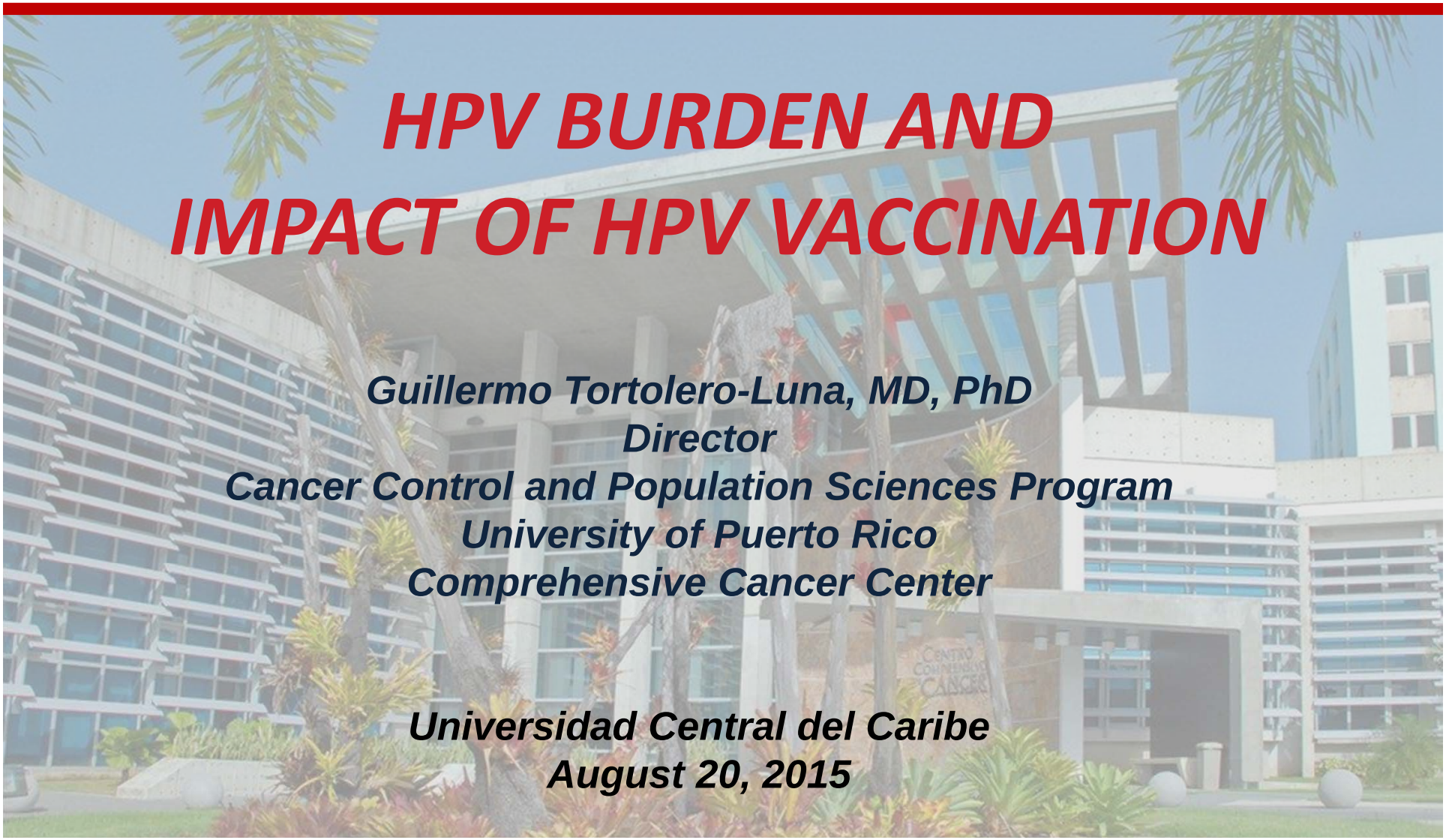

HPV BURDEN AND IMPACT OF HPV VACCINATION

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Director
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University of Puerto Rico
Comprehensive Cancer Center

Universidad Central del Caribe
August 20, 2015

Centro Comprensivo de Cáncer
universidad de puerto rico

Understanding the Burden

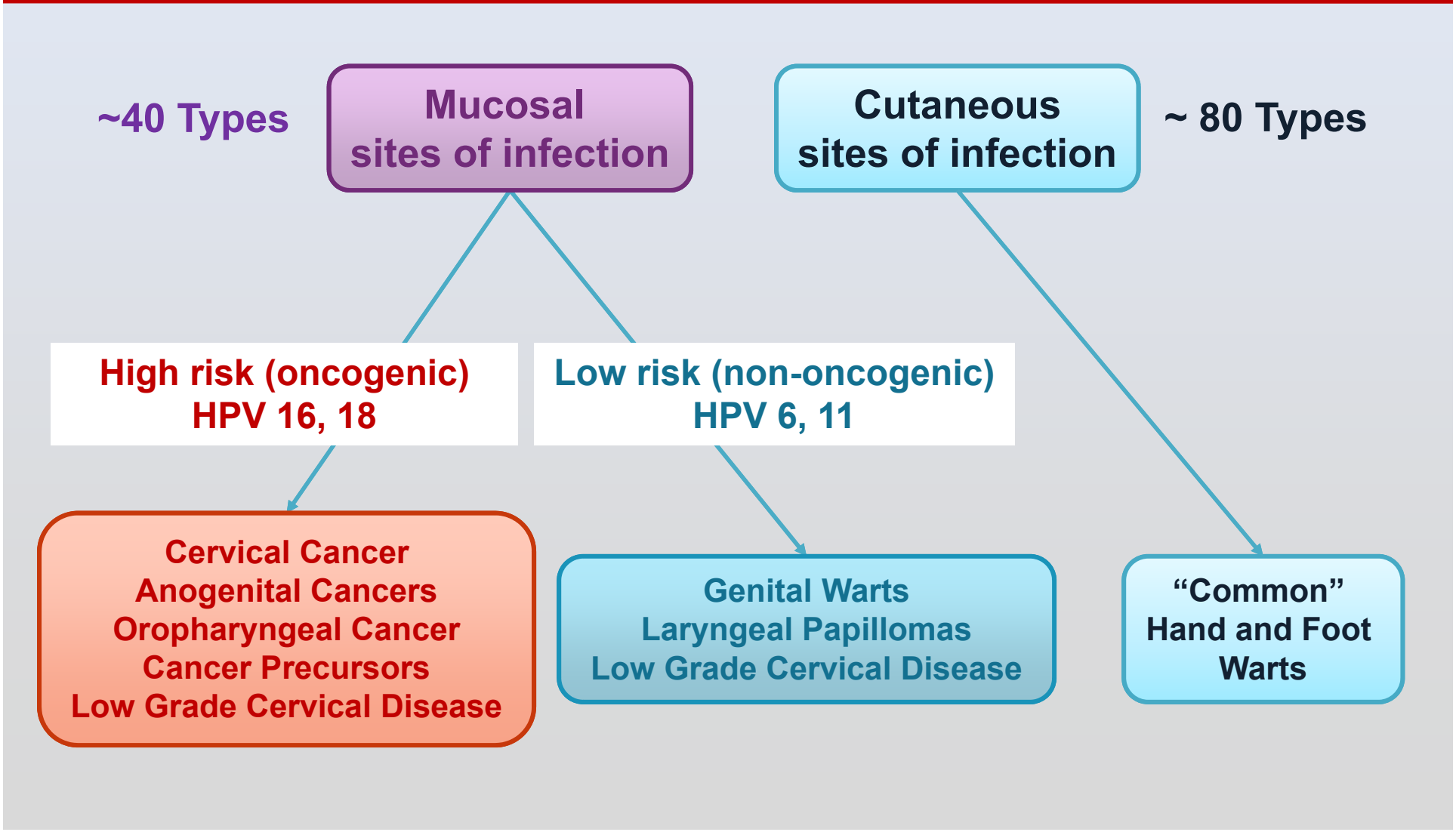
HPV INFECTION & DISEASE

HPV Infection

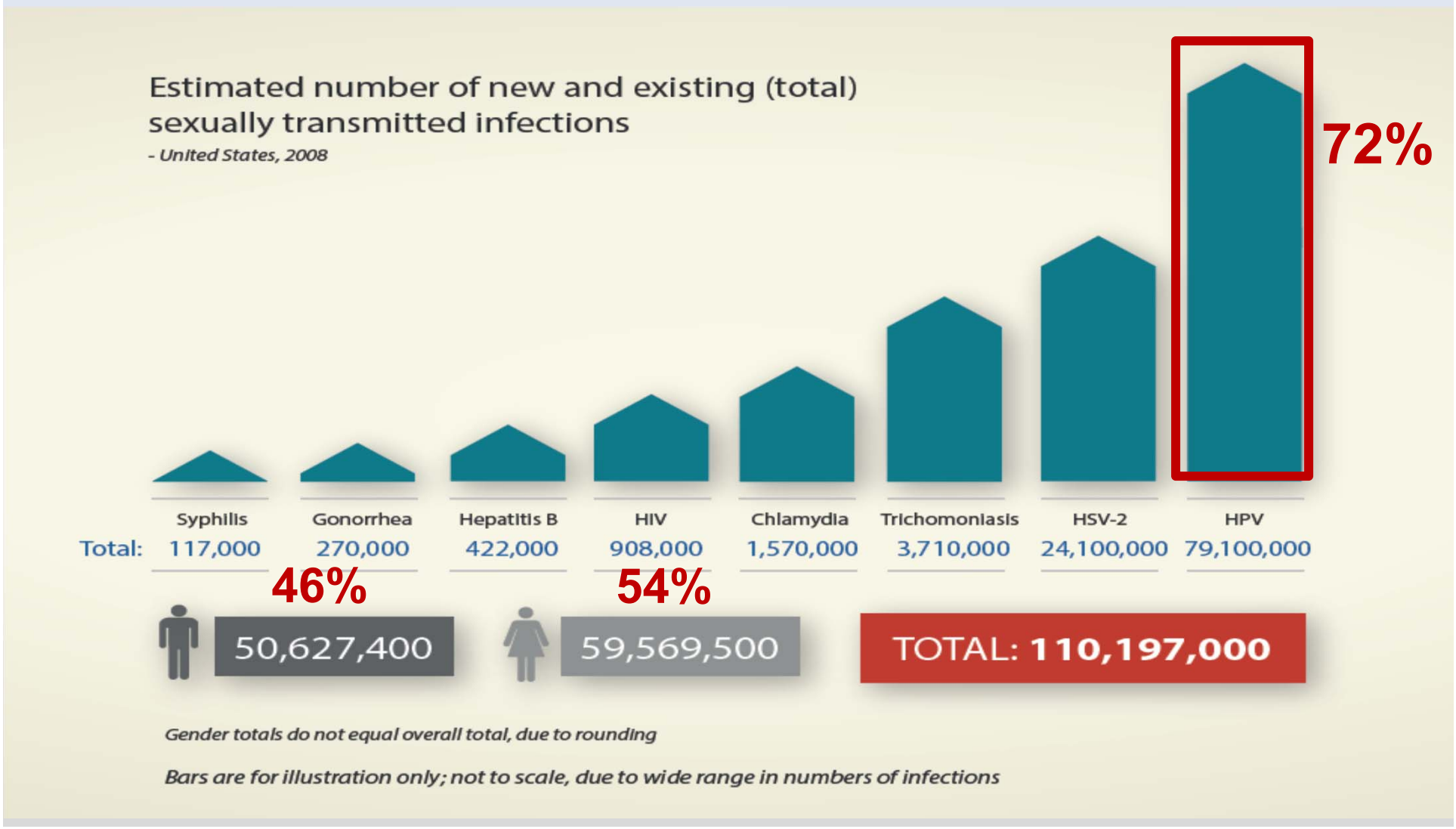
- Most common STI
- Most females and males will be infected with at least one type of HPV at some point in their lives
- HPV infection is most common in people in their teens and early 20s
- Most people will never know that they have been infected

Jemal A et al. J Natl Cancer Inst 2013;105:175-201

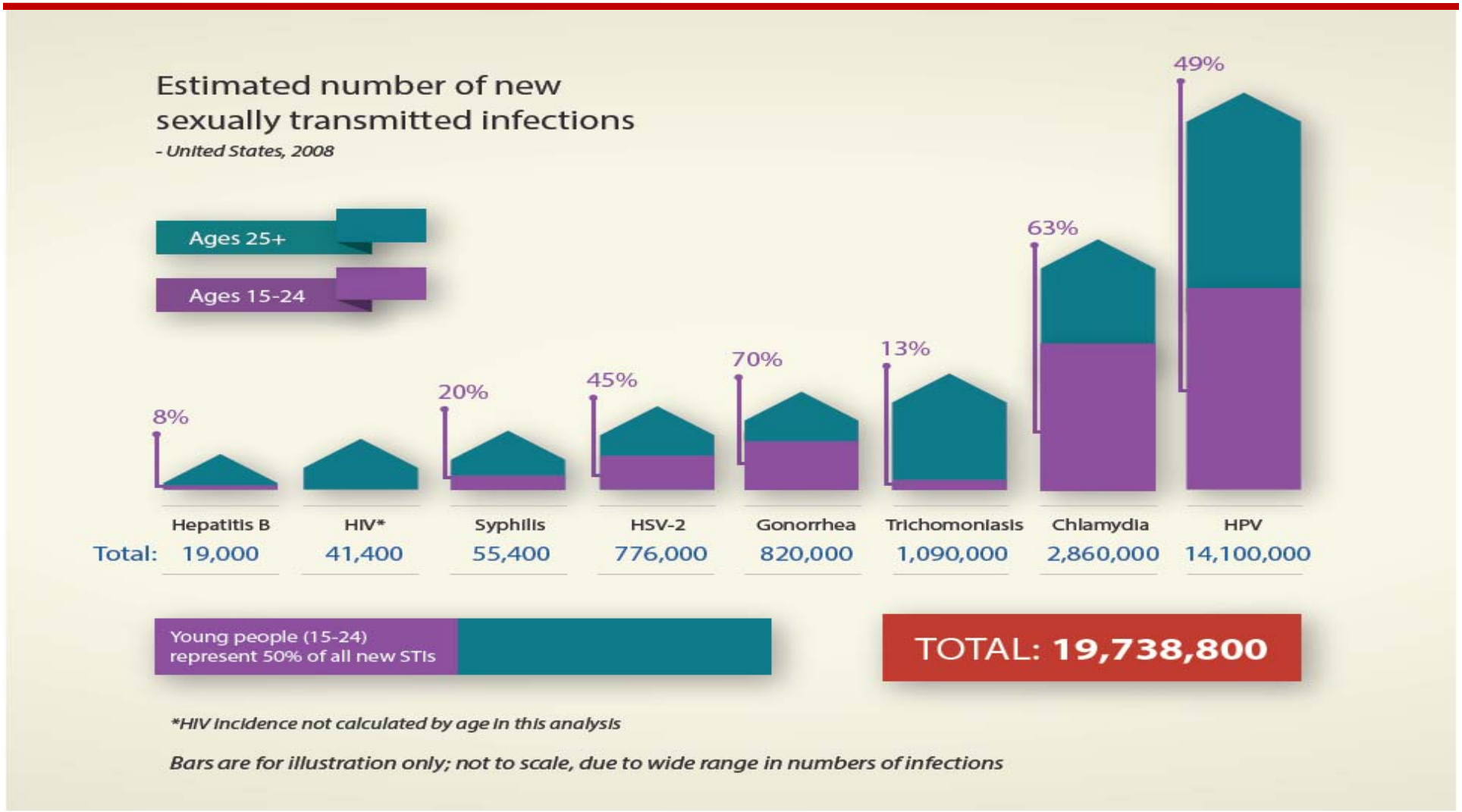
HPV Types Differ in their Disease Associations



Prevalencia de Infecciones de Transmisión Sexual en los U.S. CDC, 2013

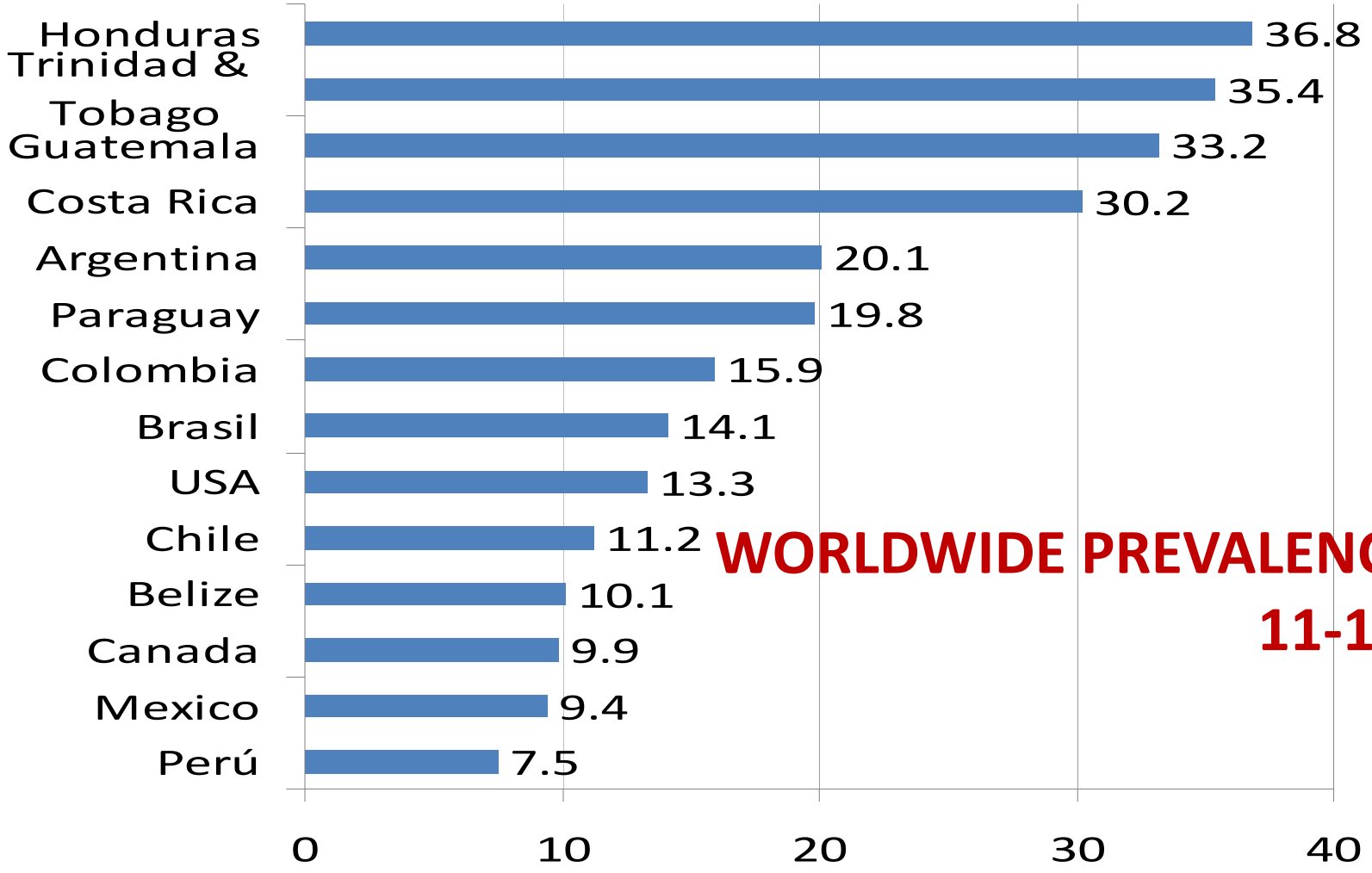


Incidencia de Infecciones de Transmisión Sexual en los U.S. CDC, 2013



HPV PREVALENCE IN THE AMERICAS

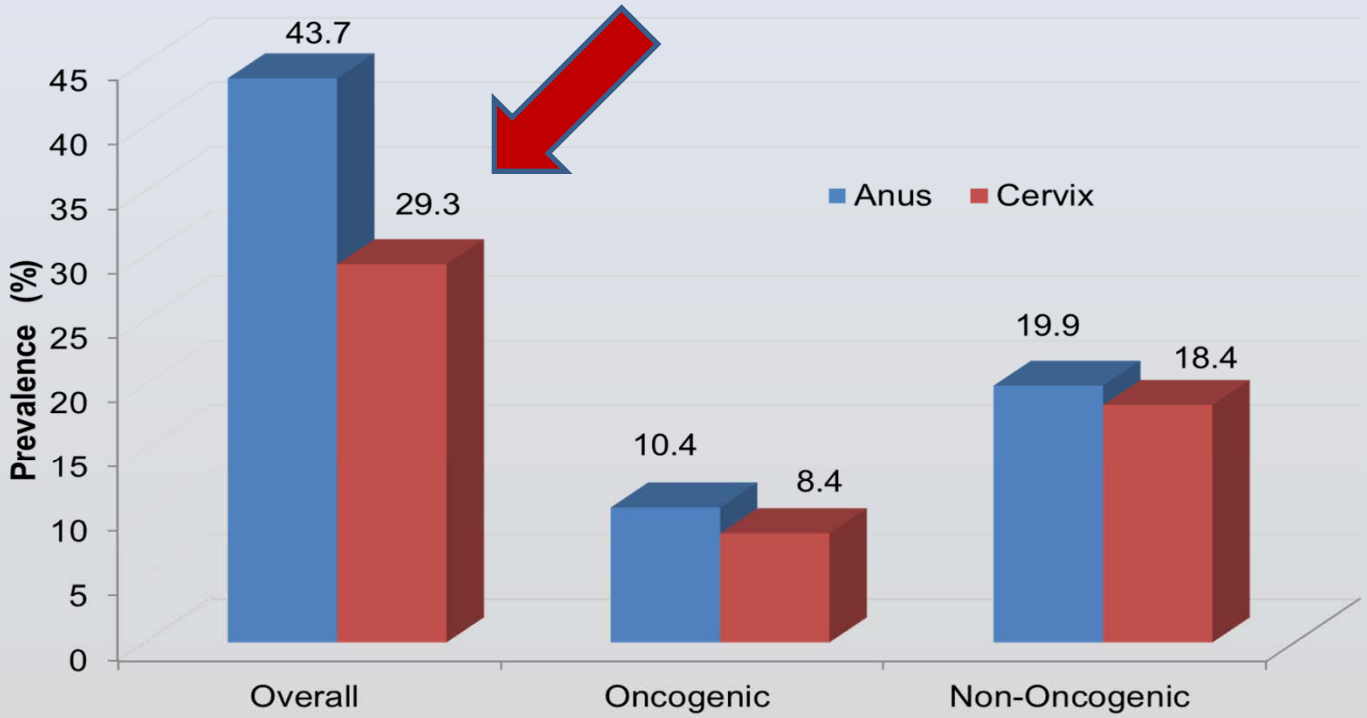
HPV PREVALENCE (%) AMONG WOMEN WITH NORMAL CYTOLOGY



WORLDWIDE PREVALENCE: 11-12%

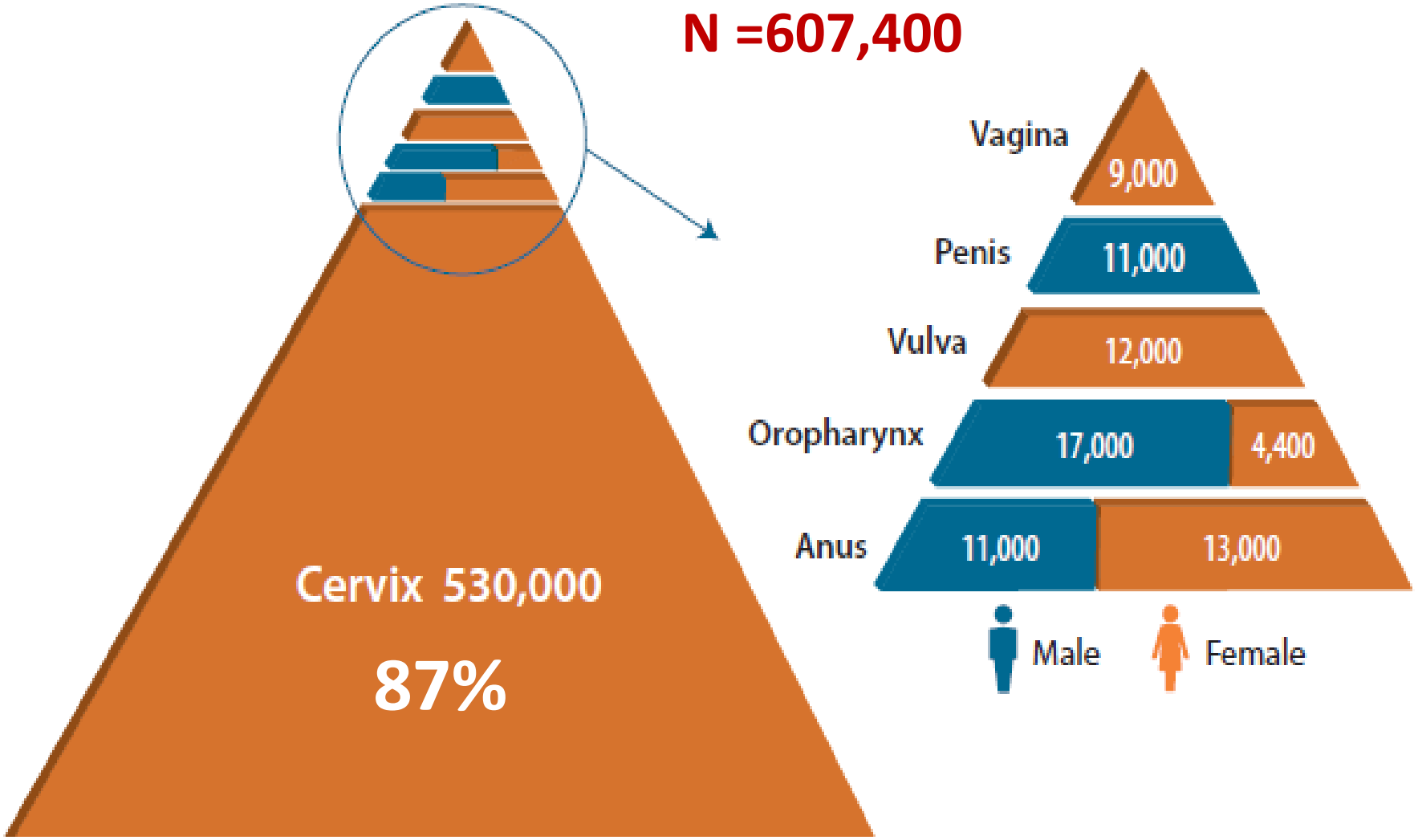
Source: ICO/WHO Summary Report for the Américas, 2010

Prevalence of cervico-vaginal and anal HPV infection in women, San Juan Metropolitan Area (n=403)



Ortiz AP. et al.; IPV Conference, 2012

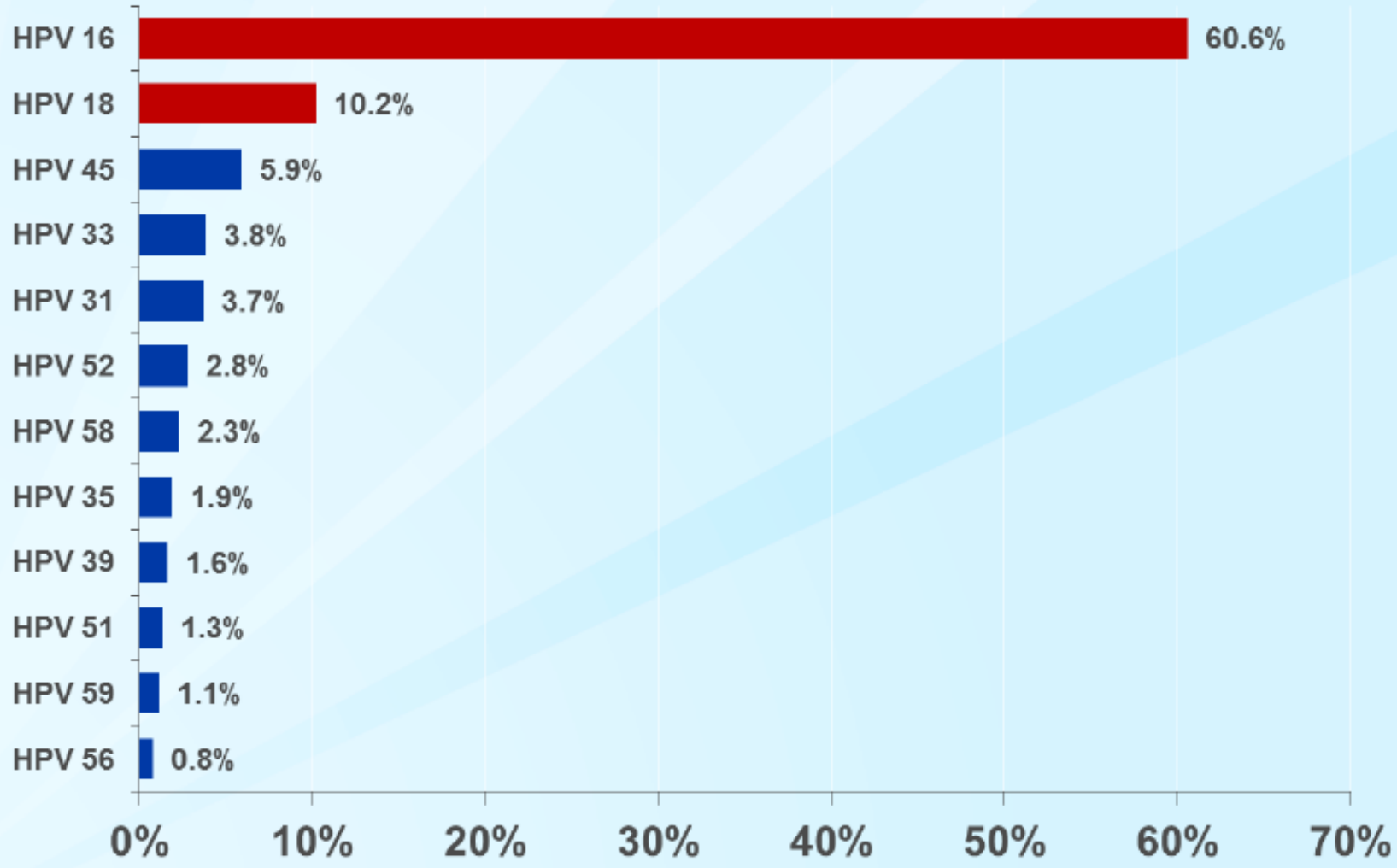
Numbers of Cancers Caused by HPV Worldwide Each Year



Note: Global estimates of genital warts and recurrent respiratory papillomatosis incidence are not available.

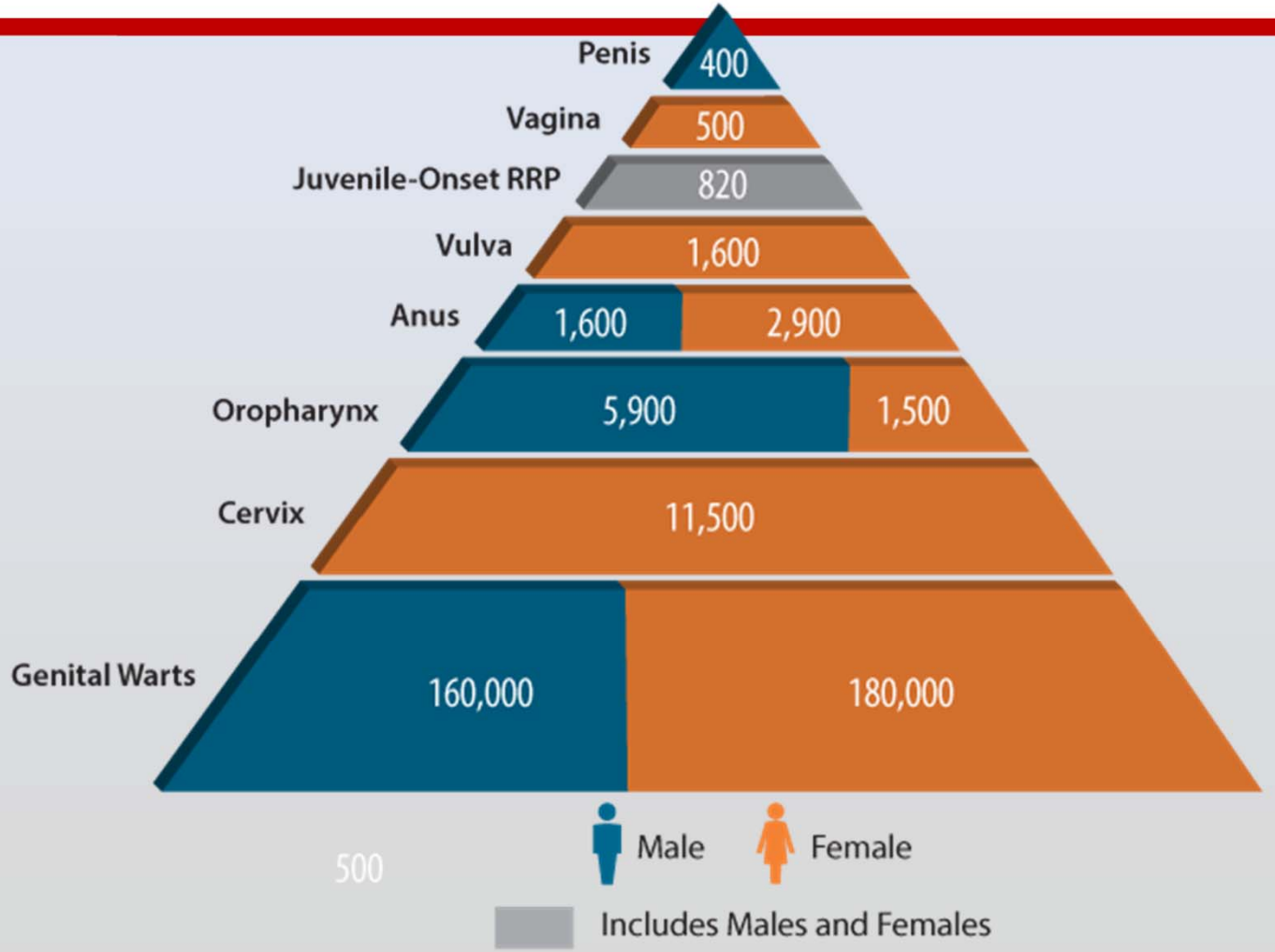
Source: de Martel C, Ferlay J, Franceschi S, Vignat J, Bray F, Forman D, et al. Global burden of cancers attributable to infections in 2008: a review and synthetic analysis. Lancet Oncol. 2012;13(6):607-15.

Percentage of cervical cancers attributed to high risk HPV types, worldwide



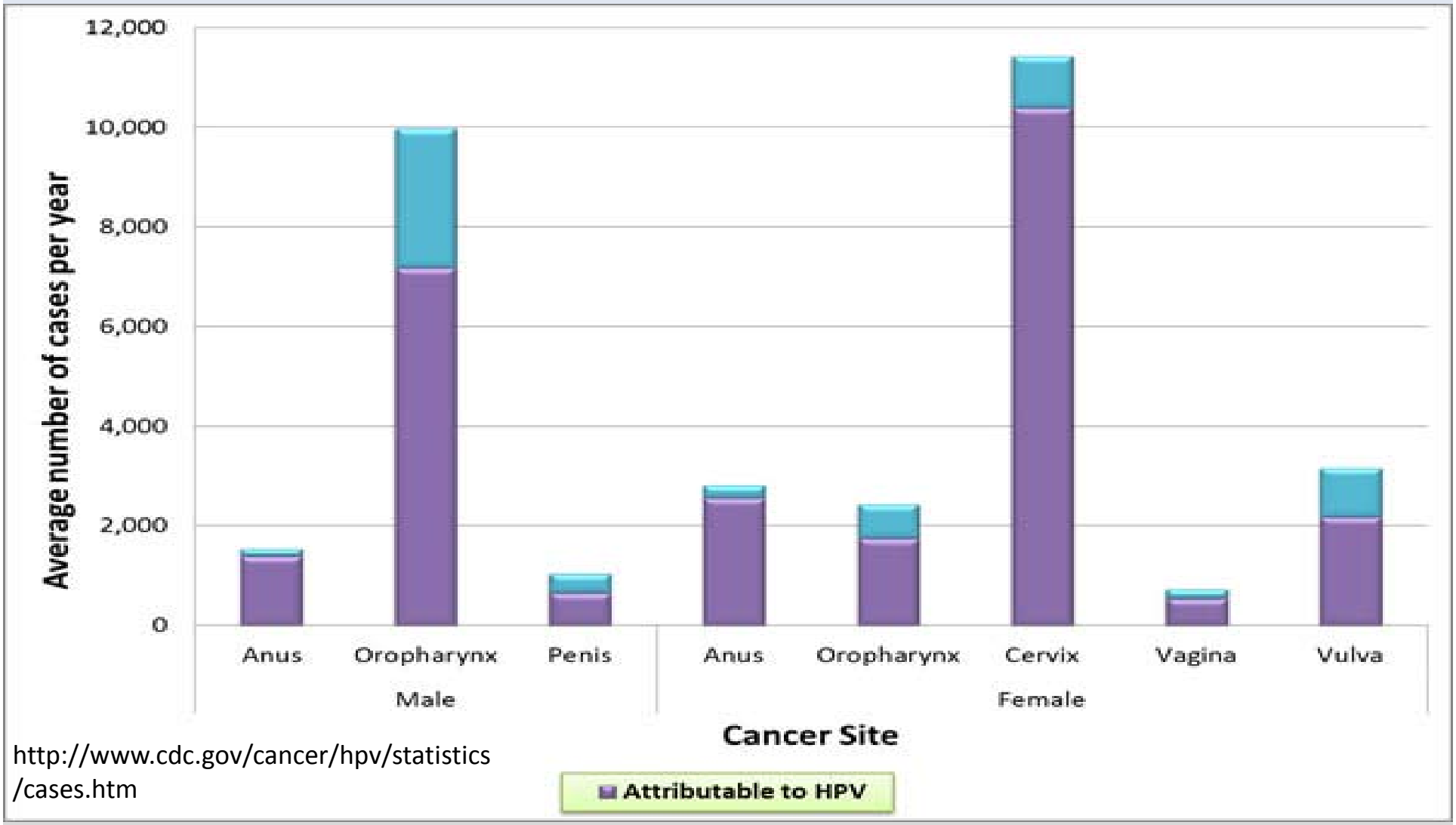
de Sanjose et al. Lancet 2010 % of HPV positives and are based on the upper estimate attribution of multiple HPV types

Numbers of Cancers and Genital Warts Attributed to HPV Infections, U.S.



CDC. Human papillomavirus (HPV)-associated cancers. Atlanta, GA: US Department of Health and Human Services, CDC; 2013. Available at http://www.cdc.gov/cancer/hpv/statistics/cases.htm

Number of HPV-Attributable Cancer Cases per Year, U.S.



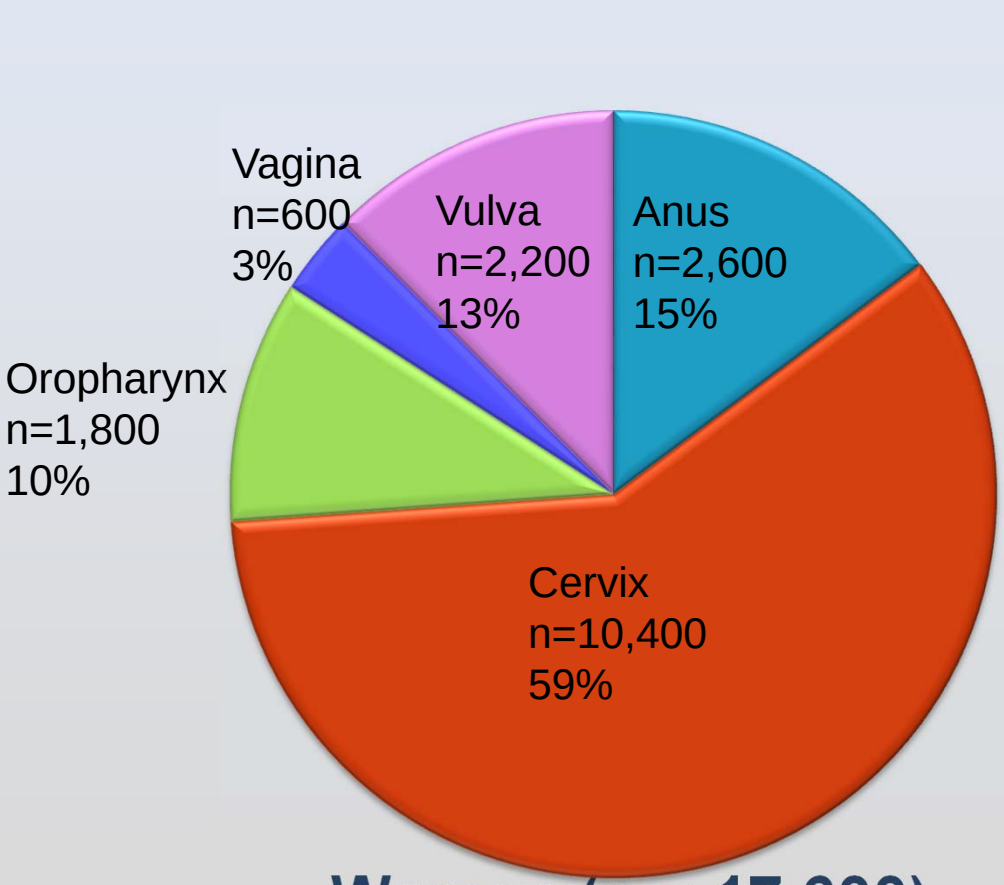
http://www.cdc.gov/cancer/hpv/statistics/cases.htm

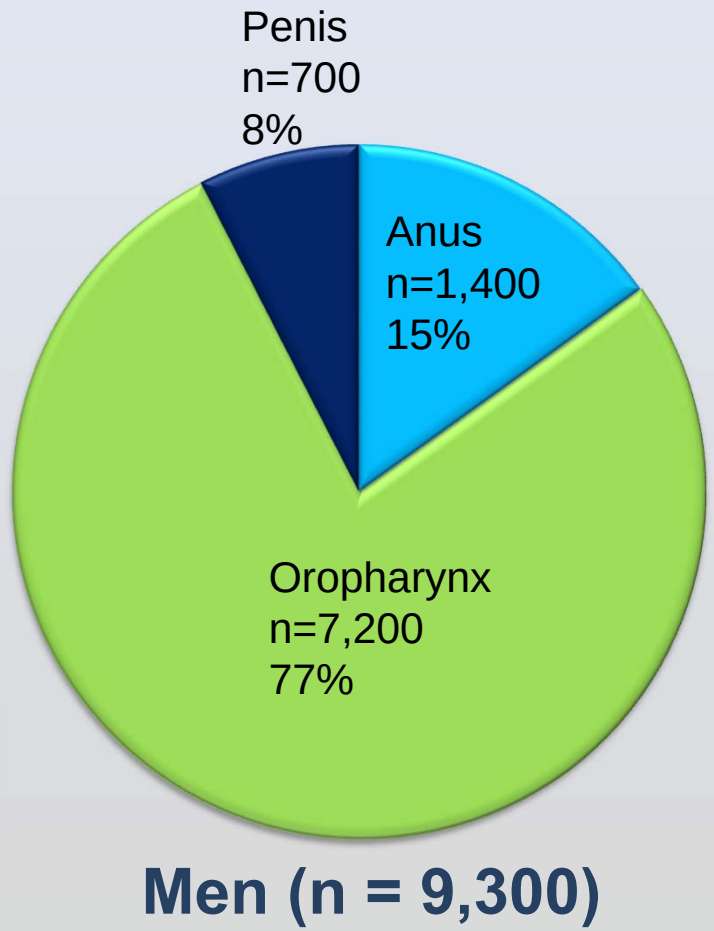
Cancers Attributed to HPV, U.S.

Cancer site	Average number of cancers per year in sites where HPV is often found			Percentage of cancers per year probably caused by HPV	Average number of cancers per year probably caused by HPV†		
	Male	Female	Both Sexes		Male	Female	Both Sexes
Anus	1,549	2,821	4,370	**91%**	1,400	2,600	4,000
Cervix	0	11,422	11,422	**91%**	0	10,400	10,400
Oropharynx	9,974	2,443	12,417	**72%**	7,200	1,800	9,000
Penis	1,048	0	1,048	**63%**	700	0	700
Vagina	0	735	735	**75%**	0	600	600
Vulva	0	3,168	3,168	**69%**	0	2,200	2,200
TOTAL	**12,571**	**20,589**	**33,160**		**9,300**	**17,600**	**26,900**

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

Average Number of New Cancers Probably Caused by HPV, by Sex, United States 2006-2010





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

Annual Report to the Nation on the Status of Cancer: HPV-Associated Cancers

- From 2000 to 2009, oropharyngeal cancer rates increased
  - 4.9% for Native American men
  - 3.9% for white men
  - 1.7% for white women
  - 1% for Asian men
- Anal cancer rates doubled from 1975 to 2009
- Vulvar cancer rates rose for white and African-American women
- Penile cancer rates increased among Asian men

Jemal A et al. J Natl Cancer Inst 2013;105:175-201

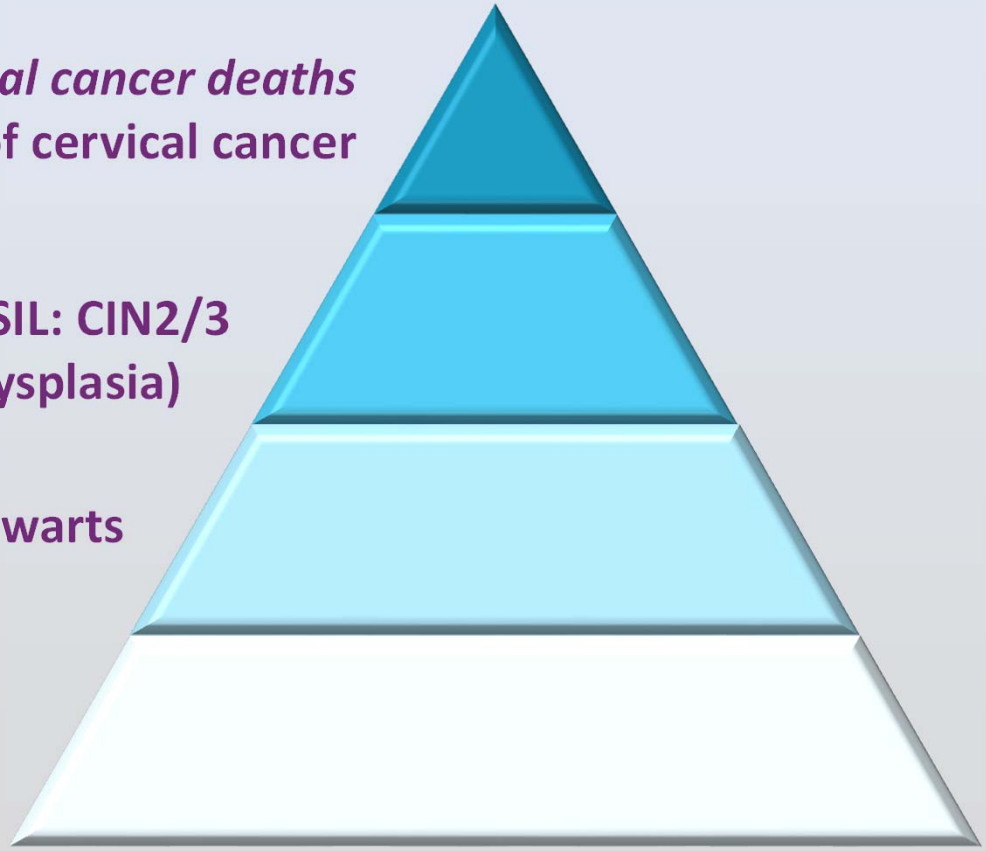
Annual burden of genital HPV-related disease in U.S. females **without vaccination**

4,000 cervical cancer deaths
10,846 new cases of cervical cancer

330,000 new cases of HSIL: CIN2/3
(high grade cervical dysplasia)

1 million new cases of genital warts

1.4 million new cases of LSIL: CIN1
(low grade cervical dysplasia)



3 million cases and $7 billion

American Cancer Society. 2008; Schiffman *Arch Pathol Lab Med*. 2003; Koshiol *Sex Transm Dis*. 2004; Insinga, Pharmacoeconomics, 2005

Economic Impact Related to HPV-Associated Disease, 2010

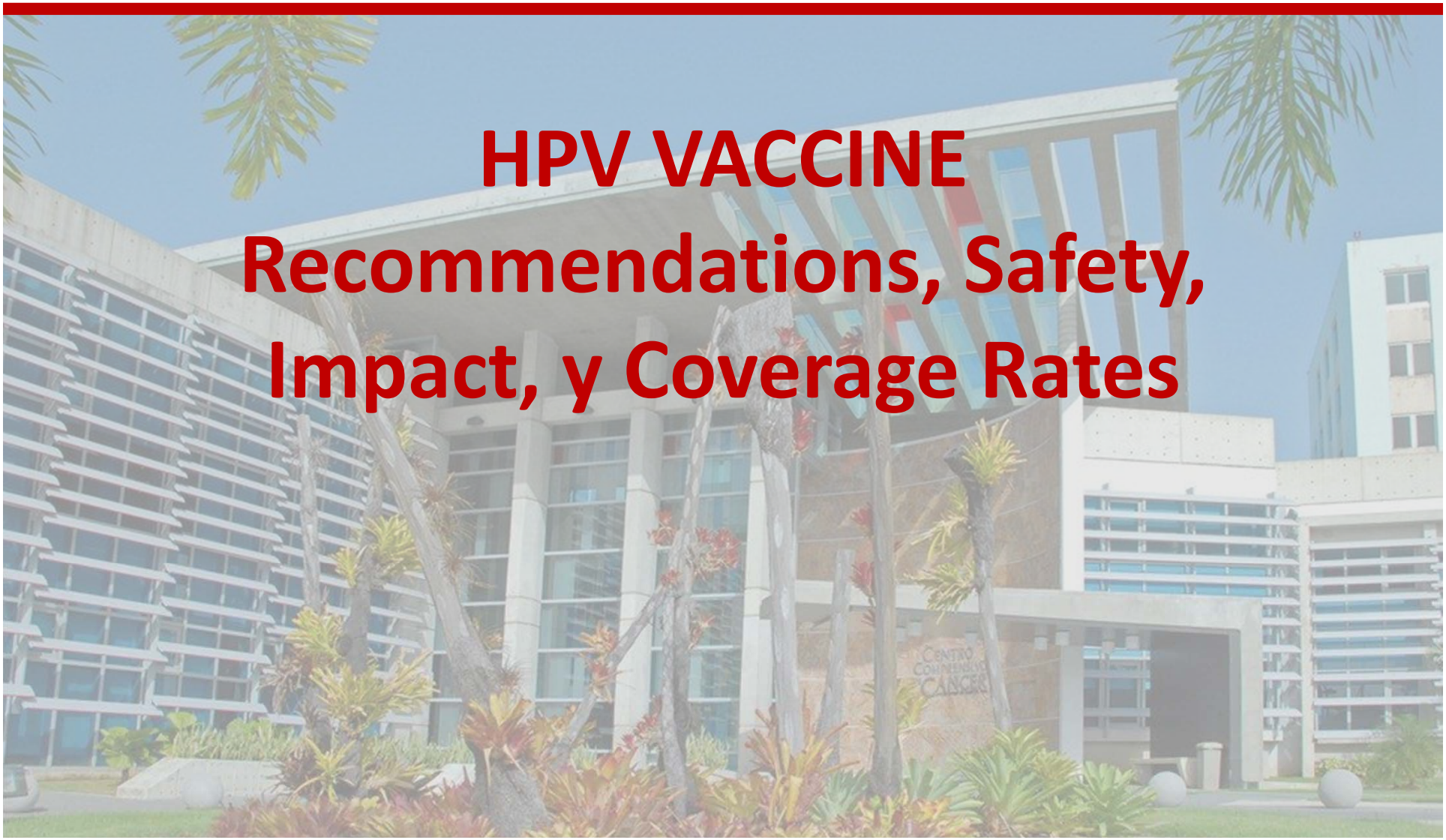
Event	Cost ($ billions)
Cervical cancer screening*	6.6
Cervical cancer	0.4
Other anogenital cancers	0.2
Oropharyngeal cancer	0.3
Anogenital warts	0.3
RRP**	0.2
TOTAL	**8.0**

***Cervical cancer screening costs: ~ 80% routine screening, ~20% follow-up**

****RRP costs: ~ 70% juvenile-onset, ~ 30% adult-onset**

Chesson H et al. Vaccine 2012;30: 6016-19

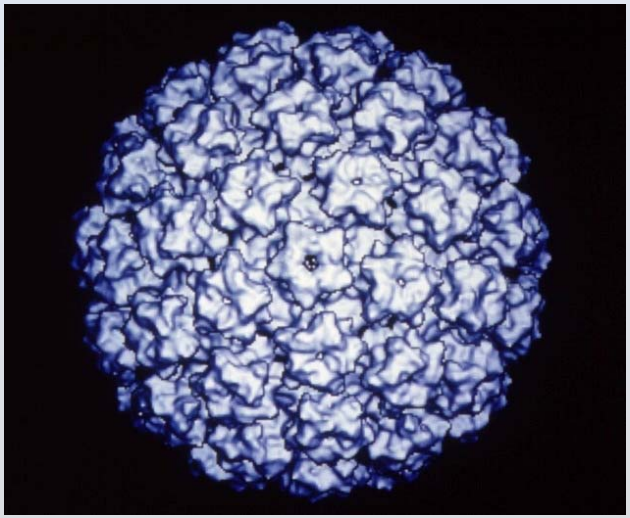
RRP: recurrent respiratory papillomatosis



HPV VACCINE
Recommendations, Safety, Impact, y Coverage Rates

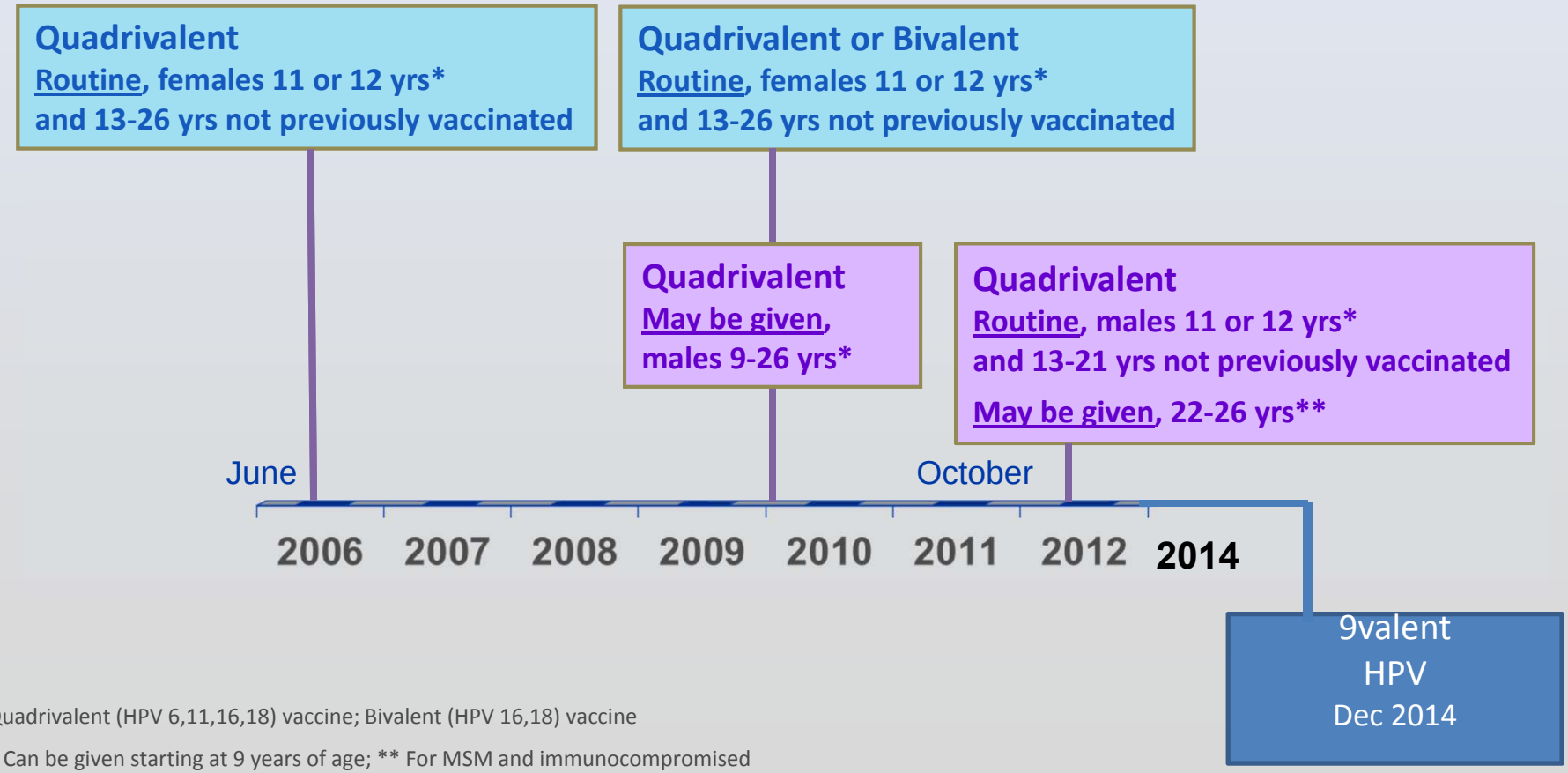
HPV Prophylactic Vaccines

- Recombinant L1 capsid proteins that form "virus-like" particles (VLP)
- Non-infectious and non-oncogenic
- Produce higher levels of neutralizing antibody than natural infection



HPV Virus-Like Particle

Evolution of Recommendations for HPV Vaccination in the United States



Quadrivalent (HPV 6,11,16,18) vaccine; Bivalent (HPV 16,18) vaccine

* Can be given starting at 9 years of age; ** For MSM and immunocompromised males, quadrivalent HPV vaccine through 26 years of age

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TABLE 1. Characteristics of the three human papillomavirus (HPV) vaccines licensed for use in the United States

Characteristic	Bivalent (2vHPV)*	Quadrivalent (4vHPV)†	9-valent (9vHPV)§
Brand name	Cervarix	Gardasil	Gardasil 9
VLPs	16, 18	6, 11, 16, 18	6, 11, 16, 18, 31, 33, 45, 52, 58
Manufacturer	GlaxoSmithKline	Merck and Co., Inc.	Merck and Co., Inc.
Manufacturing	*Trichoplusia ni* insect cell line infected with L1 encoding recombinant baculovirus	*Saccharomyces cerevisiae* (Baker's yeast), expressing L1	*Saccharomyces cerevisiae* (Baker's yeast), expressing L1
Adjuvant	500 μg aluminum hydroxide, 50 μg 3-O-desacyl-4' monophosphoryl lipid A	225 μg amorphous aluminum hydroxyphosphate sulfate	500 μg amorphous aluminum hydroxyphosphate sulfate
Volume per dose	0.5 ml	0.5 ml	0.5 ml
Administration	Intramuscular	Intramuscular	Intramuscular

Abbreviation: L1 = the HPV major capsid protein; VLPs = virus-like particles.

* Only licensed for use in females in the United States. Package insert available at http://www.fda.gov/downloads/BiologicsBloodVaccines/Vaccines/ApprovedProducts/UCM186981.pdf.

† Package insert available at http://www.fda.gov/downloads/BiologicsBloodVaccines/Vaccines/ApprovedProducts/UCM111263.pdf.

§ Package insert available at http://www.fda.gov/downloads/BiologicsBloodVaccines/Vaccines/ApprovedProducts/UCM426457.pdf.

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Available HPV vaccines

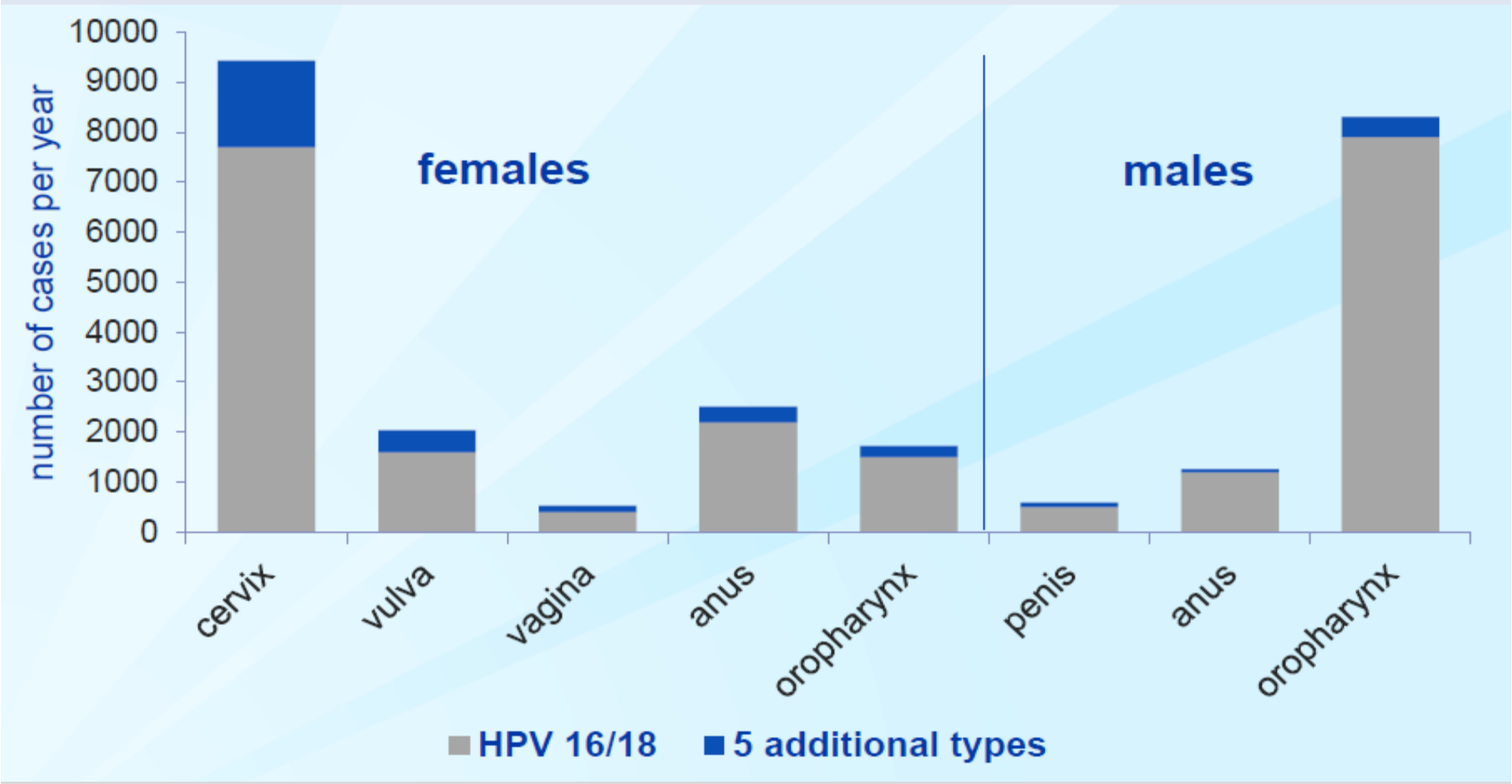
	Bivalent (Cervarix)	Quadrivalent (Gardasil)	9-Valent (Gardasil 9)
Licensed for	Females 9-25 years	Females 9-26 years Males 9-26 years	Females 9-26 years Males 9-15 years

- At the time of the first application to FDA, 9vHPV trials in males 16-26 years had not been completed
- Immunogenicity data now are available for males 16-26 years, reviewed by ACIP and submitted to FDA
- ACIP recommended use of 9vHPV in the currently recommended age groups

HPV Vaccines Approved by the FDA in the U.S.

	Cervarix	Gardasil	Gardasil 9
Contains VLPs	HPV: **16, 18**	HPV: **6, 11, 16, 18**	HPV: **6, 11, 16,18, 31, 33, 45, 52, 58**
Indicated: Women	√	√	√
Men		√	√
Cervical Pre-Cancer and Cancer	√	√	√
Vulvar Cancer	√	√	√
Vaginal Cancer		√	√
Anal Cancer (M/W)		√	√
Genital Warts (M/W)		√	√
Doses (Schedule)	**3 (0, 1, 6 mo.)**	**3 (0, 2, 6 mo.)**	**3 (0, 2, 6 mo.)**

Estimated numbers of HPV-associated cancers attributable to HPV 16/18 and 5 additional types in 9-valent vaccine, U.S.*



*Based on years 2006-2010 http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6349a11.htm and data from Saraiya, presented at AIN Conference, March 2015

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Updated ACIP recommendations

- Routine vaccination at age 11 or 12 years*
- Vaccination recommended through age 26 for females and through age 21 for males not previously vaccinated
- Vaccination recommended for men who have sex with men and immunocompromised men (including persons HIV-infected) through age 26
- 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

*vaccination series can be started at 9 years of age

MMWR 2015;64:300-4

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Updated ACIP recommendations

2vHPV, 4vHPV and 9vHPV all protect against HPV 16 and 18, types that cause about 66% of cervical cancers and the majority of other HPV-attributable cancers in the United States. 9vHPV targets five additional cancer causing types, which account for about 15% of cervical cancers. 4vHPV and 9vHPV also protect against HPV 6 and 11, types that cause genital warts.

MMWR 2015;64:300-4

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Updated ACIP recommendations: Interchangeability

If vaccination providers do not know or do not have available the HPV vaccine product previously administered, or are in settings transitioning to 9vHPV, for protection against HPV 16 and 18, any HPV vaccine product may be used to continue or complete the series for females; 4vHPV or 9vHPV may be used to continue or complete the series for males.

MMWR 2015;64:300-4

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Updated ACIP recommendations: Administration

- 2vHPV, 4vHPV and 9vHPV are each administered in a 3-dose schedule
- The second dose is administered at least 1 to 2 months after the first dose, and the third dose at least 6 months after the first dose
- If the vaccine schedule is interrupted, the vaccination series does not need to be restarted

MMWR 2015;64:300-4

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Updated ACIP recommendations: HPV vaccination during pregnancy

- No change in recommendations
- HPV vaccine not recommended for use in pregnancy

A new vaccine in pregnancy registry has been established for 9vHPV. Registries for 4vHPV and 2vHPV have been closed with concurrence from FDA.

4vHPV registry closed in 2012

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9vHPV vaccination for persons who completed a HPV vaccination series

- The manufacturer did not seek an indication for 9vHPV vaccination for persons who previously completed a HPV vaccination series
- A study of 9vHPV in prior 4vHPV vaccinees was conducted
- Due time limitations (abbreviated ACIP meeting), this was not discussed; will be discussed at a future ACIP meeting

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Summary: 9-valent HPV vaccine

- Licensed by FDA in December 2014
- Recommended by ACIP in February 2015
- One of 3 HPV vaccines that can be used for routine vaccination of females and one of 2 for males
- Targets 5 additional high risk types
  - Overall 14% of HPV-associated cancers in females; 4% in males attributable to these 5 types
  - 15% of cervical cancers attributable to these 5 types

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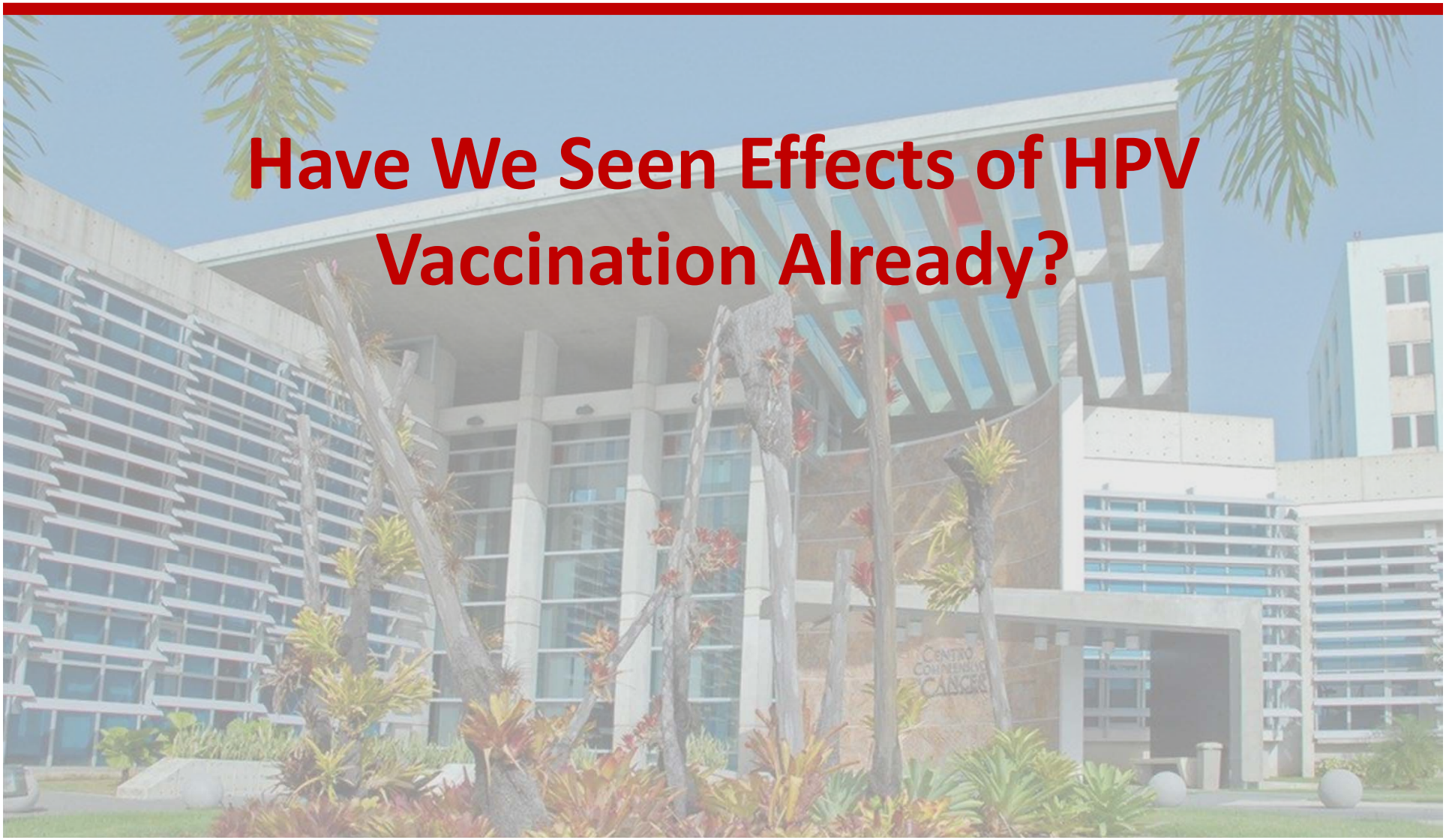
Have We Seen Effects of HPV Vaccination Already?



HPV Vaccine Is Safe, Effective, and Provides Lasting Protection

- HPV Vaccine is **SAFE**
  - Safety of HPV vaccine similar to safety of MCV4 and Tdap vaccines
- HPV Vaccine **WORKS**
  - High grade cervical lesions decline in Australia (80% of school aged girls vaccinated)
  - Prevalence of vaccine types declines by more than half in United States (33% of teens fully vaccinated)
- HPV Vaccine **LASTS**
  - Studies suggest that vaccine protection is long-lasting; no evidence of waning immunity

Garland et al, Prev Med 2011; Ali et al, BMJ 2013; Markowitz JID 2013; Nsouli-Maktabi MSMR 2013

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HPV VACCINE SAFETY

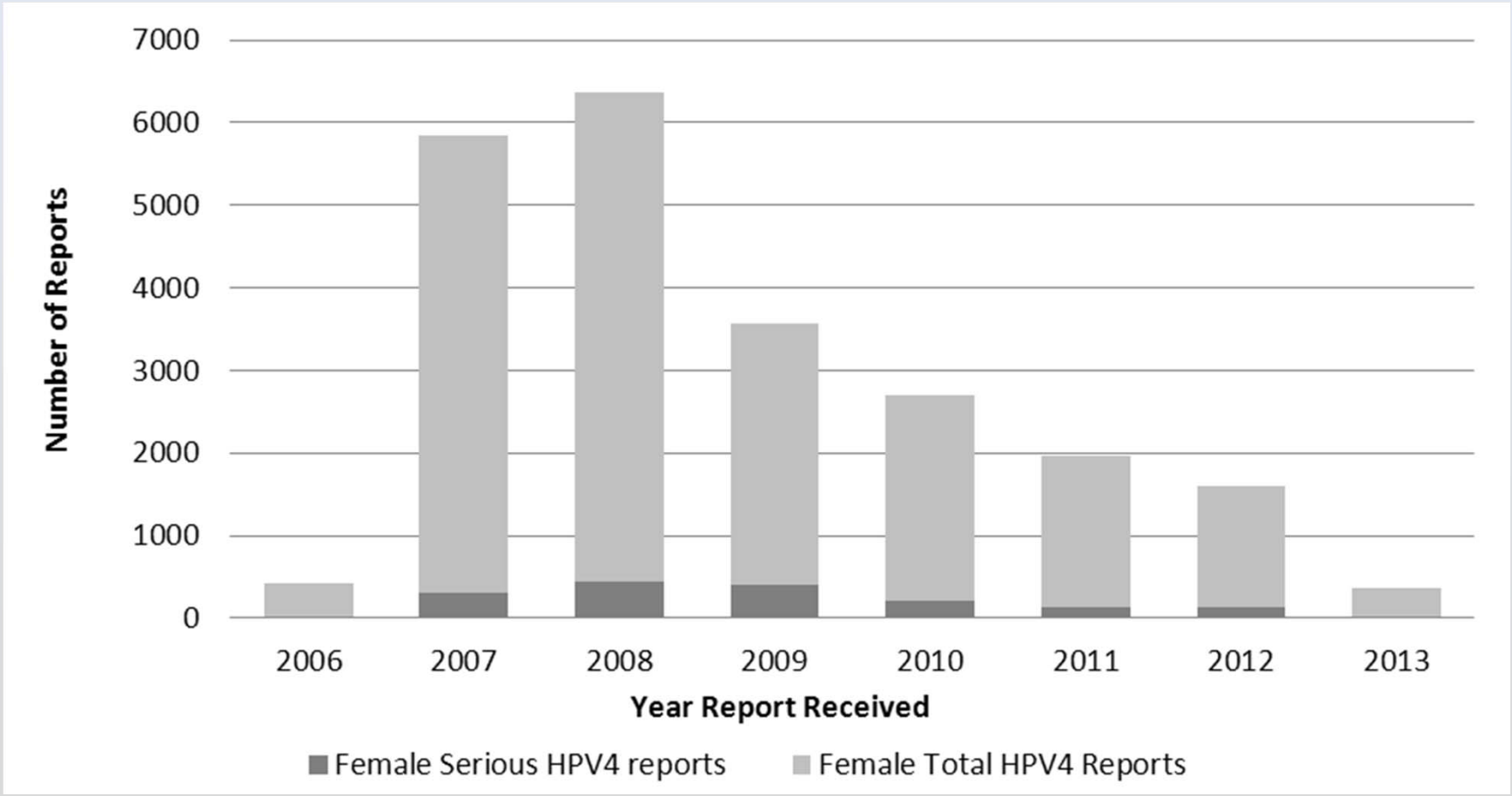
Seguridad de la Vacuna de VPH

- ***MUY SEGURA***
- Los eventos reportados se han considerado "***LEVES***"
- No Patrón o Conglomerado inusual de eventos
- Similar a la seguridad de la vacuna contra meningococo (MCV4) y Tdap
- >165 millones de dosis en el mundo y 57 millones de dosis en U.S. desde 2006 distribuidas

Fuentes de Datos sobre Seguridad de la Vacuna de VPH

- Datos de Seguridad Post-Licenciatura (VAERS)
- Estudios Observacionales Comparativos Post-licenciatura (VSD)
- Monitoreo continuo por CDC and FDA
- Compromiso Post-licenciatura de las Compañías Farmacéuticas
- Seguimiento en los países Nórdicos
- WHO's (OMS) Comité Mundial Asesor sobre Seguridad en Vacunación
- Institute of Medicine's reporte de Eventos Adversos y Vacunación, 2011

Trends in Total and Serious Female HPV4 Vaccine Reports to VAERS by Year, June 2006 to March 2013 (N=21,194)



MMWR 2013;62:591-595

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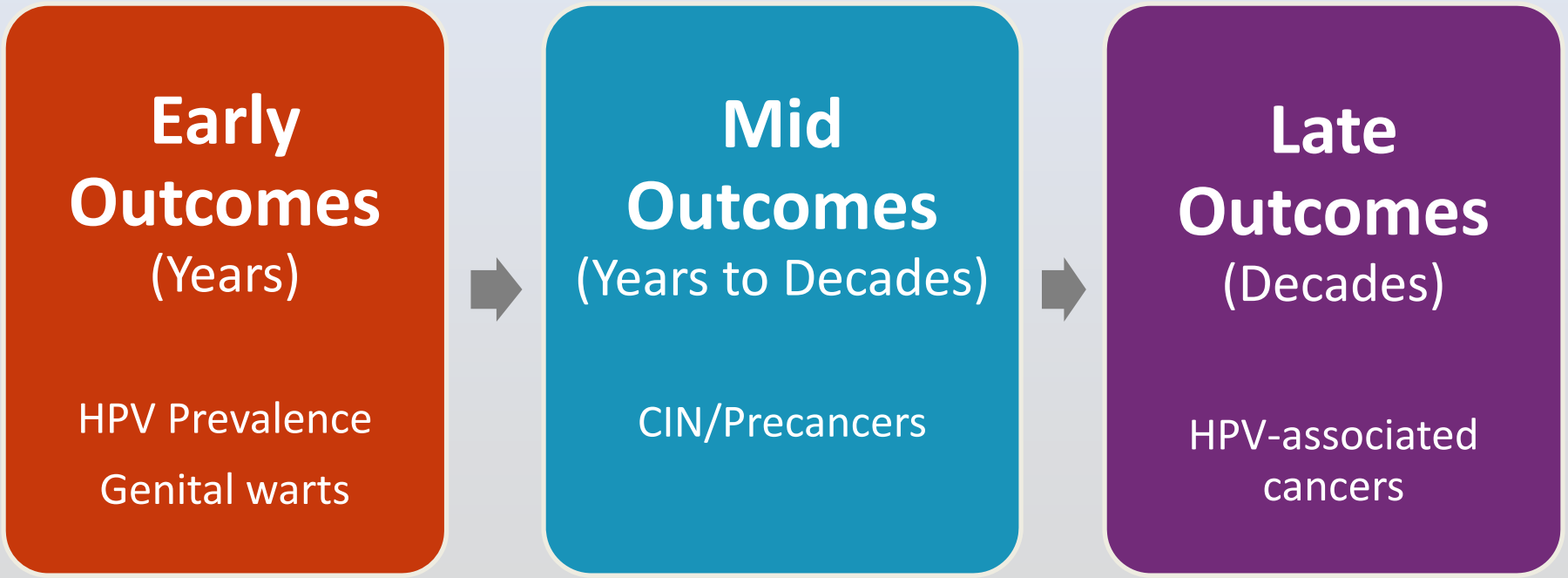
HPV VACCINE IMPACT

Monitoring Impact of HPV Vaccine Programs: HPV-associated Outcomes



Post-licensure monitoring is important to evaluate the real-world impact of vaccination on populations

Impacto de la Vacuna en Estudios de Prevalence de VPH

- National Health and Nutrition Examination Survey (NHANES) comparó la prevalencia de VPH antes del inicio de la vacunación y 4 años después:
  - En población de 14-19 años la prevalencia de tipos de VPH en las vacunas bajó un **56%**
    - **11.5%** en 2003-2006 a **5.1%** en 2007-2010)
  - Efectividad de la vacuna para prevención de infección se estima en **82%**

Impacto de la Vacuna en Estudios de Prevalence de VPH

- Estudios Clínicos
  - Descenso significativo de **24.0% a 5.3%** en la prevalencia de tipos de VPH contenidos en las vacunas en mujeres sexualmente activas de 14-17 años que atendieron 3 clínicas de atención primaria del 1999-2005 comparado con mujeres que atendieron en 2010
  - Descenso significativo en la prevalencia de tipos de VPH contenidos en las vacunas en mujeres vacunadas y no vacunadas de 13-26 años que atendieron clínicas de atención primaria en 2009-2010 comparadas con aquellas que atendieron antes de la introducción de la vacuna

Impacto de la Vacuna en Estudios Verrugas Genitales

- Un estudio observo un descenso significativo (38%) en mujeres de 15-19 años en la prevalencia de VPH entre el 2006 y el 2010
- Y un descenso más pequeño en mujeres de 21-30 años

Impacto de la Vacuna en Estudios Verrugas Genitales

- **Un estudio similar evaluó la tendencia de Verrugas genitales en hombres y mujeres en una clínica de planificación familiar y encontró:**
  - Descenso significativo de **35%** en mujeres de 21 años de edad y un descenso en hombres menores de 21 años
  - No se observo descenso en hombres y mujeres mayores

Impacto de la Vacuna: Alta Cobertura en Australia

- 80% de las niñas de edad escolar en Australia están vacunadas
- Lesiones cervicales precancerosas de alto grado disminuyeron en mujeres de menores de 18 años
- En las mujeres elegibles para vacunación los casos de Verrugas Genitales disminuyeron **93%**
- También, las Verrugas Genitales disminuyeron **82%** en hombres de la misma edad que las mujeres vacunadas, apoyando la importancia de la inmunidad de rebaño

Impact of HPV Vaccine on HPV 16/18 Precancers

- CIN2+ cases women 18 to 31 years of age were reported from pathology laboratories in 5 states from 2008 to 2011
- Among women with CIN2+ who had started HPV vaccine more than 24 months before their Pap smear, there was a significant reduction in HPV 16/18-related lesions
  - These results suggest an early impact of the HPV vaccine on vaccine-type precancers

Powell S, et al, Impact of human papillomavirus (HPV) vaccination on HPV 16/18-related prevalence in precancerous cervical lesions. Vaccine 2012;31:109-113

Impact of Bivalent HPV Vaccine on Oral HPV Infection

- Of 7,466 women 18-25 years of age randomized to receive HPV vaccine or hepatitis A vaccine, 5,840 provided oral specimens at the final 4-year study visit
  - Oral prevalence of identifiable mucosal HPV was relatively low (1.7%)
- There were 15 HPV 16/18 infections in the hepatitis A comparison group and 1 in the HPV vaccine group, for an estimated vaccine efficacy of 93.3%
  - These results suggest that the vaccine provides strong protection against oral HPV 16/18 infection and may prevent HPV 16/18-associated oropharyngeal cancers

Herrero R, et al. Reduced prevalence of oral human papillomavirus (HPV) 4 years after bivalent HPV vaccination in a randomized clinical trial in Costa Rica. PLOS ONE 2013;8:e68329

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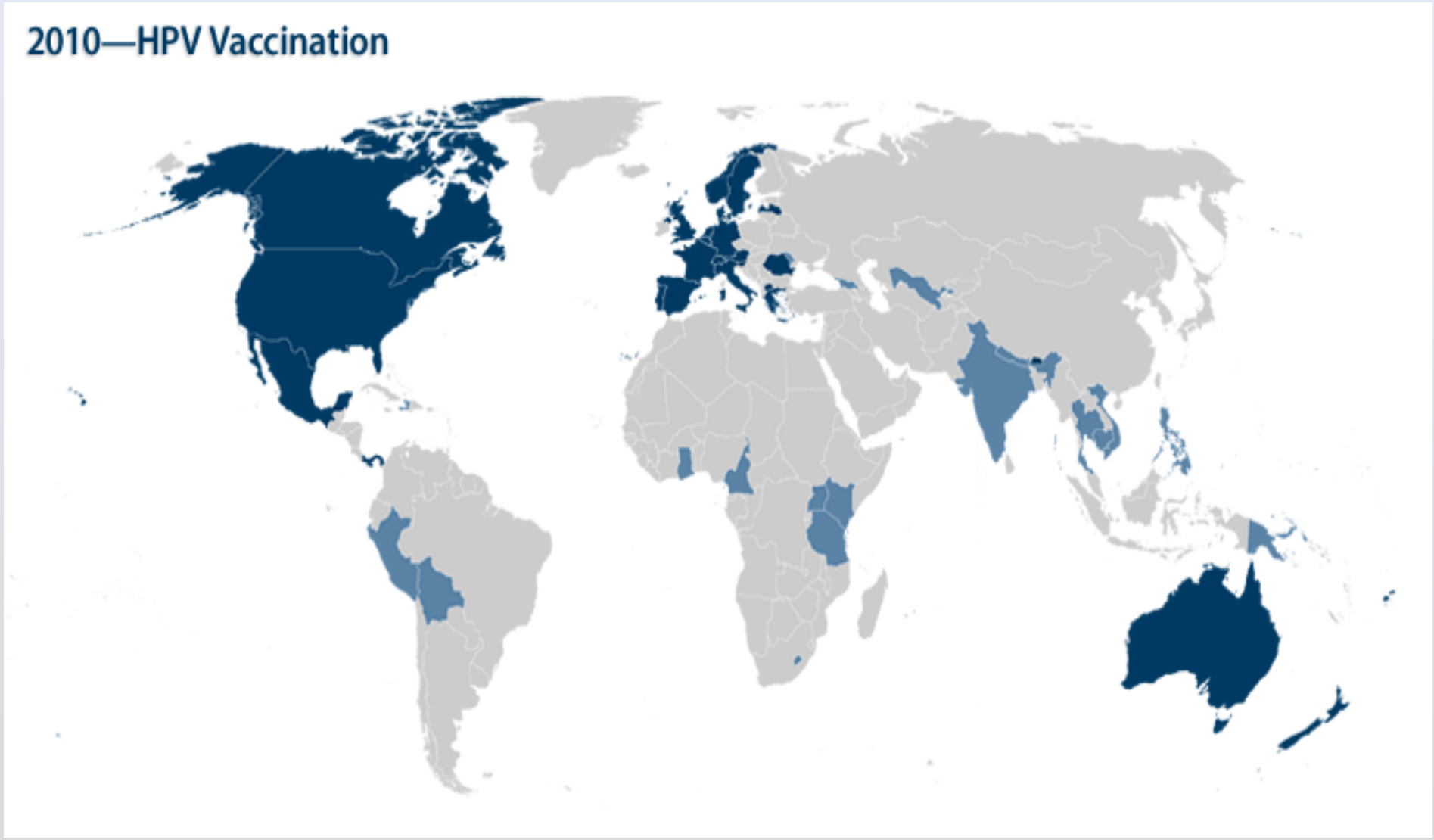
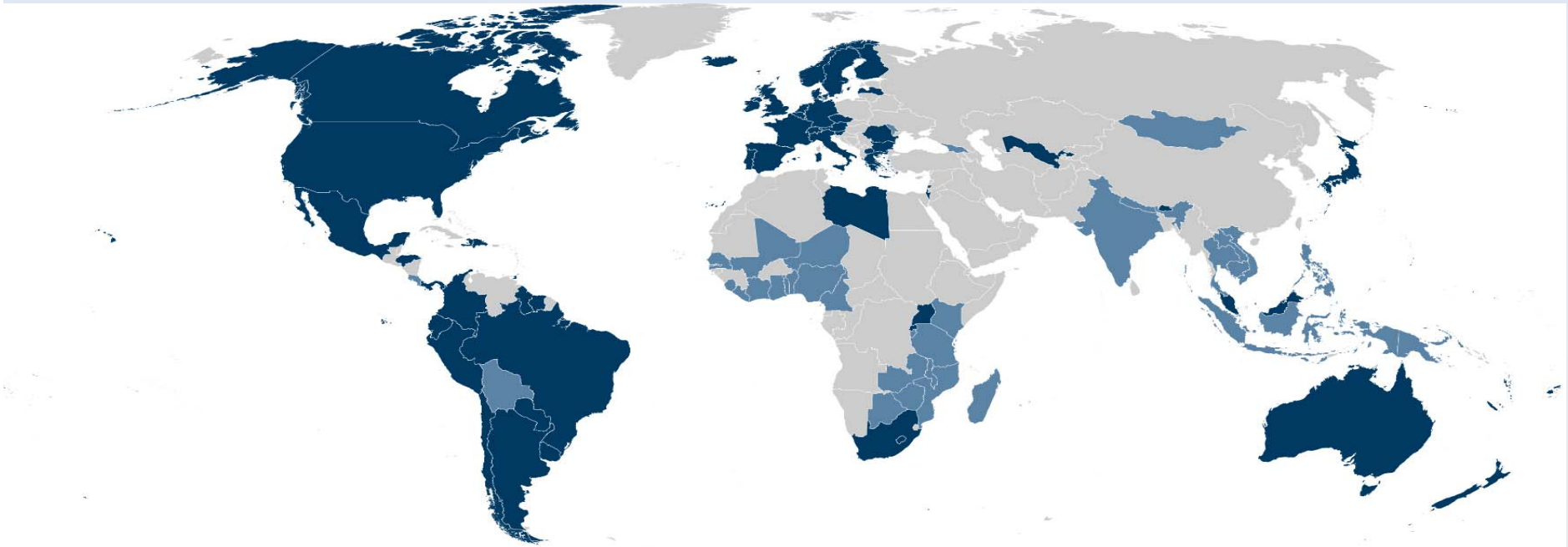
HPV VACCINE COVERAGE


2010—HPV Vaccination
National programs
Pilot programs

Global Progress in HPV vaccine introduction

February 2015



National programs

American Samoa
Argentina
Aruba
Australia
Austria
Bahamas
Barbados
Belgium
Belize
Bermuda
Bhutan
Brazil
Brunei
Bulgaria
Canada
Cayman Islands
Chile
Colombia
Cook Islands
Curacao
Czech Republic
Denmark
Dominican Republic
Ecuador
Fiji
Finland
France
French Polynesia
Germany
Greece
Guam
Guyana
Honduras
Iceland
Ireland
Israel
Italy
Japan
Kiribati
Latvia
Lesotho
Libya
Luxembourg
Macedonia
Malaysia
Malta
Marshall Islands
Mexico
Micronesia
Monaco
Netherlands
New Caledonia
New Zealand
Niue
Northern Marianas
Norway
Palau
Panama
Paraguay
Peru
Portugal
Romania
Rwanda
San Marino
Seychelles
Singapore
Slovenia
South Africa
Spain
St. Eustatius
Suriname
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Switzerland
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Uganda
United Kingdom
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Uruguay
Uzbekistan
Vanuatu

Pilot programs

Benin
Bolivia
Botswana
Burundi
Cambodia
Cameroon
Costa Rica
Cote d'Ivoire
Gambia
Georgia
Ghana
Haiti
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Indonesia
Kenya
Lao PDR
Liberia
Madagascar
Malawi
Mali
Moldova
Mongolia
Mozambique
Nepal
Niger
Nigeria
Papua New Guinea
Philippines
Senegal
Sierra Leone
Solomon Islands
Tanzania
Thailand
Togo
Vietnam
Zambia
Zimbabwe

International uptake of 3 doses HPV vaccine

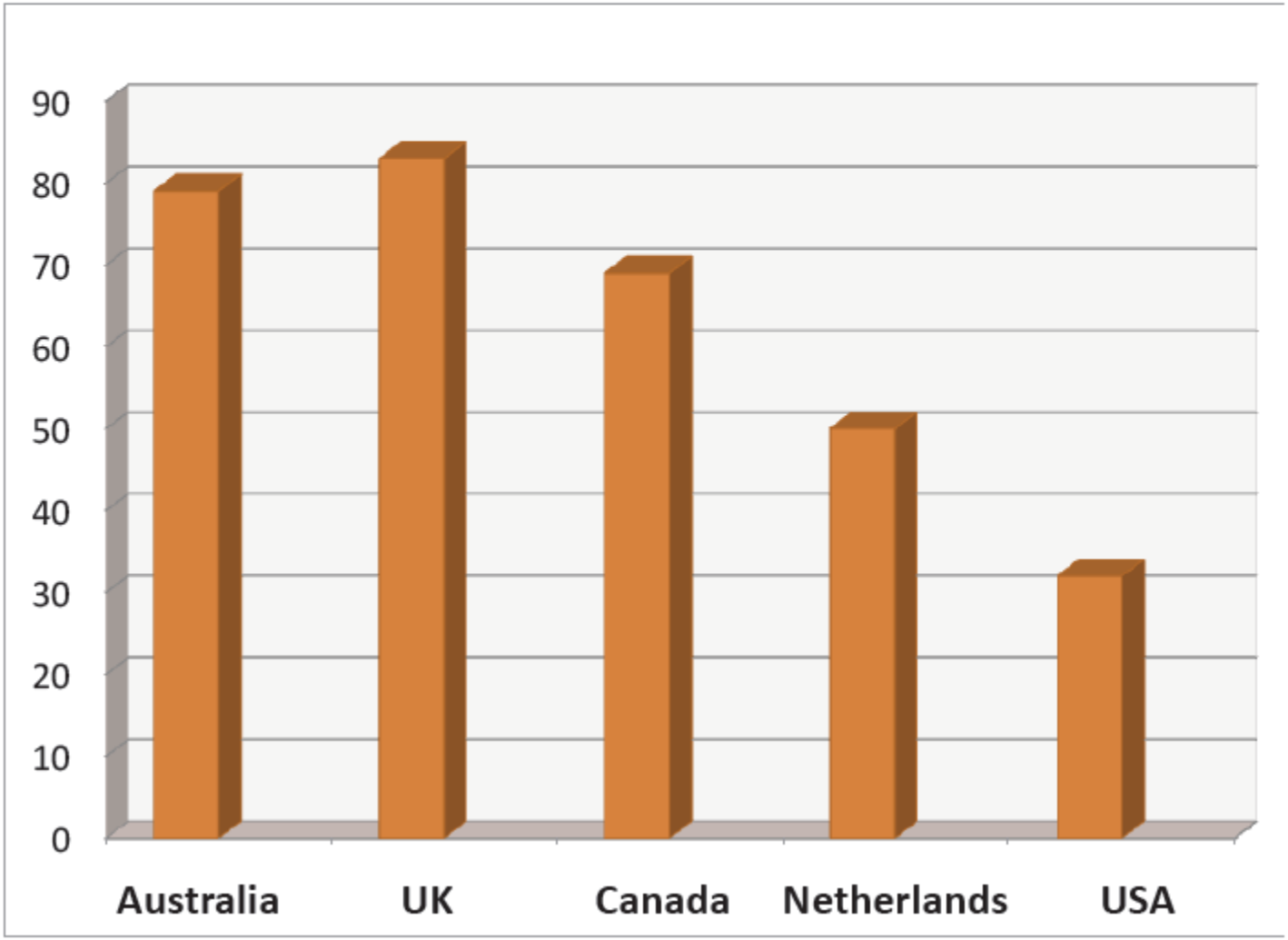


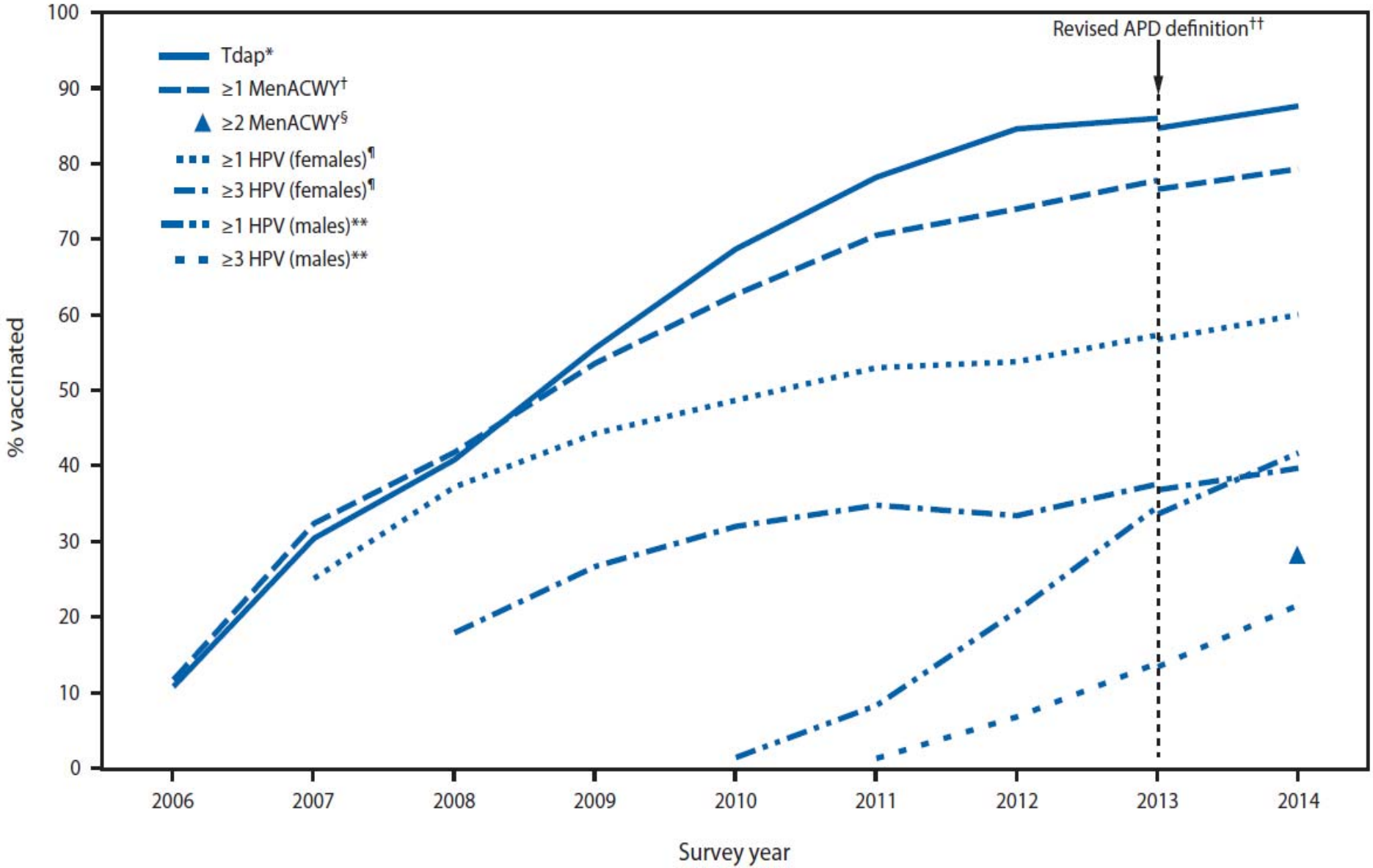
TABLE 1. Estimated vaccination coverage with selected vaccines and doses among adolescents aged 13–17* years, by age at interview — National Immunization Survey–Teen (NIS-Teen), United States, 2014

Vaccine	Age at interview (yrs) (2014) 13 (n = 4,292) % (95% CI)	14 (n = 4,329) % (95% CI)	15 (n = 4,143) % (95% CI)	16 (n = 4,215) % (95% CI)	17 (n = 3,848) % (95% CI)	Total (adolescents aged 13–17 yrs) 2014 (n = 20,827) % (95% CI)	2013† (n = 18,948) % (95% CI)
Tdap§ ≥1 dose	87.5 (±2.1)	89.1 (±1.6)	88.3 (±1.9)	86.9 (±2.1)	86.3 (±2.0)	87.6 (±0.9)¶	84.7 (±1.0)
MenACWY** ≥1 dose	78.0 (±2.5)	81.0 (±2.1)	79.2 (±2.5)	79.4 (±2.5)	78.8 (±2.5)	79.3 (±1.1)¶	76.6 (±1.1)
MenACWY ≥2 doses	—	—	—	—	28.5 (±2.8)††	—	—
HPV§§ vaccine coverage by doses							
Females							
≥1 dose	51.1 (±4.1)	56.6 (±3.9)	61.0 (±4.3)¶¶	64.4 (±4.1)¶¶	66.5 (±4.4)¶¶	60.0 (±1.9)¶	56.7 (±1.9)
≥2 doses	40.1 (±4.0)	46.4 (±4.0)¶¶	51.6 (±4.3)¶¶	55.7 (±4.2)¶¶	57.6 (±4.7)¶¶	50.3 (±1.9)¶	46.9 (±1.9)
≥3 doses	26.2 (±3.6)	35.9 (±3.9)¶¶	41.2 (±4.2)¶¶	43.8 (±4.1)¶¶	51.0 (±4.7)¶¶	39.7 (±1.9)¶	36.8 (±1.9)
Males							
≥1 dose	38.9 (±4.2)	42.6 (±4.0)	45.7 (±4.1)¶¶	40.0 (±4.0)	41.8 (±4.1)	41.7 (±1.8)¶	33.6 (±1.8)
≥2 doses	27.1 (±3.9)	30.9 (±3.8)	35.8 (±4.1)¶¶	31.2 (±3.8)	32.6 (±4.0)	31.4 (±1.7)¶	22.6 (±1.6)
≥3 doses	16.2 (±3.3)	20.9 (±3.5)	24.9 (±4.0)¶¶	22.9 (±3.5)¶¶	23.3 (±3.7)¶¶	21.6 (±1.6)¶	13.4 (±1.3)
HPV vaccine 3-dose series completion***							
Females	56.1 (±6.3)	66.8 (±5.2)¶¶	70.3 (±5.0)¶¶	70.8 (±5.2)¶¶	78.3 (±5.4)¶¶	69.3 (±2.4)	69.8 (±2.5)
Males	47.1 (±7.6)	56.6 (±6.6)	58.1 (±6.6)¶¶	64.7 (±6.1)¶¶	61.7 (±6.6)¶¶	57.8 (±3.0)¶	48.2 (±3.9)
MMR ≥2 doses	90.2 (±1.8)	91.1 (±1.6)	91.2 (±1.6)	90.2 (±1.9)	90.9 (±1.6)	90.7 (±0.8)	89.6 (±0.9)
HepB ≥3 doses	91.3 (±1.8)	91.7 (±1.5)	92.5 (±1.4)	90.2 (±2.0)	91.4 (±1.5)	91.4 (±0.7)	91.3 (±0.8)
Varicella vaccine							
History of varicella†††	13.7 (±2.0)	17.8 (±2.4)¶¶	20.2 (±2.4)¶¶	24.2 (±2.6)¶¶	29.3 (±2.8)¶¶	21.0 (±1.1)¶	25.2 (±1.1)
Among adolescents with no history of varicella							
≥1 dose vaccine	95.6 (±1.3)	95.7 (±1.2)	95.6 (±1.1)	95.1 (±1.2)	93.6 (±1.5)	95.2 (±0.6)¶	93.5 (±0.9)
≥2 doses vaccine	83.1 (±2.4)	81.9 (±2.3)	81.1 (±2.6)	81.0 (±2.6)	77.1 (±3.1)¶¶	81.0 (±1.2)¶	76.8 (±1.3)
History of varicella or received ≥2 doses varicella vaccine	85.4 (±2.1)	85.1 (±1.9)	85.0 (±2.1)	85.6 (±2.0)	83.8 (±2.3)	85.0 (±0.9)¶	82.7 (±1.0)

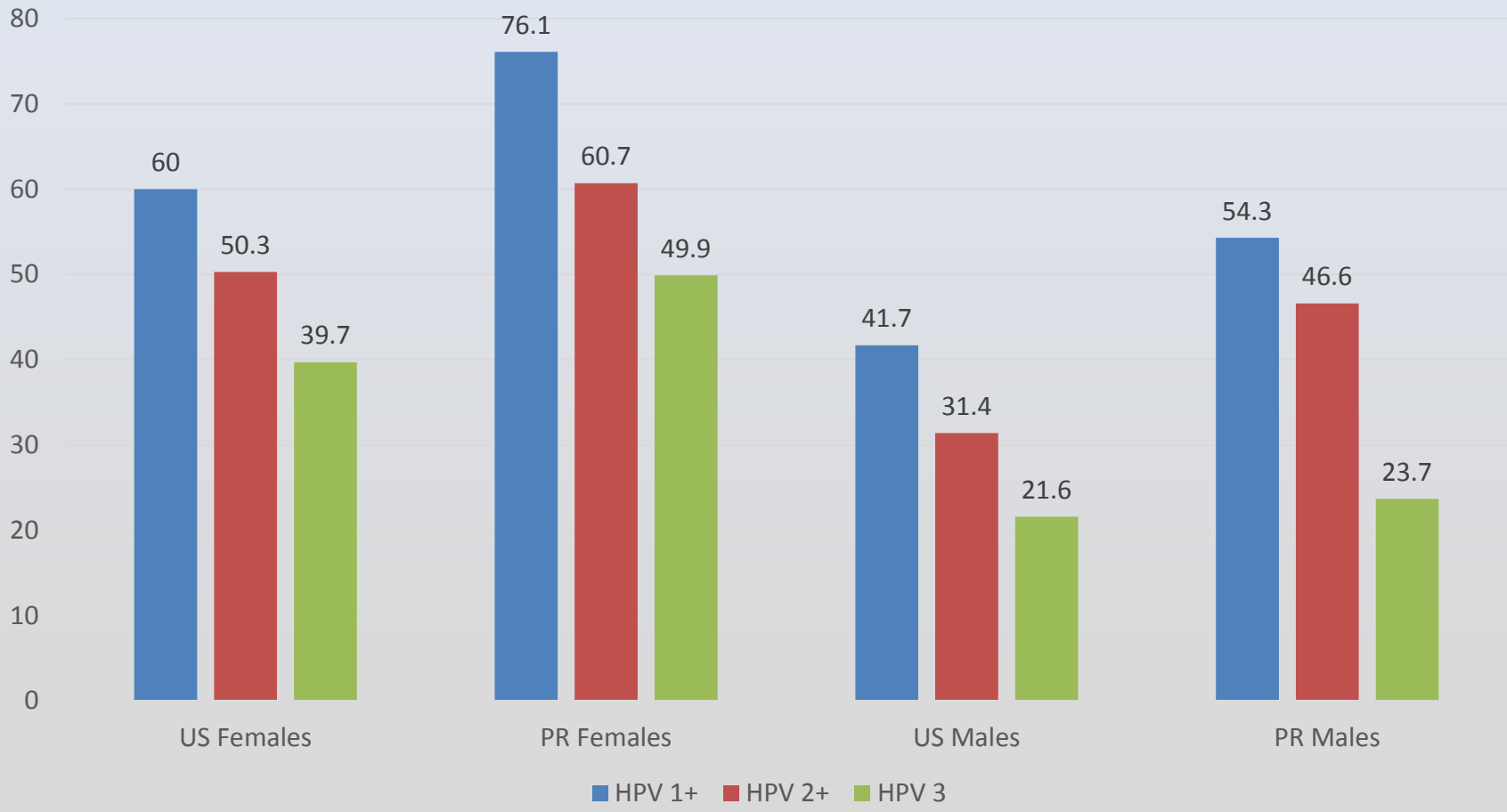
TABLE 2. Estimated vaccination coverage among adolescents aged 13–17 years,* by race/ethnicity,† poverty level,§ and selected vaccines and doses — National Immunization Survey–Teen (NIS-Teen), United States, 2014

	Race/Ethnicity						Poverty status	
Vaccine	White only, non-Hispanic (n = 13,443) % (95% CI)¶	Black only, non-Hispanic (n = 1,986) % (95% CI)	Hispanic (n = 3,255) % (95% CI)	American Indian/Alaska Native only, non-Hispanic (n = 303) % (95% CI)	Asian, non-Hispanic (n = 764) % (95% CI)	Multiracial (n = 985) % (95% CI)	Below poverty level (n = 3,709) % (95% CI)	At or above poverty level (n = 16,404) % (95% CI)
Tdap**≥1 dose	88.6 (±0.9)	87.6 (±2.1)	86.7 (±2.4)	86.1 (±6.5)	85.2 (±6.7)	81.9 (±6.3)††	85.8 (±2.0)††	88.4 (±0.9)
MenACWY §§ ≥1 dose	78.2 (±1.2)	80.3 (±2.8)	82.1 (±2.8)††	73.5 (±9.2)	82.5 (±6.5)	74.3 (±6.5)	79.0 (±2.4)	79.5 (±1.2)
HPV¶¶ vaccine coverage by doses								
Females								
≥1 dose	56.1 (±2.2)	66.4 (±4.8)††	66.3 (±5.1)††	71.2 (±14.4)††	54.9 (±9.3)	55.9 (±7.5)	67.2 (±4.2)††	57.7 (±2.1)
≥2 doses	47.1 (±2.2)	53.0 (±5.1)††	57.4 (±5.1)††	61.8 (±15.6)	47.5 (±9.1)	45.5 (±7.3)	58.0 (±4.3)††	47.9 (±2.2)
≥3 doses	37.5 (±2.1)	39.0 (±5.0)	46.9 (±5.2)††	39.4 (±15.4)	35.7 (±8.2)	37.2 (±7.0)	44.7 (±4.3)††	37.9 (±2.1)
Males								
≥1 dose	36.4 (±2.0)	42.1 (±4.9)††	54.2 (±4.9)††	49.8 (±13.9)	45.8 (±11.4)	40.2 (±10.1)	51.6 (±4.0)††	39.5 (±2.1)
≥2 doses	27.4 (±1.9)	32.0 (±4.8)	39.4 (±4.9)††	40.5 (±13.1)	38.3 (±11.1)	32.4 (±9.9)	39.4 (±4.1)††	29.5 (±2.0)
≥3 doses	18.8 (±1.7)	20.4 (±4.0)	27.8 (±4.7)††	26.3 (±10.9)	26.6 (±10.4)	23.5 (±9.6)	27.2 (±3.9)††	20.2 (±1.8)
HPV vaccine 3-dose series completion***								
Females	70.6 (±3.2)	61.6 (±6.3)††	72.8 (±5.4)	55.4 (±22.5)	71.7 (±11.0)	68.9 (±9.5)	68.3 (±5.0)	69.4 (±2.9)
Males	57.9 (±3.6)	54.1 (±8.1)	57.2 (±7.0)	57.7 (±17.5)	63.0 (±17.0)	65.1 (±13.6)	58.2 (±6.2)	57.4 (±3.5)
≥2 MMR	91.0 (±0.9)	91.1 (±1.9)	90.5 (±1.9)	94.1 (±4.1)	85.8 (±6.9)	90.0 (±3.3)	90.5 (±1.6)	90.8 (±0.9)
≥3 HepB	92.2 (±0.8)	91.4 (±1.8)	90.5 (±1.9)	93.9 (±4.3)	85.5 (±6.9)	90.4 (±3.4)	90.3 (±1.7)	91.9 (±0.8)
Varicella vaccine								
History of varicella†††	20.2 (±1.2)	18.3 (±2.8)	23.3 (±3.1)	36.1 (±11.8)††	23.2 (±7.3)	20.5 (±4.3)	24.8 (±2.6)††	19.5 (±1.2)
Among adolescents with no history of varicella								
≥1 dose vaccine	95.1 (±0.7)	95.3 (±1.4)	95.5 (±1.5)	96.1 (±3.4)	92.4 (±4.2)	95.5 (±2.5)	95.0 (±1.3)	95.2 (±0.6)
≥2 doses vaccine	80.0 (±1.4)	84.6 (±2.5)††	82.5 (±3.1)	84.7 (±6.7)	82.3 (±5.5)	73.1 (±7.8)	82.7 (±2.3)	80.8 (±1.3)
History of varicella or received ≥2 doses varicella vaccine	84.0 (±1.1)	87.4 (±2.1)††	86.6 (±2.4)	90.2 (±4.5)††	86.4 (±4.4)	78.6 (±6.5)	87.0 (±1.8)††	84.5 (±1.1)

FIGURE 1. Estimated vaccination coverage with selected vaccines and doses among adolescents aged 13–17 years, by survey year — National Immunization Survey–Teen, United States, 2006–2014

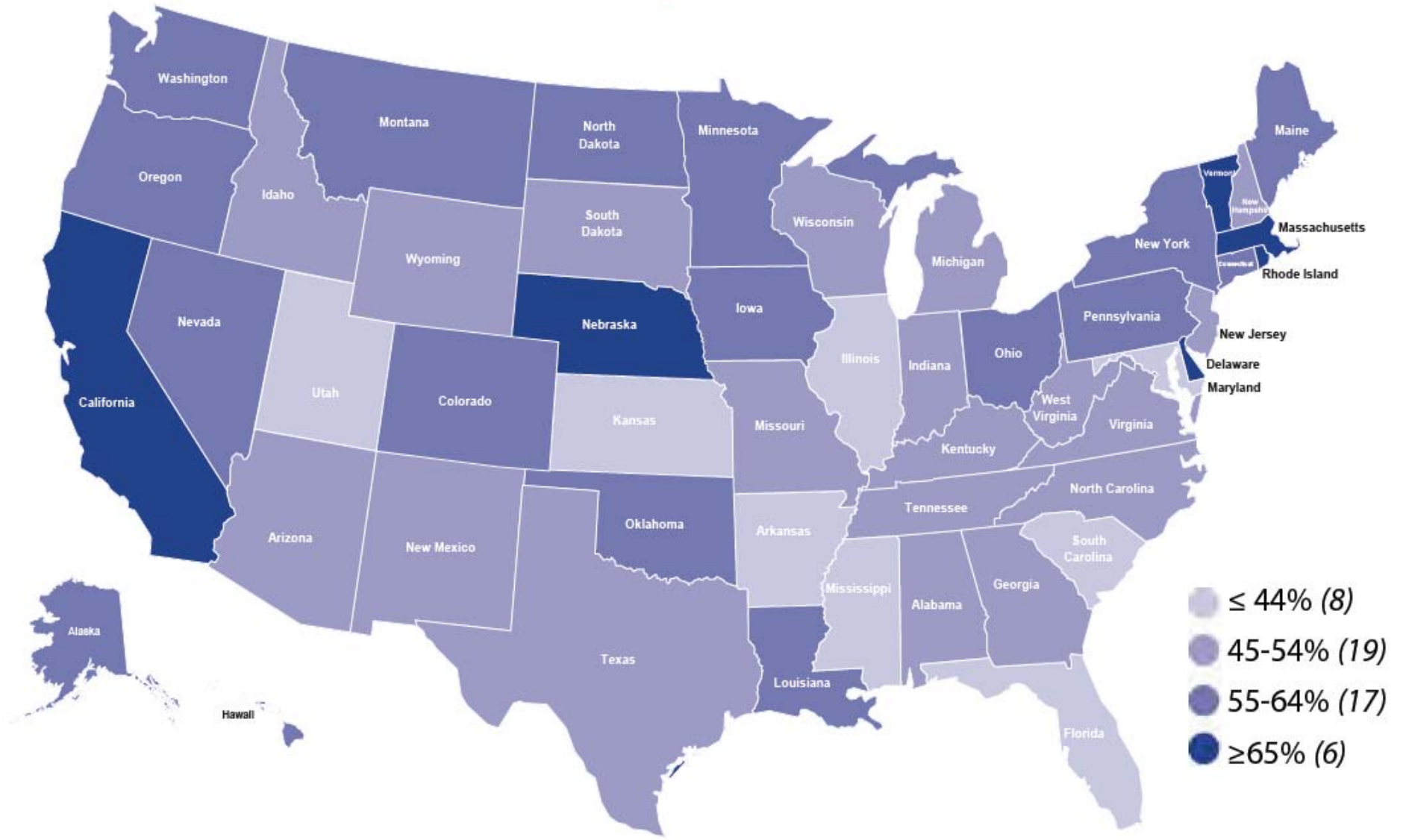


Estimated HPV vaccination coverage by doses among adolescents aged 13–17 years in U.S. and Puerto Rico— National Immunization Survey–Teen (NIS-Teen), United States, 2014



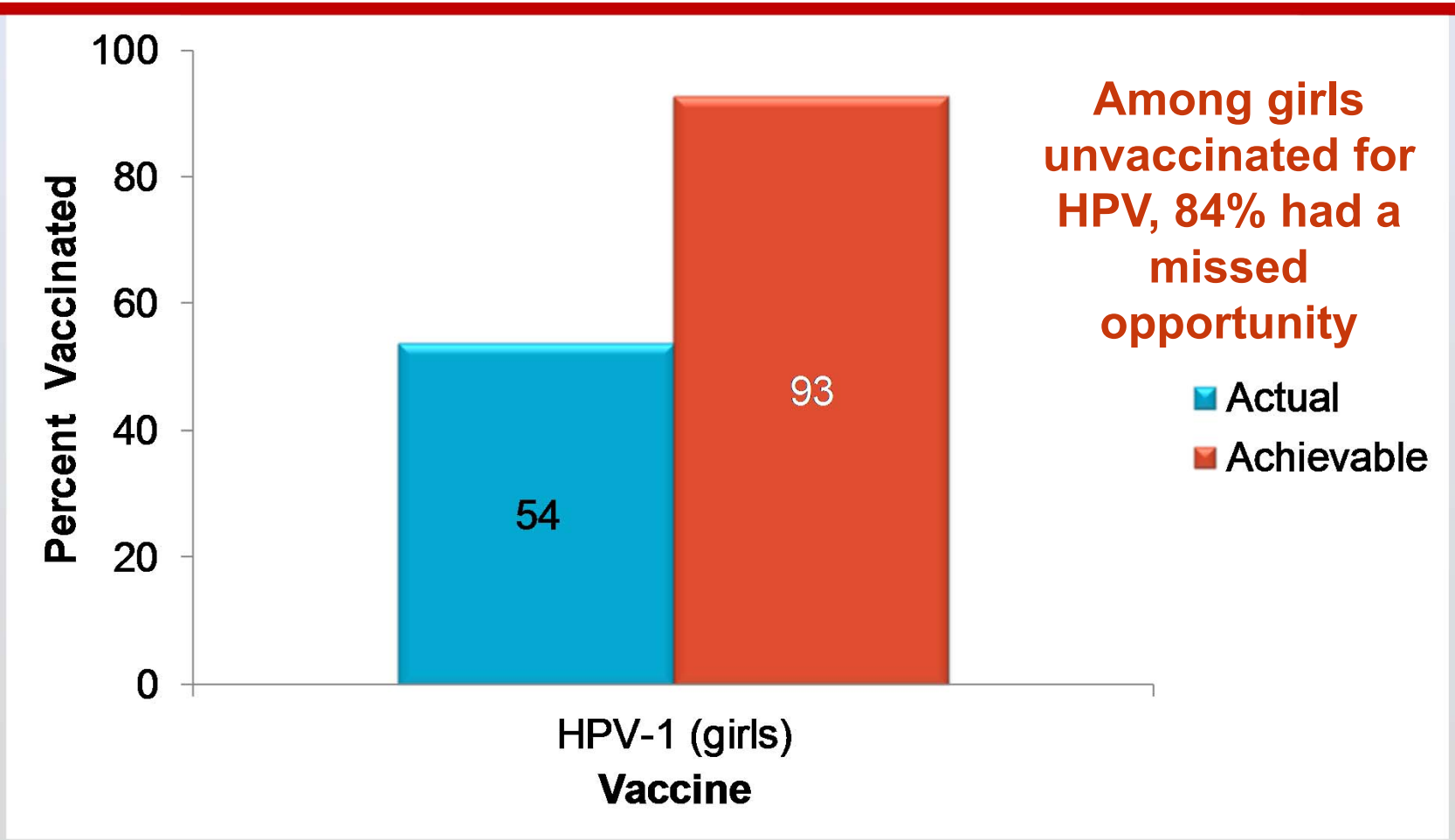
MMWR / July 31, 2015 / Vol. 64 / No. 29

Coverage of 1 of More Doses of HPV among Adolescent Girls 13-17 Years by State, NIS-Teen 2012



HPV YOU ARE THE KEY TO CANCER PREVENTION

Actual and Achievable Vaccination Coverage if Missed Opportunities Were Eliminated: Adolescents 13-17 Years, NIS-Teen 2012



Missed opportunity: Healthcare encounter when some, but not all ACIP-recommended vaccines are given.
HPV-1: Receipt of at least one dose of HPV.

Stokley S, Curtis R, Jeyarajah J. Human Papillomavirus Vaccination Coverage Among Adolescent Girls, 2007-2012, and Postlicensure Vaccine Safety Monitoring, 2006-2013 - United States. MMWR. 62(29);591-595.

Niveles de cobertura por antígeno en adolescentes de 13 a 15 años
Fuente: PRIR, septiembre 2013 (n=174,517)

Por que Están las Tasas de Vacunación de VPH Bajas

- Las barreras mas frecuentemente expresadas por profesionales de la salud, padres/cuidadores y adolescentes
  - Oportunidades perdidas durante visitas medicas para recomendar o iniciar vacunación
  - Mala información
  - Falta de confianza (Trust)
  - Falta de conocimiento
  - Acceso insuficiente
  - Fallas en el sistema de salud
  - Costo

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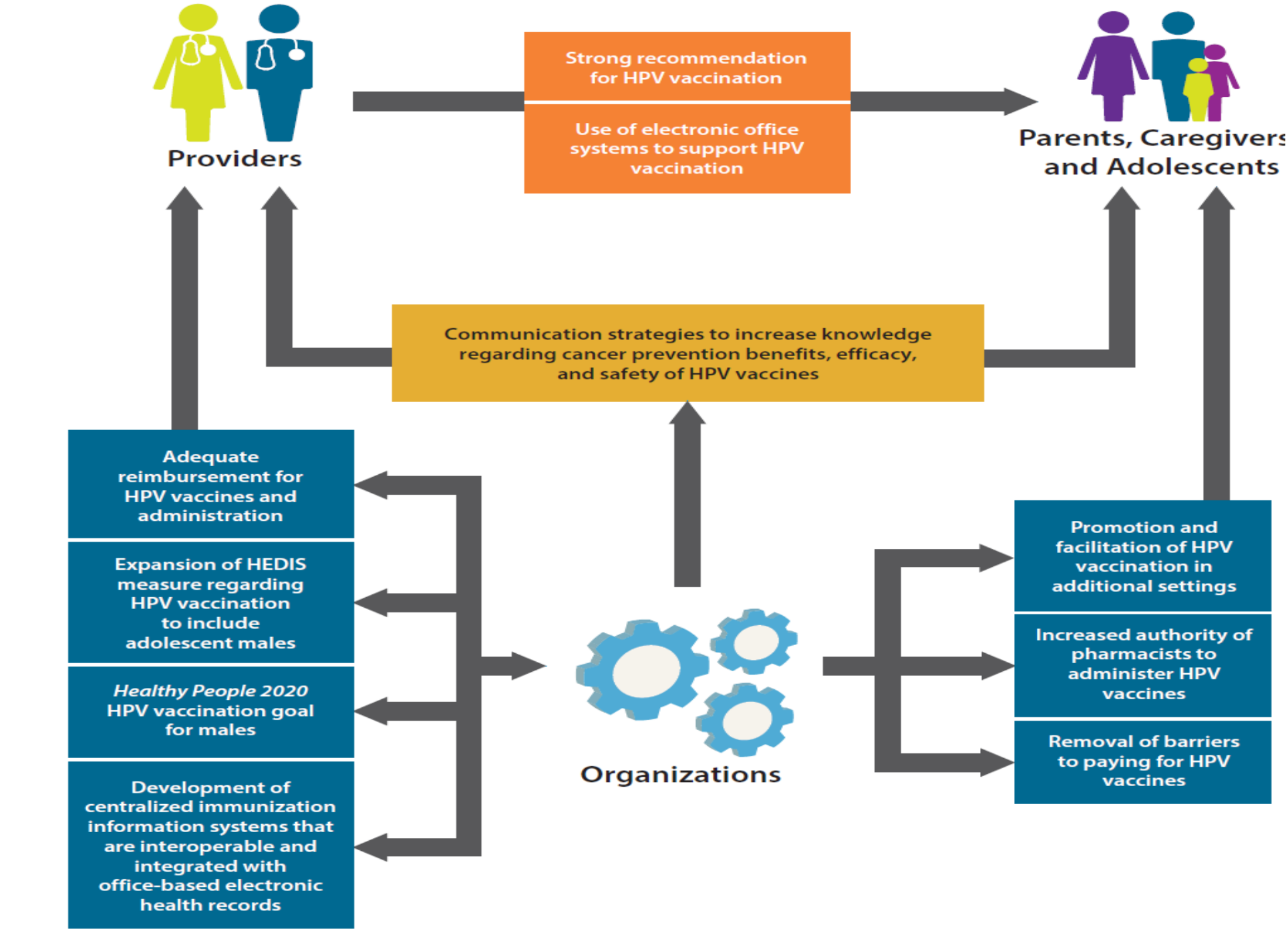
Coalición para el Control de Cáncer de Puerto Rico
PROGRAMA DE CONTROL COMPRENSIVO DE CÁNCER

Thank you

Key Audiences and Objectives for Increasing U.S. HPV Vaccine Uptake



Que es Necesario para Aumentar la Vacunación Contra VPH?

- Intervenciones Integrales para:
  - Profesionales de la Salud
  - Cambios en el sistema de atención de la salud
  - Padres y cuidadores
  - Adolescentes
  - Otros (sistema escolar)

Goals Based on Formative Research

QUEREMOS QUE LOS PADRES:

- Reconozcan que la vacuna contra el VPH es PREVENCION DE CANCER
- Entiendan que la vacuna contra el VPH es MEJOR CUANDO SE APLICA A LA EDAD DE 11 A 12 AÑOS DE EDAD
- Reconozcan LA importancia de completar LAS 3 DOSIS

Goals Based on Formative Research

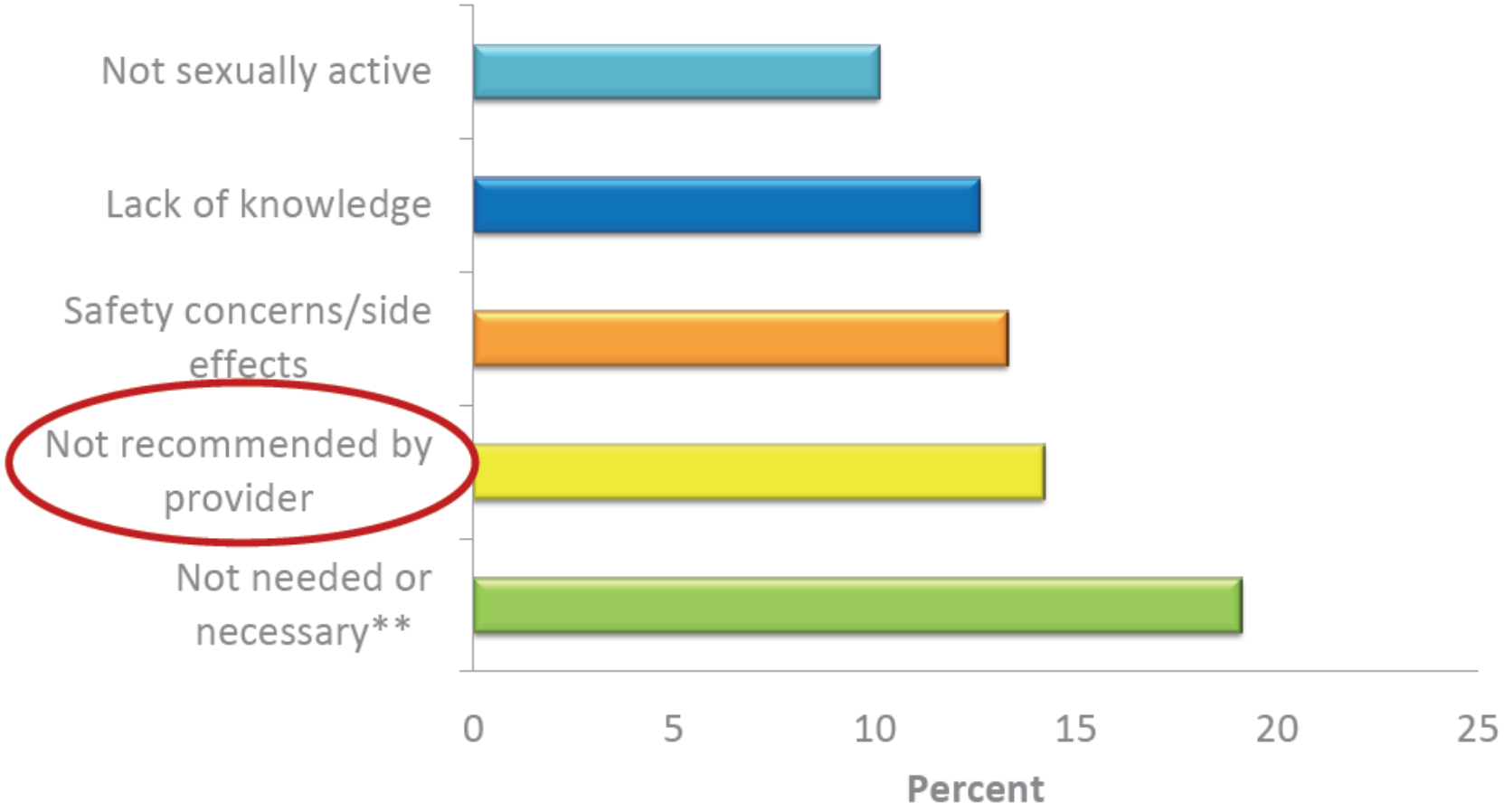
QUEREMOS QUE LOS PROFESIONAL DE LA SALUD:

- Estén familiarizados CON TODAS LAS INDICACIONES de la vacuna contra el VPH
- RECOMIENDEN DE MANERA FUERTE/ENERGICA la vacuna contra el VPH a los 11 o 12 años de edad
- Estar consientes e interesados en, SISTEMAS que puedan mejorar las tasa de vacunación

Razones por las que los Padres No piensan vacunar a sus Hijos(as) Contra el VPH

- La vacuna **NO ES NECESARIA**, sobre todo en hombres
- El profesional de la salud **NO** me recomendó la vacuna contra el VPH
- Preocupación sobre la **SEGURIDAD** de la vacuna
- Falta de **CONOCIMIENTO** sobre la vacuna y las enfermedades causadas por el VPH
- Hijo(a) **NO SEXUALMENTE ACTIVO**
- Hijo(a) **MUY JOVEN** para ser vacunado contra el VPH
- **COSTO** de la vacuna

Top 5 reasons for not vaccinating daughter, among parents with no intention to vaccinate in the next 12 months, NIS-Teen 2012



* Not mutually exclusive.

** Did not know much about HPV or HPV vaccine.

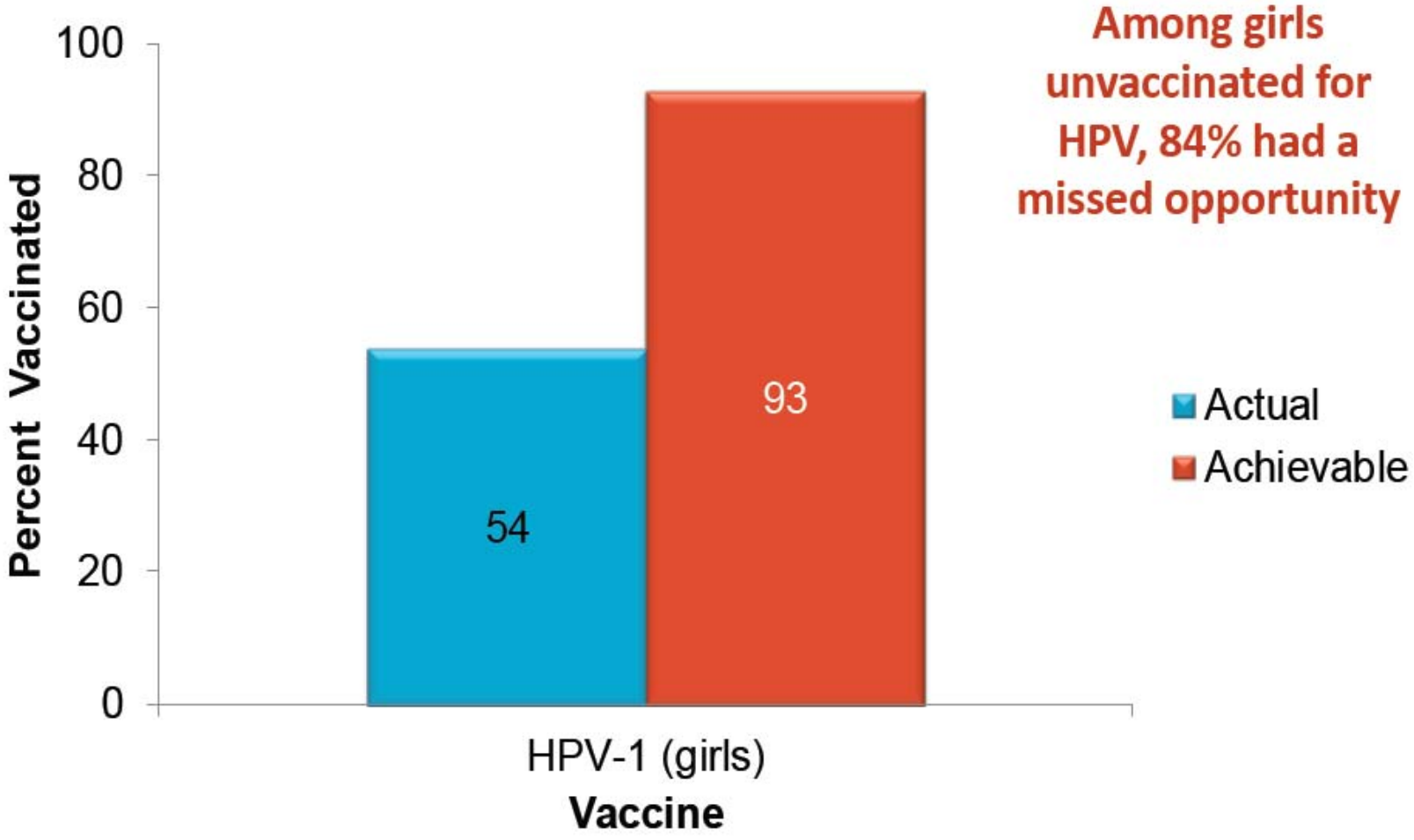
Porque Debemos Mejorar la Vacunación contra VPH a los 12 años?

- 26 M niñas <13 en los US
  - Si No se Vacunan:
    - 168,400 desarrollaran cáncer de cérvix
    - 54,100 morirán por el
- Vacunando 30% prevendríamos
  - 45,500 casos
  - 14,600 muertes
- Vacunando 80% prevendríamos
  - 98,800 casos
  - 31,700 muertes

Porque Debemos Mejorar la Vacunación contra VPH a los 12 años?

- Por cada año que mantengamos cobertura de solo el 30% en lugar de 80% ocurrirán:
  - 4,400 casos
  - 1,400 muertes.

Actual and Achievable Vaccination Coverage if Missed Opportunities Were Eliminated: Adolescents 13-17 Years, NIS-Teen 2012



Missed opportunity: Encounter when some, but not all ACIP-recommended vaccines are given.

HPV-1: Receipt of at least one dose of HPV.

HPV YOU ARE THE KEY TO CANCER PREVENTION

Evitar Perder Oportunidades

- Vacuna de VPH se puede administrar en conjunto con otras vacunas
- Administrar la vacuna de VPH en deportes o campamentos
- Revisar el expediente de inmunizaciones aun en visitas de emergencia o enfermedad aguda
- Estimula a los padres a mantener buen registro de inmunizaciones y revisarlo
- Implementas intervenciones de sistema en la oficina medica o practica

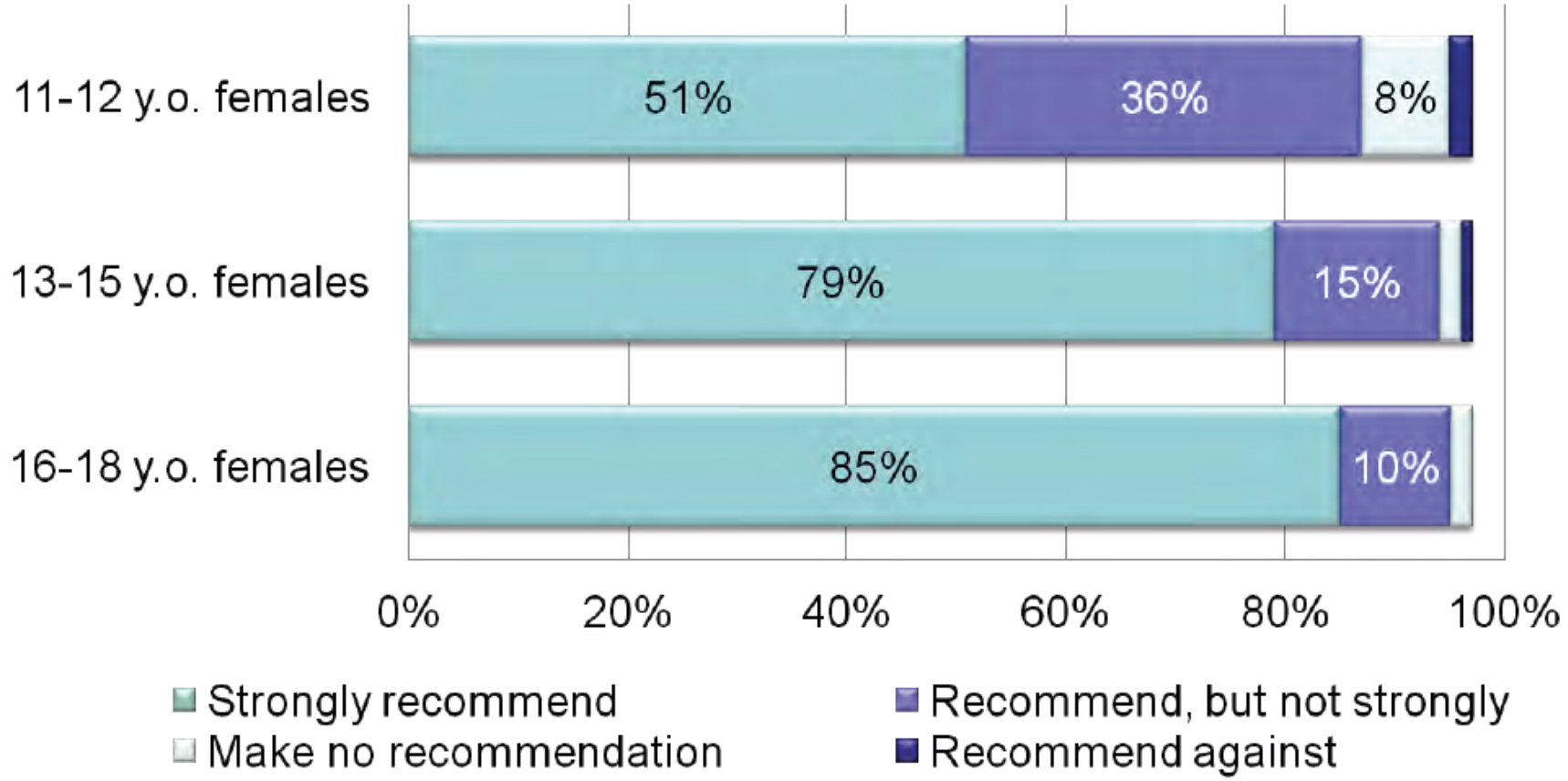
La Tormenta Perfecta

- **Porque es la Vacuna de VPH Diferente?**
  - Sensacionalizada en los medios
  - Diferentes razones entre niños y niñas para iniciar y completar las 3 dosis
  - Padres piensan en sexualidad en lugar de prevención de cáncer
  - Algunos médicos no dan una fuerte recomendación
  - Los padres tiene preguntas en la que los profesionales no están seguros
  - Confusión con la recomendación para niños y niñas en diferentes fases
  - Intervenciones de sistema requieren compromiso del medico

Importancia de la Recomendación del Profesional de la Salud

- Los estudios demuestran que la recomendación del profesional de la salud es el factor que mejor predice la vacunación contra VPH
- No recibir la recomendación se reporta como una barrera de los padres para vacunar a sus hijos.

Strength of HPV Vaccine Recommendation for Female Patients, Pediatricians and Family Physicians (N=609)



Allison et al. https://cdc.confex.com/cdc/nic2011/webprogram/Paper25181.html

Vacuna Contra VPH es Solo Otra de las Vacunas del Adolescente

- **Recomendación:**
  - **agrupar todas las vacunas de adolescentes**
  - Recomendar la vacuna de VPH de la misma manera que otras vacunas
  - Cuando no hay recomendación fuerte los padres se cuestionan "***si la vacuna es realmente necesaria***"
  - Muchos padres responden que ellos confían en los médicos de sus hijos y que obtendrían la vacuna si su medico lo recomendar ara

Como Pudiera Usted Ayudar?

- De una **RECOMENDACION SOLIDA**
- Inicie la conversación pronto y enfoque su mensaje en la **PREVENCIÓN** de cáncer
- Ofrezca una **HISTORIA PERSONAL**
- Estimule las **PREGUNTAS** de los padres, especialmente aquellas sobre seguridad y eficacia de la vacuna

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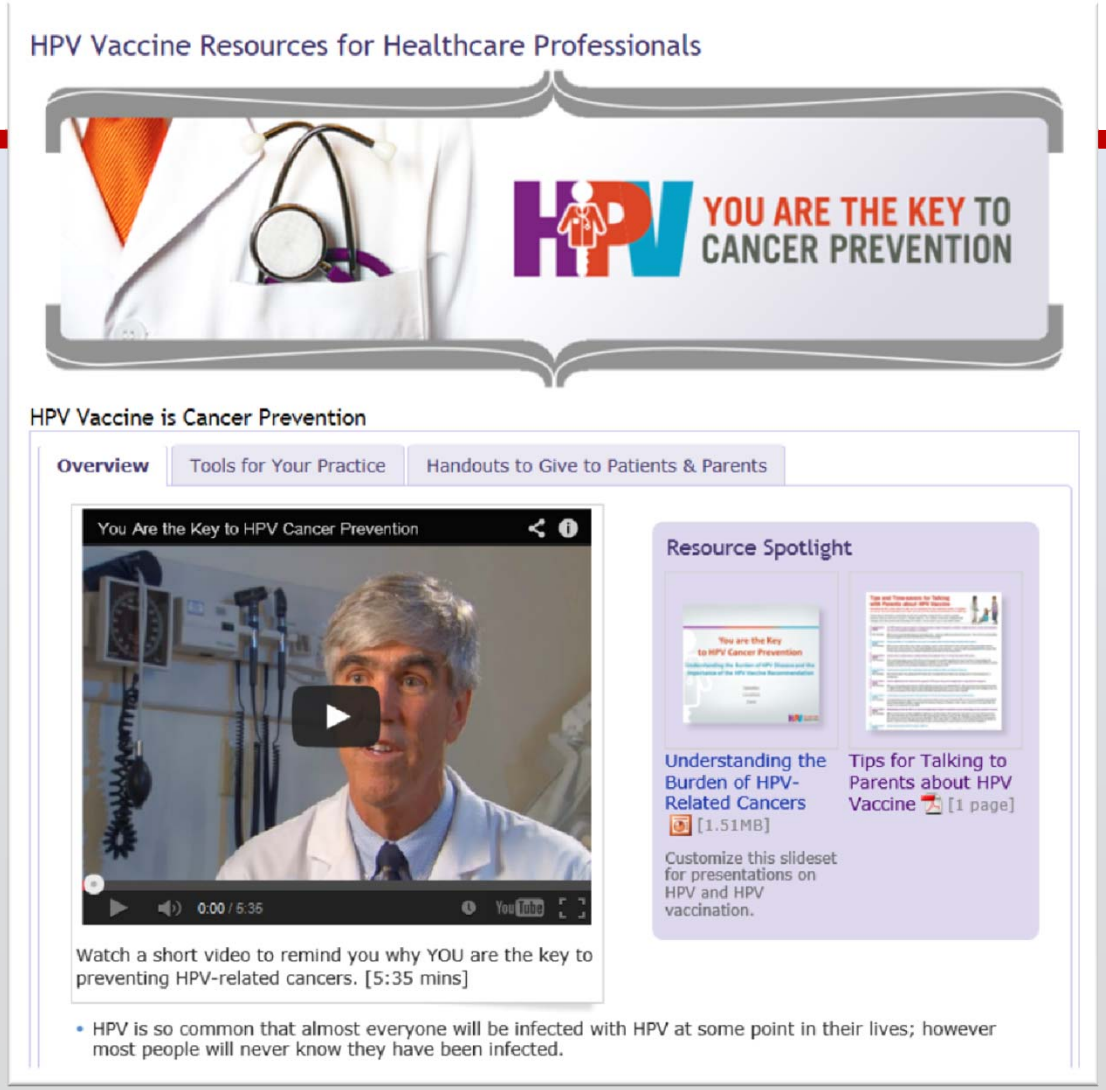
Resources for HPV vaccine communication campaigns

COMMUNICATION TOOLS

You Are the Key Website



cdc.gov/vaccines/YouAreTheKey

Tips for Talking to Parents about HPV Vaccine

Tools for your Practice

Tips and Time-savers for Talking with Parents about HPV Vaccine

Recommend the HPV vaccine series the same way you recommend the other adolescent vaccines. For example, you can say "Your child needs these shots today," and name all of the vaccines recommended for the child's age.

Parents may be interested in vaccinating, yet still have questions. Taking the time to listen to parents' questions helps you save time and give an effective response. CDC research shows these straightforward messages work with parents when discussing HPV vaccine—and are easy for you or your staff to deliver.

CDC RESEARCH SHOWS:	The "HPV vaccine is cancer prevention" message resonates strongly with parents. In addition, studies show that a strong recommendation from you is the single best predictor of vaccination.
TRY SAYING:	HPV vaccine is very important because it prevents cancer. I want your child to be protected from cancer. That's why I'm recommending that your daughter/son receive the first dose of HPV vaccine today.
CDC RESEARCH SHOWS:	Disease prevalence is not understood, and parents are unclear about what the vaccine actually protects against.
TRY SAYING:	HPV can cause cancers of the cervix, vagina, and vulva in women, cancer of the penis in men, and cancers of the anus and the mouth or throat in both women and men. There are about 26,000 of these cancers each year—and most could be prevented with HPV vaccine. There are also many more precancerous conditions requiring treatment that can have lasting effects.
CDC RESEARCH SHOWS:	Parents want a concrete reason to understand the recommendation that 11–12 year olds receive HPV vaccine.
TRY SAYING:	We're vaccinating today so your child will have the best protection possible long before the start of any kind of sexual activity. We vaccinate people well before they are exposed to an infection, as is the case with measles and the other recommended childhood vaccines. Similarly, we want to vaccinate children well before they get exposed to HPV.
CDC RESEARCH SHOWS:	Parents may be concerned that vaccinating may be perceived by the child as permission to have sex.
TRY SAYING:	Research has shown that getting the HPV vaccine does not make kids more likely to be sexually active or start having sex at a younger age.
CDC RESEARCH SHOWS:	Parents might believe their child won't be exposed to HPV because they aren't sexually active or may not be for a long time.
TRY SAYING:	HPV is so common that almost everyone will be infected at some point. It is estimated that 79 million Americans are currently infected with 14 million new HPV infections each year. Most people infected will never know. So even if your son/daughter waits until marriage to have sex, or only has one partner in the future, he/she could still be exposed if their partner has been exposed.

cdc.gov/vaccines/who/teens/for-hcp/hpv-resources.html

HPV Fact Sheet for Clinicians

Tools for your Practice

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SEARCH

A-Z Index A B C D E F G H I J K L M N O P Q R S T U V W X Y Z #

Sexually Transmitted Diseases (STDs)

Sexually Transmitted Diseases

- Diseases & Related Conditions
- Bacterial Vaginosis (BV)
- Chlamydia
- Gonorrhea
- Hepatitis
- Herpes
- HIV/AIDS & STDs
- Human Papillomavirus (HPV)
- **Vaccine Information for Clinicians**
- Pelvic Inflammatory Disease (PID)
- Syphilis
- Trichomoniasis
- Other STDs
- Life Stages and Populations
- Prevention
- Pregnancy & Infertility

Sexually Transmitted Diseases > Diseases & Related Conditions > Human Papillomavirus (HPV)

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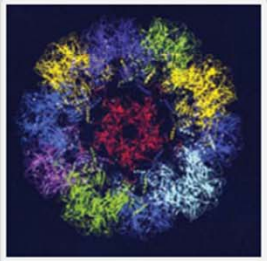
HPV Vaccine Information for Clinicians - Fact Sheet

CDC and partners, including the American Academy of Pediatrics, recommend HPV vaccination of both girls and boys at ages 11 or 12 years and suggest that clinicians strongly recommend HPV vaccination for preteens and teens who have not yet been fully vaccinated.



Virus-like particles (VLPs) assembled from the L1 protein of human papillomavirus 16

Background

Approximately 20 million people are currently infected with genital human papillomavirus (HPV) in the United States (U.S.). As many as half of these infections are among adolescents and young adults, ages 15 through 24 years of age. HPV is so common that most sexually active adults become infected at some point in their lives.

Of the more than 40 HPV types that infect human mucosal surfaces, most infections are asymptomatic and transient. However, certain oncogenic types that persist can cause cervical cancer and other, less common cancers, including cancers of the anus, penis, vulva, vagina, and oropharynx (back of throat including base of tongue and tonsils). Other, non-oncogenic HPV types can cause genital warts and, rarely, respiratory tract warts in children which is a condition called juvenile-onset recurrent respiratory papillomatosis (RRP).

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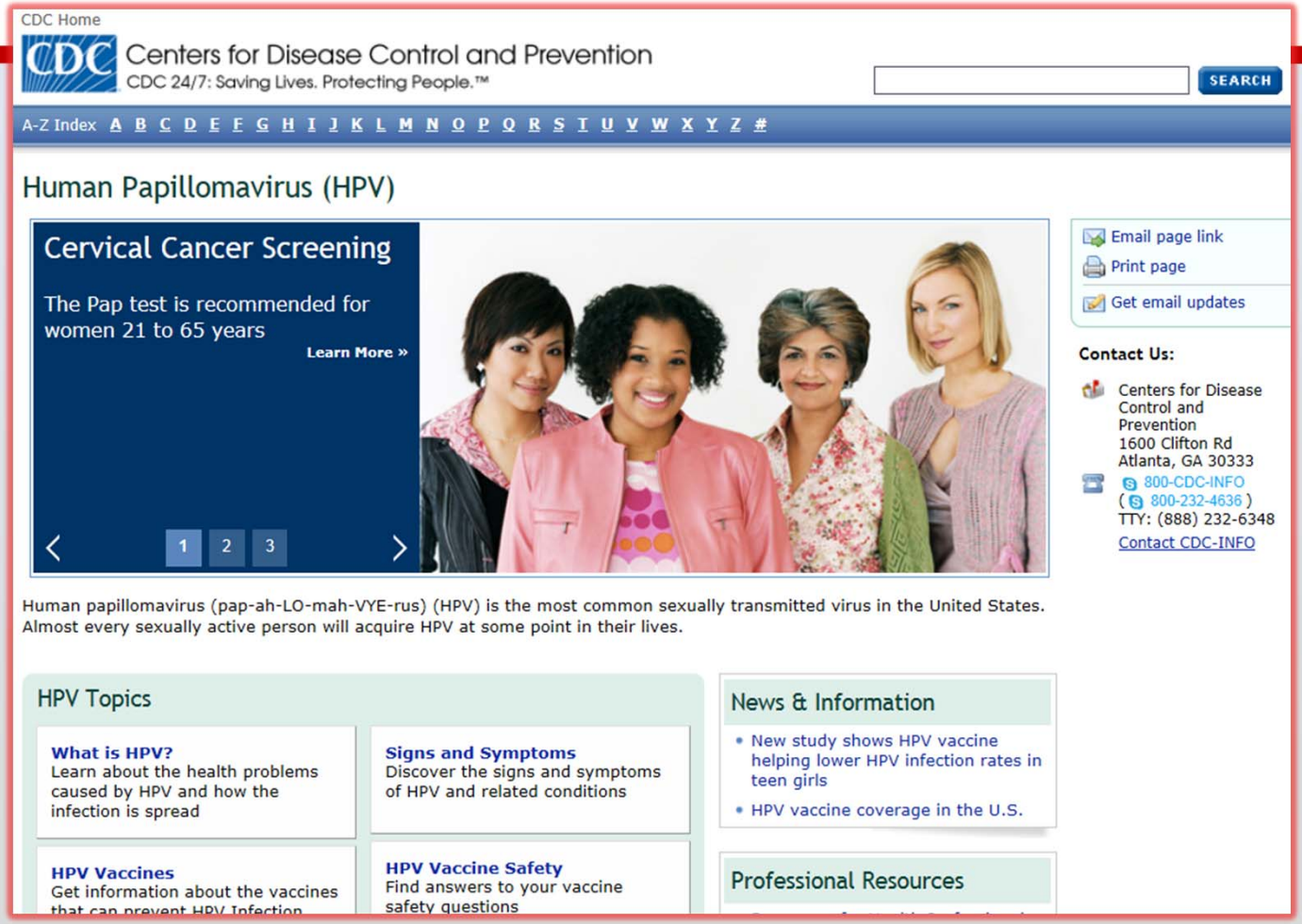
Contact CDC-INFO

cdc.gov/vaccines/who/teens/for-hcp/hpv-resources.html

HPV Portal

Tools for your Practice



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AAP—HPV Vaccine Can't Wait

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THE OFFICIAL NEWSMAGAZINE OF THE AMERICAN ACADEMY OF PEDIATRICS

AAP News

DEDICATED TO THE HEALTH OF ALL CHILDREN

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NEWS AND FEATURES

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HPV vaccine *can't* wait

Immunization of younger teens is critical to preventing serious cancers later in life

Anne Schuchat, M.D. and Michael T. Brady, M.D., FAAP

Administering immunizations during adolescence provides unique challenges. A recently released report from the National Immunization Survey—Teen (NIS-Teen) provides evidence that there has been more difficulty in obtaining acceptance of the human papillomavirus (HPV) vaccine compared to two other vaccines recently introduced to adolescents: tetanus, diphtheria and acellular pertussis (Tdap) vaccine and meningococcal conjugate (MCV4) vaccine.

"HPV vaccine is different." "HPV vaccine can wait." "I won't go to the mat for this one." That's what is frequently heard from pediatricians across the country. Perhaps you have said the same things yourself.

This Article

Published online August 31, 2012

(doi: 10.1542/aapnews.20120831-1)

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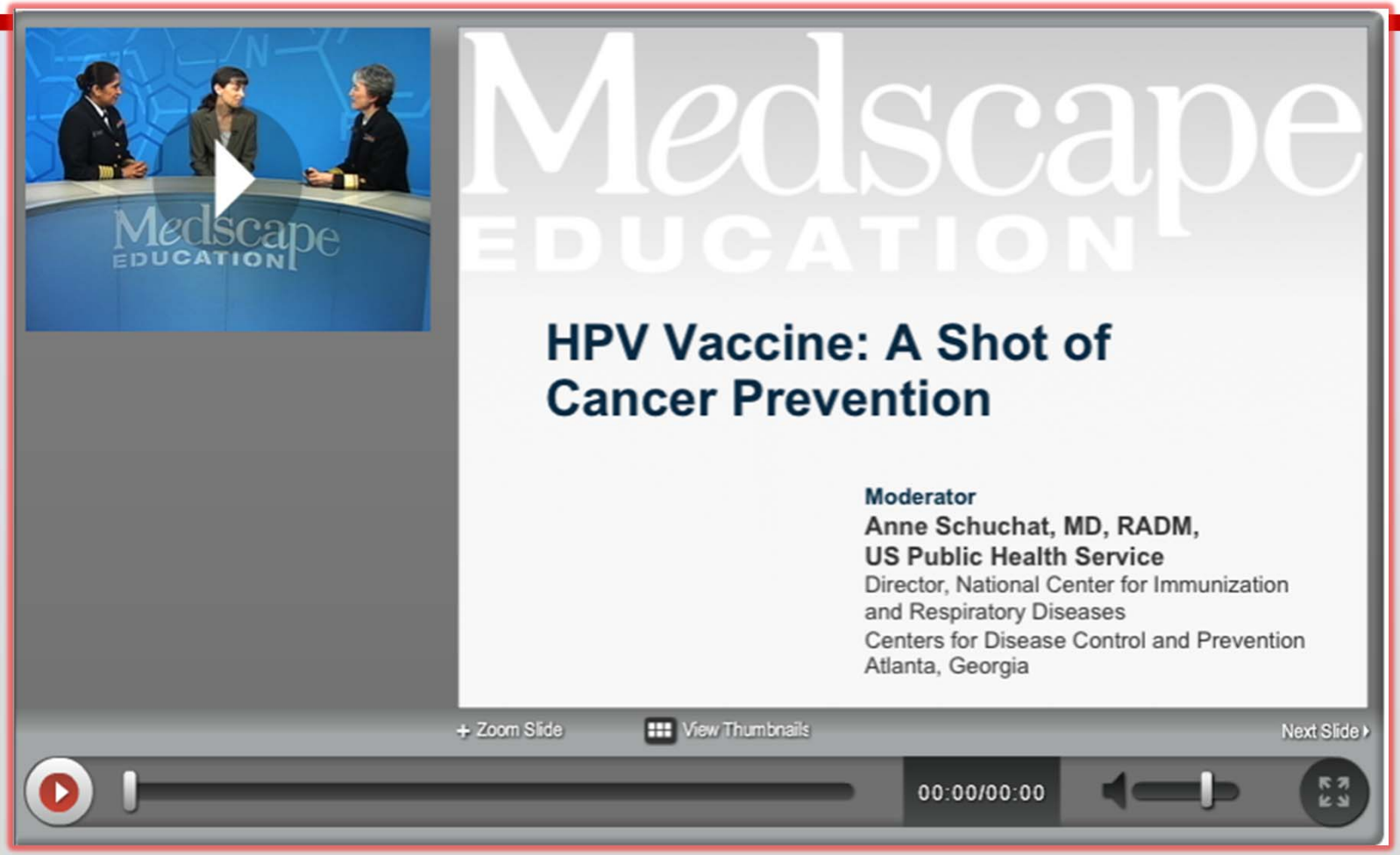
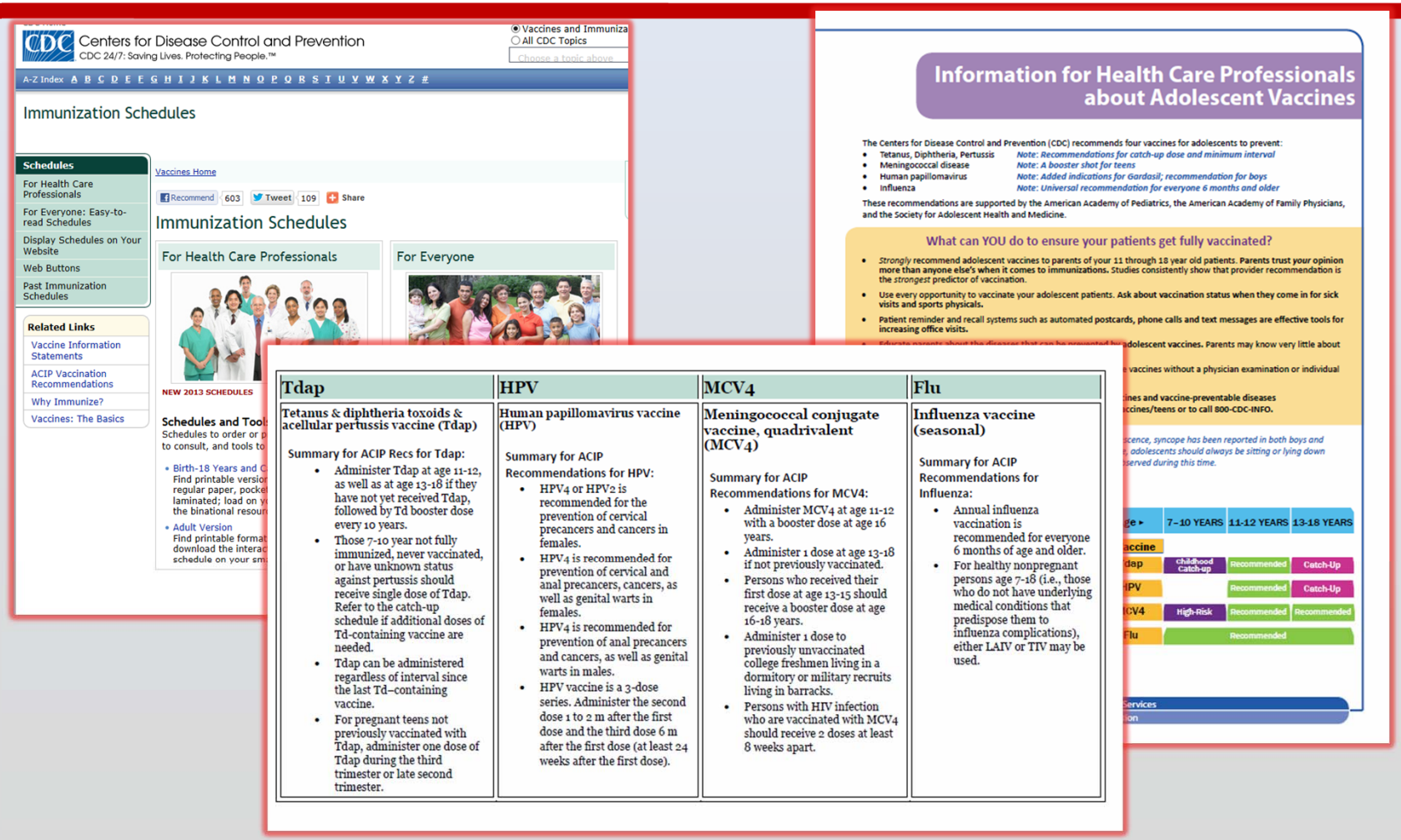


cdc.gov/vaccines/who/teens/for-hcp/hpv-resources.html

Immunization Schedules, Recommendations, and more

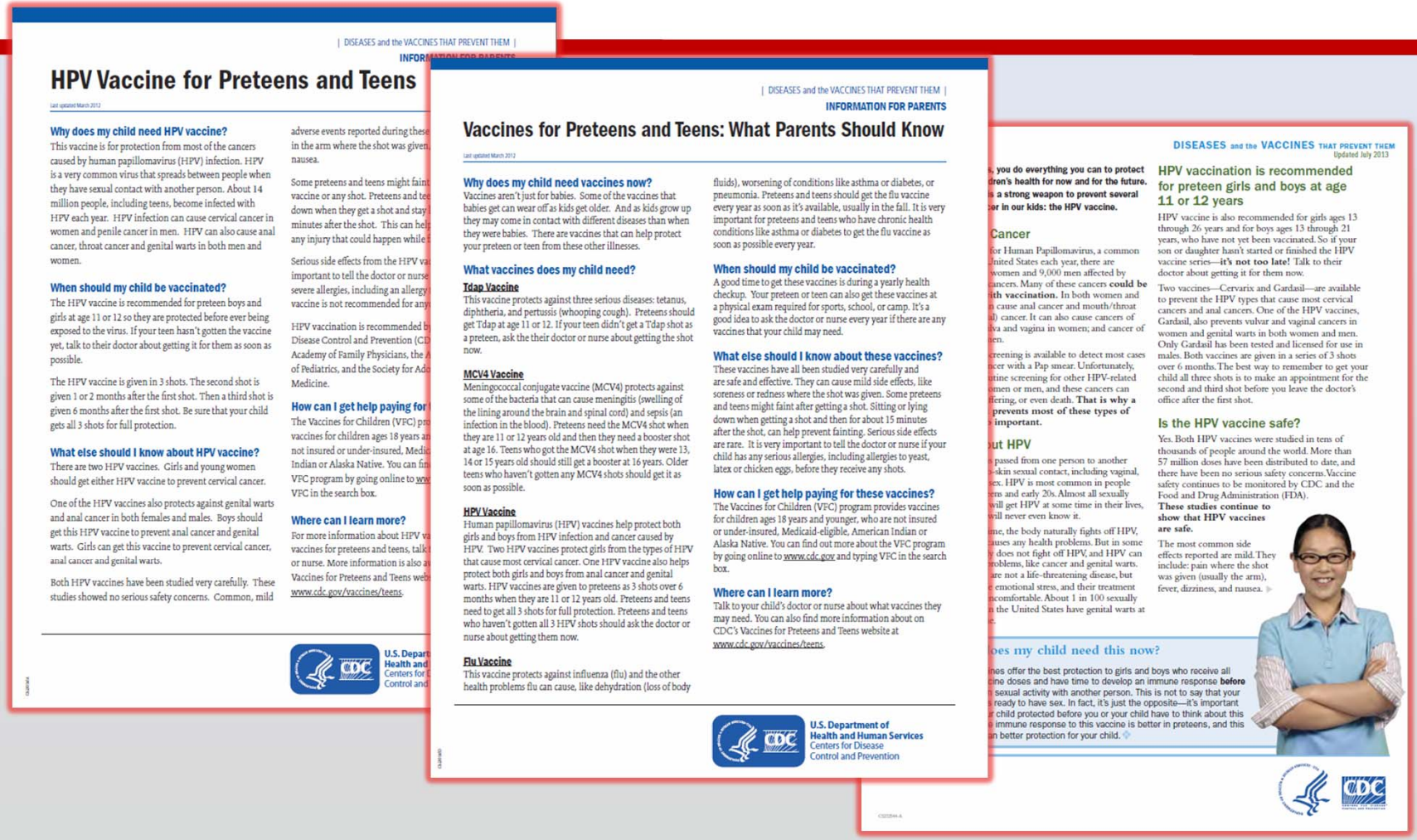
Tools for your Practice



cdc.gov/vaccines/who/teens/for-hcp/hpv-resources.html

Patient and Parent Handouts

Resources for Patients



HPV Vaccine for Preteens and Teens

Last updated March 2012

Why does my child need HPV vaccine?

This vaccine is for protection from most of the cancers caused by human papillomavirus (HPV) infection. HPV is a very common virus that spreads between people when they have sexual contact with another person. About 14 million people, including teens, become infected with HPV each year. HPV infection can cause cervical cancer in women and penile cancer in men. HPV can also cause anal cancer, throat cancer and genital warts in both men and women.

When should my child be vaccinated?

The HPV vaccine is recommended for preteen boys and girls at age 11 or 12 so they are protected before ever being exposed to the virus. If your teen hasn't gotten the vaccine yet, talk to their doctor about getting it for them as soon as possible.

The HPV vaccine is given in 3 shots. The second shot is given 1 or 2 months after the first shot. Then a third shot is given 6 months after the first shot. Be sure that your child gets all 3 shots for full protection.

What else should I know about HPV vaccine?

There are two HPV vaccines. Girls and young women should get either HPV vaccine to prevent cervical cancer.

One of the HPV vaccines also protects against genital warts and anal cancer in both females and males. Boys should get this HPV vaccine to prevent anal cancer and genital warts. Girls can get this vaccine to prevent cervical cancer, anal cancer and genital warts.

Both HPV vaccines have been studied very carefully. These studies showed no serious safety concerns. Common, mild

Vaccines for Preteens and Teens: What Parents Should Know

Last updated March 2012

Why does my child need vaccines now?

Vaccines aren't just for babies. Some of the vaccines that babies get can wear off as kids get older. And as kids grow up they may come in contact with different diseases than when they were babies. There are vaccines that can help protect your preteen or teen from these other illnesses.

What vaccines does my child need?

Tdap Vaccine

This vaccine protects against three serious diseases: tetanus, diphtheria, and pertussis (whooping cough). Preteens should get Tdap at age 11 or 12. If your teen didn't get a Tdap shot as a preteen, ask the their doctor or nurse about getting the shot now.

MCV4 Vaccine

Meningococcal conjugate vaccine (MCV4) protects against some of the bacteria that can cause meningitis (swelling of the lining around the brain and spinal cord) and sepsis (an infection in the blood). Preteens need the MCV4 shot when they are 11 or 12 years old and then they need a booster shot at age 16. Teens who got the MCV4 shot when they were 13, 14 or 15 years old should still get a booster at 16 years. Older teens who haven't gotten any MCV4 shots should get it as soon as possible.

HPV Vaccine

Human papillomavirus (HPV) vaccines help protect both girls and boys from HPV infection and cancer caused by HPV. Two HPV vaccines protect girls from the types of HPV that cause most cervical cancer. One HPV vaccine also helps protect both girls and boys from anal cancer and genital warts. HPV vaccines are given to preteens as 3 shots over 6 months when they are 11 or 12 years old. Preteens and teens need to get all 3 shots for full protection. Preteens and teens who haven't gotten all 3 HPV shots should ask the doctor or nurse about getting them now.

Flu Vaccine

This vaccine protects against influenza (flu) and the other health problems flu can cause, like dehydration (loss of body fluids), worsening of conditions like asthma or diabetes, or pneumonia. Preteens and teens should get the flu vaccine every year as soon as it's available, usually in the fall. It is very important for preteens and teens who have chronic health conditions like asthma or diabetes to get the flu vaccine as soon as possible every year.

When should my child be vaccinated?

A good time to get these vaccines is during a yearly health checkup. Your preteen or teen can also get these vaccines at a physical exam required for sports, school, or camp. It's a good idea to ask the doctor or nurse every year if there are any vaccines that your child may need.

What else should I know about these vaccines?

These vaccines have all been studied very carefully and are safe and effective. They can cause mild side effects, like soreness or redness where the shot was given. Some preteens and teens might faint after getting a shot. Sitting or lying down when getting a shot and then for about 15 minutes after the shot, can help prevent fainting. Serious side effects are rare. It is very important to tell the doctor or nurse if your child has any serious allergies, including allergies to yeast, latex or chicken eggs, before they receive any shots.

How can I get help paying for these vaccines?

The Vaccines for Children (VFC) program provides vaccines for children ages 18 years and younger, who are not insured or under-insured, Medicaid-eligible, American Indian or Alaska Native. You can find out more about the VFC program by going online to www.cdc.gov and typing VFC in the search box.

Where can I learn more?

Talk to your child's doctor or nurse about what vaccines they may need. You can also find more information about on CDC's Vaccines for Preteens and Teens website at www.cdc.gov/vaccines/teens.

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

DISEASES and the VACCINES THAT PREVENT THEM
Updated July 2013

HPV vaccination is recommended for preteen girls and boys at age 11 or 12 years

HPV vaccine is also recommended for girls ages 13 through 26 years and for boys ages 13 through 21 years, who have not yet been vaccinated. So if your son or daughter hasn't started or finished the HPV vaccine series—**it's not too late!** Talk to their doctor about getting it for them now.

Two vaccines—Cervarix and Gardasil—are available to prevent the HPV types that cause most cervical cancers and anal cancers. One of the HPV vaccines, Gardasil, also prevents vulvar and vaginal cancers in women and genital warts in both women and men. Only Gardasil has been tested and licensed for use in males. Both vaccines are given in a series of 3 shots over 6 months. The best way to remember to get your child all three shots is to make an appointment for the second and third shot before you leave the doctor's office after the first shot.

Is the HPV vaccine safe?

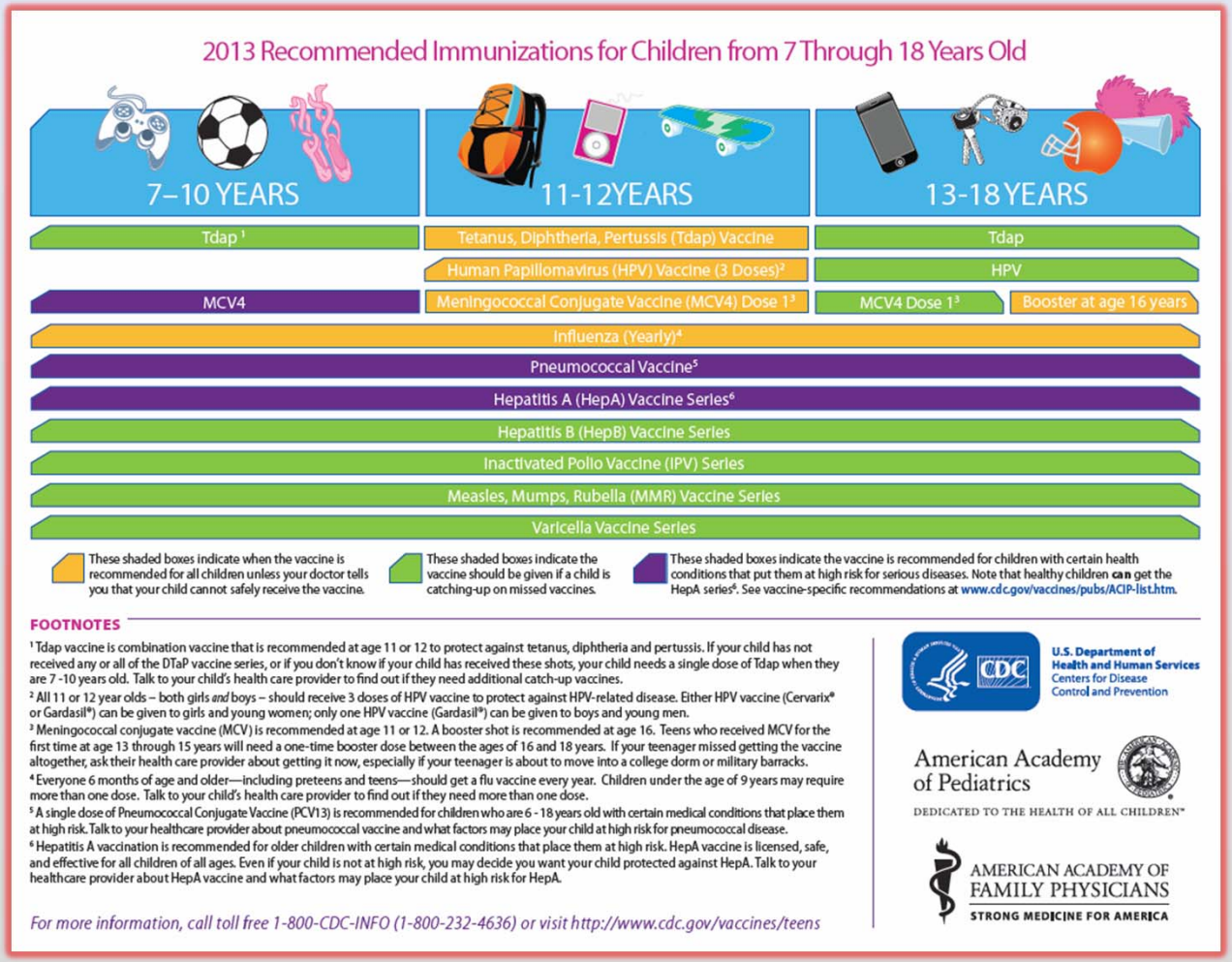
Yes. Both HPV vaccines were studied in tens of thousands of people around the world. More than 57 million doses have been distributed to date, and there have been no serious safety concerns. Vaccine safety continues to be monitored by CDC and the Food and Drug Administration (FDA). **These studies continue to show that HPV vaccines are safe.**

The most common side effects reported are mild. They include: pain where the shot was given (usually the arm), fever, dizziness, and nausea.

cdc.gov/vaccines/who/teens/for-hcp/hpv-resources.html

Adolescent Immunization Schedule

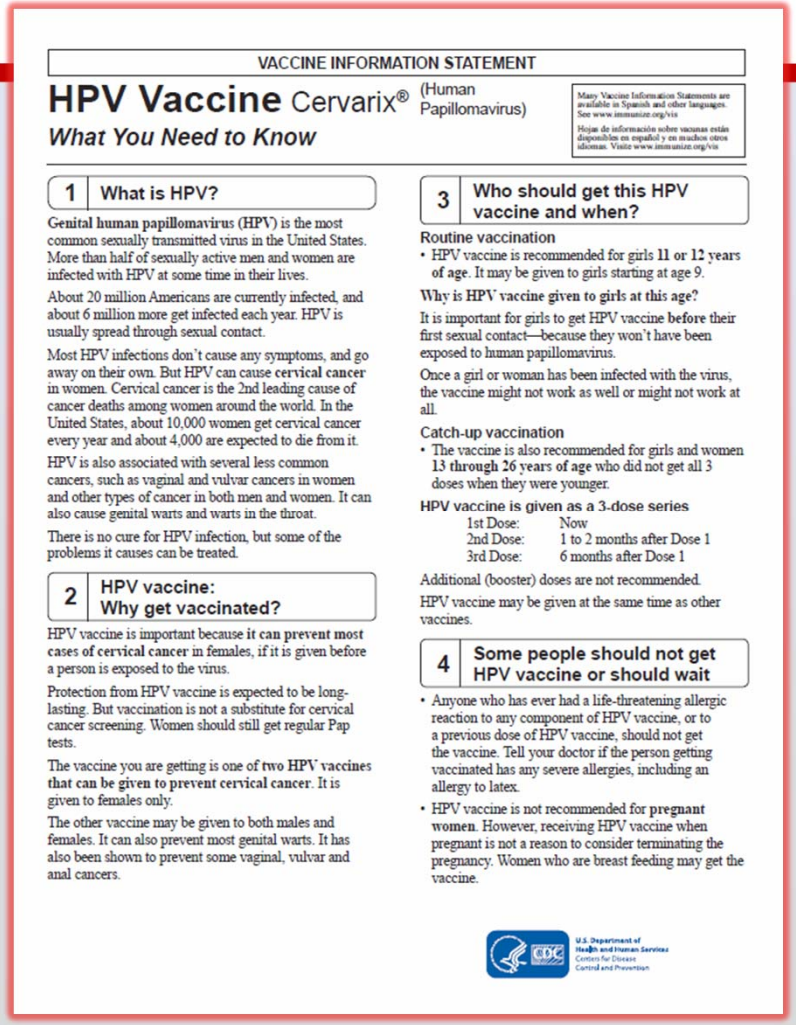
Resources for Patients



cdc.gov/vaccines/who/teens/for-hcp/hpv-resources.html

HPV Vaccine Information Sheets

Resources for Patients



VACCINE INFORMATION STATEMENT

HPV Vaccine Cervarix® (Human Papillomavirus)

What You Need to Know

Many Vaccine Information Statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1 What is HPV?

Genital human papillomavirus (HPV) is the most common sexually transmitted virus in the United States. More than half of sexually active men and women are infected with HPV at some time in their lives.

About 20 million Americans are currently infected, and about 6 million more get infected each year. HPV is usually spread through sexual contact.

Most HPV infections don't cause any symptoms, and go away on their own. But HPV can cause **cervical cancer** in women. Cervical cancer is the 2nd leading cause of cancer deaths among women around the world. In the United States, about 10,000 women get cervical cancer every year and about 4,000 are expected to die from it.

HPV is also associated with several less common cancers, such as vaginal and vulvar cancers in women and other types of cancer in both men and women. It can also cause genital warts and warts in the throat.

There is no cure for HPV infection, but some of the problems it causes can be treated.

2 HPV vaccine: Why get vaccinated?

HPV vaccine is important because **it can prevent most cases of cervical cancer** in females, if it is given before a person is exposed to the virus.

Protection from HPV vaccine is expected to be long-lasting. But vaccination is not a substitute for cervical cancer screening. Women should still get regular Pap tests.

The vaccine you are getting is one of **two HPV vaccines that can be given to prevent cervical cancer**. It is given to females only.

The other vaccine may be given to both males and females. It can also prevent most genital warts. It has also been shown to prevent some vaginal, vulvar and anal cancers.

3 Who should get this HPV vaccine and when?

Routine vaccination

- HPV vaccine is recommended for girls **11 or 12 years of age**. It may be given to girls starting at age 9.

Why is HPV vaccine given to girls at this age?

It is important for girls to get HPV vaccine **before** their first sexual contact—because they won't have been exposed to human papillomavirus.

Once a girl or woman has been infected with the virus, the vaccine might not work as well or might not work at all.

Catch-up vaccination

- The vaccine is also recommended for girls and women **13 through 26 years of age** who did not get all 3 doses when they were younger.

HPV vaccine is given as a 3-dose series

1st Dose:	Now
2nd Dose:	1 to 2 months after Dose 1
3rd Dose:	6 months after Dose 1

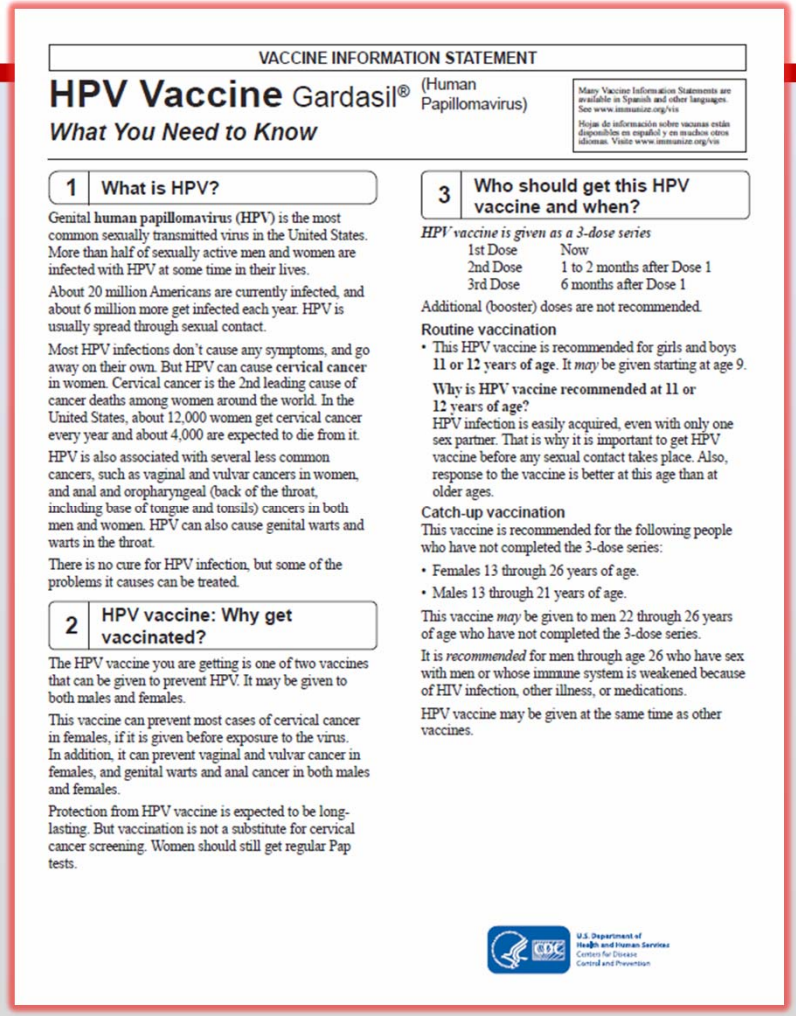
Additional (booster) doses are not recommended.

HPV vaccine may be given at the same time as other vaccines.

4 Some people should not get HPV vaccine or should wait

- Anyone who has ever had a life-threatening allergic reaction to any component of HPV vaccine, or to a previous dose of HPV vaccine, should not get the vaccine. Tell your doctor if the person getting vaccinated has any severe allergies, including an allergy to latex.
- HPV vaccine is not recommended for **pregnant women**. However, receiving HPV vaccine when pregnant is not a reason to consider terminating the pregnancy. Women who are breast feeding may get the vaccine.

U.S. Department of Health and Human Services Centers for Disease Control and Prevention



VACCINE INFORMATION STATEMENT

HPV Vaccine Gardasil® (Human Papillomavirus)

What You Need to Know

Many Vaccine Information Statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

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About 20 million Americans are currently infected, and about 6 million more get infected each year. HPV is usually spread through sexual contact.

Most HPV infections don't cause any symptoms, and go away on their own. But HPV can cause **cervical cancer** in women. Cervical cancer is the 2nd leading cause of cancer deaths among women around the world. In the United States, about 12,000 women get cervical cancer every year and about 4,000 are expected to die from it.

HPV is also associated with several less common cancers, such as vaginal and vulvar cancers in women, and anal and oropharyngeal (back of the throat, including base of tongue and tonsils) cancers in both men and women. HPV can also cause genital warts and warts in the throat.

There is no cure for HPV infection, but some of the problems it causes can be treated.

2 HPV vaccine: Why get vaccinated?

The HPV vaccine you are getting is one of two vaccines that can be given to prevent HPV. It may be given to both males and females.

This vaccine can prevent most cases of cervical cancer in females, if it is given before exposure to the virus. In addition, it can prevent vaginal and vulvar cancer in females, and genital warts and anal cancer in both males and females.

Protection from HPV vaccine is expected to be long-lasting. But vaccination is not a substitute for cervical cancer screening. Women should still get regular Pap tests.

3 Who should get this HPV vaccine and when?

HPV vaccine is given as a 3-dose series

1st Dose	Now
2nd Dose	1 to 2 months after Dose 1
3rd Dose	6 months after Dose 1

Additional (booster) doses are not recommended.

Routine vaccination

- This HPV vaccine is recommended for girls and boys **11 or 12 years of age**. It *may* be given starting at age 9.

Why is HPV vaccine recommended at 11 or 12 years of age?

HPV infection is easily acquired, even with only one sex partner. That is why it is important to get HPV vaccine before any sexual contact takes place. Also, response to the vaccine is better at this age than at older ages.

Catch-up vaccination

This vaccine is recommended for the following people who have not completed the 3-dose series:

- Females 13 through 26 years of age.
- Males 13 through 21 years of age.

This vaccine *may* be given to men 22 through 26 years of age who have not completed the 3-dose series.

It is *recommended* for men through age 26 who have sex with men or whose immune system is weakened because of HIV infection, other illness, or medications.

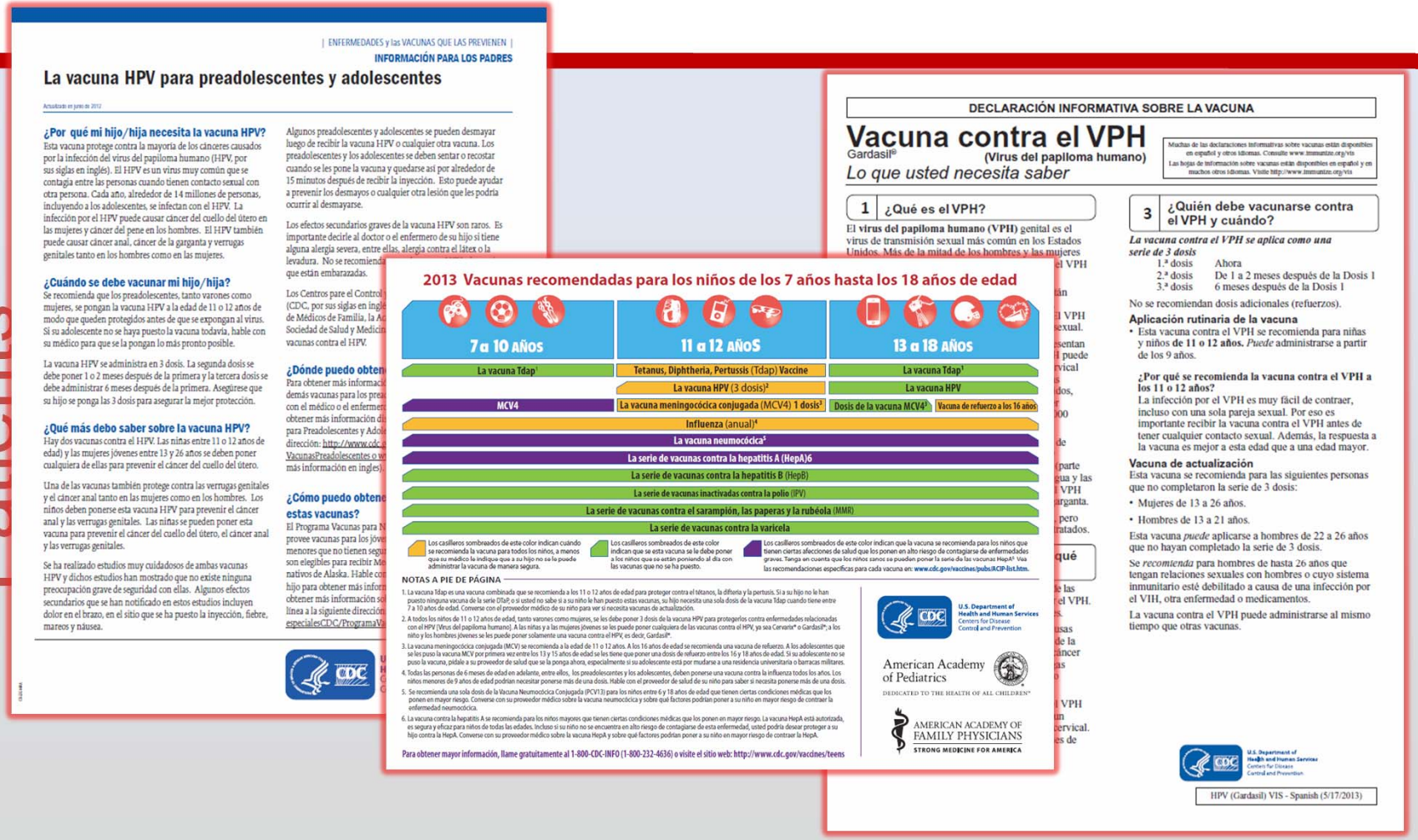
HPV vaccine may be given at the same time as other vaccines.

U.S. Department of Health and Human Services Centers for Disease Control and Prevention

cdc.gov/vaccines/who/teens/for-hcp/hpv-resources.html

HPV Vaccine Resources in Spanish

Resources for Patients



| ENFERMEDADES y las VACUNAS QUE LAS PREVIENEN |

INFORMACIÓN PARA LOS PADRES

La vacuna HPV para preadolescentes y adolescentes

Actualizado en junio de 2012

¿Por qué mi hijo/hija necesita la vacuna HPV?

Esta vacuna protege contra la mayoría de los cánceres causados por la infección del virus del papiloma humano (HPV, por sus siglas en inglés). El HPV es un virus muy común que se contagia entre las personas cuando tienen contacto sexual con otra persona. Cada año, alrededor de 14 millones de personas, incluyendo a los adolescentes, se infectan con el HPV. La infección por el HPV puede causar cáncer del cuello del útero en las mujeres y cáncer del pene en los hombres. El HPV también puede causar cáncer anal, cáncer de la garganta y verrugas genitales tanto en los hombres como en las mujeres.

¿Cuándo se debe vacunar mi hijo/hija?

Se recomienda que los preadolescentes, tanto varones como mujeres, se pongan la vacuna HPV a la edad de 11 o 12 años de modo que queden protegidos antes de que se expongan al virus. Si su adolescente no se haya puesto la vacuna todavía, hable con su médico para que se la pongan lo más pronto posible.

La vacuna HPV se administra en 3 dosis. La segunda dosis se debe poner 1 o 2 meses después de la primera y la tercera dosis se debe administrar 6 meses después de la primera. Asegúrese que su hijo se ponga las 3 dosis para asegurar la mejor protección.

¿Qué más debo saber sobre la vacuna HPV?

Hay dos vacunas contra el HPV. Las niñas entre 11 o 12 años de edad) y las mujeres jóvenes entre 13 y 26 años se deben poner cualquiera de ellas para prevenir el cáncer del cuello del útero.

Una de las vacunas también protege contra las verrugas genitales y el cáncer anal tanto en las mujeres como en los hombres. Los niños deben ponerse esta vacuna HPV para prevenir el cáncer anal y las verrugas genitales. Las niñas se pueden poner esta vacuna para prevenir el cáncer del cuello del útero, el cáncer anal y las verrugas genitales.

Se ha realizado estudios muy cuidadosos de ambas vacunas HPV y dichos estudios han mostrado que no existe ninguna preocupación grave de seguridad con ellas. Algunos efectos secundarios que se han notificado en estos estudios incluyen dolor en el brazo, en el sitio que se ha puesto la inyección, fiebre, mareos y náusea.

Algunos preadolescentes y adolescentes se pueden desmayar luego de recibir la vacuna HPV o cualquier otra vacuna. Los preadolescentes y los adolescentes se deben sentar o recostar cuando se les pone la vacuna y quedarse así por alrededor de 15 minutos después de recibir la inyección. Esto puede ayudar a prevenir los desmayos o cualquier otra lesión que les podría ocurrir al desmayarse.

Los efectos secundarios graves de la vacuna HPV son raros. Es importante decirle al doctor o el enfermero de su hijo si tiene alguna alergia severa, entre ellas, alergia contra el látex o la levadura. No se recomienda

que están embarazadas.

Los Centros para el Control

(CDC, por sus siglas en ingl

de Médicos de Familia, la A

Sociedad de Salud y Medicin

vacunas contra el HPV.

¿Dónde puedo obten

Para obtener más informaci

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VacunasPreadolescentes o w

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¿Cómo puedo obten

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2013 Vacunas recomendadas para los niños de los 7 años hasta los 18 años de edad

7 a 10 AÑOS	11 a 12 AÑOS	13 a 18 AÑOS
La vacuna Tdap[1]	Tetanus, Diphtheria, Pertussis (Tdap) Vaccine	La vacuna Tdap[1]
	La vacuna HPV (3 dosis)[2]	La vacuna HPV
MCV4	La vacuna meningocócica conjugada (MCV4) 1 dosis[3]	Dosis de la vacuna MCV4[3] Vacuna de refuerzo a los 16 años
Influenza (anual)[4]		
La vacuna neumocócica[5]		
La serie de vacunas contra la hepatitis A (HepA)6		
La serie de vacunas contra la hepatitis B (HepB)		
La serie de vacunas inactivadas contra la polio (IPV)		
La serie de vacunas contra el sarampión, las paperas y la rubéola (MMR)		
La serie de vacunas contra la varicela		

Los casilleros sombreados de este color indican cuándo se recomienda la vacuna para todos los niños, a menos que su médico le indique que a su hijo no se le puede administrar la vacuna de manera segura.

Los casilleros sombreados de este color indican que se esta vacuna se le debe poner a los niños que se están poniendo al día con las vacunas que no se ha puesto.

Los casilleros sombreados de este color indican que la vacuna se recomienda para los niños que tienen ciertas afecciones de salud que los ponen en alto riesgo de contagiarse de enfermedades graves. Tenga en cuenta que los niños sanos se pueden poner la serie de las vacunas HepA[6]. Vea las recomendaciones específicas para cada vacuna en: www.cdc.gov/vaccines/pubs/ACIP-list.htm.

NOTAS A PIE DE PÁGINA

1. La vacuna Tdap es una vacuna combinada que se recomienda a los 11 o 12 años de edad para proteger contra el tétanos, la difteria y la pertusis. Si a su hijo no le han puesto ninguna vacuna de la serie DTaP, o si usted no sabe si a su niño le han puesto estas vacunas, su hijo necesita una sola dosis de la vacuna Tdap cuando tiene entre 7 a 10 años de edad. Converse con el proveedor médico de su niño para ver si necesita vacunas de actualización.
2. A todos los niños de 11 o 12 años de edad, tanto varones como mujeres, se les debe poner 3 dosis de la vacuna HPV para protegerlos contra enfermedades relacionadas con el HPV (Virus del papiloma humano). A las niñas y a las mujeres jóvenes se les puede poner cualquiera de las vacunas contra el HPV, ya sea Cervarix® o Gardasil®; a los niño y los hombres jóvenes se les puede poner solamente una vacuna contra el HPV, es decir, Gardasil®.
3. La vacuna meningocócica conjugada (MCV) se recomienda a la edad de 11 o 12 años. A los 16 años de edad se recomienda una vacuna de refuerzo. A los adolescentes que se les puso la vacuna MCV por primera vez entre los 13 y 15 años de edad se les tiene que poner una dosis de refuerzo entre los 16 y 18 años de edad. Si su adolescente no se puso la vacuna, pídale a su proveedor de salud que se la ponga ahora, especialmente si su adolescente está por mudarse a una residencia universitaria o barracas militares.
4. Todas las personas de 6 meses de edad en adelante, entre ellos, los preadolescentes y los adolescentes, deben ponerse una vacuna contra la influenza todos los años. Los niños menores de 9 años de edad podrían necesitar ponerse más de una dosis. Hable con el proveedor de salud de su niño para saber si necesita ponerse más de una dosis.
5. Se recomienda una sola dosis de la Vacuna Neumocócica Conjugada (PCV13) para los niños entre 6 y 18 años de edad que tienen ciertas condiciones médicas que los ponen en mayor riesgo. Converse con su proveedor médico sobre la vacuna neumocócica y sobre qué factores podrían poner a su niño en mayor riesgo de contraer la enfermedad neumocócica.
6. La vacuna contra la hepatitis A se recomienda para los niños mayores que tienen ciertas condiciones médicas que los ponen en mayor riesgo. La vacuna HepA está autorizada, es segura y eficaz para niños de todas las edades. Incluso si su niño no se encuentra en alto riesgo de contagiarse de esta enfermedad, usted podría desear proteger a su hijo contra la HepA. Converse con su proveedor médico sobre la vacuna HepA y sobre qué factores podrían poner a su niño en mayor riesgo de contraer la HepA.

Para obtener mayor información, llame gratuitamente al 1-800-CDC-INFO (1-800-232-4636) o visite el sitio web: http://www.cdc.gov/vaccines/teens

U.S. Department of Health and Human Services Centers for Disease Control and Prevention

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

AMERICAN ACADEMY OF FAMILY PHYSICIANS
STRONG MEDICINE FOR AMERICA

DECLARACIÓN INFORMATIVA SOBRE LA VACUNA

Vacuna contra el VPH

Gardasil® (Virus del papiloma humano)

Lo que usted necesita saber

Muchas de las declaraciones informativas sobre vacunas están disponibles en español y otros idiomas. Consulte www.immunize.org/vis
Las hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite http://www.immunize.org/vis

1 ¿Qué es el VPH?

El **virus del papiloma humano (VPH)** genital es el virus de transmisión sexual más común en los Estados Unidos. Más de la mitad de los hombres y las mujeres

3 ¿Quién debe vacunarse contra el VPH y cuándo?

La vacuna contra el VPH se aplica como una serie de 3 dosis

1.ª dosis	Ahora
2.ª dosis	De 1 a 2 meses después de la Dosis 1
3.ª dosis	6 meses después de la Dosis 1

No se recomiendan dosis adicionales (refuerzos).

Aplicación rutinaria de la vacuna

- Esta vacuna contra el VPH se recomienda para niñas y niños **de 11 o 12 años.** *Puede* administrarse a partir de los 9 años.

¿Por qué se recomienda la vacuna contra el VPH a los 11 o 12 años?

La infección por el VPH es muy fácil de contraer, incluso con una sola pareja sexual. Por eso es importante recibir la vacuna contra el VPH antes de tener cualquier contacto sexual. Además, la respuesta a la vacuna es mejor a esta edad que a una edad mayor.

Vacuna de actualización

Esta vacuna se recomienda para las siguientes personas que no completaron la serie de 3 dosis:

- Mujeres de 13 a 26 años.
- Hombres de 13 a 21 años.

Esta vacuna *puede* aplicarse a hombres de 22 a 26 años que no hayan completado la serie de 3 dosis.

Se *recomienda* para hombres de hasta 26 años que tengan relaciones sexuales con hombres o cuyo sistema inmunitario esté debilitado a causa de una infección por el VIH, otra enfermedad o medicamentos.

La vacuna contra el VPH puede administrarse al mismo tiempo que otras vacunas.

U.S. Department of Health and Human Services Centers for Disease Control and Prevention

HPV (Gardasil) VIS - Spanish (5/17/2013)

cdc.gov/vaccines/who/teens/for-hcp/hpv-resources.html

What we're asking our partners to do:

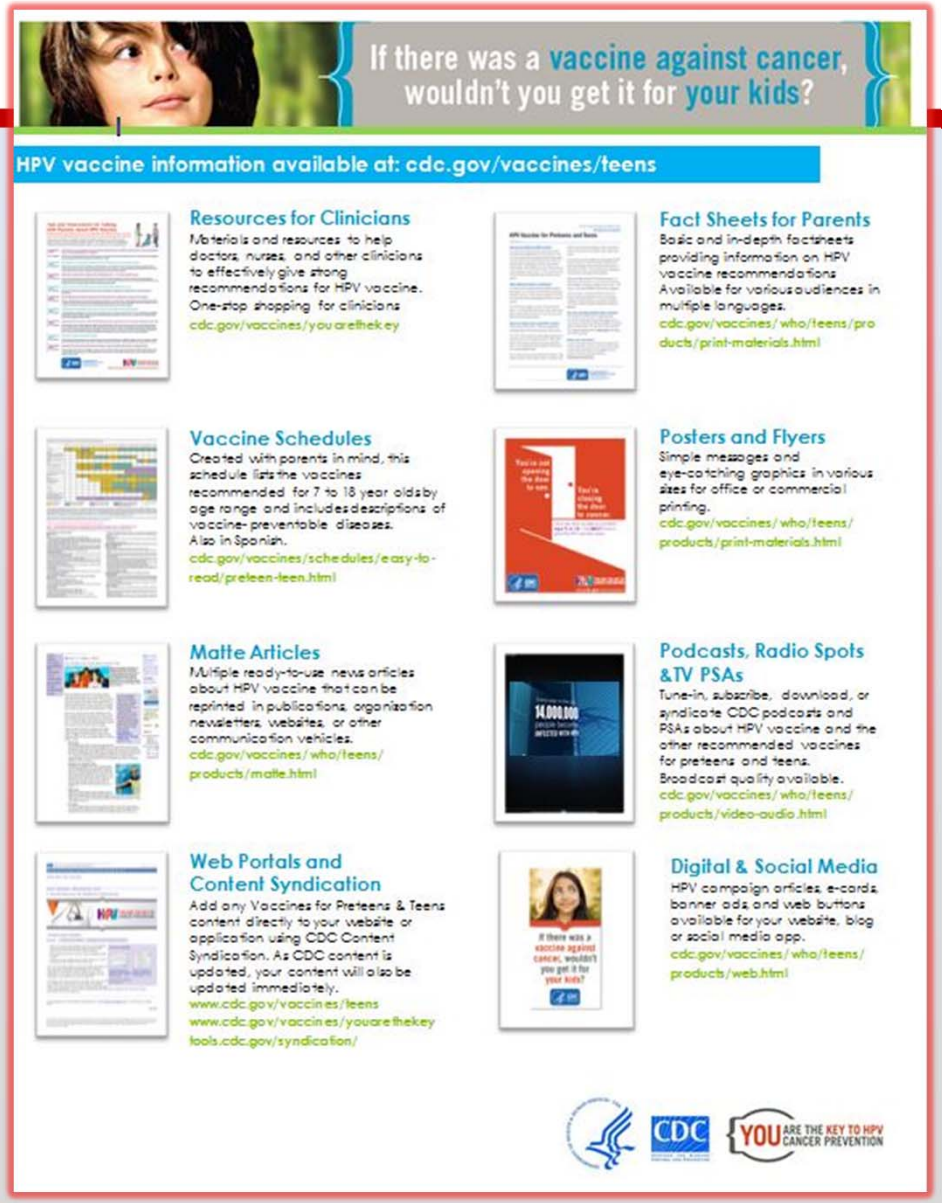
1. **SYNDICATE** content to their website
   http://tools.cdc.gov/syndication/
   http://www.cdc.gov/vaccines/who/teens/products/web-button.html

2. **DOWNLOAD** a matte article for publications
   http://www.cdc.gov/vaccines/who/teens/products/matte.html

3. **SHARE** factsheets with parents & clinicians
   http://www.cdc.gov/vaccines/who/teens/products/print-materials.html
   http://wwwn.cdc.gov/pubs/ncird.aspx

4. **COLLABORATE** to increase the campaign reach
   Jcory@cdc.gov
   Jroark@cdc.gov

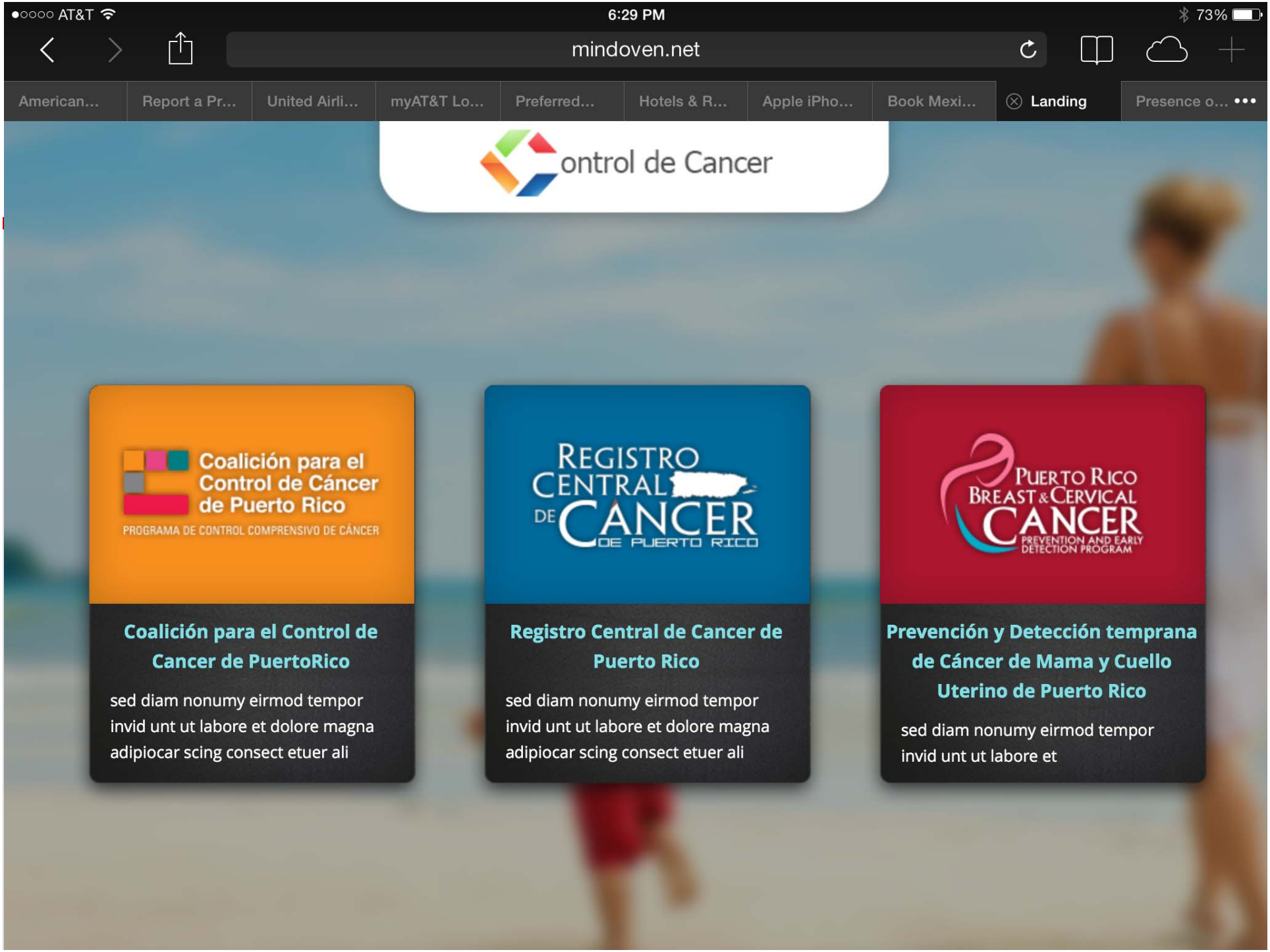
HPV Vaccine Info for Partners



Centro Comprensivo de Cáncer
universidad de puerto rico

Coalición para el Control de Cáncer de Puerto Rico
PROGRAMA DE CONTROL COMPRENSIVO DE CÁNCER

Resources Developed by the Cancer Control and Population Sciences Program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Thank you