

# Awareness and Use of the HPV Vaccine



## Among Women in Los Angeles County

Findings from the 2007  
Los Angeles County Health Survey

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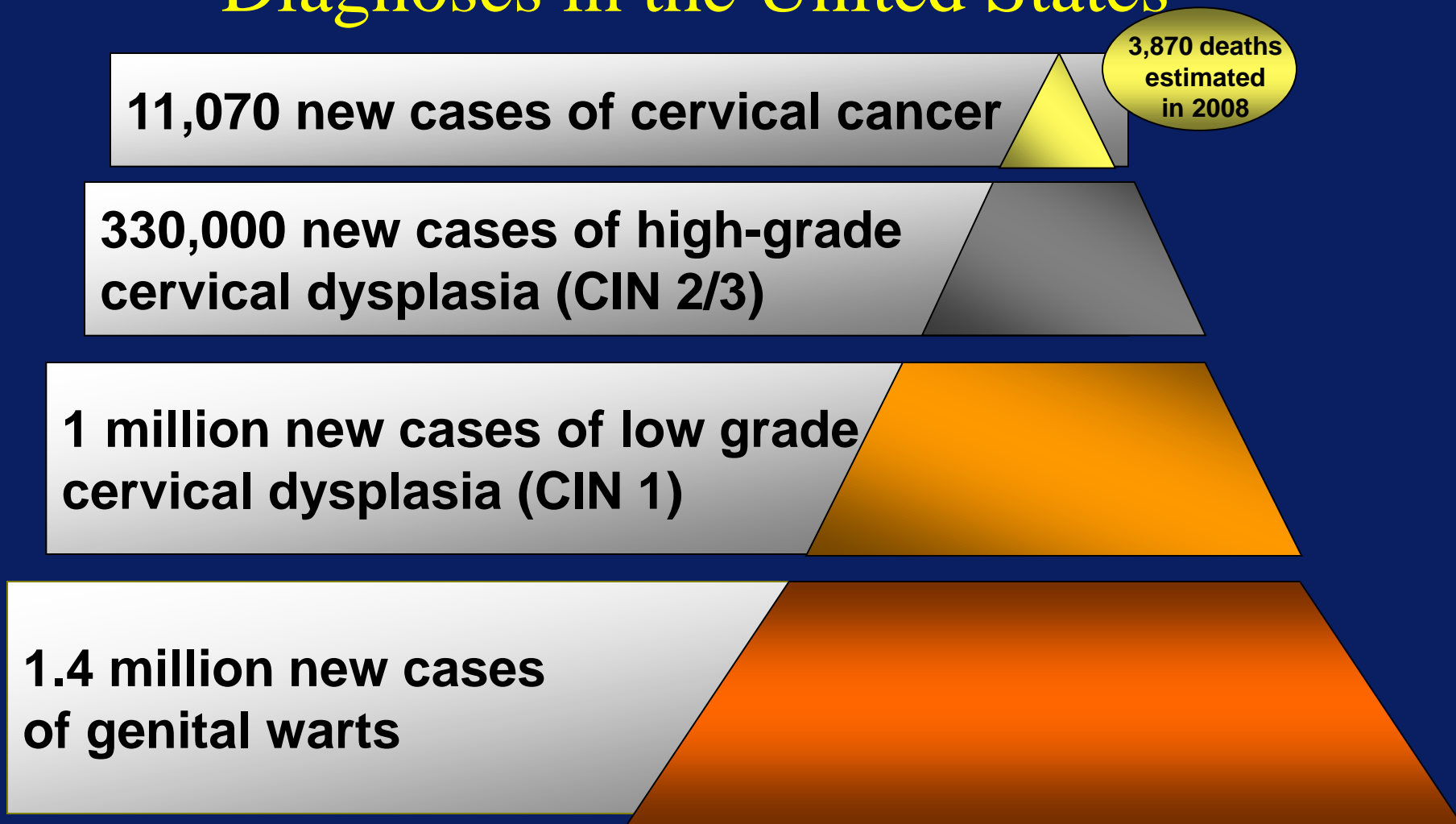
# Learning Objectives



- Identify the group of adult women for whom the ACIP currently recommends prophylactic HPV vaccination
- Describe utilization of the HPV vaccine and intention to get vaccinated among populations at  $\uparrow$  risk for cervical cancer
- Understand barriers to widespread HPV vaccine implementation



# Estimated Annual Burden of HPV-Related Diagnoses in the United States



# Cervical Cancer



- A preventable disease
- Worldwide burden: 493,000 cases/year
- Leading cause of cancer death for women in developing countries: 274,000 deaths/year
- Incidence in U.S. decreased dramatically in 20<sup>th</sup> century following introduction of routine Pap smears
- In U.S. disproportionately impacts low income women and women of color



# Human Papillomavirus 101



- Necessary but insufficient cause of cervical cancer
- HPV DNA found in 99.7% of squamous cell cervical cancers, nearly as many adenocarcinomas
- The overwhelming majority of HPV infections are transient & do not result in cervical cancer or dysplasia
- Persistent HPV infection required for development of invasive or pre-invasive disease



# Human Papillomavirus Types



- ~120 HPV types identified
- 30 - 40 infect the genital tract
- **Low-risk, non-oncogenic** types
  - Include 6 and 11, associated with anogenital warts (condyloma acuminata)
- **High-risk, oncogenic** types
  - 15 types, including 16 and 18, found in cancers and high grade intraepithelial lesions
  - Types 16 and 18 together responsible for ~70% of invasive cervical cancers worldwide



# Prophylactic HPV Vaccine



- Bivalent vaccine includes HPV types 16 & 18
- Quadrivalent vaccine (available in U.S.) includes types 16, 18, 6, & 11
- Vaccines consist of “virus-like particles” based on coat protein; immunogenic but not infectious
- Efficacy preventing anogenital disease among women with no history of HPV 6/11/16/18 exposure
  - 100% (95% CI, 94 - 100%)

*For both prevention of condyloma and CIN*



# ACIP Recommendations for HPV Vaccine



- In June 2006, ACIP recommended that the prophylactic HPV vaccine be routinely given to girls 11-12 years old
- Allows for vaccination of girls beginning at 9 years old, at the discretion of the physician
- “Catch-up” vaccination of girls and women 13-26 years old





# ACIP Recommendations for HPV Vaccine



- **Contraindication** to HPV immunization: immediate hypersensitivity to yeast or other component
- **Caution**: moderate or severe acute illness
- It is **appropriate** to vaccinate women with history of abnormal pap, CIN, or genital warts, immunosuppressed women, and lactating women
- Vaccine not studied in pregnant women— should be avoided (*but Category B based on data from animal studies showing no harm to fetus*)



# Methods:

## Awareness and Use of HPV Vaccine



- 2007 Los Angeles County Health Survey
- Periodic, population-based, random digit dial computer-assisted telephone survey in 6 languages
- Of 7200 adult respondents, 2974 women 18 – 64
- Descriptive analyses
- Logistic regression analyses
  - Age, race/ethnicity, education, income, marital status, language, birthplace, insurance, regular source of care, access to care, sexual activity, Pap screening, HIV testing



# HPV Vaccine Questions



*Human papilloma virus, also called HPV, is a common sexually transmitted infection known to cause cervical cancer in women. A vaccine to prevent HPV infection is available and is called the cervical cancer vaccine, HPV shot, or Gardasil.*

Before today, had you ever heard of a vaccine to prevent HPV and cervical cancer?



# HPV Vaccine Questions



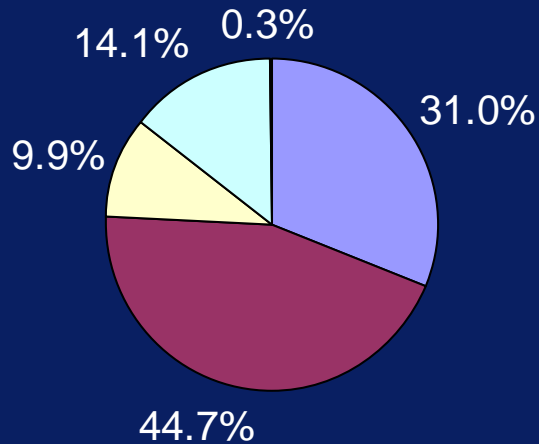
- Women 18 – 26: Have you received any HPV shots?
- How likely is it that you will get vaccinated?
  - Very likely, somewhat likely, not too likely, not at all likely
- Women 27 – 64: If the vaccine were available to you, how likely is it that you would get vaccinated?
- Women 18 – 64: If not likely, why not...?



# Study Population

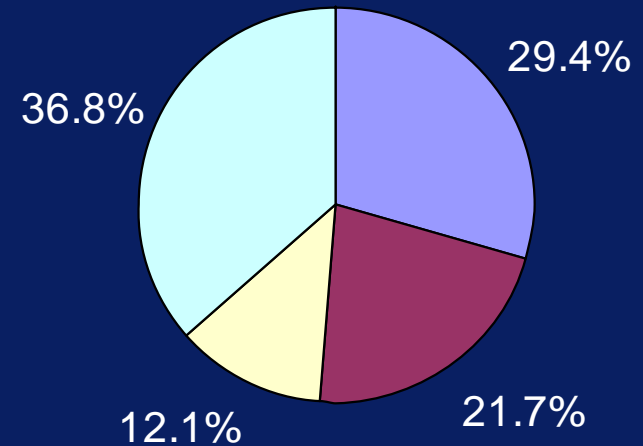


## Race/ Ethnicity



■ White ■ Latino ■ Black ■ API ■ AI & White/ AI

## Household Income



■ 0-99% FPL ■ 100%-199% FPL  
■ 200%-299% FPL ■ 300% or above FPL



# Results: Awareness of HPV Vaccine



	Percent	Adjusted OR (95% CI)
<b><u>Race-Ethnicity</u></b>		
White	89.1%	1.0 (ref)
Latina	52.8%	0.48 (0.32, 0.74)
African American	77.9%	0.49 (0.30, 0.80)
Asian/ Pacific Islander	57.6%	0.50 (0.28, 0.91)
<b><u>Income (federal poverty level)</u></b>		
300% or above FPL	86.6%	1.0 (ref)
200%-299% FPL	74.5%	0.80 (0.52, 1.22)
100%-199% FPL	60.9%	0.60 (0.39, 0.91)
0-99% FPL	45.9%	0.52 (0.33, 0.84)
		P trend=0.0066

*Adjusted for age, race/ethnicity, education, income, marital status, language, birthplace, insurance, regular source of care, access to care, sexual activity, Pap screening, HIV testing*



# Uptake of HPV Vaccine and Interest in Getting Vaccinated



- Among women 18 – 26, only 5.0% report having received any doses of the vaccine
- An additional 56.1% report that they intend to receive the vaccine
- Among “older” women up to age 50, more reported interest in vaccine



# Intention to Get Vaccinated



<u>Age Group</u>	Percent	Adjusted OR (95% CL)
18-26 yrs	56.1%	1.0 (ref)
27-29 yrs	68.9%	3.11 (1.47, 6.57)
30-39 yrs	71.3%	3.58 (2.06, 6.22)
40-49 yrs	57.0%	2.56 (1.48, 4.43)
50-59 yrs	45.1%	1.77 (1.00, 3.16)
60-64 yrs	42.5%	1.82 (0.95, 3.47)
<u>Race-Ethnicity</u>		
White	47.4%	1.0 (ref)
Latina	70.4%	1.61 (1.09, 2.36)
African American	59.1%	1.18 (0.74, 1.88)
Asian/ Pacific Islander	60.3%	2.20 (1.26, 3.81)

*Adjusted for age, race/ethnicity, education, income, marital status, language, birthplace, insurance, regular source of care, access to care, sexual activity, Pap screening, HIV testing*





# Intention to Get Vaccinated

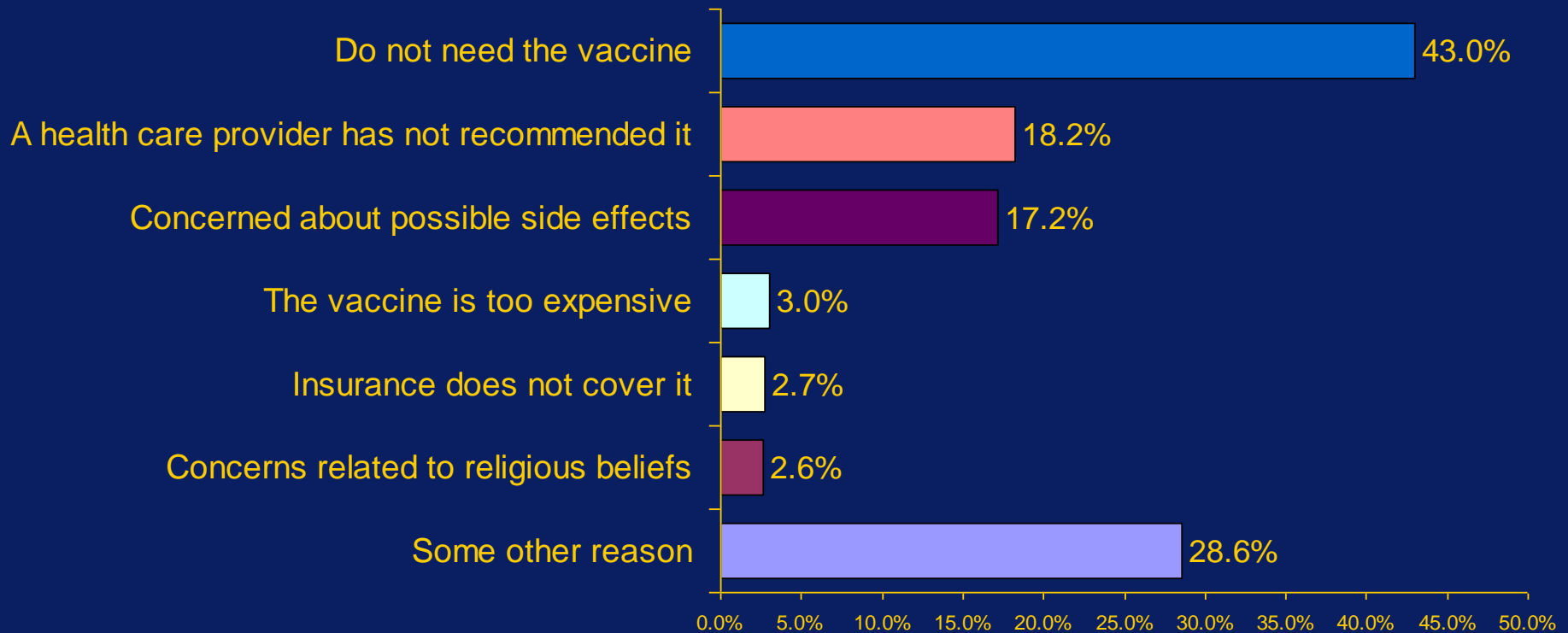


	Percent	Adjusted OR (95% CL)
<b><u>Education</u></b>		
College or post graduate degree	51.0%	1.0 (ref)
Some college or trade school	56.1%	1.19 (0.85, 1.65)
High school	59.3%	1.18 (0.77, 1.83)
Less than high school	81.5%	2.84 (1.54, 5.22)
		P trend=0.0049
<b><u>Language Used Most at Home</u></b>		
English	53.5%	1.0 (ref)
Spanish	74.2%	1.74 (1.00, 3.03)
Asian/ Pacific Islander languages	69.1%	2.94 (1.10, 7.87)
Other languages	54.2%	2.16 (0.70, 6.68)

*Adjusted for age, race/ethnicity, education, income, marital status, language, birthplace, insurance, regular source of care, access to care, sexual activity, Pap screening, HIV testing*



# Reasons Women Do Not/Would Not Want to Receive HPV Vaccine



# Conclusions



- Disparities in awareness of vaccine
  - *Need for educational efforts targeting Latinas, Asians/Pacific Islanders, African Americans, low income women*
- Very low uptake of vaccine among young women (18-26) eligible for vaccination
  - *More study needed of this group to identify concerns/barriers*



# Conclusions



- Majority of women 18-26 intend to get vaccinated, but interest in vaccine is greater among women 27-49
  - *Why is the target age group less interested in the vaccine?*
  - *How do we facilitate vaccination among young women who intend to get vaccinated?*
  - *Will the vaccine be recommended/appropriate for use in U.S. women over age 26?*



# Conclusions



- Women not interested in vaccination commonly cite “not needing” vaccine— is their perception correct?
- Interest in vaccination highest among population groups at high risk for cervical cancer:
  - *Latinas, Asians/Pacific Islanders, women with little formal education*

