

# A Quality Improvement Project to Reduce Unnecessary Daily Labs by Residents During Transitions of Care

Turab Raza MD, Michael Kehdi DO, Supratik Rayamajhi MD

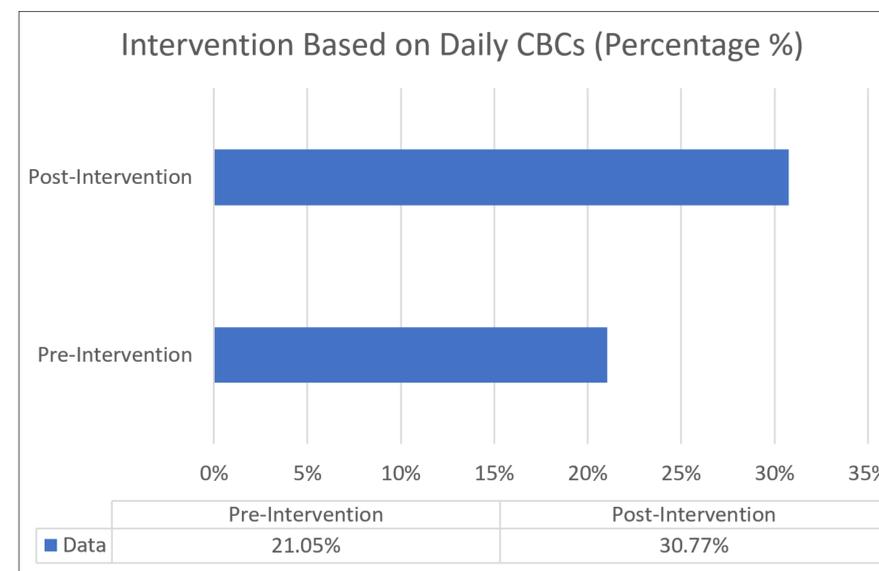
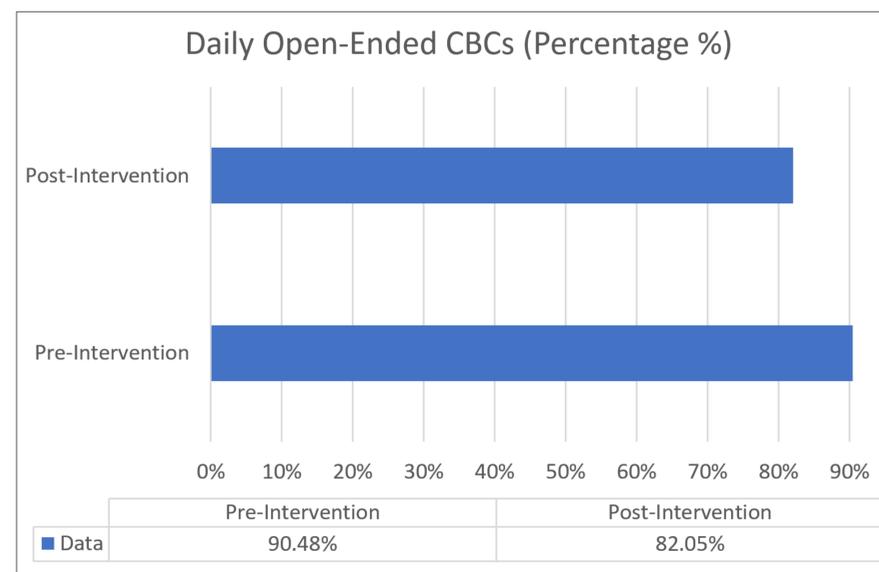
## INTRODUCTION

- Common labs, such as daily complete blood count (CBC) and basic metabolic panel (BMP), may represent waste in many forms if no medical decision/intervention is made based upon them.
- This has been targeted by many professional societies and the choosing wisely campaign for critical evaluation.
- We undertook a quality improvement (QI) intervention in an internal medicine residency based community hospital in efforts to decrease unnecessary common labs.

## PURPOSE / METHODS

- Our primary focus was on daily CBC lab draws, and how this test was utilized. Specifically, looking at if there were any CBC abnormalities (anemia, leukocytosis, thrombocytopenia) that required medical intervention.
- We looked at specific aspects, such as hospital acquired anemia necessitating a packed red blood cell transfusion (pRBC), increased hospital costs, and this influenced mortality.
- Intervention: Introductory email, and didactic lecture for the residents highlighting the harm of daily CBCs.
- This was a pilot study based on a QI initiative published in the Journal of Hospital Medicine.
- Patients with a variety of diagnosis transferred from the critical care unit to the internal medicine residency service were selected for the project.
- 42 pre-intervention and 39 post-intervention patients.
- Electronic medical records (EMR) were used for chart review and data collection.
- Burden of decision making regarding continuing or discontinuing open-ended CBCs was on both transferring and accepting resident physician.
- Bi-weekly reminder emails were sent to all residents in the internal medicine residency program.

## Comparative Analysis Between Pre and Post Intervention Groups



- Residents participating in the study did not have direct patient contact as this would have influenced the results of the study.

## RESULTS

### Pre-Intervention group:

- Daily CBC was continued in 38 patients (90.48%)
- Intervention was done in 8 patients (21.05%)
- 5 patients (11.90%) required pRBC transfusion
- Mortality rate at hospital discharge was 7.14%

### Post- Intervention group:

- Daily CBC was continued in 32 patients (82.05%)
- Intervention was done in 10 patients (30.77%)
- 12 patients (30.77%) required pRBC transfusion
- Mortality rate at hospital discharge was 7.69%

## CONCLUSIONS

- Implementation of a QI intervention within a Internal Medicine residency based community hospital was associated with decrease in number of ordered daily CBC.
- This intervention suggests such a QI intervention can be effective in safely reducing healthcare waste without compromising quality of care.
- Our pilot study indicates that physician awareness and mindfulness regarding daily may have profound impact when implemented on a large-scale.
- In the future, a patient satisfaction survey can be employed to see a direct correlation between limiting daily lab draws and improving patient satisfaction scores.

## REFERENCES

- Corson, A. H. (2015). A Multifaceted Hospitalist Quality Improvement Intervention: Decreased Frequency of Common Labs. Journal of Hospital Medicine, 390-395.