

### National Inpatient Medication Chart Implementation

Medication errors may occur at any part of the medication management pathway. Drug therapy errors are reported to occur in 5 to 20 per cent of all drug administrations in Australian Hospitals.<sup>1</sup> It has been reported that up to 43% of adverse drug events are preventable.<sup>2</sup> In a system-based approach to minimise the risk of adverse drug events, the Australian Health Ministers stated that 'by June 2006, all public hospitals will be using a common medication chart. This means that the same chart will be used wherever a doctor or nurse works and wherever a patient is in hospital'. In the same reform agenda, the recommendation for a process of pharmaceutical review of prescribing, dispensing, administration and documentation processes for medication use was also recommended to be implemented in Australian public hospitals by December 2006.<sup>3</sup>

In Europe, a standard national medication chart was implemented in Wales in 1969 which was further developed in 2004. This was accompanied by the development of prescription writing standards and an e-learning package.

In Australia the perceived benefits of standardisation of prescribing and administration documentation through the introduction of the National Inpatient Medication Chart (NIMC) include:

- standardisation of best practice throughout the medication management pathway;
- standardisation of undergraduate training of health professionals in the medication management pathway;
- reduced need for retraining of health professionals in documentation of prescribing and administration as they move between healthcare services; and
- reduced duplication of effort in designing medication charts.

The NIMC links a series of medication initiatives aimed to provide best practice standards for the medication management pathway.

- The medication management pathway describes the cognitive and physical steps involved in the use of medicines, from the decision to treat to monitoring the patient's response. The steps and processes are interdependent. The pathway provides a framework to identify the potential for errors and safe system improvements.<sup>4</sup>
- The Australian Pharmaceutical Advisory Council's guiding principles state that 'Hospital pharmaceutical care aims to provide a continuum for the quality use of medicines during a period of a patient's entry into and treatment within hospital and re-entry into community or residential care setting. The care needs to be individualised for each patient and involves cooperation and coordination between healthcare workers and services within and outside the hospital, the patient and his or her carers'.<sup>5</sup>
- Pharmaceutical review is defined as the minimum standard of systematic appraisal of all aspects of medication management within an institution conducted (or supervised) by a qualified and suitably trained health professional (ideally a pharmacist) acting as part of a multidisciplinary team. It includes objective review of prescribing, dispensing, distribution, administration, monitoring of outcomes and documentation of medication-related information

in order to optimise the quality use of medicines.<sup>6</sup>

- The fundamental components of pharmaceutical review are further defined within SHPA Standards of Practice for Clinical Pharmacy.<sup>7</sup>

The process for development of the NIMC involved the establishment of a national working party by the Australian Council for Safety and Quality in Healthcare in August 2004. This working party comprised members from all states with experience in this field. The resulting chart was piloted in 31 sites across Australia between January and April 2004. The aggregate report from the pilot project demonstrated improved documentation following education in safe prescribing and administration and improved design of the medication chart. Areas that improved included:

- documentation of adverse drug reaction details (improved 21 to 50%);
- re-prescribing of drugs to which a patient was allergic (decreased 9 to 6%);
- drug dose unclear or wrong (decreased 7.4 to 3.9%);
- drug frequency unclear or wrong (decreased 7.2 to 4.8%);
- 'prn' prescription with the indication stated (improved 13 to 26%);
- 'prn' prescription with a maximum dose stated (increased 24 to 36%); and
- prescriber identifiable (improved 41 to 79%).

During the latter part of 2005, the Australian Council for Safety and Quality in Healthcare disbanded and was replaced in early 2006 by the Australian Commission for Safety and Quality in Healthcare. It is not yet known what role the Commission will play in facilitating version control of the current NIMC or the development of national standards for ancillary charts. The responsibility for coordinating implementation of the NIMC has been devolved to the state jurisdictions. The representatives for these jurisdictions continue to collaborate on the implementation of the NIMC within each state by teleconference on a monthly basis.

In Victoria, the implementation process embraced the following change management components:

- *rationale for change*: Australian Health Ministers joint communiqué to improve patient safety<sup>3</sup>
- *tools and approach to support the change process*: development of a Victorian 'toolkit';
- *education*: seven 'train the trainer' workshops were conducted from November 2005 to February 2006 in rural, regional and metropolitan locations;
- *communication*: a communication strategy was developed, targeted at all health professionals, incorporating e-mail updates and newsletter articles. A change register has also been developed to create an opportunity for input into the continuous quality improvement of the NIMC from health professionals. The Victorian Quality Use of Medicines Network will continue to be used to facilitate the exchange of data relating to best practice in the quality use of medicines, embracing all aspects of the medication management pathway;
- *evaluation*: an implementation register has been developed to monitor and evaluate the scope of implementation; and
- *contingencies*: an escalation plan has been developed to address barriers and identify solutions throughout the implementation process.

Further information and materials developed to support this change process in Victoria can be found on <[www.health.vic.gov.au/vmac/project/nimc.htm](http://www.health.vic.gov.au/vmac/project/nimc.htm)>. Implementation of a NIMC provides an exciting opportunity for medication safety systems changes to be made on a large scale. Engagement of all health professionals is key to the success of this process. As we make this journey, many lessons will be learned in all aspects of the change management process. It will be important for us to embrace these lessons in order to achieve continuous quality improvement in the use of medicines at national level in the future.

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