Reducing the Incidence of Rectal Temperatures in Patients with Neutropenia: A Quality Improvement Project at Lenox Hill Hospital

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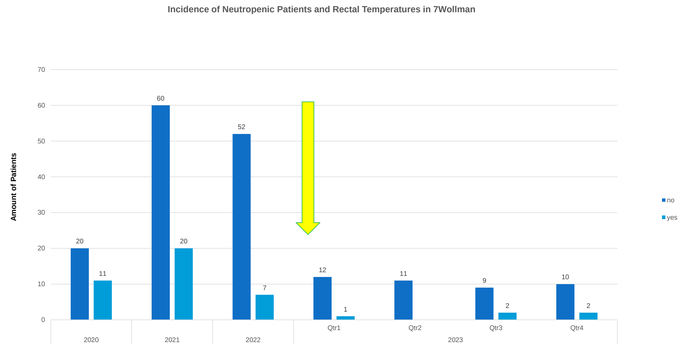
INTRODUCTION

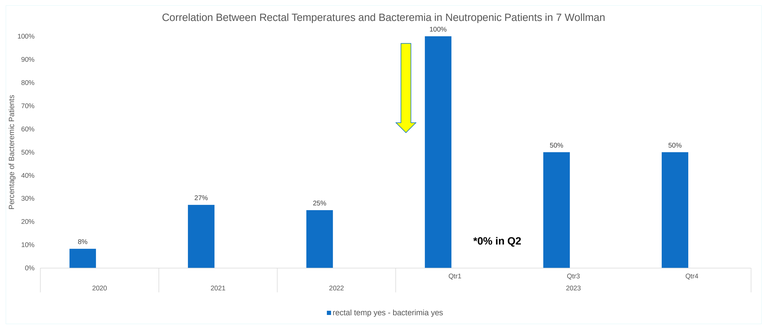
- Fevers in patients with neutropenia are hematologic/oncologic emergencies that could indicate life-threatening infections. In this patient population, rectal temperatures, although more accurate, should be avoided completely given the risk of bacterial translocation [2]
- Cytotoxic chemotherapy can lead to breakdown of mucosal surfaces which supports the notion that bacterial translocation poses a greater risk in this subset of patients [2].
- The goal of our Quality Improvement Project (QIP) has been to reduce the incidence of rectal temperatures performed in patients with neutropenia and as a result, potential for consequent bacteremia.

METHODS

- We identified our target improvement by devising a S.M.A.R.T. Aim statement (Specific, Measurable, Achievable, Relevant, Timely). We then developed a Swim Lane diagram to visualize the steps that would be necessary for accomplishing our goal of performing less rectal temperatures.
- We identified 7 Wollman (7WO) as the most appropriate floor on which to enact our small test of change. For our project, we used the National Instituted of Health's definition of neutropenia of an Absolute Neutrophil Count of 1.5 K/uL or less.
- We worked with the Data Informatics team to create an alert system that sends us an email each time a patient on 7WO was neutropenic. After receiving an email alert, one of the QIP team members contacts the resident physician team working on 7WO and a sign is placed on the patient's door.
- We then documented when signage was successfully placed, the number of rectal temperatures obtained after sign placement, and rates of bacteremia if a rectal temperature was obtained.

RESULTS





FIGURES

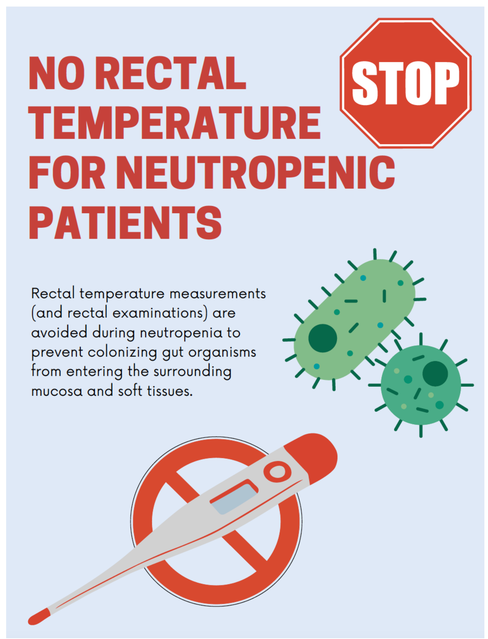


Figure 1: The sign that is placed outside the rooms of patients with neutropenia.

DISCUSSION/CONCLUSION

- While ensuring that patients with neutropenia have their temperatures monitored in hospital settings is important, we must take great care to avoid obtaining rectal temperatures in these patients due to the risk of mucosal disruption and bacterial translocation (3-5).
- By implementing our intervention on 7WO, we were able to work with physicians, nurses, and PCA's to avoid obtaining rectal temperatures in patients with neutropenia.
- Our QIP study was able to decrease the number of rectal temperatures performed in patients on 7WO with neutropenia. We were also able to highlight the correlation between rectal temperatures and bacteremia, implicating the importance of avoiding rectal temperatures in our neutropenic population.
- Future studies will work to expand our study across additional units and eventually all of Lenox Hill Hospital.

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