Shoo the Flu®
A School-Located Influenza Vaccination Model Program
May 13, 2021

Coverage Variability Among Child Age Groups

Figure 1. Flu Vaccination Coverage by Age Group, Children 6 months–17 years, United States, 2010–2020

Data Source: National Immunization Survey-Flu (NIS-Flu)
Error bars represent 95% confidence intervals around the estimates.
Coverage Dip and Race & Ethnicity Disparities

Influenza vaccination coverage among children is lower than last season, and disparities by race and ethnicity have widened

<table>
<thead>
<tr>
<th>Race / Ethnicity</th>
<th>Flu Season 2019-2020</th>
<th>Overall Coverage 2020-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black, Non-Hispanic</td>
<td>47.3%</td>
<td>54.8%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>42.1%</td>
<td>55.4%</td>
</tr>
<tr>
<td>White, Non-Hispanic</td>
<td>57.4%</td>
<td>57.9%</td>
</tr>
<tr>
<td>Others, Non-Hispanic</td>
<td>54.5%</td>
<td>55.1%</td>
</tr>
</tbody>
</table>

Data Source: National Immunization Survey - Flu Analysis and slides: Dr. Melinda Wharton, CDC

Shoo the Flu - Reducing Friction for Families

- Multi-year project to determine if vaccinating a large number of Oakland school children against influenza is effective in increasing immunization coverage and limiting community-level transmission

- Model SLIV programs: Hawaii’s Stop Flu at School, Southern California Kaiser’s Teach Flu a Lesson, Alachua County’s Control Flu, Texas’s Kick the Flu

- Unique aspects:
  - Dense, urban, multicultural location
  - Public-private partnership
  - Rigorous evaluation
  - Aim for sustainable funding from the beginning
### How It Works

![Diagram showing the flow of how the program works](image)

### Yearly Participation

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<tbody>
<tr>
<td>Vaccines given</td>
<td>8,641</td>
<td>11,277</td>
<td>8,732</td>
<td>8,815</td>
<td>8,522</td>
<td>9,052</td>
</tr>
<tr>
<td># of schools</td>
<td>110</td>
<td>138*</td>
<td>102</td>
<td>95</td>
<td>93</td>
<td>95</td>
</tr>
<tr>
<td>Avg. school participation rate (range of participation rates)</td>
<td>26% (4-76%)</td>
<td>28% (5-67%)</td>
<td>21% (5-54%)</td>
<td>21% (4-58%)</td>
<td>22% (2-57%)</td>
<td>21% (4-58%)</td>
</tr>
<tr>
<td>% of low income/uninsured students</td>
<td>57%</td>
<td>52%</td>
<td>49%</td>
<td>40%</td>
<td>37%</td>
<td>42%</td>
</tr>
</tbody>
</table>

*Pre-schools included in program

*2016 - first year using injectable vaccine only*
Evaluation Objectives

Measure whether offering school-located vaccination to elementary school students in a large, diverse school district:

↑ Influenza vaccination coverage among elementary school students
↓ Tamiflu prescriptions, doctor’s visits for flu-like illness, hospitalization among all ages
↓ Illness-related school absences among elementary school students

Evaluation methods

- Matched cohort study design
  - Intervention district: Oakland Unified School District
  - Comparison district: West Contra Costa Unified School District
- Data sources: school-based survey, school absence records, flu hospitalization surveillance dataset, large Kaiser Permanente Northern California dataset
- Statistical analysis controlled for differences between districts before the intervention
Key findings

5-12 year olds

- 7-11% higher vaccination coverage
- Up to 4% fewer Tamiflu prescriptions*
- 3k-8k fewer illness-related school absences per school year
- No decrease in flu hospitalization or medically attended ARI*

Community

- 1.6% lower Tamiflu prescriptions in adults in 2016-17*
- 3-22% lower medically attended ARI in adults* (but not preschool children)
- Lower hospitalization in all ages, 327-715 fewer per season in 65+

*Data not available for 2017-18
medRxiv: https://doi.org/10.1101/2021.05.03.21256546
Benjamin-Chung et al., *PLoS Medicine* 2020 https://doi.org/10.1371/journal.pmed.1003238

POLICY

Vaccinating kids for COVID-19 poses additional challenges for officials

White House has yet to release distribution plan that incorporates school clinics

“You’re going to end up with school districts that have an 80 percent vaccination rate and school districts that have a 10 percent vaccination rate of their student population. And those same school districts that are at the 10 percent are likely the same districts that have struggled to get back to in-person learning,” Bode said, warning about what will happen if vaccines aren’t offered in schools.

Ariel Cohen, May 4, 2021
Key Elements

- Champions from each planning partner
- Dedicated staffing
- Collaboration within local health department
- Engagement of community partners
- “Jump start” and creativity

The recipe is similar for COVID-19 vaccination programs!

ShootheFlu.org/Toolkit
Let’s Shoo the Flu (and SARS-CoV-2)!

- Activate turn-key program with the Shoo the Flu toolkit at ShootheFlu.org
- Experiment with adaptation for COVID-19 vaccination
- Document and share plans and implementation efforts
- Collect information to support evaluation

Thank you

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ShootheFlu.org/Toolkit