

2009 QUEENSLAND HEALTH AWARDS FOR EXCELLENCE

Branch: Medication Services Queensland (MSQ)
Category: Better meeting people's needs across the health continuum

Entry title

Continuity in Medication Management – A multi-faceted approach

Abstract

Patient harm and sub-optimal use of medicines can result from inadequate transfer of information about medication management when patients move between different care settings and providers.

Medication Services Queensland (MSQ) has a multi-faceted approach to continuity in medication management. Training and up-skilling of staff in medication history taking, medication reconciliation and use of two standardised tools support accurate, comprehensive and timely transfer of medication information.

The tools include the Medication Action Plan form (MAP) which has state-wide endorsement and is used in 22 QH facilities, the Enterprise-wide Liaison Medication System (eLMS) used in 73 sites with over 5000 Discharge Medication Records produced per month, and two training and competency assessment modules which support both the MAP form and eLMS.

Aim

To implement a multi-faceted approach that supports districts in the accurate, comprehensive and timely transfer of patient medication information as patients move from one episode of healthcare to another.

Nature of the problem

Medication errors occur during transition points (at hospital admission and discharge, and on ward transfers). The medication management pathway includes not just medication prescribing, dispensing and administration but also transfer of verified medication information. Each step in the pathway has potential for error to occur. Patients are placed at risk of inappropriate drug therapy, adverse medicine events and errors carried through to discharge if errors are not identified and addressed. Research shows that failure in medication information transfer contributes too many errors.

Extent of the problem

There is evidence that on admission to hospital, up to one in two patients had an incomplete medicine list provided, resulting in a medicine not administered during the hospital stay (Cornish et al., 2005; Stowasser et al., 2000). Of patients who are unintentionally not given a medication, one in three will experience moderate, and one in 16 severe discomfort or clinical deterioration.

Similarly omission of a medicine from the discharge summary list sent to community health care professionals was associated with a 2.3 fold increase in risk of hospital readmission or adverse medicine event (Stowasser, 2002).

Before implementation of a standardised tool, an audit across 9 Queensland Health hospitals found that only 20% of medication histories taken by a Medical Officer and 34% of medication histories taken by a pharmacist were complete with medicine name, dose and frequency.

Strategic importance

An accurate medication history, medication review and a medication action plan are integral parts of the 2005 Australian Pharmaceutical Advisory Council 'Guiding principles to achieve continuity in medication management'. Implementation of these principles is a contractual requirement between QH and the Commonwealth for the introduction of the Pharmaceutical Benefits Scheme in Queensland public hospitals.

The continuity of care through the use of electronic medication management and reconciliation systems is also aligned with the e-health strategic direction of Queensland Health.

Planning and implementing solutions

Medication reconciliation, the term used to describe the process of obtaining a comprehensive medication history, comparing medication lists and acting on issues or discrepancies identified and transfer of verified information, underpins continuity in medication management. MSQ's multi-faceted approach to support medication reconciliation involves the training and up-skilling of staff and providing standardised tools.

The tools developed include the:-

- Medication Action Plan form (MAP)
- Enterprise-wide Liaison Medication System (eLMS)
- Medication History Training and Competency Assessment Module
- Discharge Medication Reconciliation and Discharge Medication Record Training and Competency Assessment Module

The MAP form was developed in consultation with nursing, medical and pharmacy staff. It provides prompts and structure to clinicians obtaining and reconciling medication histories, supports quality by providing an area to record and develop a Medication Action Plan and the information collected on it assists the reconciliation process on discharge.

eLMS is a web-based application designed to assist districts in producing medication related information for patients and to facilitate exchange of medication information with community health practitioners (ie GPs, community pharmacists). The main outputs are a discharge medication record for the patient (to enable them to continue management of their medicines at home) and a discharge medication profile for the GP and community pharmacist involved in the patient's ongoing care.

The medication reconciliation process is facilitated by using both the MAP form and eLMS. Combined, they link admission and discharge information making it easier to communicate to patients and GPs any changes made to medicines during an episode of care.

The competency modules are complete packages with tools, training, assessment and support materials. They were developed to train and up-skill rural nurses involved in medication management and to support the use of the MAP form and eLMS.

Outcomes and evaluation

The MAP form was evaluated in seven Queensland Health public hospitals. The key findings were:-

1. Completeness of Patients' Medication History (i.e. all medicines in each patient's medication history list had name, dose and frequency documented) improved from 49% to 73%
2. Patients' medication histories that reconciled with the medication chart (i.e. name, dose and frequency was written clearly onto the medication chart in accordance with any documented medication plan) improved from 39% to 63%
3. Discharge medication records documenting change information improved from 63% to 82%
4. Responses from the survey showed that 83% of clinicians considered the MAP an "overall useful tool to communicate medication issues to other clinicians".

The MAP form has been endorsed as a state wide form and is available for use by all QH acute care facilities. Currently 22 QH facilities are using the MAP form.

eLMS is currently being used in 73 sites across the state with over 5000 Discharge Medication Records produced per month for patients.

The Discharge Reconciliation and Discharge Medication Record Competency module has been completed by 210 RNs since June 2007 and 38 RNs have completed the Medication History Training and Competency module since June 2008.

Sustaining change

The MAP form has been introduced into the Pharmaceutical Review Workshops provided to pharmacists, Medication Risk Awareness Training package for nurses at induction, and the Safe Medication Management Tutorials provided to some of the 4th year medical students. This has increased both the awareness of the form and its acceptance as a valuable tool by clinicians.

The reports produced by eLMS can be electronically integrated into the Enterprise Discharge Summary system to populate both the medicines on admission and medicines on discharge fields. The application is supported centrally and is reviewed and updated on a regular basis.

Future Scope

The MAP form will continue to be promoted by MSQ and implementation encouraged throughout all QH acute care facilities to embed a standard system of medication history taking and medication reconciliation in the delivery of patient care.

Linking eLMS with other systems such as GP Connect and EDIS are being investigated as are strategies to improve the use of the eLMS application in rural and remote sites. A trial using eLMS to print directly onto a Medication Chart in the pre-admission clinic setting and provision of eLMS training via the use of videoconferencing equipment are underway.

CaSS | Medication Services Queensland

A CLINICAL AND STATEWIDE SERVICE



Reference List

Cornish P, Knowles S, Marchesano R et al 2005, 'Unintended medication discrepancies at the time of hospital admission', *Archives of Internal Medicine*, vol. 165, pp. 424-429.

Stowasser, DA 2000 'Medication information and health outcomes – development and evaluation of a medication liaison service', PhD thesis, University of Queensland, Brisbane.

Stowasser DA, Stowasser M, Collins DM 'A randomised controlled trial of medication liaison services – patient outcomes', *Journal of Pharmacy Practice and Research*, vol. 32, pp. 133-140

Stowasser DA, Stowasser M, Collins DM 'A randomised controlled trial of medication liaison services – acceptance and use by health professionals', *Journal of Pharmacy Practice and Research*, vol. 32, pp. 221-226