

Background

- Vaccines are an important preventative health measure that have decreased the morbidity and mortality rates for several diseases
 - Credited with the global eradication of smallpox and elimination of polio in the Americas
- Vaccines are most effective with high vaccination rates
 - Creates the indirect protection of the general population, or herd immunity
- Vaccine hesitancy is the indecisive attitude or reluctance towards a vaccine or vaccination overall
 - Socio-cultural, political, historical, and personal factors all contribute¹
- Vaccination rates have been decreasing
 - Measles outbreak in 2014-2015 and 2019²
 - 1 in 8 children younger than 2 have not completed their primary vaccinations³
 - Non-medical exemptions for vaccination have been increasing²
- Hesitancy observed as recently as the COVID-19 pandemic

Objective

- Assess and understand the differences in vaccine hesitancy factors for groups based on the following sociodemographic characteristics: race, ethnicity, income level, and education level
- Determine possible at-risk groups

Methods

- Searched PubMed and Google Scholar
- Key search terms: vaccine hesitancy, income, education, race, ethnicity, socioeconomic status, and SES
- 26 research articles chosen – screened based on peer-review status, whether were written in English, study based in the United States of America

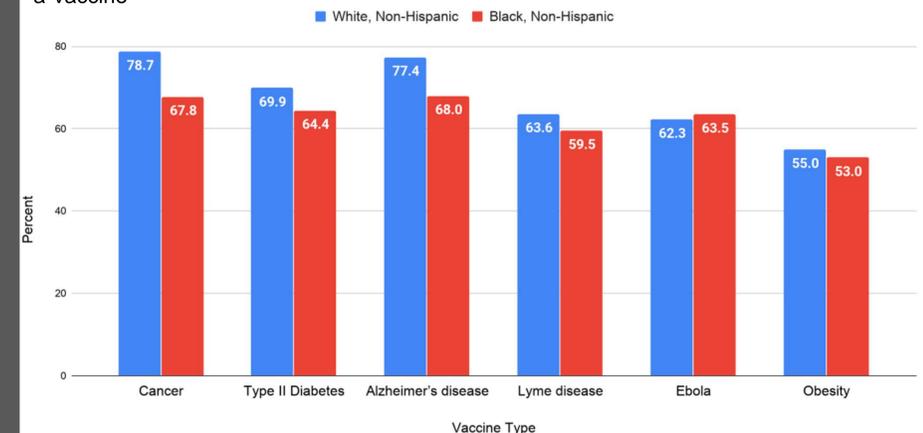
Results

- *Vaccine hesitancy and the influenza vaccine:*
 - Black and Hispanic Americans, and individuals with lower SES are less likely to receive the flu vaccine
 - Higher income and education levels associated with greater likelihood of receiving a flu vaccine
 - Hesitancy factors among Black Americans:
 - Mistrust in government, use of natural home remedies, belief in conspiracy theories, knowledge of the Tuskegee Syphilis Study, perceptions regarding vaccine side effects
- *Vaccine hesitancy and childhood immunizations:*
 - Non-Hispanic Black parents more likely to delay their children's vaccinations than white parents
 - Parents with higher income and education level more likely to have positive beliefs regarding vaccines
 - Low-income Black mothers more likely to rate vaccines as ineffective than white parents
 - Vaccines considered effective when recommended by trusted health provider
- *Vaccine hesitancy and the HPV vaccine:*
 - Hesitancy factors among non-Hispanic Black Americans:
 - Not recommended to them, insufficient information, family decision, age, cost, and children's fears
 - Hesitancy factors among Hispanic Americans:
 - Not recommended to them, insufficient information, not required by their child's school, belief that child is not sexually active, child is male, perception that vaccine causes harm, and lack of trust in their healthcare providers
- *Vaccine hesitancy and the COVID-19 vaccines:*
 - After vaccine approval: vaccine hesitancy prevalence was 41.6% among African Americans and 30.2% among Hispanics
 - Hesitancy factors: medical mistrust, history of racial discrimination, exposure to myths and misinformation, perceptions regarding risk of COVID-19 infection, and beliefs regarding vaccine safety, efficacy, and side effects
 - Individuals with lower income and education levels more likely to be hesitant

Results

- *Vaccine hesitancy and future vaccines:*

Figure 1: Percentage of White and Black Adults Reporting They Would "Very Likely" Accept a Vaccine



Discussion

- Black and Hispanic Americans, and individuals with low income and education levels are at risk
- *Risk Factors and Barriers:*
 - Mistrust in government and/or healthcare provider, use of natural home remedies, belief in conspiracy theories, negative beliefs or perceptions regarding vaccine, misinformation, cost
- *Protective Factors:*
 - Trust in healthcare provider, positive beliefs regarding vaccine, education level, income

References

1. Dubé E, Laberge C, Guay M, Bramadat P, Roy R, Bettinger J. Vaccine hesitancy: an overview. *Hum Vaccin Immunother.* 2013;9(8):1763-1773. doi:10.4161/hv.24657
2. Callender D. Vaccine hesitancy: More than a movement. *Hum Vaccin Immunother.* 2016;12(9):2464-2468. doi:10.1080/21645515.2016.1178434
3. Kestenbaum LA, Feemster KA. Identifying and addressing vaccine hesitancy. *Pediatr Ann.* 2015;44(4):e71-e75. doi:10.3928/00904481-20150410-07

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