

PA State Geospatial Coordinating Board COVID-19 Special Report Follow Up





Overview

In 2020, the PA Geospatial Coordinating Board, (PA GeoBoard) developed a special report on the use of geospatial information systems (GIS) in the response to the COVID-19 pandemic. As COVID-19 continued well beyond that first year, GIS data, software, and tools continued to play a prominent role in surveillance, treatment, economic recovery, research and education, and the well-being of Pennsylvania's citizens. This follow up report serves to identify some of the ways in which GIS continued to play a crucial role in response to COVID-19 across our state.

Vaccinations & Testing

Efforts to distribute COVID-19 vaccines to the public highlighted many important questions across the commonwealth. Issues such as vaccine equity, diversity, transportation, and access, not to mention the massive effort to vaccinate millions of Pennsylvanians in a short period of time to stem the tide of the disease. The following are just a few of the initiatives related to vaccines and testing.

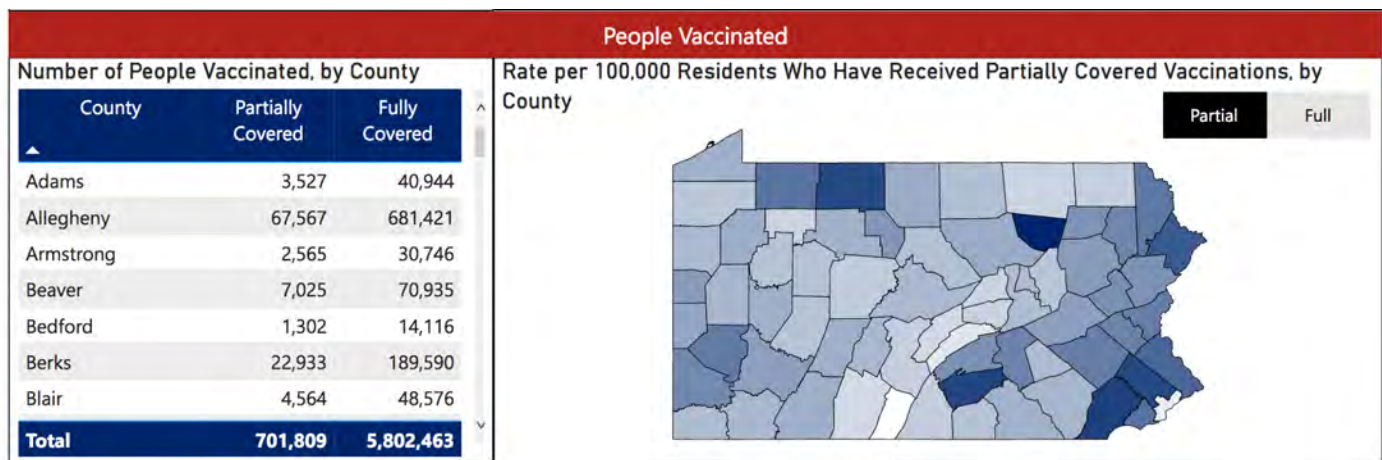


Figure 1. Pennsylvania Department of Health Vaccine Dashboard

Pennsylvania Department of Health

The Pennsylvania Department of Health developed a Vaccine Dashboard to track the number of people vaccinated. Users could see vaccination rates by legislative district, ZIP code, county, and statewide. The vaccination data by legislative district excludes those districts fully or partially located in Philadelphia County which was a separate CDC-designated vaccine jurisdiction. (Press Release)

Federal Emergency Management Agency and City of Philadelphia

One of the largest vaccination efforts in the state took place in Philadelphia. In March 2021, community groups and FEMA, in partnership with the City of Philadelphia, came together to plan and operate a mass vaccination site at the Pennsylvania Convention Center which would serve as a central point for people to receive vaccinations. Initially, this location seemed ideal as it is centrally located and a transportation

hub. The location was set up to vaccinate 6,000 people each day. As stated, the goal was for “everyone who wanted a vaccine in Philadelphia, had the opportunity to get one” (FEMA). However, it was clear that there would have to be a multipronged approach to ensure equitable access to vaccines. A second pilot site was set up at the Esperanza Community Vaccination Center (ECVC), a Type 2 pilot site in North Philadelphia. GIS data, tools, and software played a large role in this expansive effort. GIS helped to identify areas of social vulnerability and undervaccinated communities, transportation and access issues,

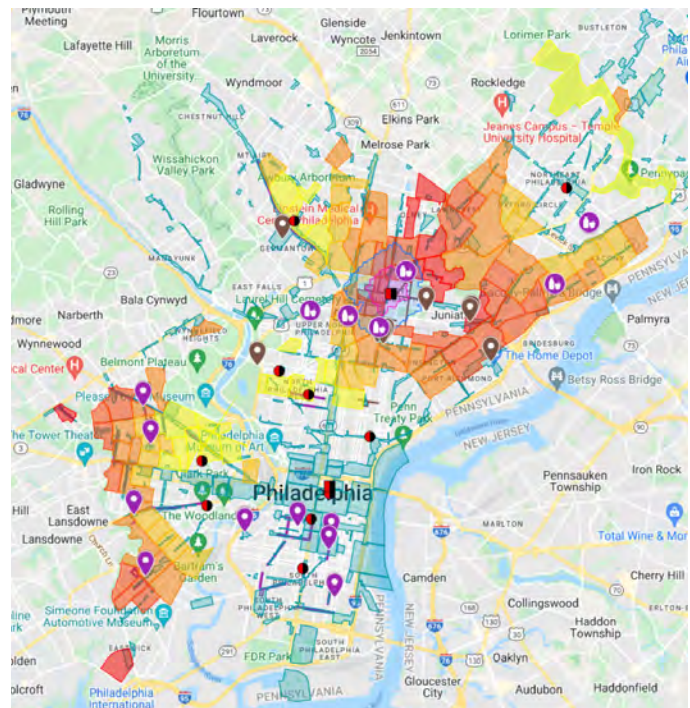


Figure 2. CCVC and ECVC Canvassing in Philadelphia

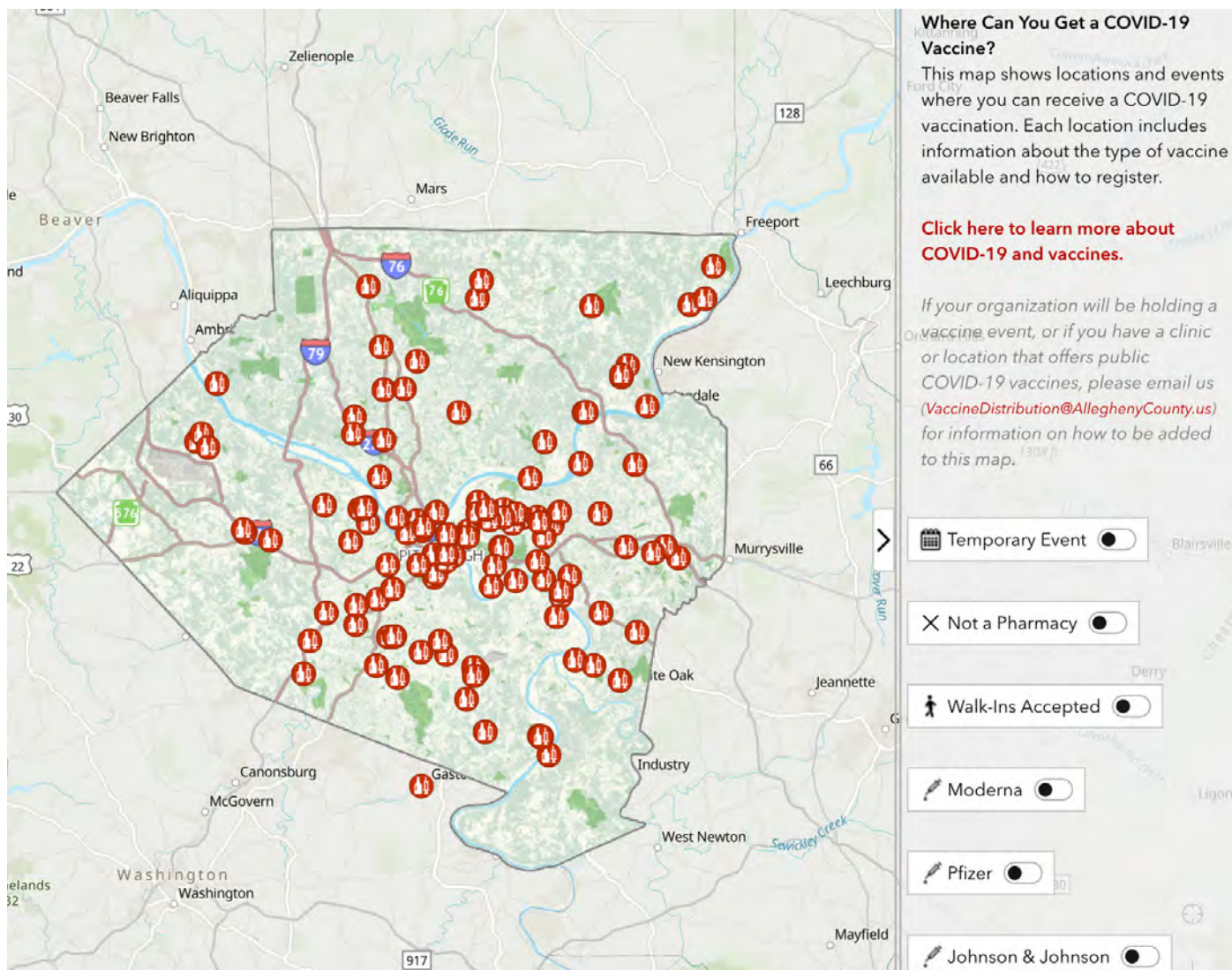


Figure 3. Allegheny County Vaccine Provider App

Allegheny County COVID-19 Testing Lo...

Find address or place

10 mi

20

20 mi

Find the nearest COVID-19 testing location by using one of the following search methods:

- Click in the search box above and type in an address, municipality, or neighborhood; or
- Click within the map; or
- Use current location if on mobile device.

Results will include information about nearest COVID-19 testing locations.

The default distance is locations within 20 miles, but using the slider bar allows for adjustment the of the search radius.

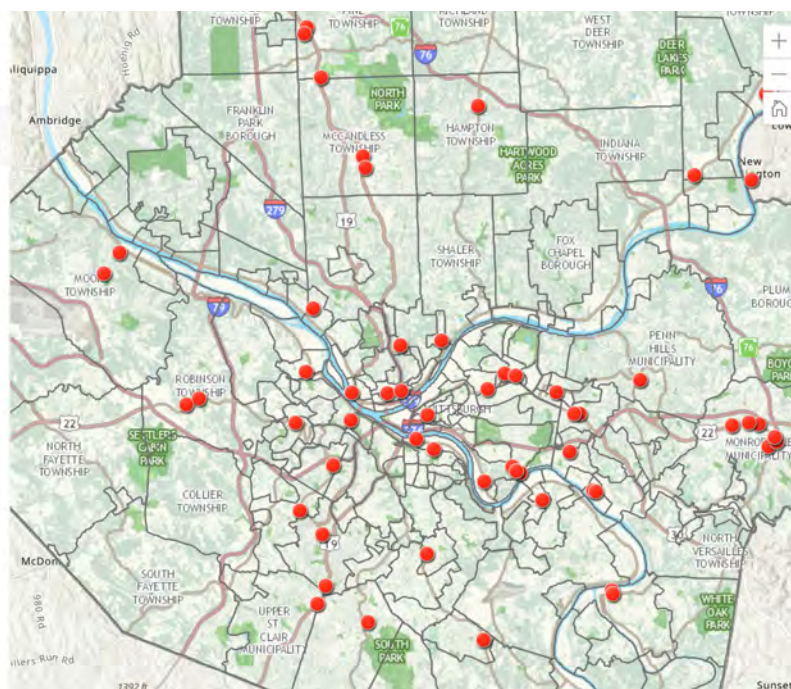


Figure 4. Allegheny County Testing Locator App

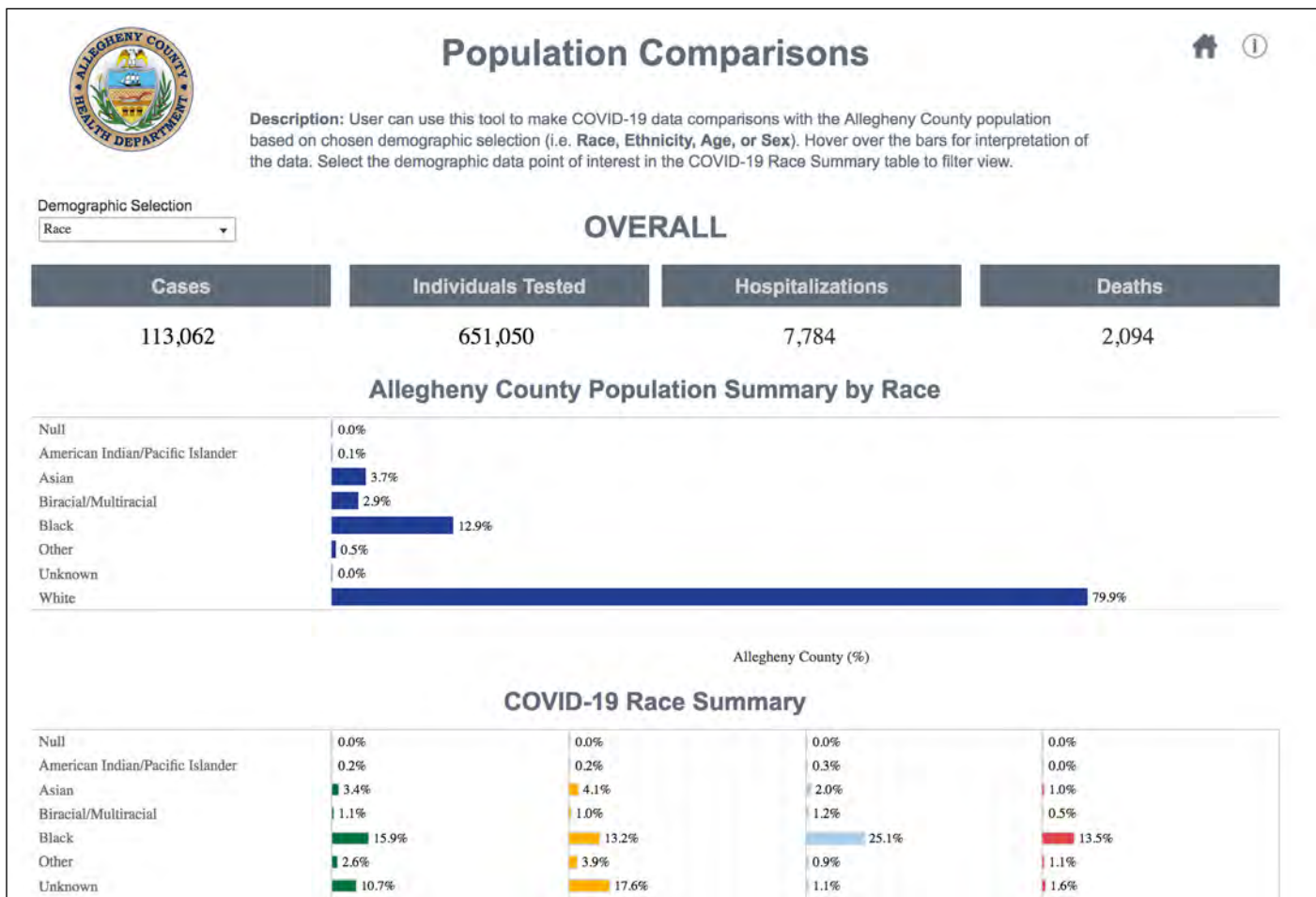


Figure 5. Allegheny County Population Comparison Dashboard

and areas where significant outreach would be needed to ensure these populations had access to COVID-19 vaccines. This collaborative effort, involving input and guidance from community groups such as Sewa, allowed for FEMA's GIS team "to take a data-driven approach, combining data sets of high social vulnerability index areas and high traffic commercial corridors in support of targeted outreach."

Allegheny County

Allegheny County approached the challenge of vaccinations on multiple fronts by developing a series of apps and tools, including a Vaccine Provider app.

In addition, the county developed a Testing Locator Map to assist users in finding the nearest COVID-19 testing location. Another Allegheny County app showed

comparisons across populations in relation to cases, individuals tested, hospitalizations, and deaths.

York County

York County wanted to create a one-stop shop website for everyone in the county to access information about COVID-19 vaccines. It worked with the top health agencies, including the York City Health Bureau to help develop the priority needs of the centralized hub and determine who had the authoritative information that would populate it. The county used ArcGIS Hub to create the York County Vaccination Distribution Hub site. This site includes web mapping applications, statistical dashboards, links to authoritative information, and even a calendar of events. One component of this dashboard helped citizens find locations for vaccines.



Figure 6. York County Coronavirus Vaccine Data Hub

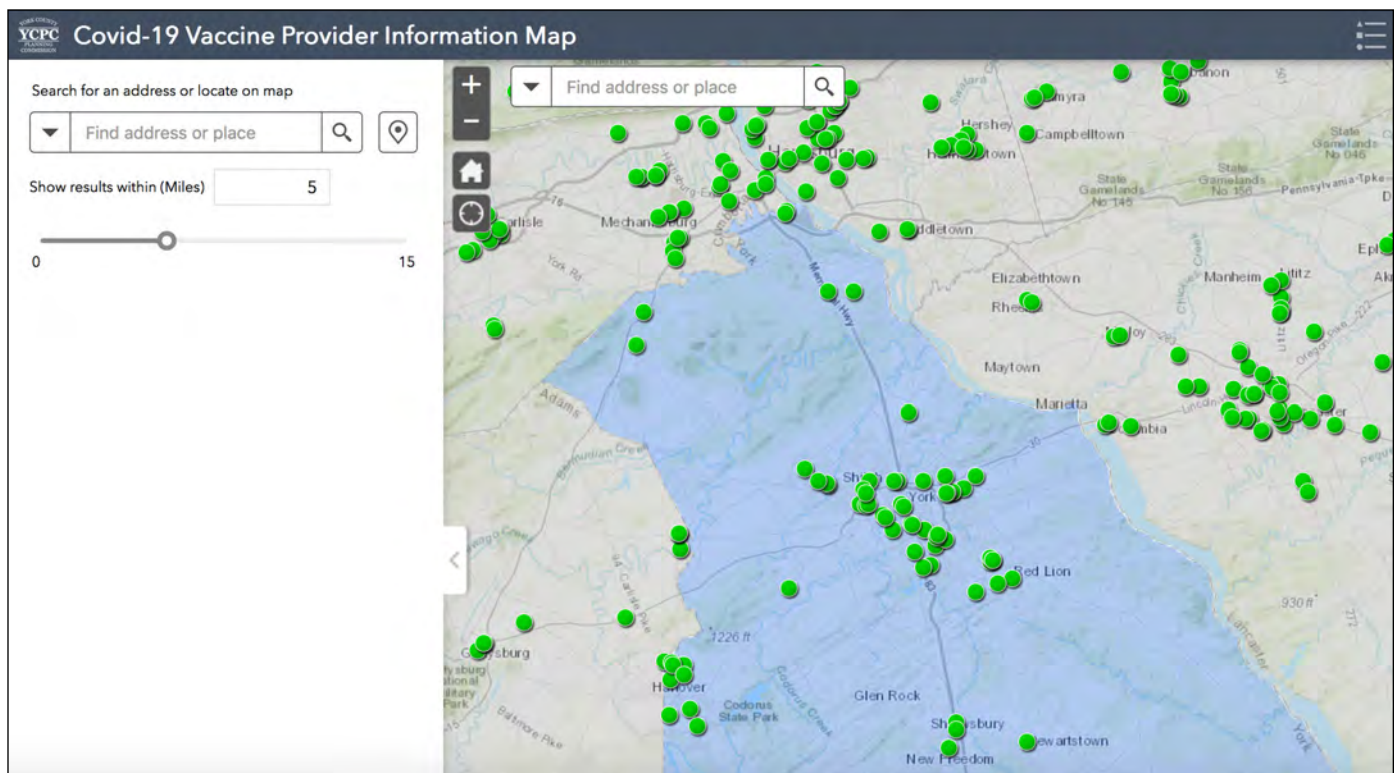


Figure 7. York County Planning Commission Vaccine Provider Information Map

My Vaccine Experience

You or your child get the COVID-19 Vaccination recently? Share and promote your experience using our [My Vaccine Experience Survey](#).

Check out what other people had to say about their experience on the [I Got Vaccinated App](#).

Thank you for sharing your experience with the COVID-19 vaccine, it is very important to us.

Who got vaccinated?*

☐ Myself

☐ My Child (12-16)

☐ My Child (17 and older)

Where did you or your child get vaccinated?*

Click on the map below. You can type in an address or click on a location.

Figure 8. The York County My Vaccine Experience survey

In addition, the county wanted to know how well the vaccine program was working and what people’s vaccine experiences were like. It created the “My Vaccine Experience” to make this happen.

The data gathered through this survey allowed others to potentially share their stories with others who might be hesitant about getting vaccinated.

West Health Policy Center and the University of Pittsburgh

West Health Policy Center and the University of Pittsburgh created VaxMap 2.0 to identify areas and populations with lower access to existing health care facilities to administer the vaccine.

Economic Impact & Assisting the Community

GIS was used to assist local businesses and restore economic vitality to communities. For example, GIS helped to sustain PA’s economy by

enabling customers to locate open businesses such as restaurants, as well as take out/delivery options for those who did not want to venture out.

Berks County

The Berks County CARES Funding Dashboard was developed to show how funds from the Coronavirus Aid, Relief and Economic Security (CARES) Act were being distributed throughout the County.

Crawford County

Crawford County launched a GIS Hub page to disseminate COVID-19 information to residents. Also, the use of ArcGIS Online / Pictometry / ArcGIS Desktop allowed many of staff to continue GIS operations while working remotely to social distance and reduce in-person interactions.

Delaware County

Delaware county had many applications related to COVID-19 assistance. It developed a COVID-19 testing interactive mapping application, food and meal services interactive map, guide to local establishments with carry out and delivery options, and a Delco Strong grantees dashboard showing businesses that received funding during pandemic.

McKean County

In McKean County, web apps were created to provide resources to residents for social needs, food security, businesses that were operational during the pandemic (economic & community development), resources that were explicitly catering to the needs of

seniors (including businesses with senior hours), and internal dashboards that tracked COVID-19 cases for local elected officials. GIS was the catalyst and software system that enabled the county to provide these services. Most of those services are no longer available, but the community resource directory arose out of the needs of constituents during the pandemic.

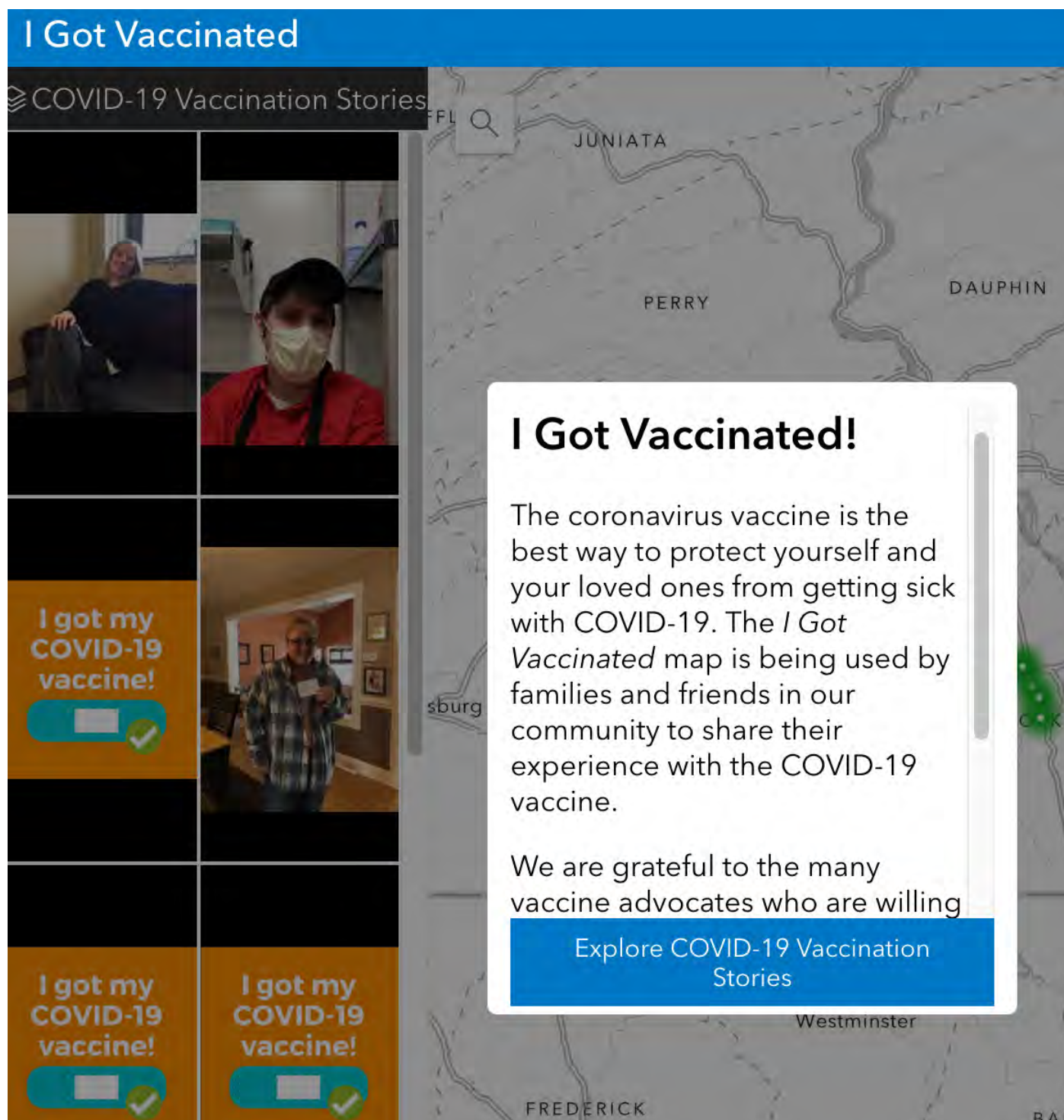


Figure 9. The I Got Vaccinated App from York County.

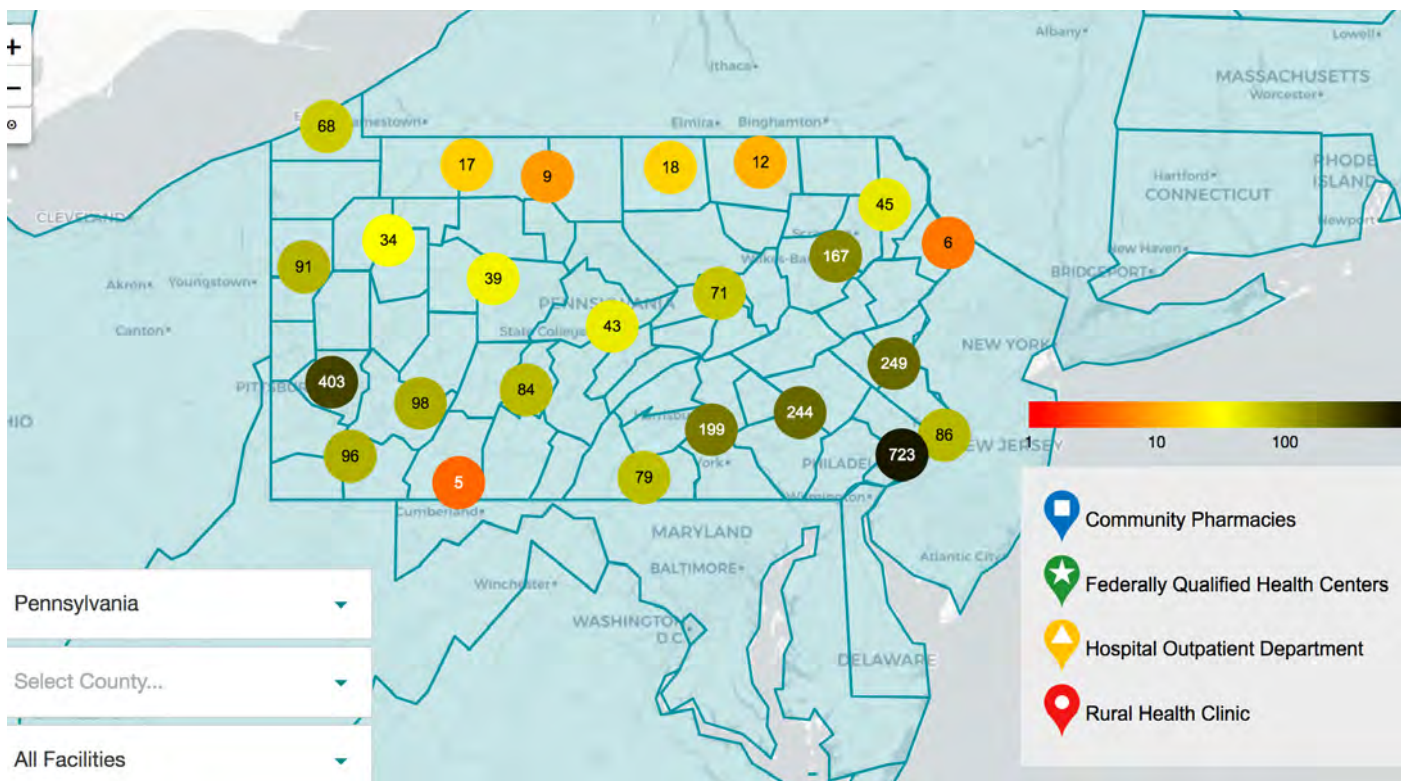


Figure 10. Locations of Select Existing Healthcare Facilities that Could Administer COVID-19 Vaccines.

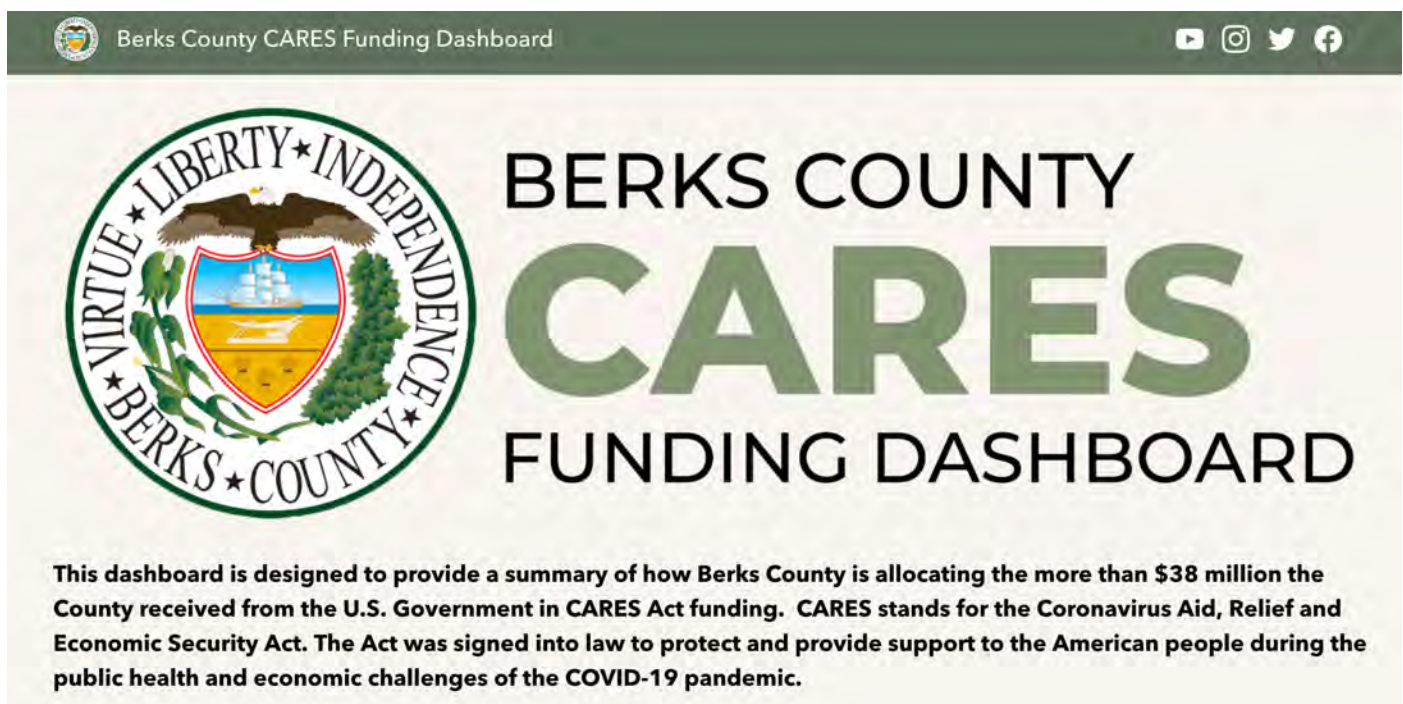


Figure 11. Berks County CARES Funding Dashboard.

Research and Education

University of Pennsylvania

The University of Pennsylvania, which has a long history of developing unique geospatial applications, developed research and outreach initiatives related to many aspects of the COVID-19 pandemic. The University's Center for High Impact Philanthropy developed an online assessment tool that helped to identify communities in need of support from charitable organizations as well as interactive maps to assist in identifying needs in the homeless population.

Drexel University

The Drexel University Urban Health Care Collaborative and the Drexel West Philly Promise Neighborhood team created a dashboard related to COVID-19 and the high-risk areas in Philadelphia. The purpose of this dashboard was to show vulnerable areas/populations using different data sets including the Center for Disease Control's Social Vulnerability Index. Identifying vulnerable areas as well as resources and support mechanisms for them is facilitated by a series of interactive maps and data.

Penn State University

Penn State University developed the series, Geospatial Revolution, over 15 years ago. The latest episode focuses on how GIS has been used in fighting, tracking, and responding to COVID-19.

Villanova University

The fundamental functions of teaching during the COVID-19 pandemic challenged every learning institution from K-12 to research universities. Moving from the classroom to an online environment was a massive shift in education. Online GIS apps, data, and tools provided teachers with enormous resources to access and use in their teaching. One example from Villanova University was transitioning an environmental geology class from an outdoors-focused course to an indoor, online class. Using ArcGIS Insights and ArcGIS Online allowed the course to continue and students to excel and learn.

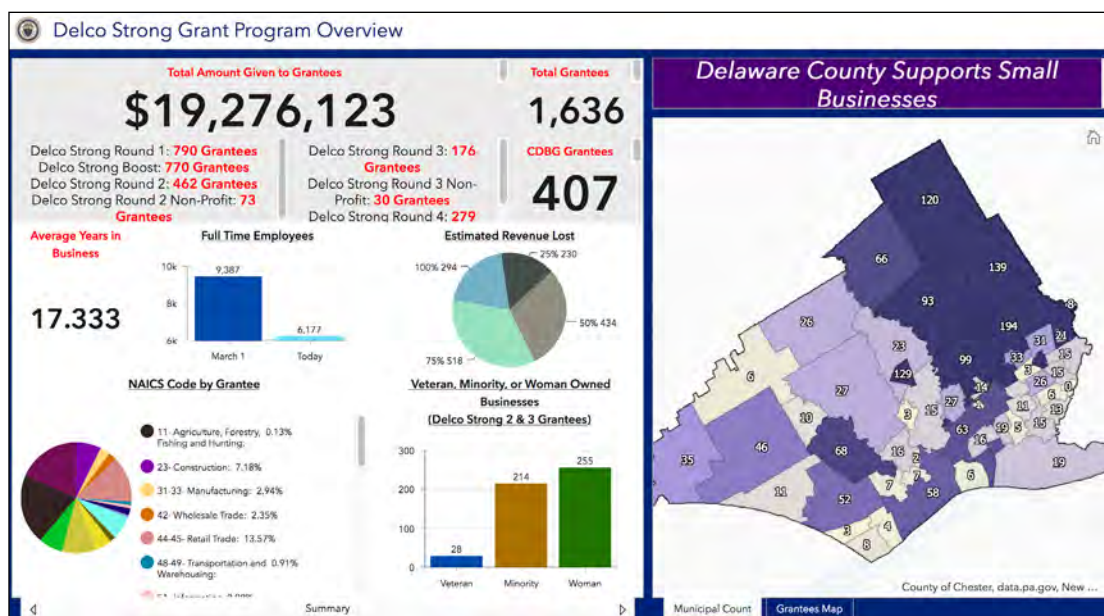


Figure 12. Delaware County Delco Strong Grant Dashboard.



Delaware County Guide to Local Food Establishments

Helping local businesses during the COVID-19 Pandemic



2SP Brewing Company

Outdoor Dining: No

Delivery: No

Curbside Pickup: Yes

Carryout: Yes

[Website](#)

320 Market Cafe

Outdoor Dining: No

Delivery: No

Curbside Pickup: No

Carryout: Yes

[Website](#)

320 Market Cafe - Media

Outdoor Dining: Yes

Delivery: No

Curbside Pickup: Yes

Carryout: Yes

[Website](#)

39 North Taproom & Grill

Outdoor Dining: Yes

Delivery: Yes

Curbside Pickup: Yes

Carryout: Yes

[Website](#)

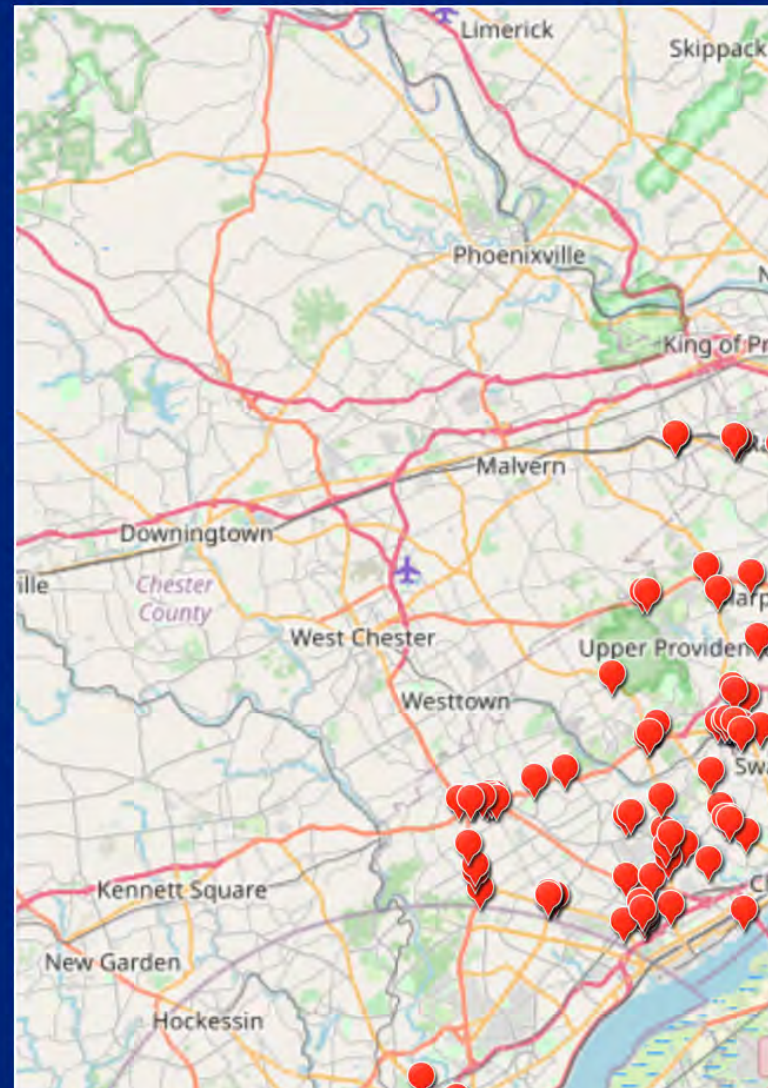
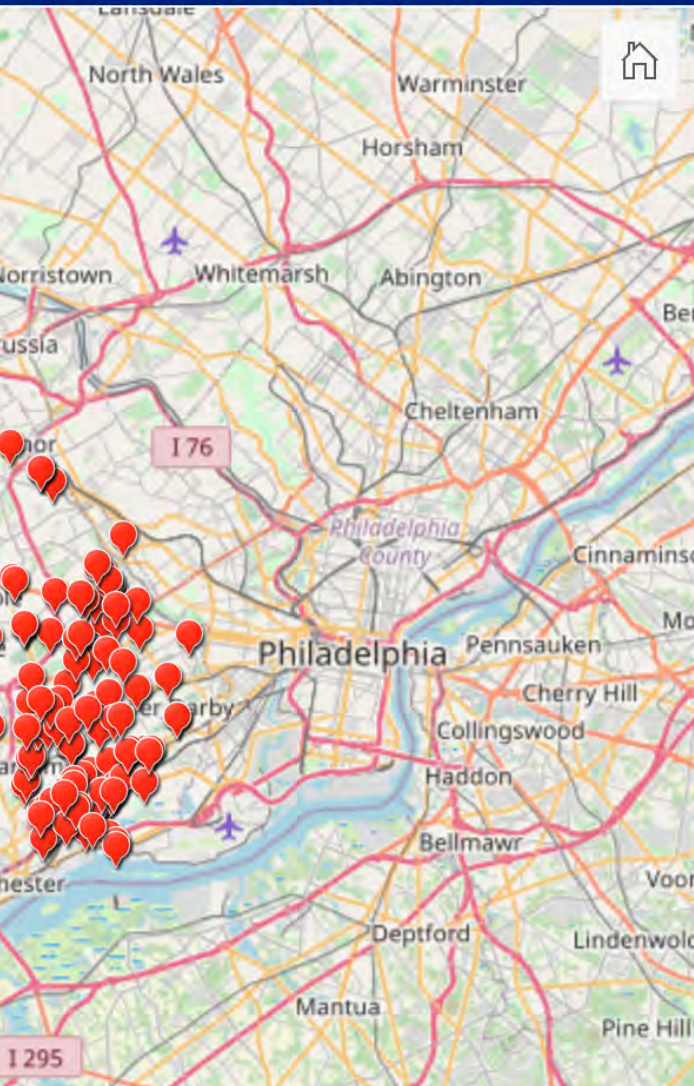


Figure 13. Delaware County Guide to Local Food Establishments.

Outdoor Dining Filter

Search for Restaurant



209

Establishments

Last update: a few seconds ago

Survey: Food Establishments

Business owners please use this survey to collect data on restaurants and food establishments in the Delaware County area that have outdoor dining, carry-out, delivery or curbside pick up options available during the COVID-19 Pandemic.

Location of restaurant or business

Type in address so it pops up correctly on map

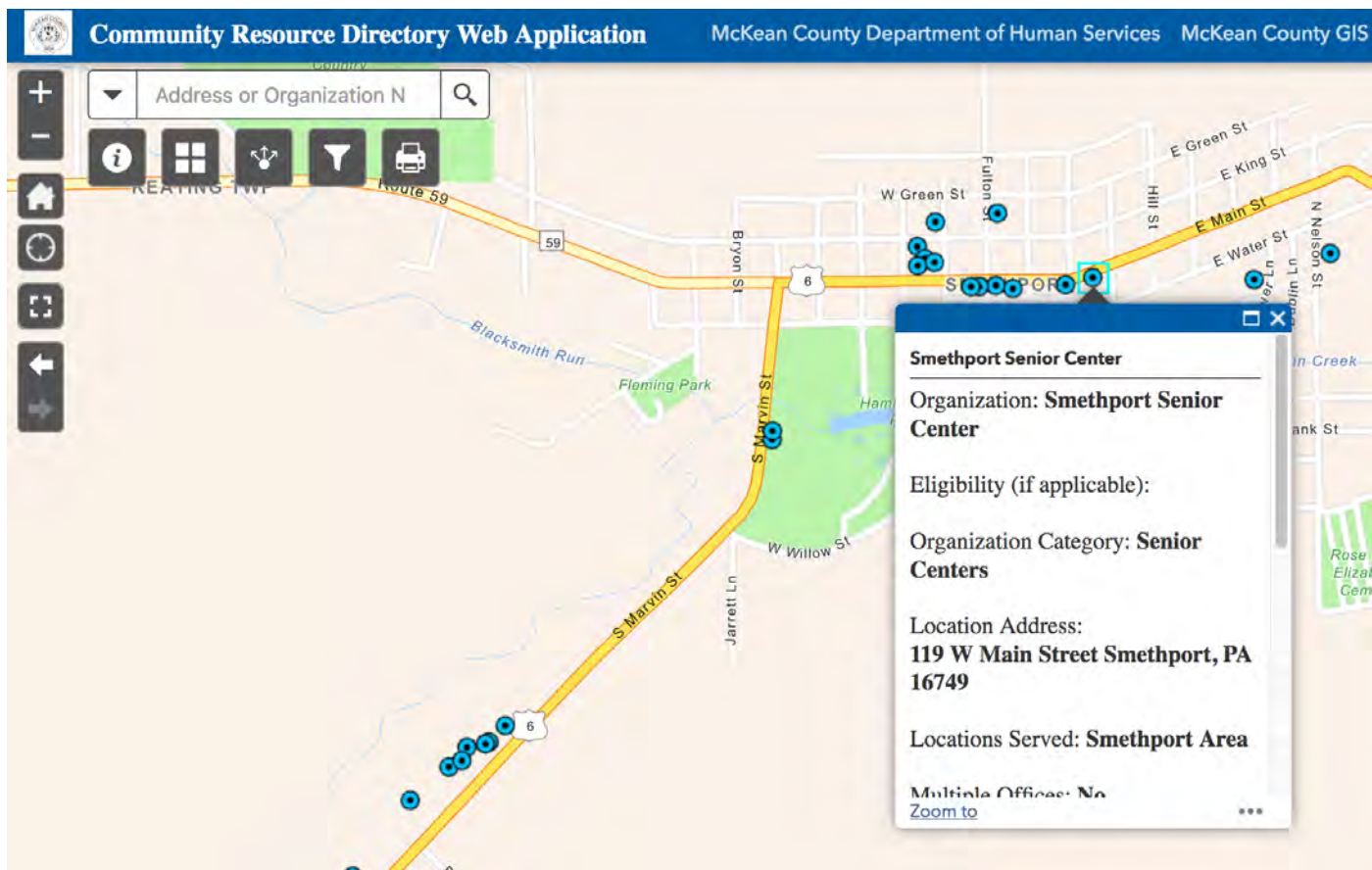


Figure 14. McKean County Community Resource Directory.

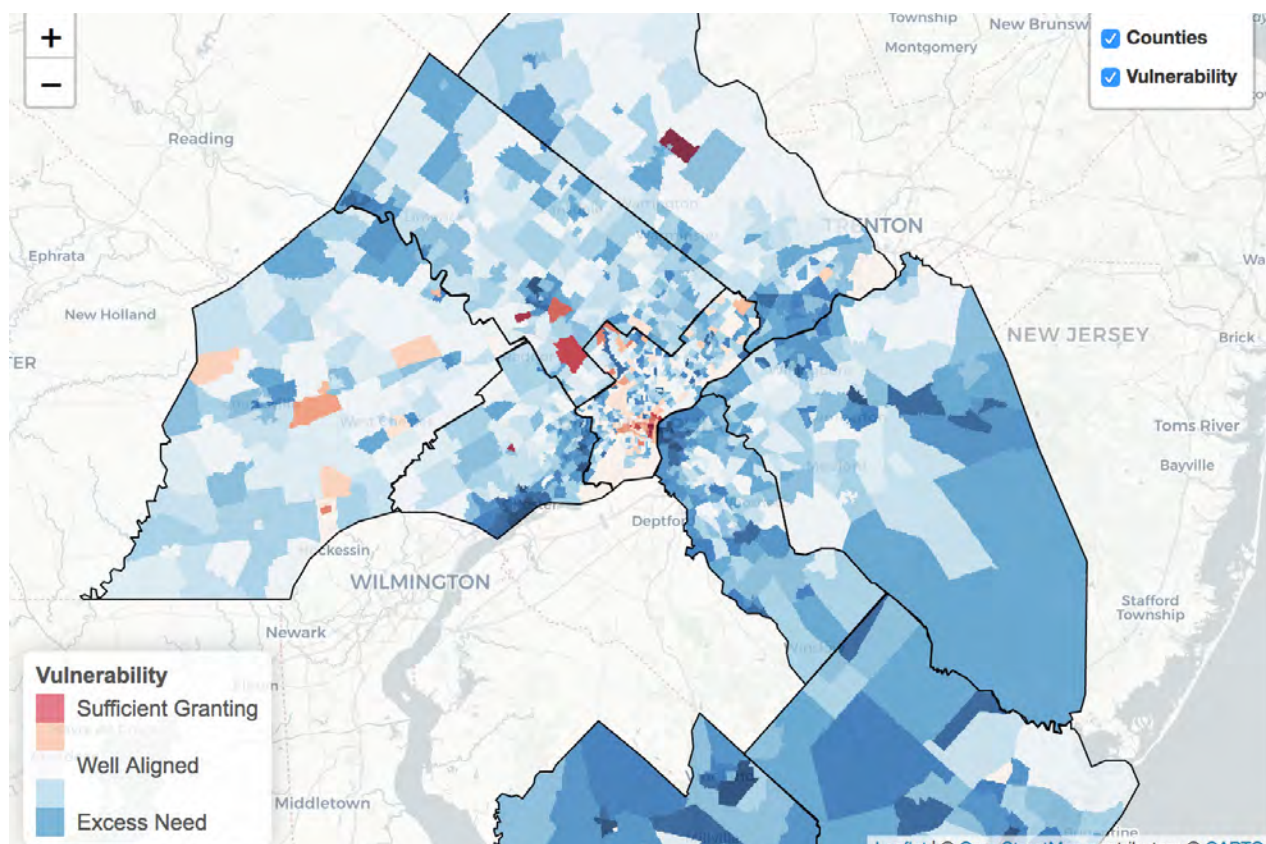


Figure 15. University of Pennsylvania online assessment tool.

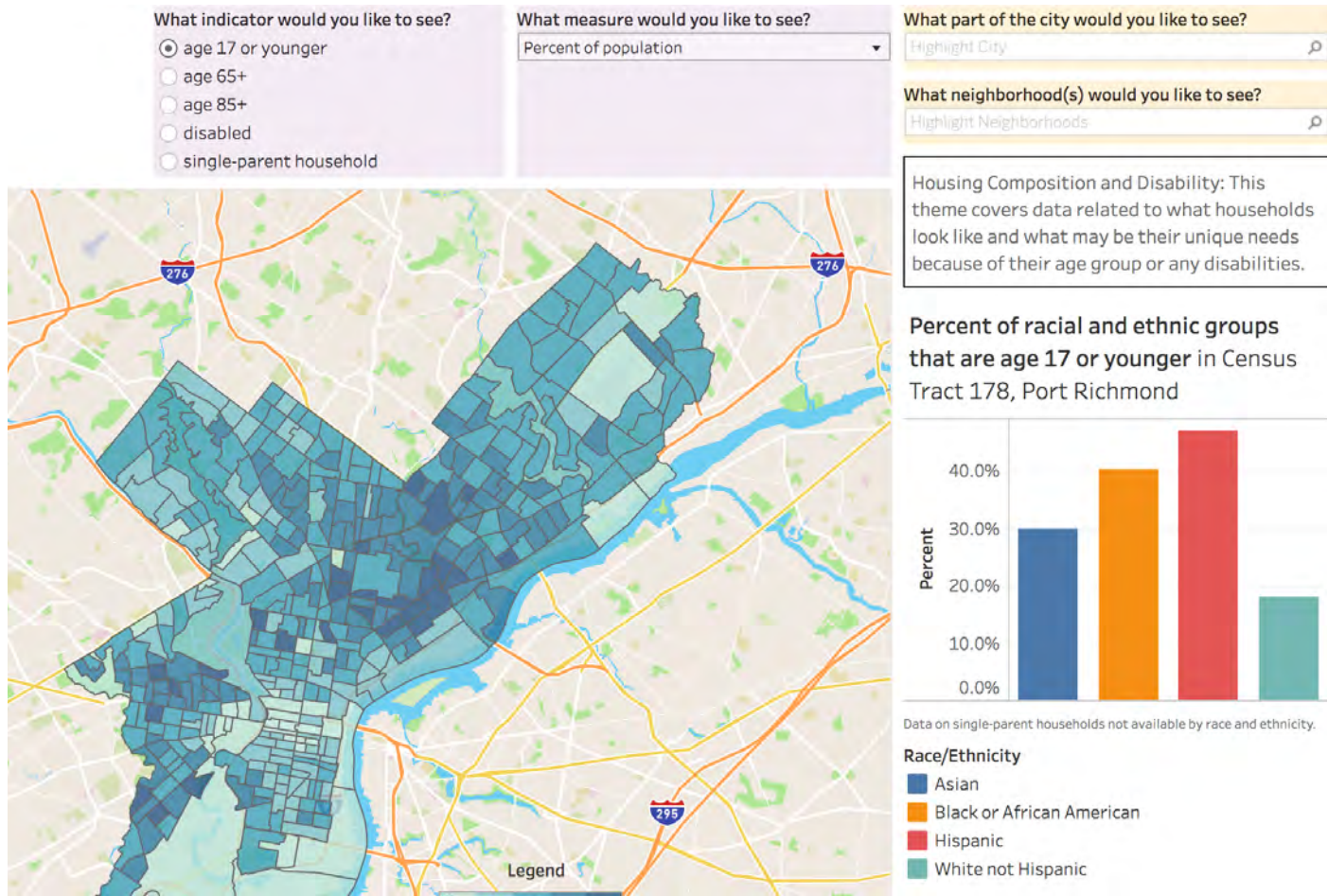


Figure 16. Drexel University Dashboard, Social Vulnerability.

Sources

Drexel University:

<https://drexel.edu/uhc/resources/coronavirus/vulnerability-indicators/>

FEMA Press Release: FEMA Continues Community Outreach Efforts to Combat Vaccine Inequity in Philadelphia

<https://www.fema.gov/press-release/20210728/fema-continues-community-outreach-efforts-combat-vaccine-inequity>

FEMA Press Release: Reaching Out - COVID-19 Support in Philadelphia

<https://www.fema.gov/blog/reaching-out-covid-19-support-philadelphia>

Geospatial Revolution:

<https://www.psu.edu/news/research/story/wpsu-show-depicts-how-geospatial-technology-mapped-covid-debut-july-13/>

Pennsylvania Department of Health:

<https://www.governor.pa.gov/newsroom/department-of-health-releases-vaccination-dashboard-by-legislative-districts/>

University of Pennsylvania Online

Assessment Tool:

<https://penntoday.upenn.edu/news/maps-pandemics-and-reckoning-history>

Villanova University:

<https://www.esri.com/en-us/landing-page/industry/education/2020/villanova-university-case-study>

