Increasing Humanpapilloma Virus Vaccination Rates Among Adolescents in Primary Care

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Background

- Each year, 33,000 men and women in the United States are diagnosed with a cancer caused by infection from the humanpapilloma virus (HPV), 90% of which could have been prevented through vaccination.

- Approximately 14 million new cases of HPV are reported annually, half of which are in individuals aged 15 to 24.

- Despite the proven effectiveness of this vaccine, rates of uptake are low nationwide, a mere 53.7% for females and 48.7% for males.

- When population-based strategies are not available, multipronged interventions, targeting both the provider and the patient are recommended to increase uptake.

Objectives

The purpose of this project was to implement and evaluate the effectiveness of the 4 Pillars™ Practice Transformation Program in increasing uptake of the HPV vaccine among patients aged 11-18 in a pediatric primary care clinic.

- **Short term goals**: 70% eligible patients will be offered the HPV vaccine using the same-way, same-day strategy (figure 1); 70% of patients presenting for 11 year old well child checks were vaccinated (n=32).

- **Long term goal**: 80% of eligible patients aged 11-18 will be vaccinated against HPV.

Methods

- **Bundle of interventions within the 4 Pillars™ Program**: The 4 Pillars™ Program was selected by clinic leaders to increase buy-in and adapt project to the clinic’s specific needs.

- **Staff education was conducted and patient education materials were posted throughout clinic**.

- **Tool Kit implemented over a 10-week period**:
  - **Pillar 1 Convenience and Easy Access**: Immunization status was assessed as part of vital signs and Vaccine Information Statements (VIS) were given to all eligible patients’ parents.
  - **Pillar 2 Patient Communication**: The HPV vaccine using the Same-Way Same-Day strategy from the CDC were used as an opportunity to vaccinate patients.
  - **Pillar 3 Enhanced Vaccination Systems**: Immunization status was assessed as part of vital signs and Vaccine Information Statements (VIS) were given to all eligible patients’ parents.
  - **Pillar 4 Motivation**: progress toward improving HPV vaccination rates was tracked and posted in staff breakroom.

Results

- **Initial HPV Vaccination rate**: 68% Final rate: 76.6% representing 8.6% increase (p<0.01)

- **100% of eligible patients were given VIS, immunization status was assessed as part of vital signs for 100% of patient encounters**.

- **100% of patients presenting for 11 year old well child checks were vaccinated (n=32)**.

- **15 patients seen who previously refused, consented and were vaccinated**.

- **No real difference in gender was discovered in the final HPV vaccination rate**. Among males (n=521), there was a 78% final rate and 76% for females (n=574), echoing the closing of the gender gap nationwide.

- **100% of eligible patients aged 11-18 will be vaccinated during the project period**.

Discussion

This vaccination tool-kit is an effective way to increase HPV vaccination among adolescents in primary care.

- Use each patient encounter as an opportunity to vaccinate.

- Provide a strong recommendation using the CDC’s Same-Way Same-Day strategy.

- Assess vaccination status as part of vital sign and provide VIS to all eligible patients.

- Track progress toward goals to motivate staff.

Strong recommendation at the 11 year old visit proved 100% effective, echoing literature findings of strong recommendation for vaccine as the single most effective intervention outside of a tool-kit.

Recommended areas of improvement:

- Clearly document reason for vaccine refusal to better focus education efforts.

- Advocate for vaccine to be mandatory as 50% of refusals in this project were due to deferral until mandatory for school entry.

Conclusions

- This project demonstrated successful implementation of the 4 Pillars™ Practice Transformation program to increase HPV Vaccination rates among adolescents in primary care.

- Sustainability would be enhanced through changes in electronic medical record to include drop-down menu to document reason for vaccine refusal.

References


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Abstract

Each year, 33,700 men and women in the United States are diagnosed with a cancer caused by infection from the human papillomavirus (HPV), 90% of which could have been prevented through vaccination. Despite the proven safety and effectiveness of this vaccine, rates of uptake are low nationwide, a mere 53.7% for females and 48.7% for males. The purpose of this quality improvement (QI) project was to implement and evaluate interventions guided by the 4 Pillars for Practice Transformation™ Program, an evidence-based tool-kit shown to increase HPV vaccination rates across settings, including in primary care. A bundle of interventions was implemented using the 4 Pillars Program. Pillar 1 Convenience and Easy Access: all patient encounters of those aged 11-18 were used as an opportunity to vaccinate (not just well visits). Pillar 2 Patient Communication: providers issued a strong recommendation for the HPV vaccine using the Same-Way Same-Day strategy from the Centers for Disease Control and Prevention (CDC). Pillar 3 Enhanced Vaccination Systems: Immunization status was assessed as part of vital signs and Vaccine Information Statements (VIS) were given to all eligible patients’ parents. Pillar 4 Motivation: progress toward improving HPV vaccination rates was tracked and posted in staff break room. Implementation of this tool-kit resulted in an increase in the HPV vaccination rate from 68% to 76.6%, an 8.6% increase (p<0.01). 100% of patients presenting for 11-year-old well child checks were vaccinated (n=32). 100% of eligible patients were given VIS and immunization status was assessed as part of vital signs for 100% of patient encounters. There was no real gender difference discovered in the final HPV vaccination rate. Among males (n=521), there was a 78% final rate and 76% for females (n=574), echoing the closing of the gender gap nationwide. 15 patients who previously refused, consented and were vaccinated. This QI project demonstrated this vaccination tool-kit is an effective way to increase HPV vaccination rates among adolescents in primary care.