

## Background and Importance

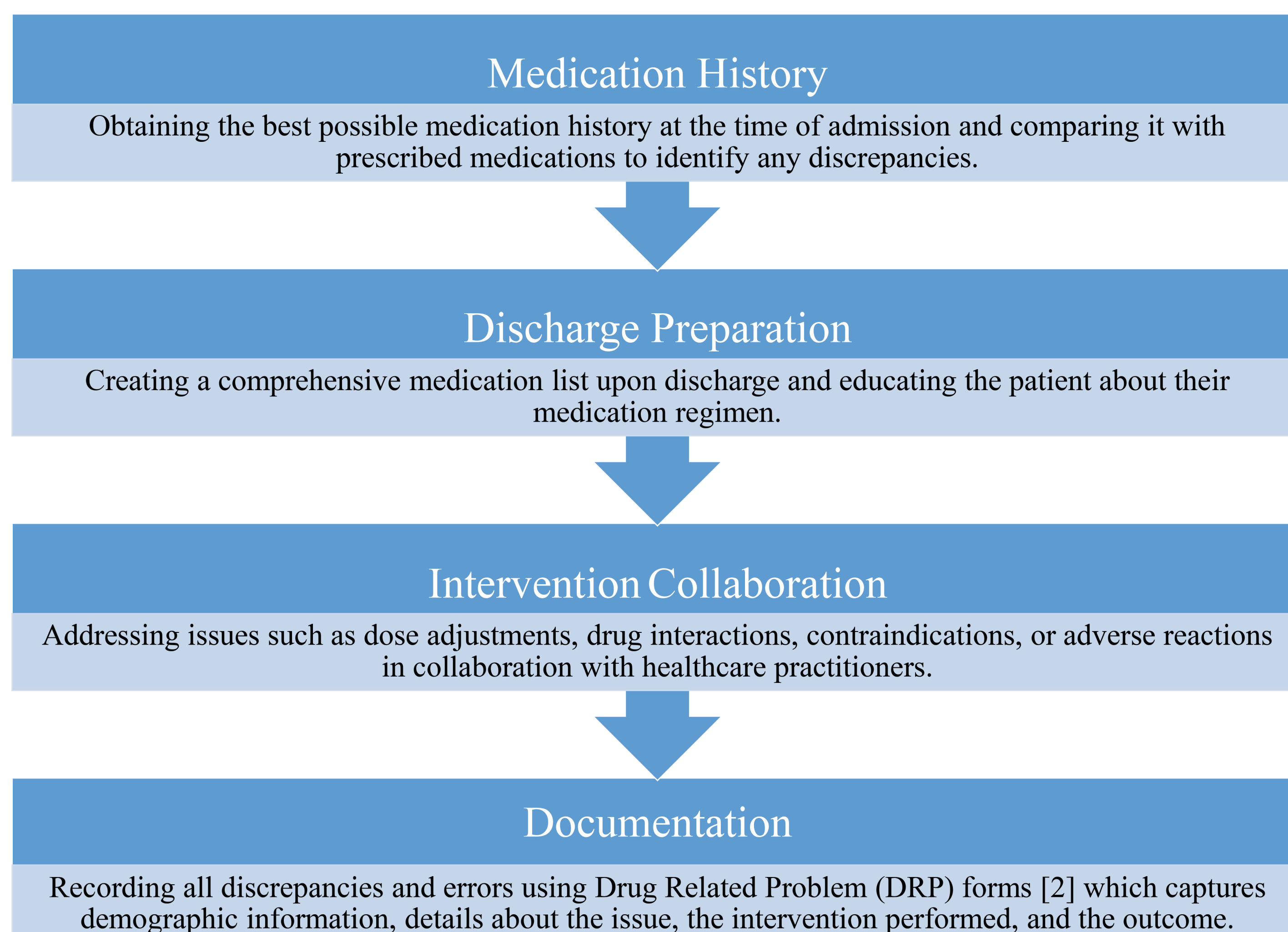
Medication discrepancies during hospital stay such as admission, discharge, or transfer between wards are significant challenges to patient safety. **Medication Reconciliation (MR)** is a crucial process that ensures accurate and consistent information about patient's medications is communicated during these transitions, ultimately enhancing patient safety.

## Aim and Objectives

The objective of this study is to evaluate the effectiveness of MR in reducing medication errors and improving patient safety outcomes.

## Materials and Methods

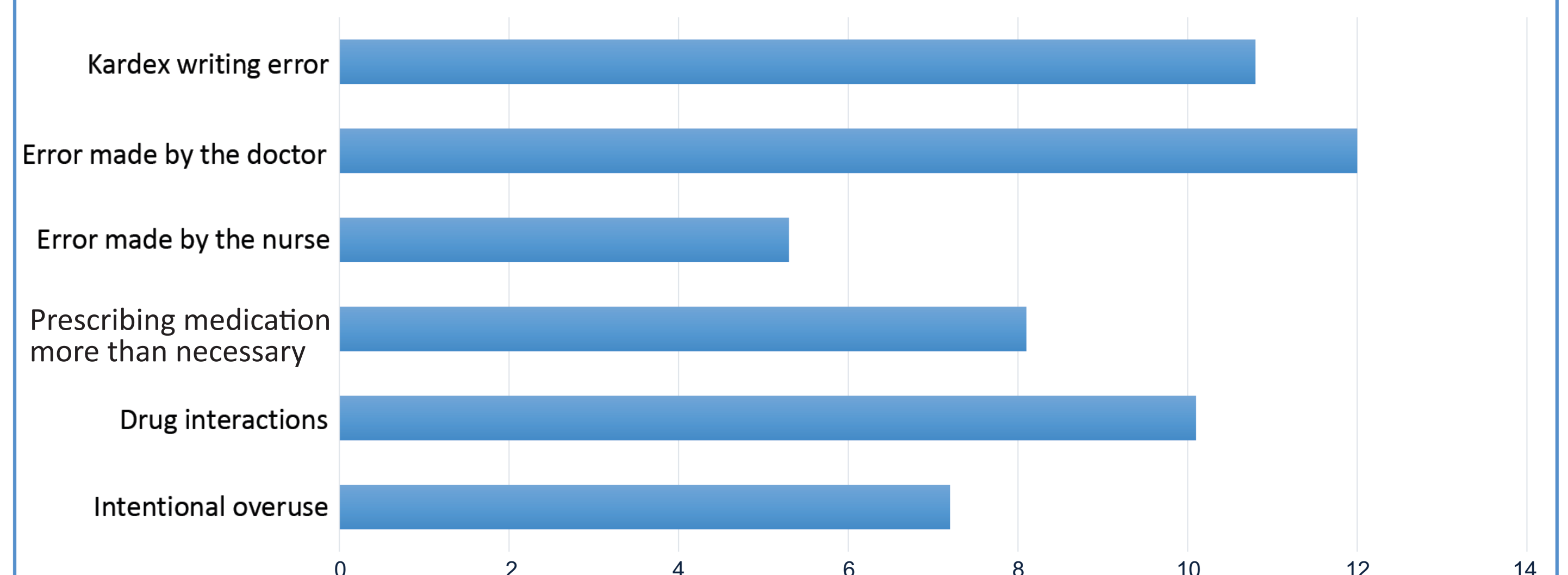
A retrospective study was carried out from December 2021 to October 2024. The MR process in our hospital, in accordance with WHO guidelines [1], includes several key steps:



We compute the **Pharmacist Intervention Index (PII)** and **Recommendation Rejection Index (RRI)**. We believe that a high PII combined with a low RRI, indicates a higher level of patient safety. This point of view is different to the view of where these indices were used to analyze the level of implementation of MR at Nikan hospital.

## Results

During the study period, **over 26,200 admission and discharge MRs** were completed, with **more than 13,000 DRPs** identified. The most common medication discrepancies are shown in the nomogram below.



The PII and RRI are defined by:

$$PII = \frac{\text{number of interventions}}{\text{number of DRP forms}}$$

$$RRI = \frac{\text{number of rejection suggestions}}{\text{number of calls to MD}}$$

A total of **2309 calls** were made to physicians. The PII and RRI during this period are:

$$PII = 0.8229, RRI = 0.22$$

## Discussion and Conclusion

Our hospital stands out as the first in the country to adopt a formalized MR program. The structured MR process undertaken by pharmacists is vital in preventing medication errors, addressing drug-related problems, and improving overall patient outcomes. Similar to the study that showed MedRec can significantly reduce unanticipated medication discrepancies by up to 45% [3]. The findings of our study underline the importance of incorporating MR into routine clinical practice to enhance the quality of healthcare delivery.

The continued support from the management of Nikan Hospital in hiring more skilled pharmacists has led to the implementation of structured and routine MR across nearly every department, further enhancing patient safety. The steady growth of PII shows that MR service has been implemented successfully in Nikan Hospital and become an essential part of patients care plan.



## References

- [1] WHO. The high 5s project : Standard operation protocol. Available at <https://www.who.int/initiatives/high-5s-standard-operating-procedures>
- [2] Nikan Hospital. DRP forms. 2021-2024.
- [3] Lehnbohm EC, Stewart MJ, Manias E, et al. Impact of medication reconciliation and review on clinical outcomes. Ann Pharmacother 2014; 48(10): 1298–1312.