# MAKING MEDICATION REVIEW AND RECONCILIATION A TEAM SPORT

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## INTRODUCTION

- Medication lists and their accurate upkeep are fundamental to patient care delivery through the electronic health record (EHR).
- Medication review/reconciliation are performed as separate steps, often by different people.
- Differences in provider roles, training, and scope of practice may contribute to medication list accuracy or inaccuracy.
- The actions, inactions, and communication between staff, patients, and providers may lead to additional downstream reconciliation work, inaccurate clinical decision support (CDS) alerts, and adverse patient events.
- There is a critical need to assess the actions, inactions, and communication between provider types during the medication reconciliation process.

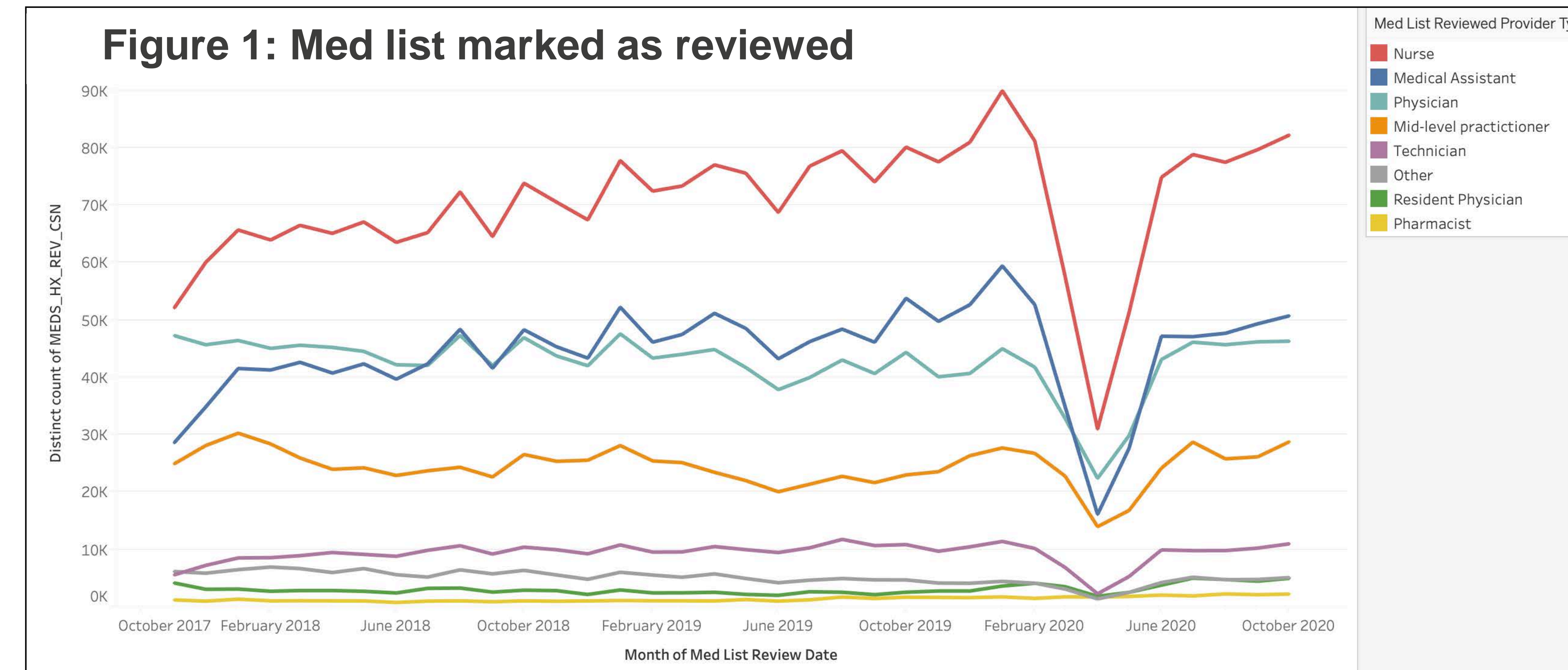
## OBJECTIVES

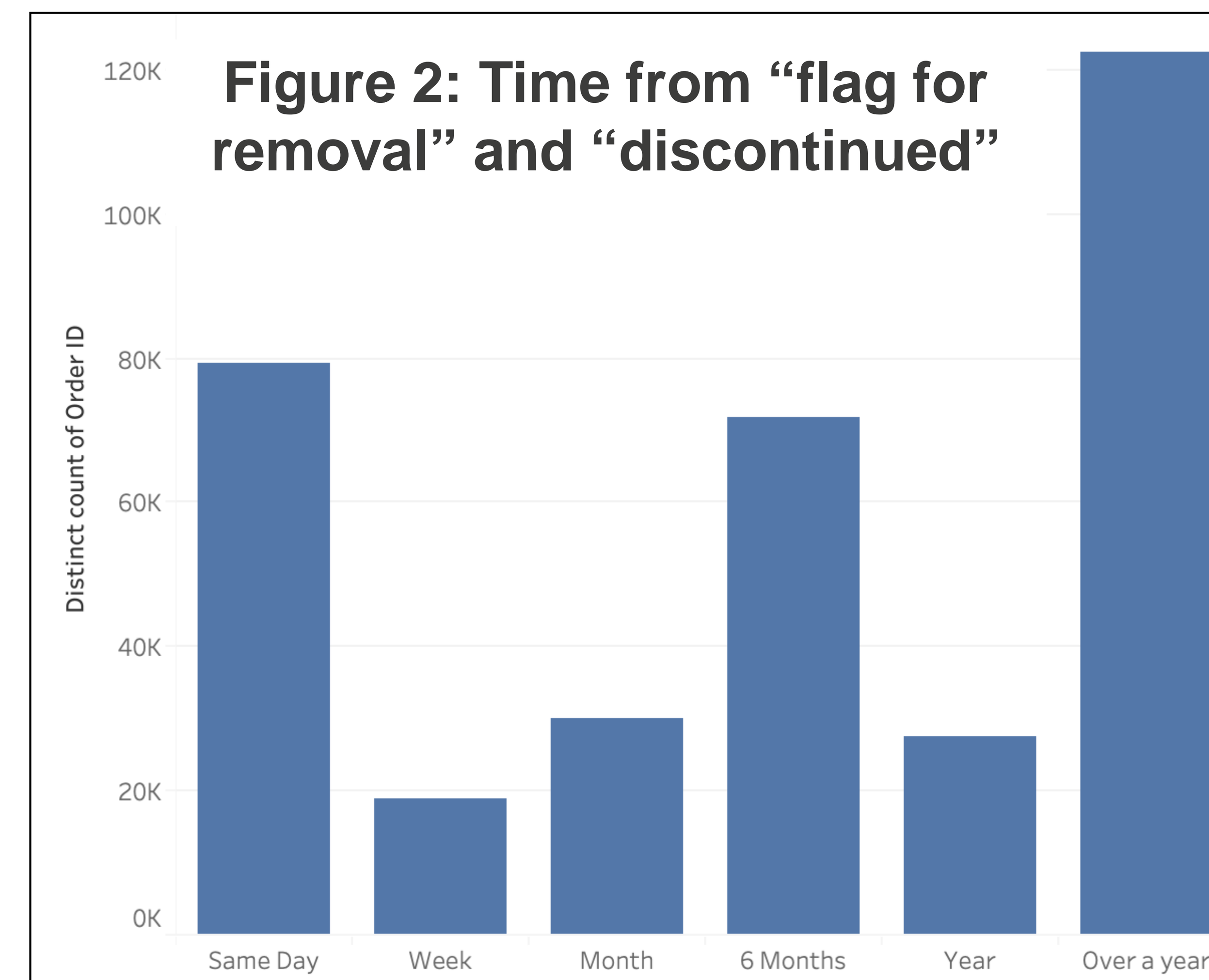
The objective of this study was to describe practice patterns of medication review and medication reconciliation through clinical encounters and patient-initiated secure portal events.

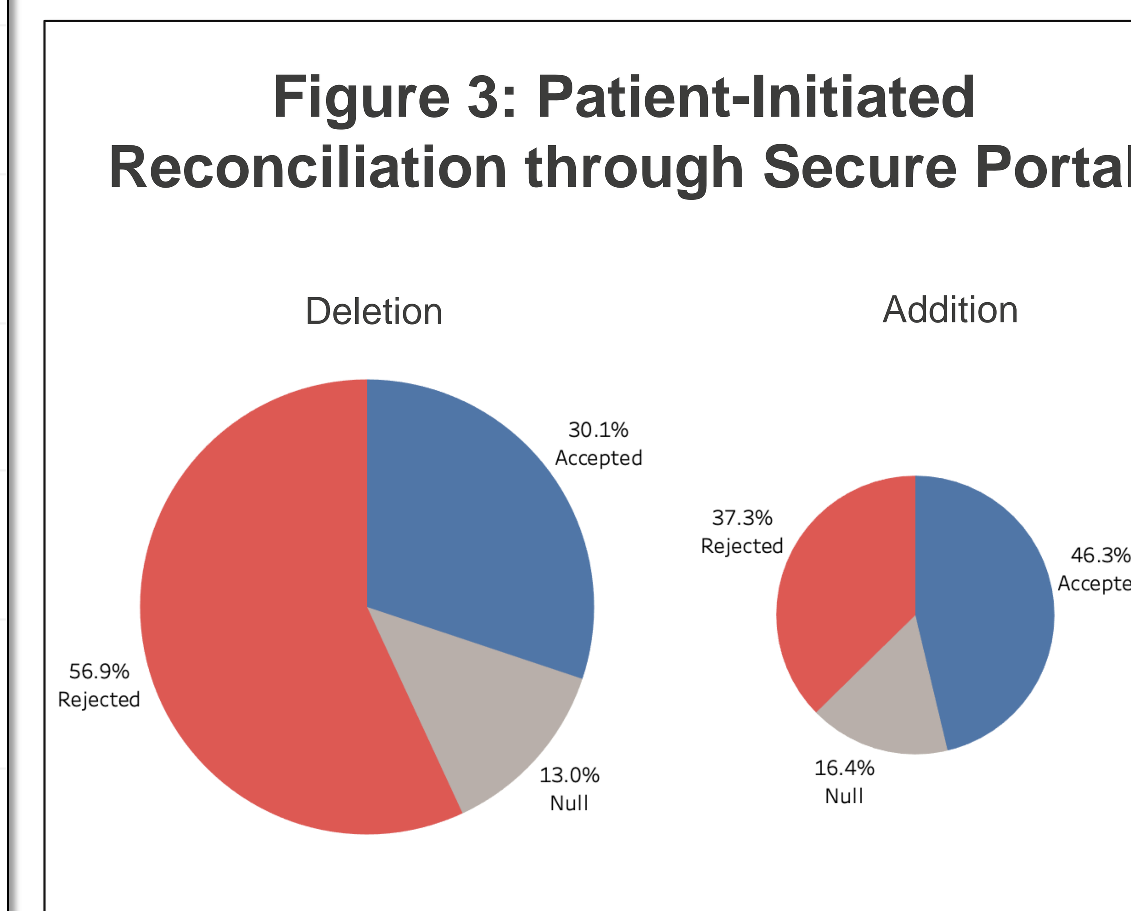
## METHODS

- Our institutional EHR (EPIC) was queried for medication reconciliation events from November 2017 to November 2020 in across two types of settings: 1) provider-initiated medication reconciliation during inpatient and outpatient encounters, and 2) patient-initiated medication reconciliation through the secure messaging portal (My Health at Vanderbilt [MHAV]).
- For the provider-initiated medication reconciliation, we specifically examined discontinuation of medications. This process was defined in two steps: Flagging of the medication for review and discontinuation by intake staff, and then the provider discontinuing the medication (removal of the medication from the medication list). Data extracted including date of encounter, medication, provider role (medical assistant, registered nurse, physician), and timestamps of medication "flag for removal" until "discontinuation".
- For the patient-initiated reconciliation through the secure messaging portal, we classified both deletion and addition of medications in three categories: Accepted by a provider (the updated is reflected on the med list), Rejected by a provider (no change to med list), and Null – when no action was taken.

## PRELIMINARY RESULTS




### *Overall*

- **Figure 1** shows counts of medication list review by provider role over time.
- Nurses most commonly marked the med list as reviewed (34.6%) followed by medical assistants (22.1%), and physicians (21.2%).
- We identified 170,836 orders that were flagged for removal, and 174,757 orders that were marked as "not taking" over the 3-year period.
- Most medications flagged for removal were discontinued within 6 months (60.2%). Within 1 month, 38.6% of medications were discontinued.
- **Figure 2** shows the counts of medications discontinued by month after being flagged for removal. The mean ± SD time to discontinuation was 4.9 ± months.
- We identified a small but detectable proportion of medications that were discontinued after 2 years and some that are still active on the med list.

### *Patient-Initiated Medication Reconciliation Events*

- Figure 3 shows patient-initiated medication reconciliation through the secure patient portal. There were 484,708 patient-initiated reconciliation events overall. Deletion events were more common than addition events (n=132,083 and n=352,625 respectively).
- Less than half of deletion or addition events were accepted into the EHR.

## SUMMARY AND NEXT STEPS

- A large proportion of medications flagged for removal were discontinued after >30 days. Further examination of clinical workflows and charting task burden is necessary to streamline these processes.
- Further study is needed to optimize the roles and access of nurses and medical assistants to take the lead on medication reconciliation.
- Patients initiate many of the medication reconciliation events through the secure messaging portal, and additional work is needed to examine why events get discarded or are not completed.

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