

Omission of Medicines due to Prescription Clarification Requirements in DME wards at Glasgow Royal Infirmary – A Quality Improvement Project

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Purpose

- To reduce unnecessary potential harm from omission of medicines due to prescription clarification requirement.
- To improve prescribing and administration of medicines of in-patient prescription charts.
- To support a local and national clinical priority area in reducing harm from omission of medicines.

Background

- Omitted doses of medicines are one of the most commonly reported category of medication incidents on DATIX.
- An acute division audit for the health board reported 2.8% (equivalent to 686,000) of prescribed doses were inappropriate omitted doses in 2016/17. Of these inappropriate omitted doses, 12% (equivalent to 82,320) were due to prescription clarifications.
- A proportion of these omitted doses can have a significant impact on patients and are largely preventable.
- Hence, a quality improvement (QI) project was initiated within DME wards at the Glasgow Royal Infirmary (GRI) following an acknowledgement of a substantial medicines omission rate due to prescription clarification requirements.
- A need to introduce change was identified in improving practice at a local level, as well as upholding the Nursing & Midwifery Council's Standards for Medicines Management, National Patient Safety Agency and Scottish Patient Safety Programme on omitted medicines.

Aim

To reduce the % of patients with a medicine omission due to prescription clarification requirements in DME wards at GRI to <5% by July 2018.

Methodology

- A QI test of change was implemented with the use of a post-drug administration round communication form (see Figure 1) to highlight omitted medicines due to prescription clarification requirement by nursing staff to the medical team.
- Baseline data of medicine omission rate due to prescription clarification requirement (see operational definition below) was collected from pilot wards and the QI test of change was implemented, which was then extended to all DME wards at GRI.
- Data was collected monthly to two-monthly post-intervention through sampling five patient drug administration charts from each ward.
- This study did not require ethics approval.

Figure 1 – Post-Drug Administration Round Communication Form

Omissions of Medicines: _____ Ward: _____ Date: _____
Please complete during medicine rounds and reconcile any medicines omitted at the end of the round by discussing with medical staff and agreeing appropriate actions.

Date/Time	To be completed by nursing staff				To be completed by medical staff	
	Patient's Name	Bed	Medicine Omitted	Reason for Omission	Outcome* (i.e. continue/withhold/stop)	Prescriber Signature

*The outcome and plan should be clearly communicated to nursing staff and documented on the drug administration chart

Operational Definition of Medicine Omission Rate in this QI Project:

- Numerator:** The total number of patients with at least one omitted medicine due to prescription clarification (in-patient prescription chart administration code '15') for more than one consecutive dose.
- Denominator:** The total number of patients in the sample.
- Medicine Omission Rate:** Compliance calculated by dividing the numerator by the denominator and then multiplying the resulting proportion by 100.

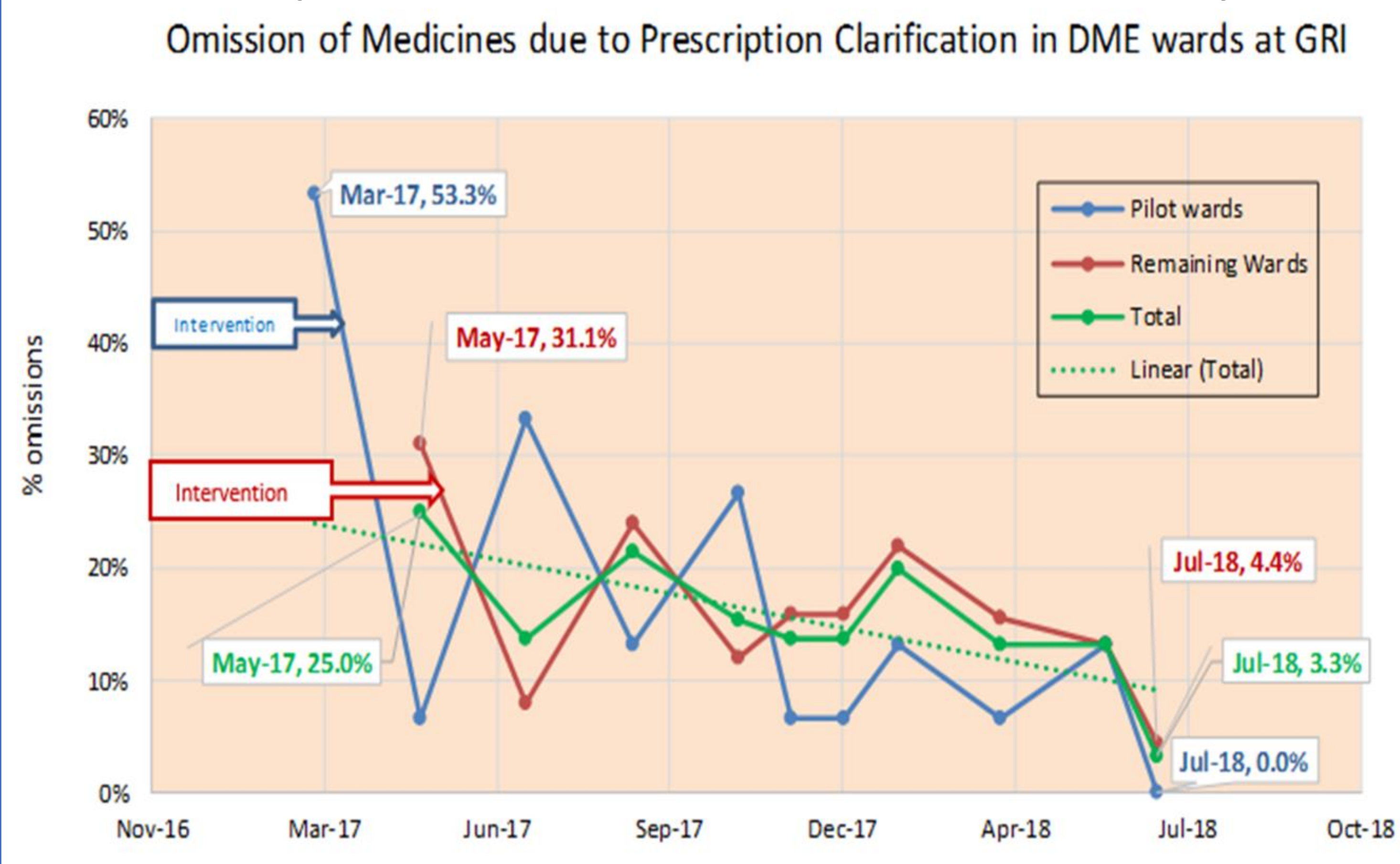
Results

The trends in medicine omission rates due to prescription clarification requirements is shown in Table 1 and Figure 2 which exhibited positive reductions with periods of variability.

Table 1 – Medicine Omission Rate due to Prescription Clarification Requirement Pre- and Post-Intervention in Pilot and Remaining DME Wards

	Medicine Omission Rate due to Prescription Clarification		
	Pre-Intervention (Baseline)	1-month Post-Intervention	Most Recent (July 2018)
Pilot DME wards	53.3%	6.7%	0%
Remaining DME wards	31.1%	8.0%	4.4%

Figure 2 – Trends in Omission of Medicines Rate due to Prescription Clarification Requirement in DME wards at GRI from March 2017 to July 2018



The most common reasons for medicines being withheld and the most common drug groups with a prescription clarification requirement is shown in Table 2.

Table 2 – Common Drug Groups and Reasons for a Prescription Clarification Requirement

Most Common Drug Groups Requiring Prescription Clarification	Most Common Reasons for Prescription Clarification
ACE inhibitors/ARB's	Deteriorating renal function
Anticoagulants/Anti-platelets	Awaiting CT brain to rule out haemorrhage
Beta-Blockers	Hypotension
Calcium Channel Blockers	Electrolyte disturbances
Diuretics	Loose stools
Laxatives	
Proton Pump Inhibitors	

Conclusions

- The target of <5% medicine omission rate due to prescription clarification by July 2018 was met with the QI intervention.
- The use of a post-drug administration round communication tool introduces a robust process to highlight and rectify omitted medicines due to prescription clarification requirements between nursing and medical staff in a timely manner.
- Following this test of change, there was a greater awareness from medical and nursing staff in routinely reviewing drug prescription charts for non-administration codes and actioning promptly.
- This simple tool has also been utilised by nursing staff for communicating to medical staff of other drug prescription chart non-administration codes, such as patient's refusing medicines and unavailable medicines for review and action.
- Some wards have demonstrated less uptake of the form than others; however, there is scope to roll out this tool to other specialties and sites due to the associated improvement in omission rates.

References

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- National Patient Safety Agency Rapid Response Report: Reducing Harm from Omitted and Delayed Medicines in Hospital, February 2010
- NHS GG&C Safe and Secure Handling of Medicines Policy, April 2008