

Implementation of “RDA” Quality Control Checklist To Reduce Medication Error To Ensure Research Subject Safety

Tay Bo Hong, Shayne Lin Tingxuan, Celine Tan Xue Lin
SingHealth Investigational Medicine Unit

BACKGROUND

- From 2017 to 2018, there were several cases of near misses and inaccurate information on drug labels received from vendors/sponsors at SingHealth Investigational Medicine Unit for clinical trial research.
- These errors were only identified prior to drug administration which causes ‘Near misses’ in drug administration.
- If these errors were not captured in time before administration, it could lead to serious consequences affecting patient safety.
- Thus, to prevent medication errors before drug administration, we created the “RDA” Quality Control checklist as a simple and effective way to conduct checks during the medication handling process.

AIMS

Eliminate errors and near misses prior to medication administration

Ensure information on drug labels are correct and sufficient in accordance to regulatory requirement

To capture any discrepancy in information when matching research subject’s prescriptions with drug label

To protect research subject’s safety

METHODOLOGY

Using this system, our staff can easily identify errors on medication labels and prescriptions before they are administered to our research subjects. The system consisted of three sequential checkpoints also known as “RDA”. Each checkpoint comprises of Key Performance Indicators that aid the staff during drug handling from receipt to drug administration:

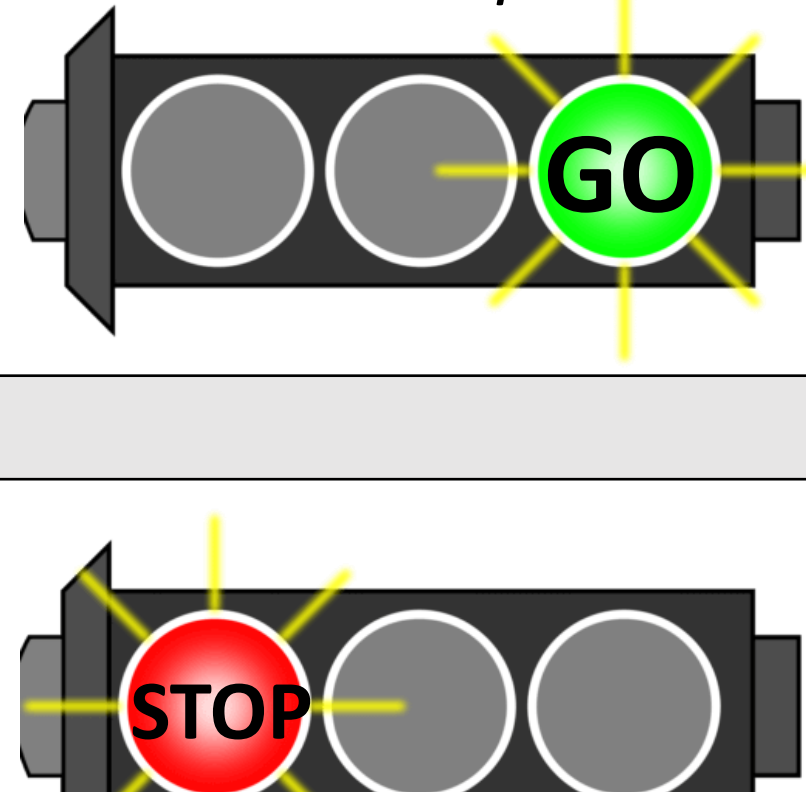
1st Checkpoint:

R Receipt of labelled medication



- During drug receipt from sponsor, labels are checked against the Receipt Checklist (Picture 1) for labelling requirements by HSA
- Label errors (e.g. wrong protocol number) can be identified at this checkpoint before proceeding to dispensation

If no errors, proceed to 2nd checkpoint.



If there are errors on the label, do not proceed to 2nd checkpoint.

Error must be rectified before proceeding.

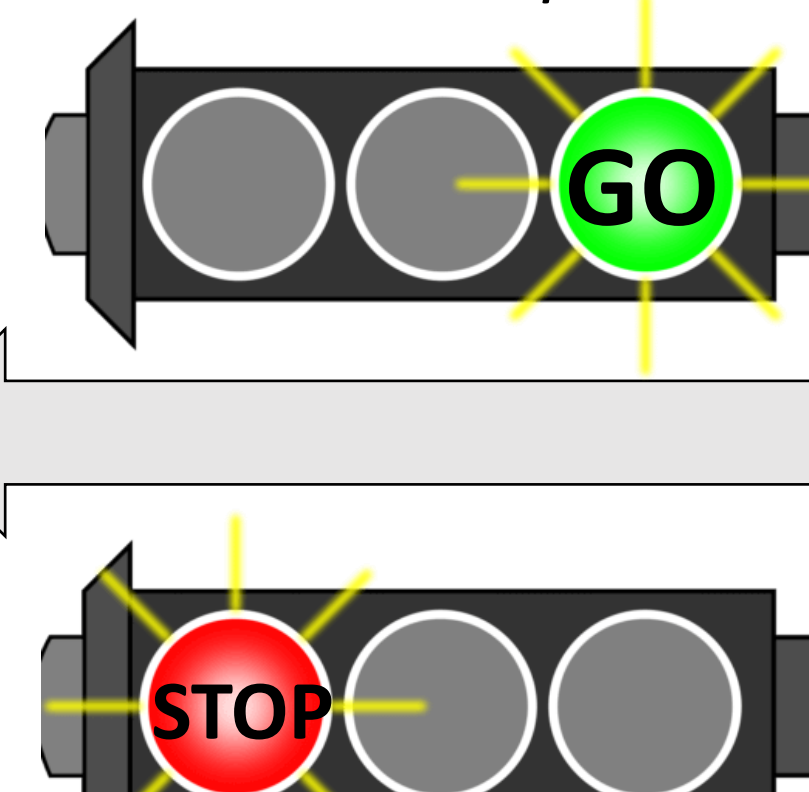
2nd Checkpoint:

D Dispensation of medication



- Drugs and requisites (for IV infusion for chemotherapy) will be verified against the prescription for dispensation of drugs using the Dispensation Checklist (Picture 2)
- Drugs that are expired can be captured and isolated at this checkpoint

If no errors, proceed to last checkpoint.

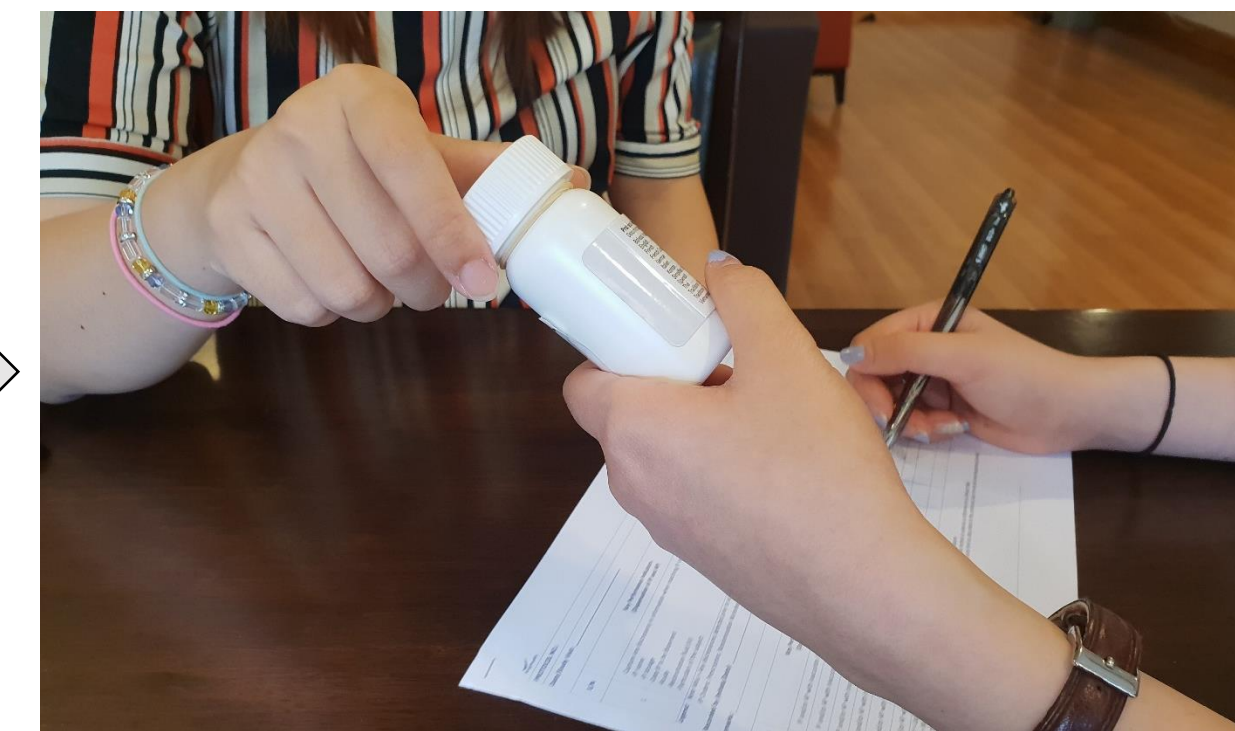


If there are errors when verifying drugs with prescription, do not proceed to last checkpoint.

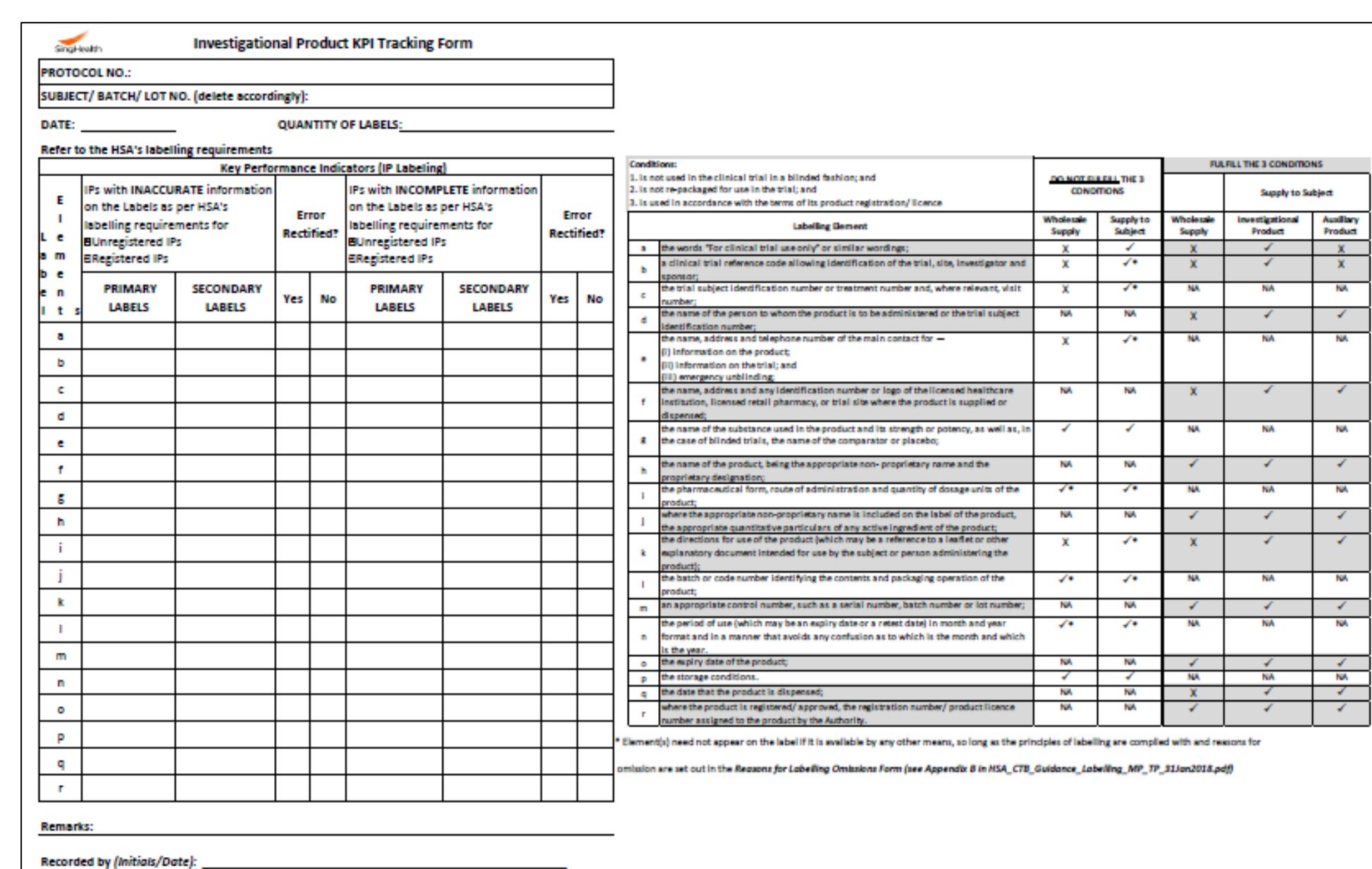
Error must be rectified before proceeding.

Last Checkpoint:

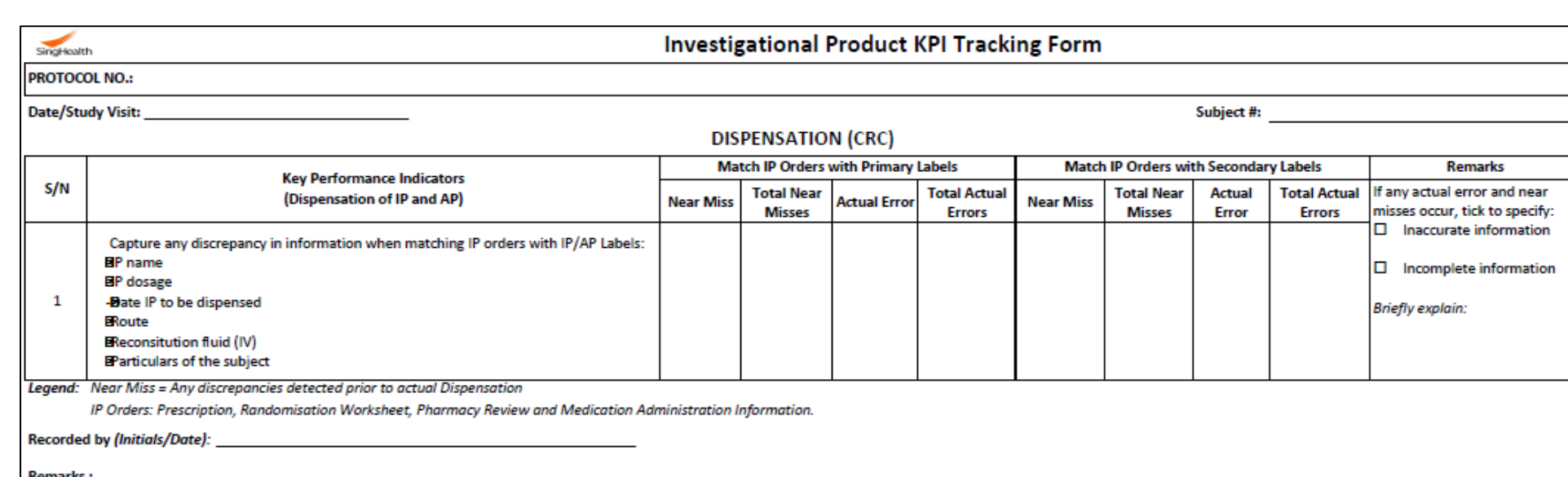
A Administration of medication



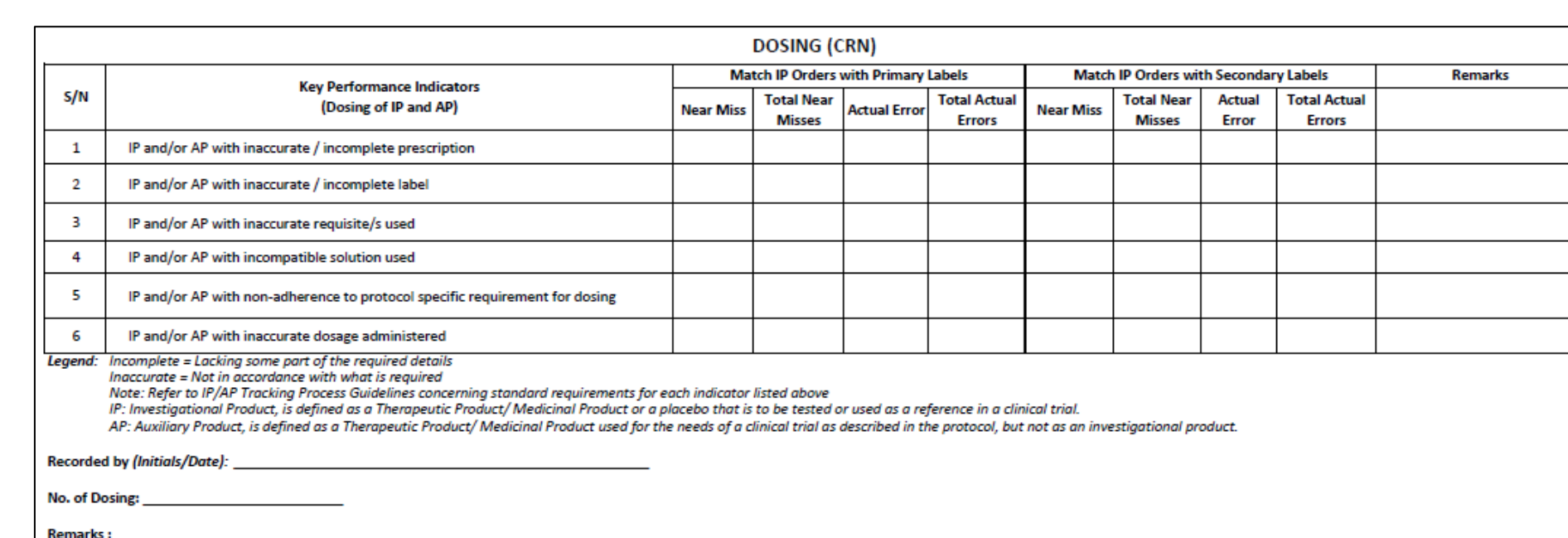
- Final checkpoint before drug administration to subjects
- Drugs will be checked by research nurses using the Dosing Checklist (Picture 3) to capture any discrepancy in information when matching prescription with drug labels



Picture 1: Sample of Receipt Checklist



Picture 2: Sample of Dispensation Checklist



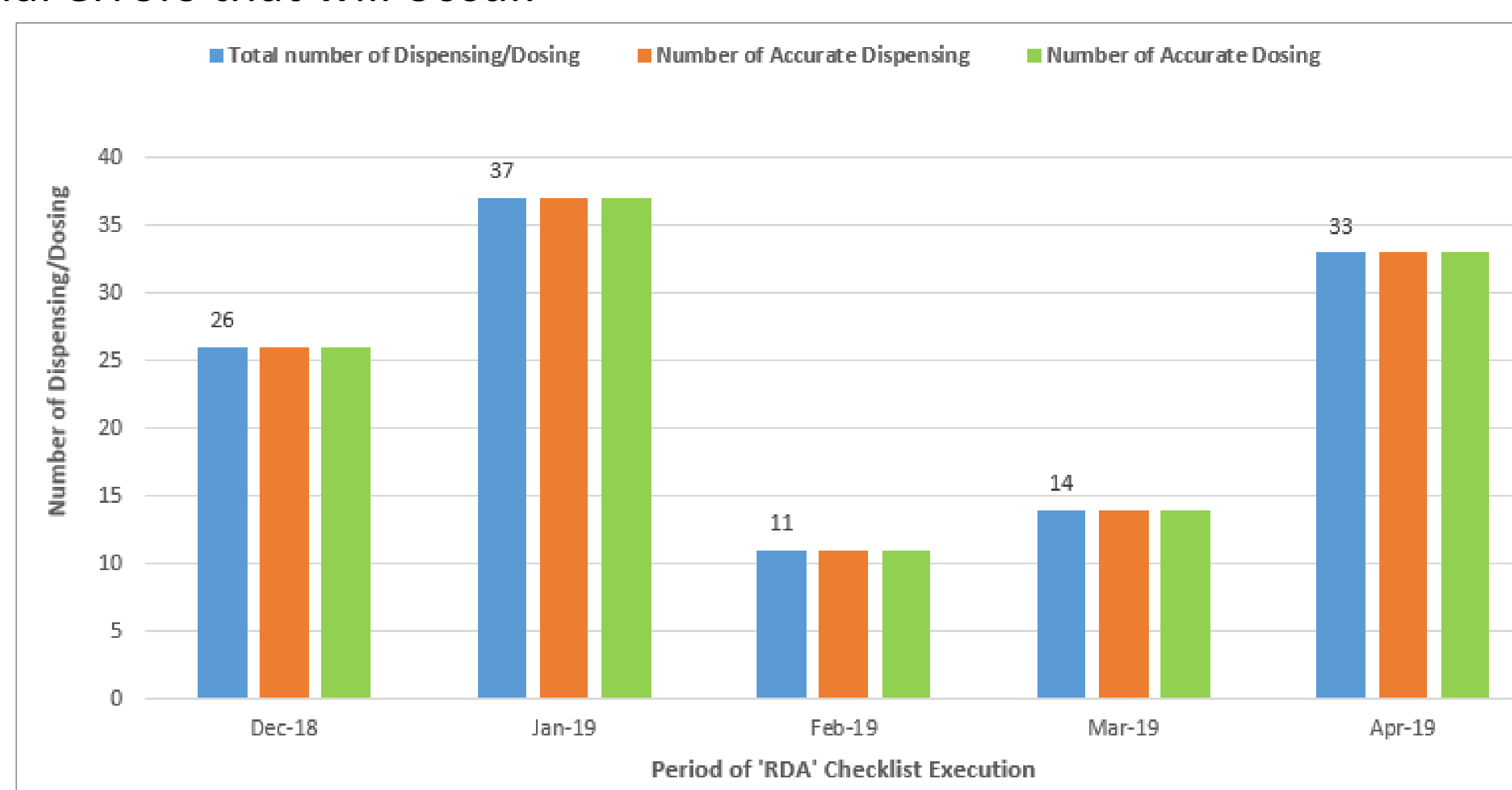
Picture 3: Sample of Dosing Checklist

RESULT

Ever since the implementation of the “RDA” quality control checklist in December 2018, we have achieved 100% accuracy for drug administration (Picture 4). We hope to achieve and maintain the accuracy by eliminating potential errors that will occur.

CONCLUSION

The development of various medical treatment and therapy give rise to a wide array of drugs and requisites used in hospitals. Hence, there is a need for a system in place to ensure all the drugs, instruments and medical requisites used are correct. The introduction of this “RDA” Quality Control Checklist acts as an effective control measure to target and reduce errors during medication administration to ensure patient’s safety. This measure has been implemented at SingHealth Investigational Medicine Unit and used actively for clinical trials.



Picture 4: Data Collected from Dec 18 to Apr 19