Can the childhood influenza vaccination season be extended beyond December?

Lessons learned from the San Diego Influenza Coverage Enhancement (SDICE) Study
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Background: Influenza

- Respiratory illness caused by influenza viruses
- Severe cases can lead to complications
  - Pneumonia
  - Bronchitis
  - Sinus and Ear Infections
- Most likely to occur in high risk populations
- Depends on which viruses are circulating
Background: Influenza Season

- October – March
  - Regular Season: October – December
  - Late Season: January – February
- In 2007, the CDC emphasized expanding influenza vaccination to January and later
  - Cases of influenza peak in February
Background: Influenza in Children

- High risk population
- Sustain highest attack rates during influenza epidemics
  - Preschool aged: >40%
  - School aged: 30%
- Initiate and maintain epidemics
- Increase medical costs
  - Care of sick children
  - Increased work absenteeism in adults
Background: Academic Detailing

- Based on a marketing strategy used by pharmaceutical manufacturers
- Form of continuing medical education
- Health educator visits a medical office to provide education on designated topics and feedback on performance
  - Ex: immunization rates
- Effective method of reaching providers to deliver key prevention methods and suggestions to improve delivery
Background: Strategies to Improve Coverage Rates

- Physician Medical Chart Reminders
- Reminder / Recall
- Vaccine Clinics
- Standing Orders
- Waiting Room Screening Forms
- Waiting/Exam Room Posters
Background: Current Vaccination Rates

- Healthy People 2020 Goal
  - Children 6 months – 59 months: 80% influenza vaccination rate

- National Rates (2010-2011 Season)
  - 6 months – 59 months: 60.9%

- California Rates (2010-2011 Season)
  - 6 months – 59 months: 64.8%

Study Design: Data Set

- San Diego – Influenza Coverage Enhancement (SD-ICE) Project
- Two year intervention project funded by the CDC
- Goals:
  - Increase influenza vaccination rates in children 6 – 59 months old
  - Increase late season vaccination rates
Baseline (2008 – 2009)
Recruited 6 medical clinics
2 Community Health Centers (CHC), 2 Group Practices (GP), 2 Private Practices (PP)

Control Group:
1 CHC, 1 GP, 1 PP
PIS performed (n=389)

Intervention Group:
1 CHC, 1 GP, 1 PP
PIS performed (n=399)

Follow Up (2010 – 2011)
Control Group:
1 CHC, 1 GP, 1 PP
PIS performed (n=367)

Follow Up (2010 – 2011)
Intervention Group:
1 CHC, 1 GP, 1 PP
PIS performed (n=350)
Academic Detailing Visit

- Intervention practices received a loose leaf binder with:
  - Influenza vaccination coverage rates from chart audit performed
  - Comparison of practice coverage rates with other practices in study
  - Information of evidence based strategies to increase influenza rates
  - Templates for screening forms, posters, etc.
Research Question 1

Do intervention clinics experience the expected increase in influenza vaccination rates the follow up year in comparison to the baseline following the academic detailing intervention?
Research Question 2

Do intervention clinics exhibit the expected increase in late season influenza vaccination rates the follow up year in comparison to the baseline following the academic detailing intervention?
## Results: Increase in vaccination rates?

### Study group and year comparisons of influenza vaccination coverage rates by study group for children 6-60 months

<table>
<thead>
<tr>
<th>Study Group</th>
<th>Baseline Coverage Rate (%)</th>
<th>Follow Up Coverage Rate (%)</th>
<th>OR (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Control</strong></td>
<td>73.0</td>
<td>77.4</td>
<td>1.00</td>
<td>0.1641</td>
</tr>
<tr>
<td><strong>Baseline</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Follow Up</strong></td>
<td></td>
<td></td>
<td>1.27 (0.91, 1.76)</td>
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<tr>
<td><strong>Intervention</strong></td>
<td></td>
<td></td>
<td></td>
<td>0.0313*</td>
</tr>
<tr>
<td><strong>Baseline</strong></td>
<td>55.4</td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td><strong>Follow Up</strong></td>
<td>63.1</td>
<td></td>
<td>1.38 (1.03, 1.85)</td>
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</tbody>
</table>

* Where p<0.05 considered statistically significant
# Results: Increase late season?

<table>
<thead>
<tr>
<th>Study group and year comparisons of influenza vaccination coverage rates during regular or late season for children aged 6-60 months</th>
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<tr>
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<tr>
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<tr>
<td>Control</td>
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<tr>
<td>Baseline</td>
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<td>Follow Up</td>
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<td>Baseline</td>
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<tr>
<td>Follow Up</td>
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* Where p<0.05 considered statistically significant
Conclusions

- As a result of the academic detailing intervention:
  - Intervention clinics experienced a significant increase in influenza vaccination rates in the follow up year in comparison to the baseline ($p=0.0377$).
  - For patients in the intervention group, the odds of receiving influenza vaccination are 1.38 (95% CI: 1.03, 1.85) times higher the follow up year compared to the baseline.
Conclusions

- Intervention clinics experienced a borderline significant increase in late season influenza vaccination rates the follow up year in comparison to the baseline ($p=0.053$).
- For patients in the intervention group, the odds of receiving late season influenza vaccination are 1.55 (95% CI: 0.99, 2.42) times higher the follow up year compared to the baseline.
Contribution to the Field

- Reduce morbidity and mortality from influenza in children
- Not many academic detailing studies for influenza vaccination in children
- Success with low intensity academic detailing provides cost effective way to improve immunization rates
  - Good for public health department use
- Methods from this study can be applied to improve other vaccine immunization rates
References

- Soumerai SB, Avorn J. Principles of educational outreach (‘academic detailing’) to improve clinical decision making. JAMA 1990; 263: 549-56.
Acknowledgements

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