HOW NURSES CONTRIBUTE TO MEDICINES RECONCILIATION

Chetan Shah and colleagues provide an overview of conducting effective processes with a view to developing a best practice toolkit

Abstract

The process of obtaining an up-to-date and accurate patient medication list, medicines reconciliation (MedRec), is vital to ensuring patient safety. Despite its high status as a patient safety issue, and the efforts made to drive and implement robust MedRec processes, further efforts are required to identify and disseminate best practice (Greenwald et al 2010).

This article outlines some of the principles involved in conducting effective MedRec and invites interested nurses to join a working group that aims to develop a best-practice toolkit.

Keywords
Best practice, medication errors, medicines reconciliation, MedRec, patient safety

MEDICATIONS RECONCILIATION (MedRec) is recognised globally as a vital aspect of patient safety. The World Health Organization (WHO) has identified MedRec as a priority for action as part of its High 5s project, launched in 2006, to address continuing patient-safety concerns. Similarly, and in line with the High 5s project, national organisations such as the National Institute for Health and Care Excellence (NICE) and the National Patient Safety Agency (NPSA) (2007), the Canadian Patient Safety Institute (2015), the Institute for Safe Medication Practices Canada (2015) and the Joint Commission (2015), in the US, have all issued guidance and directives to drive and improve the MedRec process.

In August 2014, NHS England issued a patient safety alert about the risks arising from the breakdown of, and failure to act on, communication during handover when patients are discharged from secondary to primary and social care (NHS England 2014). An accurate and well documented MedRec at admission and during a hospital stay is critical to ensuring accurate communication about medicines at discharge. Despite the high status of MedRec as a patient safety issue, and the significant work done to drive and implement robust MedRec processes, a consensus statement from stakeholders has called for further efforts to identify and disseminate best practice (Greenwald et al 2010).

A collaborative audit by the East and South East England Specialist Pharmacy Services in 2010, which involved 56 NHS organisations and covered 33,120 beds, found that 52% of acute hospital patients received MedRec by a member of the pharmacy team within 24 hours. More than 8,600 MedRecs, covering about 49,100 admission drugs with an average of 5.6 drugs per patient, were audited. In this sample, 11,366 unintentional discrepancies were identified, equating to an average of 1.32 drug discrepancies per MedRec (Dodds 2010).

International studies indicate similar issues and trends. For example, in two literature reviews, variances between the medications that patients were prescribed at admission and what they took ranged between 30% and 70% (Gleason et al 2004, Cornish et al 2005). Another study of MedRec errors and risk factors at hospital admission noted that 36% of patients had errors in their admission medication prescriptions, with most occurring as medication history was gathered (Gleason et al 2010).

As healthcare delivery systems become more complex and involve more care providers, the risk of medical errors particularly at transitions of care increases (Rozich and Resar 2001). According to the
The synthesis of art and science is lived by the nurse in the nursing act

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NPSA, between 2003 and 2007, there were in England more than 7,000 medication errors at the admission and discharge interface, which resulted in two deaths and 30 incidents of severe harm (NPSA 2007). This suggests that current systems and processes are insufficient to prevent patients from being harmed.

MedRec is a multidisciplinary approach. Nurses are generally the first professional group on admission to interview patients or their advocates about presenting complaint, past medical history, general health and medication regimes, although this same information can be obtained from patients or their advocates by other clinicians during the patient journey. Many factors affect the quality of information from patients: their health literacy, for example, as well as language barriers, health status, clinicians’ interview skills and time constraints. It is imperative that an effective consultation process is designed and used so that prescribing clinicians know their patients’ complete medication histories, including allergies and past reactions.

**Medicines reconciliation**

MedRec is defined by the Institute for Healthcare Improvement as ‘the process of obtaining an up-to-date and accurate medication list that has been compared to the most recently available information, and has documented any discrepancies, changes, deletions, and additions, resulting in a complete list of medications that patients are taking which is accurately communicated’ (National Prescribing Centre 2007).

Although MedRec should ideally be undertaken fully and accurately without interruption, it is often done in two stages: basic reconciliation and full reconciliation (National Prescribing Centre 2007).

Basic MedRec can be described as obtaining a medication list at admission, at the admitting clinician’s clerking-in stage mainly through consultation with the patient; this is then documented on a drug chart. This stage does not generally involve pharmacy staff.

Full reconciliation involves pharmacy staff checking the most accurate medication list available for a patient using a structured approach and at least two or more sources of information. It also involves identifying any discrepancies between the pharmacy-deciphered list and the medication list that has been charted by the admitting clinician, and then resolving these discrepancies.

Depending on the setting, nurses might be involved in undertaking basic or full MedRec. Secondary care nurses who are triaging patients, for example, may conduct only basic medicine reconciliation with a ward pharmacist or pharmacy technician then undertaking full reconciliation. However, in specialist nurse clinics, walk-in centres, urgent care centres or pre-assessment clinics, nurses are unlikely to have the support of dedicated pharmacy teams, so it is essential that they take a similar approach to pharmacists, for example by using at least two or more sources, to obtain the most accurate medication list possible.

Staff in services such as specialist nurse clinics, walk-in centres, urgent care centres and pre-assessment clinics would be expected to be able to conduct full MedRec, so nurse managers should consider how their staff are trained in this process and how their competency is assessed and accredited. Consideration should also be given to how the process is audited to ensure that MedRec is undertaken safely and effectively. Nurse managers should consider access to summary care records so that nurses can use these to conduct MedRec.

**Process for undertaking MedRec**

When completing a robust and accurate MedRec, a patient’s medication history should be collected from the most recent, accurate and reliable sources, such as the patient or person managing the medicines, repeat-prescription tear-off slips, or the patient’s GP. Information should be cross-checked and verified using, if possible, at least two sources. If sources conflict, a third source, or the patient if appropriate, should be used for confirmation. The accuracy and limitations of each source should be considered before making a clinical judgement. It is good practice to place hard copies of the information sources, if they are available, in the medical notes. Some examples of sources and their limitations are given in Table 1.

Clarifying allergy status could be the most important piece of information documented in the MedRec process and this is reinforced by the recent NICE (2014) guideline on drug allergy.

As medication history begins to form, it is vital that the following information is documented:

- **Drug name:** the generic name is always preferred but, if patients state the brand name and the clinician does not know its generic name, brand name is fine.
- **Strength or concentration of the preparation.**
- **Patient dose:** this should always be written as ‘mg’, ‘g’, ‘units’ and so on. ‘Tablets’ or ‘mL’ should not be written.
- **Route.**
- **Frequency.**
- **Indication:** clinicians should ask patients what their medication is meant to treat, rather than
### Table 1  Information sources and their limitations

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<tr>
<th>Source</th>
<th>Standards</th>
<th>Helpful hints, comments and limitations</th>
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| Patients or people managing the medicines   | ■ Ensure where possible that patients or the people managing the medicines are one of the sources of information.  
■ Ensure patients have cognition and capacity.  
■ If there are translation difficulties, consider using NHS translation services.  
■ Ensure patients are asked about medicines: inhalers, nebulisers, recent antibiotics, steroids, weekly meds, eye drops, patches, emergency use drugs and so on.  
■ Ensure patients are asked about recently started or stopped medicines and recent changes in dose. | ■ First check with patients on how they manage their medicines and whether they take their medicines as prescribed or differently.  
■ If it is not the patient managing the medicines, consider liaising with the family member, carer, care home staff, district nurse or whoever else is doing so.  
■ Document if patients are temporarily unable to confirm medication history, for example due to confusion, so that other staff are aware, and leave a prompt for them to try later when the patient’s condition may have improved. This is important because medicines are not always taken as prescribed.  
■ Check for hospital outpatient clinic letters, and any hand-held medicines-related documents, such as methotrexate or warfarin books, or insulin or medication passports, as well as medication apps on patients’ smartphones, compliance charts, medicines that patients have with them, and ‘green-bag’, clinical-trial or detox-unit medicines. |
| Repeat-prescription tear-off slips          | ■ Ensure you have all the pages of the repeat tear-off slips.  
■ Cross-check these with patients or the people managing the medicines to ensure they are up to date.  
■ Check when prescriptions were last issued. | ■ Tear-off slips do not include information about acute prescriptions.  
■ Prescription may not have been collected or taken.  
■ Some medicines may have stopped recently. |
| Requesting information from the GP          | ■ Ensure the details and designation of the person providing the information is confirmed and documented. | ■ Use discretion on the need to contact a GP; do not do so if the information required is minimal, for example to confirm ‘no medication’.  
■ Information provided by GPs may not include: over-the-counter medicines, hospital-supplied medication, medication supplied by homecare services or dentists, or prescribed in urgent care or walk-in centres, by hospital at-home teams or specialist nurse prescribers, or medicines to manage genito-urinary conditions or HIV/AIDS.  
■ Obtain print-outs from the GP system by fax or email as opposed to verbal communication.  
■ Ensure GP information is as complete and current as possible.  
■ Request that the information include any repeat-prescription medication list, any acute prescriptions issued in the past three months and allergy status. | ■ Obtaining print-outs limits the risk of errors as a result of miscommunication or omission of important information.  
■ Email from and to encrypted central mailboxes, such as nhs.net  
■ If faxing, ensure only staff have access to the receiving fax machine.  
■ Check the dates of issue and quantities of medicine issued because these can highlight problems with compliance or if items are no longer taken at all.  
■ Viewing only repeat-medication lists is often insufficient because patients may have been issued with acute prescriptions, for example for an antibiotic for an unresolved chest infection that has resulted in admission.  
■ Some GP systems may remove items from repeat lists if they are issued infrequently.  
■ GPs may not make items available on repeat because: the medicine is newly started and they want to monitor patient response after each prescription, they may want to remain in control of quantities issued, they may have forgotten or not yet had time to move item to repeat, the medicine was initiated elsewhere and they have not yet received or actioned full directions on continuing therapy.  
■ Amending, starting or stopping medication may have contributed to the reason for admission so this can affect decisions to amend, withhold or restart medicines on admission. This information may be in the acute prescriptions or GP consultation section. |
making assumptions. For example, sodium valproate might be used for bipolar disorder rather than epilepsy.

**Conducting an effective MedRec**

There is no specific approach to obtaining an accurate MedRec. In most circumstances, patients are unlikely to have brought with them their medications or an up-to-date medication list, so clinicians will have to rely on patients recalling what medicines they take; this is integral to conducting any MedRec. The following questions can help start a conversation with patients about medicines:

- What medications do you take?
- Do you take any over-the-counter medicines?
- Do you administer any eye or ear drops, inhalers, creams or ointments?
- Have you taken any antibiotics in the past two or three weeks?
- Are you wearing any medication patches?
- Is there anything else you take that has not been mentioned?

To assess for allergies, clinicians might ask:

 `'Do you have any allergies to medications and, if so, what happens when you take the medication?`"

Finally, where appropriate, patients should be asked about the following:

- If they are on warfarin and, if so, do they have a yellow book?
- If they are diabetic and, if they do and are on insulin, do they have an insulin passport?
- Clinicians should also confirm insulin doses and type of administration device.
- Do they take any once-weekly medications such as methotrexate or biphosphonates? If so, patients should be asked which day of the week they take these.

Do they take any over-the-counter remedies, herbal medicines, medicines sourced through the internet, or ‘recreational’ drugs?

**Summary**

The goal of MedRec is to ensure that clinicians know exactly what medications patients take before they make any clinical decisions. Doing so helps prevent adverse drug events on admission such as omitting regular medicines, and substituting or duplicating any medicines.

Nurses are essential to creating, improving and implementing the MedRec process for various reasons. For example, pathways that deliver care closer to or within patients’ homes are being developed along the lines of nurse-led models, so responsibility for MedRec increasingly lies with nursing staff. Further, nurses are often the first clinicians patients see on admission to hospital, and MedRec usually takes place at this time. Equally, they tend to be the last caregivers patients see when leaving hospital and at this point it is vital to ensure that patients and their next caregivers are aware of the most up-to-date and accurate medication lists.

For those nurses interested in MedRec, a first step is to find out if their employing organisations have a MedRec policy and, if so, to familiarise themselves with its content and identify if it mentions the nurse’s role. Second, nurses can contact a member of their pharmacy department for more information and to find out what training opportunities there are for nurses in conducting MedRec. Finally, if nurses would like to get involved with the MedRec project undertaken by the NHS Specialist Pharmacy Service, please contact Chetan Shah at chetanshah@nhs.net

**References**


National Institute for Health and Care Excellence (2014) Drug Allergy: Diagnosis and Management of Drug Allergy in Adults, Children and Young People. tinyurl.com/s/hy33b (Last accessed April 7 2014.)


