

# Ethnic/Racial and Sex Disparities with HPV Vaccines in Mississippi

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## BACKGROUND & INTRODUCTION

Human papillomavirus (HPV) is a viral infection of the skin and mucous membranes.<sup>1</sup> These infections are very common and most (9 out of 10) will go away by themselves within 2 years. The virus can lead to several complications, including warts and some forms of cancer.<sup>1,2</sup> Common HPV-associated cancers include cervical and vaginal (females), penile (males), anal (males and females), and oropharyngeal cancer (the back of the throat) in both males and females.<sup>2</sup>

Approximately 42 million Americans are currently infected with this virus, with at least 13 million Americans becoming infected every year.<sup>2</sup> According to the National Immunization Survey – Teen records, the percentage of Mississippi adolescents ages 13 to 17 years who received all recommended doses of the HPV increased slightly from 29.1% in 2016 to 30.5% in 2019.<sup>6</sup> For comparison, United States' rates were 43.4% and 54.2% for the same time periods.<sup>3</sup> In Mississippi, an estimated 38.3% of African American youth and 21.6% of White youth have received the HPV vaccination. In the United States, 56.8% of African American youth and 51.8% of White youth have received the HPV vaccination.<sup>3,5,6</sup> The Mississippi State Department of Health reported that approximately 35% of females and 20% of males in Mississippi have completed the HPV 3-dose series, which is lower than the average United States rates.<sup>6,7</sup>

The HPV vaccine, Gardasil 9, available since 2006, provides protection against certain cancers and genital warts.<sup>4</sup> It is approved for adolescents ages 11 to 12 years old but can be started around the age of 9.<sup>4</sup> Vaccination before age 15 and exposure to the HPV virus is recommended and prevent seven HPV-related cancers.<sup>2,4</sup> In addition, around this age, most adolescents are getting their required immunizations for school, such as the Tdap vaccine. While the HPV vaccine is not a required vaccine in Mississippi, pediatricians and primary physicians could recommend this vaccination for patients at this time.<sup>5</sup>

## OBJECTIVES

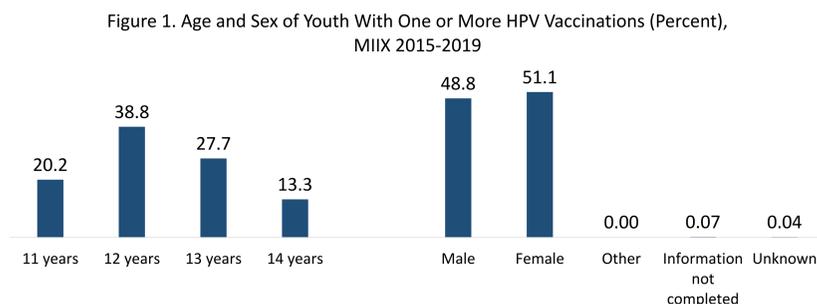
The primary objectives of this study is to determine the HPV vaccination coverage of youth ages 11-14 years by ethnicity, race, and sex within the state of Mississippi.

## METHODS

This study is a descriptive and inferential analysis using vaccination data from the Mississippi Immunization Information eXchange (MIIX) database. Inclusion criteria includes Mississippi residents ages 11-14 years who received one or more HPV vaccinations between 2015-2019.

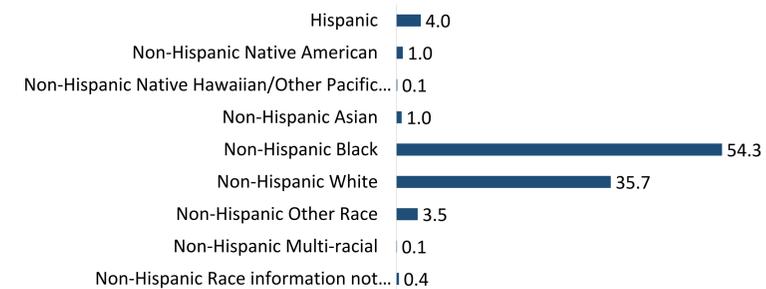
## FINDINGS

Between 2015-2019, 187,853 HPV vaccinations were administered to 126,109 youth between the ages of 11-14 years (Figure 1). About 2 in 3 vaccines were administered to youth 12 to 13 years. The proportion of male and female youth who received at least one HPV vaccination was not significantly different.



The proportion of youth 11-14 who received at least one HPV vaccination was significantly different by ethnicity and race ( $X^2 < 0.0001$ ). Non-Hispanic Black youth had the highest proportion of vaccinations. Figure 2. Between 2015-2019, 54.5% of youth 11-14 years received only one HPV vaccination, 35.1% received two, and 10.4% received three or more. Period data for up-to-date vaccination was significantly different by sex ( $X^2 < 0.0001$ ) and race/ethnicity (MH  $X^2 < 0.0001$ ). In assessing vaccination completeness among Non-Hispanic Black and Non-Hispanic White youth aged 11-14 years, Black youth were not significantly more likely to be up-to-date (receive 2 or more HPV vaccines) than White youth.

Figure 2. Percent of Youth 11-14 Years with One or More HPV Vaccinations, by Ethnicity and Race, MIIX 2015-2019



## RESULTS/CONCLUSIONS

Additional multi-level regression analyses will be conducted to better assess completion of vaccination series and vaccination by race and ethnicity.

## IMPLICATIONS

The data collected from this study will help the Mississippi State Department of Health identify any disparities among racial/ethnic groups regarding HPV vaccination rates by providing awareness and education.

## DISCLOSURES & ACKNOWLEDGEMENTS

Authors of this presentation do not have anything to disclose concerning possible financial or personal relationship with commercial entities that may have direct or indirect contact with the subject matter of this presentation.

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