Flu Fighters: Increasing the Number of Flu Vaccine Administrations in Pediatric Hematology Oncology Patients

Meaghan Beverley MS, Emla Clark BS, Christie Dance BSN RN CPON, Margaret Gillard Chad Jacobsen MD, Joel Kaplan DO, Patricia Lorenz MSN RN, Cali Matchunis BSN RN, Nicole Turner MSN RN CPHON, Jonathan Wheeler BSN RN CPHON

Introduction

Influenza is a serious virus that affects millions of people every year. The Centers for Disease Control and Prevention (CDC) estimates that for the 2017-2018 influenza season there were 48.8 million influenza-related illnesses, 959,000 hospitalization, and 79,400 influenza-related deaths. Children and those with compromised immune systems are at a higher risk for developing flu-related complications that could result in hospitalization and death. The CDC and the American Academy of Pediatrics (AAP) recommend that all people 6 months of age and older receive a yearly flu vaccine, especially those who are immunocompromised or suffer from a chronic condition.

We developed the “Flu Fighters” project to increase the number of pediatric hematology oncology patients that received the seasonal flu vaccine. Children receiving chemotherapy for cancer treatment are at heightened risk of severe influenza infection and resulting complications, including prolonged hospitalization, accelerated pulmonary complications, and a greater rate of concurrent bacteremia than children without cancer. Additionally, influenza in these children may cause a delay in planned anticancer therapy and can contribute to poorer overall and event-free survival. Flu vaccinations are also a US News and World Report measure.

Flu vaccination is a low-cost/high-value opportunity to protect some of our most at-risk patients. Preventing unnecessary flu complications potentially decreases hospitalizations and other high-cost, acute-care medical interventions.

Goals

For the 2017-2018 flu season our goal was:
- to administer the flu vaccine to at least 95% of patients with a diagnosis of leukemia or neuro-oncology (i.e. brain tumors) on active chemotherapy who were older than 6 months of age with no medical contraindications.
- to offer the flu vaccine via use of an innovative, original decision support tool to at least 90% of the pediatric hematology oncology patients that were seen in our outpatient clinic.

For the 2018-2019 flu season we added the following goals:
- to administer the flu vaccine to at least 95% of patients diagnosed with a solid tumor or lymphoma on active chemotherapy who were older than 6 months of age with no medical contraindications.
- to offer the flu vaccine via use of an innovative, original decision support tool to at least 90% of the pediatric hematology oncology patients that were seen in our outpatient clinic.

Improvement Process

An interdisciplinary team guided by a QI coach convened to imagine and drive this quality improvement project. This QI project utilized the Model for Improvement as the framework, with annotated run charts to monitor the impact of changes tested. An aim statement and process flow maps showing the current and ideal process were created. The team identified several change ideas which were tested with small-cycle PDAs.

In recognition that patient buy-in would be crucial to the project’s success, our team agreed that such a patient-centered initiative requires inclusion of health literacy principles throughout the communication process. We developed an introductory letter displayed in all patient rooms and at the front desk explaining the clinic’s approach to flu prevention. Strategies included enlisting plain language writing assistance from a colleague involved in the current and ideal process were created. The team identified several change ideas which were tested with small-cycle PDAs.

In recognition that patient buy-in would be crucial to the project’s success, our team agreed that such a patient-centered initiative requires inclusion of health literacy principles throughout the communication process. We developed an introductory letter displayed in all patient rooms and at the front desk explaining the clinic’s approach to flu prevention. Strategies included enlisting plain language writing assistance from a colleague involved in the current and ideal process were created. The team identified several change ideas which were tested with small-cycle PDAs.

Results/Outcomes

The goal to vaccinate 95% of our patients was met for both the 2017-2018 and the 2018-2019 flu seasons.

For the 2018-2019 flu season the goal was met 7 weeks earlier than the previous year.

Discussion

This project demonstrates a comprehensive and effective approach to reducing the risk of a serious health threat for some of our most vulnerable patients. By developing a well-defined process for standardizing the care team’s messaging, and using data to inform next steps, our team succeeded in surpassing benchmarks established by some of the best cancer care specialists in the country. The techniques and processes established through this project can be applied to many divisions across the enterprise, offering hope that future flu seasons could be less devastating to our more vulnerable populations.

Resources


Contact Info

Meaghan Beverley: Meaghan.Beverley@atriumhealth.org
Nicole Turner: Felisha.Turner@atriumhealth.org
Dr. Chad Jacobsen: Chad.Jacobsen@atriumhealth.org
Dr. Joel Kaplan: Joel.Kaplan@atriumhealth.org

Acknowledgements

Thank you to all of the teammates in the Cancer & Blood Disorders Clinic. Thanks also to Sarah Mabus, Project Manager for the Center for Advancing Pediatric Excellence (CAPE).