



IMPAQ
HEALTH

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Social Determinants of Health Action Tool

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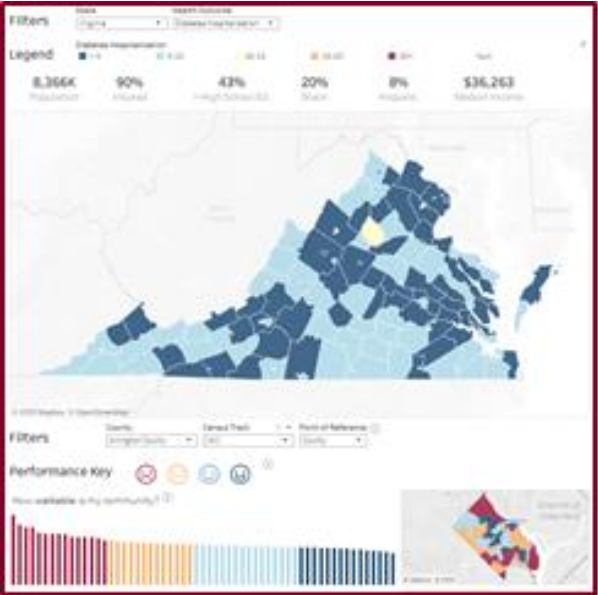
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H E A L T H

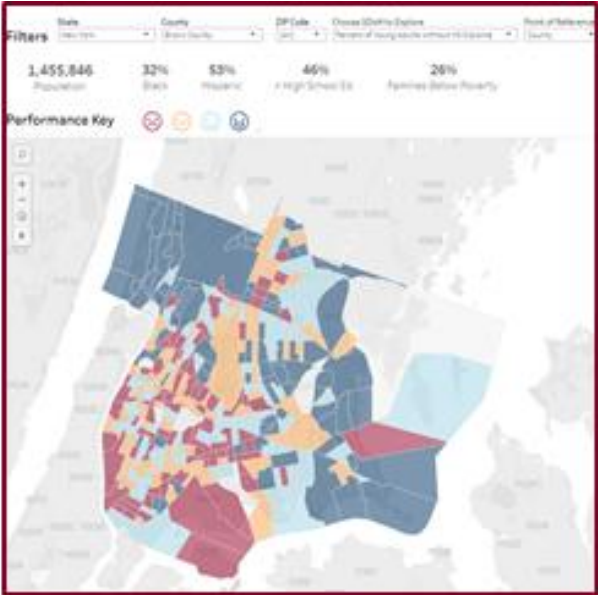
IMPAQ is a global policy research and analytics firm delivering evidence that shapes the world. We bring clear answers to the most important questions in health care, economic development, and human services through cutting-edge research, analytics, and technical support.

SDoH Action Tool

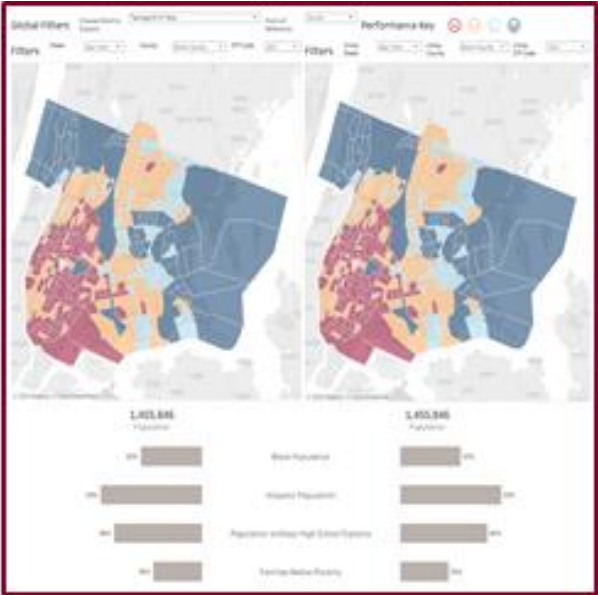
IMPAQ's [Social Determinants of Health \(SDoH\) Action Tool](#) offers three unique dashboard views for users to explore SDoH and health outcomes within communities of their choice.



The **Health Outcome Dashboard** allows a user to explore a selected health outcome such as diabetes and learn about how evidence-based SDoH contribute to the health outcomes in a community.



The **SDoH Drilldown Dashboard** allows a user to explore an SDoH and how it affects communities within a county differently.



The **Community Comparison Dashboard** allows a user to explore how two communities compare on SDoH measures such as walkability or teenage birth rate.

What are Social Determinants of Health?

Economic Stability	Neighborhood & Physical Environment	Education	Food	Community & Social Context	Health Care System
<ul style="list-style-type: none">• Employment• Income• Expenses• Debt• Medical bills• Support	<ul style="list-style-type: none">• Housing• Transportation• Safety• Parks• Playgrounds• Walkability• ZIP code / geography	<ul style="list-style-type: none">• Literacy• Language• Early childhood education• Vocational training• Higher education	<ul style="list-style-type: none">• Hunger• Access to healthy options• Food insecurity	<ul style="list-style-type: none">• Social integration• Support systems• Community engagement• Discrimination• Stress	<ul style="list-style-type: none">• Health coverage• Provider engagement• Provider linguistic & cultural competency• Quality of care
<p style="text-align: center;">Health Outcomes Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations</p>					

The Importance of SDoH: **Social Determinants Explain...**



up to 80%
of health outcomes,
such as life expectancy
or the risk of readmission
after being discharged
from the hospital.



up to 85%
of the utilization and
costs for healthcare
services in the country.

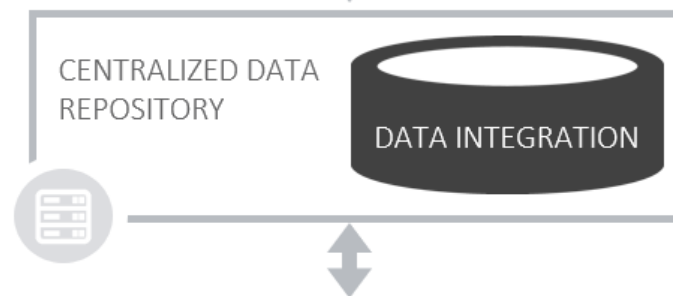
Hood, C. M., K. P. Gennuso, G. R. Swain, and B. B. Catlin. 2016. County health rankings: Relationships between determinant factors and health outcomes. American Journal of Preventive Medicine 50(2):129-135.

AHRQ Challenge Linking the SDoH Data

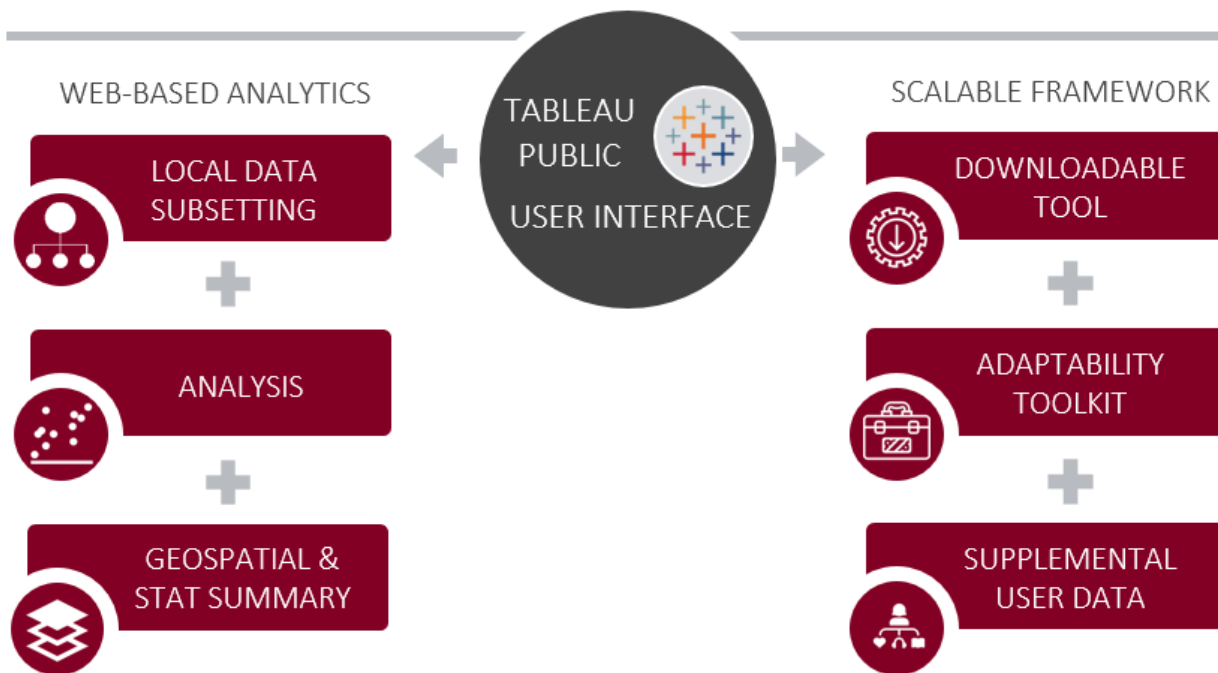
DATA



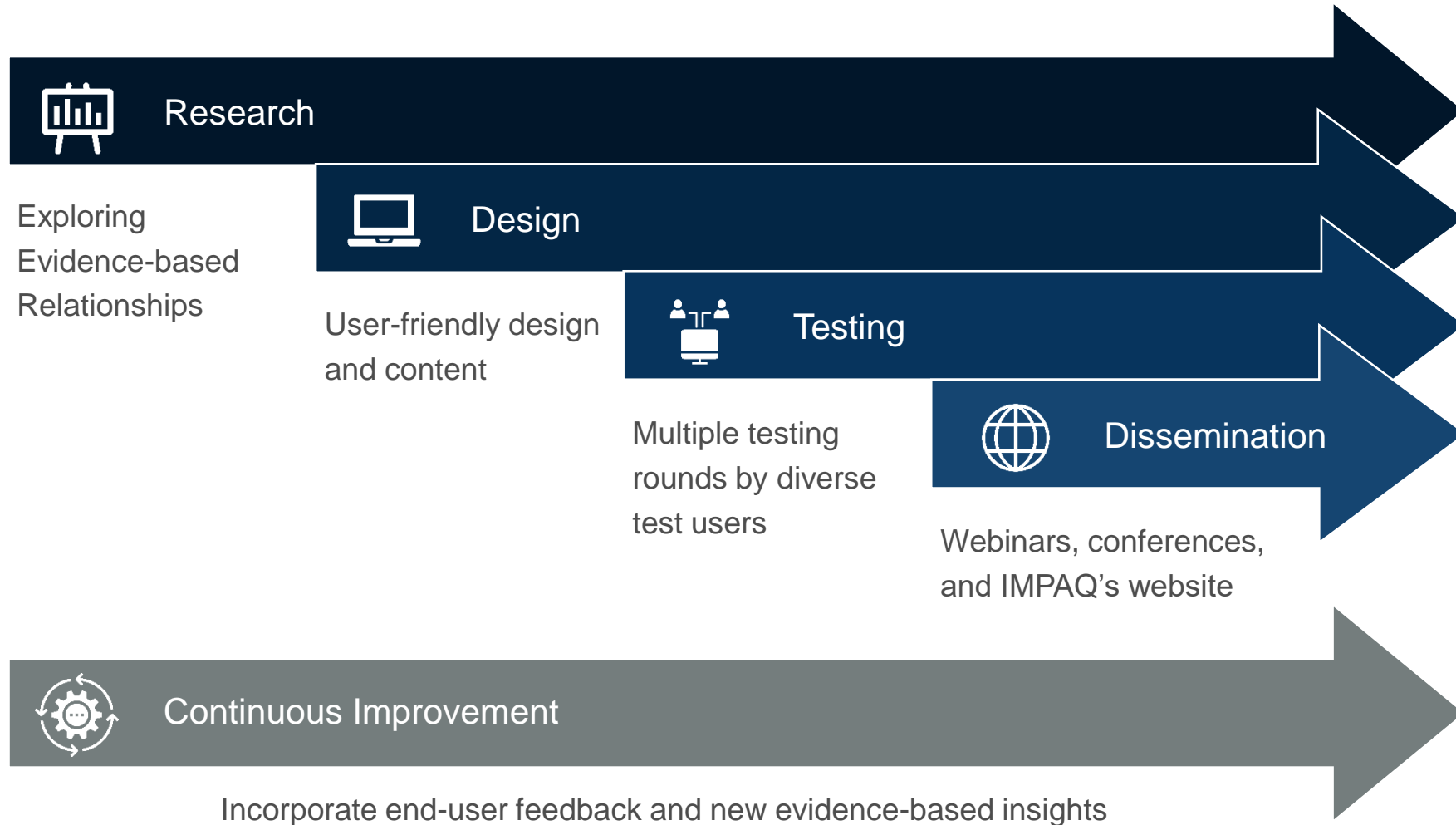
SYSTEM



EMPOWERING LOCAL ACTION

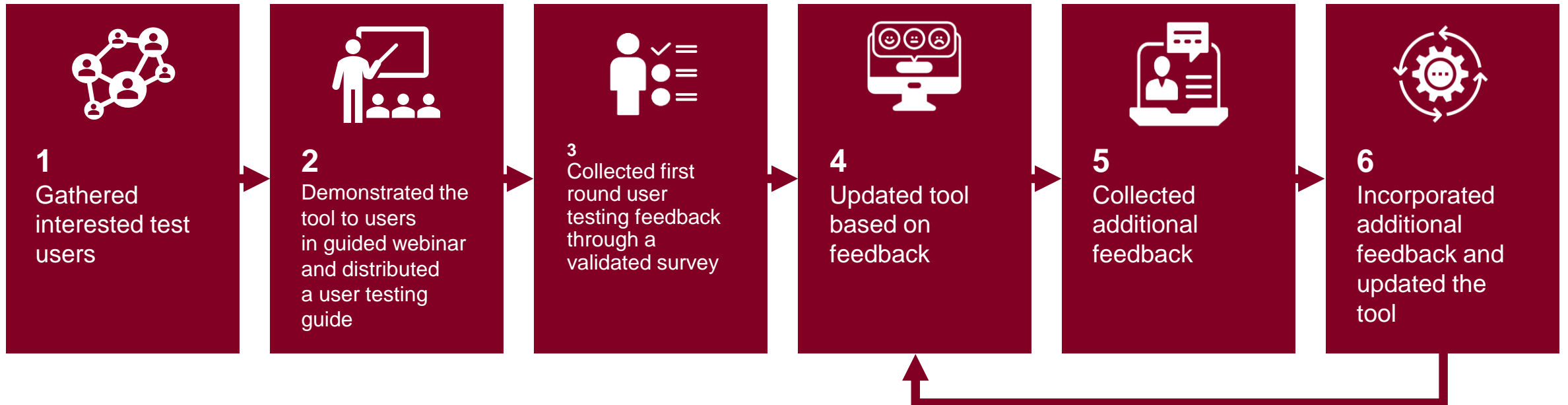


Developing the SDoH Action Tool



Target Audiences

We conducted user testing with 9 users across 4 stakeholders:



Our target audiences are health plans, local community workers, community-based organizations (CBOs), health care providers, health care improvement organizations, and policymakers who want to make an impact in their communities by improving health outcomes by focusing on SDoH.

SDoH Action Tool's Data

Health Outcomes



Example SDoH Variables

- ▶ Diabetes
- ▶ Hypertension
- ▶ Chronic Kidney Disease
- ▶ *COVID-19 and Asthma (coming soon)*

- Neighborhood Walkability ◀
- Food Access ◀
- Public Transit Access ◀
- Health Insurance Access ◀
- Gini Index (Income disparity within a community) ◀

Key Data Sources

Free Publicly Accessible Data	SDoH Target	SDoH Variable Examples	Aggregation Level	Last Release Date	Updates
SDoH Data					
<u>American Community Survey (ACS)</u>	Education, Demographics, Community and Social Context	Educational Attainment, Median Household Income, Poverty Rate, Population Level, Unemployment Rate	Census Tract	2018	Annually
<u>Opportunity Atlas</u>	Social Mobility Data	Teenage Birth Rate	Census Tract	2018	Annually
<u>Food Access Research Atlas</u>	Food Insecurity	Food Accessibility for SNAP Households, Food Accessibility for Households without a Vehicle	Census Tract	2017	Based on Census/ACS Updates
<u>National Walkability Index</u>	Neighborhood Walkability	Neighborhood Walkability	Census Tract	2015	Unknown
Health Outcome Data					
<u>Mapping Medicare Disparities (MMD) Tool</u>	-	-	County ¹	2019	Annually

¹ We used the smallest aggregate level data available due to lack of health outcome data at the census tract level.

Design Considerations



Completeness

Includes variables that are **at least 95% complete** at the census tract level (for SDoH measures) or county level (for health outcomes).



Interpretability

All variables have been **normalized for comparability**. For example variables are shown as percentages, rates, or indices.



Scalability

Users to aggregate SDoH and health outcome data to the **state and national levels** for comparisons.



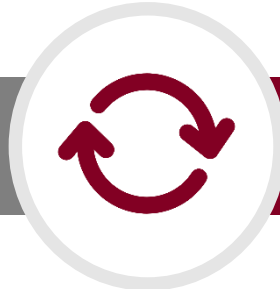
Intuitiveness

Emoticons and colors are combined for **quick readability**.

Incorporating User Feedback

Real-world user feedback

- ▶ “[It] would be helpful if [the] data could be downloaded.”
- ▶ “Non-public health users may struggle to understand how to find their census.”
- ▶ “[There needs to be a] narrative to explain how [the associated SDoH variables] have been determined [and how] it is linked to evidence-based research.”
- ▶ “Have a ‘how to navigate Tableau’ guide, for example, how to reset a map if you accidentally zoom in or out.”



Updates made to the SDoH Action Tool

- Updated the SDoH Action Tool so any user can download the data and Tableau workbook. ◀
- Added a ZIP Code filter and geographic layer so a user can search through the SDoH Action Tool by ZIP Code to easily navigate the 3 dashboards. ◀
- Included a link on the overview landing page to supporting evidence-based literature. ◀
- Included “how-to” instructions for Tableau functionalities in the user guide available on the overview landing page that we are adapting from our user testing guide. ◀



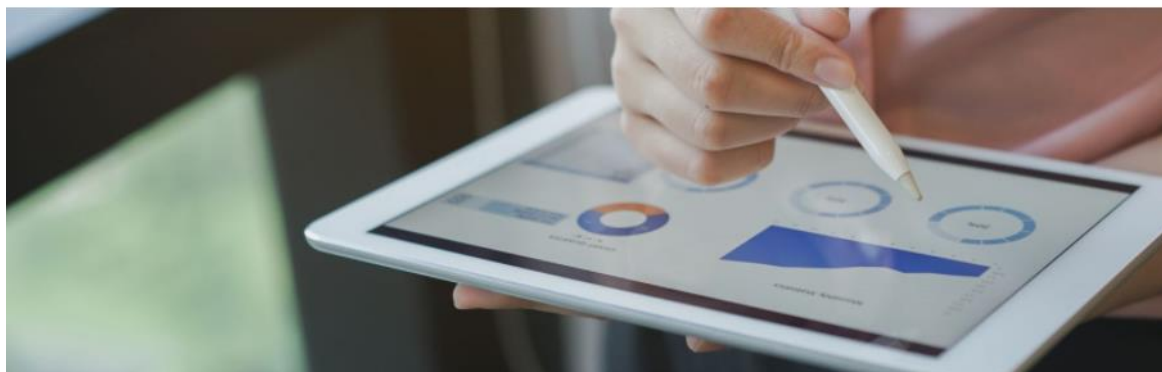
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SDoH Dashboard Action Tool



Overview

Health Outcome Dashboard

SDoH Drilldown Dashboard

Community Comparison Dashboard

Overview

"Health starts in our homes, schools, workplaces, neighborhoods, and communities."¹ Healthy People 2020, a government initiative, made it a goal to improve health by creating social and physical environments that promote good health for all. IMPAQ Health has joined in this goal by focusing on social determinants of health (SDoH).

SDoH "are the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life."² IMI understands that to improve community health outcomes, a key piece of the puzzle is understanding and addressing SDoH, yet resources for finding and using evidence-based SDoH information are limited. To address this gap, IMPAQ designed the SDoH Dashboard Action Tool, a data visualization tool that helps organizations and individuals better understand and find solutions based on which SDoH factors—such as food insecurity, neighborhood walkability, and teen birth rates—are affecting population health at the local level.

The SDoH Dashboard Action Tool recently won major recognition from the Agency for Healthcare Research and Quality (AHRQ) in its Visualization Resources Community-Level SDoH Innovation Challenge. Insights from this award-winning tool help users make informed decisions to improve health care access, quality and equity. IMPAQ's SDoH Dashboard Action Tool allows nuanced geographical analyses across a broad array of SDoH variables that empower users to identify population-level challenges and interventions to address these challenges. The SDoH Dashboard Action Tool can be a resource to help academic researchers, community-based organizations (CBOs) and policymakers understand, prioritize, and act on disparities.

Use Case Walkthrough



Use Case Walk-through

Begin your exploration with Dashboard 1: The Health Outcome Dashboard



Filters

State

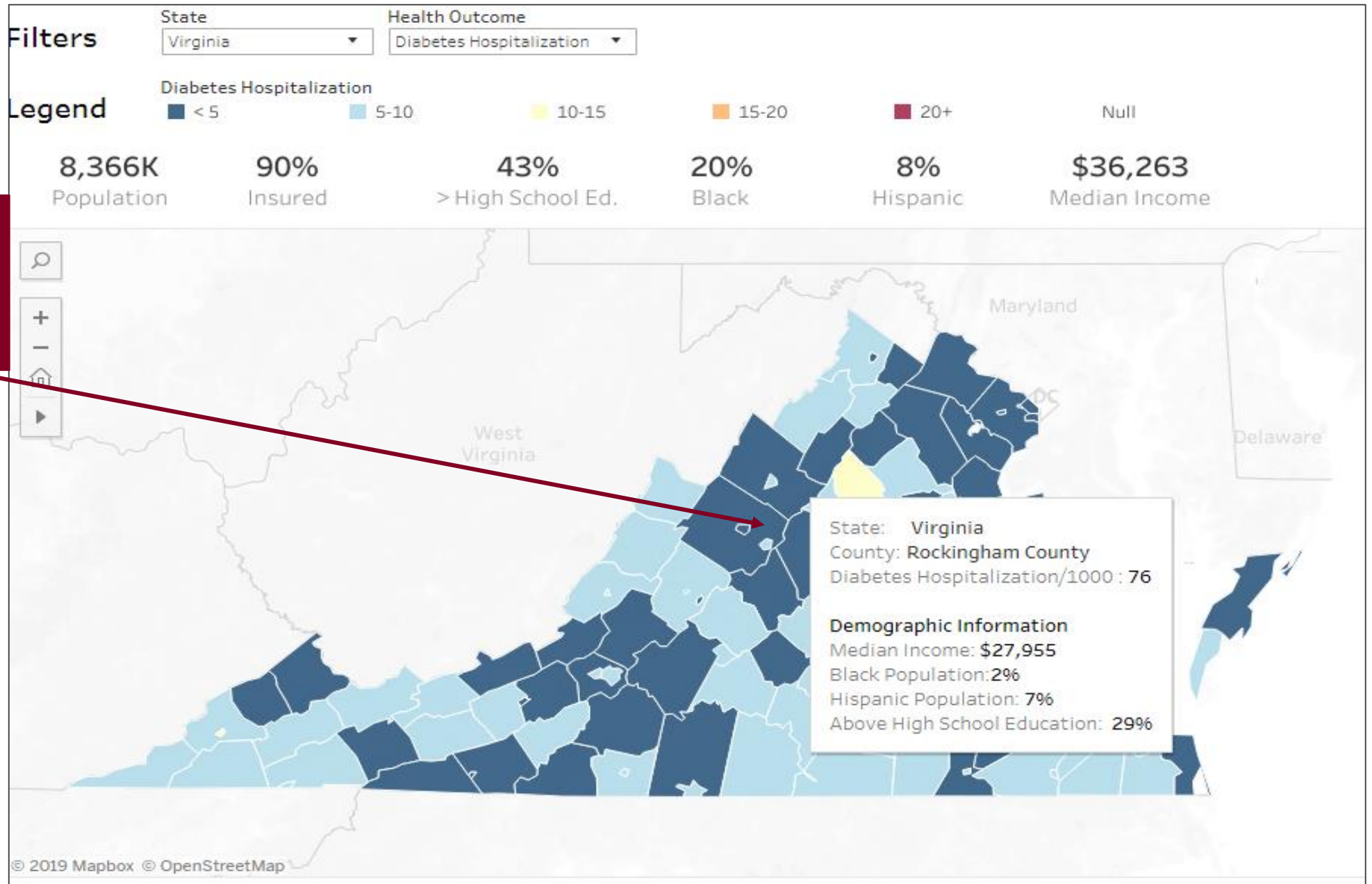
Virginia

Health Outcome

Diabetes Hospitalization

Select the state of interest

Select the health outcome of interest



View demographic information about the population in the selected state

Filters

County
Arlington County

Census Tract
(All)

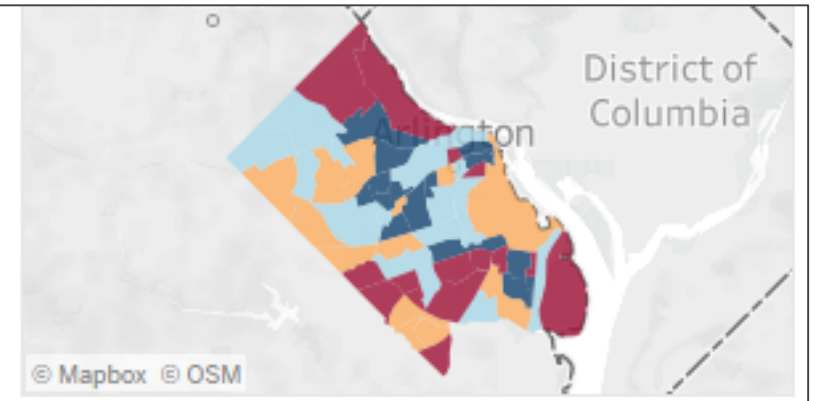
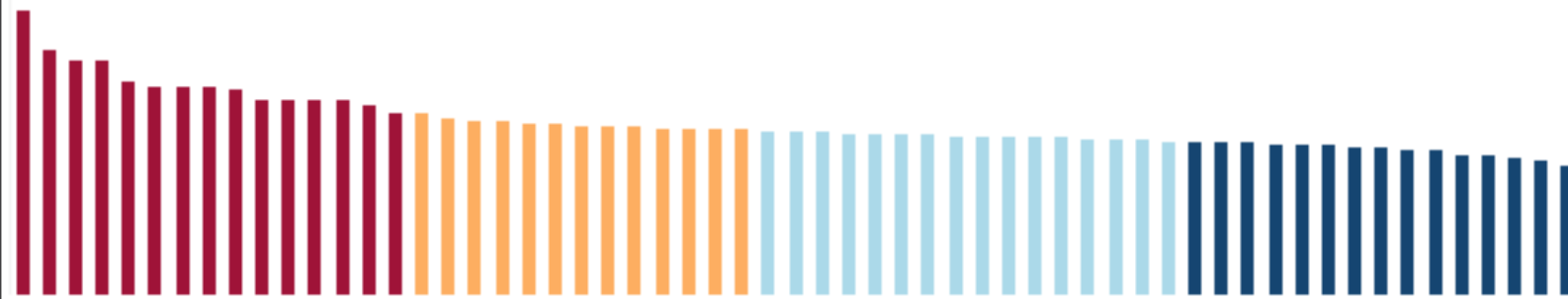
Point of Reference ⓘ
County

Select a Point of Reference to understand how the census tract/communities in that county compare to county, state, or national averages on certain SDOH measures

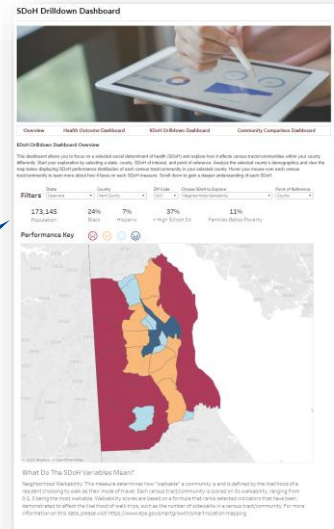
Performance Key



How walkable is my community? ⓘ



Continue your exploration with Dashboard 2: The SDoH Drilldown Dashboard



Filters

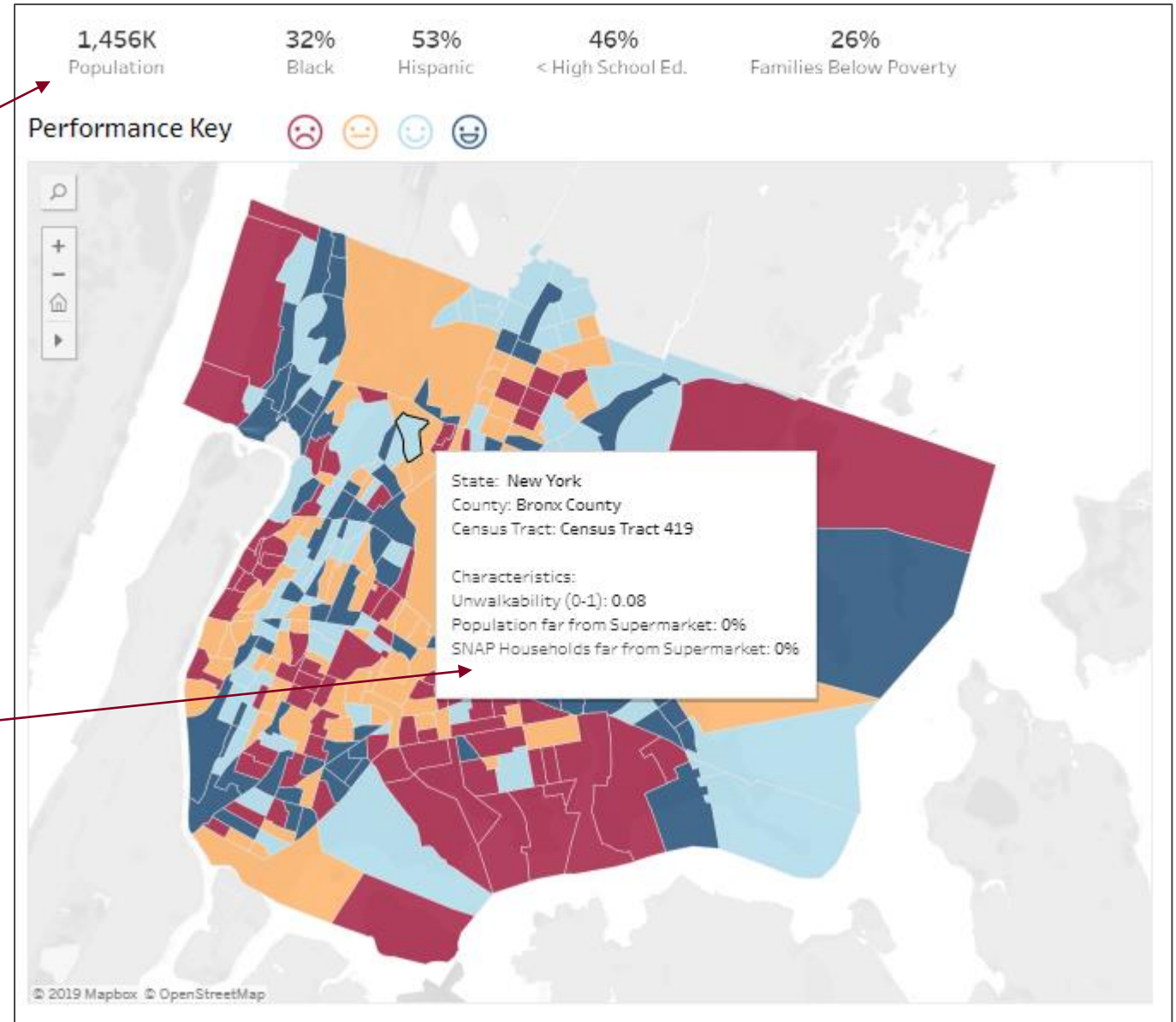
State	County	ZIP Code	Choose SDoH to Explore	Point of Reference
Delaware	Kent County	(All)	Neighborhood Walkability	County

View the selected SDoH for a specific ZIP Code of interest

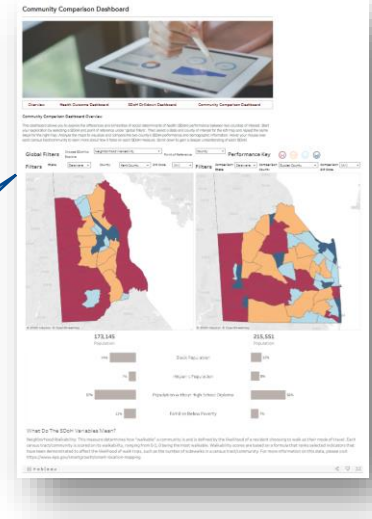
Select an SDoH measure of interest to drill down on it further

View the county's demographic information and corresponding map that displays census tract/community performance on the SDoH measure.

Hover your mouse over the map to learn more about each census tract/community.



Continue your exploration with Dashboard 3: The Community Comparison Dashboard



Select an SDoH to explore and a Point of Reference

Global Filters Choose SDoH to Explore: Neighborhood Walkability

Point of Reference: County

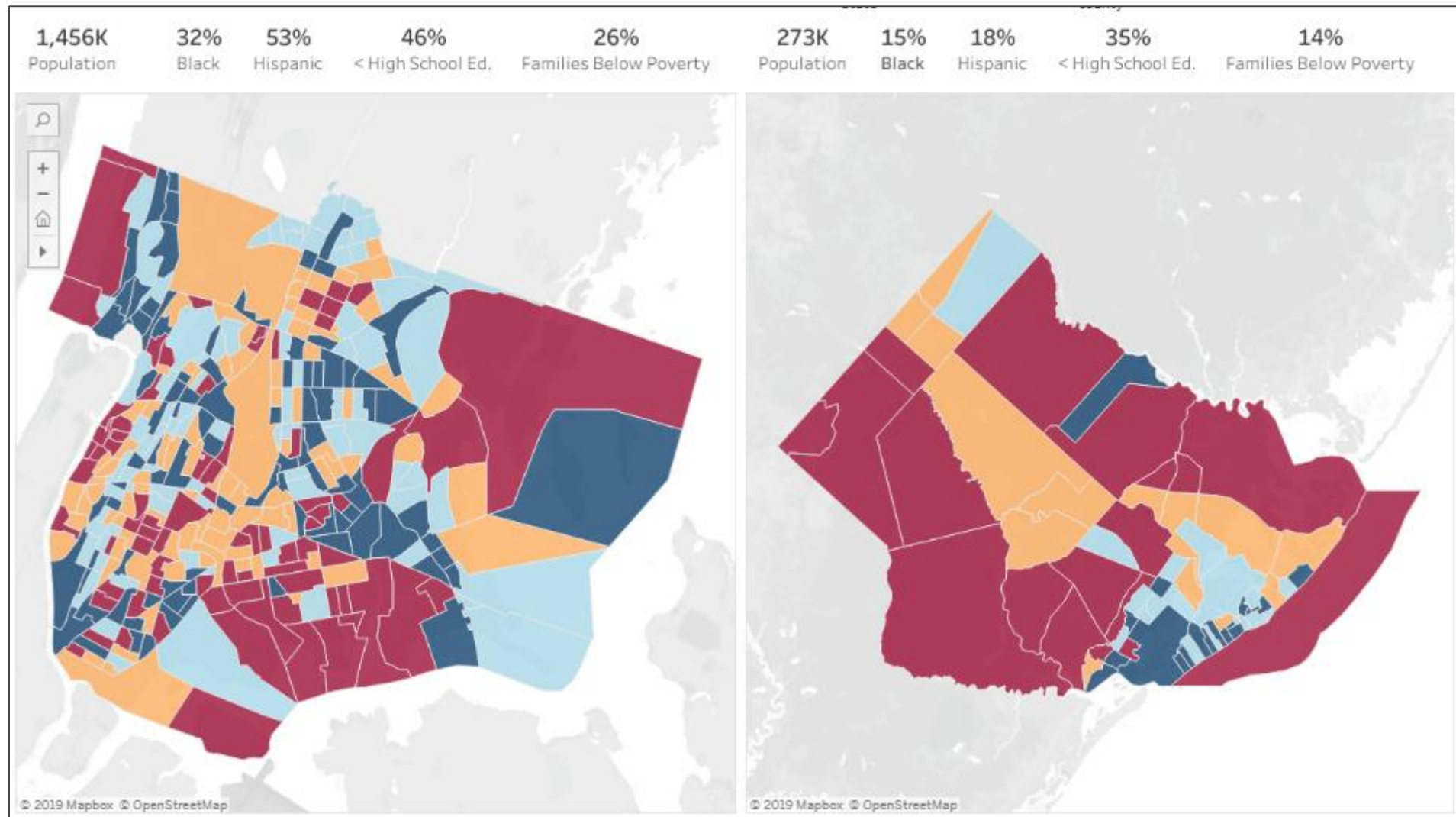
Performance Key [Sad Face] [Neutral Face] [Happy Face] [Very Happy Face]

Filters State: Delaware | County: Kent County | ZIP Code: (All)

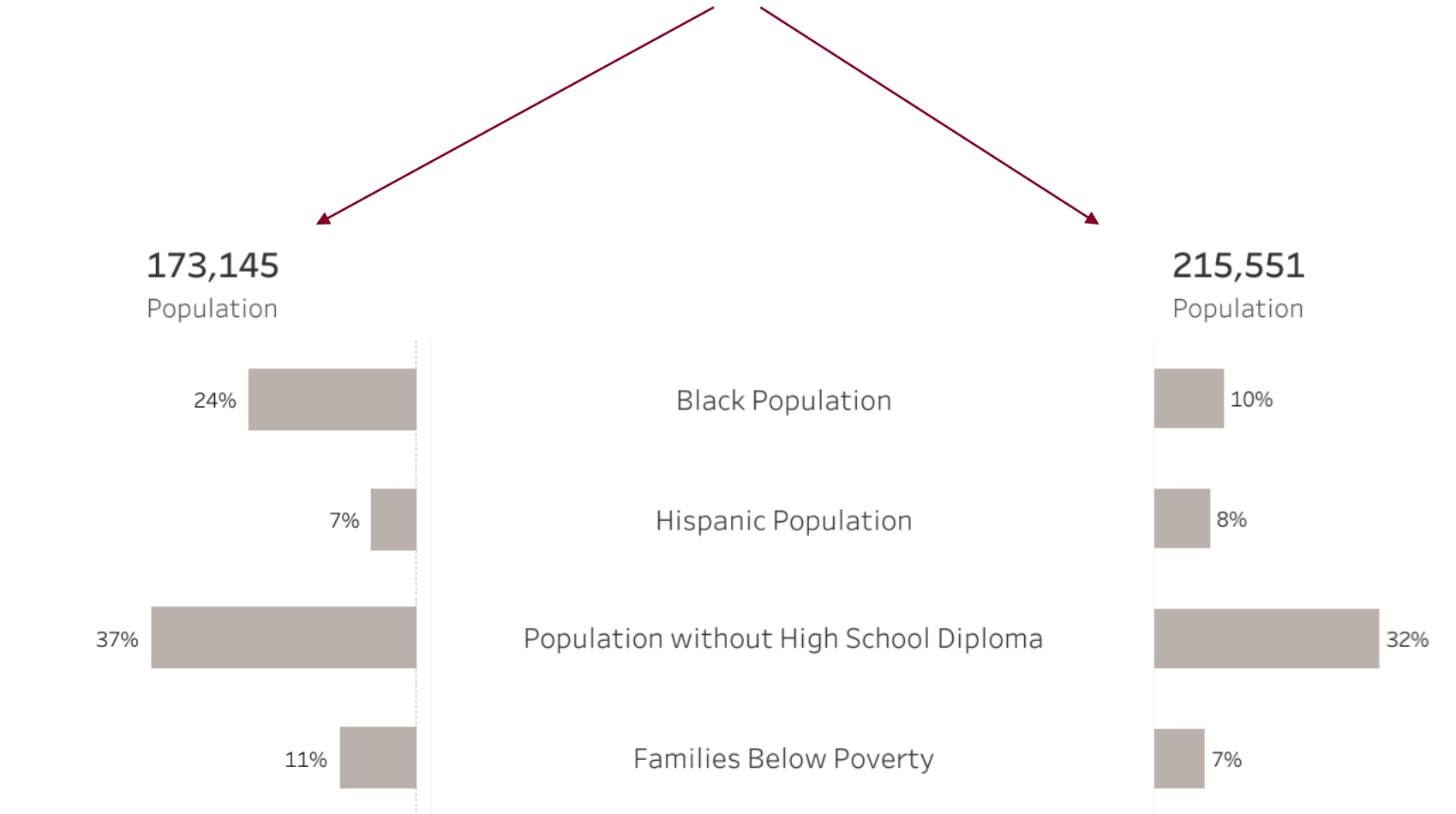
Filters Comparison State: Delaware | Comparison County: Sussex County | Comparison ZIP Code: (All)

Select 2 states, counties, and ZIP Codes of interest to compare

Compare the two geographies' performance on the selected SDoH.



View and compare the two geographies' demographic information



Limitations and Challenges

- Data timeliness
 - Data reporting can have multi-year lag in updates
- Data availability at the census tract level across the Nation
 - Health outcome data is primarily available at the county level
- SDoH can exert influence at a more granular level than census tract
 - Data availability decreases at more granular levels
- Our knowledge of SDoH is evolving and on-going research and maintenance of the tool is required to keep the tool relevant

Real-World Insights

“

“For those who aren't used to working with [SDoH] data, this could be a useful tool and a way to get information for talking with stakeholders/decision makers.”

- Researcher

“

“Community Health Worker[s] will benefit from the tool [because] it can help [them when] writing annual reports [and with] retrospective analyses.”

- Healthcare Collaborative Organization

“

“The ability to look at data at a sub-county level and to understand how different neighborhoods are disproportionately impacted is incredibly valuable [to our organization].”

- Health Care Provider

“

“An often-cited gap is availability of granular data for local areas, so I imagine many will welcome this tool.”

- Researcher

“

“Nonprofits can use [this tool to] conduct a Health Needs Assessment.”

- Nonprofit Organization

Thank You!



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