

To Reduce the Number of Prescription Interventions at Pioneer Polyclinic Pharmacy

Chua Jia Jing, Pioneer Pharmacy

Mission Statement

To reduce the number of interventions at Pioneer polyclinic pharmacy by 30% over a period of 6 months.

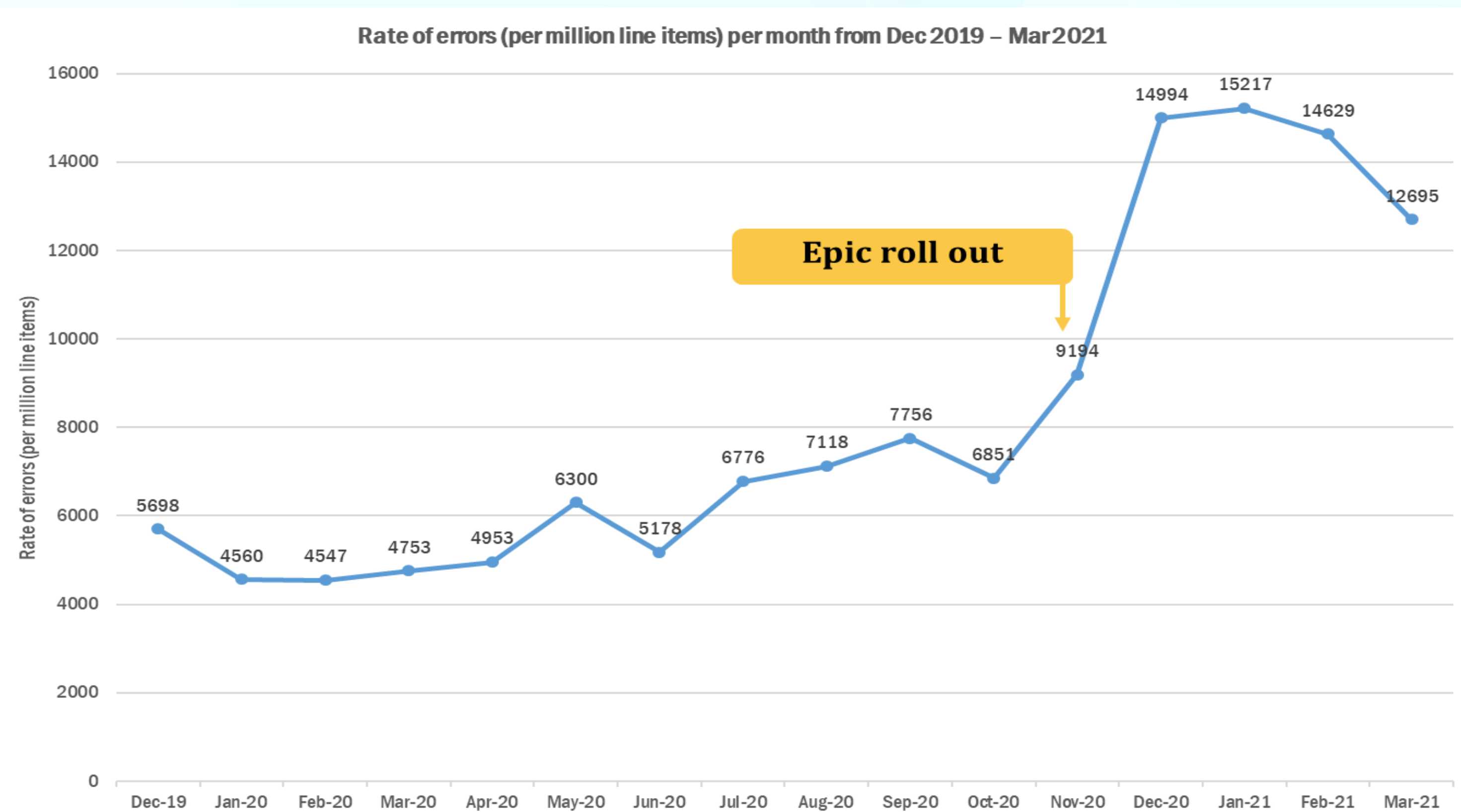
Team Members

Role	Name	Designation	Department
Team Leader	Chua Jia Jing	Senior Pharmacist	Pharmacy
Team Members	Nicole Leong Chu Xin	Senior Pharmacy Technician	Pharmacy
	Chan Chu Xin	Pharmacy Technician	Pharmacy
	D'mitra Hanley D/O Vadevellu	Pharmacy Technician	Pharmacy
	Qurratu Ain Bte Razali	Pharmacy Technician	Pharmacy
	Dr. Pang Suan Choo	Family Physician	Medical
Facilitator	Grace Ho Caihong	Senior Pharmacist	Pharmacy

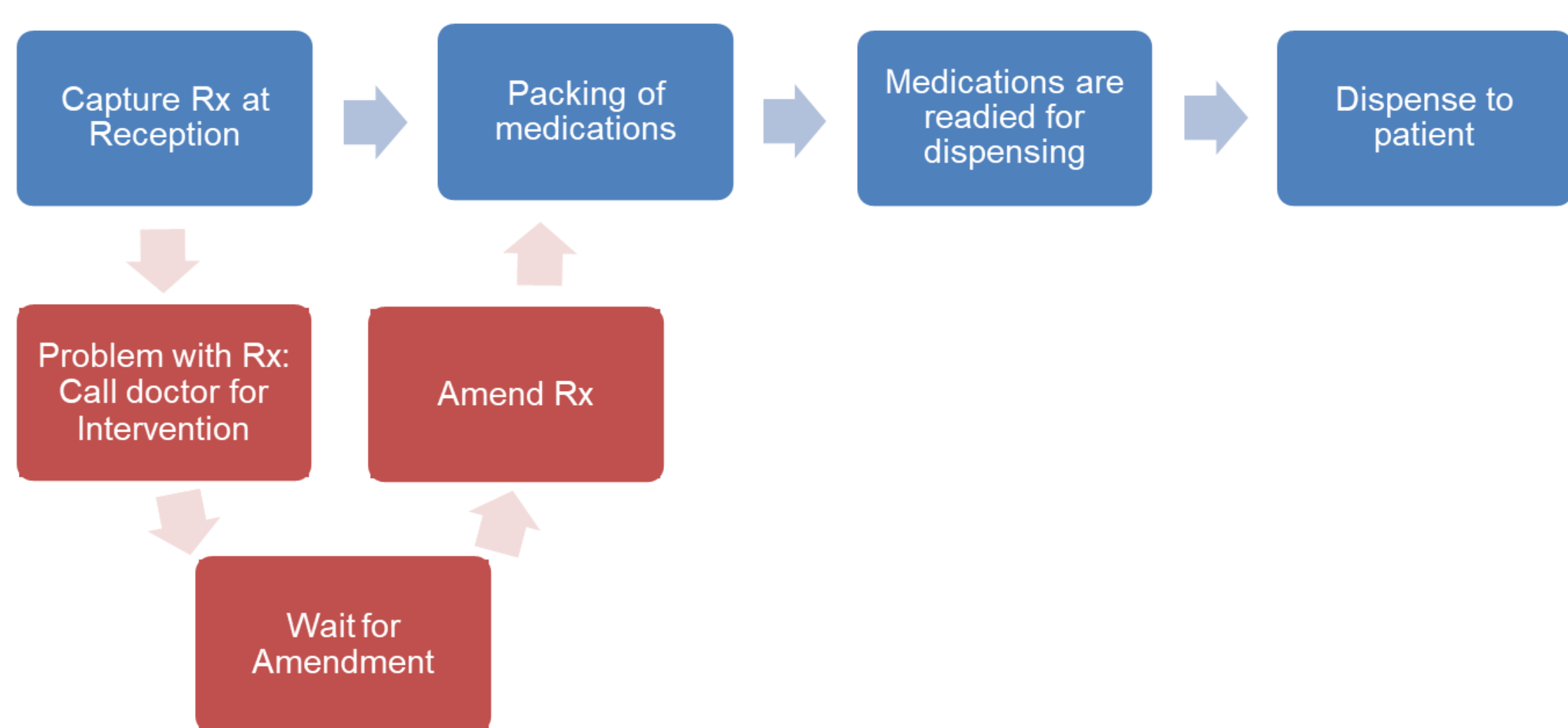
Evidence for a Problem Worth Solving

Post NGEMR implementation, prescription intervention rate increased 2.9 times at Pioneer Pharmacy. Over a similar 4-month period, the total rate of errors per million line items for Dec 2019 – Mar 2020 (Pre-Epic) was 19558 (842 interventions) while for Dec 2020 – Mar 2021 (Post-Epic) it was 57534 (1804 interventions in total).

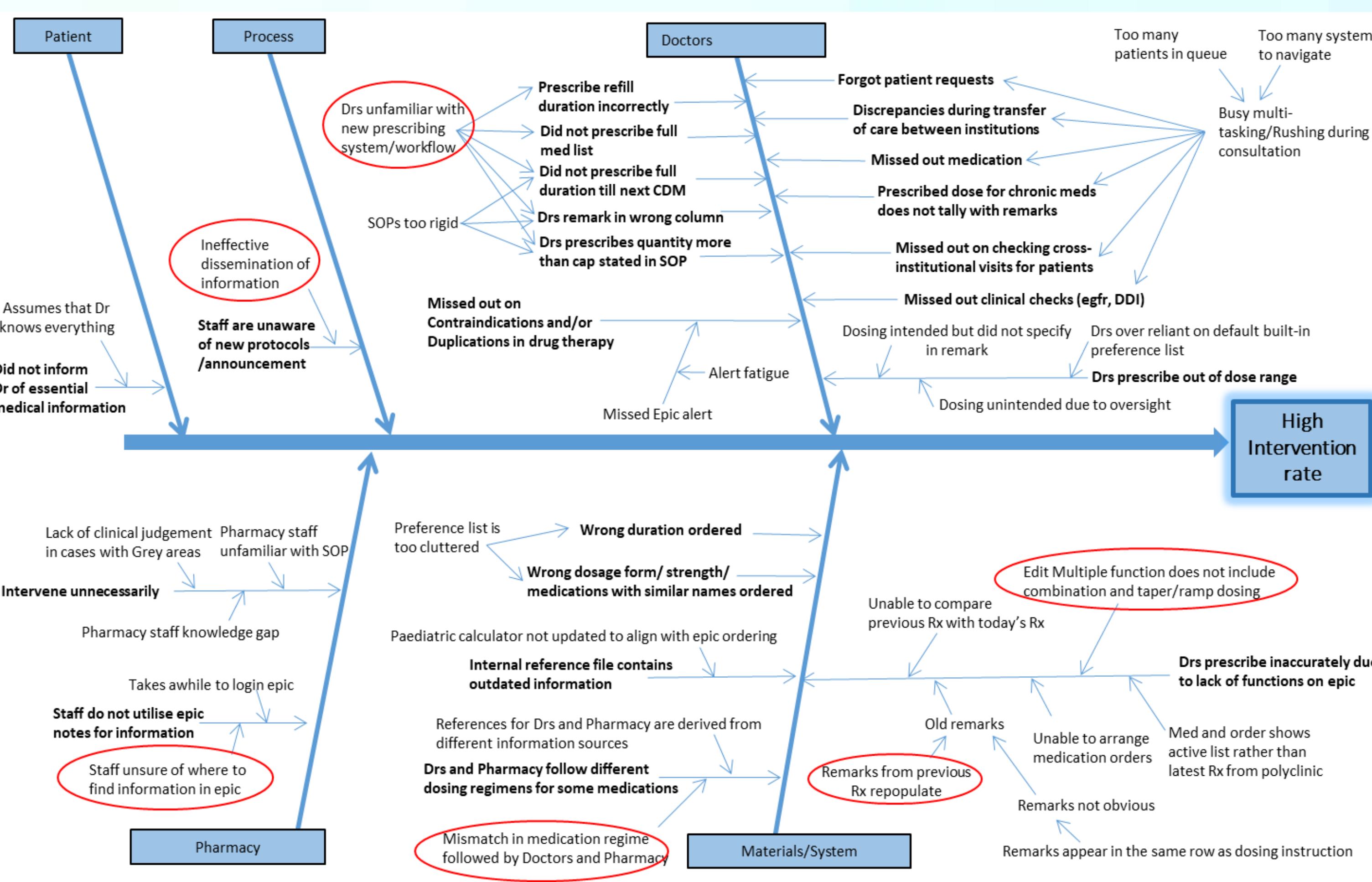
Current Performance of a Process



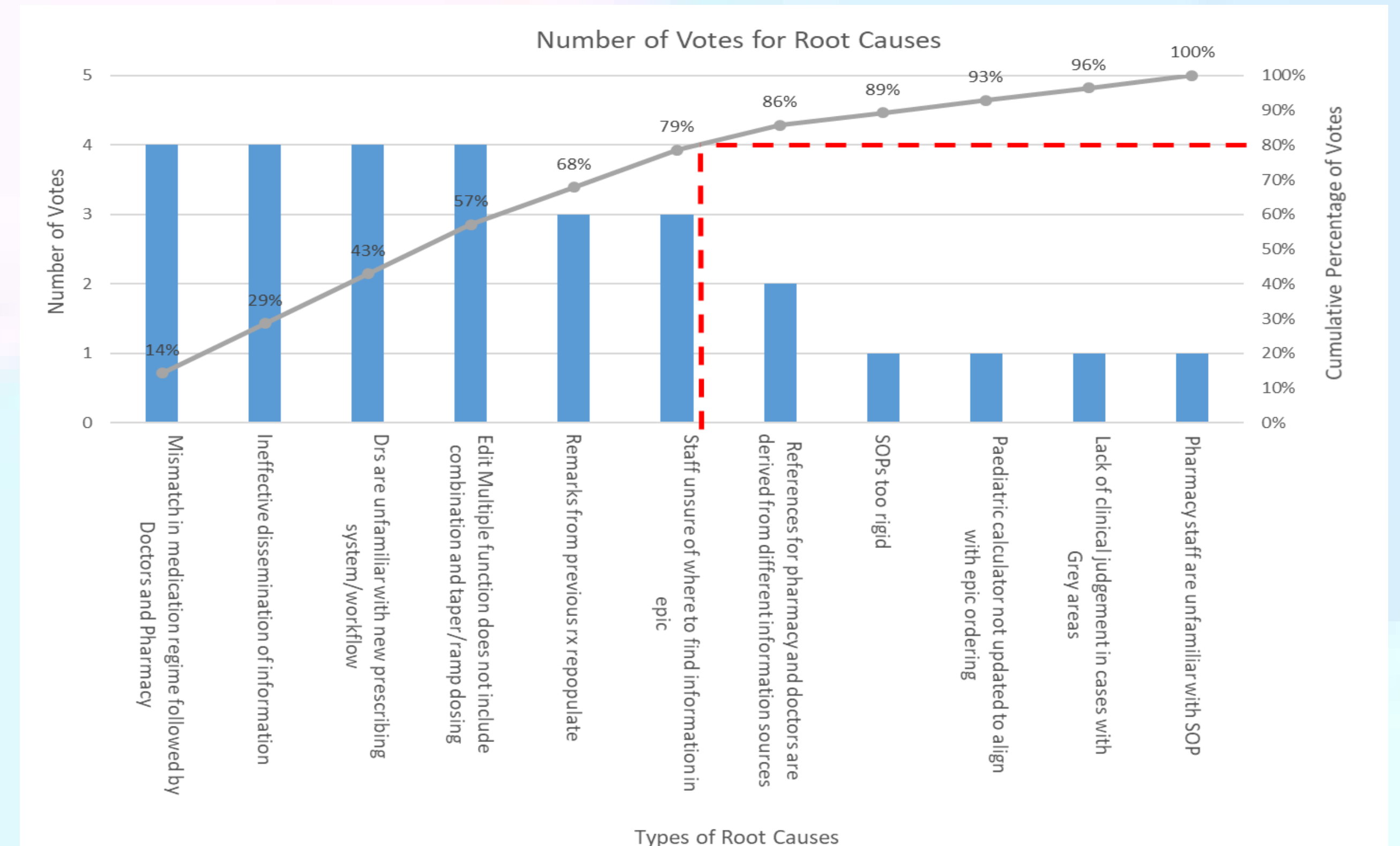
Flow Chart of Dispensing Process



Cause and Effect Diagram



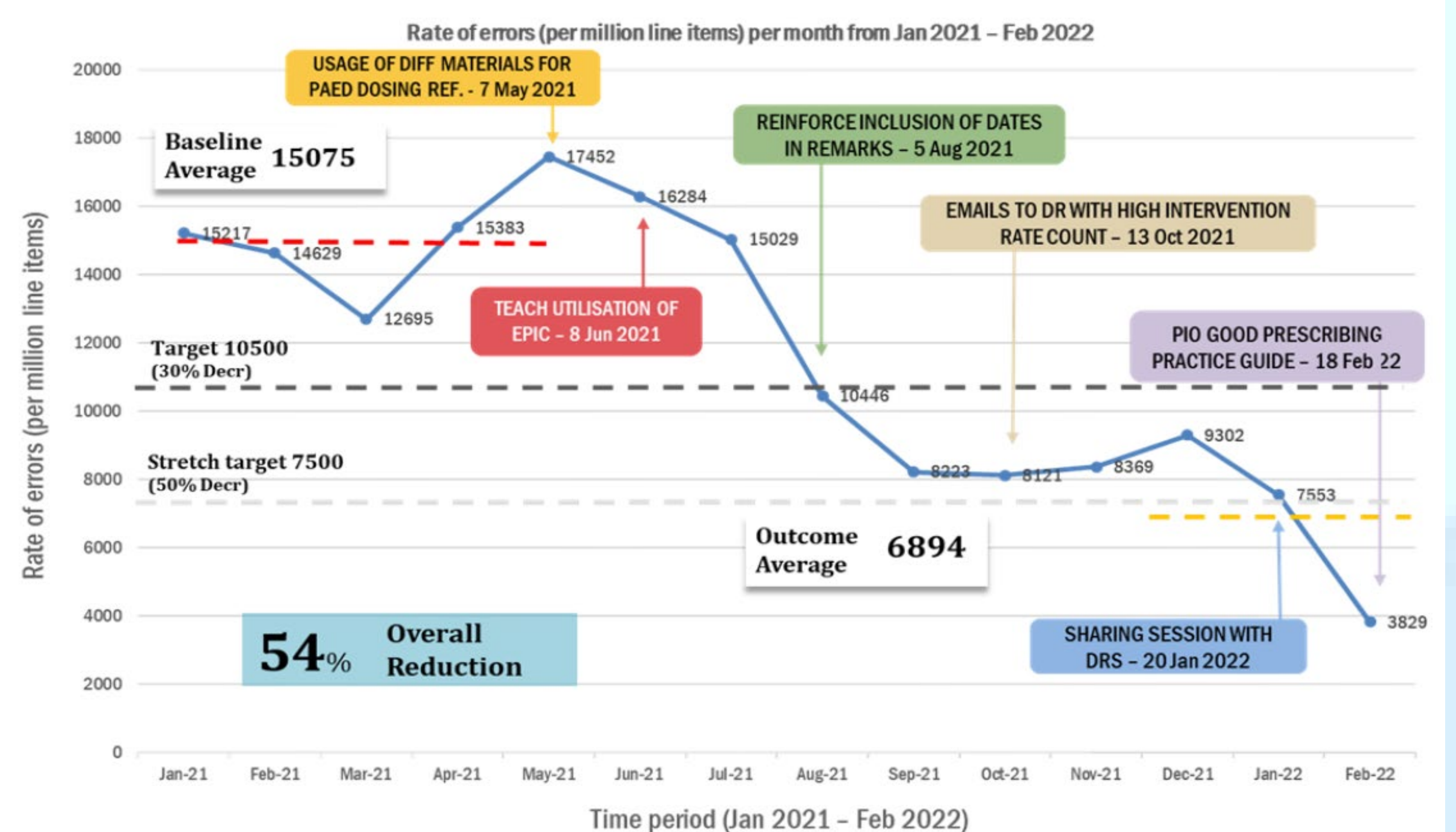
Pareto Chart



Implementation

Root Cause	Countermeasure proposed	Timeline
1 Mismatch in medication regime followed by Doctors and Pharmacy	- Usage of different materials for pediatric dosing references - Sharing session with Doctors - PIO Good prescribing practice guide	May 21 Jan 21 Feb 21
2 Ineffective dissemination of information	- Emails to Doctors with high intervention rate count - Sharing session with Doctors - PIO Good prescribing practice guide	Oct 20 Jan 21 Feb 21
3 Drs unfamiliar with new prescribing system/workflow	- Sharing session with Doctors - PIO Good prescribing practice guide	Jan 21 Feb 21
4 Edit Multiple function does not include combination and taper/ramp dosing	- System issue (HQ)	Nil
5 Staff unsure of where to find information in EPIC	- Teach utilisation of EPIC	Jun 21
6 Remarks from previous Rx repopulate	- Reinforce inclusion of dates in remarks - Sharing session with Doctors - PIO Good prescribing practice guide	Aug 21 Jan 21 Feb 21

Results



The rate of prescribing interventions per million line items was reduced by 54% overall, from the baseline average of 15075 per month (Jan 2021 to May 2021) to 6894 per month (Dec 2021 - Feb 2022).

Cost Savings

468 (average number of interventions/month before project) x 54% (% reduction in rate of errors) x 10 minutes (time spent per intervention) = 2527.2 mins = 42.1 hours/month

The estimated time saved by staff per month: **42.1 hours**

Problems Encountered

- Unable to reach out to more doctors during the sharing session, especially doctors on Resident Continuity Clinic (RCC) rotation.
- Challenging to achieve a complete standardization of prescribing and intervention practices. We will continue to ensure active communication between Doctors and Pharmacy.

Strategies to Sustain

- Pharmacists will continue to compile and analyse common interventions recorded, and review these information with the Doctors.
- The "PIO Good prescribing practice" guide will also continue to be updated as new practices are introduced.