Influenza vaccination rates amongst high risk pediatric populations

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INTRODUCTION

- During the 2017-2018 influenza season, >48,000 influenza-related hospitalizations, and 83 deaths with confirmed influenza occurred in children.
- High risk pediatric patients, including those with asthma and structural heart disease, may have low vaccination rates.
- Influenza vaccines are routinely offered at the Children’s Hospital of Wisconsin-Fox Valley (CHW-FV) Asthma/Allergy clinic
- Children with structural congenital heart disease (CHD) seen in the CHW-FV Pediatric Cardiology clinic are not provided the influenza vaccination onsite and must receive influenza vaccination at an alternate time and location

STUDY AIMS

- Determine influenza vaccination rate for high risk pediatric patients seen at CHW-Fox Valley cardiology and asthma clinics
- Determine if there is a significant difference in vaccination rates between Allergy and Cardiology clinic patients based on different clinical operations

METHODS

- Patients seen in each clinic, ages 6 months to 18 years between October 2017 and April 2018 with a diagnosis of reactive airway disease/asthma or CHD
- Clinical demographics, vaccination status, and severity of disease were retrospectively recorded
- Vaccination status was verified using the Wisconsin Immunization Registry

RESULTS

Table 1. Characteristics of patients with reactive airway disease/asthma or congenital heart defects seen during the 2017-2018 influenza season

<table>
<thead>
<tr>
<th>Patient Demographics</th>
<th>Total (n=200)</th>
<th>Adequately Vaccinated (n=177)</th>
<th>Inadequately Vaccinated (n=23)</th>
<th>Total (n=293)</th>
<th>Adequately Vaccinated (n=246)</th>
<th>Inadequately Vaccinated (n=47)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female</td>
<td>114 (57%)</td>
<td>114 (58%)</td>
<td>124 (62%)</td>
<td>124 (62%)</td>
<td>124 (62%)</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>86 (43%)</td>
<td>63 (36%)</td>
<td>99 (50%)</td>
<td>70 (29%)</td>
<td>70 (29%)</td>
</tr>
<tr>
<td>Race</td>
<td>Caucasian or White</td>
<td>132 (63%)</td>
<td>116 (59%)</td>
<td>130 (67%)</td>
<td>101 (45%)</td>
<td>101 (45%)</td>
</tr>
<tr>
<td></td>
<td>Non Caucasian or White</td>
<td>68 (32%)</td>
<td>61 (30%)</td>
<td>63 (30%)</td>
<td>45 (29%)</td>
<td>45 (29%)</td>
</tr>
<tr>
<td>Age</td>
<td>0-4 years</td>
<td>68 (32%)</td>
<td>53 (25%)</td>
<td>71 (38%)</td>
<td>53 (25%)</td>
<td>53 (25%)</td>
</tr>
<tr>
<td></td>
<td>5-9 years</td>
<td>72 (36%)</td>
<td>60 (28%)</td>
<td>78 (40%)</td>
<td>60 (26%)</td>
<td>60 (26%)</td>
</tr>
<tr>
<td></td>
<td>10-16 years</td>
<td>57 (28%)</td>
<td>46 (23%)</td>
<td>63 (32%)</td>
<td>46 (20%)</td>
<td>46 (20%)</td>
</tr>
<tr>
<td></td>
<td>17+ years</td>
<td>33 (16%)</td>
<td>27 (13%)</td>
<td>36 (19%)</td>
<td>27 (12%)</td>
<td>27 (12%)</td>
</tr>
</tbody>
</table>

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- High risk patients at CHW-FV Asthma/Allergy and Cardiology programs had a higher rate of influenza vaccination than the pediatric population of Winnebago county (31%).
- There was a statistically significant difference between vaccination rates in the Asthma/Allergy program compared to the Cardiology program (p=0.0285; p<0.05)
- Of the patients seen in the Asthma/Allergy program, 24% received their vaccination at the subspecialty clinic
- Among asthmatics, persistent asthmatics had the highest rate of immunization
- With progressive cardiac complexity, immunization rates increased
- Offering influenza vaccine in sub-speciality clinics may improve vaccination rate among high risk patients by minimizing missed opportunities
- Future directions include prospective study of immunization rates after influenza vaccination is offered in both programs

REFERENCES