

Association of Discharge Summary Medication Errors and Risk of Readmission: A Retrospective Audit

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Background:

Discharge summaries (DSs) are an important communication tool; however, DS medication errors are common. Previous research has focused on describing the frequency and type of errors, or evaluated interventions to reduce their occurrence.¹⁻⁵ There is a lack of research on the potential harms which may result from DS medication errors.

Aim:

To determine whether there is an association between DS medication errors and hospital readmission.

Method:

A previous audit at our health network identified the frequency of medication errors on 801 DSs (figure 1).⁵

We used this data to determine if readmission had occurred within 60 days of discharge using the hospital administrative database. Age, sex and number of medications on discharge were obtained from medical records. Medications were classified as high-risk using the APINCH acronym (modified to exclude antimicrobials).⁶

Results:

Of the 801 discharges included in the original audit, 100 patients were readmitted within 60 days of discharge (table 1). We found no difference in readmission rates for patients discharged with one or more DS medication errors compared to those without errors (figure 1).

There was a trend towards higher readmission rates in patients with one or more high-risk DS medication errors compared to patients without high-risk medication errors (figure 2).

Age, sex and number of medicines were not associated with readmission within 7, 30 or 60 days (table 1, all: $p > 0.05$).

Discussion:

Despite an emphasis on improving DS accuracy in the literature, our study found DS medication errors were not associated with readmission. Future research should focus on other community-based outcome measures. Alternatively, the trend towards readmission in patients with high-risk medication errors could be investigated further.

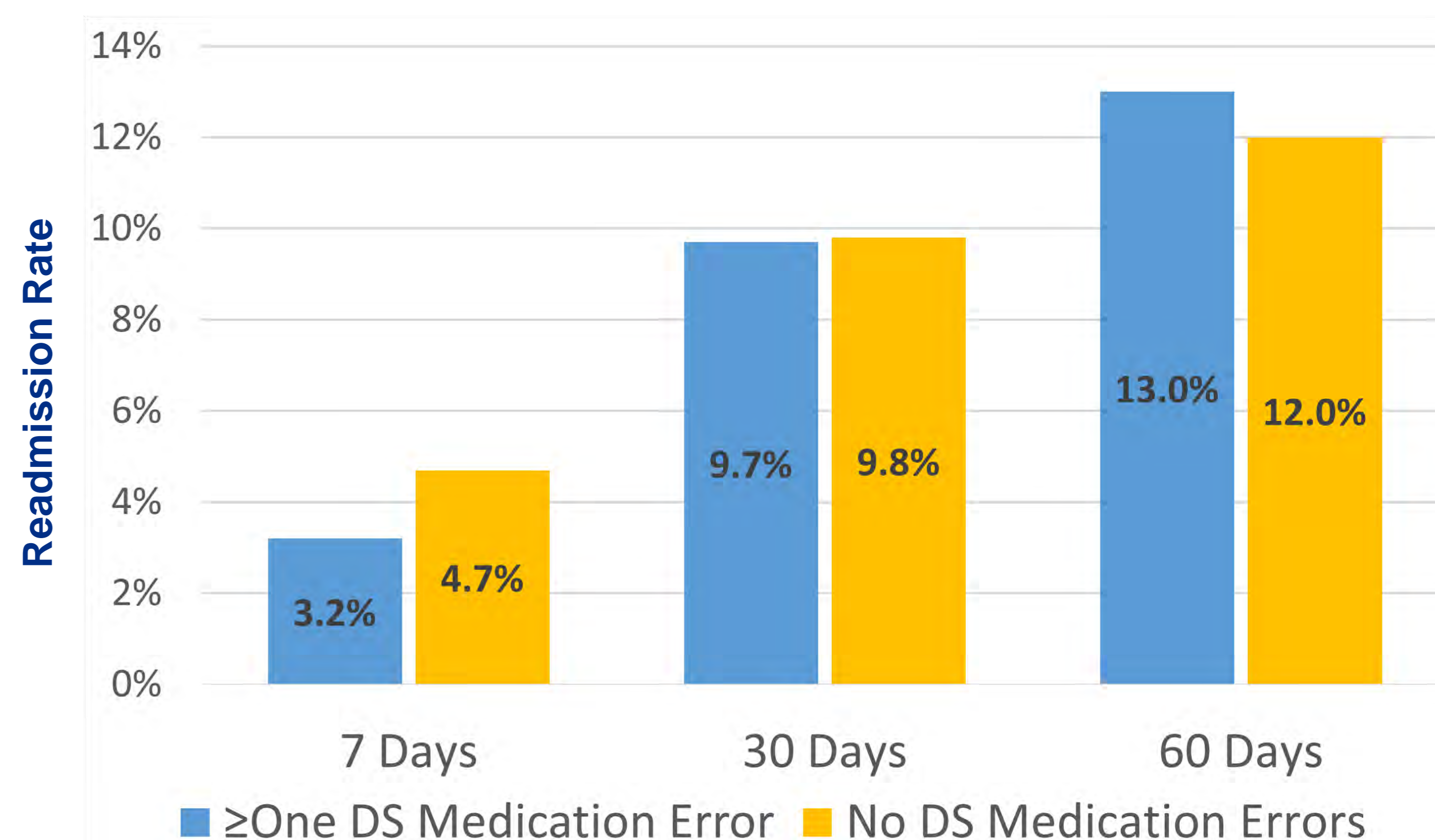


Figure 1: Readmission Rates in patients with and without ≥ 1 medication errors. All comparisons: $p > 0.05$.

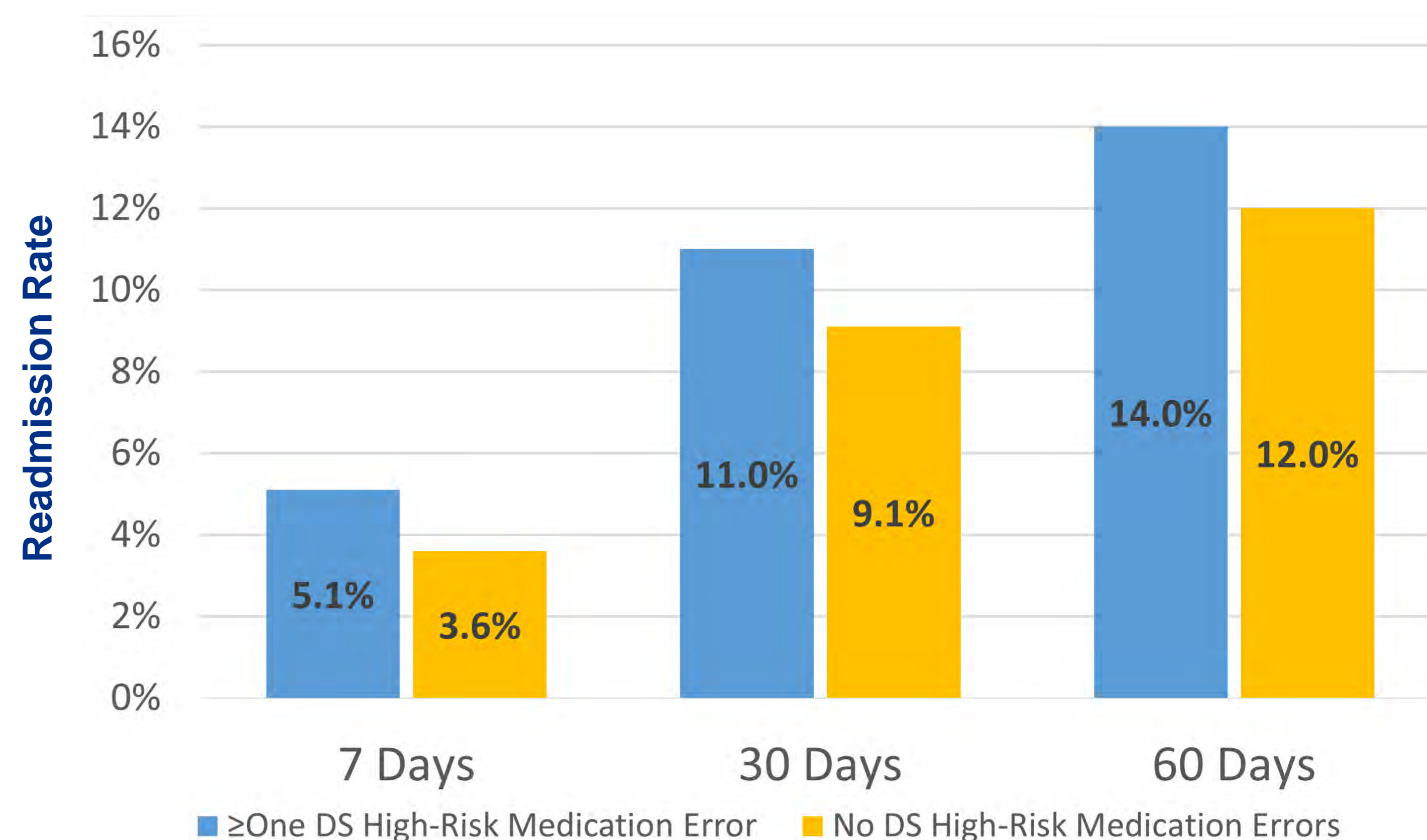


Figure 2: Readmission Rates in patients with and without ≥ 1 high-risk medication errors. All comparisons: $p > 0.05$.

Conclusion:

This study found no evidence that DS medication errors are associated with an increased risk of hospital readmission.

Table 1: Demographic details by readmission category

	Seven day readmission		Thirty day readmission		Sixty day readmission	
	No	Yes	No	Yes	No	Yes
Sample Size	771	30	723	78	701	100
Age (mean, years)	68	72	72	70	72	69
Sex (% Female)	53%	57%	53%	47%	53%	48%
Number of Discharge Medications (mean)	10	12	10	12	10	12
Polypharmacy (≥ 5 medications) (%)	87%	87%	87%	88%	87%	97%
Number of High-Risk Medications (mean, SD)	1.1	1.2	1.1	1.2	1.1	1.2
Length of Stay – Index Admission (mean, SD)	11	10	11	11	11	11

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Figure 1: Previous study