

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) is to reduce the incidence of rectal temperatures performed in patients with neutropenia.

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 tram members contacts the resident physician team working on 7WO and asks them to inform the nurses of the neutropenic patient.
- We then calculated the incidence rates of rectal temperatures in patients with neutropenia over the past 2 years as well as in our QIP patients and compared the two using the Chi²-statistic.

RESULTS

- In hospitalized patients from 2020 to 2022, rectal temperatures were performed on 106/1021 patients with neutropenia (Incidence Rate = 0.1038, 95% Confidence Interval 0.085-0.1256)
- Over the first two months of our QIP project we have successfully placed signage outside the rooms of 17/17 patients with neutropenia (100% execution rate)
- Of the 17 patients with neutropenia, rectal temperatures were performed on 0/17 (Incidence Rate = 0, 95% Confidence Interval 0-0.217)
- The Incidence Rate Difference between the pre-and-post intervention groups is 0.1038 (P-value = 0.184, Confidence Interval of -0.049-0.257).

FIGURES

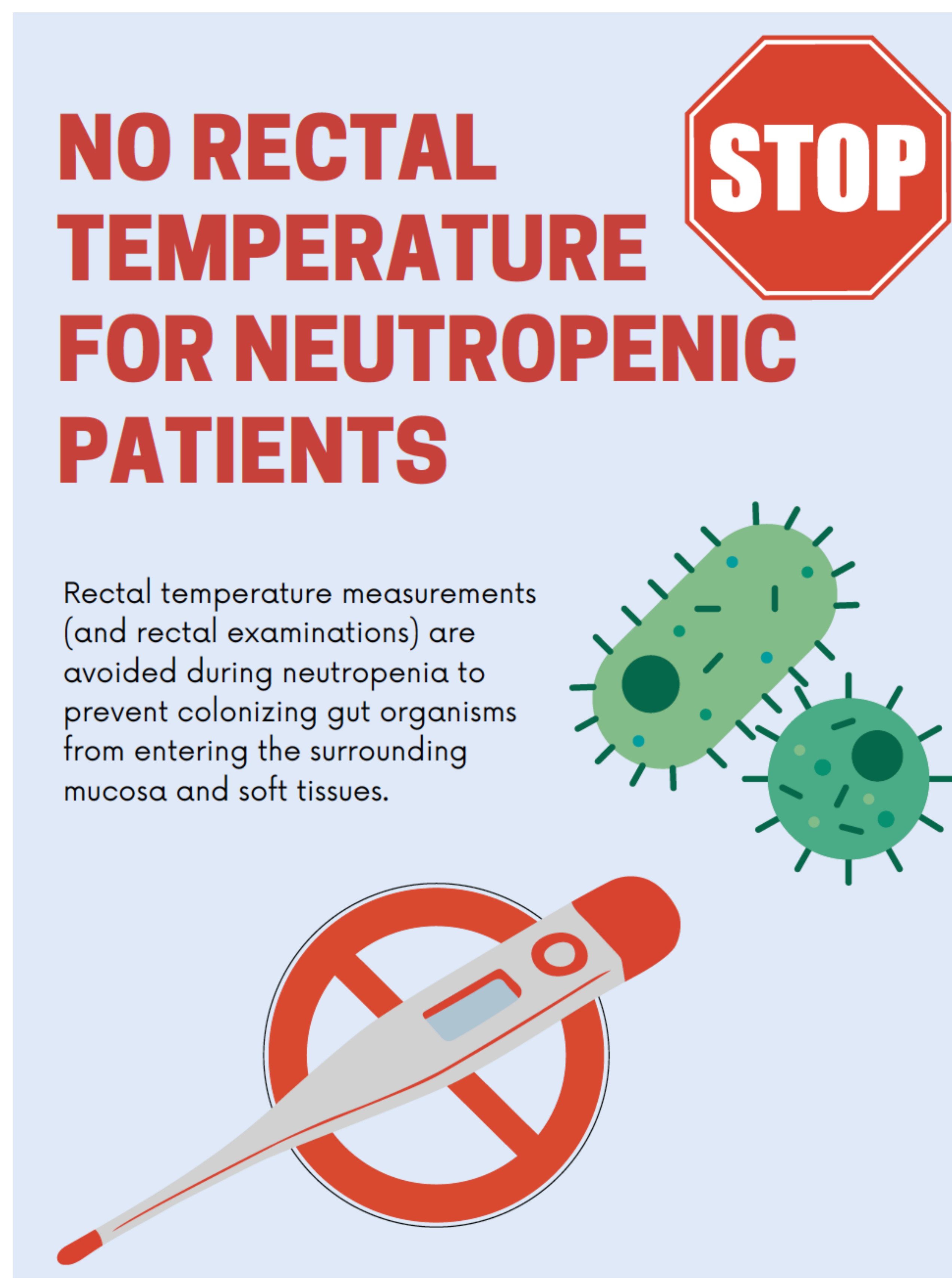


Figure 1: The sign that is placed outside the rooms of patients with neutropenia.

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 decrease the number of rectal temperatures obtained in patients with neutropenia.
- Successful prevention of rectal temperature in 38 patients will allow us to attain statistical significance.
- Our QIP study was able to decrease the number of rectal temperatures performed in patients on 7WO with neutropenia. Future studies can expand our study across additional units and eventually all of Lenox Hill Hospital.

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