module 224

www.pharmacymag.co.uk

WELCOME to the two hundred and twenty fourth module in the *Pharmacy Magazine* Continuing Professional Development Programme, which looks at medication safety incidents.

Continuing professional development (CPD) is a statutory requirement for pharmacists. Journal-based educational programmes are an important means of keeping up to date with clinical and professional developments and can form a significant element of your CPD. Completion of this module will contribute to the nine pieces of CPD that must be recorded a year, as stipulated by the GPhC.

Before reading this module, test your existing understanding of the topic by completing the pre-test at **www.pharmacymag.co.uk**. Then, after studying the module in the magazine, work through the six learning scenarios and post-test on the website.

Record your learning and how you applied it in practice using the CPD report form available online and on pviii of this module.

Self-assess your learning needs:

- Are you familiar with, and have used, the National Reporting and Learning System?
- What do you understand by the term 'medication safety incident'?
- What is a significant event audit?

forthismodule

GOAL:

To help pharmacists reduce and prevent medication safety incidents in community pharmacy.

OBJECTIVES:

After completing this module you should be able to:

- Help prevent the harm that can be caused by medicines
- Understand why medication safety incidents happen
- Identify what can be done in your pharmacy to reduce medication safety incidents.

First in professional development pharmacy magazine

the continuing professional development programme

CPD

This module is suitable for use by pharmacists as part of their continuing professional development. After reading this module, complete the learning scenarios and post-test at **www.pharmacymag.co.uk** and include in your CPD portfolio. Previous modules in the Pharmacy Magazine CPD Programme are available to download from the website.

Medication safety incidents

Contributing author: Tony Jamieson, medicines governance lead for Leeds North, Leeds West and Leeds South & East CCGs

Introduction

The delivery of healthcare is, by its nature, complex and error prone. We know that there is an error in 5-7 per cent of prescriptions, dependent on the setting[1,2], and that of the medication errors reported to the National Reporting and Learning System (NRLS) in 2005-2010, 16 per cent reported actual patient harm and 0.9 per cent resulted in death or severe harm[3].

Unintended discrepancies in patients' medicines after discharge from hospital frequently occur, affecting 43 per cent of repeat prescriptions in primary care and more than half of all patients discharged[4]. Problems with medicines after hospital discharge are particularly associated with adverse health consequences.

The dispensing error rate in hospitals has been estimated at 0.02-2.7 per cent of dispensed medicines. In community pharmacies, the estimate is 0.01-3.32 per cent[5]. In 2007, over 748m prescriptions were prescribed and dispensed in primary care and resulted in just 5,223 medication error reports being submitted to the NRLS by community pharmacies[6], a figure far lower than would be expected from the research.

The importance of improving medication safety is well recognised. It is a component of the NHS Outcomes Framework[7] and has been the subject of National Patient Safety Agency (NPSA) reports in 2007[8] and 2009[6], as well as a plethora of alerts from the NPSA, MHRA and DH.

It is clear from the reports sent in to the NRLS that things go wrong at every stage of the pathway, from prescribing through dispensing, supply, administration and monitoring. A breakdown of the errors is shown in Table 1.

Potential for harm

The medications of most concern are those with the greatest potential for harm, both because of their inherent toxicity but also due to the number of patients who are exposed to them.

Of particular note are insulin, opiates, methotrexate, warfarin and lithium. Anti-biotics are also the subject of error reports as a result of their use in patients who are known to have an allergy to the drug in question.

Making patient safety interventions is something pharmacists and pharmacy

Table 1: Error type as classified on NRLS

What goes wrong	% of errors
Wrong dose, strength or frequency	28.7
Omitted medicine	17.1
Wrong medicine	11.5
Wrong patient	*circa* 5
Wrong formulation	2.4
Wrong route	2.1

technicians do, every day, multiple times a day, to great effect. Every clinical intervention could be considered a patient safety incident averted. However pharmacy interventions are rarely considered as a resource for medication incident reporting.

Reporting more pharmacy interventions to the NRLS would greatly increase our understanding of what goes wrong at the prescribing stage in primary care.

In addition, pharmacy teams prevent errors that might be made by the patient. Supporting adherence, building understanding and optimising therapy, especially where there are multiple morbidities and polypharmacy, all contribute to the safety of medication use.

What is a medication safety incident?

A variety of terms have been used to describe situations when things have not gone as well as they might in the course of medicating a patient (see Table 2). It is common to hear these terms used interchangeably, which has caused considerable confusion when discussing when and why things go wrong.

The term used most often in the NHS is *patient safety incident*. This is an unintended or unexpected occurrence that led to or could have led to patient harm. A patient safety incident involving medicines has become known as a medication safety incident. A failure to optimise the use of a medicine could also be considered a medication safety incident (e.g. a patient with heart failure who is prescribed an ACE inhibitor, the dose of which is not titrated up to the maximum that the patient can tolerate).

All these terms can have 'serious' added to them to mean that the result for the patient was either death, permanent disablement or having to have some life-saving intervention.

NHS England defines a serious incident as an incident resulting in one of the following[9]:

- Unexpected or avoidable death of one or more patients, staff, visitors or members of the public
- Serious harm to one or more patients, staff, visitors or members of the public or where the outcome requires life-saving or major surgical/medical intervention, causes permanent harm, or will shorten life expectancy/result in prolonged pain or psychological harm
- Allegations of abuse
- One of the core set of 'never events'.

'Never events' are a sub-set of serious incidents and are defined as "serious, largely preventable patient safety incidents that should not occur if the available preventative measures have been implemented by healthcare providers"[10]. Each of the 'never events' has been the subject of detailed guidance on how they can be avoided. Those involving medicines are described in Table 3.

Reflection exercise 1

• When you identify a prescribing error, you take immediate action to resolve the error and protect the patient from harm. How could you take this a step further and help prescribers to learn from the error?
• Would you consider approaching the practice manager and asking how he/she would like to be informed of any incidents you identify? You could also discuss who will report the incident to the NRLS.

Why incidents occur

The nature of error

Bad things happen to the best of people. Fallibility is a human trait and we cannot eliminate it. What we can do is prepare for it and be ready to mitigate against it. An everyday example of this management of fallibility is the accuracy check on a prescription.

We can also make failure less likely by optimising our team, environment, processes and equipment. Human factors (also known as ergonomics) is the study of how people interact with products, processes and environments day-to-day in order to improve them and make them easier to use, safer, more comfortable and more efficient. It has foundations in psychology, sociology, physiology and engineering, and is the key to understanding why errors are made and how to prevent them.

When a safety incident occurs it will be a front-line person who has made the error. Errors are classified by their nature (see Table 4).

Contributory factors

An error must not be looked upon in isolation. The circumstances that people find themselves in at the time will have a bearing on their actions. Some are obvious – e.g. familiarity with the pharmacy, tidiness of the dispensary, relationship with the other staff, tiredness, the attitude of the patient, the complexity of the prescription, to name just a few.

All these things, and many others, have a bearing on our ability, even if we think we are compensating for them.

The things we notice affecting us the most are "situational factors", such as how we feel that day and how we get on with our work colleagues and patients. We are usually aware of local working conditions such as staffing levels, workload and whether the stock is on the shelf.

We are usually less aware of those things that add pressure but are less easily controlled. These are known as latent factors. Examples are the layout of the dispensary, company targets or the usability of the patient medication record (PMR) system.

We are not blind to the risks that surround us and in normal circumstances we manage these risks effectively. Medication safety incidents,

Table 2: Terms used to describe medication safety incidents

Term	Explanation
Adverse drug reaction (ADR); side-effect	Unwanted effect of using a medicine
Untoward event; critical incident	Something unintended has happened, usually having a detrimental effect on the patient
Adverse drug event (ADE)	An 'untoward event' involving medicines
Medication error	Deviation from the intended plan to medicate the patient
Patient safety incident	An unintended or unexpected occurrence which led to, or could have led to, patient harm
Medication safety incident	A patient safety incident involving medicines

new medicine service continues

The NMS has been extended until April 2015 pending the results of an evaluation study

Table 3: Medication-related 'never events'

Death or severe harm as a result of an overdose of an opioid given to a patient who was opioid naïve
Prescription, supply or administration of daily oral methotrexate to a patient for non-cancer treatment including supply to the patient with the instruction to take daily
Death or severe harm as a result of an overdose of midazolam injection following use of high strength midazolam (5mg/ml or 2mg/ml) for conscious sedation
Death or severe harm as a result of maladministration of insulin by a health professional
Death or severe harm as a result of a wrongly prepared high-risk injectable medication
Death or severe harm as a result of maladministration of a potassium-containing solution
Intravenous or other chemotherapy (e.g. vincristine) that is correctly prescribed but administered via the wrong route (usually into the intrathecal space)
Death or severe harm as a result of oral/enteral medication, feed or flush administered by any parenteral route
Death or severe harm as a result of intravenous administration of epidural medication

particularly serious ones, occur when the various barriers we have put in place to prevent harm fail at the same time.

When a medication safety incident occurs it is crucial that our analysis of the incident includes a systematic review of all the contributory factors. It is only by modifying these factors that we can prevent further incidents.

In the example in Table 5, the pharmacist was far more likely to be distracted because he/she was having to multitask, at a particularly busy time, compensating for failures in stock management and staffing.

It would be natural for the pharmacist to "try harder not to get distracted" but this will inevitably fail because humans are prone to distraction. A far more effective strategy, in this scenario for instance, would be to address the issue of staff numbers.

Automatic pilot and analytical thinking

Community pharmacy calls on us to use two different working approaches:

- Act like a robot to ensure the accuracy of dispensing high volumes of prescriptions
- Think like an artist when having to be creative in overcoming clinical conundrums.

When dispensing prescriptions we mostly work on automatic pilot while applying higher level analytical thinking to the monitoring of the medicines counter and conversation in the dispensary.

However when we notice that the prescription contains an overdose, such as a daily dose of methotrexate, we switch our analytical thinking to the dispensing process.

Both these thinking styles have their distinct advantages. Autopilot allows for highly accurate repetitive physical tasks, while analytical thinking allows for sophisticated problem solving. The trick in pharmacy is switching between the two thinking styles at the right time.

The clinical check, and arguably the accuracy check, requires analytical thinking, while labelling and assembly can be accomplished on autopilot. It is virtually impossible to entertain two trains of analytical thought at the same time. And there lies the problem. Unlike autopilot, analytical thinking is prone to error by distraction. This is human nature and yet we are surprised when, in the hustle and bustle of the dispensary, we miss a dispensing error during the accuracy check.

Creating a just and safe culture

The impact on the individual

We can see that pharmacy practice is error-prone and that humans are fallible and strongly influenced by their environment and situation. And yet when a medication safety incident occurs, there remains a tendency for the person who made the error to blame him/herself and resolve to "double their efforts". As if we don't all try our utmost to do a great job every day.

Inevitably the person who made the error feels dreadful about it. Indeed, serious errors have caused good people to question their career choice or even leave the profession. It is essential that effective care and support is provided to people who have been involved in errors that have led to patient harm.

The perfection and punishment myth

There are two myths that need busting. The first is that if we just tried a bit harder we could be perfect. Trying harder will not prevent slips or lapses or make us immune to distraction. Equally ineffective is the idea that, by punishing a person, they will be less likely to repeat an error.

Incident decision tree

The vast majority of medication safety errors are made by competent people trying to do a good job. In the minority of cases incidents are caused by people who are unable to meet the require-

Table 4: The nature of error

Nature of the error	Explanation	Example
Mistake	A knowledge-based error; either following a bad rule or following a good rule in the wrong circumstances	A patient with swine flu was put into an empty consulting room to prevent spread of disease (good rule). The patient was known to be a heroin addict and stole prescriptions from the room. There was a practice policy not to leave people unattended in consulting rooms
Slip	A manual error; when attempting to do one thing, we actually do another	When labelling a prescription the dispenser picks warfarin 0.5mg from the drop-down list instead of the 5mg they intended to pick
Lapse	A cognitive error; forgetting to do something	Forgetting to include the insulin that is being stored in the fridge when handing out a prescription
Violation	A rules-based error; making a decision not to follow the 'rules'. The rules can be the standard operating procedure or just custom and practice. Some violations are reasoned; others are not	Deciding not to supply methadone to a substance misuse client in the mistaken belief they were intoxicated (reasoned violation)

'An error must not be looked upon in isolation. The circumstances that people find themselves in will have a bearing on their actions'

ments of the job, either through ill health, addiction, or because they are in a job that they do not have the skills or temperament for. Incident decision trees such as the one in Figure 1 can be used to consider what action is best to take to protect patients from harm following a medication safety incident.

The effect of professional accountability

It is a fundamental requirement of the pharmacy profession to speak out when patients are put at unacceptable risk of harm. Unfortunately not all pharmacies are the same and some do not have sufficient safeguards in place to prevent errors and the harm they can cause.

We are professionally accountable for our actions, which means not putting ourselves in a position whereby we feel the safety of patients cannot be managed. It also means raising our concerns about the safety of patients in an assertive and effective way.

Being open

What do patients really want when they have been the subject of a medication safety incident? We know that they want:

- An apology
- An explanation of what happened, and how
- Assurance that steps are taken to avoid it happening to them again
- Assurance that steps are taken to avoid it happening to others.

Only a very small proportion of patients want to pursue a claim for compensation at the outset but if people don't get an apology, an explanation and the assurances they are after, they may feel they have no option but to go to a solicitor. The best approach is to offer a sincere apology as soon as the incident comes to light, even if you don't think an error has occurred, then include the patient (or their chosen representative) in the significant event audit[11].

Table 5: Example of stratified contributory factors

	Example	Impact	Barrier/control	Failure mode
Latent external factors	The community pharmacy contract	Contract rewards high volume dispensing	Staffing geared towards dispensing	Dispenser calls in sick
Latent organisational factors	The pharmacy only uses one wholesaler	Could restrict access to some drugs	Increased stock levels to compensate	Stock runs out resulting in an increased number of owings
Local working conditions	The Thursday before Good Friday	Very high volume of items to dispense	No other jobs undertaken on that day	Time has to be spent sourcing medicines that have been owed
Situational factors	A patient with 12 items in a compliance aid needs the dose of one item changing	Highly complicated and error prone dispensing	Pharmacist attempts to isolate him/herself to concentrate on dispensing	Distraction

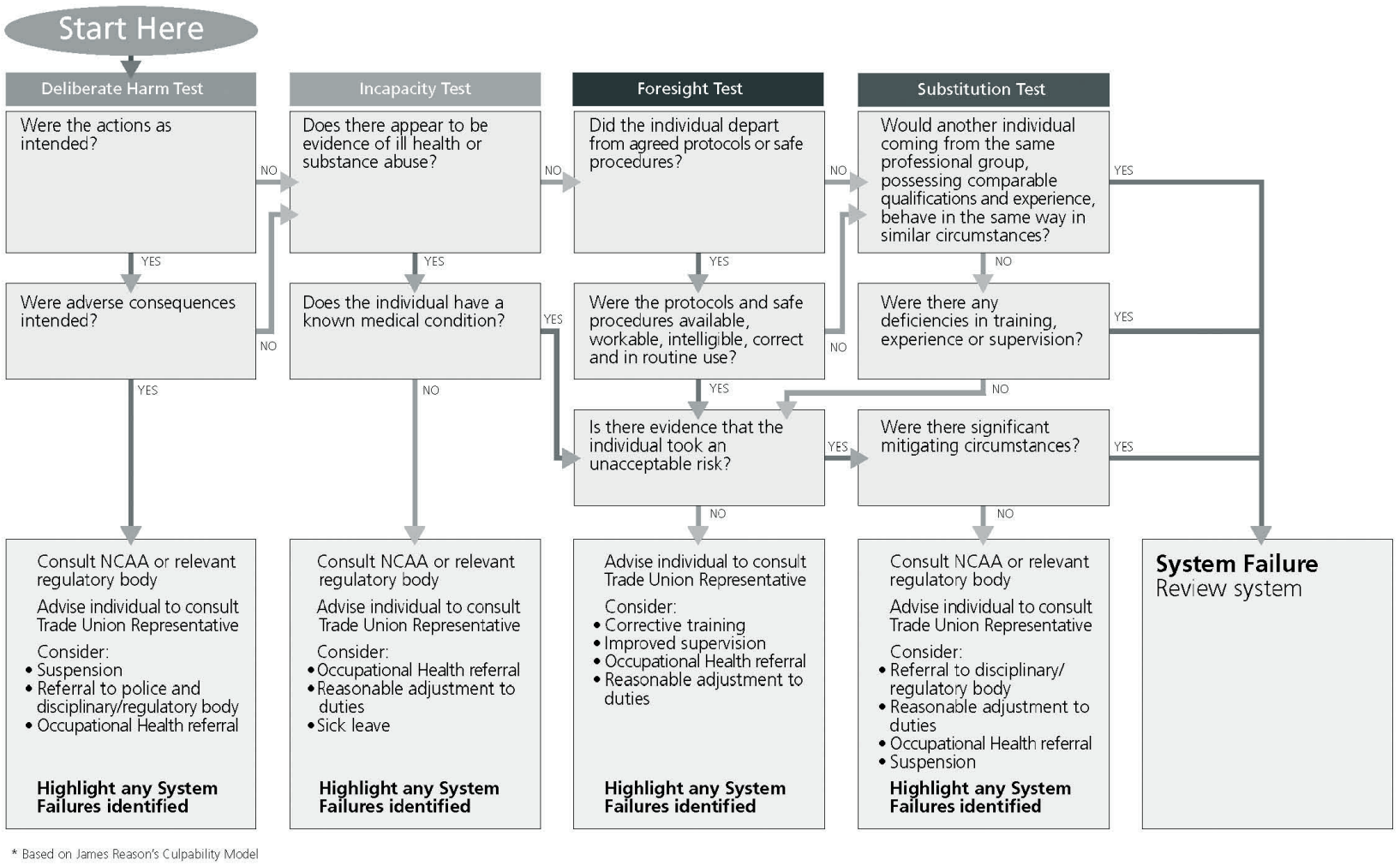
Managing medication safety incidents

Recording medication safety incidents: why make records?

Recording medication safety incidents underpins the whole process of learning from past events. It also offers some legal protection should our actions be called into question.

More recording is a good thing. It may seem counterintuitive but the more records of medicines safety incidents a pharmacy has, the safer the patients are likely to be. This is because the number of records is an indicator of the

Figure 1: Incident decision tree



* Based on James Reason's Culpability Model

awareness of patient safety issues. The most dangerous pharmacies are arguably the ones in which the staff think nothing is going wrong.

What to record

The bare minimum for an incident record is a factual account of what happened and when. It often helps to record who was affected (while ensuring patient confidentiality is maintained) and who was involved. This is to allow further investigation and analysis of the incident, and is not a tool for performance management.

It is also a good idea to record what action was taken immediately after the incident was discovered to ensure harm to the patient is avoided or minimised. As well as this, consider whether there is an imminent danger to other patients that needs addressing urgently (for instance, if a patient has complained that his/her box of procyclidine contained propranolol, you should record that all the remaining dispensary stock has been checked and whether other patients were part of the same error).

When to record

Make the records as soon as possible after the immediate actions to avoid harm to the affected patients occurring.

Reporting medication safety incidents

Having a record of medication safety incidents in the dispensary is a good thing. Even better is reporting the incident so that it can contribute to improved understanding of what is going wrong in the company, organisation or healthcare nationally. Most larger organisations have their own reporting processes and many of these upload the incident reports to the NRLS.

National Reporting and Learning System (NRLS)

The NRLS is the most comprehensive resource of its kind in the world. Analysis of the incidents reported to it has greatly helped us understand what the biggest medication risks are, improving our ability to respond to these risks. Every report submitted to NRLS is valuable. A patient safety alert on NRLS reporting was published jointly by NHS England and the MHRA in March 2014[11].

Reflection exercise 2

Consider the last time you identified an error in your workplace that was not one of your own. What did you think about the abilities of the person who made the error? What was your 'gut feeling' at the time?

If the error was made by someone you generally have confidence in, was your confidence shaken at all? Did you consider how that person felt when they were told that they had made an error? How might what you have learnt so far change how you react to errors in the future?

Additional reporting requirements

In addition to the NRLS and local reporting systems, there are a number of other reporting mechanisms to which pharmacy teams should feed back to (see Table 6).

Analysing incidents

Two well-established methods of analysing patient safety incidents are commonly used in the NHS:

- Significant event audit (SEA)
- Root cause analysis (RCA).

SEA has an advantage over RCA in that it is much quicker to complete. RCA, on the other hand, is more comprehensive and more likely to identify the most important contributory factors.

A comprehensive guide to RCA can be found at https://report.npsa.nhs.uk/rcatoolkit/course/index.htm.

RCA is best used for serious incidents or complex incidents involving multiple agencies or providers.

Significant event audit

The NPSA has published guidance on how to complete a significant event audit[13].

It recommends a seven-step process:

1. Awareness and prioritisation of a significant event
2. Information gathering
3. The facilitated team-based meeting
4. Analysis of the significant event
5. Agree, implement and monitor change
6. Write it up
7. Report, share and review.

The analysis of the event benefits from a team approach. This brings better insight and increases the chance of the event (and the circumstances and prevailing conditions) being remembered accurately.

Nominating one member of the team to facilitate the analysis can also be helpful. The team should consider who might be best to do this. The opportunity to use the skills of the wider team (e.g. technicians) should be considered.

The analysis of the event is broken down into four stages:

1. Describe what happened

This is where the results of the fact-finding or investigation are presented and the error defined.

Reflection exercise 3

Think about the last time a patient came back to you to tell you that you had made a mistake. Before you had investigated, what was your assumption? How did this assumption affect your initial response to the patient? Would you give the patient an apology even before you know whether a mistake was made? Would it do any harm if you did?

It may help to decide whether the error was a mistake, slip, lapse or violation (see Table 4).

2. Why did it happen?

In this section all the possible contributory factors are considered. The effectiveness of the rest of the SEA depends on identifying the most important contributory factors. Having an open and honest discussion is vital and everyone should be made to feel they are able to contribute.

3. What have we learnt?

To summarise: "This (insert contributory factor) needs to be addressed to reduce the chance of (insert error) happening again."

4. What will we change?

Possible changes should be discussed as well as what the impact of those changes might be.

Lessons and actions

Reducing errors is best achieved by addressing the factors most influential in causing them. However, deciding what can be done can prove challenging. Education and training have a place in reducing knowledge-based errors but will not prevent memory lapses. A flawed SOP, if re-read and signed, will not become a safer SOP.

A common proposal when an error occurs is to add an extra step into the process – an extra check or additional record-keeping. Such additional steps are difficult to maintain as the reason for them can be forgotten long before they become habitual and they pull staff time away from other duties, adding pressure elsewhere in the system.

Four classic risk management strategies are:

- **Avoid it**

Cut out unnecessary steps or processes that increase risk. An example might be for the phone, a distraction in any dispensary, to be answered only by people who are not dispensing.

Table 6: Medication safety incident reporting

Incident	Report to	System
All medicines safety incidents (other than an ADR from a drug used as intended)	NHS England	NRLS www.nrls.nhs.uk/reporting
Serious incident	Service commissioner	STEIS (via NHS England area team for community pharmacy)
Adverse drug reaction (not caused by an error)	MHRA	Yellow Card https://yellowcard.mhra.gov.uk
Suspected abuse of a vulnerable adult or child	Local authority safeguarding teams	Safeguarding referral
Controlled drug incident/concern	NHS England area team controlled drugs accountable officer	Defined by the NHS England area team
RIDDOR reportable incident (e.g. needle stick injury with a dirty needle)	Health and Safety Executive	Online form www.hse.gov.uk/riddor/report.htm

• Reduce it
Do less of the risky practice. An example might be to reduce the number of compliance aids the pharmacy supplies.

• Transfer it
Send the risky work to someone else. For example, some pharmacy chains have centralised their care home services, transferring the risk from some branches to dispensaries that are specifically designed to manage the risks.

• Mitigate the consequences
Have good systems for retrieving items that are dispensed in error. An example might be to collect contact telephone numbers from patients.

More strategies that could be considered to reduce the risk of error are described in Table 7.

Test your safety improvements

It is a good idea to test out any proposed changes before moving to full-scale implementation. Using PDSA cycles (see Figure 2) can help to establish whether or not the proposed change will actually make patients safer[14].

Learning from others

When it comes to making an error there are plenty of people who will have already made that same error and many would have made changes in their practice to stop themselves doing it again.

Reflection exercise 4

What practical steps do you need to take to enable your team to have an open and honest discussion about a medication safety incident? What could you do to make sure everyone at the meeting felt able to offer their opinions?

If we really want to prevent our patients coming to harm, it would make sense to look at what has gone wrong elsewhere, make comparisons to our own practices and adopt what we can from what they did to put it right. There are still many lessons to be learnt from the alerts, notices and rapid response reports published by the NPSA, all of which are available on the NRLS web pages[15].

The same can be said of the resources on the Patient Safety First website[16], in particular the 'How to guide' to reducing harm from high-risk medicines[17].

April saw the launch of the National Medication Safety Network for medication safety officers of large providers (including some pharmacy multiples) and other champions of medication safety in LPCs and local professional networks. Patient safety collaboratives are also expected to launch this year, which offer another opportunity to develop safer medication practices. These networks are there to help pharmacy teams become as safe as possible.

Conclusion

It is extremely unlikely that you will make an error that no-one else has ever made before. Learn from the mistakes of others before they happen to you – but when it does happen to you, make it mean something. Focus on the human factors that contributed and make changes that will be effective and sustainable.

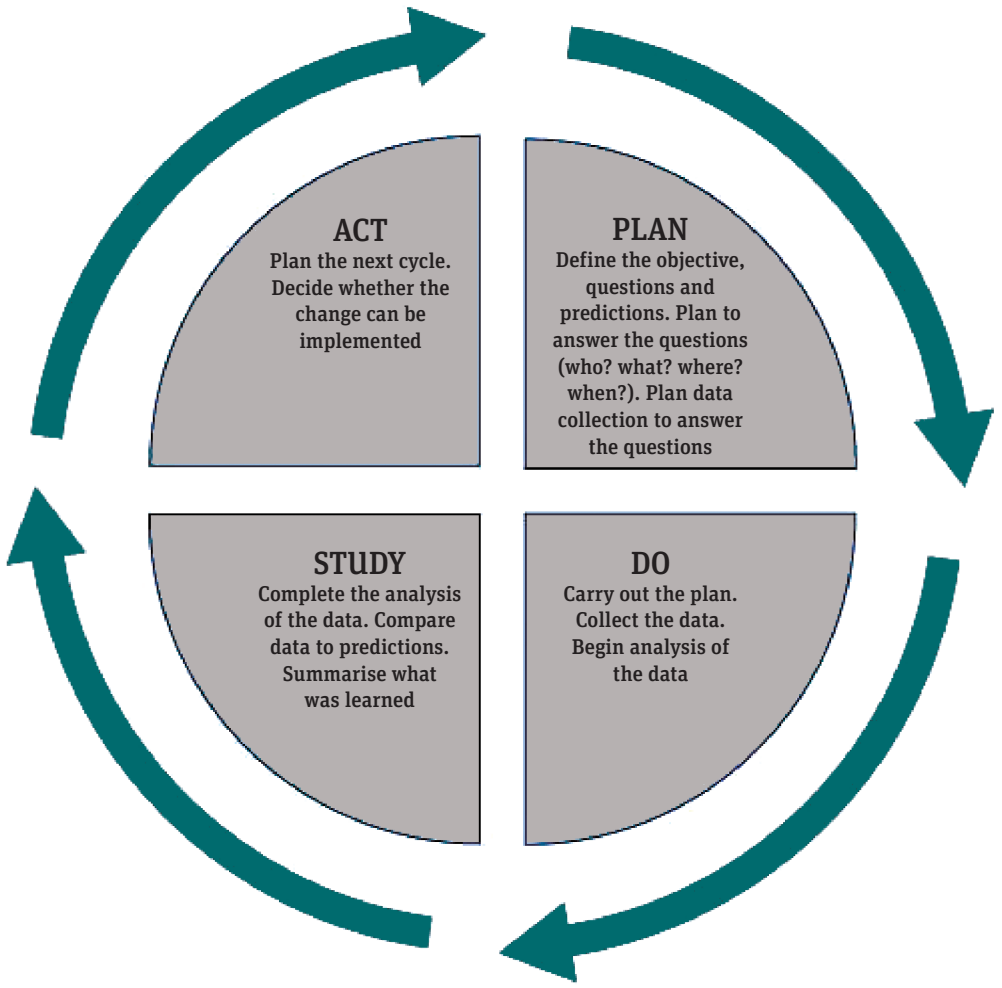
Reflection exercise 5

How can you find out what is working in other places to reduce the number of errors? Think about the last error you noticed that was or could have been serious. Are there any suggestions on how to prevent that error occurring again in any of the resources referenced in this module?

Table 7: Strategies to prevent error

Error-reducing strategy	Explanation	Example
Visual or auditory warnings	Notices that attract attention to higher risks	Methotrexate dose pop-up message on the PMR system. Fridges that beep when temperature goes above 8°C
Separation by time	Doing particularly risky things at different times	Dispensing compliance aids when the dispensary is quiet
Separation by distance	Moving high-risk items apart	Keeping warfarin 5mg and 0.5mg in different parts of the dispensary. Having separate areas for dispensing and checking
Physical barriers	Barriers that make it physically impossible to make an error	Keeping strong opioids in a CD cabinet
Environmental improvements	Changes to the dispensary to improve the layout, workflow or working conditions	Air-conditioning for overheated dispensaries. Keeping the dispensary free of clutter. (See also NPSA advice on dispensary design)
Team resource management	Skill mix, team working and interpersonal relationships	SEA discussions at team meetings. Team-building exercises
Professional accountability	Clearly defining who is responsible for each part of the dispensing process	Signing 'dispensed by' and 'checked by' boxes on dispensing labels
Checks	Separating out assembly of the prescription and the accuracy check	Avoiding self-checking, especially for high-risk products
Isolation	Shielding or protection from distraction or interruption when performing cognitive tasks	Checking compliance aids away from the prescription counter. Having a privacy screen when accuracy checking prescriptions
Standardisation	Do repetitive tasks the same way every time to increase accuracy	Using the same computer software in every branch of a multiple to make it easier for locums. Ensure SOPs are reviewed and followed

Figure 2: PDSA cycle



Source: NHS Institute for Innovation and Improvement

References, information sources & further reading

1. Avery T, Barber N, *et al.* Investigating the prevalence and causes of prescribing errors in general practice. The PRACtICe Study. (Prevalence and causes of prescribing errors in general practice). A report for the GMC. May 2012. www.gmc-uk.org/about/research/12996.asp
2. Lewis PJ, Tim Dornan T, Taylor D, *et al.* Systematic review of the prevalence, incidence and nature of prescribing errors in hospital inpatients. *Drug Safety* 2009; 32(5)379-89
3. Cousins DH, Gerrett D and Warner B. A review of medication incidents reported to the National Reporting and Learning System in England and Wales over six years (2005-2010). *Br J Clin Pharmacol* 2012; 74(4):597-604
4. Garfield S, Barber N, Walley P, *et al.* Quality of medication use in primary care – mapping the problem, working to a solution: a systematic review of the literature. *BMC Med*, 2009: 50.
5. James KL, Barlow D, Mcartney R, *et al.* Incidence, type and causes of dispensing errors: review of the literature. *Int J Phar Pract* 2009; 17:9-30
6. Safety in doses: improving the use of medicines in the NHS. National Patient Safety Agency. 2009. www.nrls.npsa.nhs.uk/resources/?entryid45=61625
7. NHS Outcomes Framework 2014 to 2015. Department of Health. November 2013 www.gov.uk/government/publications/nhs-outcomes-framework-2014-to-2015
8. Safety in doses: improving the use of medicines in the NHS. National Patient Safety Agency. 2007. www.nrls.npsa.nhs.uk/resources/?entryid45=61625
9. Serious Incident Framework. NHS England March 2013 www.england.nhs.uk/wp-content/uploads/2013/03/sif-guide.pdf
10. The Never Events List. NHS England. 2013. www.england.nhs.uk/wp-content/uploads/2013/12/nev-ev-list-1314-clar.pdf
11. 'Saying sorry when things go wrong. Being open'. National Patient Safety Agency 2009 www.nrls.npsa.nhs.uk/resources/collections/being-open/?entryid45=83726
12. Improving medication error incident reporting and learning. NHS England and Medicines and Healthcare products Regulatory Agency. 20 March 2014 www.england.nhs.uk/2014/03/20/med-devices/
13. Significant event audit: a guide for primary care teams. National Patient Safety Agency. October 2008 www.nrls.npsa.nhs.uk/resources/?entryid45=61500
14. Quality and Service Improvement Tools. NHS Institute for Innovation and Improvement. 2008. www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/ plan_do_study_act.html
15. Medication Safety. National Patient Safety Agency. Accessed May 2014 www.nrls.npsa.nhs.uk/resources/patient-safety-topics/medication-safety
16. Medication Safety. Patient Safety First. Accessed May 2014 www.patientsafetyfirst.nhs.uk/Content.aspx?path=/interventions/medicationsafety
17. 'How to' guide to reducing harm from high risk medicines. Patient Safety First. 2008. www.patientsafetyfirst.nhs.uk/ashx/Asset.ashx?path=/How-to-guides-2008-09-19/Medicines per cent201.1_17Sept08.pdf

Note: the content of this module remains the copyright of Pharmacy Magazine and cannot be reproduced without permission in the form of a valid licence granted after July 1, 2011.

Pharmacy Magazine's CPD modules are available on Cegedim Rx's PMR systems, Pharmacy Manager and Nexphase. Just click on the 'Professional Information & Articles' button within Pharmacy KnowledgeBase and search by therapy area. Please call the Cegedim Rx helpdesk on 0844 630 2002 for further information.

MEDICATION SAFETY INCIDENTS

assessment questions

1. A patient with a sore throat is prescribed amoxicillin and goes on to develop a rash. What is this best described as?
a. An adverse drug event
b. An adverse drug reaction
c. A serious patient safety incident
d. An accident waiting to happen

2. Which of the following is NOT a 'never event'? Death following:
a. A haemorrhagic event in a patient taking warfarin whose INR was not monitored in the preceding 13 weeks
b. A daily dose of methotrexate other than for chemotherapy
c. Administering 210 units of insulin against a dose instruction of 21U
d. An opioid naïve patient being given 5ml of 10mg/ml morphine sulphate solution

3. A dispensing assistant dispenses MST 100mg against a prescription for MST 10mg. The error is picked up at the accuracy check. The best course of action to take is:
a. Suspend the dispenser pending disciplinary action
b. Think nothing of it – that is what the accuracy check is for
c. Tell the dispenser to be more vigilant
d. Carry out an analysis of the event

4. The most frequently reported medication error is:
a. Wrong drug
b. Wrong dose/strength/frequency
c. Wrong patient
d. Wrong formulation

5. A patient suffers anaphylaxis and a nurse administers hydrocortisone as first-line therapy, not knowing the hospital's policy is to use adrenaline first line. What type of error is this?
a. Mistake
b. Slip
c. Lapse
d. Violation

6. Which of the following are likely to prevent errors that occur in analytical cognitive processes?
a. Isolation
b. Concentration
c. Experience (or practice)
d. Punishment of failure

7. The percentage of prescription items that include a dispensing error is estimated to be around:
a. 3 per cent
b. 8 per cent
c. 15 per cent
d. Almost 20 per cent

8. Changes to SOPs can be tested using a PDSA cycle. What does PDSA stand for?
a. Process, decision, sampling, assimilation
b. Planning and dissemination of safety analysis
c. Procedure for describing systematic achievement
d. Plan, Do, Study, Act

Pharmacy Magazine CPD record

CPD June 2014

Use this form to record your learning and action points from this module on Medication safety incidents and include it in your CPD portfolio and record online at www.uptodate.org.uk

Activity completed. (Describe what you did to increase your learning. Be specific)
(ACT)

Date: Time taken to complete activity:

What did I learn that was new in terms of developing my skills, knowledge and behaviours? Have my learning objectives been met?*
(EVALUATE)

How have I put this into practice? (Give an example of how you applied your learning) Why did it benefit my practice? (How did your learning affect outcomes?)
(EVALUATE)

Do I need to learn anything else in this area? (List your learning action points. How do you intend to meet these action points?)
(REFLECT & PLAN)

*** If as a result of completing your evaluation you have identified another new learning objective, start a new cycle. This will enable you to start at Reflect and then go on to Plan, Act and Evaluate. This form can be photocopied to avoid having to cut this page out of the module. Complete the learning scenarios at www.pharmacymag.co.uk**

ENTER YOUR ANSWERS HERE Please mark your answers on the sheet below by placing a cross in the box next to the correct answer. Only mark one box for each question. Once you have completed the answer sheet in ink, return it to the address below together with your payment of £3.75. Clear photocopies are acceptable. **You may need to consult other information sources to answer the questions.**

1.	2.	3.	4.	5.	6.	7.	8.
a. ☐	a. ☐	a. ☐	a. ☐	a. ☐	a. ☐	a. ☐	a. ☐
b. ☐	b. ☐	b. ☐	b. ☐	b. ☐	b. ☐	b. ☐	b. ☐
c. ☐	c. ☐	c. ☐	c. ☐	c. ☐	c. ☐	c. ☐	c. ☐
d. ☐	d. ☐	d. ☐	d. ☐	d. ☐	d. ☐	d. ☐	d. ☐

Name (Mr, Mrs, Ms) _____

Business/home address _____

Town _____ Postcode _____ Tel _____ GPhC/PSNI Reg no. ☐☐☐☐☐☐☐☐

I confirm the form submitted is my own work (signature) _____

Please charge my card the sum of £3.75 Name on card _____ ☐ Visa ☐ Mastercard ☐ Switch/Maestro

Card No. _____ Start date _____ Expiry date _____

Date _____ Switch/Maestro Issue Number _____

Processing of answers
Completed answer sheets should be sent to Precision Marketing Group, Precision House, Bury Road, Beyton, Bury St Edmunds IP30 9PP (tel: 01284 718918; fax: 01284 718920; email: cpd@precisionmarketing group.co.uk), together with credit/debit card/cheque details to cover administration costs. This assessment will be marked and you will be notified of your result and sent a copy of the correct answers. The assessors' decision is final and **no correspondence** will be entered into.

224