

A retrospective evaluation of maternity patients who may be at risk of medication-related adverse events

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Introduction:

More than 20% of pregnant women are reported to have at least one chronic disease, suggesting growing complexity in obstetric patients.¹ A multidisciplinary medication management is often required to minimise medication-related errors.²

Due to pharmacy funding and resource limitations, maternity patients are reviewed by clinical pharmacists only upon referral by nurses or doctors at Eastern Health.

Clinical pharmacists use the Eastern Health *Pharmacy High Needs Criteria*³ to screen for patients at risk of medication-related adverse events. This tool was developed via modification of the Society of Hospital Pharmacists of Australia Fact Sheet 'Risk factors for medication-related problems'.³ It has been validated for use in Eastern Health and identifies patients at risk of medication related harm,³ however, it is not specific for maternity patients.

Aims:

Primary aim -- to examine the proportion of maternity patients who meet the Eastern Health *Pharmacy High Needs Criteria*.

Secondary aim – to clinically review all 'High Needs' maternity patients and identify any medication-related errors.

Method:

A retrospective audit was completed for maternity patients at two Eastern Health hospitals; Box Hill Hospital (BHH) and Angliss Hospital (AH) between 01/02/21 -- 14/02/21.

Patients with a length of stay less than 24 hours were excluded so as to allow a sufficient clinical review.

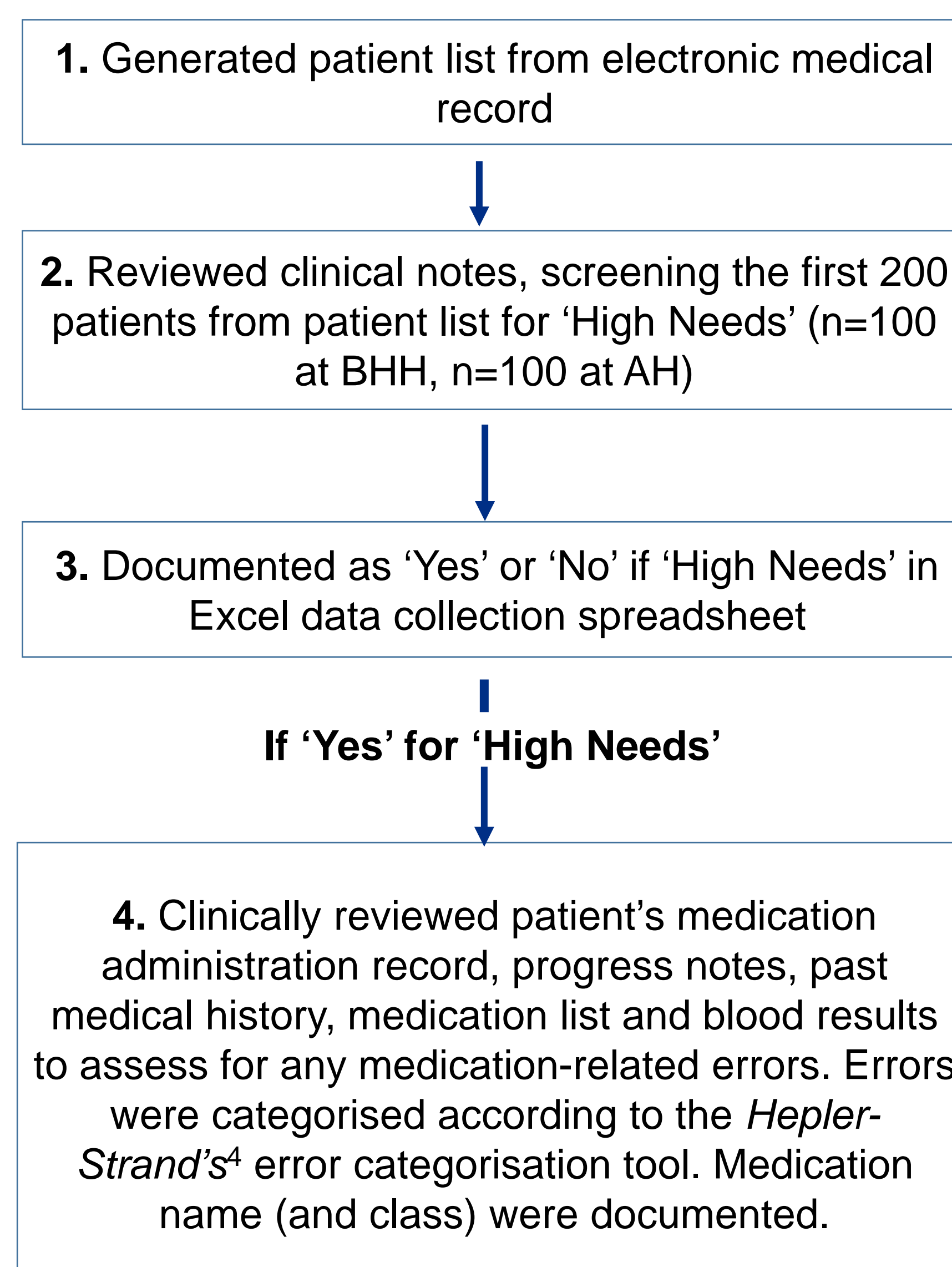


Figure 1. Flow-chart describing project methodology

Results:

Primary aim

Of the 200 maternity patients identified, **41.5%** were 'High Needs'. See **Figure 2** for the breakdown of reasons for meeting 'High Needs' criteria.

Secondary aim

Thirty-seven percentage of 'High Needs' maternity patients had ≥ 1 potential medication related error.

Drug class	Error type	Number of errors		% of all errors
Anticoagulant	Untreated indication	15 (AH)	15 (BHH)	67
Antibiotic	Untreated indication	13 (AH)	0 (BHH)	29
Analgesics	Improper drug selection	1 (AH)	1 (BHH)	4
Total		45		100

Table 1. Drug classes associated with errors

Discussion:

There is a 'High Needs' sub-group of maternity patients at risk of medication-related adverse events (**Figure 2**).

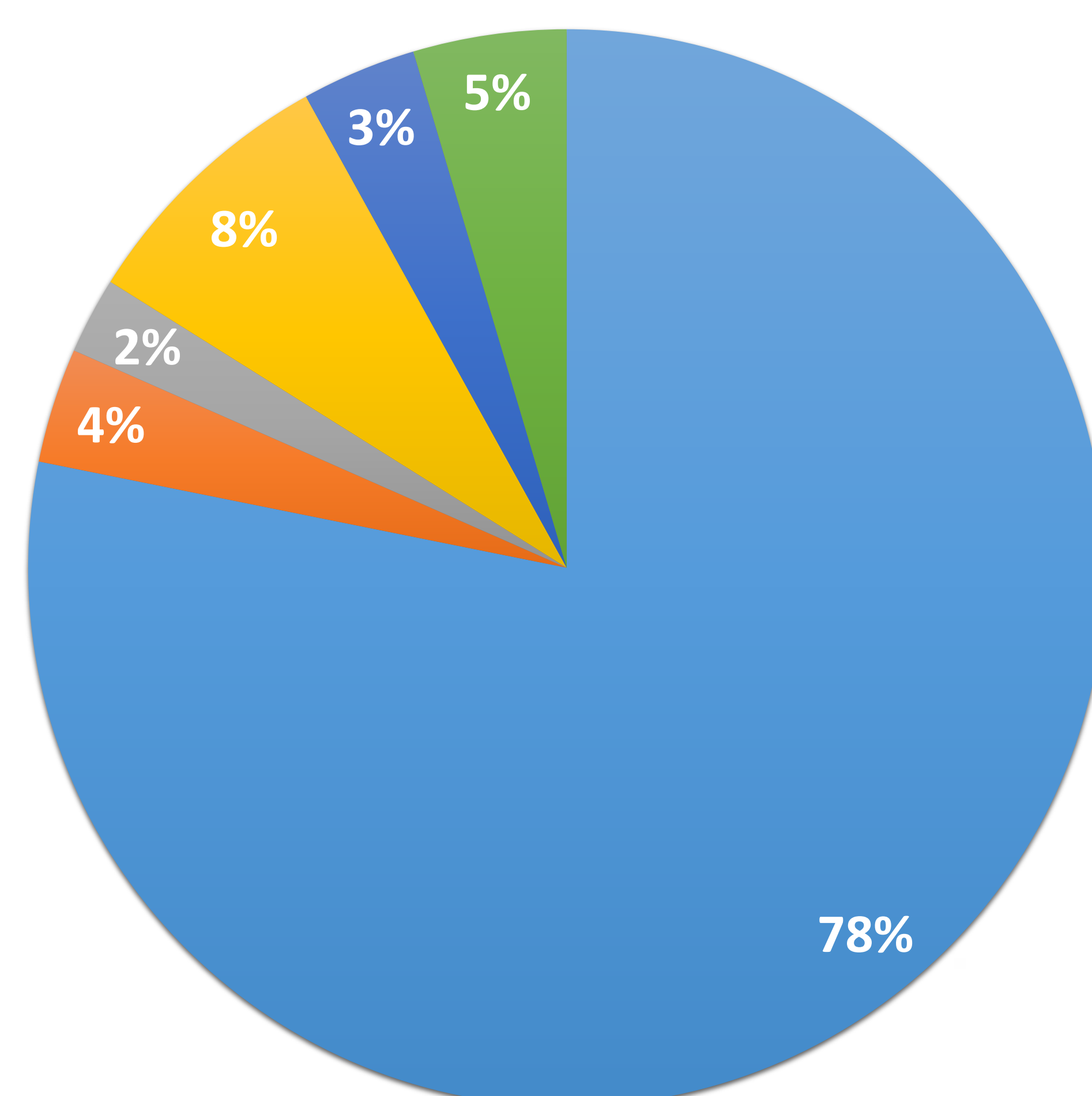
Table 1 shows "untreated indication" to be a reoccurring medication error. 'High Needs' maternity patients did not receive anticoagulation post-emergency caesarean (as recommended by the Eastern Health *Venous Thromboembolism Prophylaxis Guidelines*⁵). Also, some AH patients did not receive antibiotic prophylaxis pre-caesarean (as recommended by Eastern Health *Surgical Antimicrobial Prophylaxis – Obstetrics Guidelines*⁶). Should a pharmacy service be implemented, these errors may be preventable. There was also a smaller error trend for: "improper drug selection". A designated maternity pharmacist could advise against unsafe drug prescribing in obstetrics patients.

Conclusion:

About 40% of maternity patients at Eastern Health meet the 'High Needs' criteria for a clinical pharmacist review, and 37% of them were at risk of potential medication-related errors. This suggests that appointment of a designated maternity pharmacist may be helpful in minimising medication-related errors.

Future research could record real-time pharmacy interventions to assess the pharmacist's impact in maternity.

- Epidurals
- Pathology abnormalities
- Immunosuppressant use
- Extreme body mass index
- Diabetes Mellitus
- Other [NB]



[NB] 1 'High Needs' patient for each of the following: prescribed restricted intravenous antibiotics, past medical history of stroke, presenting with urosepsis and history of medication misadventure

Figure 2. 'High Needs' Criteria breakdown

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