

# UNDERSTANDING HPV VACCINATION RATE DATA

## Mission: HPV Cancer Free

- An American Cancer Society initiative.
- Eliminate vaccine-preventable HPV cancers.
- First step: reach an annual vaccination rate of 80% in 13-year-olds by 2026.

Fig. 1 Transforming State Areas to be Proportional to HPV Vaccination Rates

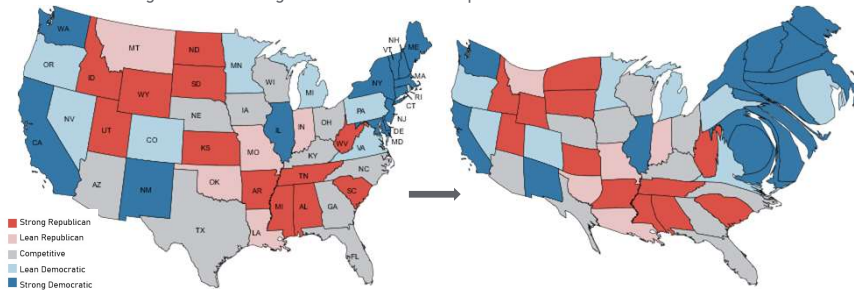
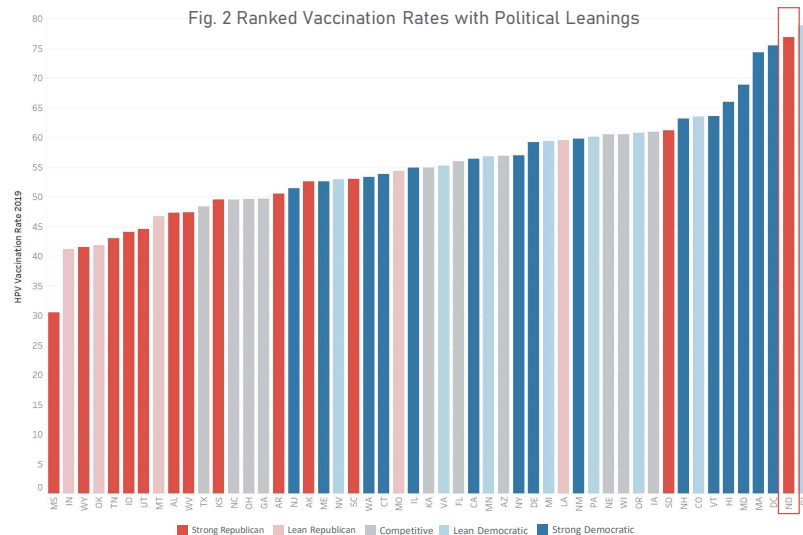


Fig. 2 Ranked Vaccination Rates with Political Leanings



## 1. Why HPV?

- ~80% of sexually active people will get HPV at some point in their lives.
- HPV is associated with cervical, genital, and oral or throat cancers.

## 2. Vaccine Status

- Approved for females in 2006 and for males in 2009.
- Proven to be extremely safe and effective at protecting against cancer-causing HPV.
- One of the most controversial vaccines.
- Mandated for school children in the District of Columbia, Hawaii\*, Rhode Island, and Virginia. \* Hawaii's mandate was not in place at the time this data was taken.
- We analyzed the most recently available data (2019) from the CDC's HPV Vaccination Coverage Report.

## 3. Regional & Political Data

- The Northeast has much higher vaccination rates than the rest of the country (Fig. 1).
- Ranking the same vaccination rates (Fig. 2), it's clear to see that politically Democratic states tend to have higher rates than Republican states do.
- These trends may be tied to culture, vaccine hesitancy, and the availability of sex education and health clinics that offer the vaccine.
- One extreme exception to note is North Dakota, which has the second highest vaccination rate in the country (despite being strongly Republican).

## 4. Gender & Poverty Data

- Looking at gender (Fig. 3), vaccination rates are still higher for females than for males in most states, by about 4% on average.
- For most states, vaccination rates are higher for those living below the poverty line as opposed to those living at or above the poverty line (Fig. 4).
- Why? This is likely due to the efforts of Planned Parenthood, Vaccines for Children (VFC), and other cost-reducing programs.

\* Poverty level data was unavailable for the following states: CT, HI, MA, MN, NJ, ND, UT, VA

Fig. 3 Comparing Female to Male Vaccination Rates Across States (Sorted by Magnitude of Difference)

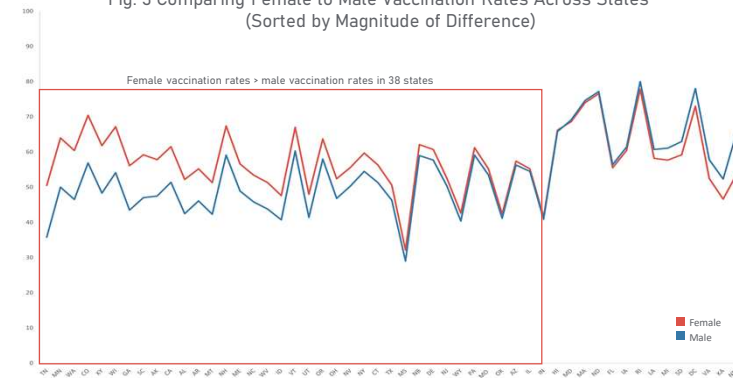
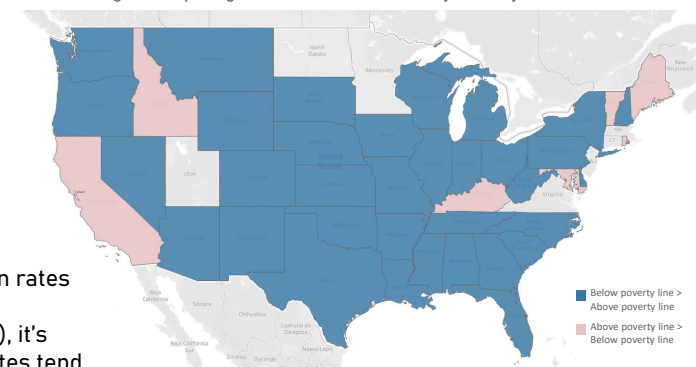


Fig. 4 Comparing HPV Vaccination Rates by Poverty Status



## 5. Conclusions & Recommendations

- In analyzing CDC data, we found correlations between HPV vaccination rates and region, political leaning, poverty status, and gender.
- In order to reach our goal of 80% vaccinations, we recommend:
  - Examining past successes to inform future interventions.
  - Increasing education efforts to reduce stigma and misinformation.
  - Addressing barriers & current limitations such as parental consent and exemptions from vaccine mandates.
  - Keep studying the data, especially in light of the pandemic.