

# Cancer Center Council's Biannual "Woman to Woman" Cervical Cancer Disparities & Uptake Of The HPV Vaccine

02/11/09



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<http://www.sanantonio.gov/health/Healthprofiles-Main.html>

# Cervical Cancer Impact

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- Cervical cancer: #2 cause of female cancer deaths worldwide with 288,000 deaths each year (source: WHO)
- 510,000 cases of cervical cancer are reported each year - nearly 80% in developing countries.
- There were **11,070 new cases** and **3,870 deaths** from cervical cancer in the United States in 2008

# Cervical Cancer Preventive Care

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- Early detection is essential for cure
- Pap test: checks for abnormal changes in the cervix before cancer develops
- With PAP screening, the U.S. cervical cancer death rate declined by 74% from 1955-1992
- Information on where to get a free or low-cost Pap test: National Cancer Institute's Cancer Information Service at 1-800-4-CANCER.
- Pap tests are sometimes covered by Medicaid and are covered every 2 years by Medicare (yearly for women at higher risk). Call 1-800-MEDICARE.

# Cervical Cancer Disparities: United States, 1998–2003

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- Hispanic and black women get cervical cancer more often and are diagnosed later
- Possibly because of decreased access to Pap testing or follow-up treatment\*.

# United States Cervical Cancer Incidence by Race & Ethnicity in 2004

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Rates are per 100,000 persons

Hispanic	12.2
African Am.	10.8
White	7.5
Asian/Pacific Islander	7.4
American Indian/Alaska Native	6.4

Centers for Disease Control and Prevention

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. standard population

# United States Cervical Cancer Death Rates by Race & Ethnicity in 2004

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Rates are per 100,000 persons

Hispanic	3.1
African Am.	4.5
White	2.2
Asian/Pacific Islander	2.2
American Indian/Alaska Native	2.4

Centers for Disease Control and Prevention

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. standard population

# Bexar County 2006 leading Causes of Death in Females

(all ages)

	Hispanic Rate		Non Hispanic White Rate		African American Rate	
Chronic ischemic heart disease	153	34.3	222	88.7	34	61.8
Cerebrovascular diseases	129	28.9	182	72.7	26	47.3
Acute myocardial infarction	134	30.1	124	49.5	26	47.3
<b>Malignant neoplasms of lung</b>	<b>54</b>	<b>12.1</b>	<b>137</b>	<b>54.7</b>	<b>17</b>	<b>30.9</b>
Diabetes mellitus	138	31.0	50	20.0	13	23.6
Other chronic lower respiratory diseases	35	7.9	152	60.7	14	25.5
Alzheimer's disease	73	16.4	119	47.5	6	10.9
All other forms of heart disease	65	14.6	107	42.7	16	29.1
<b>Malignant neoplasm of breast</b>	<b>83</b>	<b>18.6</b>	<b>81</b>	<b>32.3</b>	<b>19</b>	<b>34.5</b>
Atherosclerotic cardiovascular disease	63	14.1	82	32.7	17	30.9
Heart failure	36	8.1	66	26.4	12	21.8
Unspecified malignant neoplasms	51	11.4	52	20.8	6	10.9
Falls	26	5.8	68	27.2	1	1.8
Pneumonia	40	9.0	45	18.0	9	16.4
Renal failure	53	11.9	33	13.2	6	10.9
<b>Malignant neoplasms of colon</b>	<b>35</b>	<b>7.9</b>	<b>48</b>	<b>19.2</b>	<b>6</b>	<b>10.9</b>
<b>*Malignant neoplasm of cervix uteri</b>	<b>13</b>	<b>2.9</b>	<b>4</b>	<b>1.6</b>	<b>1</b>	<b>1.8</b>

Crude Rate per 100k (2006 female population) \* not in order

# What Is HPV?

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- A virus
- Transmission: person-to-person
  - Most often through **sexual contact**
  - Also skin contact
- Two categories of serotypes
  - **High risk** cause cervical cancer.
  - **Low risk** cause genital warts.

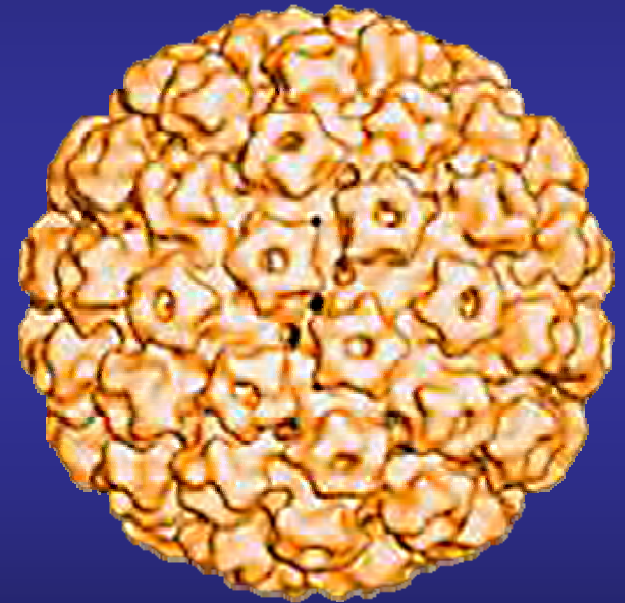


# Why Are We Concerned About HPV?

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## Because HPV Is...

1. The major cause of cervical cancer
2. One of the most common sexually transmitted infections (STI) in the U.S.<sup>1</sup>
  - Prevalence of cancer associated HPV serotypes is 15-27%
  - By age 50, at least **80% of sexually active people** will have had HPV<sup>2</sup>

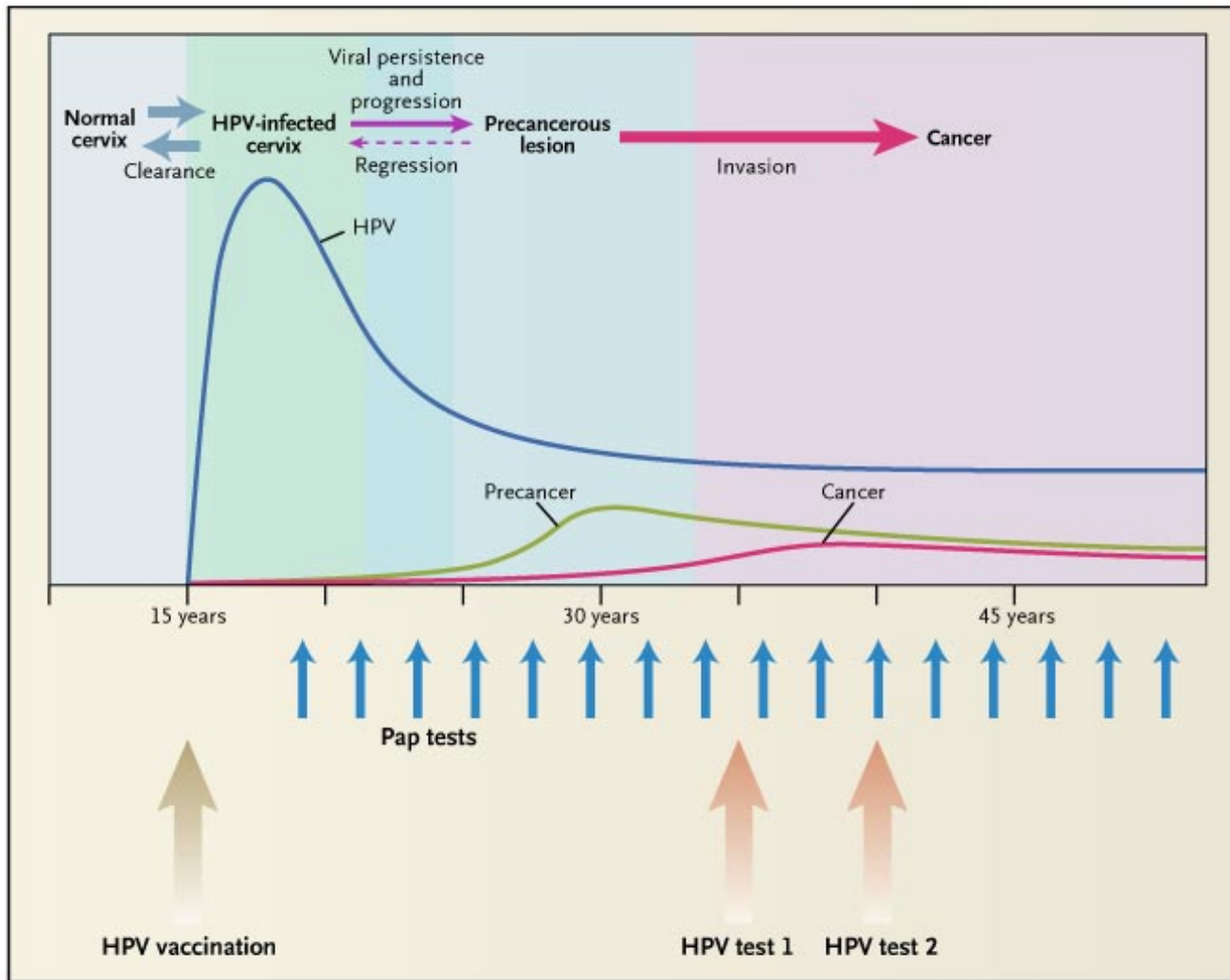


1. Bosch FX, Lorincz A, Muñoz N, Meijer CJLM, Shah KV. *J Clin Pathol*. 2002;55:244–265. 2. Centers for Disease Control and Prevention. Genital HPV Infection Fact Sheet. Rockville, Md: CDC National Prevention Information Network; 2004.
2. CDC accessed from <http://www.cdc.gov/std/stats07/other.htm#HPV>

## Bexar County Reported 2007 Sexually Transmitted Diseases/AIDS/HIV by Age

Age (yrs.)	Syphilis	Gonorrhea	Chlamydia	HIV	AIDS
0 – 14	5	46	138	1	0
15 – 19	16	694	2,696	10	6
20 – 24	87	790	3,052	82	47
25 – 29	69	405	1,270		
30 – 34	47	208	491	65	77
35 – 39	47	120	197		
40 – 49	39	149	162	50	63
> = 50	32	53	41	15	33
Unknown	42	0	7	0	0
<b>Total</b>	<b>384</b>	<b>2,465</b>	<b>8,054</b>	<b>223</b>	<b>226</b>

# HPV Incidence vs. Age



<http://content.nejm.org/content/vol353/issue20/images/large/01f2.jpeg>

# HPV Facts

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- The immune system will usually get rid of the virus.
- 90% of all genital warts are caused by HPV 6 and 11
- 70% of all cervical cancer is due to HPV 16 and 18
- There is no CURE for HPV, so our best choices are:
  - Prevention through vaccination
  - Detection and treatment through Pap screening

# Risk Factors for HPV Infection

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## Women

- Young age (peak age 20–24)<sup>1</sup>
- Lifetime number of sex partners<sup>2</sup>
- Early age of first sexual intercourse<sup>3</sup> (immature cervix more vulnerable to HPV)<sup>4</sup>
- Male partner sexual behavior<sup>3</sup>
- Smoking<sup>5</sup>
- Oral contraceptive use<sup>5</sup>
- Uncircumcised male partners<sup>6</sup>

## Men

- Young age (peak age group 25–29 years of age)<sup>1</sup>
- Lifetime number of sex partners<sup>7</sup>
- Being uncircumcised<sup>7</sup>

1. Insinga RP, Dasbach EF, Myers ER. *Clin Infect Dis*. 2003;36:1397–1403.
2. Burk RD, Ho GYF, Beardsley L, Lempa M, Peters M, Bierman R. *J Infect Dis*. 1996;174:679–689.
3. Murthy NS, Mathew A. *Eur J Cancer Prev*. 2000;9:5–14.
4. Moscicki BA. National Cancer Institute. Accessed from <http://www.cancer.gov/researchandfunding/MERIT/Moscicki>
5. Winer RL, Lee S-K, Hughes JP, Adam DE, Kiviat NB, Koutsky LA. *Am J Epidemiol*. 2003;157:218–226.
6. Schiffman M, Castle PE. *Arch Pathol Lab Med*. 2003;127:930–934.
7. Svare EI, Kjaer SK, Worm AM, Osterlind A, Meijer CJLM, van den Brule AJ. *Sex Transm Infect*. 2002;78:215–218.

# What Is HPV Vaccine?

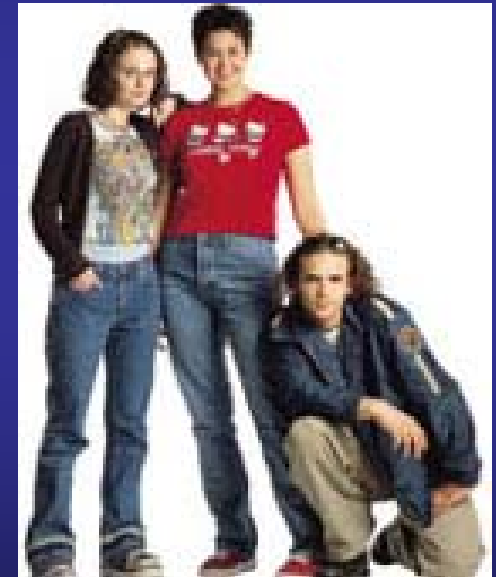
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- A vaccine that provides protection against **important types of HPV**
- The vaccine protects against **four HPV types** (6, 11, 16, and 18)
- Studies indicate vaccine **efficacy is 89 to 100%** with some serotype variability
- Duration of efficacy: at least **5-8 years** (studies are ongoing)

# Who Should Get The HPV Vaccine ?

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- **ACIP & CDC recommends:** all females age 11-12 should get the HPV Vaccine
- Approved for females ages **9 through 26**
- It is best to get the vaccine **before becoming sexually active**. Vaccine protects against HPV types to which a person has **not yet been exposed**



# Recommended immunization schedule for children 7-18 years - United States-2009

DEPARTMENT OF HEALTH AND HUMAN SERVICES-CENTERS FOR DISEASE CONTROL AND PREVENTION

Vaccine ▼	Age ►	7-10 years	11-12 years	13-18 years	
Tetanus, Diphtheria, Pertussis <sup>1</sup>	<i>see footnote 1</i>		<b>Tdap</b>	<b>Tdap</b>	Range of recommended ages
Human Papillomavirus <sup>2</sup>	<i>see footnote 2</i>		<b>HPV (3 doses)</b>	<b>HPV Series</b>	
Meningococcal <sup>3</sup>		<b>MCV</b>	<b>MCV</b>	<b>MCV</b>	Catch-up immunization
Influenza <sup>4</sup>		<b>Influenza (Yearly)</b>			
Pneumococcal <sup>5</sup>		<b>PPSV</b>			Certain high-risk groups
Hepatitis A <sup>6</sup>		<b>HepA Series</b>			
Hepatitis B <sup>7</sup>		<b>HepB Series</b>			
Inactivated Poliovirus <sup>8</sup>		<b>IPV Series</b>			
Measles, Mumps, Rubella <sup>9</sup>		<b>MMR Series</b>			
Varicella <sup>10</sup>		<b>Varicella Series</b>			

This schedule indicates the recommended ages for routine administration of currently licensed vaccines, as of December 1, 2008, for children aged 7 through 18 years. Any dose not administered at the recommended age should be administered at a subsequent visit, when indicated and feasible. Licensed combination vaccines may be used whenever any component of the combination is indicated and other components are not contraindicated and if approved by the Food and Drug Administration for that dose of

the series. Providers should consult the relevant Advisory Committee on Immunization Practices statement for detailed recommendations, including high-risk conditions: <http://www.cdc.gov/vaccines/pubs/acip-list.htm>. Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS). Guidance about how to obtain and complete a VAERS form is available at <http://www.vaers.hhs.gov> or by telephone, 800-822-7967.

# Vaccine Facts

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- 19,839 Bexar County females age <30 years received a total of 33,964 doses from 2007\*
- The cost could be as much as \$170-\$180 per shot at the doctor's office
- The vaccine is given in **3 doses**
  - The second dose is 2 months after the first dose
  - The last dose is 6 months after the first dose
- Some **insurance** programs **cover it** under preventive care benefits.
- It is a covered benefit of the **Vaccine for Children Program**.
- **Vaccine Assistance Program**
- Pap smears **are still necessary**

\*Immunization Registry System (SAIRS) – database reflects a large subset of Bexar population

# HPV Uptake Rates

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- USA: 25% of teens ages 13 to 17 received even 1 of the 3 recommended HPV Vaccine since it's licensure in 2007\* (n=2,947)
- Bexar: 14% (n= 12,394)\*\*



\*CDC's Morbidity & Mortality Weekly-Vaccination Coverage Among Adolescents Aged 13--17 Years --- United States, 2007-October 10, 2008 / 57(40);1100-1103

\*\*Immunization Registry System (SAIRS) – database reflects a large subset of Bexar population

# Bexar County HPV Vaccine Uptake Detail

Age	Total Females in SAIRS	Females with 1st dose	% with one dose
21	15,716	142	1%
20	15,794	308	2%
19	16,707	791	5%
18	17,093	1,481	9%
17	17,667	1,893	11%
16	18,081	2,365	13%
15	18,445	2,982	16%
14	18,154	2,577	14%
13	18,431	2,577	14%
12	19,062	2,330	12%
11	19,070	1,242	7%
<b>Age 13 to 17</b>	<b>90,778</b>	<b>12,394</b>	<b>14%</b>
Age 11 to 21	194,220	18,688	10%

\*Immunization Registry System (SAIRS) – database reflects a large subset of Bexar population

# Screening (PAP) Disparities

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- Lower screening associated with<sup>1</sup>:
  - Low income
  - Lack of usual source of health care
  - Low education
  - Unmarried
  - Uninsured
- Adolescent screening limited by<sup>2,3</sup>:
  - Cannot obtain affordable health care
  - Confidentiality concerns & consent requirements
  - Fear of physical exams
  - Social barriers

1 Hewitt M, et al. *Prev Med.* 2004; 39:91-8.

2 American College of Obstetricians and Gynecologists Committee on Adolescent Health Care. *Obstet Gynecol.* 2004; 104:885-9.

3 American College of Obstetricians and Gynecologists Committee on Adolescent Health Care. *Obstet Gynecol.* 2004; 104:891-98.

# Pap Smear Diagnosis for Bexar County 2003

	NH White Rate		Hispanic Rate		Black Rate	
Atypical Glandular Cells of Undetermined Significance	2	0.97	17	5.98	-	0.00
Atypical Squamous Cells	131	63.84	544	191.38	59	155.10
High Grade Squamous	2	0.97	19	6.68	1	2.63
Low Grade Squamous	59	28.75	286	100.61	22	57.84
Total	3,331		15,894		1,170	

Source: Kathleen Allen, Director, Texas Center for Infectious Disease Women's Health Laboratory, Rate per 10000 females age 18 and older, Study Population women who are examined at SAMHD, TDH and State funded Family Planning Clinics

# HPV Vaccine Disparities

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- Vaccine awareness differs by race, education & income<sup>1</sup>
- Other Barriers to vaccination: <sup>2</sup>
  - 1. Cost & access to vaccine
  - 2. Concerns that it may promote adolescent sexual behavior (6-12%)
    - Given information, mothers of teens in Mexico had high acceptance rates of HPV vaccine<sup>3</sup>
    - Teenage girls surveyed indicated no increased interest in risky sexual behavior if they were to be vaccinated<sup>4</sup>
- We need to promote awareness & emphasize
  - High likelihood of HPV infection
  - High vaccine effectiveness
  - Physicians' recommendations to get vaccine
  - Address barriers

1 Hughes, et al. Cancer Epidemiol Biomarkers Prev. Feb 3, 2009.

2 Brewer NT. Prev Med. 2007 Aug-Sep;45(2-3):107-14.

3 Lazcano-Ponce E, et al. Arch Med Res. 2001 May-Jun;32(3):243-7.

4 Kahn JA. Int J STD AIDS. 2003 May;14(5):300-6.

# Vaccines for Children Program (VFC) provides the HPV vaccine

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- Metro Health's VFC program
  - Federally funded program
  - Provides **vaccines at no cost** to children who might not otherwise be vaccinated because of inability to pay.
- Eligibility: 0-18 years of age and meet 1 of the following criteria:
  - Medicaid Enrolled
  - Uninsured
  - Health insurance does not cover immunizations
  - American Indian or Alaskan Native
  - Enrolled in CHIP (State vaccine is provided for CHIP patients)
- Ask your Physician about VFC and HPV

# Bottom Line

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- The HPV Vaccine can reduce dramatically the incidence of cervical cancer
- The HPV Vaccine does not protect against all HPV strains, or against other Sexually Transmitted Diseases (STD)
- We need higher HPV vaccination rates
  - Bexar County teen HPV vaccination is at 14% compared to 25% nationally.\*
  - Manufacturer data from 2008 show that HPV vaccination is much lower in Latina teens.
- Today, given the advances in HPV vaccination and PAP screening, cervical cancer is almost fully preventable

\*Immunization Registry System (SAIRS) – database reflects a large subset of Bexar population

# Questions?

**Women have an unprecedented opportunity to drastically reduce the number of serious complications caused by HPV by being vaccinated before they are at risk.**

**For further questions about HPV vaccine, call  
Metro Health Immunization Division  
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Public Health Nurse Supervisor  
Office: (210) 207-8804**