

Implementation of an Influenza Vaccination Campaign at a Children's Hospital

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Aim:

Increase percentage of eligible hospitalized patients receiving influenza vaccines prior to discharge at all Akron Children's Hospital acute care units.

Background:

- Influenza can cause serious illness, hospitalization and death particularly among very young children and those with certain chronic medical conditions
- The Centers for Disease Control and Prevention (CDC) estimates that since 2010, influenza-related hospitalizations among children younger than 5 years ranged from 7,000 to 26,000 in the United States
- Vaccination is the best protection against Influenza. Routine annual influenza vaccination for all person aged ≥ 6 months who do not have contraindications has been recommended by the CDC since 2010
- Influenza-Associated Pediatric Mortality in all 50 United States, Puerto Rico and District of Columbia:
 - 94 deaths reported in the 2015-2016 Influenza Season
 - 110 deaths reported in the 2016-2017 Influenza Season
 - 180 deaths reported in the 2017-2018 Influenza Season
- In most years, 80-85% of pediatric deaths occur in unvaccinated children
- Influenza vaccine reduces the risk of influenza-associated death by 51% in high risk pediatric population
- Influenza vaccine reduced the risk of influenza-associated death by 65% in healthy children
- Influenza vaccine reduces risk of PICU admission for influenza by 74%
- Documented rates of influenza vaccination for hospitalized patients at Akron Children's Hospital are lower than the national average of 59%
- In 2015-2016 only 29% of hospitalized patients and only 58% of hospitalized asthmatics were vaccinated at Akron Children's Hospital

Interventions:

In 2016-2017 a Nurse Driven Influenza Protocol was implemented for patients meeting criteria on 7 Inpatient Acute Care Pediatric Units at Akron Children's Hospital. We also had a Best Practice Advisory (BPA) that fired to remind Physicians/APP to order the Influenza Vaccine for asthmatics.

Nurse Driven Influenza Protocol Overview

- On admission, the RN completes first screening tool in the EMR
- Up to 24 hours prior to discharge, second screening tool in the discharge navigator is completed by the RN
- If patient is eligible for influenza vaccine, the RN places a protocol for influenza order for influenza vaccine under the attending physician
- The RN then obtains and administers the influenza vaccine

Barriers:

- Influenza vaccine not stocked on the units. Therefore, staff had to wait for Pharmacy to dispense the vaccine
- Patients/Family not willing to wait for influenza vaccine to arrive from pharmacy prior to discharge

2017-2018 Influenza Season:

Global Aim: Prevent morbidity and mortality from influenza, especially for our high risk population (by default, most of our hospitalized population).

Smart Aim: Increase our percentage of eligible hospitalized patients receiving influenza vaccines prior to discharge by 15% for the 2017-2018 influenza season at all Akron Children's Hospital acute care units.

Secondary Aim: Increase percentage of patients with completed protocol screening to 80%.

Interventions:

2017-2018 the Influenza Vaccination Campaign Included:

- EMR- Influenza Protocol Improvements
- Influenza vaccination storage on the acute care units
- Workflow for Vaccines for Children (VFC) vs Non-VFC Influenza vaccines established
- Workflow Improvements
- Visibility/PR Campaign
- "Fight Flu" buttons distributed to staff
- Nursing education
- Influenza Vaccine Rounds
- Multidisciplinary Flu Planning Meetings held monthly:
 - Representatives from Hospital Medicine, Pharmacy, Infectious Disease, Nursing, Quality Services, Public Relations and Employee Health
 - Data Discussion: Number of vaccines given, percentage of patients with admission/discharge screening, percentage of patients that Influenza vaccine status was addressed on (Flu protocol, vaccine already documented, physicians/APP's ordering vaccine)
 - Barriers and Interventions discussed

Barriers:

- More than 1/3 of patients and their families were not interested in receiving the influenza vaccine
- Influenza vaccine ordered and not given at time of discharge
- Poor documentation in the immunization section of the EMR
- Staff not vested in the influenza campaign

Results:

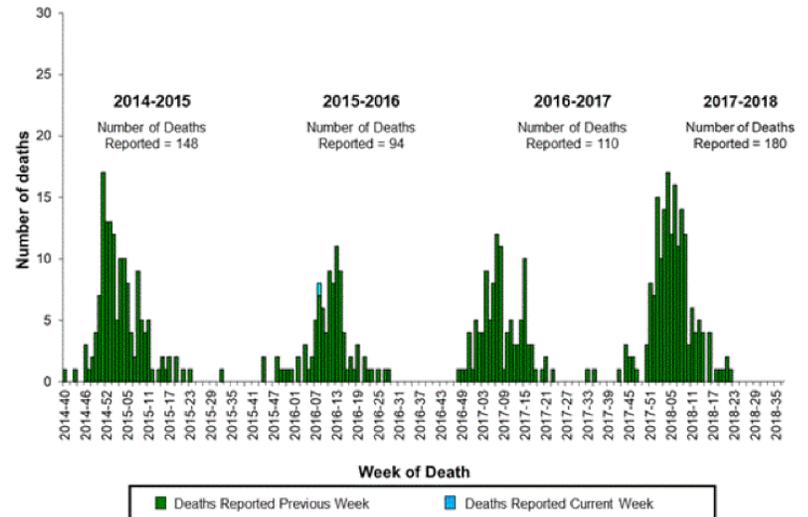
2016-2017 Influenza Season:

- 279 vaccines given; 5.1% of patients received during hospitalization

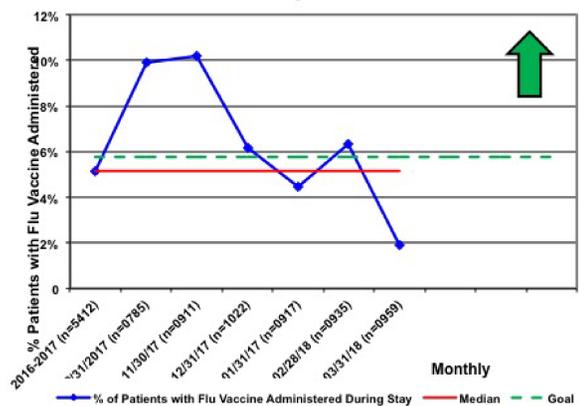
2017-2018 Influenza Season:

- 26% increase in hospitalized patients that received the influenza vaccine prior to discharge. 351 vaccines given; 6.3% given during hospitalization
- 78% of hospitalized inpatients had completed protocol screening/ influenza vaccine status addressed at time of discharge during the 2017-2018 influenza season

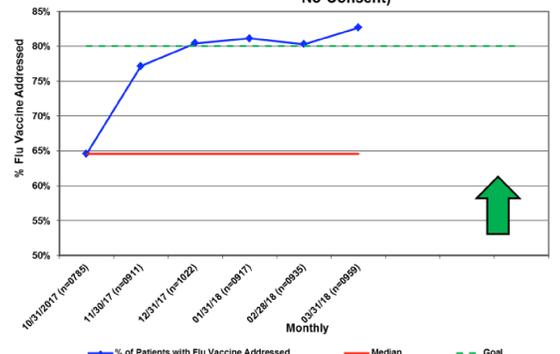
Number of Influenza-Associated Pediatric Deaths by Week of Death: 2014-2015 season to present



Inpatients with Influenza Vaccine Administered During Admission



Inpatients with Influenza Vaccine addressed (Completed Protocol, Documented Vaccine, Ordered by Physician/APP or No Consent)



Next Steps:

2018-2019 Influenza Season:

Global Aim: Prevent morbidity and mortality from influenza, especially for our high risk population (by default, most of our hospitalized population).

Smart Aim: Increase the percentage of hospitalized patients receiving influenza vaccines prior to discharge from 6.3% to 7.2% (15% increase) for the 2018-2019 influenza season at all Akron Children's Hospital inpatient units (excluding heme/onc and neonatal units).

Secondary Aim: Increase percentage of hospitalized patients with flu vaccine status addressed/protocol completed from 78% to 90% for the 2018-2019 season.

2018-2019 Interventions:

- Expanding protocol to Burn Center, PICU and Behavioral Health Units
- EMR Workflow Changes: The AVS will not print if the second screening is not complete on the influenza vaccine eligible patients with an alert stating "Discharge flu screen is not complete for this encounter"
- Improve Nursing Education:
 - Inpatient Flu Vaccine Education for Nursing module improved
 - More education on how to enter a historical immunizations
 - Changes to the Flu Vaccine Protocol discussed
 - Updates to EMR discussed
- Continue PR Campaign/Visibility
- Continue "Fight Flu" button campaign
- Patient education handouts placed in patient admission packets
- Development of script with talking points for influenza vaccine discussion with patients/family
- "Fight Flu" information displayed on televisions
- Nurse Educators to attend nursing staff meetings and reinforce the importance of screening patients for influenza vaccine