

# A Spoonful of eMEDs Helps The Medicine Go Down

## eMEDs/Workflow Synergy Improves Discharge Summary Consistency

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### Background

- Unintentional medication discrepancies in discharge summaries are common causes of avoidable harm, contributing to patient relapse and hospital readmission.
- The introduction of electronic medication management (eMEDs) at Blacktown & Mt Druitt Hospitals presented an opportunity to reduce the risk of patient harm from medication-related errors.

### Aim

To integrate eMEDs functionality into the hospital discharge processes and improve consistency of dispensed medications with documented medication lists in electronic discharge summaries.

### Method

A retrospective baseline audit of discharge prescriptions and discharge summaries was undertaken in September 2017.

Using a structured audit tool, dispensed medication orders were assessed against discharge summaries for consistency. Significance of prescribing discrepancies were documented according to error type, volume and severity.

Preliminary data from baseline audit was presented to a focus group consisting of the eMEDs team, pharmacists and medical officers. Following consensus on a standardised discharge process, a multi-strategy approach was applied.

A follow-up audit was conducted in March 2018 to evaluate the impact of interventions and strategies used.

Data from both audits were analysed with Chi-square statistical test with significance set at  $p < 0.01$ .

### Medication Safety Strategies

#### Education

- A redesigned eMEDs training package for medical officers and pharmacists
- New guidance of eMEDs discharge process introduced into junior doctors' induction and orientation (with an eMEDs pharmacist deployed to support changes)
- How-To Guide of updated eMEDs discharge process made available electronically on hospital intranet

#### Governance

- Continuing engagement and cross-disciplinary involvement with hospital executives, consultant clinicians, junior doctors and clinical pharmacists
- Mandatory use of electronic medication reconciliation on discharge functionality in eMEDs and the importing of reconciled medications into the discharge summary
- Mandatory requirement for amendments to discharge prescriptions to be made electronically ensuring electronic medical record remains the source of truth
- Use of preferred discharge summary template with medication auto-import function strongly supported and advocated
- Mandatory requirement of "in-progress" discharge summary with complete list of reconciled medications to allow pharmacist review and reconcile medications (with clinician feedback on any discrepancies), provision of medication list and appropriate supply of medications.
- Initiative commenced to improve documentation of medication history in eMEDs and admission medication reconciliation

### Results

At baseline, 28% (48/171) patients received discharge summaries which did not consistently reflect the discharge medications supplied to them, in comparison to 1.4% (3/211) patients in March 2018 ( $p < 0.01$ ) (**Figure 2**). At baseline, 14% (98/680) medications supplied to patients on discharge did not match the documented medication list in the final discharge summary, in comparison to 0.7% (4/573) medications in March 2018 ( $p < 0.01$ ) (**Figure 1**). Compared to 1 case of re-admission due to medication-related harm in the baseline audit, no reported re-admissions were identified in the repeat audit.

Table 1: Comparison of Patient Demographics September 2017 vs March 2018

	Sept 2017 (baseline)	March 2018 (post-intervention)
No. of Patients	171	211
No. of Admitting Teams	18	18
Mean Patient Age	66 years	60 years
Male gender (n[%])	85 (49%)	116 (54%)
Average No. of Discharge Medications Dispensed per Patient	4	2.7

Figure 1: Analysis of Medication Discrepancies September 2017 vs March 2018

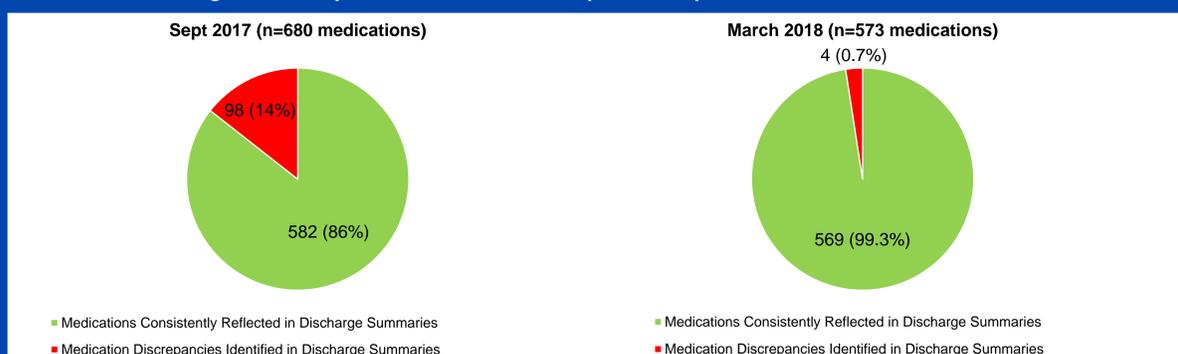
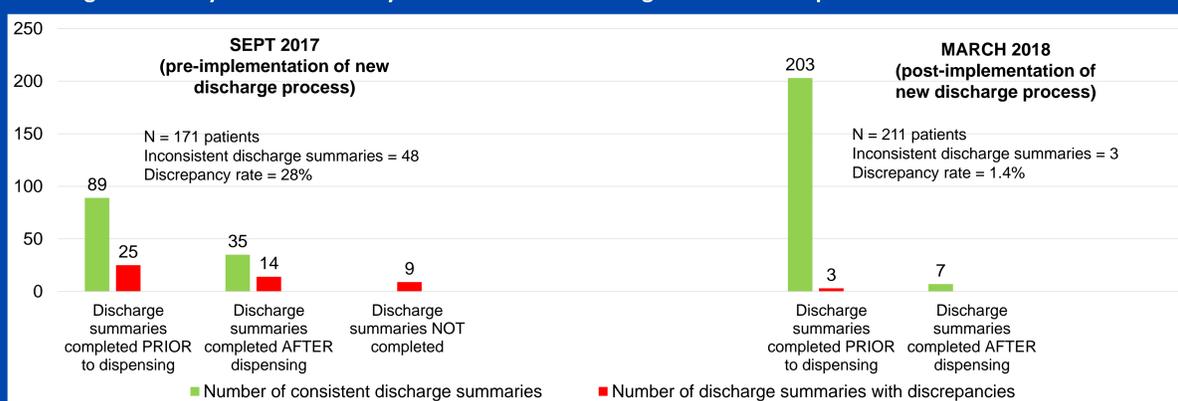
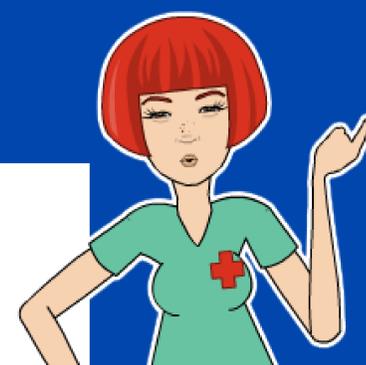


Figure 2: Analysis of Consistency & Timeliness of Discharge Summaries September 2017 vs March 2018



### Improvement in Medication & Patient Safety

Reconciliation of dispensed medications against the discharge summary improved consistency of medication handover in discharge summaries. This allowed for the provision of accurate medication lists, thus instilling confidence of patients, carers and other health care providers in the medication information provided on the discharge summary.



### Conclusion

These findings highlight the importance of integrating the eMEDs system into clinical workflow to achieve patient benefits at discharge. A collaborative and multidisciplinary approach is vital to ensure adoption of the system for full benefits realisation.