community pharmacies being able to manage repeat dispensing services in full. It was recorded on over 10,000 cases that there were items that the patient was expecting which did not appear on the prescription. Doing so would help ensure that pharmacy teams continue their contribution to improving patient safety as well as freeing up resources in general practice. Incentives and consistent commissioning messages for prescribers should be implemented to further drive the development of repeat dispensing services in community pharmacy.**
- **Further review of the charges associated with prescription medications need to be considered. Over 250 prescription items were not supplied because patients could not afford or were unwilling to pay for the medications. However, in the mean time pharmacy teams must ensure that patients are aware of prepayment certificates and are able to advise people on the most cost-effective ways of obtaining their prescriptions.**
- **The collection and delivery of prescriptions is currently not funded by the NHS. Pharmacy teams prevented the inappropriate supply of over 15 thousand items that were prescribed, but were not supplied to the patient because they were not needed. This is estimated to save the NHS about £300,000 per week. Appropriate funding mechanisms should be developed for the implementation of a collection and delivery service for community pharmacies to ensure that pharmacy teams are able to continue to supply medications to the homes of vulnerable people living with chronic diseases, especially when considering that 1 in 10 repeat medications were delivered to the patients at their own home (12.91%).**