



## Background

This closed-loop, multi-cycle quality improvement project reviewed documentation practices for withheld medications in a district general hospital. Patients admitted to hospital commonly require temporary suspension of their regular medications<sup>1</sup>:

<b>Acute Illness</b>	Impaired liver or renal function
<b>Contraindication</b>	Anticoagulants prior to surgery
<b>Drug Interaction</b>	Statins and macrolides
<b>Formulation Change</b>	Oral to intravenous switch

Without clear and easily located documentation, it may be ambiguous why a medication was initially withheld. The issue is compounded if patients change parent teams or move to new wards, as suspended medications may be overlooked<sup>2</sup>. Unnecessary or prolonged suspension of medications can have adverse outcomes for patients<sup>3</sup>.

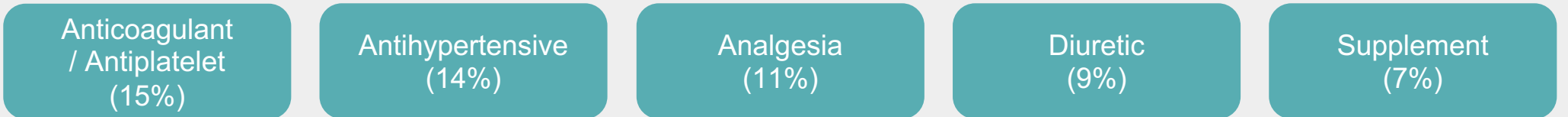
The WHO advises the use of practices and tools to avoid medication errors, which is a leading cause of patient harm<sup>4</sup>.

## Case Example

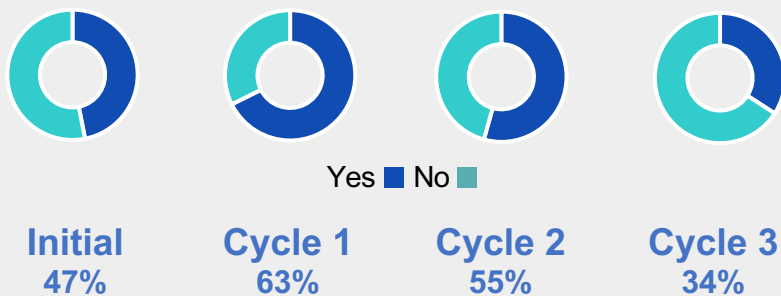
Bisoprolol (for atrial fibrillation) was withheld on admission. This was documented as “suspend antihypertensives” in notes with no temporary reason or timeframe given. On Day 10, they developed fast atrial fibrillation which required intravenous digoxin.

## Results

### Commonly Suspended Medications



### Suspended Drugs with Documented Plans



620 withheld medications were identified across 3 cycles.

Despite an initial improvement in documentation, rates remained stubborn. Discussion with various teams confirmed a consensus that documentation was important; it was surprising that higher rates were not achieved.

Disappointingly Cycle 3 underperformed by nearly every metric compared to previous data collections. It is unclear why this was the case, but it may have been due to a new cohort of junior / middle grade medical staff who had not been influenced by previous interventions.

## Conclusion

Medications are commonly withheld when patients are in hospital. Safe prescribing practices include clearly documented plans which explain why drugs have been suspended and when they might be resumed. This aids other prescribers to determine when it is safe to resume them, thereby reducing the risk of patient harm from drugs becoming unnecessarily suspended for prolonged periods.

Anecdotally, plans were frequently much easier to locate (and more legible) when they are documented against a drug on HEPMA. Documenting on HEPMA may increase the proportion of plans followed. A plan recorded in any of the patient's record appears to have a substantial likelihood of being followed.

## Objectives

### Primary Objective

→ To determine if the location of documentation increases likelihood of plans being followed or medications resumed prior to discharge.

### Secondary Objective

→ To increase documentation of drug suspension reasoning and plans during patient admission.

## Methodology

This study was run over one month on four separate occasions using the Plan-Do-Study-Act (PDSA). During each cycle, data was collected from two high turnover wards (medical and surgical) looking at all drugs that had been suspended on patient HEPMA records.

The following data was collected:

Drug | Class | Plan Documented / Followed | Location of Plan

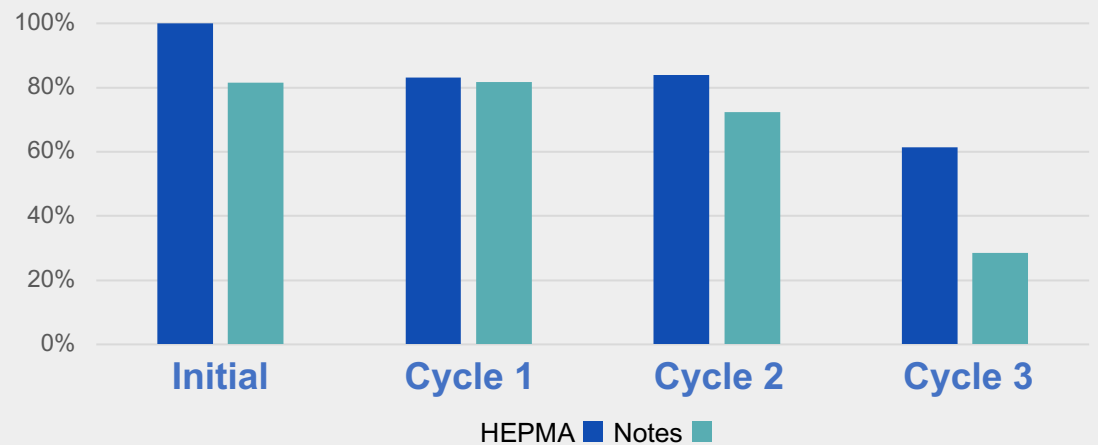
## Interventions

**Cycle 1** Medical Team: Education at M&M and Grand Rounds

**Cycle 2** Pharmacy Team: Departmental presentation

**Cycle 3** Prompts added to admissions documents

### Location of Plan vs Proportion of Plans Followed



In each cycle, a greater proportion of plans were followed if documented on HEPMA rather than patient notes. Informal discussions with junior staff revealed these plans were easier to be located and more legible.

79% of all documented plans were followed. A common theme noted by researchers when plans weren't followed was an ambiguous or vague plan (e.g. “resume when patient better”).

## Recommendation

Prescribers should clearly document any time that they are suspending medications, including their rationale and a suggestion of timescale for their resumption.

## References

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