

# The Impact of Pharmacist Admission Medication History on Hospital Discharge Summary Medication Errors

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## BACKGROUND

It is a requirement in Australia that a current list of medications is provided to receiving clinicians upon hospital discharge.<sup>1</sup> This list is commonly incorporated into the Discharge Summary (DS). Medication errors in DSs are common.<sup>2-5</sup>

Whilst pharmacist-medical collaboration on discharge has been shown to reduce DS medication errors, the effect of pharmacist-based tasks conducted earlier in the admission is unknown.<sup>2,4</sup>

## AIM

To determine if pharmacist admission medication histories (PAMH) are associated with a lower rate of DS medication errors.

## METHOD

This retrospective audit reviewed 600 randomly selected DSs from three metropolitan hospitals.

Each DS was reviewed until 300 with PAMH and 300 without that met inclusion criteria were identified (Figure 1).

Medication errors were identified by comparing DS medication lists with the Patient-Friendly Medication List (PFML) or Interim Medication Administration Chart (IMAC). Any discrepancies were considered medication errors.

Each DS was reviewed independently by two researchers, with any discrepancies resolved by a third researcher. Errors were classified according to medication name, high-risk category and type of error. Definitions for high-risk medications and error types were adapted from the Australian Commission on Safety and Quality in Health Care.<sup>6,7</sup>

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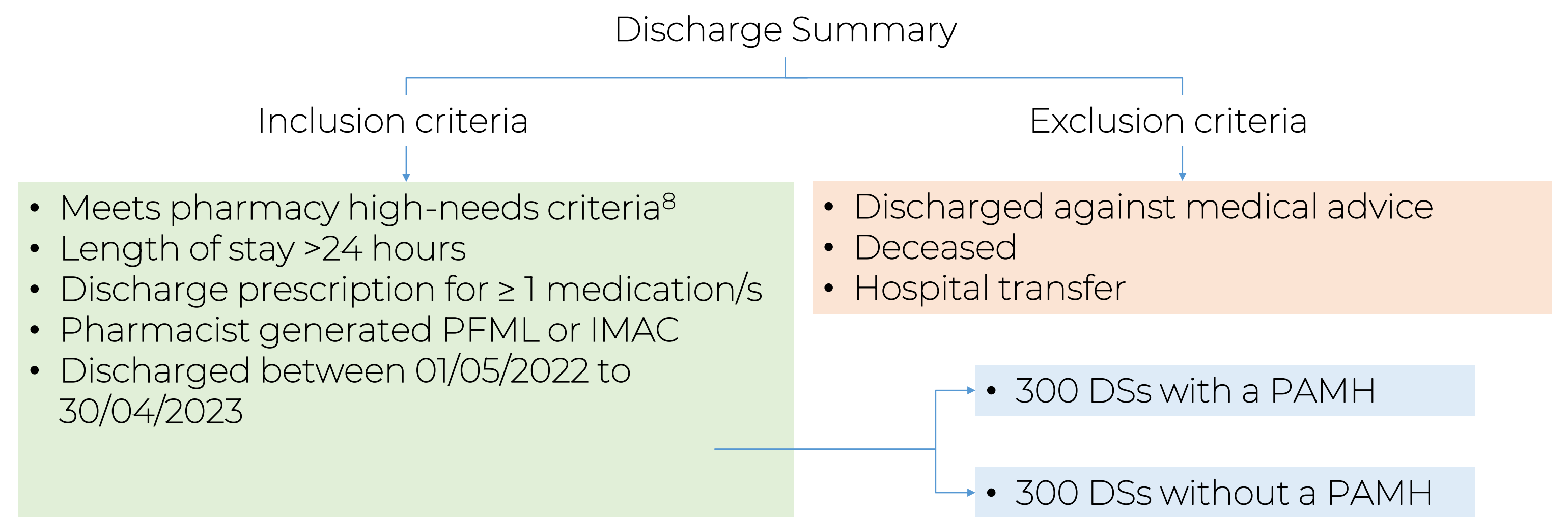
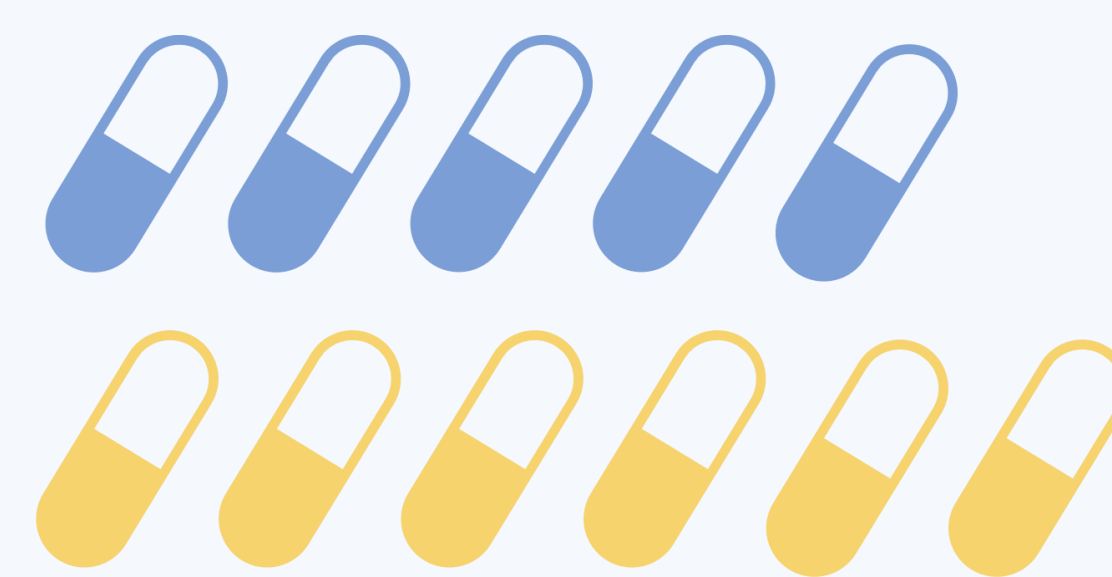


Figure 1: Inclusion and exclusion criteria

## RESULTS

There was **no association** between PAMH and DS medication errors (mean number of errors per DS: 2.18 vs 2.23,  $p = 0.26$ ). Other findings are shown in Figure 2.

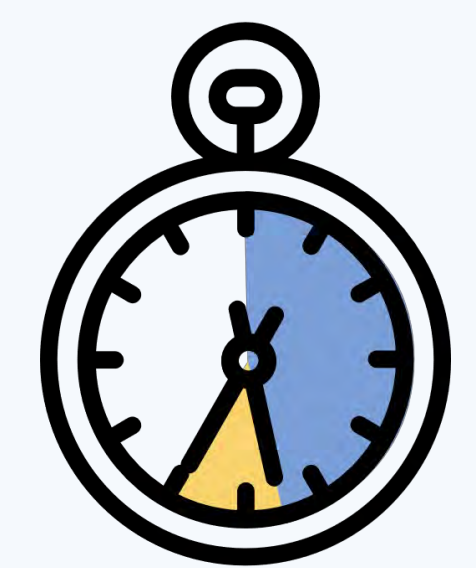
Compared to patients who did not receive a PAMH, patients **who received PAMH...**



Mean number of medications:  
9.90 vs 12.0 ( $p < 0.01$ )

... were taking **21%** more medications and were **more likely** to be exposed to polypharmacy.

...on average, stayed in the hospital for **28.6** hours longer.



Mean length of stay (hours):  
137 vs 166 ( $p < 0.01$ )

1.40 vs 1.67  
(median,  $p = 0.07$ )

...may have been taking **more** high-risk medications

Figure 2: Other findings. Statistical significance assessed using Mann-Whitney-U test.

## DISCUSSION

This study was unable to identify a correlation between DS medication errors and PAMH. This finding should be interpreted with caution as patients with PAMH were taking significantly more medications than those without. Polypharmacy is a well-documented risk factor for DS medication errors, therefore any relationship between PAMH and DS medication errors may be masked in this study.<sup>5,9</sup> In addition, the length of stay was longer in the group who received PAMH. Extended length of stay has recently been identified as a risk factor for DS medication errors.<sup>9</sup>

## CONCLUSION

Further research into the relationship between PAMH and DS medication errors is required. Methodology that can account for potential confounding factors should be utilised.