Using the American Cancer Society HPV Landscape Dashboard

In the fight to make HPV cancers history, knowledge is power! The *HPV Landscape Dashboard* gives you **an overview of HPV vaccination data** in your state or region, to help you **know the basics, develop juicy questions, and decide where to take a deep dive.**

The goal of this tool is to create questions, not to provide answers.
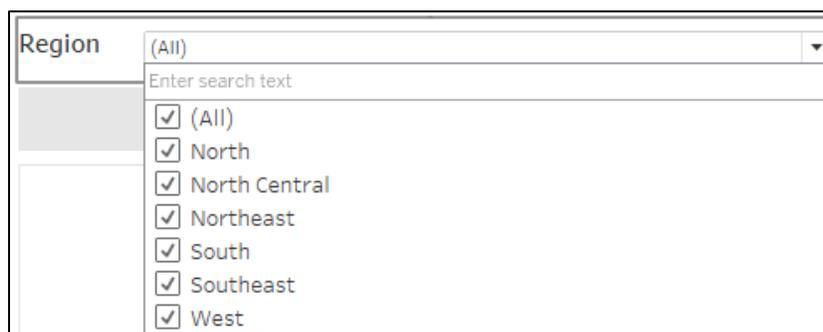
This guide walks you through:
1. Getting the dashboard
2. Filtering and navigating the dashboard in Tableau
3. Interpreting the data and developing questions
4. Data sources for further information

Accessing the dashboard

The HPV dashboard is available on **Tableau Public**. Bookmark the page on your browser for easy access!

Filters

You can filter the dashboard by ACS Region or State. To use the filters, click "All" first to clear the tick boxes, then select the Region(s) or State(s) you want to see.

| Region	(All) ▼
	Enter search text
	☑ (All)
	☑ North
	☑ North Central
	☑ Northeast
	☑ South
	☑ Southeast
	☑ West

If you filter by Region, the dashboard will focus on all the states in the Region(s). This is helpful to get the bigger picture of a Region or to compare a state to its neighbors.

If you filter by State, the dashboard will focus only on the selected state(s). This is helpful if you want to focus on a single state or compare a state to other states in different Regions.

Navigation Tips

You can hover over maps and charts to get more details. Here are examples of what happens when you hover over a map and a chart:
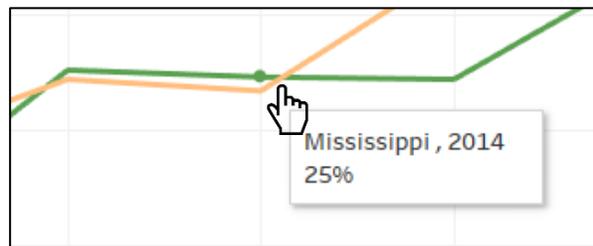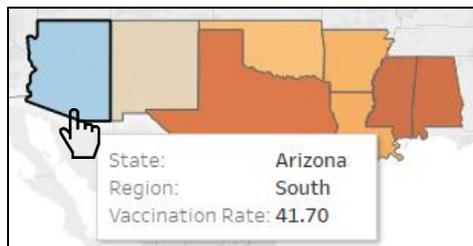
You can also click on a single line or state to grey-out all the others and focus on a single state's data. Hovering and clicking is very helpful in reading the line charts, which can be a bit tricky to read otherwise.
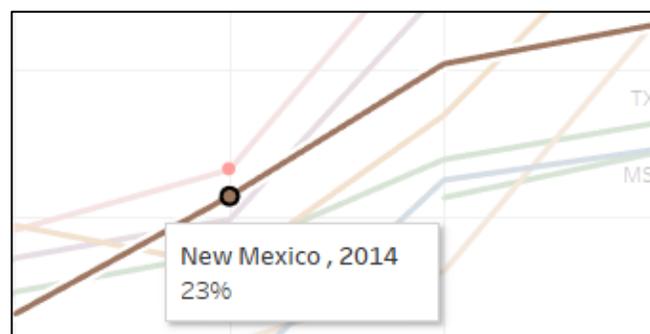
Click in the white space of the chart or map to see all the data again.

"So what?" – Interpreting the data

So, you've opened the file and filtered for your area if interest. Now what?

Remember the goals of this tool:

1. To help you know the basic landscape of HPV vaccination in your area of interest,
2. To help you develop juicy questions, and
3. To help you decide where to take a deep dive – where to go next for more information.

Think of this tool as a high-level introduction. Each part is a piece of the puzzle, but you'll probably have to go find more pieces before you can draw any major conclusions.

The rest of this section walks through each of the four parts of the dashboard, with some tips for interpretation and possible juicy questions for each part.

HPV-Associated Cancer Incidence
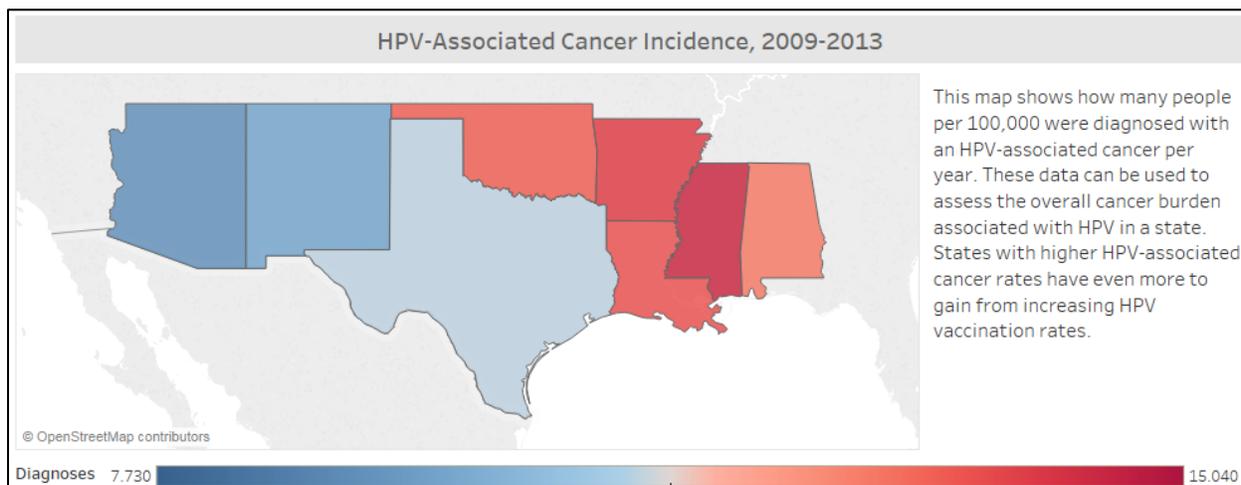
HPV-associated cancer rates are included in the dashboard for context. These data are especially important in states with high HPV-associated cancer burden. You can use this to motivate partners and the public to act on HPV vaccination.

In these CDC data, HPV-associated cancers are defined as cancers at specific anatomic sites with specific cellular types in which HPV DNA frequently is found. The rates are the average numbers out of 100,000 people who developed cancer each year from 2009 to 2013. See here for more information.

Possible Juicy Questions:

1. How do cancer rates compare to similar states? (Similarity could be socioeconomic, regional, historical, size, Medicaid expansion, and much more.)
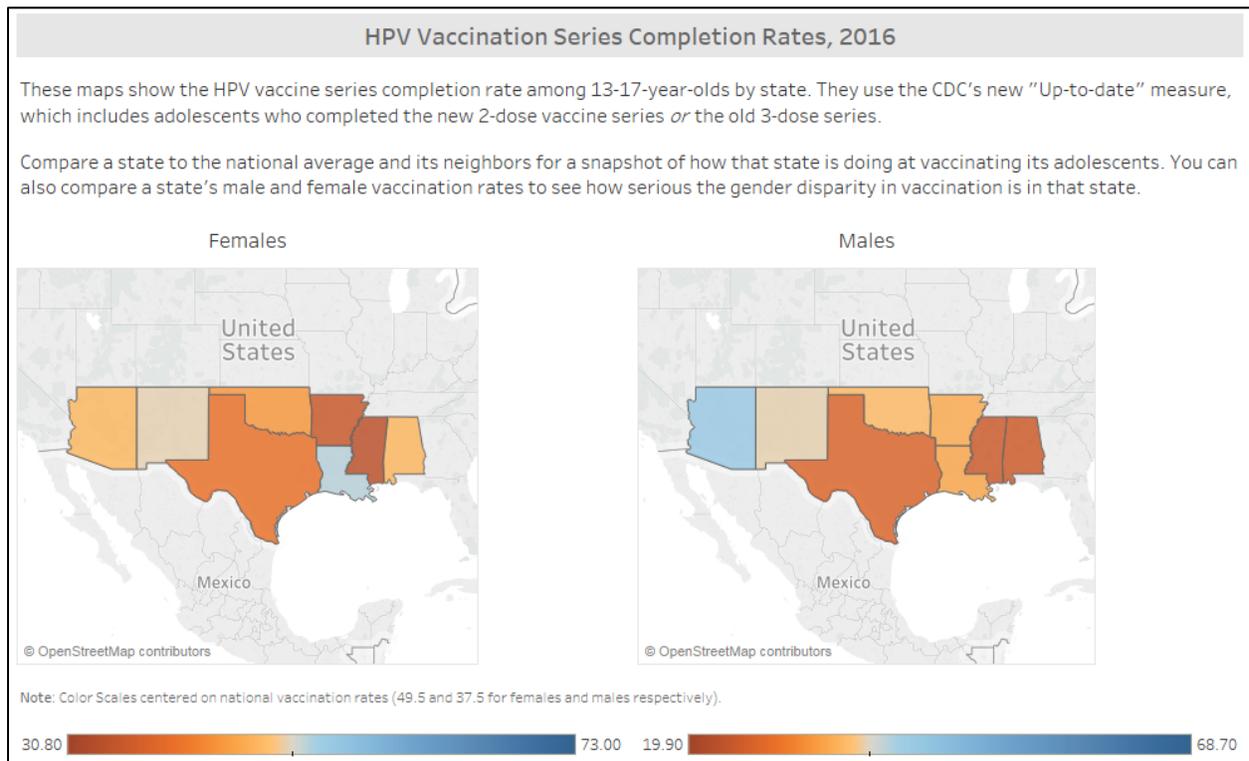
If HPV-associated cancer incidence is high:
1. Are other cancer rates high? (See here to find out). If not, why might HPV-associated cancers be different?
2. Are vaccination rates low or high? If rates are low, this can help you tell the story of how increasing vaccination rates could make a big impact. If rates are high, you probably have a large high-risk population.

If HPV-associated cancer incidence is low:
1. Are other cancer rates low? (See here to find out). If not, why might HPV-associated cancers be different?
2. Are vaccination rates low or high? If rates are high, your state is doing great! If rates are low, you probably have a very small high-risk population.

HPV Vaccination Series Completion Rate

HPV Vaccination Series Completion Rates, 2016

These maps show the HPV vaccine series completion rate among 13-17-year-olds by state. They use the CDC's new "Up-to-date" measure, which includes adolescents who completed the new 2-dose vaccine series *or* the old 3-dose series.

Compare a state to the national average and its neighbors for a snapshot of how that state is doing at vaccinating its adolescents. You can also compare a state's male and female vaccination rates to see how serious the gender disparity in vaccination is in that state.

Females   Males

Note: Color Scales centered on national vaccination rates (49.5 and 37.5 for females and males respectively).

30.80   73.00 19.90   68.70

This is the key measurement of HPV vaccination! This section uses data from the National Immunization Survey – Teen (NIS-teen), an annual survey conducted by the CDC that provides the most accurate national HPV vaccination rates available.

"Series Completion" refers to adolescents who've completed either the 2-dose or 3-dose HPV vaccine series. HPV series initiation rates are also available if you dive deeper into NIS-teen data.

Note that the NIS-teen measures vaccination rates among adolescents age 13 to 17, while ACS's focus is on vaccinating by age 13.

Possible Juicy Questions:

1. Why are vaccination rates low/high? (historical factors, population factors, programmatic factors, policy factors, etc.)
2. Are vaccination rates very different from similar states? If so, why?
3. Is there a big difference between male and female rates? Why or why not?

HPV Vaccination Series Completion Rate Trend
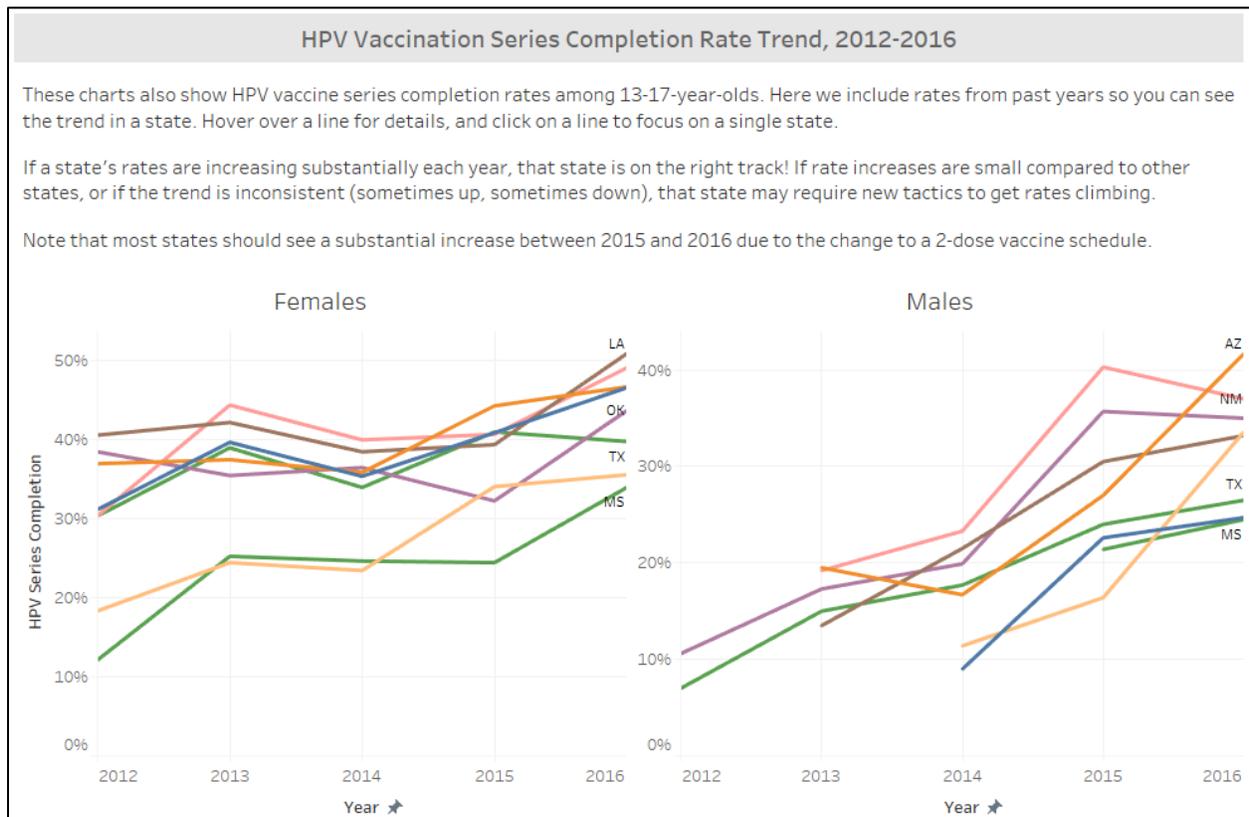
This section shows the same HPV vaccination series completion data over the past five years. Looking at the trend lets us see how much and how consistently states are improving their vaccination rates.

These charts can be a bit tricky to read. Remember, you can hover over a line to see which state it is, and click on a line to see a state by itself. If the chart has too many lines to read, try filtering for fewer states.

Possible Juicy Questions:

1. Are rates increasing quickly, slowly, steadily, inconsistently? Why? (historical factors, population factors, programmatic factors, policy factors, etc.)
2. Are vaccination rates changing at a different pace from similar states? Why or why not?
3. Are male and female vaccination rates changing at a different pace? Why or why not?
4. Did rates improve or worsen dramatically in a particular year(s)? If so, why?
5. Did rates improve more than usual in 2016 due to the change to the 2-dose schedule? Why or why not?

How to answer your juicy questions

Some of your questions probably can be answered just by comparing and discussing the data in the dashboard. Others probably require you to dig deeper by exploring other data sources or contacting partners and experts. Here are a few strategies to get you started.

1. **Explore the dashboard.** Lots of the suggested questions involve comparing your state to other states or comparing multiple sections of the dashboard. You can learn a lot just by thinking about how these pieces fit together.
2. **Ask colleagues.** Many of our colleagues have been working in depth on HPV for years. They may be able to answer some of the questions that require in-depth knowledge of a state's HPV vaccination landscape. Find out who your local HPV experts are and tap their knowledge!
3. **Ask partners.** Some of these questions may require an insider's perspective. Some ideas to start with include:
   a. State Dept. of Health Immunization Branch staff
      i. State Immunization Registry staff
   b. State Dept. of Health Cancer Branch staff
   c. Managers of large health systems
   d. Local Merck reps
   e. Primary Care Associations
4. **Explore other data sources.** Some of your questions may require county-level or clinic-level data, different variables, different frequencies, etc. Fortunately, this dashboard only includes a sliver of the HPV vaccination data available out there! See below for a list of HPV vaccination data sources. You might dig deeper into NIS-teen data using Teenvaxview, ask your contacts for county-level State Immunization Registry data, and much more.

Learn More: HPV Vaccination Data Sources

Data Source	Owner	Access	Update Frequency	Geographic Detail	Advantages	Disadvantages
National Immunization Survey (NIS)	CDC	CDC Website, teenvaxview	Annually	National, state, a few cities	• Easiest to access • Demographic/subpopulation breakdowns • Frequently cited/used • Compare geographic details	• Survey with sampling error • No county/MSA level data • Updated annually
Immunization Information Systems (IIS)/ State Registries	State Departments of Health (DoH)	State Immunization Program Manager or Registry Manager	Variable, ongoing and real time for most	State, county, zip code	• High level of geographic detail • Provider level reports possible • Real time	• Capabilities & accuracy vary by state • Availability • Provider reporting varies
Electronic Health Records (EHR)	Health System (clinic, hospital, etc.)	IT/QI department at the health sys.	Real time	Patient population of the health sys.	• Usually fairly accurate • Provider level reports possible • Real time	• Difficult to pull for some • Limited to patient pop. • Accuracy varies by HS
Vaccine Distribution/ Ordering	Merck, CDC, State/Local DoH	CDC Quarterly HPV reports, State or Local reports, VTrckS	Quarterly, Monthly	National, state, County (maybe)	• Precise • Updated frequently • Public ordering data available on local level	• Private ordering data not available on local level • Difficult to interpret and less meaningful than vaccination rate data
AFIX Report	State DoH	State Immunization Program Manager or Registry Manager	Variable	Practice level	• Widely available • Provider level reports possible	• Variable implementation across state/MSA • Sample size
Health Plan Claims	Health Plan	Quality director or medical officer. Some plans make rates available online.	Variable	Region, state, county, zip code	• Accurate • High level of geographic detail • Provider level reports possible	• Limited Availability • Can be technologically difficult

HPV Landscape Dashboard Guidance (last updated October 2017)