

NEAR MISS PRESCRIPTION ERRORS AND REPORTING

- AN INSIGHT INTO A NEW TERTIARY UNIVERSITY HOSPITAL

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INTRODUCTION

Prescription errors account for most medication-related harm, estimated to affect 1–2% of hospitalized patients in the US. The primary goal of collecting information about medication errors is to establish a database that documents all errors related to medication usage. Prescribing errors, a subset of medication errors, significantly threaten hospital patient safety. It includes error-prone abbreviations, calculation errors, inappropriate dosage, wrong route, wrong frequency, wrong medication name, and software problems.

A near miss is a medication error that can potentially cause an adverse event but does not reach the patient because of chance or intervention in the medication process. Identifying and reporting near misses is routinely practiced by pharmacists as a safeguard mechanism to limit medication errors. The number of prescribing interventions performed by pharmacists reflects near miss in prescribing error that does not reach the patient.

Hospital Al-Sultan Abdullah is a tertiary care facility that opened its doors in April 2021 with 400 gazetted beds. It became fully operational in January 2022 and has experienced a steady increase in annual attendance, corresponding with the number of prescriptions issued. In 2022, 156 beds were operational, with a Bed Occupancy Rate (BOR) of 64.3%. In 2023, the operational beds increased to 201, with a BOR of 77.6%. This report describes the near-miss reporting for prescription errors in our newly operating hospital.

METHOD

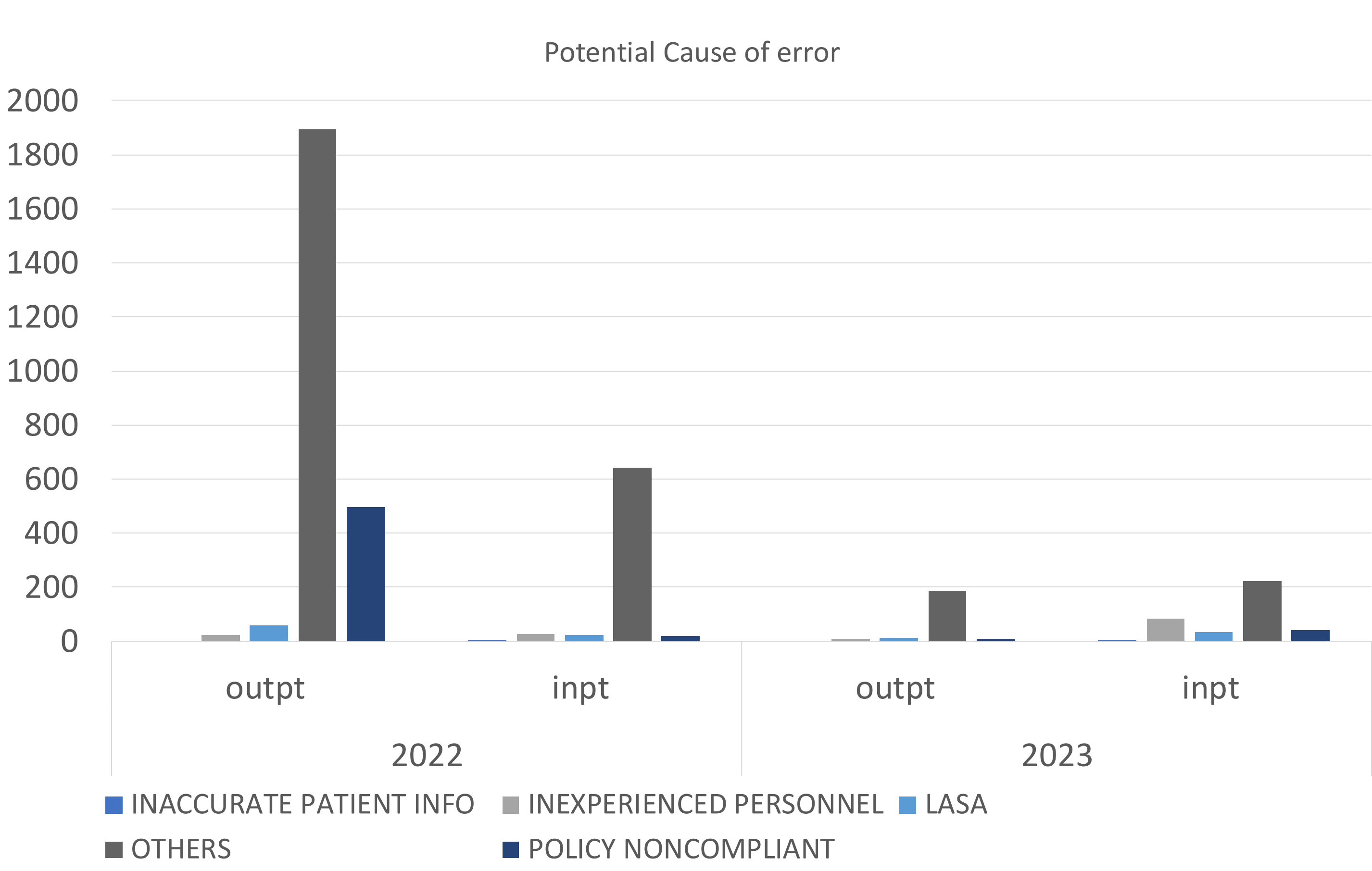
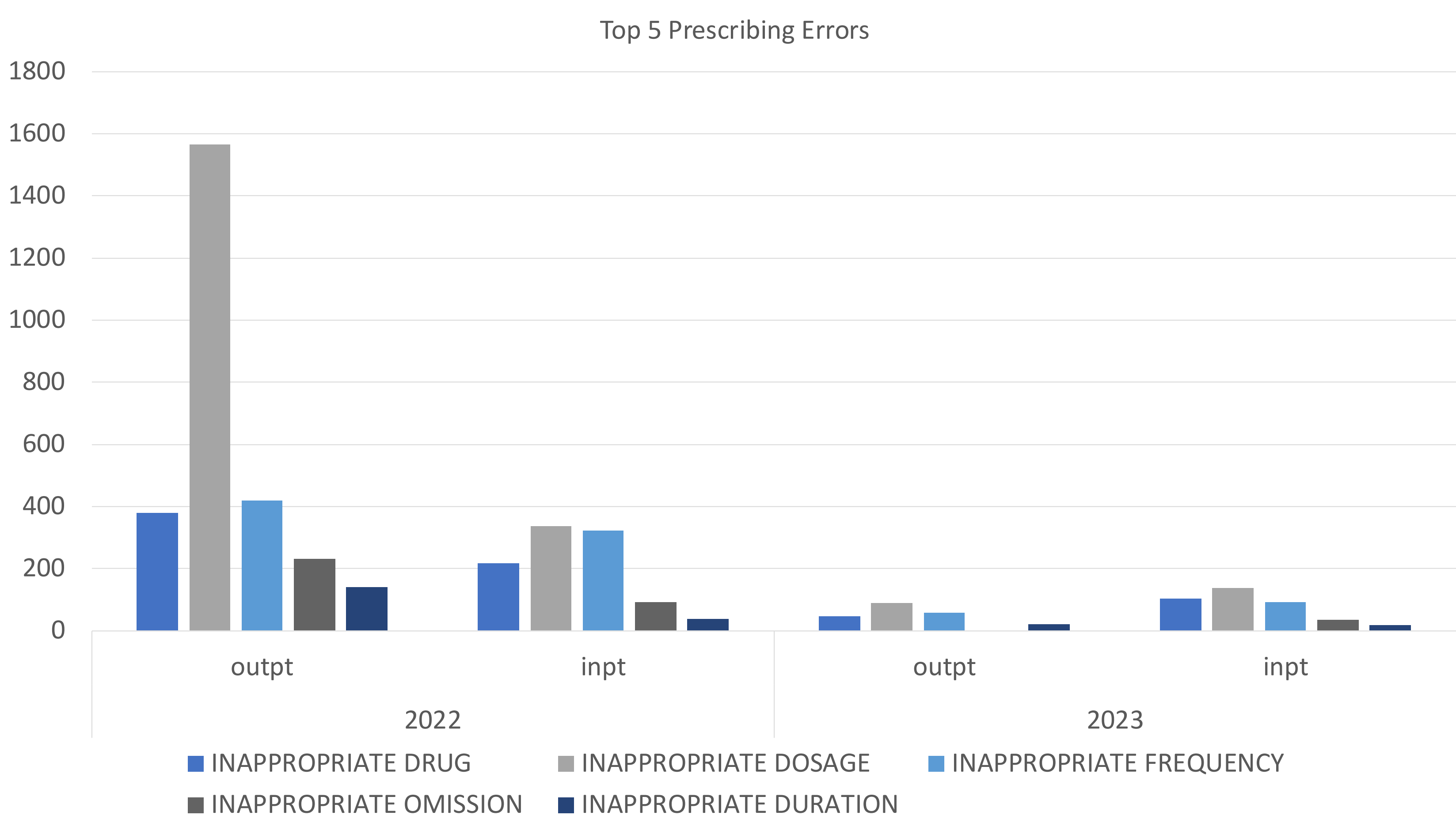
The hospital uses an electronic prescription system developed in-house by its Information Technology Department. Electronic prescriptions are the norm, except for the Emergency Department and Operating Theatre, where unique circumstances require other methods. As of 2022, the Pharmacy Department is comprised of 12 pharmacists and 23 pharmacist assistants. In 2023, the department was staffed with 18 pharmacists and 25 pharmacist assistants.

Pharmacists typically identify near misses in the medication process, and appropriate interventions are then implemented. The relevant information is recorded in a separate Google Sheets document, including the patient's hospital registration number, location, and details about the error, including the error and the prescriber's intention. The document also records the prescriber and pharmacy personnel identifying and addressing the error.

RESULT

In 2022, there was a total of 120,635 prescriptions made in the hospital. This increased by 2.5 fold in 2023 with total prescriptions of 316,099. The number of prescribing interventions in 2022 was 2665, while the number of prescribing interventions was 663 in 2023. In 2023, most prescription errors were due to inappropriate dosage (46.84%), inappropriate frequency 19.61%, inappropriate drug (16.41%), and inappropriate omission (7.93%). The error is detected during intervention done by the pharmacist.

Between 2022 and 2023, no major changes were made. At the end of 2023, the rapid declined in number of prescribing intervention recorded was identified. This did not match the increase in number of patients and prescriptions. It was then noted that the practice of recording prescribing intervention in Google Sheet Drive is tedious and time-consuming. Due to a shortage of human resources, data collection was no longer done routinely for all prescribing interventions.



CONCLUSIONS

The results from our analysis showed that we have two significant problems. Firstly, the current electronic prescribing method is rigid, and mistakes can easily occur. Secondly, the data collection process for prescribing intervention is separate from the electronic prescribing system. Having two different system becomes an added burden and deterrence to the staff.

From these findings, the hospital management plan to improve the service is to improve the electronic prescribing system and incorporate error reporting into the electronic hospital management system. Although studies have shown that electronic prescribing can reduce prescription error, there may still be an error rate. One study has also described the adverse events due to prescribing errors is similar between electronic and handwritten prescriptions. Therefore, we strongly feel not only the system has to be more robust and user friendly, other measures need also to be in place. This include implementing medication safety programs, utilizing clinical decision support systems, and fostering a culture of patient safety within the hospital environment.

REFERENCES

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