Not a Perfect Match – Medication Discrepancies in Discharge Summaries from the Emergency Department

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Introduction

Discharge summaries are an important communication tool between hospitals and primary healthcare providers. A critical component of a discharge summary is accurate documentation of medications the patient is taking at discharge, including changes to pre-admission medications, and details of any adverse drug reactions.

Published literature[1] and previous local audits within our organisation indicate that discharge summaries do not always contain complete or accurate information. The emergency department (ED) was not within the scope of those audits, thus with imminent plans to introduce an electronic medical record (EMR), initially into the ED, the need to capture baseline data regarding the accuracy of medication information contained in discharge summaries was identified.

Aims

The aim of this study was to quantify the accuracy of medication information documented in discharge summaries when compared with discharge prescriptions, for patients discharged from the ED.

Methods

A retrospective audit was conducted of patients discharged directly from the ED Short Stay Unit (SSU) and Behavioural Assessment Unit (BAU) during November 2018. Patients were randomly selected for screening against inclusion/exclusion criteria (relating to discharge destination and availability of relevant documentation in the scanned medical record) using a random number generator, until a desired sample of 300 patients was achieved.

The medication section of the discharge summary was compared with the prescription to identify discrepancies relating to discharge medications and allergy/adverse drug reaction (ADR) details. To assist with designating significance to discrepancies, medications were classified as critical or non-critical. Examples of critical medications include anti-coagulants, antimicrobials and opioid analgesics. This classification had been used in previous internal audits, and utilised information from several published sources[2-4].

Results

A total of 1,382 patients were discharged from SSU/BAU during the audit period. From this population, 986 patients were randomly selected and screened, to achieve a sample size of 305 patients. Basic demographic data is shown below in table 1.

	SSU	BAU	Total
Number of patients	292	13	305
Age (years) (mean, range)	49 (18-98)	37 (27-66)	49 (18-98)
Discharge unit (n,%)	ED (285, 97.6%) Other (7, 2.4%)	ED (13, 100%)	ED (298, 97.7%) Other (7, 2.4%)

Table 1. Demographic data

The total number of medications reviewed in the audit was 565, of which 261 (46.2%) were classified as critical medications. The mean number of medications per prescription was 1.86 (range 1 to 10). The mean number of medications listed on the discharge summary was 0.89 (range 0 to 27).

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Study data were collected and managed using the REDCap electronic data capture tool hosted by the Royal Melbourne Hospital Business Intelligence Unit.

Accuracy of Medication Information

There were 270 medications listed in the medication section of the discharge summaries (compared with 565 on the discharge prescriptions). Of these, 147 were categorised by the prescriber as new medications, 6 were categorised as changed and the remainder (117) were unchanged.

Of the 305 patients, only 71 (23.3%) had completely accurate medication documentation when comparing the prescription and the summary. The remaining 234 patients had at least one omission. Refer to figure 1.

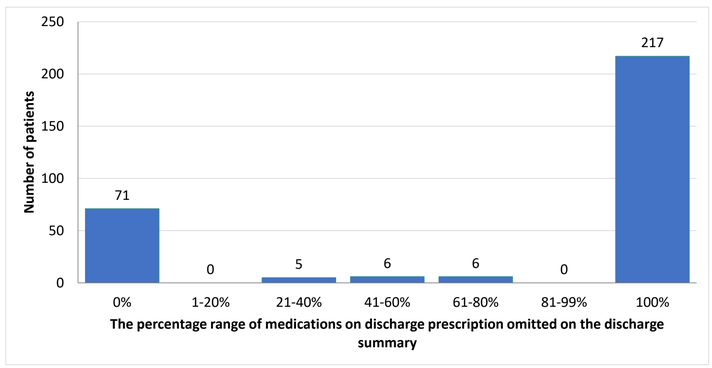

Figure 1. Medications omitted on the discharge summary

The most common type of discrepancy was omission (405 medications were omitted from the medication list on the discharge summaries, and 8 from discharge prescriptions) and 17 medications had a mismatch in dose, frequency or duration between the prescription and the summary. Out of the 430 discrepancies, 203 involved critical medications. Refer to figure 2 for a breakdown of omitted medications.

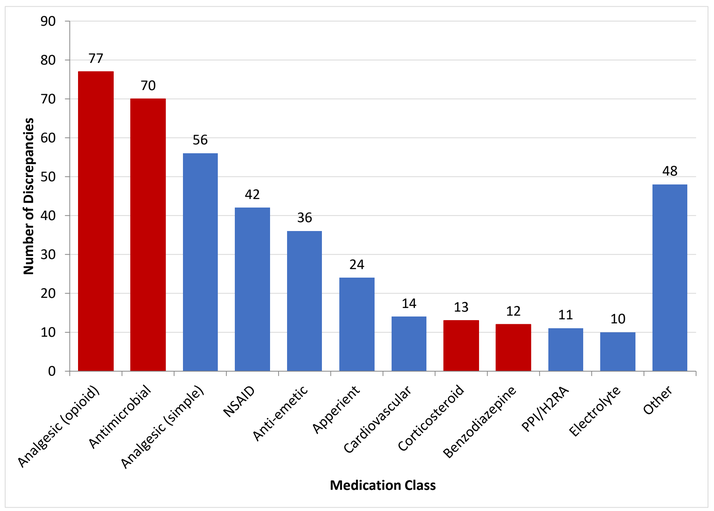

Figure 2. Omission discrepancies breakdown by medication class

Location of Medication Information

Of the 305 patients, 215 (71%) had some reference to medications in the future management plan section of the summary, however the nature and details of this information varied significantly. In total 249 patients (81.6%) had some reference to discharge medications on the summary, either in the medication list section or the future management plan. Refer to figure 3.

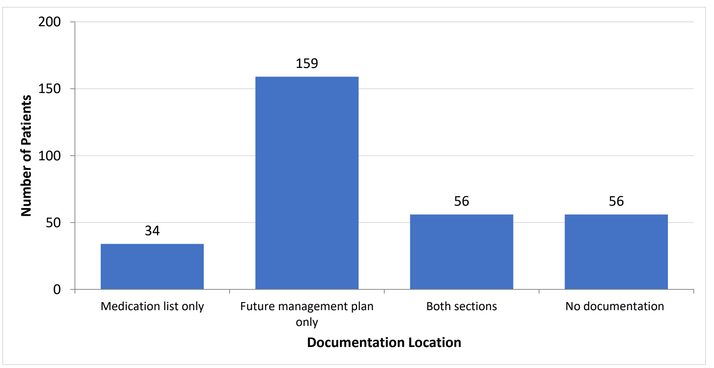

Figure 3. Location of medication information on the discharge summary

Accuracy of Allergy/ADR Information

Documentation of allergy and ADR information was compared. Overall, of the 305 patients 183 (60%) had consistent NKA documentation and 54 (17.7%) had an allergen documented on both the prescription and the summary. Refer to table 2.

		Discharge Summary		
		Allergy/ADR documented	NKA documented	No allergy/ADR documented
Discharge Prescription	Allergy/ADR documented	**54**	**9**	**4**
	NKA documented	**7**	**183**	**7**
	No allergy/ADR documented	**5**	**22**	**14**

Table 2. Allergy/ADR documentation on prescription and summary

Fourteen patients (4.6%) had no allergy/ADR documentation on either the prescription or summary. The remaining patients had inconsistent documentation between the two sources.

Of the 54 patients with allergy/ADR documentation on both the prescription and summary, 45 had the same medications/allergens listed however the remaining 9 only had partially consistent documentation (e.g. at least one medication name was missing from the prescription or summary).

Discussion

This audit provided an opportunity to evaluate the accuracy of medication information documented on discharge summaries for patients discharged from the ED. Only 71 patients (23.3%) had a completely accurate discharge summary when compared with the discharge prescription. The remaining 76.7% had at least one discrepancy. Discrepancies are often difficult to resolves post-discharge as it may be hard to contact the initial prescriber due to the large number of staff in the ED along with varying shift patterns.

One of most common classes of critical medications involved in discrepancies was antimicrobials. It is acknowledged that whilst they are classified as critical, the risk to the patient arising from poor communication about short courses is likely to be minimal, however there may be situations where longer durations are required. Opioids, however, present a challenge for the opposite reason. Given the current prescription opioid crisis, it is vital that discharge summaries provide accurate information about the intended duration of such medications to ensure that they are not inappropriately continued for long periods of time.

Discrepancies (and lack of information) relating to allergies/ADRs increase the risk that this information will not be communicated effectively to other healthcare providers, especially if it relates to newly experienced allergies/ADRs. Whilst the implementation of EMR will improve this, it still relies on accurate and complete documentation on presentation to ED.

Conclusion

A high rate of discrepancies relating to discharge medications and allergy/ADR information was identified when comparing discharge prescriptions and summaries. The audit identified significant room for improvement, some of which will be addressed through introduction of an EMR.

References

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