VACCINE NEWS

St. Luke's Children's May 2016

Disease of the month: Human Papillomavirus

Human Papillomavirus (HPV) is the most common sexually transmitted infection in the United States. In the early 1980's, cervical cancer cells were demonstrated to contain HPV DNA. Epidemiologic studies showing a consistent association between HPV and cervical cancer were published in the 1990's. High-risk , or oncogenic, HPV types act as carcinogens in the development of cervical cancer, and other anogenital cancers.

Human papillomaviruses are small double-stranded DNA viruses that infect the epithelium. More than 100 HPV types have been identified; they are differentiated by the genetic sequence of the outer capsid protein L1.

There are non-oncogenic (6 and 11), and oncogenic (16,18,31,33,35,39,45,51,52) types. Type 16 is responsible for 50% of cervical cancers, and 16 and 18 combined account for about 70%. Infection with high-risk HPV type is considered necessary for the development of cervical cancer, but by itself it is not sufficient to cause cancer because the vast majority of women with HPV infection do not develop cancer.

There is an 80% lifetime risk of acquiring HPV. Although the incidence of infection is high, most infections resolve spontaneously. The most common clinically significant manifestation of persistent genital HPV infection is cervical intraepithelial neoplasia, or CIN.

Persistent HPV infection, however, may progress directly to high-grade CIN, called CIN2 or CIN3.

HPV Disease Burden:

**20 Million are currently infected in the US*

**6.2 Million new infections per year*

**More than 80% of sexually active women will be infected by age 50*

HPV Clinical Features:

- Clinical manifestations include:
  - -Anogential warts
  - -Recurrent respiratory papillomatosis
  - -Cervical cancer precursors (cervical intraepithelial neoplasia-CIN).
  - -Cancer (cervical, anal, vaginal, vulvar, penile, head and neck)

In This Issue

- Human Papillomavirus
- HPV vaccines
- Gardasil 9 ®
- Barriers to HPV vaccination

What is new with HPV vaccination???

HPV Vaccines

- **HPV 2 (Cervarix®):** HPV 16 and 18.

  Approved Oct 2009

  Only approved for females 10-25 years of age

- **HPV 4 (Gardasil ®):** HPV 6,11,16,18.

  Approved June 2006

  Approved for males and females 9-26 years of age

- **HPV 9 (Gardasil 9 ®):** HPV 6,11,16,18,31,33,45,52,58
  Approved Dec 2014

  Approved for females 9-26/ males 9-15 years of age

Gardasil 9 ®

In Idaho

Starting in May 2015, the Idaho Immunization Program will begin taking orders for Gardasil 9 ®.

Please try to deplete your current Gardasil 4® before you order Gardasil 9® as much as possible.

They will not accept a second order of Gardasil 9 ® until Gardasil 4 ® is depleted.

Gardasil 9 ®: Human Papillomavirus 9-valent vaccine, Recombinant

***Indications**: Girls and women 9-26 years of age/boys and men 9-15*

- *Cervical, vulvar, vaginal, and anal cancer caused by HPV types 16,18, 31,33,45,52,58*
- *Genital Warts caused by types 6 and 11*
- *Precancerous and dysplastic lesions including:*

  CIN grade 1, 2, 3

  Vulvar, vaginal and anal intraepithelial neoplasia (VIN, VaIN, AIN) grades 2 and 3

***Dosage and administration**: 0.5 mL IM: 0, 2 months and 6 months*

* ACIP recommends that routine HPV vaccination be initiated at age 11 or 12 years. The vaccination series can be started beginning at age 9 years. Vaccination is also recommended for females aged 13 through 26 years and for males aged 13 through 21 years who have not been vaccinated previously or who have not completed the 3-dose series (*1*). Males aged 22 through 26 years may be vaccinated.† Vaccination of females is recommended with 2vHPV, 4vHPV (as long as this formulation is available), or 9vHPV. Vaccination of males is recommended with 4vHPV (as long as this formulation is available) or 9vHPV
* CDC ACIP guidelines published March 27, 2015
  http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6411a3.htm

HPV rates:

(NIS data –2013)

Girls 13-17 yr. old

- ***National average for girls*: 57.3%**
- ***Third dose completion: 37%***
- ***Idaho rate for girls: 51.3%***
- ***Third dose completion: 28%***

Progress with HPV vaccination is occurring, but at a slow pace.

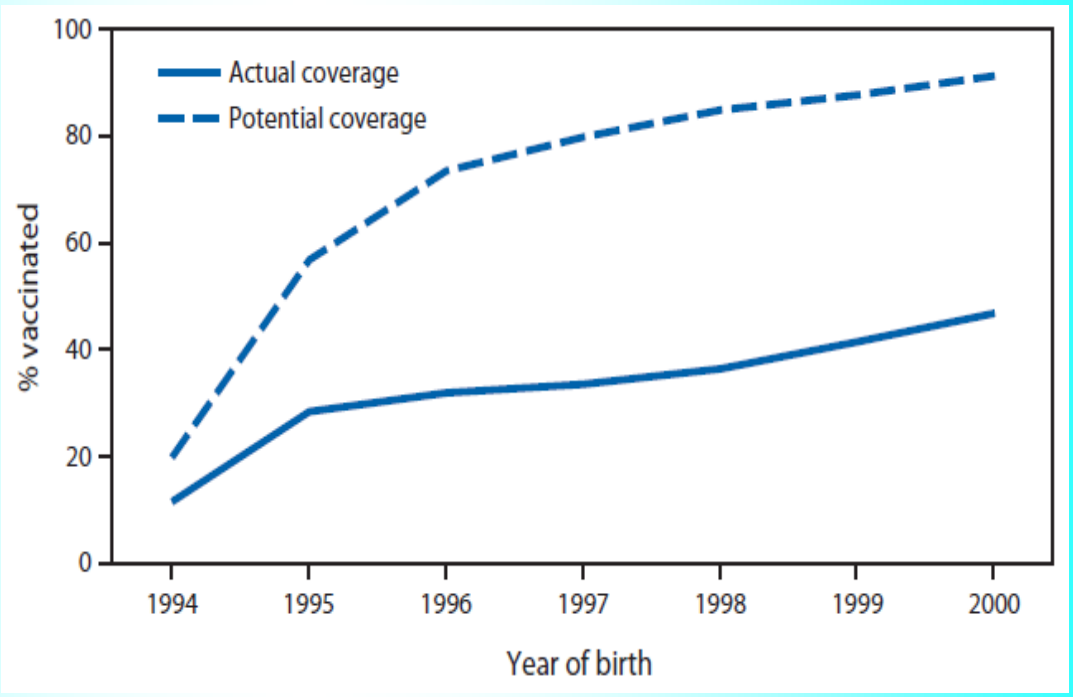
Compared to..

Other adolescent vaccination rates:

Tdap: 85%

MenACWY: 72%

http://www.cdc.gov/mmwr/preview/mmwrhtml/



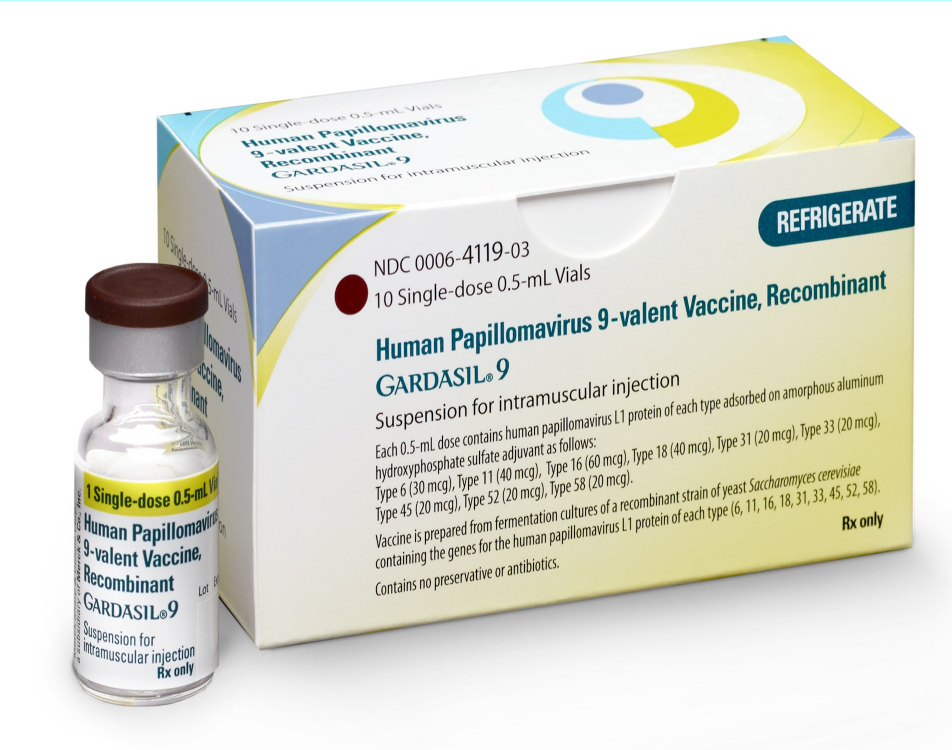
What can be done to help raise our HPV vaccination rates?

- *Top five reasons for not vaccinating adolescents with HPV vaccines:*

1. Lack of knowledge: 15%
2. Not needed or necessary: 14%
3. Safety concern/side effects: 14%
4. Not recommended by provider: 13
5. Not sexually active: 11%

- *Missed opportunities*: defined as a health care encounter occurring on or after a girl's 11th birthday during which a girl received at least one vaccination, but not her HPV.
- Tips and Timesavers for talking to parents about HPV vaccine

http://www.cdc.gov/vaccines/who/teens/for-hcp-tipsheet-hpv.pdf



Epic changes!

Make sure you update your preference lists in Epic to reflect the 9vHPV vaccine.

The IIP will only supply 9vHPV going forward through the VFC program

Packaging for Gardasil 9 ®

Kammi Hopstad
St. Luke's Children's
Immunization Coordinator
hopstadk@slhs.org