

# Understanding HPV vaccine knowledge and uptake among low-income Chinese and Korean populations

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## Background

Asian and Pacific Islander (API) sub-groups experience higher rates of cervical cancer and lower rates of Pap testing compared to non-Hispanic whites<sup>1, 2</sup>.

Widespread adoption of human papillomavirus (HPV) vaccines can reduce the disproportionate burden of cervical cancer among APIs, especially those with low-income.

While it is important to address HPV vaccination disparities within the context of cervical cancer prevention, there is currently limited understanding of HPV vaccine knowledge and uptake among API subgroups.

## Objectives

We conduct this analysis to:

- > Understand HPV vaccine knowledge among Chinese and Korean mothers of HPV vaccine age-eligible girls
- > Assess HPV vaccination rates among HPV vaccine age-eligible Chinese and Korean girls

## Methods

This study was a collaboration between UCLA and the Los Angeles County Department of Public Health Office of Women's Health (OWH).

The OWH operates a telephone hotline to deliver multi-cultural, multilingual services on women's health issues, such as cancer and cardiovascular disease. The hotline operates in six languages (Spanish, Mandarin, Cantonese, Korean, Armenian, English) and primarily serves low-income (< 200% federal poverty level) women within Los Angeles County.



Hotline operators conducted telephone interviews between January and November 2009. Interviews were approximately 30 minutes and assessed HPV vaccine awareness, knowledge, barriers and uptake.

Eligibility criteria included:

- > Hotline callers ages 18-65 years
- > Medical decision-maker for at least one HPV vaccine age-eligible girl (ages 9-18 years)

## Findings

Table 1. Characteristics of Chinese and Korean mothers/caregivers and HPV vaccine age-eligible girls

	Chinese (n=98)	Korean (n=66)
	%	%
<b>Mothers or Caregivers</b>		
<b>Demographic Characteristics</b>		
Age (mean)	44.8	44.1
Income <\$2,000/month	51.7	39.7
<High School Diploma	55.2	48.4
Married	81.6	87.9
<b>Acculturation Factors</b>		
Foreign-born	100	98.5
Interviewed in Asian Language	90.8	96.5
Prefers Health Materials in Asian Language	51.6	98.4
<b>Health Care Access</b>		
Uninsured	57.3	80.3
No Usual Source of Care	60.4	89.4
<b>HPV vaccine-eligible girls</b>		
Age (mean)	13.9	14.0
Uninsured	16.3	48.9
No Usual Source of Care	33.7	66.7

Figure 1. HPV Awareness and Knowledge

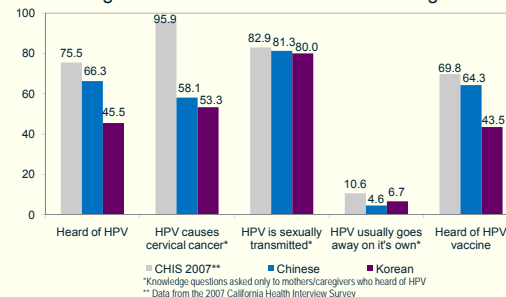


Figure 2. HPV Vaccine Uptake

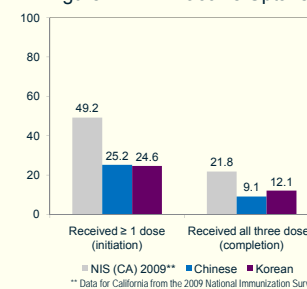


Table 2. Multivariate\* predictors of heard of HPV vaccine and HPV vaccine initiation

	Heard of HPV vaccine		HPV Vaccine Initiation	
	Odds Ratio	95% Confidence Interval	Odds Ratio	95% Confidence Interval
<b>Mothers or Caregivers</b>				
<b>Race/ethnicity</b>				
Korean (Reference: Chinese)	1.57	(0.55, 4.50)	0.53	(0.14, 2.04)
<b>Percent Life in the US</b>	1.59	(0.75, 3.38)	1.52	(0.59, 3.95)
<b>Education</b>				
< HS or HS Diploma (Ref: More than HS Diploma)	0.78	(0.22, 2.78)	0.74	(0.17, 3.25)
<b>Preferred Language for Health Information</b>				
Asian Language (Ref: English or English & Asian Language)	0.98	(0.38, 2.51)	1.19	(0.40, 3.57)
<b>Believes Immunization Against Disease is a Good Thing</b>				
Agree (Ref: Disagree or Neither Agree nor Disagree)	1.41	(0.49, 4.08)	3.41	(0.65, 17.9)
<b>Beliefs on Vaccine Effectiveness</b>				
Very Effective (Ref: Somewhat or Not Effective)			<b>2.82</b>	<b>(1.06, 7.48)</b>
<b>HPV vaccine-eligible girls</b>				
<b>Age</b>	<b>1.36</b>	<b>(1.00, 1.29)</b>	<b>1.20</b>	<b>(1.02, 1.40)</b>
<b>Insurance Status</b>				
Insured (Ref: Uninsured)	1.48	(0.54, 4.08)	3.11	(0.70, 12.64)
<b>Usual Source of Care</b>				
Yes (Ref: No)	2.35	(0.93, 5.91)	2.12	(0.70, 6.42)

\* Based on multivariate logistic regression analyses

## Results

HPV awareness is much lower among low-income Chinese (66%) and Korean (46%) mothers compared population-based rates (76%) reported by the California Health Interview Survey 2007 data.

While the majority of mothers who had heard of HPV were aware of the sexual transmission of HPV, only half recognized the link between HPV and cervical cancer and even fewer were aware that HPV infections usually go away on their own.

Compared to California's overall HPV vaccine initiation rate (49%)<sup>3</sup>, initiation rates were much lower among Chinese (25%) and Korean (25%) girls in this low-income, immigrant population.

Multivariate analyses suggest age of daughter and beliefs about vaccine effectiveness independently predict HPV vaccine initiation, after accounting for other characteristics of mothers and adolescent girls.

## Conclusions & Implications

Given the limited data on HPV vaccination among APIs, this study provides a better understanding of the rates of HPV vaccine awareness and uptake among low-income Chinese and Korean populations.

The lower rates of HPV vaccine awareness and HPV knowledge among mothers suggest future programs should aim to increase access to HPV vaccine information for these populations.

Without adequately addressing barriers to HPV vaccine uptake, cervical cancer disparities are likely to persist. Future research should identify strategies to increase access and knowledge of the vaccine among low-income API communities.

## Acknowledgements

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