



Eliminating Repetitive CBC Orders on the Resident Inpatient Service at the Orlando VAHCS

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Background and Problem Statement

- Physicians-in-training are important contributors to the burden of tests due to
 - Focus on reaching a definitive diagnosis regardless of care value
 - Practice of defensive medicine
 - Ignorance of the financial costs associated with testing.
- Blood draws can cause hospital acquired anemia and cause patients discomfort. In 2021, There was a shortage in blood collection tubes which makes this project even more relevant.
- On the inpatient VA wards, there are Complete Blood Counts (CBCs) being drawn daily which are not clinically indicated. This increases costs and use of hospital resources, causes hospital acquired anemia, and impacts the patient experience.
- This project has been replicated at multiple institutions and is part of the SHM Choosing Wisely Campaign.

Aim Statement

- Decrease the number of daily CBCs ordered that are not clinically indicated on the resident teaching service at the Orlando VA Health Care System to 25% by 4/15/23. (From baseline of 41%) .
- Reduce ratio of non-indicated CBCs/ day LOS to 0.2.

Methods

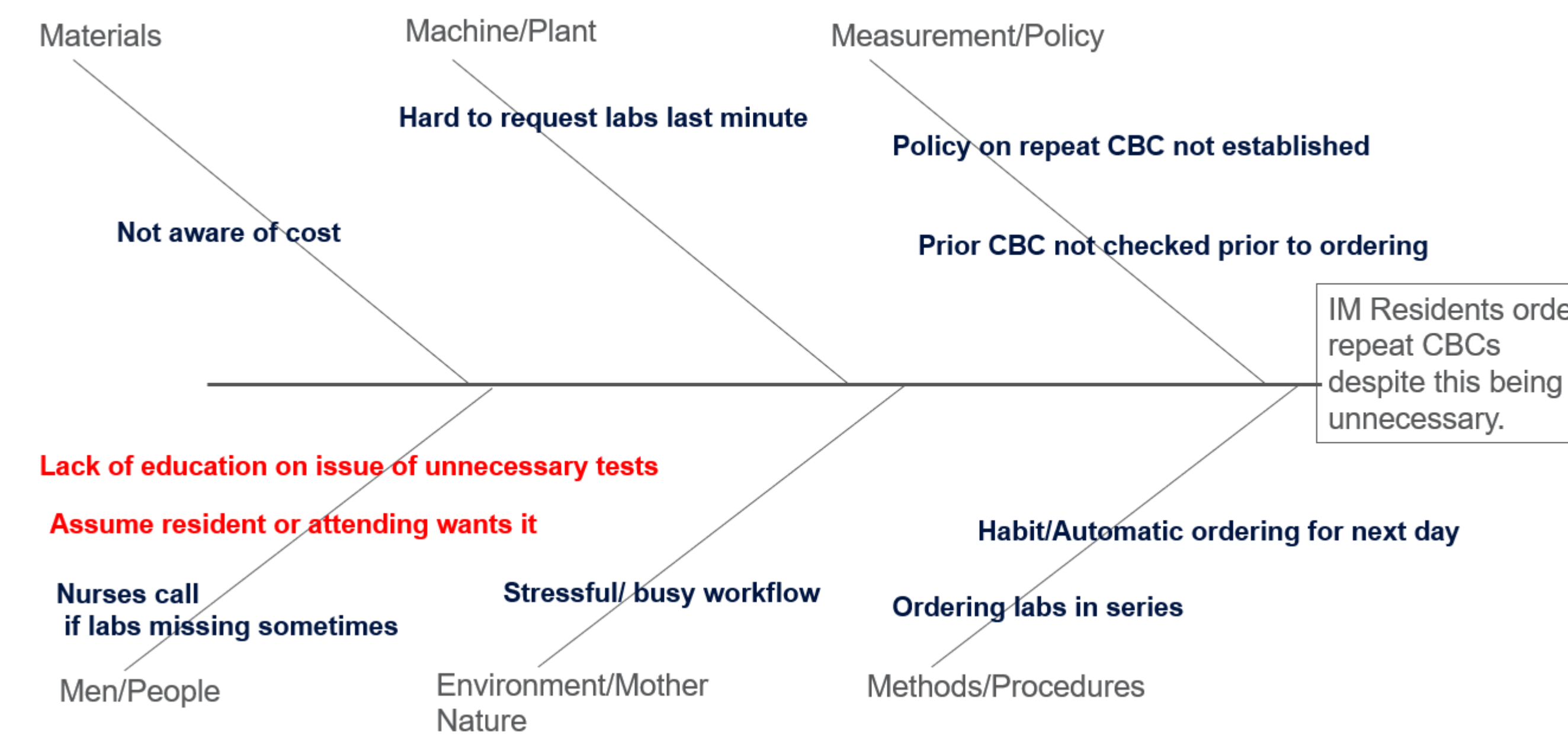
- Chart review of patients admitted under the medical resident teams at the Orlando VA during periodic weeks 7/1/22- 5/1/23 to track number of CBCs ordered per patient and assess if indicated.

CBC Indicated if:

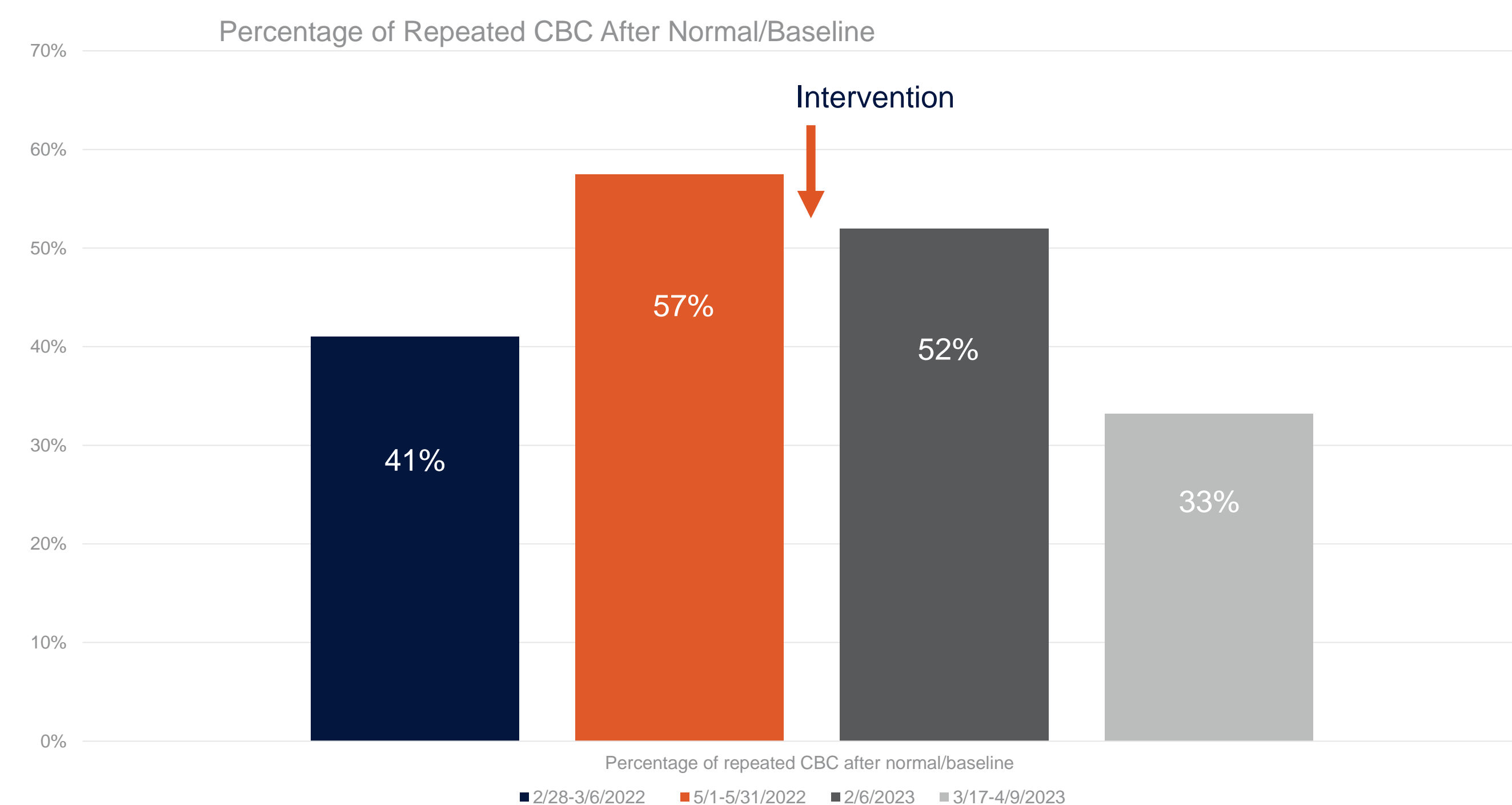
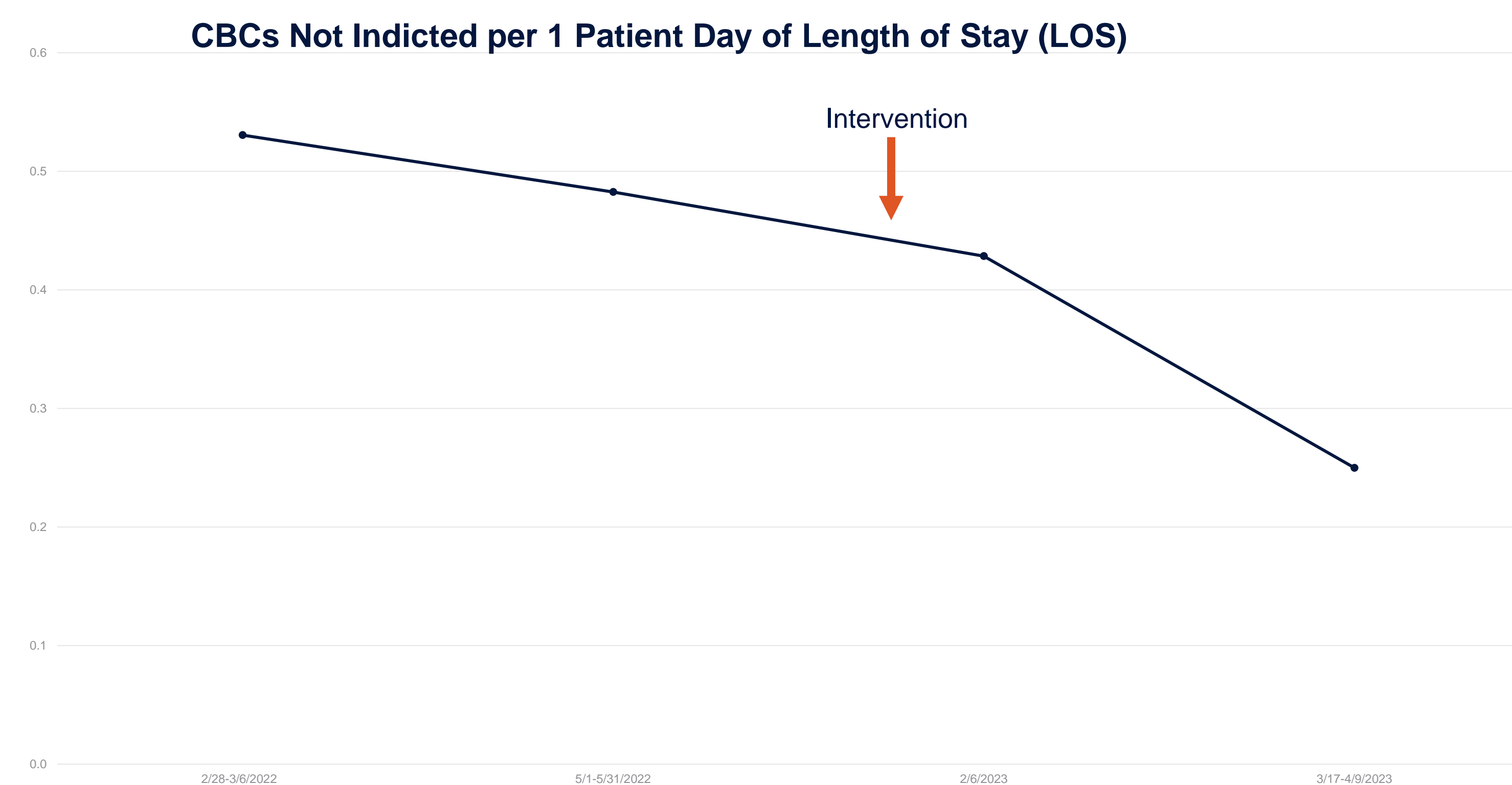
- Active Bleeding
- New onset anemia
- Suspicion for thrombocytopenia
- Leukocytosis (active infection, is clinical status improving?)
- Or following previous abnormal CBC

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Root Cause Analysis



Results



Survey of Residents and Attendings

- The most common reason residents gave for ordering daily labs was "I think my attending wants it." (41% of 39 residents surveyed).
- Nine teaching attendings were contacted to interview. Eight attendings responded. All eight attendings only wanted daily labs if indicated.

Posters in Resident Rooms



Root Causes and Interventions

Root Cause	Countermeasure	Plan (Who, What, When, Where)	Completed
No daily review of necessity of CBC	Review among teams, Publicize with the residents and attendings	AHD presentation, Publicize cost – 7/22, 3/23 Interviews and Discussion with Attendings by 4-7/22 Met with inpatient teams- 9/22, 12/22, 2/23, 3/23 Posters in residents rooms- 1/23	Y
Resident belief that attending wants daily labs	Interview Attendings on their views and publicize to residents	Interviews and Discussion with Attendings by 4-7/22 AHD presentation, Publicize cost – 7/22, 3/23	
Residents were not taught when to stop ordering CBCs	Perform education for IM interns early in Academic yr	AHD Presentation 7/22 Met with inpatient teams- 9/22, 12/22, 2/23, 3/23	Y
Ordering labs in series	did not actually happen as much on review of data	Noon report presentations- 2/23, 3/23, 4/23 AHD Presentation – 3/23	Y
Stressful/ busy workflow	Reinforce checking for unnecessary labs before sign out	Noon report presentation, posters, discussion with teams as above	Y

Conclusion

- Further work is needed to educate residents on the indications for CBC orders and to take time to appreciate them when on service.
- Our findings suggest a discord between attending physicians' expectations and resident physicians' beliefs.
- Through AHD presentation, noon report presentations, poster reminders, and discussions with residents and attendings we have seen reduction in ordering of non-indicated CBCs from 41% to 33% and reduction of non-indicated CBCs/ day LOS to 0.25

References

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