

# Improving the Accuracy of Internal Medicine Discharge Summaries

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## Background

- Hospital discharge summaries communicate on the behalf of patients: the hospital course, thought process, evaluation and tests, and current plan with outpatient providers.
- The medication list is of particular importance because errors here can lead to detrimental effects. Many times, a medication is a key in the reason why someone is admitted to the medicine service to begin with.

## P.D.S.A. Cycle



- What is the percent of inaccurate discharge summaries? Is the problem with not refreshing the discharge note prior to signing?



- The IM service adopted an adaptation to the discharge template which included the following phrase: *“\*\*\* Refresh and delete this line after reviewing that the medication are accurately listed”*. The 3 stars are a hard-stop that will not let the provider sign unless it's deleted.

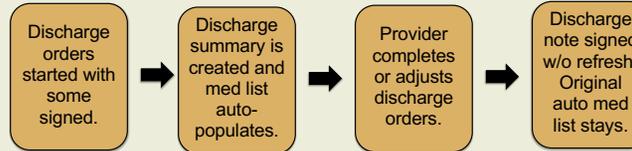


- 100 charts pre and post template update were reviewed. 20% of charts of the pre-intervention group had inaccuracies. This reduced to 4% post intervention in which 87% of the charts used the new template. Of note, only 1/4 charts that had inaccurate discharge summaries post-intervention did not utilize the new template.



- The intervention decreased incorrect discharge summaries however did not eliminate them. Further steps could be changes with the electronic medical record to have a system that does not rely on the provider to refresh.

## Figure 1: Understanding the Problem



Discharge Medications			
Your medication list			
ASK your doctor about these medications			
	Instructions	Last Dose Given	Next Dose Due
buprenorphine-naloxone 8-2 mg per SL tablet	Place 1 tablet under the tongue 2 (two) times a day.		
Ask about: Which instructions should I use?			

The flow diagram at the top reflects a situation in which an error between the discharge summary and the after visit summary (AVS) can occur. After signing the discharge note without refreshing causes in-correct and not-updated medication lists. The bottom two white boxes is an example of this discharge error. The left box is the medication list from the discharge summary which is available for outpatient providers. The right box is the medication list given to the patient (for the same discharge as on the left) available on the after visit summary.

Medication List				Morning	Afternoon	Evening	Bedtime
acetaminophen 325 mg tablet	Commonly known as: TYLENOL	Take 2 tablets (650 mg total) by mouth every 6 (six) hours as needed (mild pain 1-3) for up to 10 days.					
buprenorphine-naloxone 8-2 mg per SL tablet	Commonly known as: SUBOXONE	Place 1 tablet under the tongue 2 (two) times a day.					
gabapentin 1000 mg tablet	Commonly known as: NEURONTIN	Take 1 tablet (1,000 mg total) by mouth daily. Last time this was given: 1000 mg on June 17, 2021 9:08 AM					
folic acid 1 mg tablet	Commonly known as: FOLVITE	Take 1 tablet (1 mg total) by mouth daily. Last time this was given: 1 mg on June 17, 2021 9:08 AM					
levofloxacin 750 mg tablet	Commonly known as: LEVITAB	Take 1 tablet (750 mg total) by mouth Daily Before Breakfast for 10 days. Last time this was given: 750 mg on June 17, 2021 9:08 AM					
oxycodone 15 mg immediate release tablet	Commonly known as: ROXICODONE	Take 1 tablet (15 mg total) by mouth every 4 (four) hours as needed for severe pain for up to 2 days. Last time this was given: 15 mg on June 17, 2021 11:59 AM					

## Problem & AIM Statement

- Problem: With regards to IM program here, there were cases of discharge summaries with inaccurate appearing discharge summary medication lists. The cause of this was thought to be due to the discharge medication list that auto-populates when a discharge summary is created however does not update unless the physician refreshes the note.
- AIM: Decrease the amount of IM inaccurate discharge summaries by 10% by implementing use of a new discharge summary template.

## Study Design & Methods

- Type: Single site, retrospective, observational
- Location: Erlanger Baroness, Chattanooga, TN
- Population: Adult patients admitted to the IM service.
- Time Frame: Pre-intervention April through July 2019. Post-intervention June through December 2021.
- Methods: Pre-intervention charts from patients discharged from the IM service were collected via an automatic process. 100 of these charts were analyzed to see if there was any discrepancies between the After Visit Summary which is given to the patient & the medication list on the discharge summary (which is seen by outpatient clinicians). At the same time a new discharge summary was implemented as described in the PDSA cycle. After about 1 month later, charts were randomly collected and analyzed in the same fashion.
- Limitations: Small sample size and an analysis of multiple residents with differing discharge patterns (i.e. time when they start a note, how often they refresh on their own). Large time period between pre and post intervention.

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## Figure 2: Pre & Post Intervention Data



The pie graph on the left reflects baseline data prior to implementing the new template and understanding the scope of the problem whereas the right reflects data collected post template implementation. On both graphs, red denotes the percentage of discharge summaries where the medication list does not correlate with the medication list found on the after visit summary. The change after implementing the discharge summary template decreased the inconsistent discharge medication lists from 20% to 4%.

References: The images in the PDSA cycle were used from the IHI QI Essentials Toolkit: PDSA Worksheet. The following was used for inspiration for the projection and to provide additional background information: 1.) Graabæk T, Terkildsen BG, Lauritsen KE, Almarsdotir AB. Therapeutic Advances in Drug Safety. 2019;10:1-8. 2.) Holbrook A, Bannerman H, et al. Evaluation of a Novel Audit Tool for Medication Reconciliation at Hospital Discharge. Canadian Journal of Hospital Pharmacy. 2019;72(6):421-7.