Flu Fighters 2.0: Spreading Strategies to Stop the Spread of Flu
History of “Flu Fighters”

• Levine Children’s Cancer & Blood Disorders Program (LC-CBD) Quality Improvement (QI) Committee was developed in 2017

• Initial project: Develop a process to increase the number of flu vaccinations per US News & World Report (USNWR) Quality Measure.

  • Pediatric patients diagnosed with leukemia or brain tumors over the age of six months currently on active chemotherapy, with no medical contraindications.
History of “Flu Fighters”

Goal
- Administer the flu vaccine to at least 95% of patients with a diagnosis of leukemia or neuro-oncology on active chemotherapy over the age of six months, with no medical contraindications during the 2017-2018 flu season.

Plan
- Offer the flu vaccination to 90% of the patients seen in the LC-CBD outpatient clinic by using an original decision support tool (the “Flu Form”) and several other change ideas.
History of “Flu Fighters”

Outcome

• The goal to vaccinate 95% of patients with leukemia/neuro-oncology was met and has been sustained.

• We were able to significantly increase the number of overall flu vaccinations administered in the LC-CBD outpatient clinic.

2016-2017 season: 294 vaccinations administered

2017-2018 season: 457 vaccinations administered
Flu Fighters 2.0

• The success of this initial pilot within the LC-CBD clinic inspired collaboration with other Levine Children’s specialty clinics.

• To maximize the impact of this QI project and to leverage resources during the 2018-2019 flu season we coordinated across the following Levine Children’s specialty clinics:
  • Nephrology Clinic
  • Pulmonology Clinic
  • Targeted specific populations within Rheumatology Clinic.
Project Spread

This project is a comprehensive and effective approach to reducing the risk of a serious health threat for some of our most vulnerable patients.

The Value of Spread:

- Expediting improvement across the children's service line
- Putting adaptable change ideas into practice
- Standardizing care
- Creating a low cost, easily sustainable process that yields significant benefits to the most critical patients.
Quality Improvement Process

Model for Improvement/PDSA

**Setting Aims**
The aim should be time-specific and measurable; it should also define the specific population of patients or other system(s) that will be affected.

**Establishing Measures**
Teams use quantitative measures to determine if a specific change actually leads to an improvement.

**Selecting Changes**
Ideas for change may come from those who work in the system or from the experience of others who have successfully improved.

**Testing Changes**
The Plan-Do-Study-Act (PDSA) cycle is shorthand for testing a change in the real work setting—by planning it, trying it, observing the results, and acting on what is learned. This is the scientific method adapted for action-oriented learning.
**Project AIM**

**Collective Project AIM (What are we trying to Improve?):**
We AIM to improve the flu vaccination rates of chronically ill pediatric patients >6 months old.

<table>
<thead>
<tr>
<th>Clinic Name</th>
<th>Patient Populations being tracked for this project</th>
<th>Outcome Measure: % vaccinated</th>
<th>Patient Qualifiers</th>
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</table>
| LC-CBDCT          | Leukemia                                         | Goal = 95%                    | • Patients on active chemotherapy  
|                   | Neuro Oncology (i.e. brain tumor)                |                               | • > 6 months old  
|                   |                                                  |                               | • No medical contraindications  
|                   |                                                  |                               | • Patients seen between 9/1/18-12/31/18                                    |
| Nephrology/Rheumatology | Kidney Transplant              | Goal = 95%                    | • > 6 months old  
|                   | Nephrotic Syndrome                       | Goal = 90%                    | • No medical contraindications  
|                   | Lupus                                           | Goal = 90%                    | • Patients seen between 9/1/18-12/31/18                                    |
| Pulmonology       | All patients                                   | Goal = 80%                    | • > 6 months old  
|                   |                                                  |                               | • No medical contraindications  
|                   |                                                  |                               | • Patients seen between 9/1/18-12/31/18                                    |
Change Concepts

1. Creating a multi-disciplinary/team-based approach to care delivery

2. Explaining the "why" and importance of the flu vaccine to patients and families
   - Introductory letter or flu fact sheet displayed in all patient rooms
   - Staff scripting
   - Flu clinics/personal phone calls and letters to invite patients

3. Pre-visit planning

4. Utilizing a decision support tool (the Flu Form)
Decision Support Tool – Flu Form

Levine Children’s Specialty Center
Pediatric Nephrology Clinic
Please complete for each patient with Rooming/Vital Signs

Pt. Diagnosis (check): □ Transplant □ Neph Syndrome □ Lupus □ Other

□ Patient/family would like to have vaccine today

□ Patient/family would like to discuss with physician prior to vaccine

□ Patient/family declined vaccine (Already received?   Yes   No)

□ Patient will receive at PCP

Flu–Shot Given: □ Yes □ No

______ (staff initials)

*Put completed form in flu form collection box *

Place Patient Sticker Here
Key Ingredients to Success

1. Provider Champion
2. Addressing the Why
3. Decision Support
4. Population Health
5. Team-based Care
6. QI Culture/ Huddles
Gaining Patient Buy In At Every Level

1. The flu form prep by CMA with patient sticker
2. CMA has patient fill out flu form (sharing flu facts/letter).
3. Provider gives clinical justification if patient declines
4. CMA or RN provides flu shot
5. Documentation in Cerner/NCIR
How do we address the growing trend of declines?
How do we know our changes are an improvement? Data

- Goal of 95% met
- Goal met 7 weeks earlier than previous year
- Flu form, pre-visit planning

- Goal of 90%
- Flu form, calling to invite patients to a flu vaccine clinic

- % of clinic visits receiving flu vaccine
- Goal of 80% met
- Training staff on NCIR process, flu form, assessing refusals, data review
How do we know our changes are an improvement? Data

- Process measure
- Goal to provide flu form to 90% of patients
- Each specialty operationalized this measure slightly differently

- Compares the number of flu vaccinations given 2016-2018
- An increase in 194% over baseline for all included specialties
- Increase by 407% over average of previous two years for Pulmonary patients
How do we know our changes are an improvement? Data

- Current pediatric data cost estimates range between $7,030 for an inpatient ward stay to $39,792 for an ICU admission for influenza care
- If the flu vaccine is 80% effective (total 1,164 vaccinated), we prevented roughly 900 children from contracting the flu
- If half of those patients (450 patients), had contracted a serious illness due to their higher risk status, that would be a minimum of $7,000 per child

450 patients x $7,000 = $3.1 million cost savings conservatively
Key Points

• The result of this work is a low-cost, easily sustainable, fully scalable package yielding significant community benefit and the potential to impact health disparities.

• 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, standardizing messaging, and using data to inform next steps, we succeeded in vaccinating a tremendous number of pediatric specialty patients and surpassing benchmarks established by some of the best specialists in the country.

• An especially valuable result of this project is proof that the change package can be successfully adapted according to individual clinics’ needs.
Key Players

Levine Children's Cancer & Blood Disorders Clinic Staff

Pediatric Nephrology - MAs
Key Players

Pediatric Nephrology - Nephrology Nurses

Pediatric Nephrology/Rheumatology
South Park MAs

Pediatric Rheumatology
Key Players

Pediatric Pulmonary - Provider Champions, Nurses, and Medical Assistants
Improvement Strategy/Tools
QI Coaches Contact Info

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