Comprehensive Program to Improve Human Papilloma Virus Vaccine Rates in Children and Adolescents

Rajiv Naik, MD, Section Head Pediatrics- Onalaska, Immunization Champion
Julie Wilhelmson, MLT (ASCP), BBA, Clinical Informaticist 3
Gundersen Health System, La Crosse, WI

Background

Why HPV Vaccine is important:
New cancers caused by HPV per year in United States 2006-2010

<table>
<thead>
<tr>
<th>Location</th>
<th>Cervix</th>
<th>Vulva</th>
<th>Oral</th>
<th>Anus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>9,400</td>
<td>1,800</td>
<td>7,200</td>
<td>10,400</td>
</tr>
<tr>
<td>Men</td>
<td>1,200</td>
<td>600</td>
<td>300</td>
<td>1,400</td>
</tr>
</tbody>
</table>

CDC, United States Cancer Statistics (USCS), 2006-2010

Barriers to HPV Vaccine Initiation and Series Completion
- Missed opportunities to immunize
  - Absence of reminder, recall systems
  - Lack of standardized scheduling processes
- Patient and family hesitancy
  - Prevalent myths
- Health care provider hesitancy
  - Lack of knowledge or training to dispel myths
  - Fear of controversy

Aim
- Continuously improve HPV vaccination rates for eligible children and adolescents beginning in 2015 with institution-wide system changes and measurement
- Identify new opportunities to incrementally improve HPV vaccine rates within the health care system
- Develop tools to support HPV vaccine rate improvement within the electronic health record
- Provide system-wide hands-on training to health care providers and support staff to overcome HPV vaccine hesitancy

Scope
- Gundersen Health System (GHS) serving a tri-state area in Wisconsin, Minnesota, and Iowa
- Children and adolescents 11-18 years of age seen at any GHS clinic

Actions
Incremental introduction of multiple quality improvement modalities to improve HPV vaccine rates across an integrated health care system
- Vaccine champion and QI Team development
- A centralized electronic alerts, reminder, and recall system
- Development of electronic health record tools to improve vaccine initiation, and series follow-up and completion
- System-wide health care provider training to dispel HPV vaccine myths
  - Training in C-A-S-E method
- Development of electronic tools for live-prompting of health care providers to dispel HPV vaccine myths while simultaneously documenting these myths for patient education

Changes

C-A-S-E
- A proven model for talking to vaccine-hesitant parents
  - A form of motivational interviewing
- A mnemonic to organize a rapid, useful response
  - Created by Alison Singer, MD

Corroborate About Me Science Explain/Advise

Results

GHS HPV Completion Rates: Females

GHS HPV Completion Rates: Males

Multi-disciplinary Team
- Providers
- Support Staff including nurses and medical assistants
- Scheduling Specialists
- Health Information Management
- Information Systems
- Quality improvement specialists

Lessons Learned
- Centralizing and standardizing work flows was essential for system-wide improvement
- Hands on training was required with all levels of staff
- Continuous analysis of the data with ongoing identification of new opportunities within electronic health record to enhance and sustain noted improvements were essential to maintaining improvements

Next Steps
- Targeted education and training for low performing sites and health care providers
- Development of “pop-up” Best Practice Alerts to make sure immunizations are ordered at each opportunity