Improving HPV Vaccine Provision

Implementing Evidence-Based Strategies

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Disclosures

- No conflicts to disclose.
Background

- Integrated healthcare systems primary care
  - QI infrastructure
  - Vaccination data across system

- Challenges
  - Heterogenous population
  - Implementation of interventions
  - Competition among quality metric priorities
Cook Children’s Health Care System

- Integrated system in Fort Worth, TX
  - 33 pediatric primary care practices
  - 80 pediatricians serving >22,000 12-14 yr olds
  - Shared EMR with physician-assigned patients
Baseline HPV Vaccine Coverage

% of patients vaccinated*

80%
60%
40%
20%
0%

Overall (48%)

* ≥1 dose, patients ages 12-14
Aims

- Conduct a 6 month QI program using existing resources but adapted for Cook Children’s
- Evaluate reach to pediatricians
- Evaluate impact on HPV vaccination for 12-14 yr patients (≥1 dose)
Cook Children’s Network
33 pediatric clinics

Excluded (8 clinics)
7 lacked provider-specific patient panels
1 participated in pilot

25 clinics randomized

Quality improvement (13 clinics)
- 45 physicians allocated

Waitlist control (12 clinics)
- 35 physicians allocated

Design
Analysis

- Reach: % of practices and pediatricians who participated
- Impact on HPV vaccine provision at 6 mos
  - Hierarchical linear modeling
    - Full sample, intent to treat
    - Sensitivity analysis, excluding MDs with poor data
Results

- **Reach**
  - 13/13 practices scheduled training
  - 41/43 (95%) pediatricians participated
Increase in HPV vaccination coverage at 6 mos

<table>
<thead>
<tr>
<th>Study arm</th>
<th>Full sample (n=77 physicians)</th>
<th>Sensitivity analysis (n=71 physicians)</th>
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<tbody>
<tr>
<td>Quality improvement</td>
<td>8.6</td>
<td>10.2*</td>
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<tr>
<td>Control</td>
<td>6.4</td>
<td>6.9</td>
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*\( p < 0.05 \)
Discussion

- Program achieved excellent reach
- Increases in HPV vaccine provision were small compared to control
- Train the champion strategy shows promise
- Further study on increasing impact, mechanisms of behavior change, and assessment of implementation outcomes