Analysis of Public Policy Decisions and Factors Driving HPV Vaccination Coverage in the United States

The HPV Cancer Prevention Program at St. Jude Children's Research Hospital partnered with FTI Consulting to examine public policy decisions and other factors that drive human papillomavirus (HPV) vaccination coverage across the U.S. The analysis looked at the relationship between HPV vaccination initiation and series completion with regard to nine factors. Using CDC data and peer-reviewed literature, FTI Consulting performed a cost savings analysis which projects increased HPV vaccination series initiation and reduced HPV cancer incidence resulting from addressing four of these factors could reduce national direct health care spending by more than $24 million. In addition, increased HPV vaccination series completion and reduced HPV cancer incidence could reduce national direct health care spending by more than $26 million (Figure 1).

**FIGURE 1** Total National Cost Savings from HPV Vaccine Initiation and HPV Vaccine Series Completion

<table>
<thead>
<tr>
<th>Factor</th>
<th>Cost Savings (Initiation)</th>
<th>Cost Savings (Completion)</th>
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<tr>
<td>1% increase in meningococcal conjugate vaccine uptake</td>
<td>$13,500,160</td>
<td>$16,038,543</td>
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<td>Medicaid expansion in the 12 non-expansion states</td>
<td>$10,569,947</td>
<td>$9,872,560</td>
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<td>Access to one additional VFC provider (per 100,000 children)</td>
<td>$176,480</td>
<td>$315,706</td>
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<tr>
<td>Access to one additional pediatrician (per 100,000 children)</td>
<td>$140,659</td>
<td>$130,868</td>
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<tr>
<td>Total</td>
<td>$24,387,246</td>
<td>$26,357,677</td>
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**POLICY RECOMMENDATIONS**

Using the results of the quantitative analysis along with insights from interviews and focus groups, FTI Consulting developed five policy recommendations to improve HPV vaccination coverage.

**Recommendation 1: Leverage meningococcal conjugate vaccination as a model for HPV vaccination education and recommendations**

Coverage for meningococcal conjugate vaccination had the strongest positive relationship with HPV vaccine initiation and series completion. Research shows that adolescents who receive at least one other childhood vaccine are most likely to initiate HPV vaccination. Policies should educate and empower health care providers to recommend HPV vaccination as strongly as they recommend the meningococcal conjugate vaccine, while health systems and payors should consider incentivizing providers to close the gap between HPV vaccination and meningococcal conjugate vaccination coverage.
**Recommendation 2:** Expand health care provider and practice staff education and training related to HPV vaccination and strengthen HPV vaccination recommendations for parents and caregivers

Parental education level of college or higher had the second highest positive impact on HPV vaccination initiation and series completion. Qualitative research participants said parents’ or caregivers’ decisions to vaccinate their children largely depends on a recommendation from their child’s health care provider. Participants stressed the need for consistent messaging at the national and local levels around HPV vaccination as cancer prevention. Cancer prevention partners should expand existing training and educational programs. These programs can help providers to share the value of HPV vaccination as cancer prevention. They can also address educational gaps among parents, caregivers, and patients at every point of care.

**Recommendation 3:** Improve efforts to recruit and enroll various types of health care providers in the federal Vaccines for Children (VFC) program

The analysis found that access to VFC providers was positively and significantly correlated with HPV vaccination. Policymakers and state-level decision makers should establish incentives to boost provider VFC participation. Further, taking lessons learned from the pandemic, interview participants suggested recruiting pharmacists and dental health providers to increase HPV vaccination access to those living in rural areas and those with lower incomes.

**Recommendation 4:** Expand the resources available to improve HPV vaccination data collection and reporting through state immunization information systems (IISs)

Data collection and reporting through state IISs have a significant impact on: the measurement and evaluation of targeted interventions and on the investment of resources to increase HPV vaccination coverage. However, HPV data collection has been inconsistent, resulting in incomplete reporting. Interview and focus group participants agreed that standardized, comparable (cross-jurisdiction), and data visualizations would improve HPV vaccination series completion. State and federal officials should consider establishing reliable and standardized data collection procedures and increasing funding to improve IIS capacity and infrastructure.

**Recommendation 5:** Engage in efforts to preserve and expand eligibility for Medicaid

The analysis found that Medicaid expansion correlates positively and significantly with HPV vaccination coverage. Partners, advocates, and policymakers should encourage the 12 non-expansion states to take advantage of the opportunities related to expansion. In addition, partners should consider how advocating for Medicaid expansion in these states might be more effective if combined with other HPV prevention policy proposals.

**CONCLUSION**

HPV vaccination is cancer prevention. Increasing HPV vaccination coverage will reduce the incidence of HPV cancers. Increasing HPV vaccination coverage will also save millions of dollars for our nation’s health care system. To realize the full potential and promise of the HPV vaccine, we must pursue policy change to address systemic barriers to HPV vaccination coverage in the United States.

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Scan the QR code to access the full summary report for additional information and a complete list of references.