Are children at risk of severe influenza receiving seasonal influenza vaccine? An audit of outpatient clinics at Alder Hey Children’s Hospital.

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Background

• Globally influenza affects 20-30% of children each year
• 39% of all influenza consultations in the community are for children
• UK government directs that all children in high risk groups should be vaccinated against influenza
• Rates of vaccination in high risk children are much lower than desired
Influenza Vaccination Programme

Age over 6 months in risk groups
• Chronic respiratory disease (asthma/COPD)
• Chronic heart disease
• Chronic renal disease
• Diabetes mellitus
• Immunosuppressed due to disease or treatment
• Chronic neurological conditions

All children aged two to eight (but not nine years or older) on 31 August 2017 with nasal LAIV i.e. school year 4
Aims

• Asses vaccination rates of at-risk children and their relatives attending specialist outpatient clinics during influenza season 2016-17

• Asses vaccination rates by clinic specialty

• Identify themes in the reasons parents report to explain why their child has not been vaccinated against influenza
Method

• **Subjects**
  • Parents & carers of at-risk children

• **Setting**
  • Specialist outpatient clinic waiting rooms

• **Cases**
  • Clinics selected by definition of at risk group
  • Rheumatology, Respiratory, Oncology, Neurology, Nephrology, Immunology, and Diabetes

• **Controls**
  • Dental, ENT, GI, Endocrine, Urology, General Paediatrics
1. Age of patient

2. Sex
   - Male
   - Female
   - Prefer not to disclose

3. Religion
   - Other (please specify)

4. Name of clinic speciality

5. Has the patient ever received the seasonal influenza vaccination?
   - Yes
   - No
   - Prefer not to disclose

6. Has the patient received the influenza vaccination this season (2016/17)?
   - Yes
   - No
   - Prefer not to disclose

7. If answered yes to Q6, where did the patient receive the vaccination?
   - GP
   - Pharmacy
   - School
   - Alder Hey
   - Prefer not to disclose
   - Not applicable
   - Other (please specify)

8. If answered no to Q6, what were the reason(s) for not receiving the vaccination?
   - Other (please specify)

9. Has parent/carer of patient received the influenza vaccination this season (2016/17)?
   - Yes
   - No
   - Prefer not to disclose

10. Have all members of patient's household received the influenza vaccination this season (2016/17)?
    - Yes
    - No
    - Prefer not to disclose
Results  
216 children surveyed, 153 were at-risk

Proportion of at-risk children reported as vaccinated for 2016/7

- Yes: 58.2%
- No: 40.5%
- Prefer not to say: 1.3%

Proportion of standard-risk children reported as vaccinated for 2016/7

- Yes: 74.6%
- No: 23.8%
- Prefer not to say: 1.6%
## Results

<table>
<thead>
<tr>
<th>Clinic</th>
<th>n</th>
<th>% vaccinated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>24</td>
<td>58%</td>
</tr>
<tr>
<td>Respiratory</td>
<td>33</td>
<td>58%</td>
</tr>
<tr>
<td>Neurology</td>
<td>34</td>
<td>35%</td>
</tr>
<tr>
<td>Immunology</td>
<td>3</td>
<td>33%</td>
</tr>
<tr>
<td>Oncology</td>
<td>28</td>
<td>32%</td>
</tr>
<tr>
<td>Nephrology</td>
<td>19</td>
<td>26%</td>
</tr>
<tr>
<td>Rheumatology</td>
<td>12</td>
<td>17%</td>
</tr>
</tbody>
</table>

Where did the patient receive the vaccination this season?
## Results

<p>| Has your child received the influenza vaccination this season (2016/17)? | Have all members of the household received the influenza vaccination this season? |
|---|---|---|---|---|
| | Yes | No | Prefer not to disclose | Total |
| Yes | 20 | 42 | 0 | 62 |
| No | 2 | 87 | 0 | 89 |
| Prefer not to disclose | 0 | 0 | 2 | 2 |
| Total | 22 | 129 | 2 | 153 |</p>
<table>
<thead>
<tr>
<th>Reason Given</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not offered the influenza vaccination this season.</td>
<td>23</td>
</tr>
<tr>
<td>Not aware my child should have the influenza vaccination.</td>
<td>11</td>
</tr>
<tr>
<td>Do not agree with the influenza vaccination.</td>
<td>10</td>
</tr>
<tr>
<td>My child was too ill.</td>
<td>5</td>
</tr>
<tr>
<td>My child was not old enough to receive the influenza vaccination (where child was &gt; 6 months old).</td>
<td>3</td>
</tr>
<tr>
<td>Due to the pig derived ingredients in the influenza vaccination.</td>
<td>2</td>
</tr>
<tr>
<td>Due to current treatment.</td>
<td>2</td>
</tr>
<tr>
<td>Forgot to get my child vaccinated again influenza this year.</td>
<td>2</td>
</tr>
<tr>
<td>Healthcare worker advised against my child receiving the influenza vaccination.</td>
<td>1</td>
</tr>
</tbody>
</table>
Limitations

Potential bias identified

- Reliance on parental reporting
- Only one hospital surveyed, but we are a large busy centre
- Use of clinic attendance as a surrogate for at risk status is not perfect as some patients were awaiting diagnosis or rule-out of diagnosis
Conclusions

• Reliance on GP processes to identify and vaccinate at-risk children needs improvement

• Importance of education for parents and carers

• We recommend implementation of a Trust Immunisation Co-ordinator working across both primary and secondary care providers

• We recommend providing direct access to vaccination for at-risk children attending specific clinics

Protect yourself, your family and your patients - be a flu fighter
Acknowledgements

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