



## PRACTICE PROBLEM

Febrile neutropenia is considered a time-dependent oncologic emergency. Research shows that decreasing the door-to-antibiotic (ABX) time for this population positively affects patient outcomes (Cohen, King, Lin, Friedman, Monroe, & Kutny, 2016). Broad spectrum antibiotic administration is considered the front line medication therapy in patients with suspected neutropenic sepsis. The emergency department (ED) was not consistently providing antibiotics within the defined timeline (less than 61 minutes after arrival).

## PURPOSE

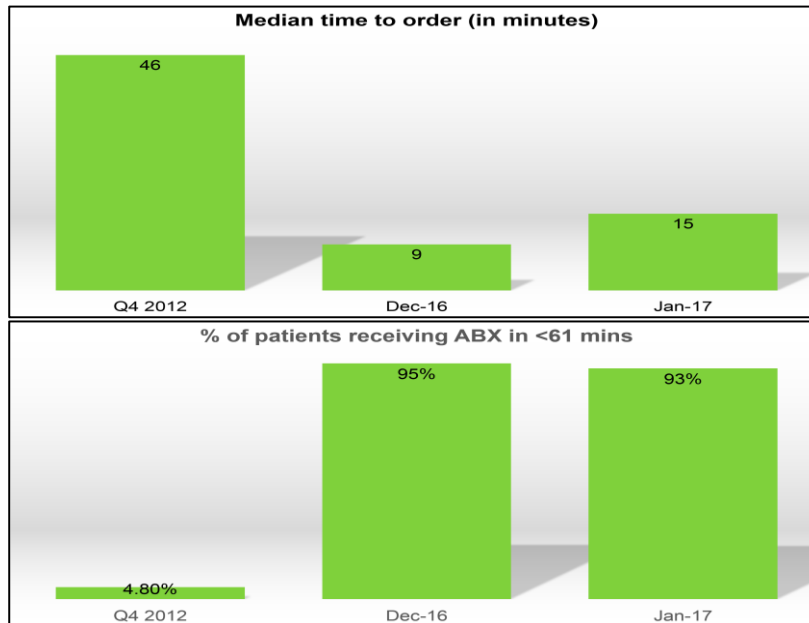
A febrile neutropenia pathway order set was created but defined goals were not reached so a multi-disciplinary group looked at sustaining this change to consistently reach defined goals of providing 90% of the population antibiotics in less than 61 minutes.

## INITIATIVE

This quality improvement multi-disciplinary project evaluated data, statistics, and brainstormed innovative approaches to administer antibiotics within the defined timeline. The project team isolated two metrics to assess and provide accountability for, conducted a literature review, used staff interviews, chart reviews, and Gemba walks to assess the problem. The two metrics chosen were: median room to antibiotic order time and door to antibiotic administration of <61 mins in 90% of this population. The goal for time to order was set at 15 minutes from arrival to room.

## DATA OUTCOMES

Original baseline data from quarter 4 of 2012 showed only 4.8% of febrile neutropenia patients receiving antibiotics in the desired time frame with a median time to obtain order of 46 minutes. An initial intervention only showed improvement to 80% of these patients receiving antibiotics in less than 61 minutes. After this intervention, data showed both goals were met and sustained for multiple months. Challenges were faced due to medication shortage during monitoring period but after this was resolved the goals were met.



## EDUCATIONAL EFFORTS

Unit champions began departmental education of the data points and presented these to staff in graphical format. Education was provided to ED nursing staff and ED physicians in daily shift huddles as well as emails. This led to improvement; however, staff engagement and understanding remained low so "scorecards" were posted weekly in staffing areas. Making this project a standard part of the workflow for staff and providing accountability on the specific metrics tracked has improved our compliance percentages.

## CONCLUSION

Sustainability of change remains a large issue for our institution. Using precepts from the ELIAS Performance Management Framework (Persaud, 2014), we chose to put accountability and routinization at the forefront of our process to affect change and sustain that change over time. This project has areas that are easily adapted for other performance improvement initiatives to ensure long-lasting change and we plan to broaden the initiative to include other patient populations at risk for sepsis.

## REFERENCES

Cohen, C., King, A., Lin, C. P., Friedman, G., Monroe, K., & Kutny, M. (2016). Protocol for reducing time to antibiotics in pediatric patients presenting to an emergency department with fever and neutropenia: efficacy and barriers. *Pediatric Emergency Care*, 32(11), 739-745.

Persaud, D. D. (2014). Enhancing learning, innovation, adaptation, and sustainability in health care organizations: The ELIAS performance management framework. *The Health Care Manager*, 33(3), 183-204.