Adolescent HPV vaccination coverage in the US: Why does coverage remain low and what can be done?

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Background

- Human papillomavirus (HPV) is the most common sexually transmitted infection (STI) in the United States (CDC, 2017).
- Incomplete human papillomavirus (HPV) immunization prior to initiation of sexual activity increases a child’s susceptibility to developing HPV-associated infections and cancers later in life.

Methodology

- Databases Searched: PubMed & EMBASE
- Inclusion Criteria: English language, Published within the past 5 years

Purpose

- To summarize the most recent human papillomavirus (HPV) vaccination rates
- To identify the most common barriers hindering HPV vaccination and discuss the effects of proposed interventions upon HPV vaccination uptake in order to provide suggestions for potential best practices to improve HPV vaccination rates
- To discuss the role nurse practitioners may play in implementing these interventions

Results

Table 1. Percentage of UTD HPV vaccination coverage amongst adolescents between 13-17 years by sex, state, and race status

<table>
<thead>
<tr>
<th>State Demographics</th>
<th>Female</th>
<th>Male</th>
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<tbody>
<tr>
<td>Overall national UTD coverage</td>
<td>49.5</td>
<td>37.5</td>
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<tr>
<td>State with the highest UTD coverage</td>
<td>73.0 (RI)</td>
<td>68.7 (RI)</td>
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<td>State with the lowest UTD coverage</td>
<td>30.8 (SC)</td>
<td>19.9 (WI)</td>
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<td>New York State UTD coverage</td>
<td>61.3</td>
<td>50.2</td>
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<tr>
<td>New York City UTD coverage</td>
<td>68.3</td>
<td>53.9</td>
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</table>

Table 2. Characteristics of included studies investigating the effects of the implementation of various interventions on HPV vaccination

<table>
<thead>
<tr>
<th>Author, Year</th>
<th>Study Type</th>
<th>Study Sample</th>
<th>Intervention Description</th>
<th>Outcomes</th>
</tr>
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<tbody>
<tr>
<td>Rand et al., 2017</td>
<td>Quality improvement</td>
<td>N= 1222</td>
<td>Multicenter United States Ages 11-17 years</td>
<td>Basic quality intervention training</td>
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<tr>
<td>Reno et al., 2018</td>
<td>RCT</td>
<td>N= 46</td>
<td>Multicenter Colorado MD, NP, PA, MA, &amp; Admin</td>
<td>35% increase in quality of care</td>
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</tbody>
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Discussion

- Most common reasons for lacking HPV vaccination rates: healthcare provider bias & inconsistent HPV vaccination recommendation (Bratic et al., 2016) & (Reno et al., 2018).
- Rhode Island has the highest rate of UTD HPV vaccination coverage for both males and females in the US. This is likely due to several factors:
  - Childhood Immunization Project
  - Vaccine Before You Graduate Program
  - 2015: Rhode Island Department of Health mandated the HPV vaccine for 7th graders for school attendance (NCTC, 2018)
- NYC HPV vaccination rates increased significantly after a public health media campaign supported by the NYSDOH, which included informative commercials, advertisements, and webinars (NYSDOH, 2017) & (NYC Health, 2018).
- The results from the Rand et al. (2017) and Reno et al. (2018) (2018) studies suggest that interventions have the potential to increase HPV vaccination rates in diverse clinical settings without increasing visit times

Implications for Nurse Practitioners

- Nurse practitioners are in a key position to educate parents and patients about the safety and benefits of the HPV vaccine.
- As promoters of immunization stewardship, nurse practitioners are in a unique position to implement these novel interventions in order to improve UTD HPV vaccination rates.

Future Research

- Implement these HPV training interventions among different populations: socioeconomic status, race, ethnicity, culture, sexual orientation, and immigrant/refugee status.
- Investigate other cost-effective, evidence-based intervention strategies to improve UTD HPV vaccination rates.

References

- Centers for Disease Control and Prevention. (2017). Adolescent HPV vaccination coverage in the US: Why does coverage remain low and what can be done? Kelsey Naruse, MSN, RN | Columbia University School of Nursing

Since the introduction of the HPV vaccine in 2006, complete adolescent HPV immunizations for US females and males have increased but remain low.

- Healthcare providers and parents have cited a number of barriers to providing the HPV vaccine to adolescents.
- Research published earlier this year investigating the effects of implementing training modules targeted towards improving healthcare provider communication about the HPV vaccine demonstrate promising results.