

Discharge Snapshot!

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Background

Discharge medication processing requires precision and efficiency to ensure accurate orders and quick bed turnover. However, Epic's current capabilities to support our processes lead to additional unnecessary clicks, potential errors, and poor coordination.

DISCHARGE SYSTEM LIST

The present discharge system list will pull in all patients with a discharge order placed. However, there are cases where Drs will place a discharge order for patients who are not meant for discharge in order to track the patient's estimated discharge date (EDD), resulting in multiple false positives on the discharge list.

From a timed motion study conducted within pharmacy,

- Each pharmacist takes an average of **35 seconds** to screen through each patient on the discharge list to determine patients for discharge and identify if bedside dispensing is required.
- In total, each pharmacist takes on average **20.4 minutes** each time to screen through the entire discharge patient list.

MEDICATION CHANGES AFTER PHARMACIST REVIEW

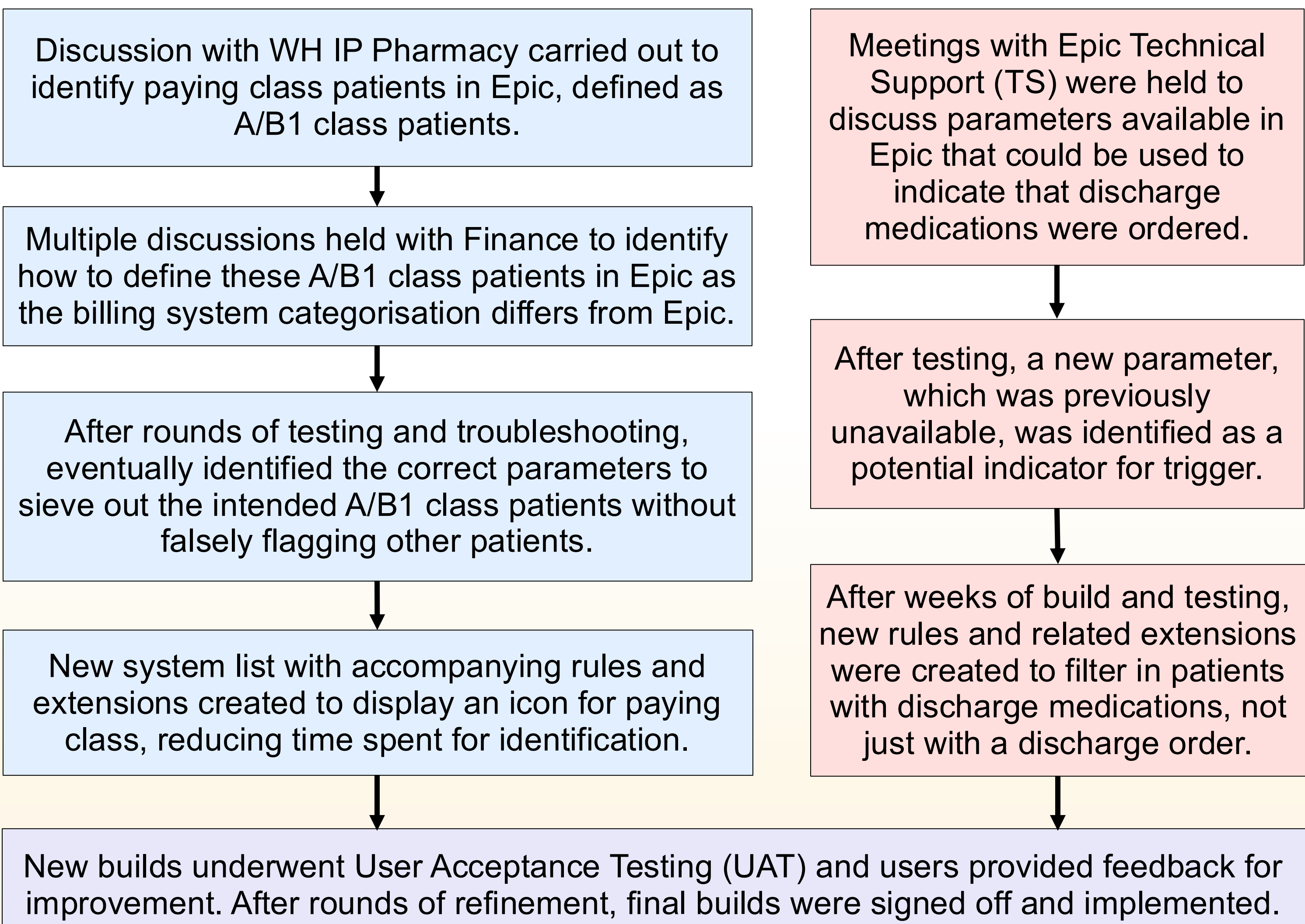
Epic allows prescribers to change discharge medications without notifying pharmacists, even after the pharmacist has reviewed the medication. The system will only prompt the physician if the medications were dispensed, but the prompt can be easily overridden. As such, there is a risk of medication errors occurring due to missed changes in discharge medications.

Implementation

The aim of the new builds was to:

- Create a **customized discharge system list** with a filter showing only patients truly meant for discharge (i.e. patients with discharge order placed + discharge medications ordered), with a column to indicate patient's paying class.
- Implement a **hard stop prescription lock** when physicians attempt to make changes to medications after they have already been reviewed, thereby ensuring pharmacy is always notified if medication changes are required post-review.

PAYING CLASS COLUMN AND CUSTOM DISCHARGE SYSTEM LIST FILTER



Bed & Current Location	Patient	Isolation or CPE/C.auris?	A/B1 class?	Nurse Discharge Navigator Information for Pharmacy	Expected Discharge Date	Medication List Status	Discharge Med Rec Complete?	Review Since Rx by Pharmacist	Med Changes Since Rx Review (Bag Status)	Communication (Bag Status)
P53B08E WH PARC Ward B53					11/02/2025	Pharmacist Reviewed	✓	Yes		Received H 11/2 4pm
P63B16 WH PARC Ward B63					11/02/2025	Pharmacist Reviewed	✓	Yes		Bag Ready a/w porter to ward H 11/2 TCF 12pm
V00B06 NUH CANCER CE...			✓		11/02/2025	Pharmacist Reviewed	✓	No		Pending supply input
V22B33E WH Acute Ward A22				Ambulanc... WARD B5... 11/02/25 10:18	11/02/2025	Pharmacist Reviewed	✓	No		
V23B01 V23B01			✓	Home toda...	11/02/2025	Pharmacist Reviewed	✓	Yes		Bag Ready tubing up to ward Bedside-tube...
V23B03 WH Acute Ward B2...					11/02/2025		✓	Yes		AS23 - EP Processed

Figure 1 – Snapshot of the new discharge system list with A/B1 class column and system list filter in place.

The A/B1 class column would only indicate a checkmark for patients who fit the following criteria:

- Singaporeans or Resident Foreigners with level of care = A or B1 class.
- Non-Residents with level of care = A or B1 class and accommodation code NOT B2 or C class.

Implementation (cont'd)

DISCHARGE LOCK

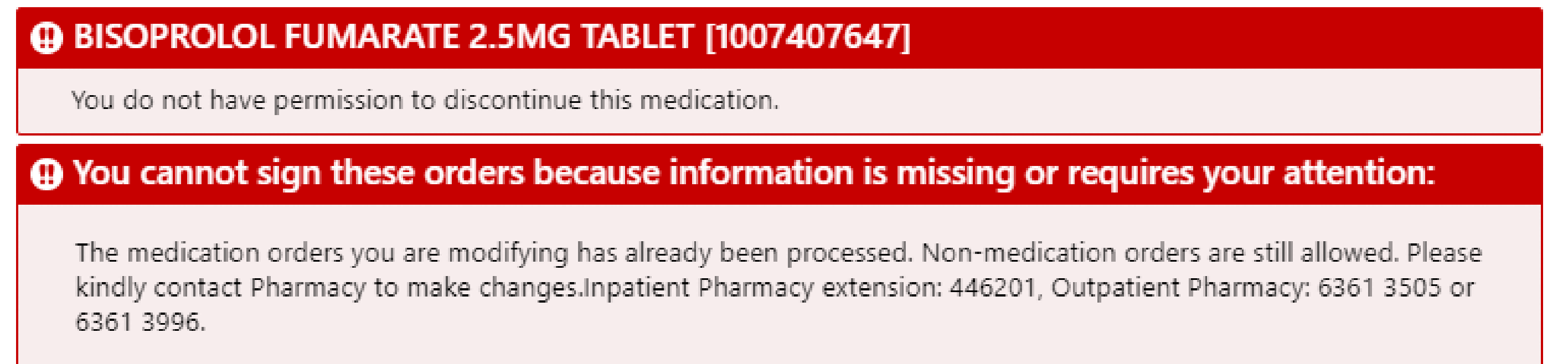
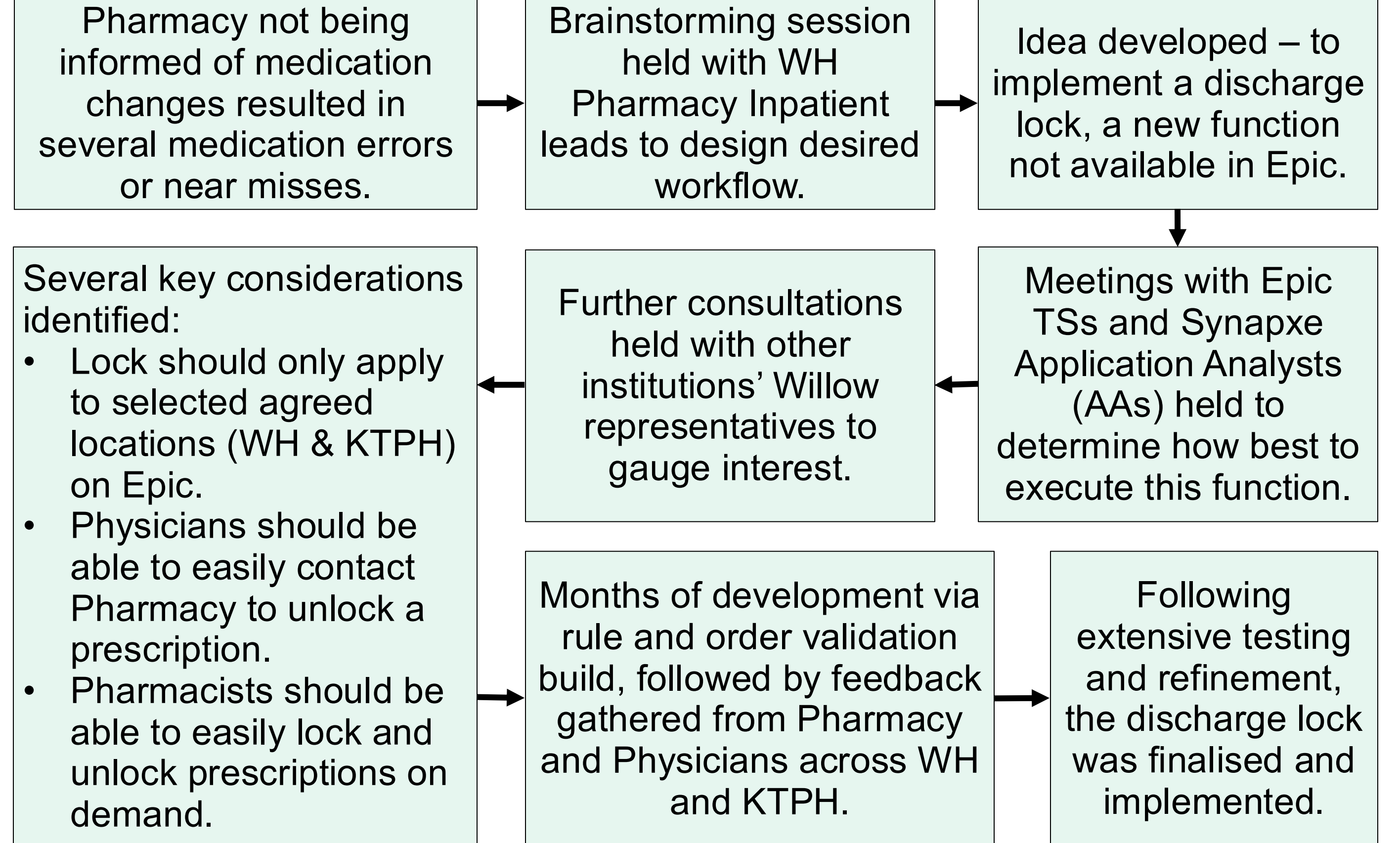


Figure 2 – Examples of prompts encountered by physicians if they attempt to (a) discontinue a medication and (b) add on a new medication or make changes to prescribed medications after the medications have been reviewed and 'locked' by a pharmacist.

This lock is also easily identifiable to Pharmacy staff with a green "Yes" as seen in Figure 1 system list screenshot. Pharmacy can also unlock quickly via system list.

Results

DISCHARGE SYSTEM LIST

After the implementation of the new filter and system list column, another time motion study was conducted, where it was found that on average, only a maximum of **10 seconds** was required to identify patients for discharge and bedside dispensing.

DISCHARGE LOCK

When the discharge lock was trialed in Khoo Teck Puat Hospital (WH nesting site), data was gathered between Oct to Nov 2023, and it was found that **10.11% of all prescriptions** placed in outpatient and inpatient setting were unlocked for medication changes after medications have been reviewed by pharmacy.

Location	Outpatient	Inpatient
Number of prescriptions locked	5021	2513
Number of prescriptions unlocked at least once	125	637
Total percentage of prescriptions unlocked at least once	762/7534 (10.11%)	

From a survey done among physicians to gather feedback, it was noted that

- Prescription unlocking mostly **occurred within 5 minutes** of pharmacist being notified of medication changes.
- Most prescribers found it **easy to identify the number to contact/reach pharmacist.**

From the same survey, 92.9% of the comments given by physicians were mainly positive and were not negatively affected by the lock.

Cost Savings

A total of 123 hours were saved per pharmacist per year, translating to 2214 hours saved in total, with **total manpower cost saving of \$245,754.**

At the same time, **10.11% of potential medication errors were prevented** after implementation of the prescription lock.

Effects of Changes on Patient Care

A customized system list filtered to only patients with discharge medications, easy display of paying class, and prescription lock/unlock function reduced the time taken to identify discharges and streamline discharge and dispensing processes.

The creation of a prescription lock also improves communication on medication changes between prescriber and pharmacist, reducing medication errors and need for service recovery, improving overall wait time and patient experience.