



BACKGROUND

Influenza Burden

- Hospitalization rate 46.9 for children 0-4 years old per 100,000 population in 2013-14
- Number of influenza-associated pediatric deaths: 35-171 per season from 2004-2013
 - 2009 pandemic (348 pediatric deaths)

Influenza Vaccine

- Concern that U.S. childhood immunization rates suboptimal
 - Vaccinations not given to every eligible person at the recommended age
- Reminders
 - Postal + Telephone → ? most effective

Current Practice at the Clinic

- Influenza vaccine offered for any eligible child who presents during the Influenza season
- No parent reminder system is in place
- As of three years of age, children are scheduled yearly well-visits

Potential Problem

- Children with no well-visits during the flu season – higher probability of not getting the flu vaccine?

Objectives:

- Compare vaccination rates in three year old children with well-visits during and outside the flu season
- Evaluate use of parent reminders in improving influenza vaccination rates

MATERIALS and METHODS

Missed Opportunities

- 1,059 children presented for annual three year old well-visits from Apr 1st, 2014 to Mar 31st, 2016 to the HealthNet Pediatric and Adolescent Care Center (PACC), staffed by IU School of Medicine physician residents-in-training

- Three year old children were divided into two groups based on availability of flu vaccine at the clinic at the time of the well-visit
 - Apr 1st to Sep 30th [outside flu season]
 - Oct 1st to Mar 31st [during flu season]
- Compared vaccination rates between the two groups

Parent Reminders

- Children who presented for three year old well-visit from Apr 1st to Sep 30th, 2015 [outside flu season]
- Reminder cards with educational material distributed by secretary at checkout
- Parents wrote down addresses on cards
- Cards mailed as soon as flu vaccine available at clinic
- Evaluated yearly vaccination rates before [Apr 2014 - Mar 2015] and after [Apr 2015 - Mar 2016] the intervention

Statistical Analysis:

- SPSS - Pearson Chi-Square Test

INFLUENZA (FLU) FACTS – 2013/2014 SEASON

70 Influenza-associated deaths in the State of Indiana

96 Influenza-associated deaths in CHILDREN from 30 states

Complications of flu include pneumonia, ear infections, sinus infections, dehydration, and worsening of chronic medical conditions, such as asthma.

INFLUENZA and COMMON COLD are NOT the same!

INFLUENZA can cause SERIOUS ILLNESS and DEATH!

The FLU SHOT does NOT cause the FLU!

Please call to schedule a nurse visit for your child's FLU SHOT.

RESULTS

Missed Opportunities

- Vaccination rate for all three year old children was 32.2% for the two-year study duration

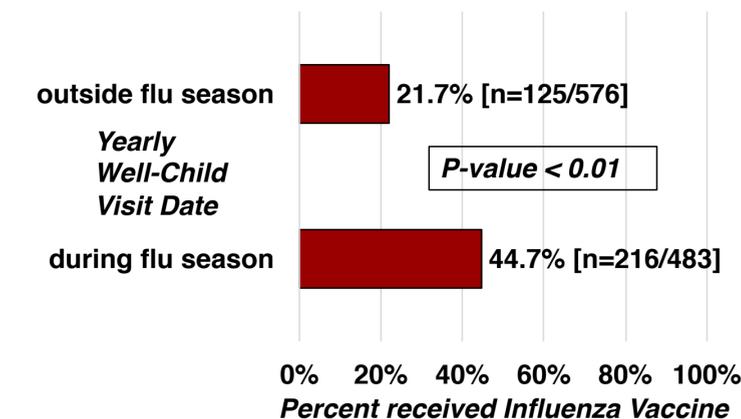


Figure 1: Flu Vaccination Rates and Date of Visit based on Vaccine Availability

Parent Reminders

- 288 children presented for a three year old well-visit between Apr 1st and Sep 30th, 2015 - before flu vaccine availability for season 2015-2016
- 70/288 (24.3%) filled the cards
- 47/70 (67.1%) came back for flu vaccine

Table 1:
Influenza Vaccination Rates
Apr 1st, 2014 - Mar 31st, 2016

Year	Vaccination Rate in Three Year Old Children
Apr 2014 - Mar 2015 (before Intervention)	32.9% [n = 171/519]
Apr 2015 - Mar 2016 (after Intervention)	31.4% [n = 170/540]

P-Value 0.610

LIMITATIONS

- Low number of returned cards
 - Parental refusal
- Patient population
 - No permanent valid phone numbers

CONCLUSIONS

- Children were twice less likely to receive the Influenza vaccine if their scheduled annual three year old well-visit was outside the flu season
- Reminder cards with printed educational material distributed by secretaries at time of check-out did not improve vaccination rates
- Efforts targeting the lower vaccination rates in children whose annual visits fall outside the Influenza season are warranted

ACKNOWLEDGEMENTS

Special Thanks to Dr. Laura Price, Tracy Davis, and all PACC Staff

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