



Increasing HPV Vaccine Coverage in the United States

Melinda Wharton, MD, MPH


Director, Immunization Services Division

National Center for Immunization and Respiratory Diseases

National Vaccine Advisory Committee

February 7, 2018

Outline of Presentation

- Brief review of timeline for ACIP's recommendations for HPV vaccination
 - 2016 National Immunization Survey (NIS)-Teen results
 - Brief review of some of the activities CDC has undertaken since 2013 to increase HPV vaccine coverage
 - Current thoughts about strategies and scale
- 

Timeline of ACIP's Recommendations for HPV Vaccination

- **June 2006:** ACIP recommended HPV4 as a 3 dose series for females at age 11-12 years, with catch up for those 13-26 years who were not previously vaccinated. HPV4 can be given as young as age 9 years.
- **October 2009:** ACIP updated recommendations to include HPV2 for use in females and provided guidance that HPV4 could be used in males
- **October 2011:** ACIP recommended HPV4 as a 3 dose series for males at age 11-12 years, with catch up for those 13-21 years who were not previously vaccinated. HPV4 can be given to males 9-26 years of age.
- **February 2015:** ACIP updated recommendations to include HPV9 as a 3 dose series for use in both males and females.
- **October 2016:** ACIP recommended 2 doses of HPV vaccine, at least 6 months apart, for adolescents beginning the vaccine series before their 15th birthday and are immunocompetent, and 3-doses of HPV vaccine for persons 15-26 years of age or persons who are immunocompromised

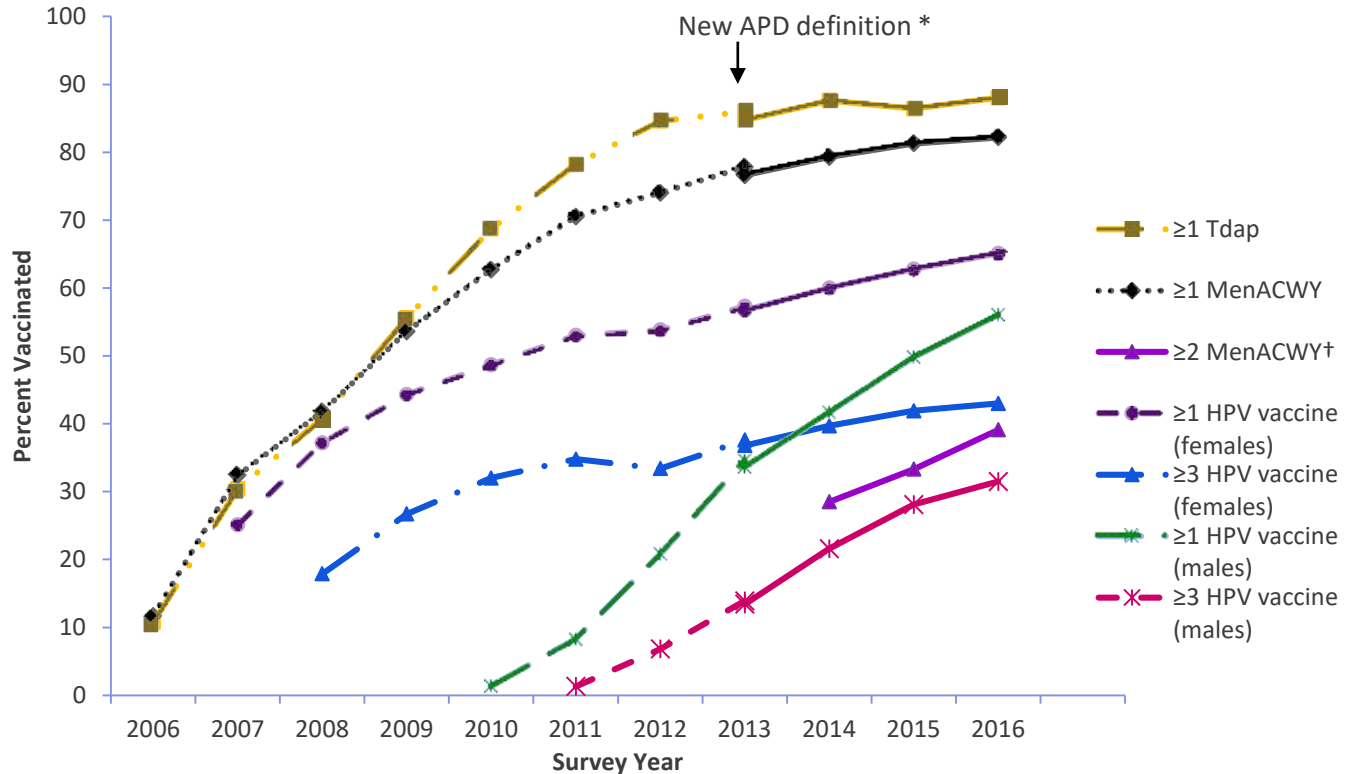
National Immunization Survey (NIS)-Teen Methodology

- Conducted annually since 2006
- Conducted among parents and guardians of eligible adolescents identified using a random-digit–dialed sample of landline and cellular telephone numbers
- Two phases:
 - Household interview
 - Mailed survey to vaccination providers to collect vaccination history
- All vaccination coverage estimates based on provider-reported vaccination histories

2016 NIS-Teen New HPV Vaccine Coverage Measures

- HPV vaccine measure for females and males combined
 - to reflect the convergence of vaccination coverage among the two groups
- HPV up-to-date (HPV UTD) measure
 - to account for the revised HPV vaccination schedule.
 - HPV UTD includes
 - those who received ≥ 3 HPV vaccine doses, or
 - (1) those who received 2 HPV vaccine doses, (2) the first HPV vaccine dose was initiated before age 15 years, and (3) the interval between the first and second dose was at least 5 months minus 4 days.

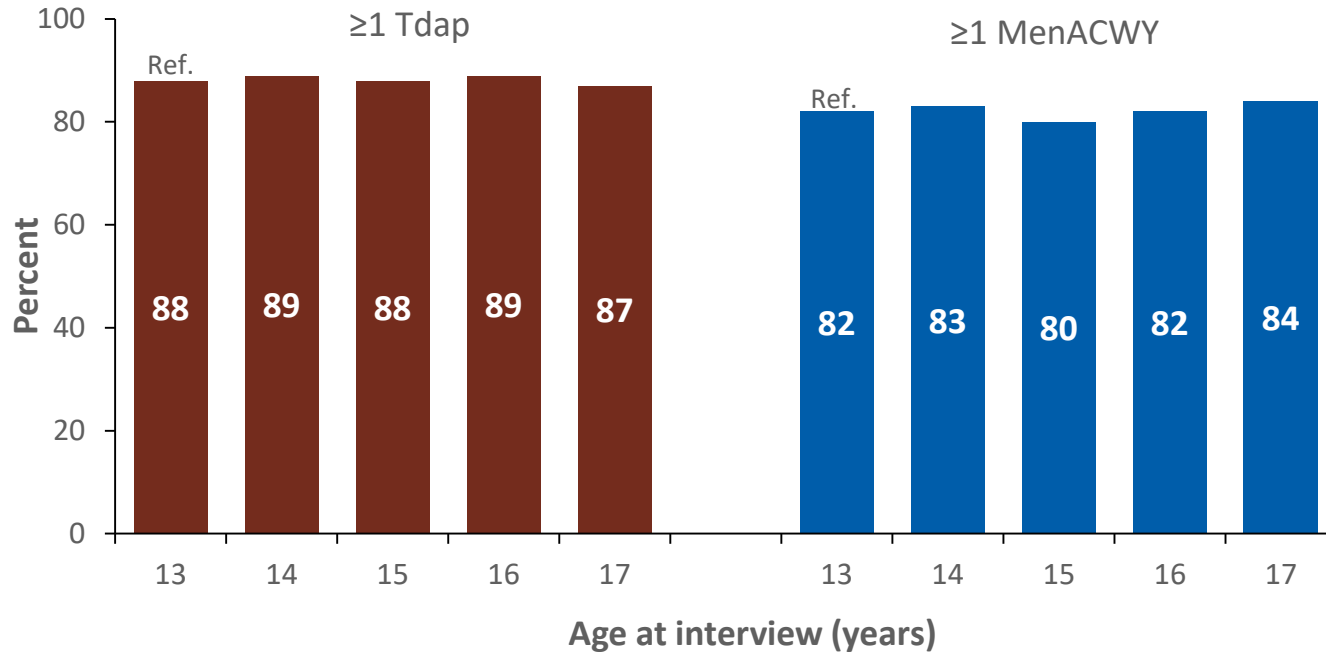
Estimated Vaccination Coverage among Adolescents Aged 13-17 Years, NIS-Teen, United States, 2006-2016



* APD = Adequate provider data

†≥2 doses MenACWY among adolescents aged 17 years

Coverage with ≥ 1 Tdap and ≥ 1 MenACWY among Adolescents Aged 13-17 Years, by Age at Interview, NIS-Teen, United States, 2016



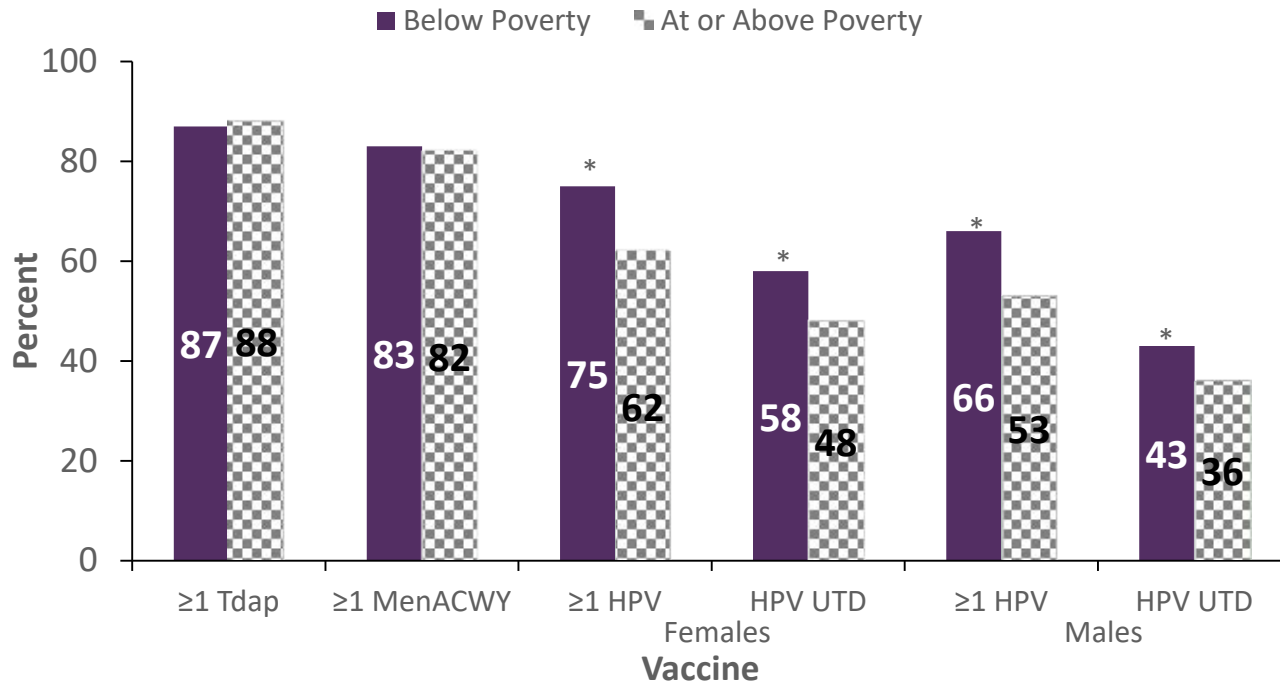
* Statistically different from adolescents aged 13 years at interview ($p < 0.05$)

Coverage with ≥ 1 HPV Vaccine Dose among Adolescents Aged 13-17 Years, by Age at Interview, NIS-Teen, United States, 2016



* Statistically different from adolescents aged 13 years at interview ($p < 0.05$)

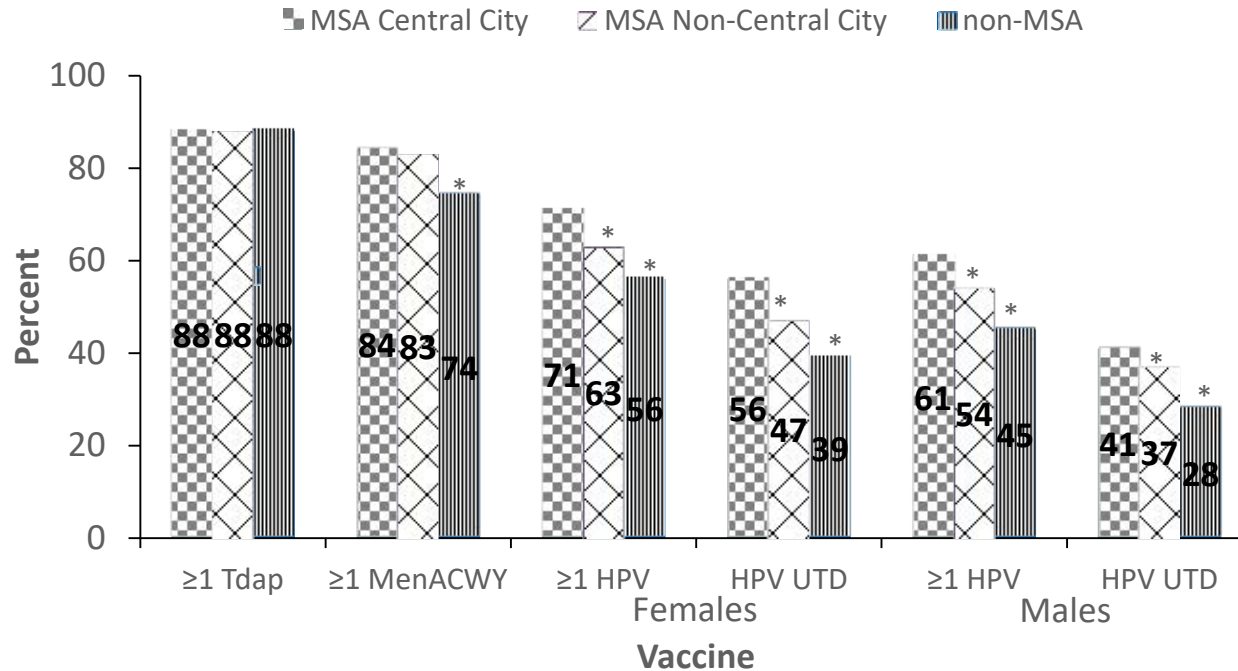
Vaccination Coverage Estimates among Adolescents Aged 13-17 Years by Poverty Status, NIS-Teen, United States, 2016



* Statistically different from adolescents at or above the poverty level ($p < 0.05$).

Adolescents with unknown poverty status ($n = 724$) were excluded from analysis.

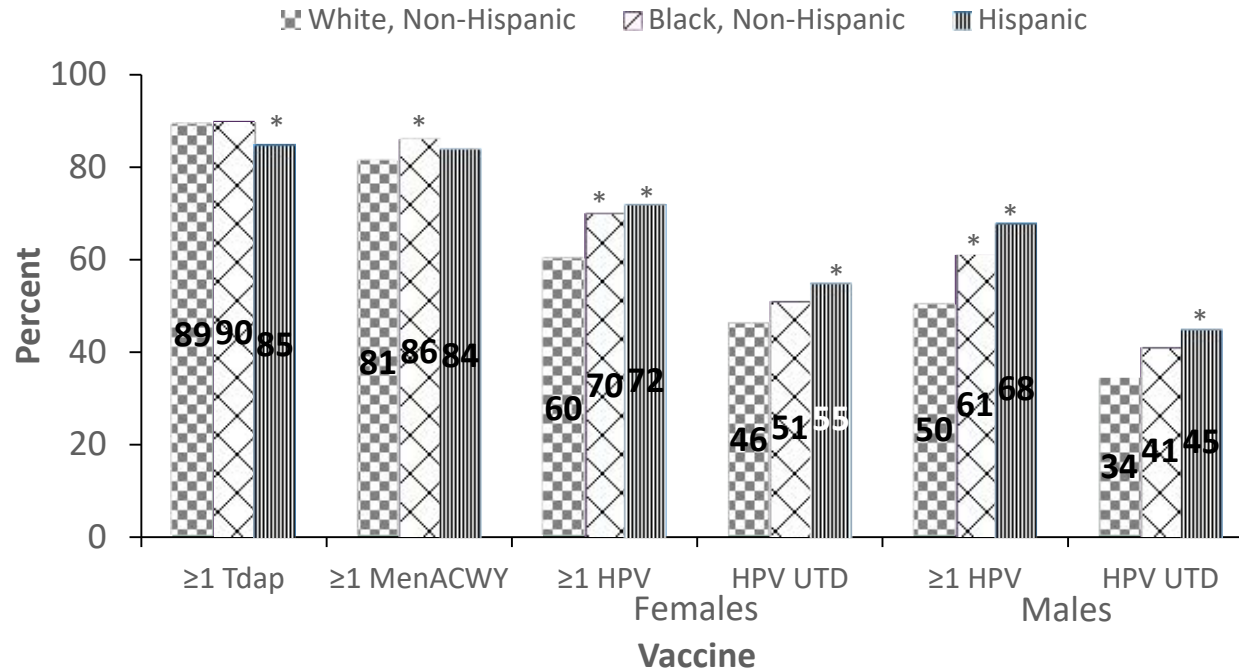
Vaccination Coverage Estimates among Adolescents Aged 13-17 Years by MSA status, NIS-Teen, United States, 2016



MSA = Metropolitan statistical area

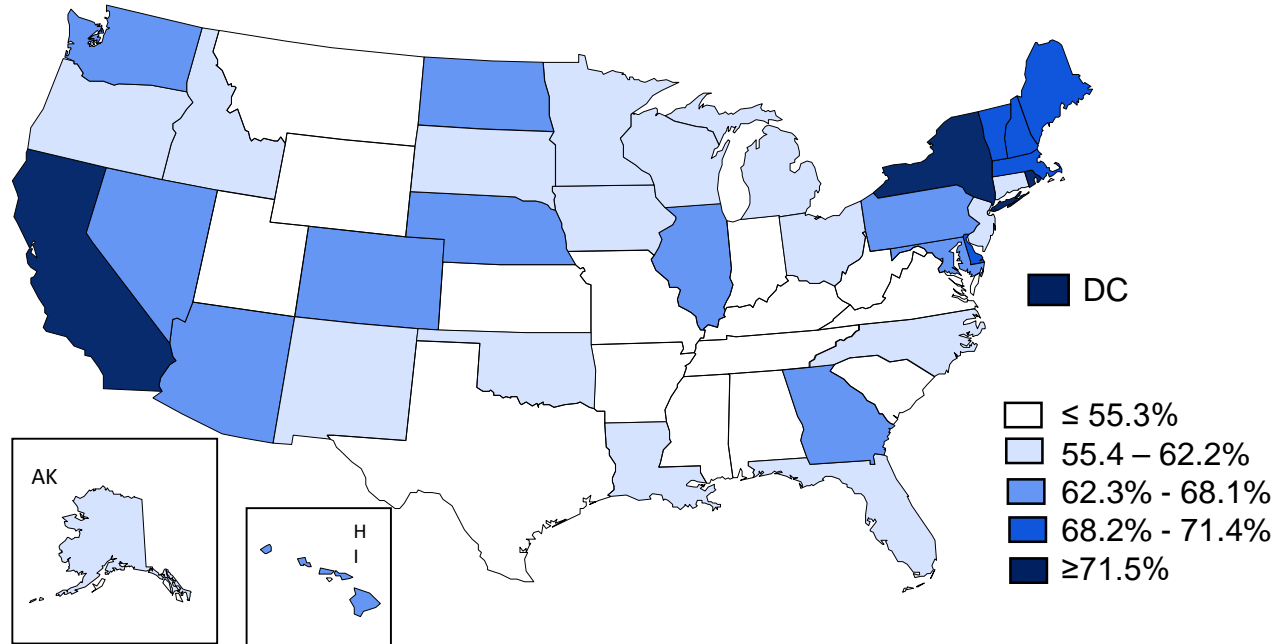
* Statistically different from adolescents living in MSA central cities ($p < 0.05$).

Vaccination Coverage Estimates among Adolescents Aged 13-17 Years by Race/Ethnicity, NIS-Teen, United States, 2016



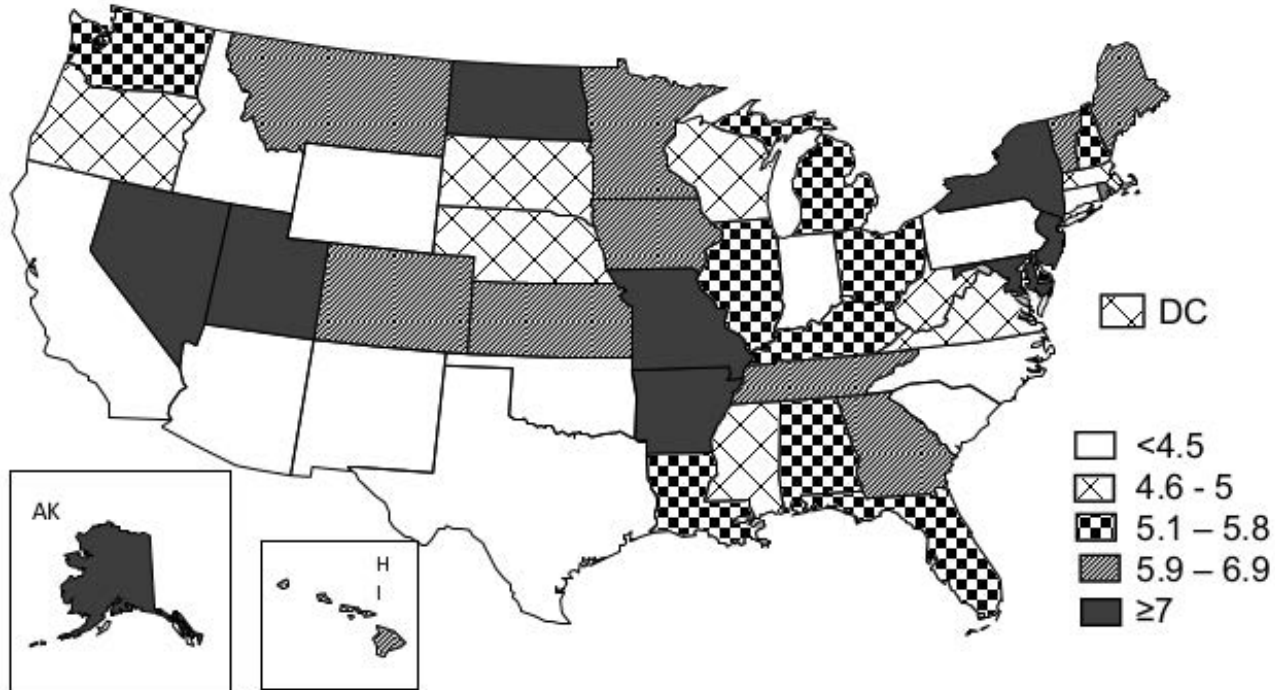
* Statistically different from White, Non-Hispanic adolescents (p<0.05).

Estimated Vaccination Coverage with ≥ 1 HPV, Adolescents Aged 13-17 Years, NIS-Teen, United States, 2016



Coverage ranged from 43.4% (Wyoming) to 88.9% (Rhode Island)

Average Annual Increase in Coverage with ≥ 1 HPV, Adolescents Aged 13-17 Years, NIS-Teen, United States, 2013-2016



National Average Annual Increase = 5.0 percentage points

The greatest statistically significant average annual increases were in New York City (7.7 percentage points), Nevada (7.6), Maryland (7.4), New York (7.2), and Alaska (7.1)

Selected NCIRD-Supported Activities to Improve HPV Vaccine Coverage, 2013-2018

- Partner with national provider and quality improvement organizations
- National HPV Vaccination Roundtable (with CDC's Division of Cancer Prevention and Control)
- Multicomponent intervention to improve HPV vaccination in 22 jurisdictions
- Technical assistance to selected states to
 - Support stakeholder engagement
 - Develop statewide plans
 - Implement effective strategies
- NACCHO partnership
- Support health services research in large health systems
- Communications campaigns targeting both providers and parents of pre-teen children

Clinicians

- 8 Research Studies Conducted
- 7 CEU Activities Produced
- 5 Medscape Commentaries
- 5 Clinician Factsheets
- 8 Posters for Clinics
- 1 Infographics
- 3 Broadcast Quality Videos
- 10+ Print Ads
- Numerous Digital Ads

Parents

- 9 Research Studies Conducted
- 1 Easy-to-Read Schedule
- 6 Parent Factsheets
- 6 Broadcast Quality Videos
- 14 Radio PSAs
- 4 Print Ads
- 1 Infographic
- 5 CDC Features
- Numerous Digital Ads

All Audiences

- 4 Broadcast Quality Videos
- 10 Drop-In Articles
- 1 Partner Toolkit
- 1 Infographic

I WAS SURPRISED TO LEARN THAT PARENTS VALUE HPV VACCINE AS MUCH AS OTHER ADOLESCENT VACCINES.

HEAR FROM OTHER DOCTORS AT BOOTH BOB

GET INTO THE ROUTINE OF RECOMMENDING CANCER PREVENTION.

SHARE WITH SOME ONE. PARENTS WILL LISTEN.

HPV VACCINE IS CANCER PREVENTION

Addressing Parents' Top Questions about HPV VACCINE

WHEN PARENTS SAY:

- Why should my child get HPV?
- Why is my doctor recommending HPV?
- How do I know my child is safe?
- How do I know my child is getting the best care?
- How do I know my child is getting the most up-to-date information?

THEY SAY:

- HPV is a common virus that causes genital warts and cervical cancer.
- HPV is a common virus that causes genital warts and cervical cancer.
- HPV is a common virus that causes genital warts and cervical cancer.

Communicating Safety and Efficacy of HPV Vaccine to Parents and Prospects near

Dr. [Name] discusses the safety and efficacy of the HPV vaccine with a parent and a prospect.

HPV

HPV is the most common sexually transmitted infection in the United States. It is caused by a virus that can be spread through skin-to-skin contact.

Most people who get HPV do not know they have it. It can be passed from one person to another through sexual contact.

There are many types of HPV. Some can cause genital warts and cervical cancer. Others can cause anal cancer and oropharyngeal cancer.

HPV vaccination is recommended for everyone between the ages of 9 and 12 years old.

HPV vaccination is recommended for everyone between the ages of 9 and 12 years old.

HPV VACCINATION IS THE BEST WAY TO PREVENT MANY TYPES OF CANCER

NATIONWIDE 4 OUT OF 10 HIGH SCHOOL SENIORS HAVE STARTED THE HPV VACCINE SERIES

NATIONWIDE 6 OUT OF 10 HIGH SCHOOL SENIORS HAVE STARTED THE HPV VACCINE SERIES

HPV CANCER PREVENTION

1. HPV VACCINE IS CANCER PREVENTION
2. PREVENTING IS BETTER THAN TREATING
3. HPV VACCINE IS BEST FOR 11-12 YEAR OLDS

VACCINATE YOUR 11-12 YEAR OLDS.

If there were a vaccine against cancer, wouldn't you get it for your kids?

HPV vaccine is cancer prevention. Talk to the doctor about vaccinating your 11-12 year old sons and daughters against HPV.

If there were a vaccine against cancer, wouldn't you get it for your kids?

HPV vaccine is cancer prevention. Talk to the doctor about vaccinating your 11-12 year old sons and daughters against HPV.

<https://www.cdc.gov/hpv/>

HEDIS Measures for HPV Vaccine Coverage

- CDC partnered with the National Committee for Quality Assurance (NCQA) to develop a HEDIS measure for HPV vaccination coverage of girls
 - Proportion of girls who have received three doses of HPV vaccine by their 13th birthday
- The measure was first publicly reported in HEDIS 2014 (MMWR 2015)
- The NCQA/HEDIS was included Core Set of Children's Health Care Quality Measures for Medicaid and CHIP in FY2014
- CDC partnered with NCQA to update the measure:
 - HEDIS 2017: include receipt of 3 doses of HPV vaccine by age 13 in the Adolescent Immunization measure
 - HEDIS 2018: align with the ACIP's recommendation for a 2 dose series

Improving HPV Vaccine Coverage in the United States

- Provider-level interventions are effective, but difficult to bring to scale
- Ongoing engagement and coalition-building at the national, state, and local level continues to be important
- Updated Adolescent Immunization measure in HEDIS 2018 provides an opportunity for systems interventions
 - State level: encouraging state planning efforts to include major payers and health systems, including Medicaid managed care organizations
 - National level: including HPV vaccine coverage in conversations with national payers, the health systems sector, and Medicaid

Acknowledgements

- Tanja Walker
- Benjamin Fredua
- David Yankey
- Laurie Elam-Evans
- Jim Singleton
- Lauri Markowitz
- Charnetta Williams
- Sarah Meyer
- Shannon Stokley
- Achal Bhatt
- Robin Curtis
- Jill Roark
- Sarah Cutchin

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

