

MEDICATION RECONCILIATION NURSING & MIDWIFERY EDUCATION PACKAGE

2017 PILOT REPORT



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Queensland Health (Medication Services Queensland) for sharing their resources and allowing us to adapt their content and structure for NSW use.

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Background

Medication reconciliation is the process of ensuring that patients receive all intended medicines and that accurate, current and comprehensive medicines information follows them at all transfers of care. Standardised medication reconciliation processes have been recognised internationally as a strategy to improve patient safety and the continuity of medication management.

A formal medication reconciliation process involves four steps:

1. Collecting information to compile a list of each patient's pre-admission medications.
2. Confirming the accuracy of the information to achieve a Best Possible Medication History (BPMH).
3. Comparing the history with prescribed medicines at every transfer of care, and identifying and resolving any discrepancies.
4. Supplying accurate medicines information to the patient/carer and next care provider/s.

Medication reconciliation is a multidisciplinary process. Traditionally pharmacists have taken on the tasks associated with medication reconciliation, however in areas where there are very low numbers of pharmacists or none at all, and limited medical workforce, involvement of nursing staff is essential in reducing medication errors associated with poor communication of medicines information.

Training specifically for nurses has been identified as a need across NSW to progress nurses undertaking tasks associated with medication reconciliation. Policy development and organisational support are also crucial to supporting nurses in these tasks.

A Medication Reconciliation Nursing and Midwifery Education Package was developed in 2016 and piloted across five health facilities in 2017 to ensure it was fit for purpose. The five pilot sites self-nominated and they included Cobar Health Service, Western NSW LHD, Forensic Hospital, Justice Health & Forensic Mental Health Network, Long Bay Hospital, Justice Health & Forensic Mental Health Network, MEHI Cluster, Hunter New England LHD and Milton Ulladulla Hospital, Illawarra Shoalhaven LHD.

Aims

The aims of the Education Package pilot were to:

- a) Increase knowledge and skill amongst nursing staff in medication reconciliation processes.
- b) Improve medication reconciliation rates.

Method

The Education Package pilot involved:

- CEC engagement with district/network and local executive and managerial staff prior to the education
- provision of pre-workshop learning materials
- provision of evaluation resources including the audit tool and user guide
- CEC facilitation or local lead facilitation of face-to-face workshops, including role plays, group activities and discussions
- provision of Facilitator and Participant Handbooks and
- evaluation.

The evaluation utilised participant surveys and an admission medication reconciliation audit to determine if the aims of the pilot were met.

Participant Surveys

At the workshops participants were asked to complete a pre- and post-workshop survey. The survey questions assessed knowledge and skill as well as perceived relevance and value of the training.

The surveys were then analysed to determine if there was an increase in self-reported knowledge and skill amongst nursing staff in undertaking medication reconciliation processes.

Admission Medication Reconciliation Audit

Prior to the workshops being held a local lead was asked to complete a baseline admission medication reconciliation audit on approximately 20 patient records. Three to six months after the workshops the local lead was asked to complete the same audit as a follow up on another 20 patient records.

The audit assessed the first three steps of the medication reconciliation process, including;

1. Was a *clear medication history* documented for the patient on admission?
2. Was there documentation of *more than one source of medicines information* used to collect and confirm the accuracy of the medication history (a BPMH)?
3. Was there documented *evidence of a reconciliation process* between the medicines in the medication history and the medicines actually prescribed as an inpatient?

The audits were then analysed to determine if there had been improvements in medication reconciliation rates as a result of the training. The audit results were analysed using Microsoft Excel.

The audit also captured other information relating to the continuity of medication management, including; documentation of allergy status, accessibility of the medication history at the point of care and the number of omitted home medications.

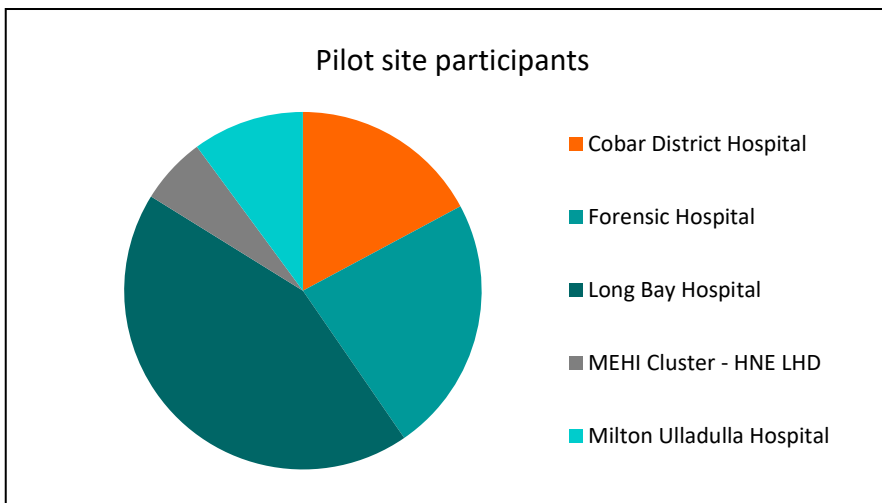
Results

Results of Participant Surveys

A total of 98 participants across the five sites attended the three workshops that were run in succession (3 x 1 hour), between March – April 2017. Two pilot sites requested CEC facilitation and three sites used their own local educators to facilitate the workshops.

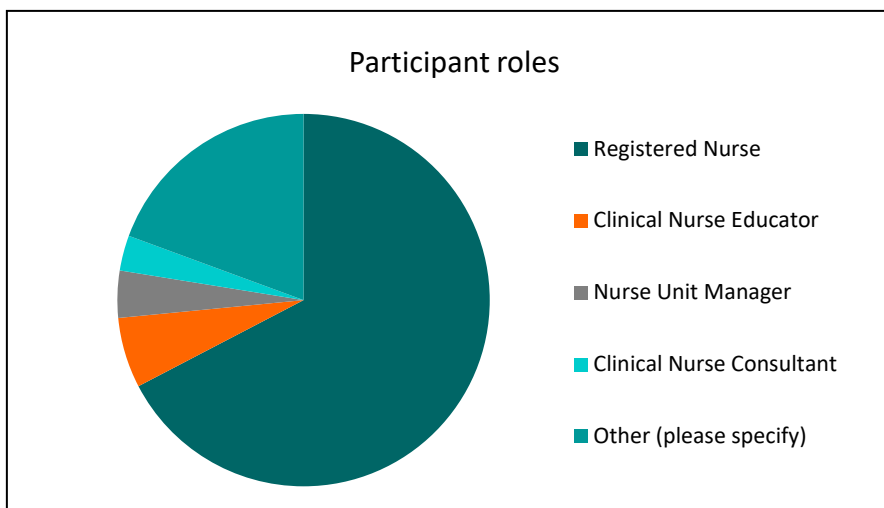
The number of participants at each pilot site varied, with some pilot sites choosing to train a few clinical nurse educators as opposed to training a larger number of registered nurses. The idea was to then use the clinical nurse educators to provide education more widely to their nursing staff. Graph 1 shows the breakdown of the participants by pilot site.

Graph 1. Participants by pilot site



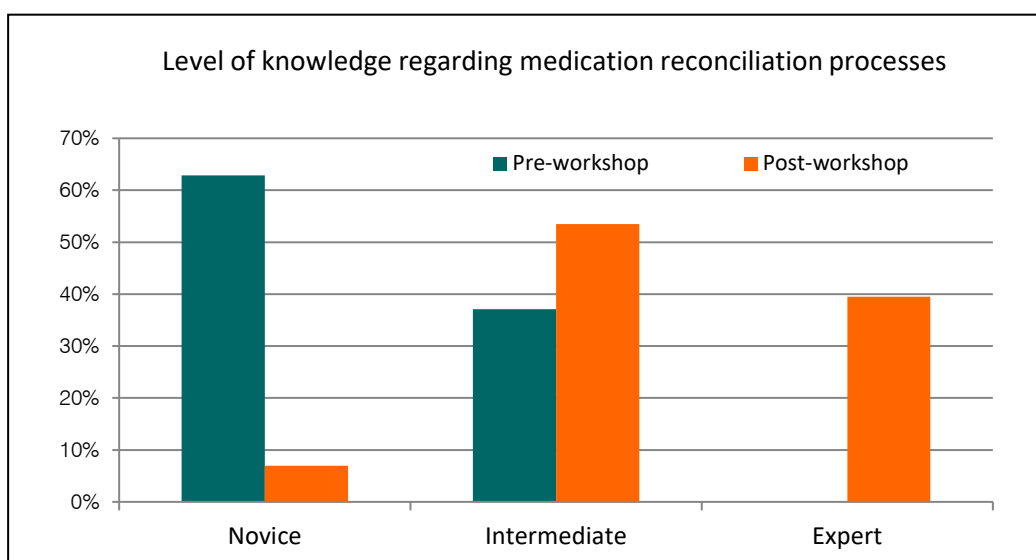
The majority of participants across the pilot sites were registered nurses. Graph 2 shows the breakdown of participant roles with 'Other' being mainly enrolled nurses.

Graph 2. Participants by role



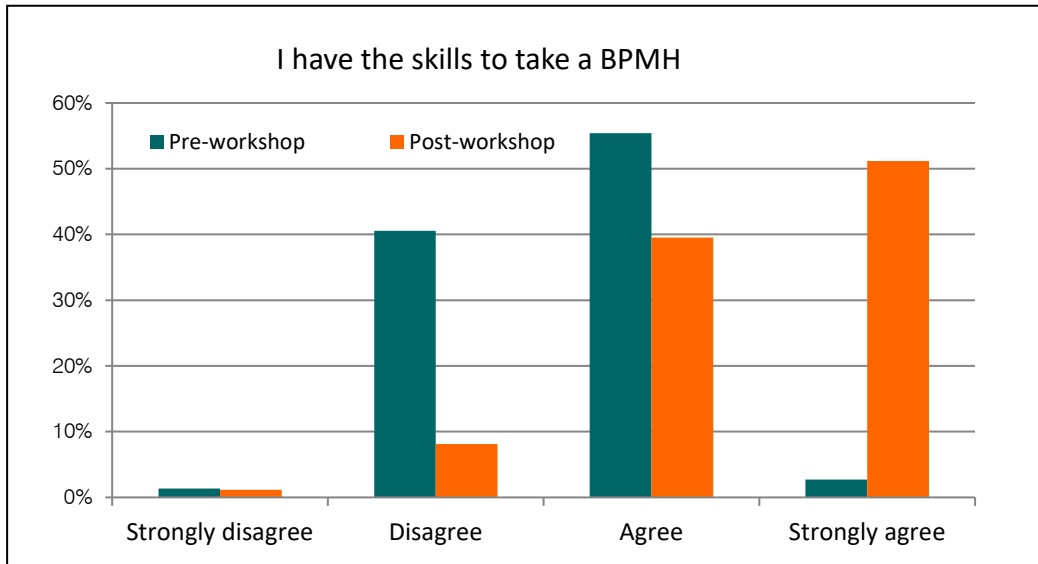
Overall there was an increase in participant self-reported knowledge regarding medication reconciliation processes (Graph 3.) after attending the workshops, with the majority of participants moving from the 'novice' category to 'intermediate' and 'expert' categories.

Graph 3. Knowledge regarding medication reconciliation processes



Participants also reported feeling more confident in their skills in being able to take a BPMH (Graph 4.)

Graph 4. Skills to take a Best Possible Medication History (BPMH)



90% of participants considered the workshops relevant to their practice and a useful professional development activity.

Participants were asked about what they achieved from attending the workshops. Most participants expressed positive feedback.

Comments from Participants

I have gained more confidence in doing Med Rec

Resources and support to take education to staff in my facility

I have more knowledge to apply in the workplace

An understanding of the importance of Med Rec

Increased knowledge in obtaining a BPMH and where to document it

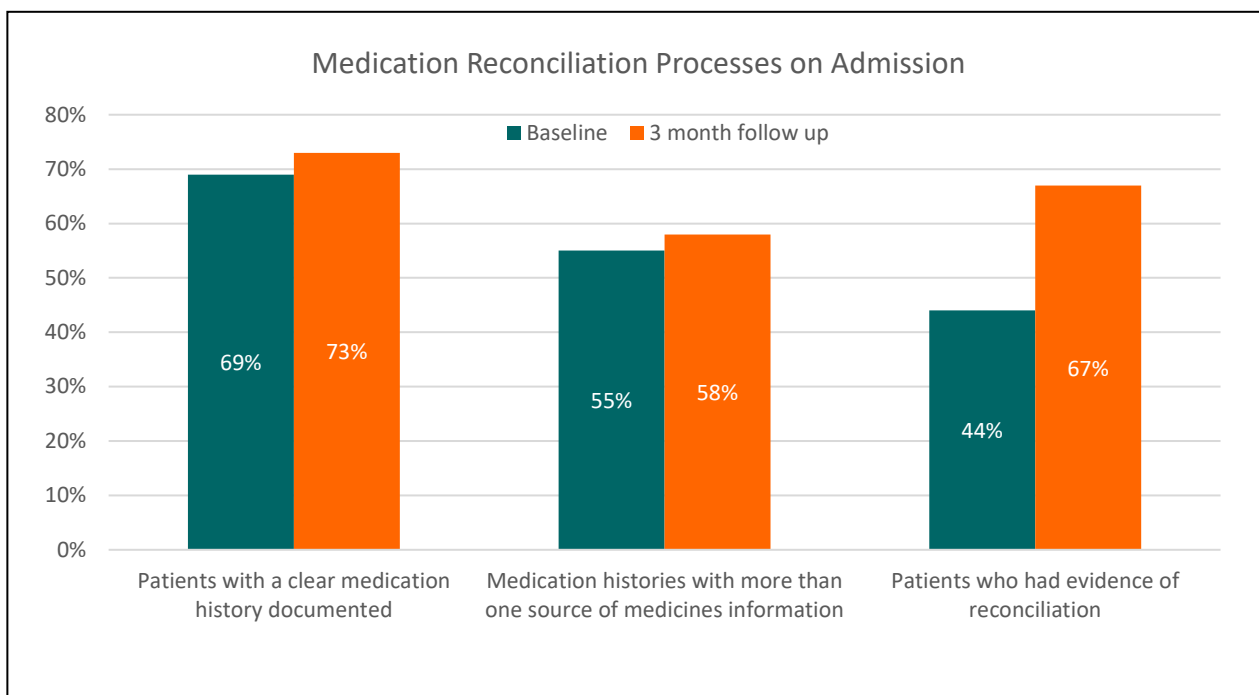
It made sense, I understood it all

Results of Admission Medication Reconciliation Audit

There were a total of 97 patient records reviewed in the baseline audit and 89 patient records reviewed in the 3 month follow up audit. The average patient age was 58 years old for both the baseline and follow up audits.

There was an increase from baseline in all three medication reconciliation processes on admission at the 3 month follow up.

Graph 5. Medication reconciliation processes on admission



These results indicate the education package achieved both the aims. The package was successful in increasing knowledge and skill amongst nursing staff in medication reconciliation processes and medication reconciliation rates of completion were increased.

Limitations & Discussion

Knowledge in Practice

Increases in knowledge and skill were self-reported by participants in the workshop surveys. The Education Package did not assess participants' actual performance of medication reconciliation tasks in practice. The Admission Medication Reconciliation Audit provides some insight into the rates of medication reconciliation but does not go into the detail of the quality of task performance or who actually performed the processes (doctor or nurse). To complement the workshops, additional role play/simulation/one-on-one learning opportunities may assist in improving/assessing the actual skill of nurses in performing medication reconciliation tasks.

Education with Medical Staff

The Education Package was designed to increase knowledge and skill amongst nursing staff in medication reconciliation processes; however medication reconciliation is a multidisciplinary process, and also relies strongly on the medical workforce being involved in the improvement process. For example nursing staff can obtain and document a BPMH, reconcile this with current inpatient medication orders and note any discrepancies such as omitted medications and refer to a medical officer for medication order amendments. Delivery of medical staff education such as information sessions, academic detailing or doctor-to-doctor education forums may be effective in engaging medical staff in the process.

Impact on Workflows

While it is known that implementing formal medication reconciliation processes in practice saves time¹, the process of integrating medication reconciliation into existing workflows requires careful consideration prior to implementation. Initially, there may be more time spent on admission, collecting and confirming a medication history, however this will likely save time during the admission and at discharge as issues will be identified and resolved earlier. The Education Package did not consider individual facility workflows, while it included a process mapping activity to prompt participants to consider this aspect; a more in depth process map of the entire admission to discharge process including nursing, pharmacy and medical staff would be ideal.

Mode of Delivery

The mode of delivery for the Education Package was predominantly face-to-face small group workshops, with individual pre-workshop reading materials provided. This format was chosen based on feedback from key nursing education stakeholders in the development of the Education Package. The pilot did not assess other modes of

delivery such as videoconference or individual self-directed learning. While face-to-face training is ideal, this may not always be possible. We encourage consideration of what modes of delivery would be feasible and practical for your local context and adapt the delivery based on this.

Other Factors

While education is a key component in supporting nurses to undertake medication reconciliation processes, other elements such as policy development and organisational support are equally as important.

Summary & Recommendations

The pilot provided evidence of increased knowledge and skill amongst nursing staff at the pilot sites in medication reconciliation processes; this was further supported by significant improvements in medication reconciliation rates on admission at the 3 month follow up, with the biggest improvement seen in patients having evidence of documented reconciliation.

Further recommendations include:

- training for new nursing staff and refreshers for staff already trained, also consider if additional learning experiences would be beneficial e.g. simulation or one-on-one training
- involving medical staff in the improvement process
- process mapping the entire admission to discharge journey in terms of communication of medicines information and identifying if there are additional areas for improvement
- providing opportunities for nursing staff to give feedback on the process and inform future steps
- maintaining executive and managerial support.

Definitions

Clear medication history	A documented list of medications taken prior to admission that includes the name, dose and frequency of each medication.
Best Possible Medication History (BPMH)	A medication history was documented evidence of more than one source of medicine information used to collect and confirm the accuracy of the medication history.
Sources of medicines information	Patient or carer interview, patient's own medications, dose administration aids, patient medicines list, nursing home or hostel medication chart/s, GP medication list or referral letter, community pharmacy dispensing history, previous hospital discharge summary or the HealtheNet Portal.
Reconciliation process	<p>The process of comparing the medications in the medication history with the medications prescribed as an inpatient to ensure that each medicines that 'is' prescribed 'should' be prescribed.</p> <p>Evidence of reconciliation may include documented changes to orders resulting from identified discrepancies or documentation that reconciliation had been completed on a form dedicated for this purpose (e.g. the MMP).</p>
Medication Management Plan (MMP)	The Medication Management Plan (MMP) is a standardised form that facilitates/documents medication reconciliation processes.
Omitted medication	An omitted medication is any medication that was documented in the medication history but not prescribed as an inpatient medication order. An omission may be intentional and the reason documented, or it may be intentional or unintentional with no reason documented.

References

1. Duguid M. The importance of medication reconciliation for patients and practitioners. *Australian Prescriber*. 2012 Vol 35, p15-9.

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