PolicyLab
CENTER TO BRIDGE RESEARCH, PRACTICE & POLICY

Supporting Families and Clinicians with Decision-Making Improves HPV Vaccination Rates

WHAT WE ASKED:

How effective is supporting decision making—for families, clinicians, or both—at improving HPV vaccination rates among adolescent girls?

Despite clinical trials that show the HPV vaccine to be safe and effective, vaccination rates remain low among adolescent girls (35% fully vaccinated, compared to 70-80% for other common adolescent vaccines).

Parents report delaying HPV vaccination due to concerns about safety and fears that vaccination may lead to an earlier onset of sexual activity. Additionally, clinician beliefs and practice styles, and adolescents' infrequent health care visits, may limit receipt of the HPV vaccine. Receipt of all 3 doses is required for full protection.

Innovative interventions are needed to overcome these obstacles to vaccine receipt. Providing automated support to families and clinicians during health decision-making offers an opportunity to meaningfully use electronic health records to promote efficient workflows.

WHAT WE DID:

We developed a 3-part **clinician-focused decision support intervention** (education, electronic health record-based alerts, and feedback), and a **family-focused decision support intervention** (automated reminder phone calls that also directed families to an educational website).

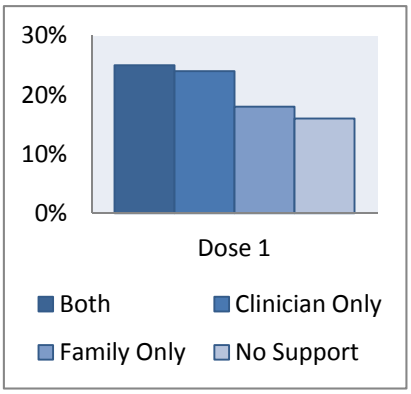
In a 1-year clinical trial, 22 primary care practices within The Children's Hospital of Philadelphia Pediatric Research Consortium were randomized to receive clinician-focused decision support or not. Within these practices, **22,486 girls** aged 11-17 and due for the HPV vaccine dose 1, 2, or 3 were randomized to receive family-focused decision support or not.

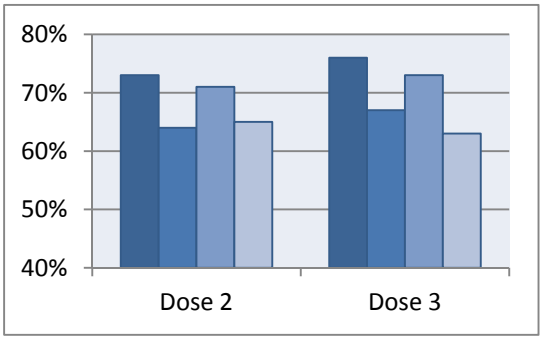
This resulted in **4 study groups**: clinician and family-focused decision support, clinician-focused only, family-focused only, and no support. We measured effectiveness of the decision support by comparing final vaccination rates and time to vaccination between the study groups.*

WHAT WE FOUND:

- Decision support directed at **both clinicians and families** most effectively increased HPV vaccination rates.
- **Clinician-focused** reminders, education, and feedback were most effective for promoting the **initiation** of the HPV vaccine series, while the **family-focused** reminder phone calls supported **completion** of the vaccine series.
- **Both types** of decision support (family-focused and clinician-focused) **accelerated vaccination uptake.**

Effectiveness of Decision Support on Final HPV Vaccination Rates





*Rates for doses 2 and 3 only include those who received the prior dose(s)

- The **cost** of implementing the most effective single intervention for each dose was **low (≤$10 per additional girl vaccinated).**
- Phone calls were not effective at directing families to the study website.

WHAT IT MEANS:

- To increase HPV vaccination rates, it is most effective to **engage both the family and the clinician**.
- These results demonstrate how **health information technology** can be utilized to engage both clinicians and families in order to improve health and health care outcomes.
- Prior work has shown that **clinician recommendation** is an important factor in determining whether children receive vaccines in general. Our results highlight that this holds true for the HPV vaccine, particularly for **initiating** the 3-dose series.
- Engaging families was key to receipt of follow-up doses (doses 2 and 3).
- The **cost** of implementing the most effective single intervention for each dose was **low**.
- Families did not visit the study website, suggesting that providing direction to specific online educational content by phone may not be effective. Email, texts, and patient portals provide additional opportunities to direct families to specific content.

*For detailed study methods, see the back of this sheet.

The Children's Hospital of Philadelphia® RESEARCH INSTITUTE
PolicyLab

STUDY METHODS: 22 primary care practices were cluster-randomized to receive clinician decision support or no intervention. Eligible adolescent girls within each practice were randomized to receive family-focused decision support or no intervention. The primary outcomes were HPV vaccination rates and time to vaccine receipt, measured separately for HPV doses 1, 2, and 3. Kaplan-Meier plots were constructed showing overall vaccination rates among eligible subjects over time. Standardized Cox proportional hazard regression models were constructed to adjust for possible differences in patient characteristics across sites not balanced by randomization. Covariates included race, age, insurance status, urban teaching vs. suburban non-teaching practice, hormonal contraceptive use, and vaccine refusal.

PUBLICATION: Fiks AG, Grundmeier RW, Mayne S, Song L, Feemster K, Karavite D, Hughes CC, Massey J, Keren R, Bell LM, Wasserman R, Localio AR. Effectiveness of Decision Support for Families, Clinicians, or Both on HPV Vaccine Receipt. Pediatrics, 2013;131(6): In Press

FUNDING: This study was funded by the Agency for Healthcare Research and Quality, contract number HHSA 290-07-10013, Task Order 4, Rockville, MD

PolicyLab Research At-A-Glance briefs highlight key research projects for the policy audience in order to inform evidence-based decision making and improve child health.

❖

For more information, go to ***www.research.chop.edu/policylab*** *or email* ***policylab@email.chop.edu***

PolicyLab
CENTER TO BRIDGE RESEARCH, PRACTICE & POLICY

The Children's Hospital of Philadelphia® | RESEARCH INSTITUTE