QUALITY IMPROVEMENT
PROJECT COMPLETION DOCUMENT

IMPACT
Describe the EVALUATION of the outcomes of the project as they relate to the project's aim and deliverables.

Prompt administration of antibiotics is an important quality measure in the management of patients presenting to the emergency department (ED) with febrile neutropenia (FN). We addressed this issue by changing the current process of triage and antibiotic administration of these patients, and developing a notification card for patients at high risk of FN to present to the triage nurse upon arrival.

Though this project, we achieved a considerable drop in time to antibiotics for FN patients presenting with the alert card to the ED, from a pre-intervention median of 3 hours and 27 minutes to a post-intervention median of 2 hours, representing a 42% drop in the delay. However, this result did not reach statistical significance ($p = 0.07$, using quantile regression), likely due to the small sample size in the post-intervention group (only 14 FN patients with the cards have been seen in the ED).

MILESTONES
Describe the various MILESTONES delineated in your project charter and when/how they were achieved.

We implemented the FN card system on October 24, 2016, as planned. As of May 2017 there were 110 patients with FN cards.

The automated notification system is still functioning, and speaking with the nurse practitioners from the TFC, they feel that they are able to provide better care and closer follow up for their patients with this in place.

LESSONS
Describe the LESSONS, individual or organizational, learned through this project.

Although we have not been able to achieve the TTA target thus far of less than 1 hour, there still has been substantial improvement, reducing the TTA by nearly half.

There have been many organizational and cultural changes as well. At the outset of this project, we met with PMH leadership to develop strategies to improve the care of FN patients. Given the current reality of ED patient volumes, wait times, and boarding of admitted patients, we needed a fundamental change in our approach to management of these patients. This spurred on the expansion of TFC hours and reemphasized ED diversion and outpatient management whenever possible. This FN card system became less about the card itself, and more as a rallying point for the different departments (emergency medicine, oncology, and internal medicine) to get on the same page to improve efficiency and patient care.

Leveraging an IT solution to identify patients included in the trial has been successful in providing the primary care team with information on ED visits, and inpatient admissions outside of PMH, improving continuity of care.

The use of this alerting system allowed for tracking of all patients presenting to either UCC or the ED, and simplified the data analysis process.

RECOMMENDATIONS

Describe the IMPLICATIONS of this project for patient care or for future projects.

This project was a large undertaking as it required the coordination of three very different departments (emergency medicine, hematology-oncology, and general internal medicine) with different priorities, pressures, and goals. This pilot project involved hematologic oncology patients only, and different oncology services have been enthusiastic about adopting some of the changes we have made in PMH and ED processes.

DISSEMINATION

Describe the completed or planned steps for DISSEMINATION of this project's findings (e.g., presentations, posters, manuscripts, etc).

This project is still very much a work in process, and data collection will continue on an ongoing basis. We plan to do a second analysis in 6 months' time to measure the change in TTA. We will also be carrying out PDSA cycles to look for opportunities to refine our current notification system, as well as look for different avenues to improve FN patient care.