

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

Public Health

journal homepage: [www.elsevier.com/puhe](http://www.elsevier.com/puhe)

## Original Research

# Human papillomavirus vaccine initiation in Asian Indians and Asian subpopulations: a case for examining disaggregated data in public health research

H. Budhwani<sup>a,\*</sup>, P. De<sup>b</sup><sup>a</sup> University of Alabama at Birmingham, Department of Health Care Organization and Policy, 310 Ryals Public Health Building, 1665 University Boulevard, Birmingham, AL 35294, USA<sup>b</sup> City College and the Graduate Center, City University of New York, 160 Convent Avenue, New York, NY 10031, USA

## ARTICLE INFO

## Article history:

Received 13 April 2017

Received in revised form

22 July 2017

Accepted 29 July 2017

## Keywords:

Human papillomavirus

Vaccine

Health disparities

Minority health

Asian Indian

## ABSTRACT

**Objectives:** Vaccine disparities research often focuses on differences between the five main racial and ethnic classifications, ignoring heterogeneity of subpopulations. Considering this knowledge gap, we examined human papillomavirus (HPV) vaccine initiation in Asian Indians and Asian subpopulations.

**Study design:** National Health Interview Survey data (2008–2013), collected by the National Center for Health Statistics, were analyzed.

**Methods:** Multiple logistic regression analysis was conducted on adults aged 18–26 years ( $n = 20,040$ ).

**Results:** Asian Indians had high income, education, and health insurance coverage, all positive predictors of preventative health engagement and vaccine uptake. However, we find that Asian Indians had comparatively lower rates of HPV vaccine initiation (odds ratio = 0.41; 95% confidence interval = 0.207–0.832), and foreign-born Asian Indians had the lowest rate HPV vaccination of all subpopulations (2.3%).

**Conclusions:** Findings substantiate the need for research on disaggregated data rather than evaluating vaccination behaviors solely across standard racial and ethnic categories. We identified two populations that were initiating HPV vaccine at abysmal levels: foreign-born persons and Asian Indians. Development of culturally appropriate messaging has the potential to improve these initiation rates and improve population health.

© 2017 The Royal Society for Public Health. Published by Elsevier Ltd. All rights reserved.

\* Corresponding author. Tel.: +1 (205) 975 7613.

E-mail addresses: [budhwani@uab.edu](mailto:budhwani@uab.edu) (H. Budhwani), [pde@ccny.cuny.edu](mailto:pde@ccny.cuny.edu) (P. De).<http://dx.doi.org/10.1016/j.puhe.2017.07.036>

0033-3506/© 2017 The Royal Society for Public Health. Published by Elsevier Ltd. All rights reserved.

## Introduction

Human papillomavirus (HPV) is the most common sexually transmitted infection in the United States, causes cervical cancer and creates significant financial burden on the healthcare system.<sup>1–4</sup> HPV is preventable through a multidosed vaccine; however, vaccination rates remain low with initial dose uptake ranging between 45% and 65% in girls and 8%–10% in boys.<sup>5,6</sup> Moreover, these rates are often lower in racial and ethnic minorities.<sup>5,6</sup> Vaccination trends across the five main racial and ethnic classifications (non-Hispanic whites, African Americans, Hispanics, Asian and Pacific Islanders, and Native Americans) are routinely monitored, but there is a paucity of research disaggregating the five main racial and ethnic classifications, and little is known about HPV vaccination-related health behaviors in subpopulations.<sup>7,8</sup> There are several reasons to investigate HPV vaccine initiation within the group of Asian and Pacific Islanders. The classification of Asian and Pacific Islanders contains immense heterogeneity; Asian and Pacific Islanders comprise over 60% of the world's population.<sup>9</sup> Asian and Pacific Islander subpopulations differ in religious practice, language, culture, health behaviors, and health preferences, apart from national origin.<sup>7,8</sup> Thus, generalizing findings from aggregated data to subpopulations, particularly for this group, may lead to inaccurate findings.

Asian Indians are a rapidly growing subpopulation within Asians and Pacific Islanders. Asian Indians have higher socio-economic status compared to non-Hispanic whites.<sup>10</sup> According to the United States Census Bureau, the Asian and Pacific Islander population grew at the same rate as Hispanics (43%), which is four times faster than the general population in just one decade.<sup>11–13</sup> Among all Asian and Pacific Islanders, the Asian Indian population was larger than any other subpopulation.<sup>13</sup> Asian Indians' growth rates are just behind the Chinese and Filipinos,<sup>14–16</sup> rising from 1,899,599 in 2000 (0.6% of the population) to 3,183,063 in 2010, about 1% of the US population.<sup>11,17</sup> This growth, coupled with a preponderance of foreign-born persons and higher levels of socio-economic status make Asian Indians' health behaviors enigmatic. Specifically, higher socio-economic status, measured by educational attainment and household income, has consistently been associated with higher levels of preventative healthcare utilization, such as vaccination.<sup>7,8,18</sup> However, Asian Indians hail from a cultural context which hasn't actively adopted preventative healthcare utilization<sup>18,19</sup> and may avoid health care associated with sexual engagement.<sup>19,20</sup> Additionally, the healthy migrant effect asserts that foreign-born individuals are healthier than American-born peers and are therefore less risk averse (possibly less likely to vaccinate), but there is no significant evidence to support or refute this effect for sexually transmitted infections.<sup>21–24</sup> Some studies (e.g. cardiovascular health, influenza vaccine, and cancer) have found evidence that Asian Indians engage in preventative health care at less than optimal rates, but these studies are few and far between.<sup>7,25,26</sup> These factors create a complex situation wherein Asian Indians are affected by factors which would both increase and decrease the likelihood of

vaccination. Thus, we aim to examine HPV vaccine initiation in Asian and Pacific Islander subpopulations. We compare adult HPV vaccine initiation rates in Asian Indians, Chinese, Filipinos, and other Asian subpopulations, controlling for personal characteristics.

## Methods

### Participants and data

We analyzed data from the National Health Interview Survey (NHIS). The NHIS is an annual survey of sociodemographic and health factors in the United States and is one of the few nationally representative surveys that report disaggregated race and ethnicity. Respondents are asked if they are of Chinese, Filipino, or Asian Indian origin. One challenge for analyzing data for subgroups is that sample sizes may become too small for stable statistical interpretation. However, starting in 2008, with the exception 2010, the same HPV vaccine uptake question was asked every year until 2013 in the NHIS. Due to this consistency, we are able to combine data from several years to increase sample size and produce reliable results. Thus, we selected our sample by retaining all respondents between the age of 18 and 26 years, the oldest recommended age for HPV vaccination for every year from 2008 to 2013, except 2010 when no HPV information was available. This process yielded 20,040 respondents, of whom 1.17% were Asian Indians. Because of the significant sample size, records with missing data were eliminated. Since we used the public use component of the NHIS data, this study is exempt from the University of Alabama at Birmingham institutional review board approval requirement.

### Measures

Our dependent variable was single dose of the HPV vaccine asked as 'Have you ever received HPV shot/vaccine?' This measure was binary coded (0 = no; 1 = yes). Independent variables included race, ethnicity, and nativity. The NHIS includes separate questions for race and ethnicity. Within race, we use the variable 'mracrpi2' which codes a respondent's race to white, African American, American Indian or Alaskan Native, Asian Indian, Chinese, Filipino, other Asian, and other race either uniquely indeterminable or not releasable. Whites were used as the referent group throughout.

Three categories of controls were included. The first was demographic factors: age (18–26 years), sex (0 = female; 1 = male), marital status (0 = not married; 1 = married), and nativity (0 = born in the US; 1 = foreign-born). The second captured economic and health variables. There were 11 income groups with the lowest (\$0–\$4999) group being used as the reference one. The third category captured health-related characteristics. To control for health status and access, we include health insurance status, access to physicians, and general level of physical health in our logistic regression model. The variable 'health insurance coverage' has three categories—(i) no insurance (reference), (ii) private insurance, and (iii) Medicaid. The variable 'trouble finding doctor' reflects

Download English Version:

<https://daneshyari.com/en/article/5122652>

Download Persian Version:

<https://daneshyari.com/article/5122652>

[Daneshyari.com](https://daneshyari.com)