

## Introduction

Whether from the Emergency Department, the Operating Room/Post Anesthesia Recovery Unit, or a transfer from and outside facility, timely admission to a hospital bed, with the appropriate level of expertise, equipment, and staffing for the clinical problem (surgical, medical) and acuity (ICU, lower acuity ward) of the patient is critical to delivering quality clinical care, patient safety and appropriate utilization of resources. The availability of a bed appropriate for the patient's needed level of care is very much dependent upon the timely discharge of patients in a hospital at or near full capacity<sup>1,2</sup>. The effects on patients who must await admission from the Emergency Department due to lack of an appropriate care setting are not insignificant and are associated with increased lengths of stay<sup>3</sup>, morbidity and mortality<sup>4</sup>.

Discharging a patient is complex process and involves multiple individuals and functions. However, the initial step to commence the discharge process is the completion and signing of a discharge order in the electronic medical record..

## Aim Statement

The *Overall Global Aim* of this Quality Improvement (QI) Project is to improve access to an appropriate level of care for patients being admitted to VMC by increasing the percentage of patients discharged from VMC by 12 noon. Because discharging a patient is initiated by a discharge order, the *Specific Aim* of this QI project is to increase the percent of discharged orders signed at or before 9 AM from approximately 20% (current level) to 40% (100% improvement) on 1 South ECU Surgical Oncology and from approximately 5% (current level) to 10% (100% improvement) on 4 North ECU Trauma/Acute Care in 6 months.

## Acknowledgements

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## Methods

We developed a work flow diagram to see how a patient is discharged from an academic surgical service with surgical residents and attending physicians (Figure 1). Although the process of discharging a patient is complex, we elected to focus on the initiating process of discharge order signing. Because previous data had demonstrated that it requires approximately 2-3 hours once a discharge order is signed to discharge a patient (Figure 2), we hypothesized that increasing discharge orders that were signed by 9AM would translate into improved discharges from the hospital before 12 noon.

### Surgical Services

We elected to confine our initial intervention to two surgical services (Surgical Oncology on 1 South and Trauma/Acute Care Surgery on 4 North). Both services chiefs were notified by the Chair of Surgery of the Quality Improvement Project and a challenge to improve the percentage of discharge orders by 9 AM was issued.

### Data Collection:

Data on the number of patients discharged on the two surgical services was obtained along with the time of discharge order signing along with the time to discharge from the ward and the actual time of discharge. The on two different hospital wards. Baseline data on the percentage of discharge orders signed by 9AM was obtained.

## Results

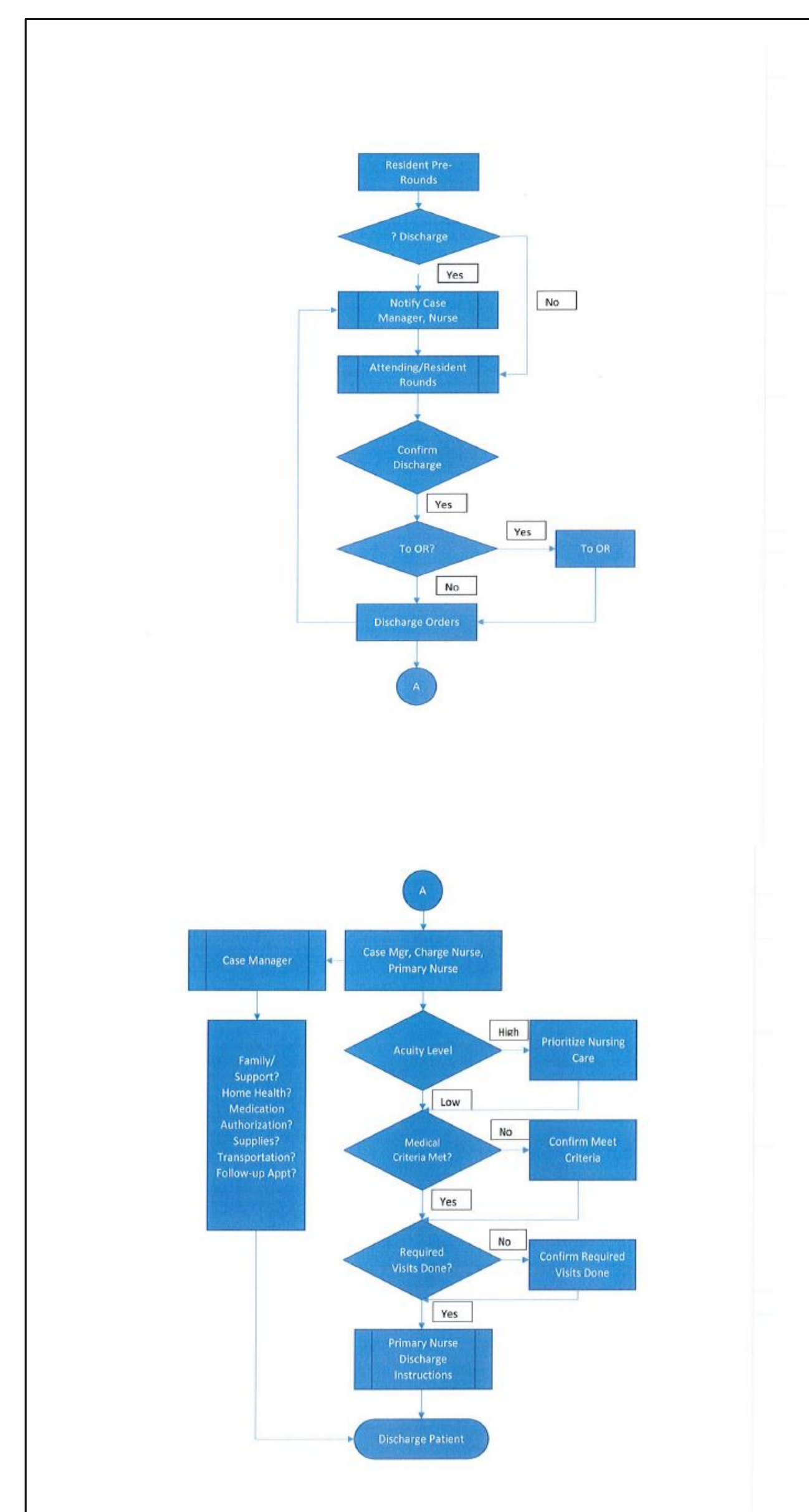


Fig 1. Work Flow Diagram of Discharging a Patient from an Academic Surgical Service (1 South Surgical Oncology).

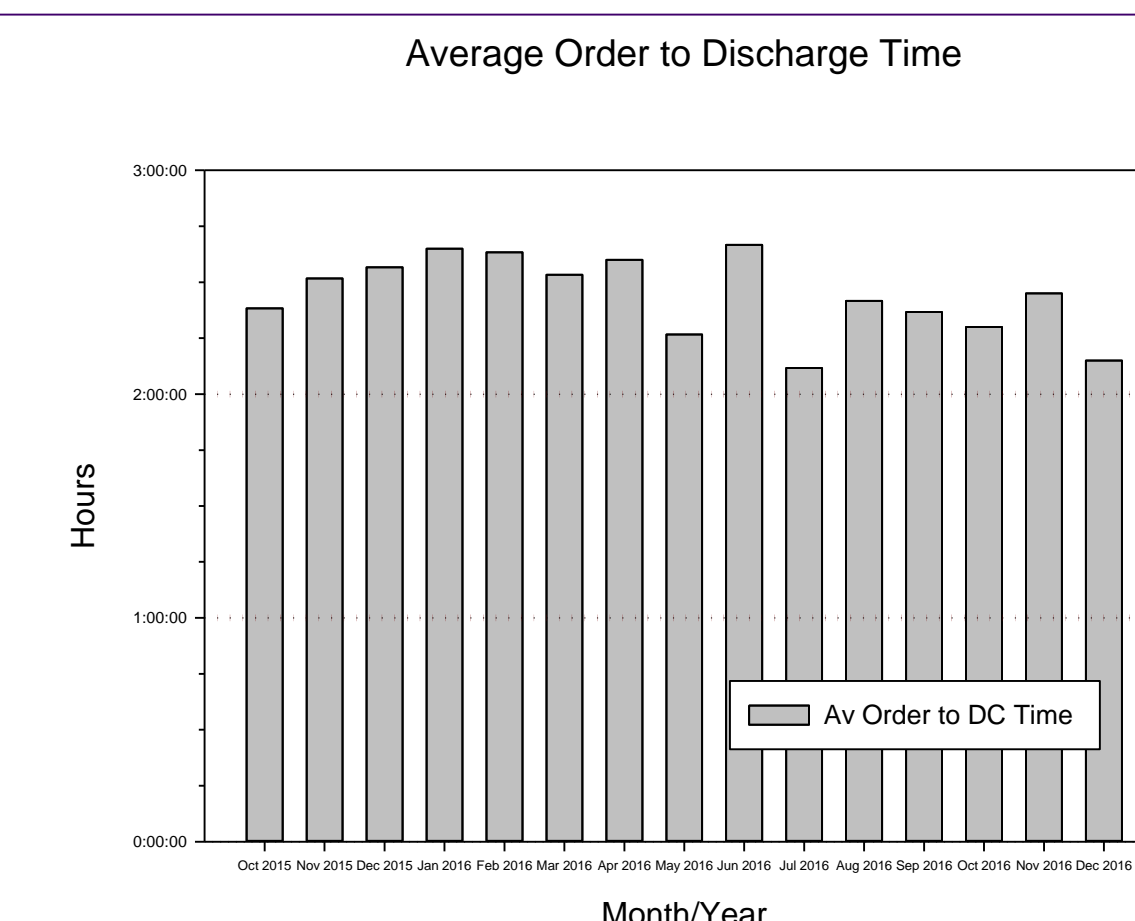


Fig 2. The average time from Discharge Order Signing to Patient Discharge averaged greater than 2 hours.

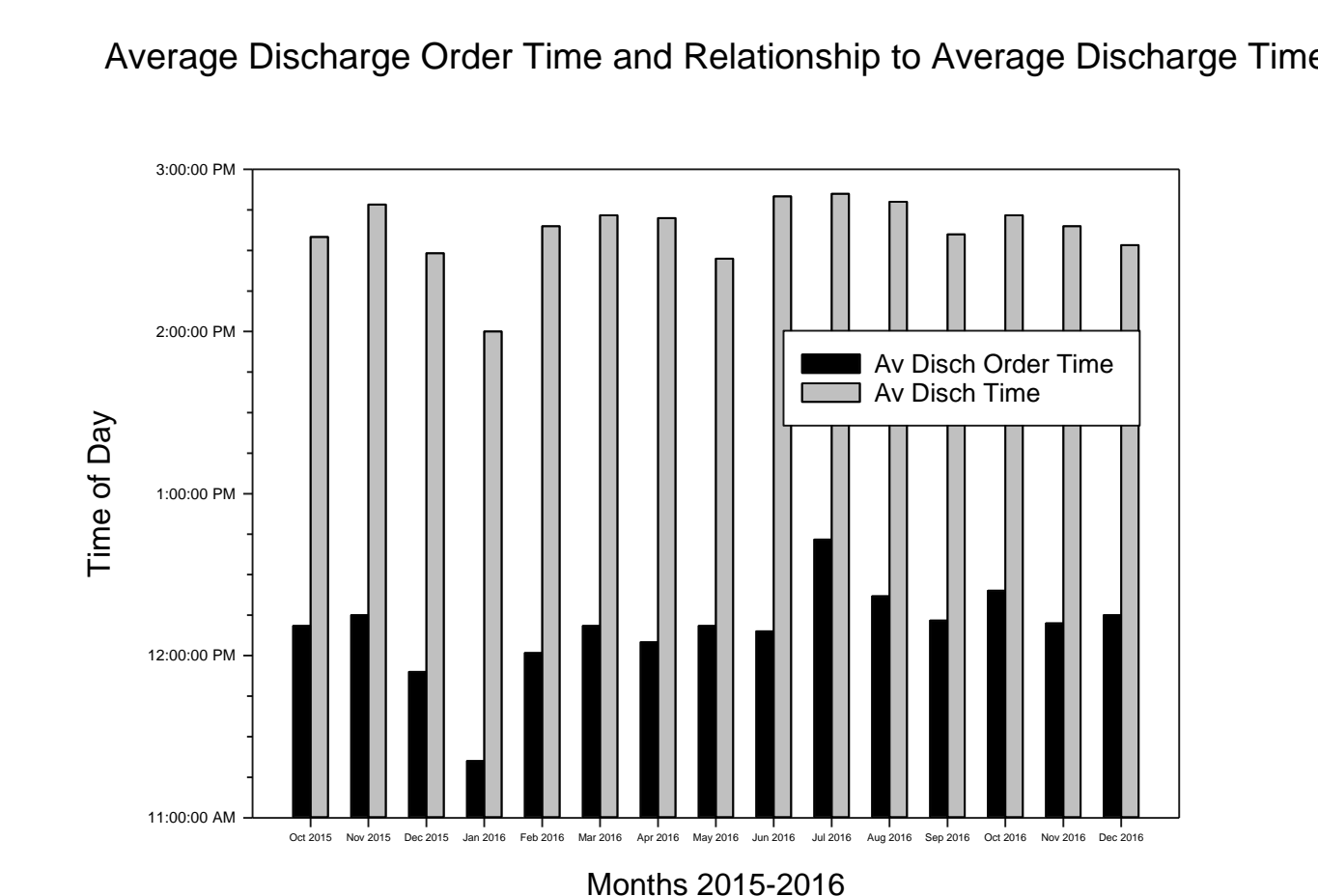


Fig 3. The time of Discharge Order Signing correlates with the actual Time of Patient Discharge.

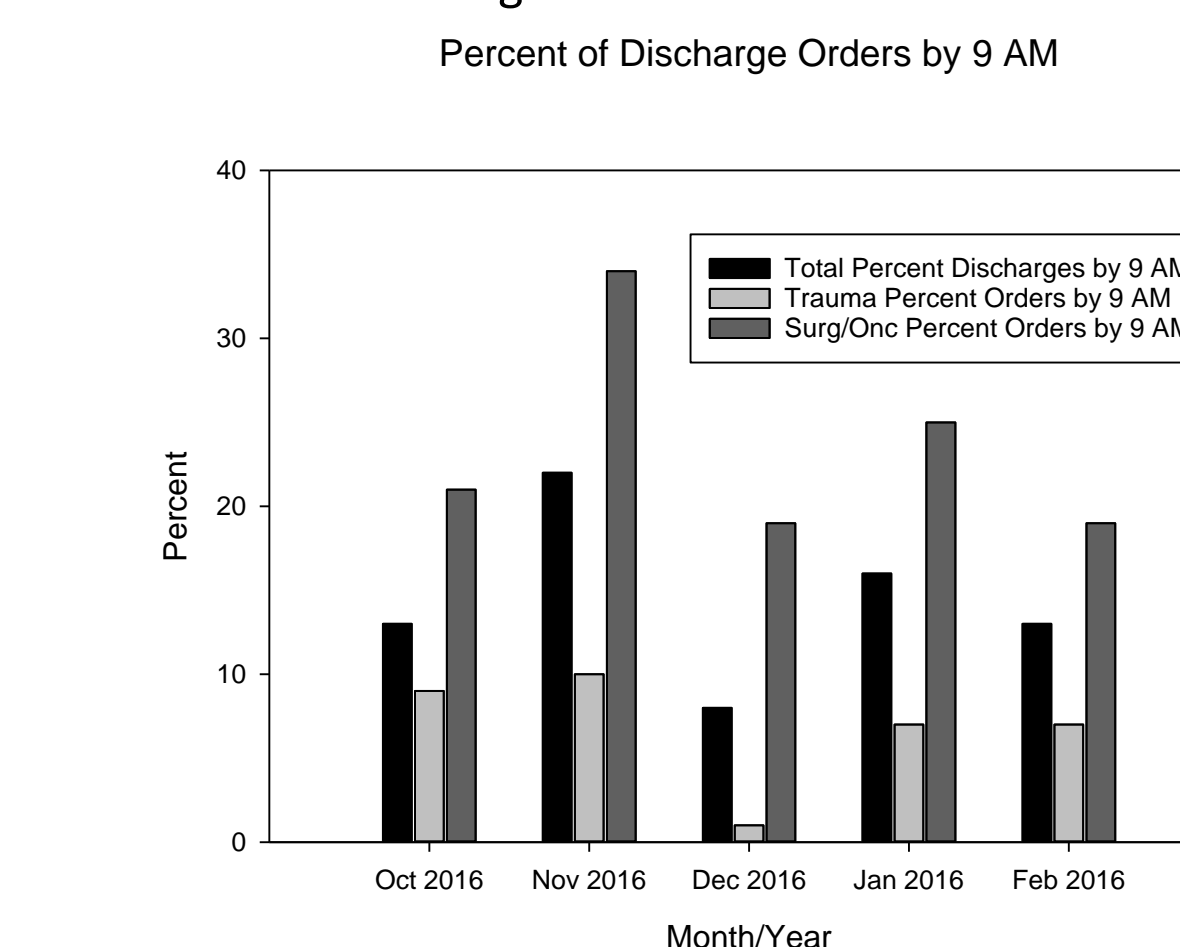


Fig 4. Percent of Discharge Orders by 9 AM. Initial Change Idea occurred in November of 2016.

## Discussion

Substantial observational data supports worse outcomes from delays in admissions to appropriate care settings. Work flow analysis demonstrated although much pre-discharge planning occurs, it cannot be completed until an order for discharge is signed by a physician. Baseline data indicates that the time of discharge is directly related to the time an order for discharge is signed. An initial plan of change (**Chair of Surgery Challenge**) to improve the time of discharge order signing) failed to substantively move the percentage of discharge orders signed by 9 AM.

The reason(s) for this are likely multiple. Workflows on a surgical services are complicated and prioritizing tasks can be challenging. Prioritizing discharge order signing with targeted interventions have been shown to improve the timing of discharge order signing and the percentage of early discharges but without continued re-enforcement are short lived<sup>5</sup>.

It is proposed that at the monthly Surgical Administrative Meeting the percentage of patients with discharge orders signed by 9 AM become a standing item on the agenda to emphasize the importance of this in patient care and safety.

## Conclusion

An initial simple change idea (**Chair Challenge**) failed to improve discharge order signing by 9 AM during the initial 3 months.

A strategy to utilize feedback through a dashboard will be initiated as a second change intervention at monthly Surgery Administrative Meeting.

Overcoming resistance to change is difficult.

## References

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