

SAFE



THE NEW UK STANDARD OF CARE

✘ BANISH MEDICATION ERRORS

REPORT

PRIMARY CARE



INTRODUCTION

The NHS has been hit by an uncomfortably stark fact – 237 million medication errors occur in England each year as a result of working practices around prescribing, transition, dispensing, administration and monitoring.¹ These errors cut across multiple sectors including clinical professions and come at a cost to patients and to the NHS.

Medication errors are a global problem. The World Health Organization (WHO) are calling for medication errors to be cut by 50% in the next five years². This has prompted the Department of Health and Social Care to commission its own research into the extent and scale of medication errors. Its review, *Prevalence and Economic Burden of Medication Errors in the NHS*,¹ was accompanied by a report from the Short Life Working Group (SLWG) outlining the Department's implementation plan for reducing medication errors.³ The key priorities identified were employing new technology, improving transparency and fostering a culture of learning rather than blame.

In primary care, pharmacy has a key role to play in helping reduce medication errors around dispensing and indirectly around prescribing and monitoring through medicines management.

BACKGROUND

Community pharmacy is under tremendous pressure to deliver more services for less money. The NHS has cut funding to community pharmacy for 2017/2018 by £200 million⁴ and yet still expects pharmacy to deliver an ever increasing volume of prescriptions - now estimated at 1 billion per year⁵ - which are becoming more complex as the population ages.

As well as managing prescriptions, pharmacy is also being asked to deliver additional patient services, including health promotion and medicines optimisation. They are also the first point of access for healthcare, acting as a gatekeeper to GP surgeries and A&E in a bid to reduce pressure on these services.

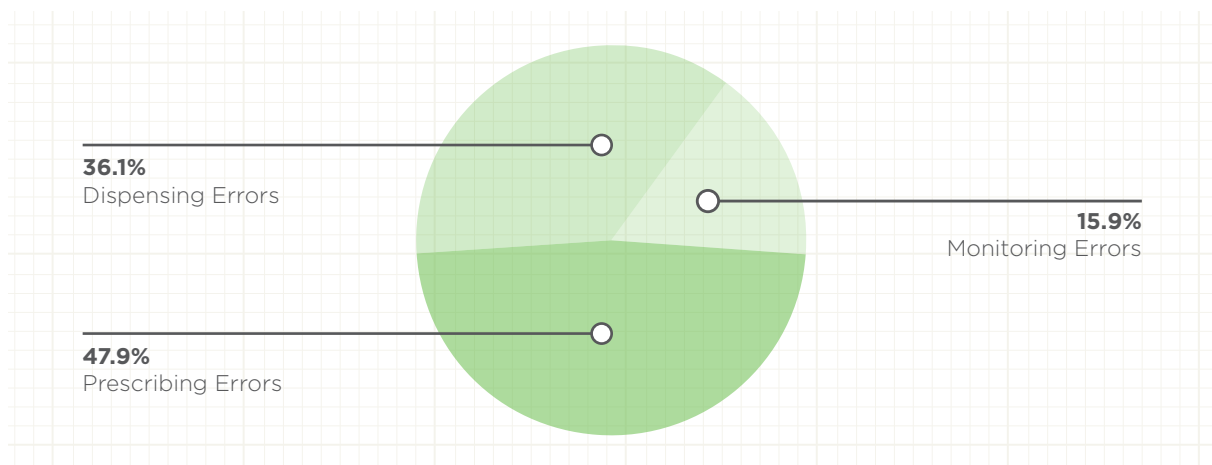
Buckling under this weight and the need to remain viable, it is no surprise that half of pharmacy contractors surveyed last year said they have cut back on staff hours. When there are increasing pressures on demand, time and resources, the risk of medication errors in primary care become more likely.

THE SCALE AND IMPACT OF ERRORS IN PRIMARY CARE

The scale of medication errors is greater in primary care than in care homes or secondary care because more people are accessing care within this sector.

Out of the overall 237 million medication errors per annum, 38.3% of these occur in primary care. It is estimated that 66.2 million of the 237 million errors are clinically significant and can cause moderate or severe harm. The majority of these (47 million or 71%) occur in primary care.¹

ERROR RATES PER PATIENT IN PRIMARY CARE¹



OTHER SIGNIFICANT STATS

- Primary care adverse drug reactions (ADRs) leading to hospital admissions (per year) cost
 - £83.7 million (vs £98.5 million total for all sectors)¹
 - 627 deaths (vs 712 deaths total for all sectors)¹
- Medication is the most common intervention and is a critical component of modern healthcare
 - over 1 billion prescription items dispensed in the community (2016)⁵
 - total net ingredient cost is over £9 billion in primary care (about £16 billion for total annual drug expenditure)⁶

- In 2007, the National Patient Safety Agency estimated that preventable harm from medication across all sectors could cost more than £750 million each year in England⁷

WHERE AND HOW ERRORS OCCUR

The community pharmacy is the main site of dispensing in primary care and is where pharmacists and their teams can have the most influence on medication errors. Some of these pharmacies are also involved in dispensing medicines for care homes.

There are many factors that can increase the risk of medication errors.

- **COMPLEX PRESCRIPTIONS**

Around half the population in England take at least one medicine and more than half of those aged 85 years or over take at least five.⁸ Medication errors are more likely in older people or in the presence of co-morbidity and polypharmacy. This is because they are associated with an increased risk of drug/drug interactions, adverse drug reactions and poor adherence.

- **VOLUME OF PRESCRIPTIONS**

Prescription volume continues to rise and NHS Digital published figures in November 2017 showing that the average monthly number of items dispensed by each community pharmacy in England reached an all time high last year at 7,218.⁵

- **LESS TIME TO TALK TO PATIENTS, PROMOTE ADHERENCE AND CORRECT ADMINISTRATION**

High volumes of dispensing means staff are diverted away from face to face patient contact, from talking to them about their medicines and promoting adherence. Unlike in secondary care and care homes where medicines are administered to the patient, in primary care it is the patients themselves (or their carers) that take responsibility for the safe, appropriate and timely use of their medicines. Services such as Medicines Use Review (MURs) and the New Medicine Service (NMS) have been designed to promote adherence and is where pharmacy can make the most impact to patient health outcomes.

Non-adherence not only contributes to medication errors around administration, it also leads to medicines waste – as much as £300 million is spent every year on unused or partially used medication that the patient throws away or takes back to the pharmacy for disposal.⁹ This medicines waste is partly being blamed on the pharmacy repeat prescription service and consequently a growing number of clinical commissioning groups (CCG) are starting to decommission this service from community pharmacy.¹⁰ This deprives pharmacies from much needed revenue and burdens GPs with additional prescription requests while making the whole process more cumbersome for the patient. Time spent on promoting adherence can reduce medicines waste and help preserve this service .

RECOMMENDATIONS

The NHS sees the real value of pharmacy in “front of counter” patient contact rather than the transactional fulfilment of prescriptions behind dispensary walls.

In a bid to address financial pressures, pharmacy has started to look at how best to introduce efficiencies in its dispensing process. They want to focus the team’s efforts on patient care and medicines use services that

promote adherence, positive patient outcomes and reduce waste. All this ultimately improves medicines safety and reduces medication errors.

One way is looking at technical solutions such as automation and dispensing robots. Making the dispensing process more efficient, safe and accurate also allows pharmacies to further expand their prescriptions business. In Scotland, government financial grants are available for pharmacies to invest in robotics or scanning technology as part of its Prescription for Excellence strategy for pharmacy.^{11,12}

As well as automation, other types of technology could also allow primary care to better engage with patients. The SLWG identified systematic use of information in primary care as a key area in improving systems around medication.³ There is a real need to make sure that patients understand what they are taking and how to take it and deal with any possible reasons for not taking it.

SLWG RECOMMENDATIONS ON REDUCING MEDICATION ERRORS ^{3,13}

- An enhanced summary care record system that would automatically link prescribing data in primary care to hospital admissions so it can be ascertained whether a prescription led to the patient being admitted
- A feedback mechanism from hospital admissions data to clinical commissioning groups that would help to highlight high risk prescribing. These prescribing indicators are being developed by NHS Digital and NHS Business Services Authority
- Accurate and consistent medical coding to enable the patient journey and any associations to be studied
- Roll out of pharmacist-led information technology intervention (PINCER) to identify high risk prescribing in general practice
- Technology to flag up allergies and also medicines most associated with hospital admissions (non-steroidal anti-inflammatories, antiplatelets, anticoagulants, diuretics and antihypertensives)
- Use of technology to improve medicines information to patients and carers and promote joint decision-making to improve medicines safety and adherence
- Pharmacy dispensing systems that produce labels that would contribute to safer use of medicines by patients
- Systems that would flag up 'look alike' and 'sound alike' medicines to reduce selection errors in the dispensing process

DECRIMINALISATION OF DISPENSING ERRORS¹⁴

The recent decriminalisation of dispensing errors in pharmacy has been considered by the profession and beyond as a positive step in ultimately improving patient safety by promoting a learning culture rather than a blame culture and facilitating the sharing of best practice.

BEST PRACTICE FOR THE AUTOMATED DOSE DISPENSING¹⁵

The European Directorate for the Quality of Medicines and Healthcare (EDQM) has issued its Guidelines on 'Best Practice for the Automated Dose Dispensing (ADD) Process and Care and Safety of Patients'. The ultimate goal of these guidelines is to ensure the safe use of medicines through technology providing the best possible medication outcome for patients.

FEATURES OF AN IDEAL TECHNOLOGY SOLUTION

Technology can provide pharmacy with safe dispensing of both medication adherence packs and original pill packs helping to dramatically reduce the risk of dispensing errors and provide a safety net for the pharmacy team.

ROBOTIC SYSTEMS

Community pharmacies can help to prevent medication errors by installing robotic systems that sort and dispense medication and automated systems which accurately fill and check medication adherence packs. Installing such systems also means that experienced staff are no longer diverted to operational tasks like restocking, stock rotation and filling medication adherence packaging.

Robots have been used in logistics and distribution for many years, but only recently in pharmacy. In 2001, the Audit Commission's "Spoonful of Sugar" report¹⁶ advocated the use of automation to transform pharmacy services but cost and limited space were prohibitive in community pharmacy. With smaller and more efficient robots emerging on the market there is now the opportunity to change this.

BENEFITS

Evidence exists to show how pharmacy robots can reduce errors while improving the speed and efficiency of the dispensing process at the same time. Robots have the potential to handle high volumes of dispensing in community pharmacies, or dispensing "hubs", and release pharmacists to develop and deliver patient-centred services, including medicine use reviews that can potentially further reduce medication errors.

MEDICATION ADHERENCE PACKAGING

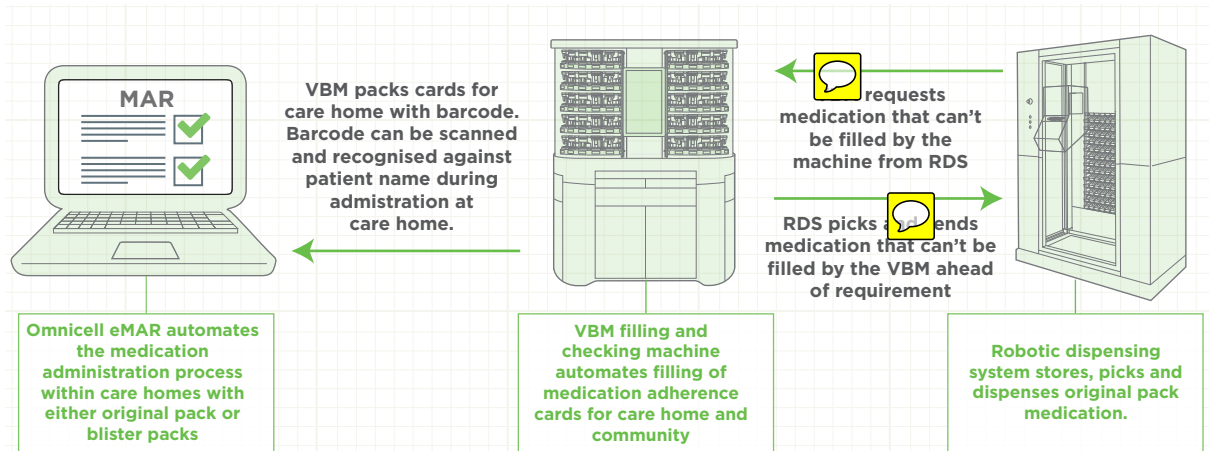
Technology now exists to safely automate the process for filling medication adherence packaging. Adherence cards are an important tool for patients with complex medication regimes to help them take the right dose of the right medicine at the right time. However, as a manual process, this can be a time consuming process for many pharmacies.

BENEFITS

Automating filling of these packs significantly reduces the risk of human error and in some settings the technology has been so reliable that pharmacists have been able to remove the second exemption check. It is now more important than ever for pharmacies to modernise and consider automation to drive patient safety, help reduce costs and spend more time with patients.

TOTAL SOLUTION FOR PHARMACY SERVICES

In community pharmacy, technology has the potential to integrate the robot dispensing system, the filling of medication adherence packaging and the medicines administration record for care homes, making the process safe, simple and compliant and improving the communication between pharmacies, care homes and GPs.



CASE STUDY ONE – HOW IT WORKS IN PRACTICE

PEARL CHEMIST GROUP - SOUTH LONDON¹⁷

VBM AUTOMATED FILLING MACHINE

Automated the dispensing process for medication adherence packs to ensure staff have more time to speak with patients and to reduce the risk of medication errors

Pearl Chemist Group consists of 13 pharmacies. The pharmacists work closely with patients and other healthcare professionals to advise on the best treatments and how to use medicines safely and effectively. The pharmacy provides medication adherence pill packs to patients with complex medication regimes to help ensure that patients are taking the right dose of the right medication at the right time. These were previously filled manually by staff at each of its stores.

GOALS

The goals of implementation were to...

- Consolidate the filling of medication adherence packs into one pharmacy instead of 13.
- Free up pharmacy staff time across all branches so they could spend more time supporting patients on initiatives like medicines usage reviews.
- Speed up the checking process for the packs.
- Improve patient safety and remove the risk of human error.

BENEFITS

The packs are now filled by an automated Omnicell VBM filling machine at its store in Tooting.

EFFICIENT FILLING OF MEDICATION ADHERENCE PACKS

The machine receives the electronic medication administration records from the pharmacies and then fills and checks the packs at a rate of up to 30 to 40 packs per hour. Time saved in producing the packs has been one

of the biggest benefits realised to date. For example instead of it taking up to 10 minutes for the pharmacist to check packs, it now takes them a matter of seconds due to the vision checking and RFID technology used by the VBM.

FREEING UP STAFF TIME

Staff in all the pharmacies no longer have to spend hours deblistering medication and then filling and checking medication adherence packs. As a result they are free to spend more time dealing with patients and focussing on other revenue streams.

IMPROVING PATIENT SAFETY

By using the VBM the group has been able to reduce the risk of human error in filling the packs. The VBM machine uses vision checking technology which checks the medicines dispensed based on size, shape and colour and takes corrective action in the event of any errors. The machine is also able to visually check manual additions which are not filled by the machine's cassettes. This system helps to reduce the risk of medication errors for patients.

IMPROVING INDUSTRY STANDARDS

The pharmacy receive a 'good' rating in their latest GPhC inspection with the inspector particularly impressed with the VBM. Prior to installing the VBM the pharmacy had only ever received a 'satisfactory' rating. The GPhC were particularly impressed with the audit trail provided by the VBM.

"It's allowed us to free up both our pharmacists and pharmacy technicians so they can spend more time at the counter and in the consulting room with patients.

Ultimately it's helping us to provide the best possible care to our patients." *Mayank Patel, Director and Superintendent Pharmacist, Pearl Pharmacy Group*

CASE STUDY TWO – HOW IT WORKS IN PRACTICE

WELLBEING PHARMACY¹⁷

COMMUNITY PHARMACY ROBOTIC DISPENSING SYSTEM

INVESTING IN AUTOMATION TO DELIVER EFFICIENCIES AND SPEND MORE TIME WITH PATIENTS

Wellbeing Pharmacy Group is an independent pharmacy chain with nine stores across the country. Their latest branch recently opened at Abbey Field Medical Centre – a GP practice which has just expanded having taken on the case load of another nearby surgery. The medical centre has never had an in-house pharmacy, but with an increasing number of patients it was agreed that such a facility was now more important than ever.

The pharmacy is the first community pharmacy in the country to invest in an Omnicell Robotic Dispensing System. The pharmacy's prescription system communicates information to the robot which stores and dispenses the medicines. The company invested in the system to drive efficiencies and deliver a better service to patients.

GOALS

The goals of implementation were to...

- Provide a one stop shop for patients and ensure the right resources are in place so more time can be spent on face to face patient care.
- Be able to dispense 15,000 items a month using Omnicell's unique combination of chaotic and channel fed storage.
- Expand their customer base in order to drive profits as the RDS offers high output capacity
- Reduce the amount of time highly skilled staff spent on logistics/operations.

BENEFITS

The pharmacy installed an Omnicell Robotic Dispensing System.

PHARMACY TIME SAVINGS NOW REINVESTED INTO PATIENT CARE

Staff no longer spend half their time on operational tasks like putting stock on the shelves or managing stock rotation. The robot manages this for them.

IMPROVED PATIENT SAFETY

Medication is now sorted, stacked, stored and then picked by the RDS meaning there is less chance of picking errors. Staff are no longer rushing around and grabbing medication in a hurry or picking up medication that may have been put away on the wrong shelf.

ABILITY TO GROW THE PHARMACY BUSINESS

The pharmacy has just agreed to start providing a service to a local care home. One of the reasons they won this business was that they were able to commit to being able to deliver the same level of service no matter how many other care homes they take on because the bulk of the logistics work is done by the robot.

CUTTING POTENTIAL WAITING TIME

By ensuring that the fast moving lines are stored in the channel fed 'SpeedBox', faster dispensing can be achieved which reduces patient waiting times, compared with traditional 'chaotic only' robots.

CLOSER COLLABORATION WITH STAFF AT THE SURGERY

The pharmacy is trusted to offer a very good service to patients as pharmacy staff now have time for the important clinical services such as Medicine Use Reviews and New Medicine consultations.

IMPROVED INVENTORY CONTROL AND SAVINGS

The robot automation enables you to keep track of expiry dates, manage medication by FIFO and allows you to track slow moving items and eliminate waste. These practices will help the pharmacy to save money.

HIGH VOLUME DISPENSING

It's only been operational for seven months but the robot is already dispensing 7,000 prescription items a month. As the pharmacy continues to grow, the robot will be able to dispense 15,000 prescription items a month around the delivery schedule - without the robot it would have been impossible in the space available.

DRAMATICALLY REDUCED AMOUNT OF MEDICATION OWINGS

Stock is now managed more effectively and as a result patients get their medication as soon as they need it without having to make a return trip to store.

“As a result of the recent community pharmacy cutbacks it's crucial to invest in technology and to be aware of the benefits it can bring. Wellbeing has invested money on a Robotic Dispensing System to make savings in the long run and be more efficient. We can now provide a better service as we have time to be at the counter engaging with patients, rather than being a pharmacist tucked away in the back of the store doing logistics work like putting away stock. The accuracy of the system allows us to make better use of skilled staff such as accuracy checking technicians and dispensers.” *Claire Langan, Pharmacy Manager, Wellbeing Pharmacy*

CONCLUSION

Technology and automation of the dispensing process provides a safety net for errors and can free up pharmacist and support staff time to talk to patients and deliver more services that improve patient health outcomes.

It can help reduce the current estimated 11.6 million clinically significant dispensing errors that occur in primary care each year.¹ It may also indirectly reduce the medication errors around prescribing and monitoring by freeing up pharmacists to take on more medicines optimisation activities.

Freeing up time tied to dispensing also allows community pharmacies to continue to evolve, grow and survive despite the climate of funding cuts.

What is needed now is a system wide approach for automation in pharmacy to help community pharmacies overcome funding pressures and incidences of medication errors. In an era where pharmacies are being expected to deliver more for less it may well be the only solution.

Omnicell will support an introduction of Standards of Care in each setting to facilitate shared learning and showcase those that have demonstrated benefits from new ways of working.¹⁷

Omnicell is once again this year implementing a SAFE (Safeguarding against frontline errors) campaign amongst key opinion leaders within secondary care, care home and pharmacy settings in order to raise awareness of the impact of medication errors. The campaign aims to drive change and understanding around the role of technology in tackling the problem. #BanishMedsErrors for more information please visit www.omnicell.co.uk

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