Developing customized geographic maps to enhance technical assistance provision to strengthen EHE-funded jurisdictions' EHE Plans

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2022

NATIONAL RYAN WHITE CONFERENCE ON HIV CARE & TREATMENT

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Strengthen & support implementation of jurisdiction Ending the HIV Epidemic (EHE) Plans to contribute to achievement of reduction in new reported HIV cases by 75% by 2025

TAPin Technical Assistance Provider innovation network

Tip: Get TAP-in TA and Training by Contacting TAP-in@caiglobal.org

TAP-in Partnership Structure

HOUSING WORKS

NCSD
National Coalition of STD Directors

UCLA

AETC
MidAtlantic

AMIDA CARE
ABOVE AND BEYOND FOR YOU

SAC
SOUTHERN AIDS COALITION

WRMA

The University of Mississippi Medical Center
Center for Telehealth

Mission Analytics Group

National Association of Community Health Centers®

Objectives

- Describe the rationale for supporting jurisdictions to enhance their understanding of EHE priority populations and current gaps in service delivery through real-time review and presentation of available data on service locations, funding streams, available resources, and demographics of key priority populations.
- Describe partnering with the jurisdiction to design, collate data for, and refine interactive system of care geographical maps.
- Identify the impacts of using system of care maps to guide and shape technical assistance with jurisdictions to support implementation of EHE strategies that best serve priority populations and get to the next level of impact.

Agenda

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- Introduction of project and speakers
- Description of approach of identifying and collating various types of data
- Mapping software options and demonstration
- Case Study: San Bernardino, CA

Speakers

Eric Moore, MSSW

Knowledge Development Specialist

Hanaan Yazdi

Evaluation Specialist

Emily Leung, MPH

Lead, Research and Data Analytics

Disclosures

All the presenters of this workshop have indicated that neither they nor their spouses/legally recognized domestic partners have any financial relationships with commercial interests related to the content of this presentation.

Using Data to Enhance Understanding of Priority Populations and Service Delivery

Opportunity of EHE

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EHE goals are ambitious

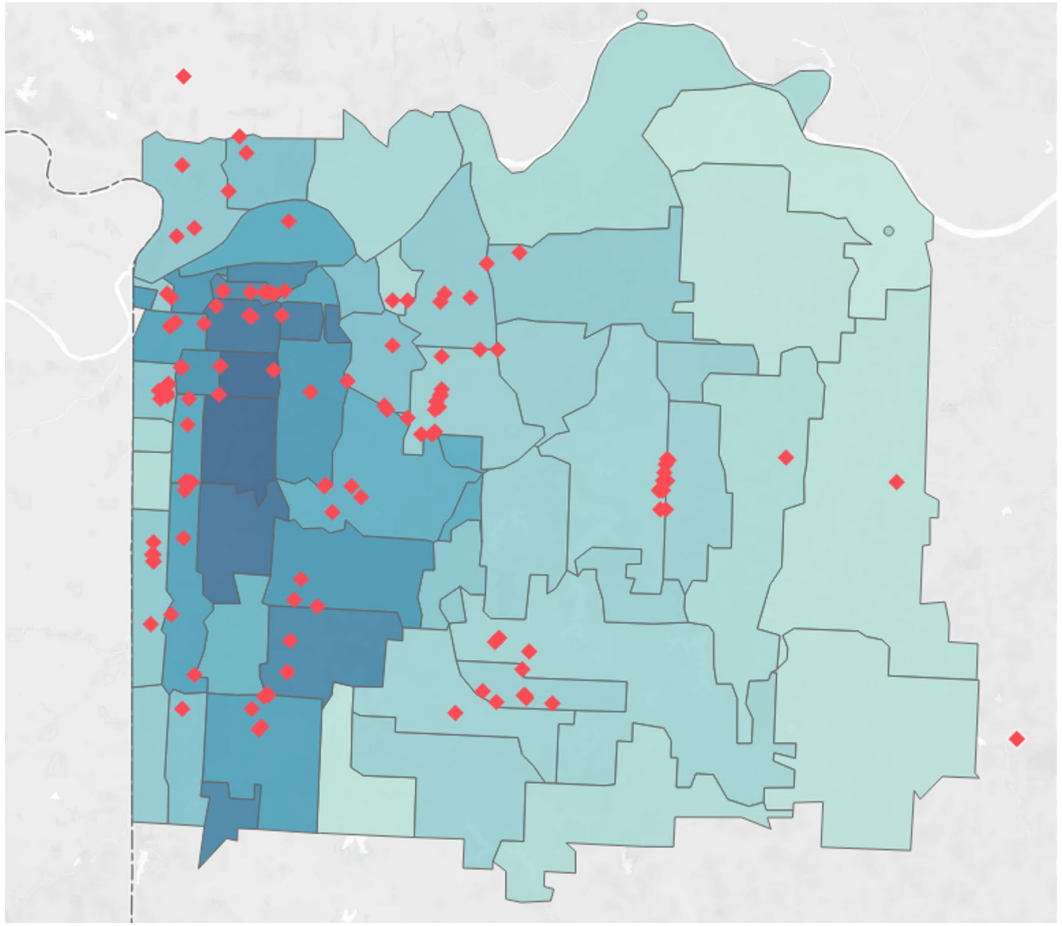
- We need to do things differently
- We need to reach clients and communities not currently being served by the system of care

Why Mapping?

- Data are key to Ending the HIV Epidemic.
- Numbers on a page tend to be static and disconnected from the lives of people and communities.
- Overlaying data sets on a map provides new ways to understand gaps in a system and opportunities for transformation.

Mapping Provides Rich Context

Map of Jackson County, MO



% Racial/Ethnic Minorities

2.2% — 92.9%

◆ **Payday Loan Lender**

Data Considerations

Reliability

- How consistently do the data being accessed provide the same results over time?
- If data produce the same or similar results over time, then the data are generally reliable.
- Reliability is related to precision.

Validity

- How accurately do the data being accessed measure what they are intended to measure?
- If the data describe what is intended, then the data are generally valid.
- Validity is related to accuracy.

Accuracy

- How persuasively do the data being accessed allow decisions to be made?
- Access data from sources which everybody involved trusts to be both valid and reliable.
- Accuracy is related to trustworthiness.

Data Sources

Demographics
United States Census

One of the most respected and reliable source of population-level demographic information for the United States

www.data.census.gov

- Data are available at various levels:
  - National
  - State
  - County
  - ZIP Code
  - Census Track

Demographics & Health Information
UDS Mapper

The HRSA-funded UDS Mapper provides Health Center Program data and population characteristics.

www.udsmapper.org

- Information is available at the ZIP Code Tabulation Area (ZCTA) level.
- Data about health insurance, income, and some chronic health conditions (e.g., diabetes, high blood pressure) are available.

Demographics & Health Information Other Sources

Some state, county, or organization websites have information available at various population levels.

- Examples of information include:
  - Epidemiological data by county.
  - Community health assessments.
  - Planning Council for RWHAP clients.
- Vet the data to ensure reliability, validity, and accuracy.

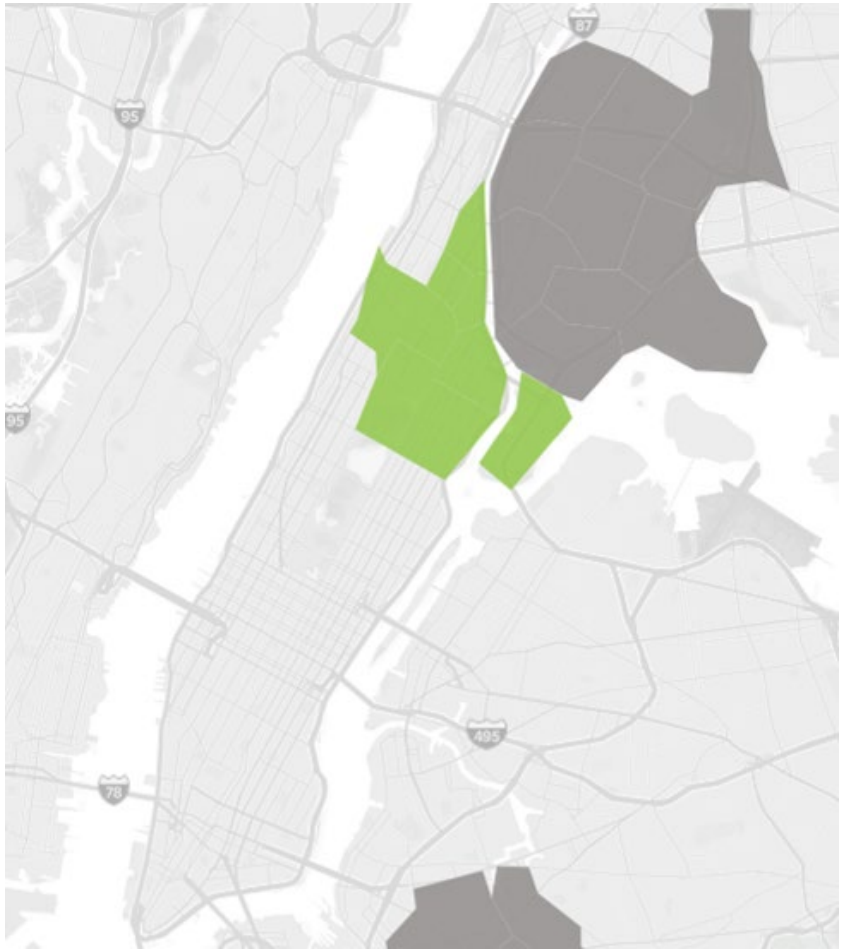
Service and Funding Data Public Sources

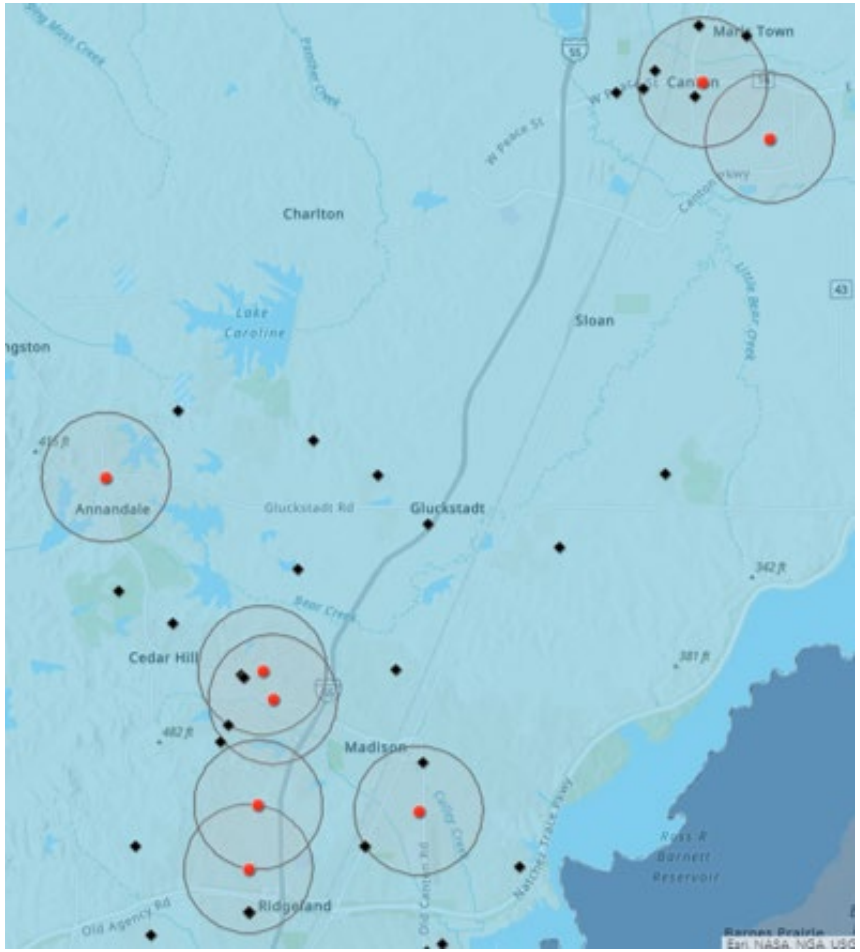
Because jurisdictions are public entities, contracts may be available online. Contracts can provide rich data regarding services and funding streams.

- Websites could include:
  - State or County Procurement
  - County Commissions or Boards of Supervisors
  - Organization websites
  - Community Resource Guides

Overview of Mapping Software and Demonstration

Spatial Data and Geographic Information Systems (GIS)





Spatial Data and Geographic Information Systems (GIS)

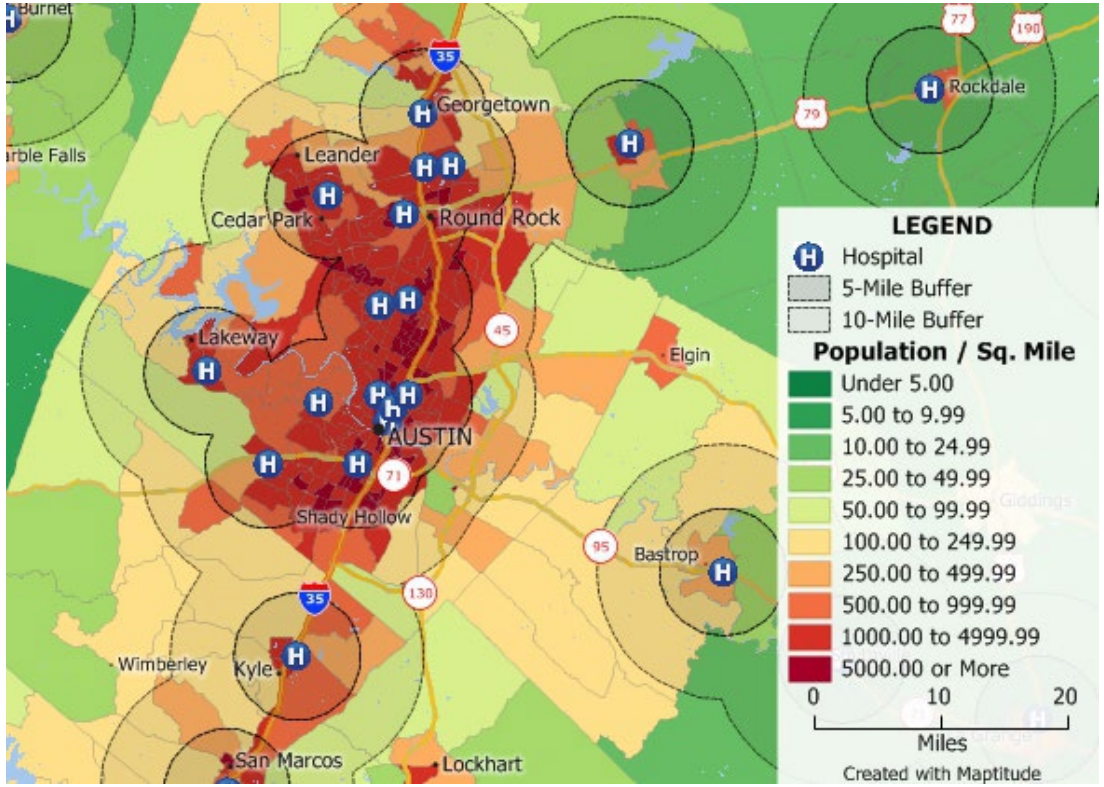


Image Source:
https://www.caliper.com/maptitude/publichealth/default.htm

There is a long history of the application of spatial data visualization and analysis in public health, but it's use is being continually refined and tested

Mapping Tools and Options

- ArcGIS (desktop, online)
  - Free online version
- Carto
- QGIS
  - Free, open-source
- R
  - Free, open-source
- Tableau
  - Free version with limited functions
- Excel

Tableau

Pros

- Easy to use
- Easy to link to non-spatial data sources and connect to dashboards
- Free Version exists
- Capable of publishing online maps
- Best for: creating static maps

Tableau 2

Limitations

- Not optimized for viewing multiple layers of data
- No robust geocoding capabilities
- Cannot conduct spatial analysis

ArcGIS Online

As the demands of our organization have increased, we looked for mapping options that have more capabilities, particularly for spatial analysis and creating layered, interactive maps. ArcGIS online also has a repository of existing maps and data, saving us the time and effort of collating data

ArcGIS

ArcGIS Online 2

Limitations

- Requires training and more knowledge of GIS
- Licenses are expensive

Development of a Standard System of Care Map Template

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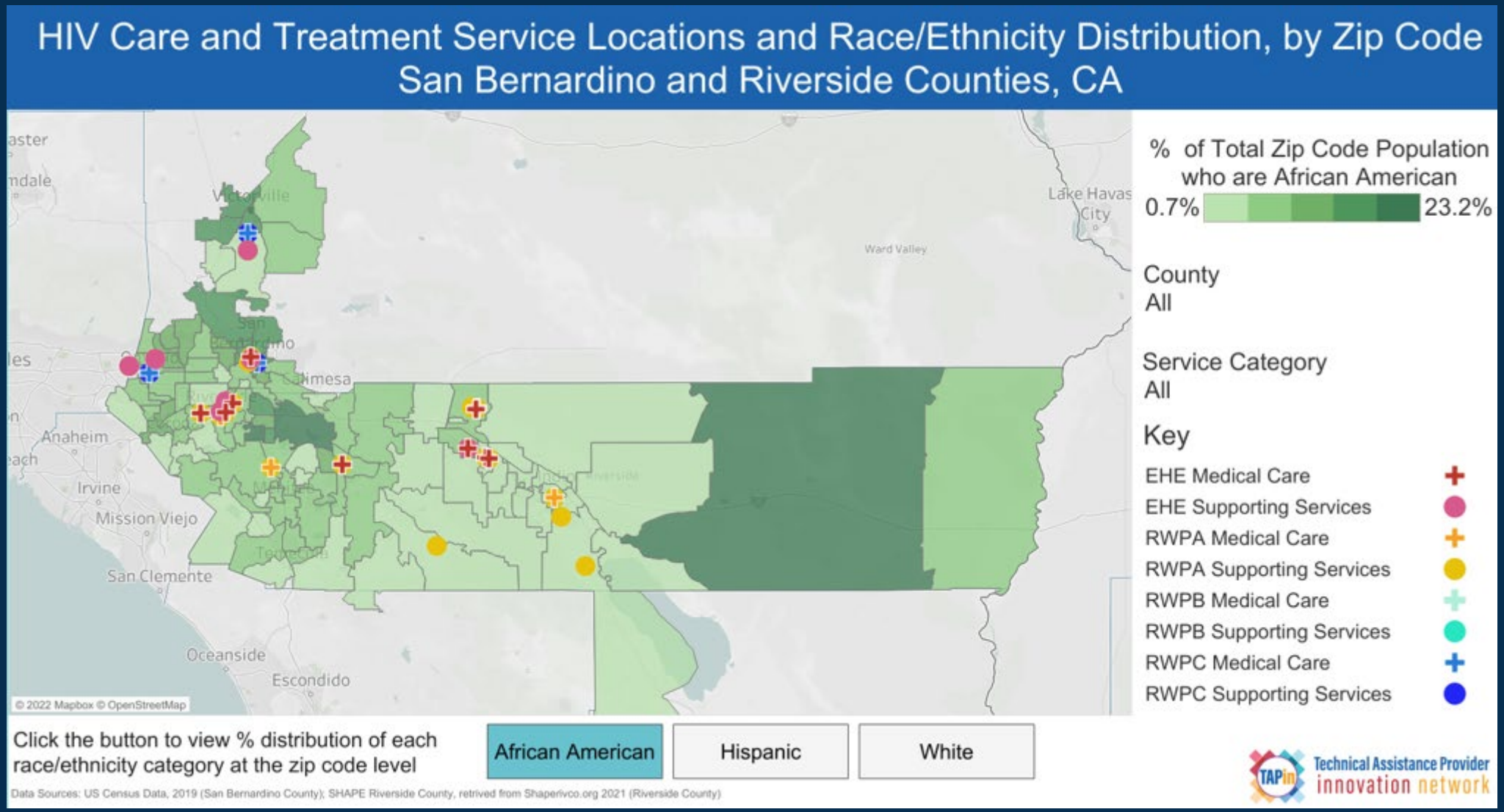
Data Included:

- Location of service sites
- Demographic data by zip code (select race/ethnicity variables)
- HIV indicators
- Funding streams for service sites

Map Features:

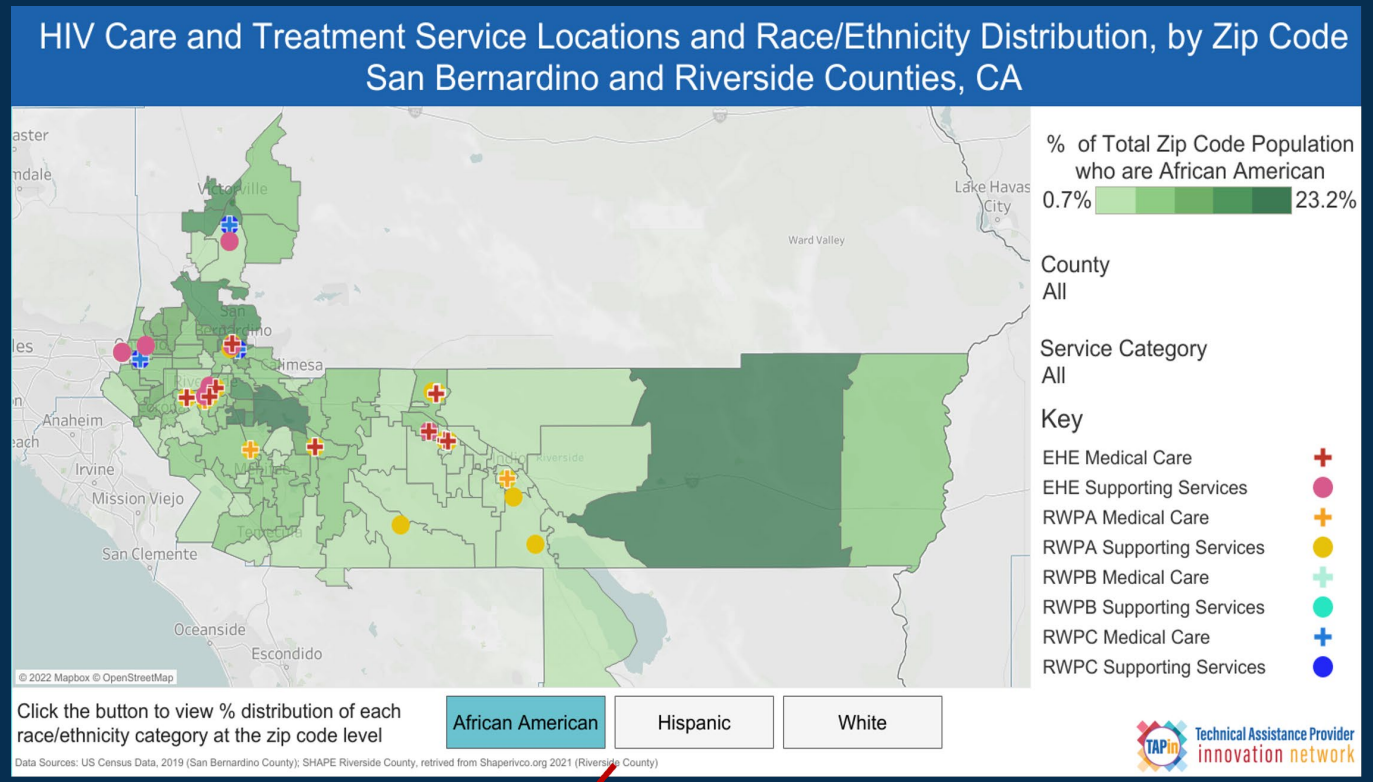
- Published publicly on Tableau online
- Fully interactive (scrolling, zooming on specific areas)
- Data layers can be filtered

San Bernardino Sample Map Dashboard, Tableau



Link to view this map: http://bitly.ws/soee

San Bernardino Sample Map Dashboard, Tableau 2



Click the button to view % distribution of each race/ethnicity category at the zip code level

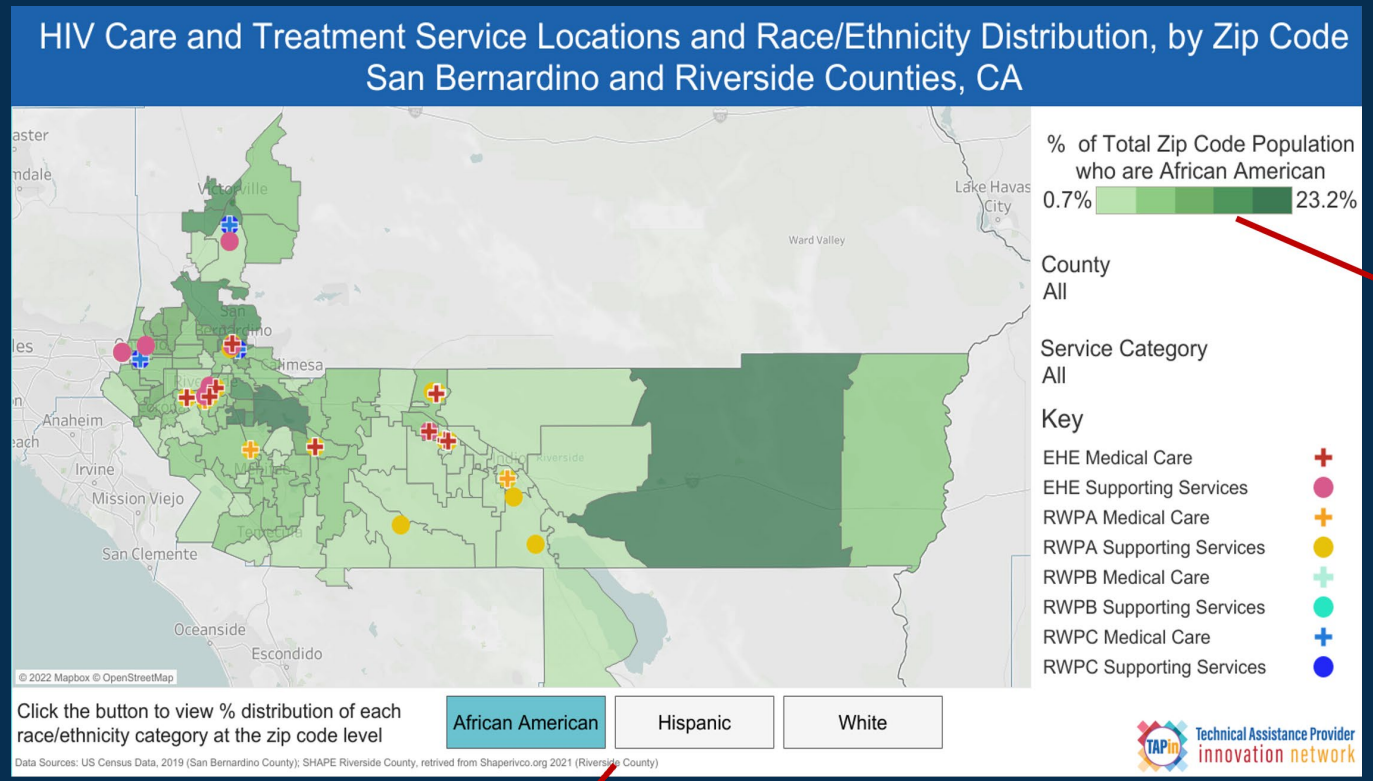
African American

Hispanic

White

Link to view this map: http://bitly.ws/soee

San Bernardino Sample Map Dashboard, Tableau 3



% of Total Zip Code Population who are African American
0.7% 23.2%

Click the button to view % distribution of each race/ethnicity category at the zip code level
African American
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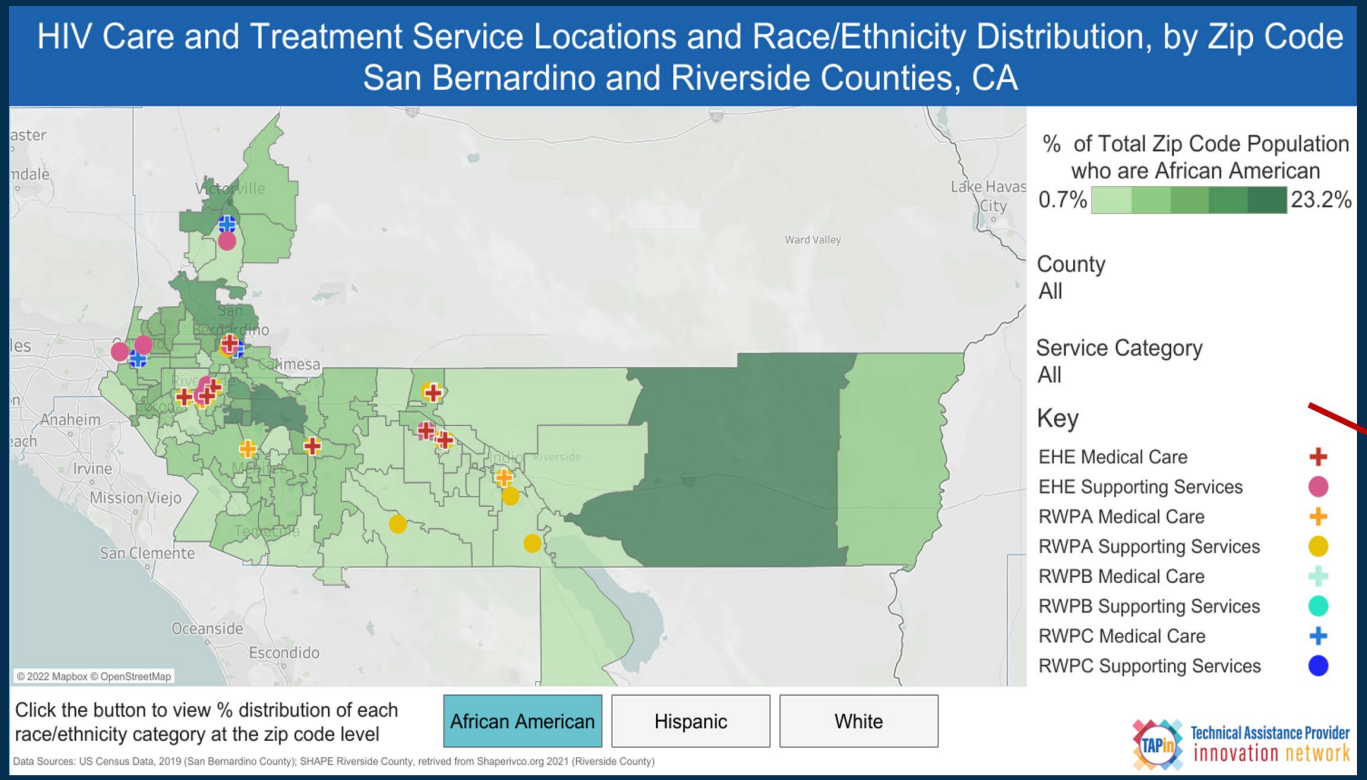
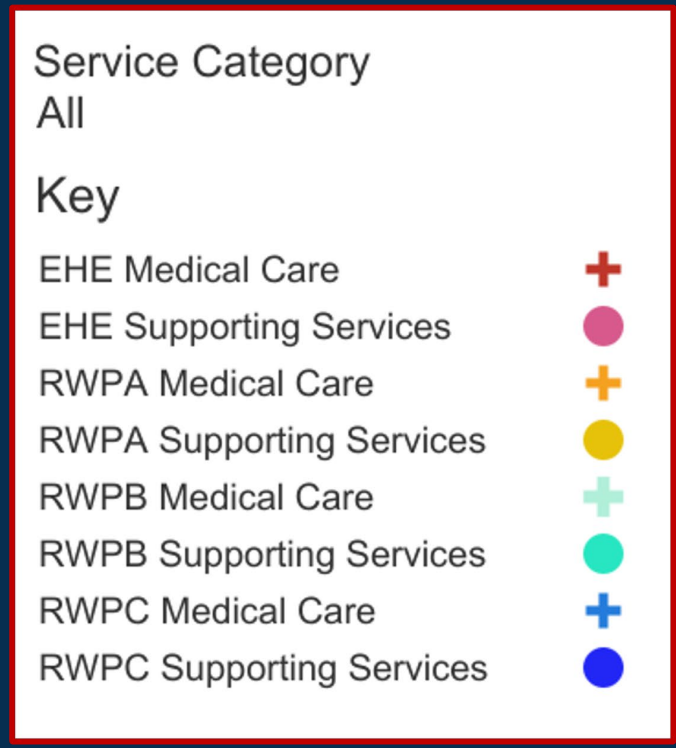
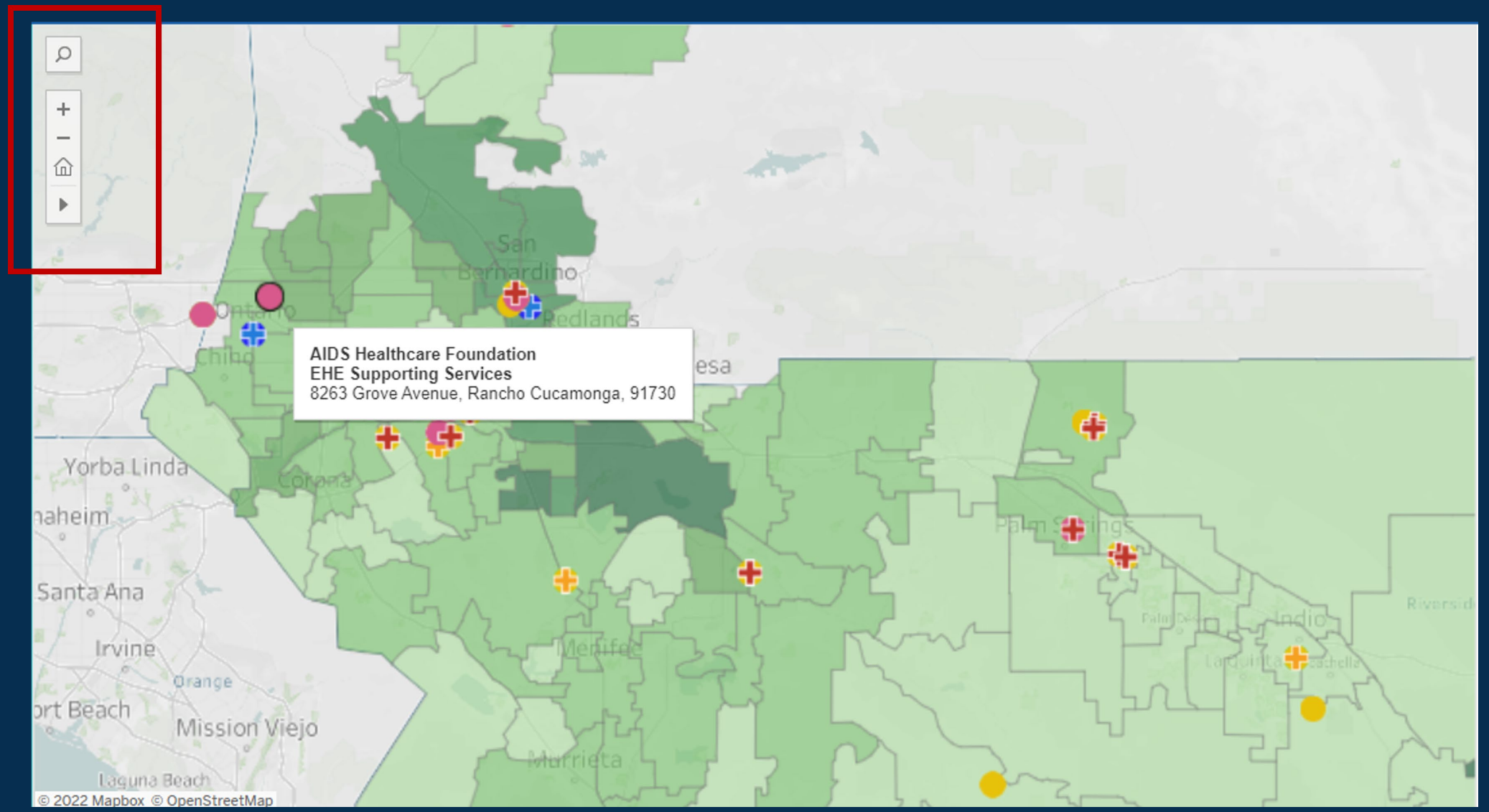
San Bernardino Sample Map Dashboard, Tableau 4





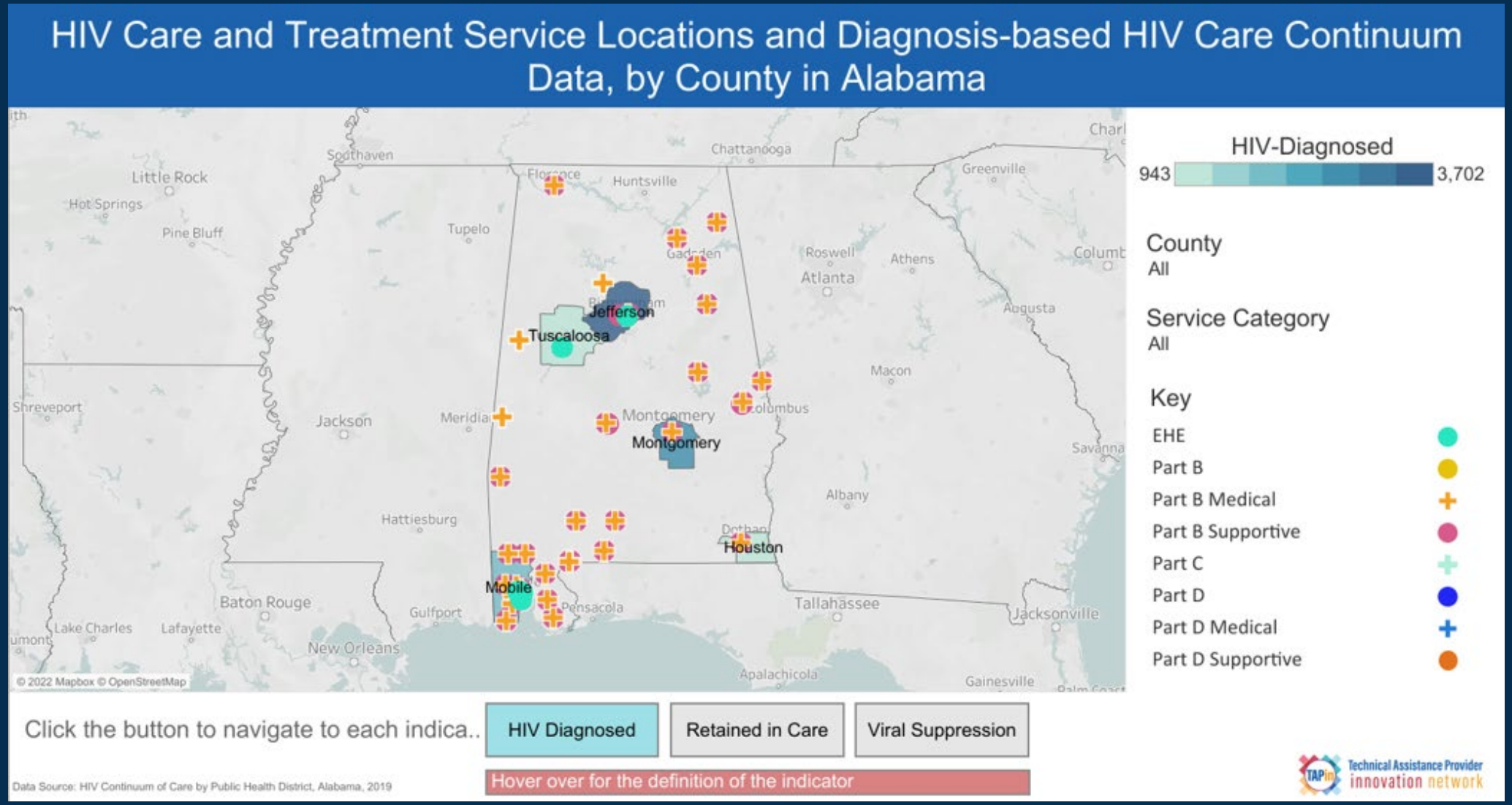
Link to view this map: http://bitly.ws/soee

San Bernardino Sample Map Dashboard, Tableau 5



Link to view this map: http://bitly.ws/soee

Alabama Sample Map Dashboard, Tableau



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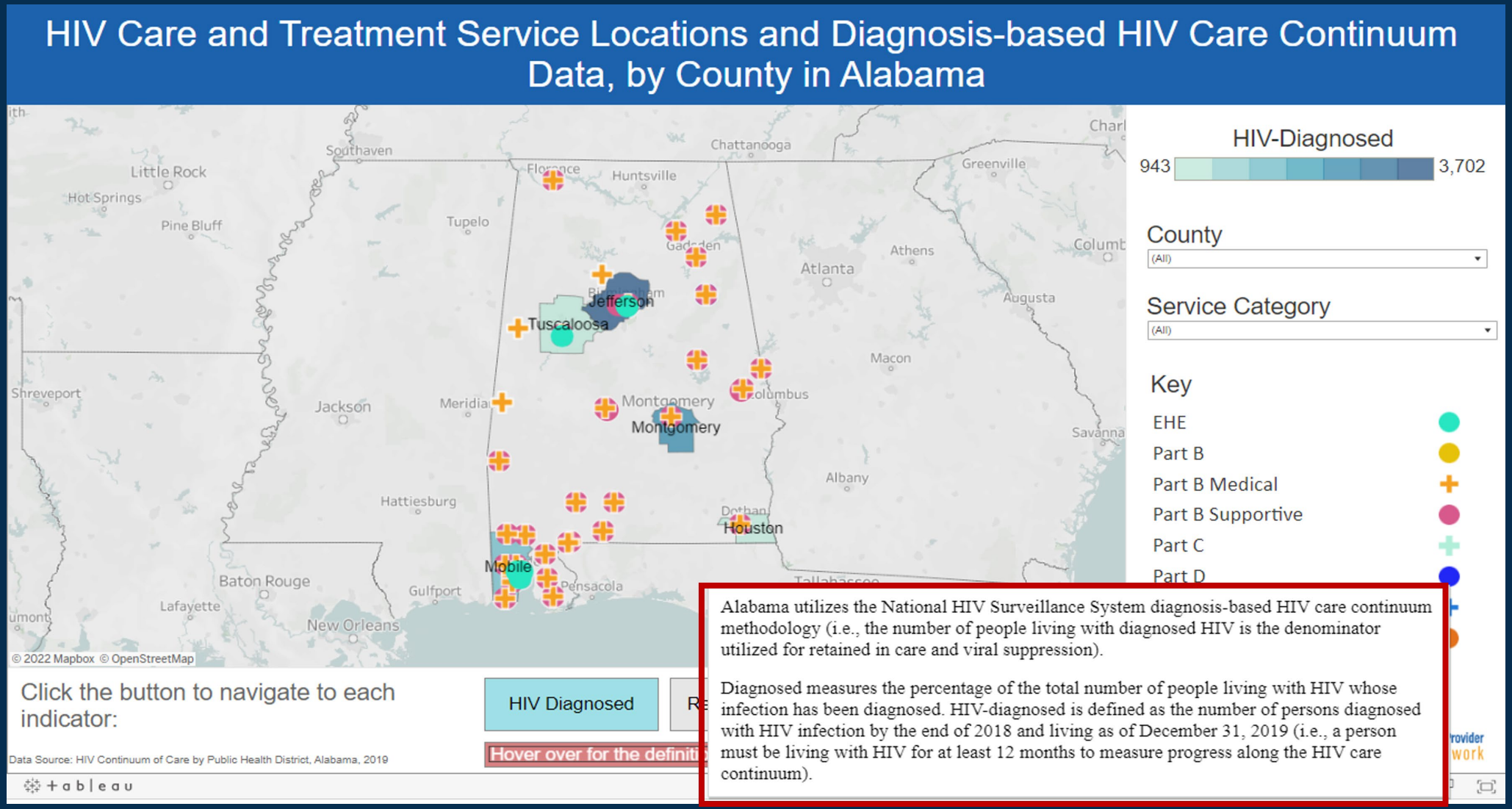
Alabama Sample Map Dashboard, Tableau 2



Link to view this map: http://bitly.ws/sofa

Case Study: San Bernardino

"Every system is perfectly designed to get the result that it does."

-- W. Edwards Deming

Intensive Technical Assistance Events

- Grounded in data
- Bring together jurisdiction teams, subrecipients, stakeholders
- Build shared understanding of system, gaps, opportunities

Intensive Events have been conducted about:

- The unique opportunity of EHE and how it is different from the RWHAP.
- Mapping where priority populations live in relation to service locations to better understand the gaps and opportunities to leverage EHE funding.

San Bernardino/Riverside Counties, CA

- The San Bernardino and Riverside Counties TGA is larger in area than 10 states.
- In May 2021, TAP-in conducted an Intensive TA Session.
- The main focus was the Black/African American population.
- We wanted to foster a data-grounded discussion examining the current service structure and how it can be leveraged to meet the needs of people for whom the current system of care does not work.

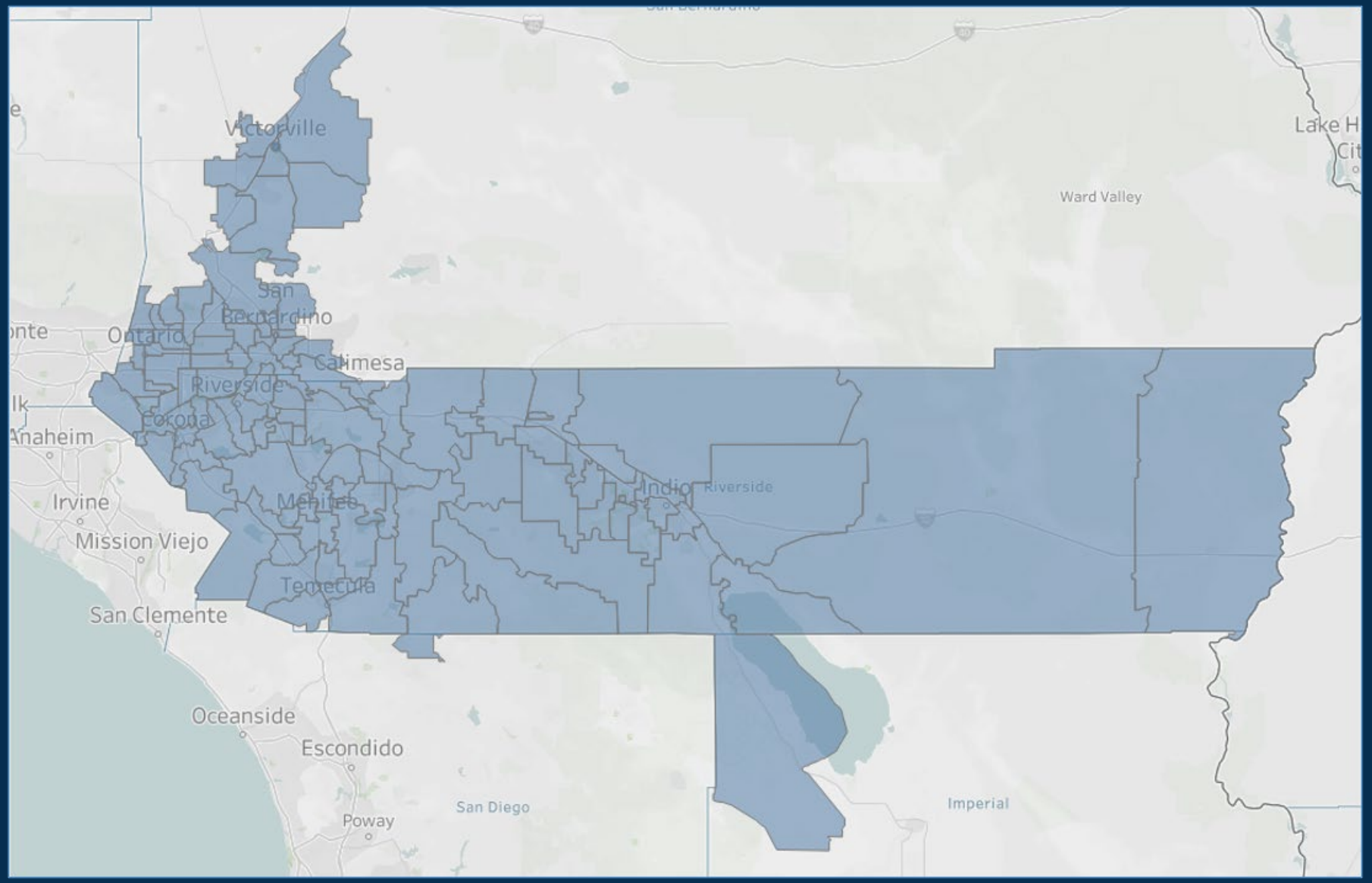
San Bernardino/Riverside Counties, CA 2

San Bernardino/Riverside Counties, CA

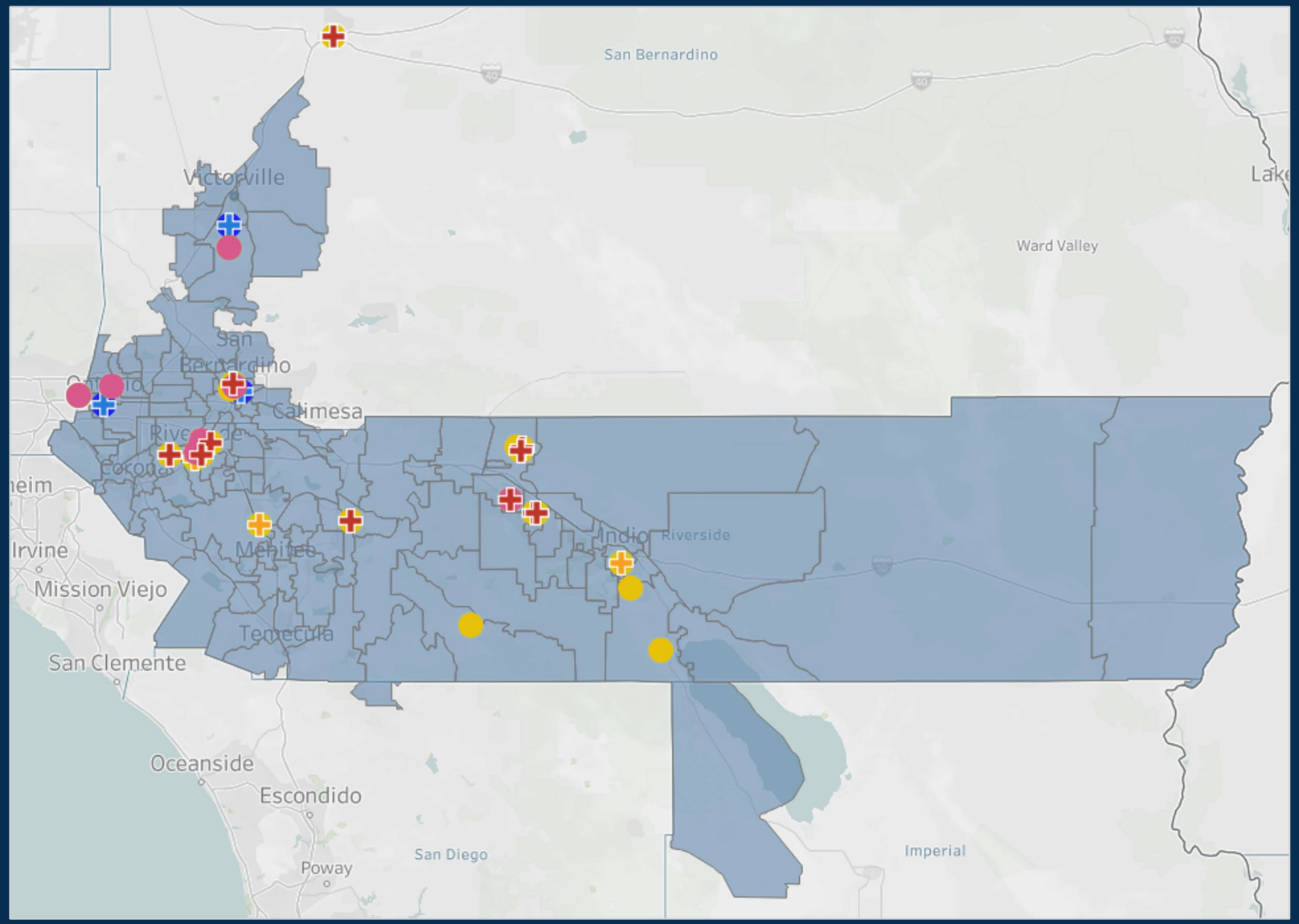
- Combined population of 4.6 million people.
- Area of 27,408 square miles.
- In 2020, the TGA was home to 15,255 PWH.
  - Viral Suppression in the TGA is **68.4%**.
  - Viral Suppression in San Bernardino County is **57.3%**.
  - Viral Suppression in Riverside County is **73.9%**.
- 4,821 PWH in the TGA are not virally suppressed.

California Department of Public Health, Office of AIDS. California Surveillance Report – 2020. Released April 21, 2022.

San Bernardino and Riverside Counties, CA
Service Area Base map



San Bernardino and Riverside Counties, CA
Service Area Base map and Service Locations



Key

- EHE Medical Care
- EHE Supporting Services
- RWPA Medical Care
- RWPA Supporting Services
- RWPB Medical Care
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- RWPC Medical Care
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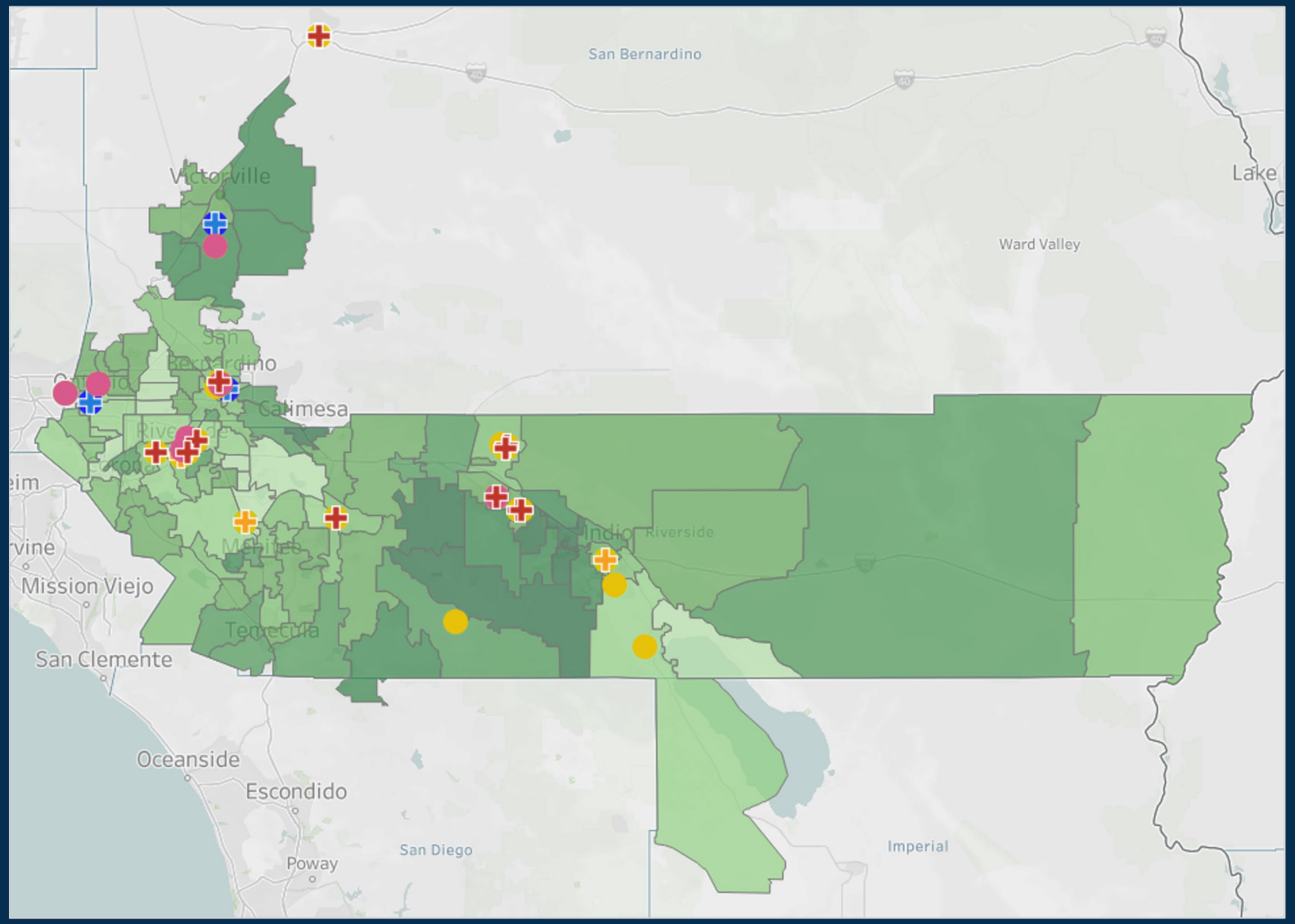
San Bernardino and Riverside Counties, CA
% White Population



% of Total Zip Code Population who are White

35.3% — 89.3%

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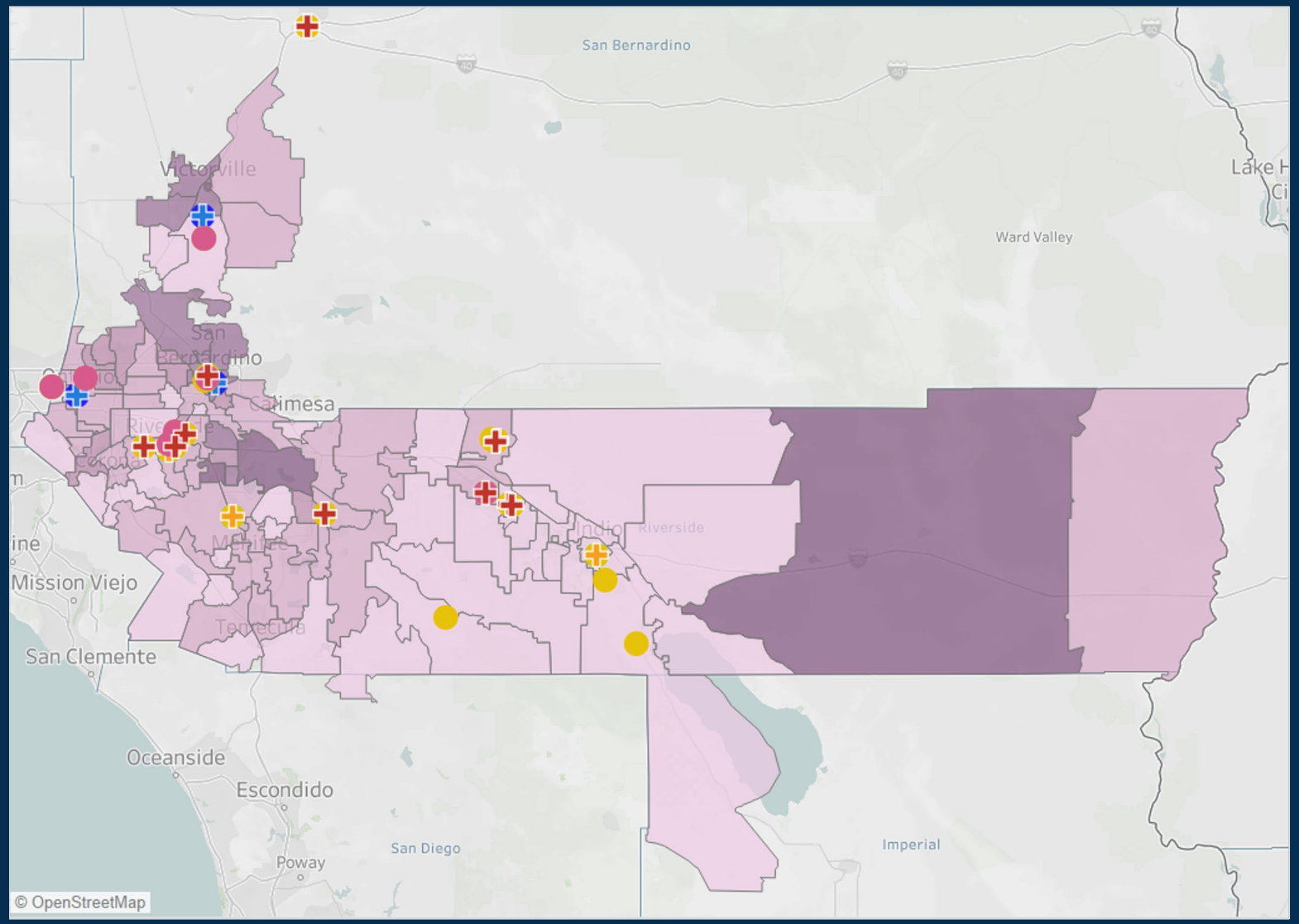
San Bernardino and Riverside Counties, CA
% Black Population



% of Total Zip Code Population who are African American

0.7% — 23.2%

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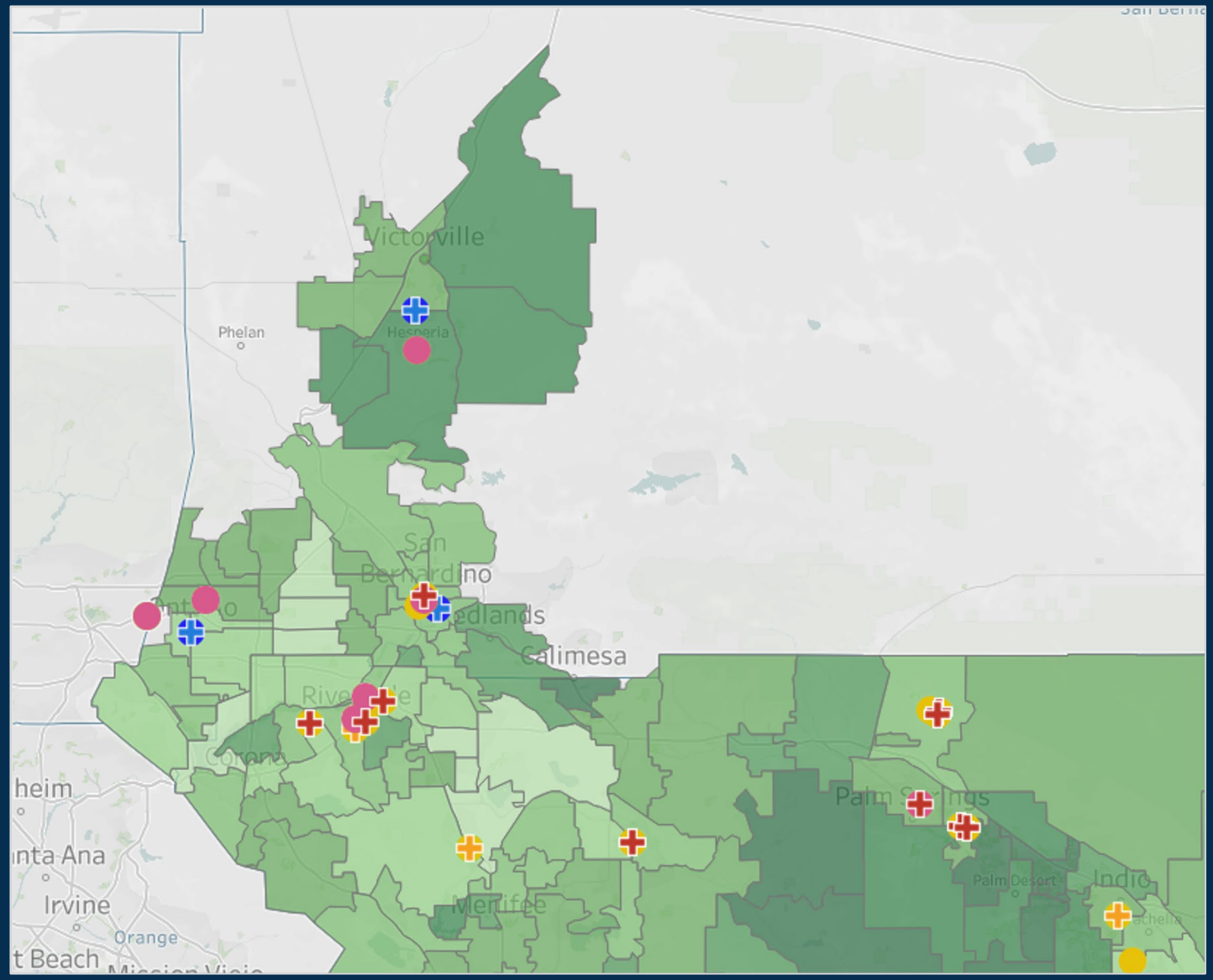
Zooming in on Victorville
% White Population



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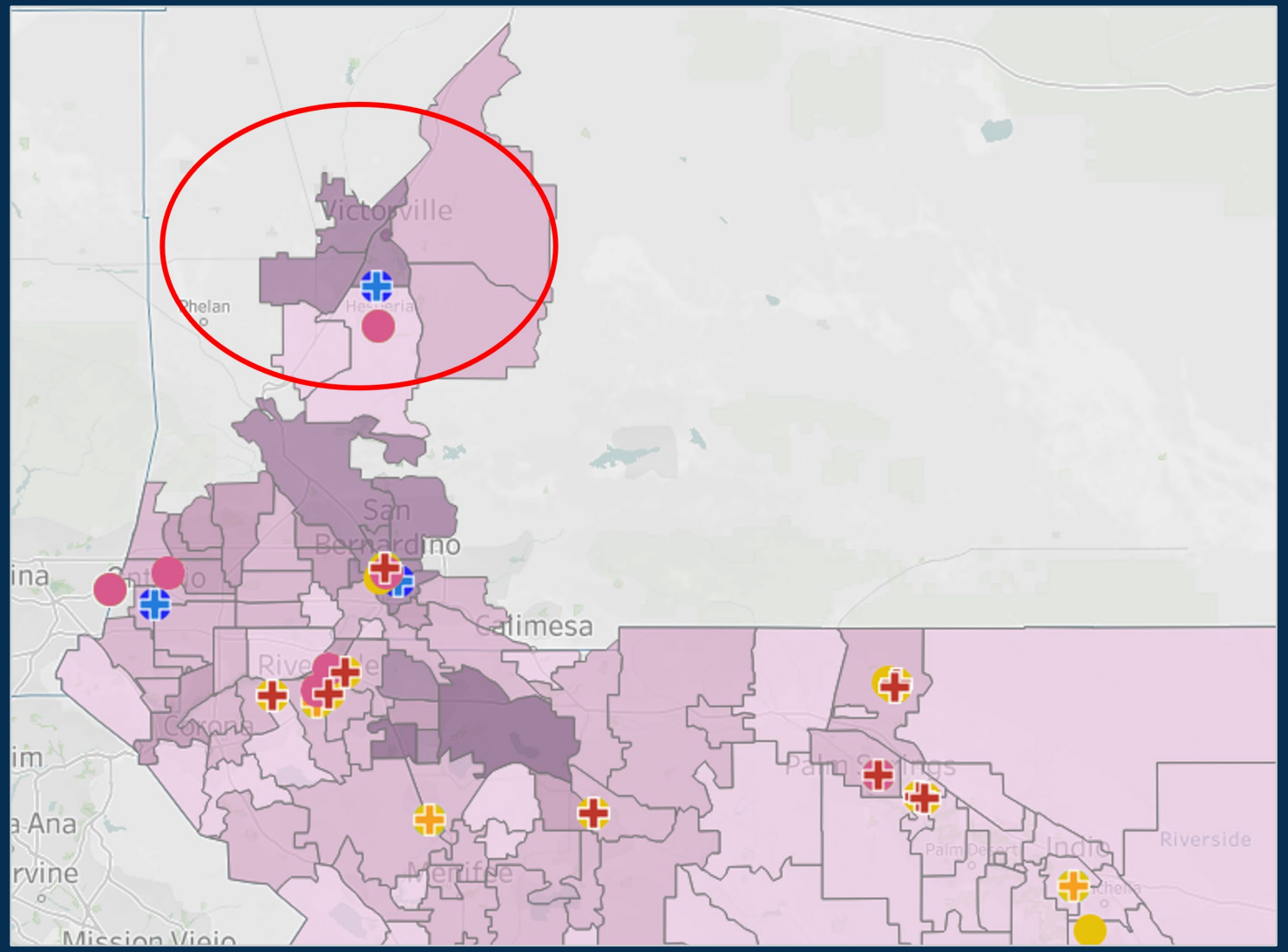

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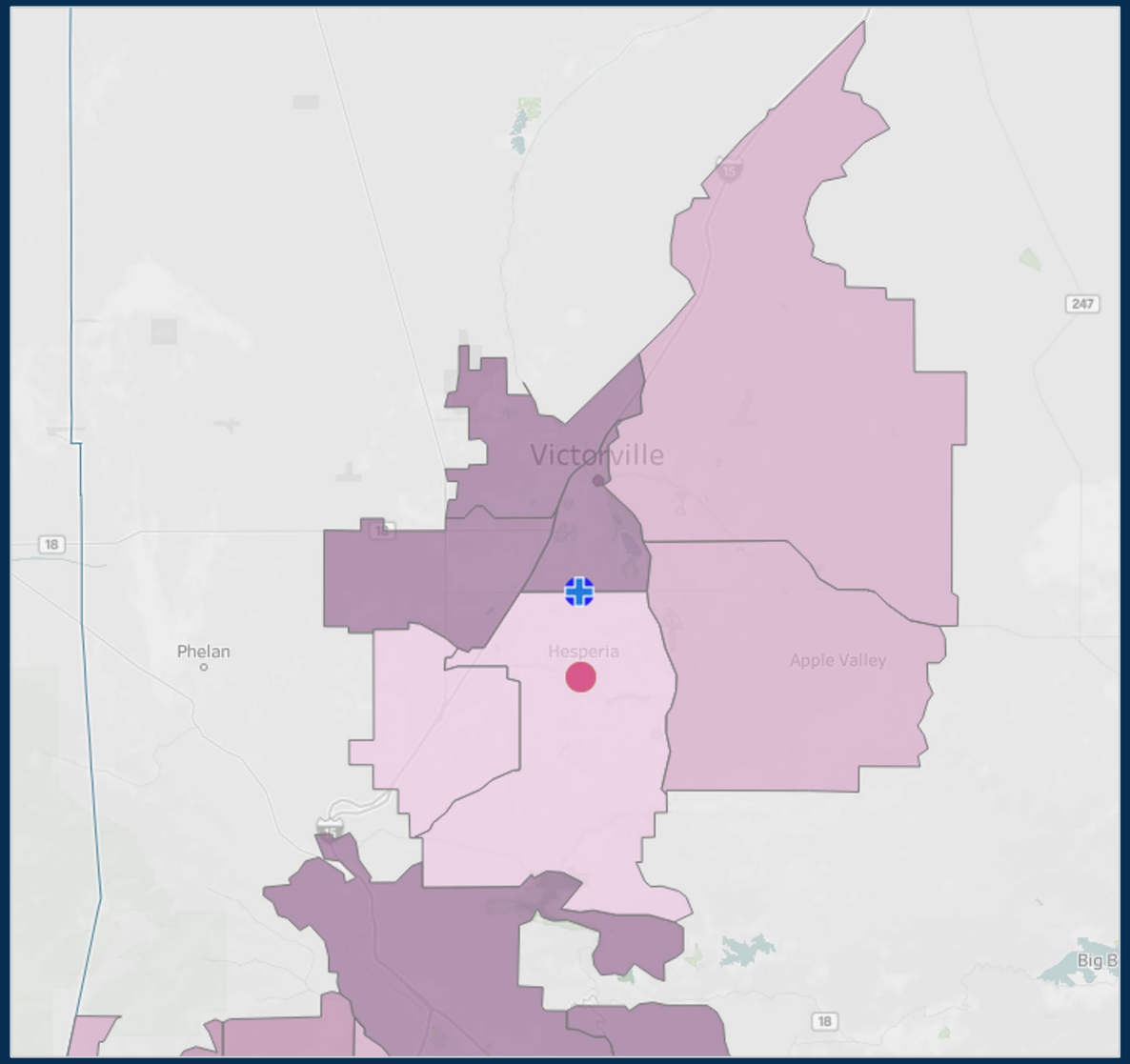
Zooming in on Victorville
% Black Population and Service Availability



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Using the Maps

- **Availability** is the extent to which a provider has the resources, personnel, and technology to meet client needs.
- **Accessibility** is geographic location.
- **Acceptability** is care that is responsive to the needs and ways the priority population wants to receive care.
- **Affordability** is related to the payment for services or insurance status are not barriers to care.
- **Quality** is evidence-based or evidence-informed services.

1. What is being done now with EHE funds?
2. Where do you see opportunities to reach those who are not currently being reached by your system of care?
3. What can be done to enhance EHE strategies to reach Black/African Americans?

What Did Jurisdiction Staff Think?

*"Having the TGA **understand and know of each others' services** and begin the discussion of how we can support each other is very important. To be able to strategize together and begin to work outside of our silos. Also, I believe it's important to really identify the gaps together and strategize how we as a group can address those challenges together. **I don't believe we have ever been shown or seen where these very specific gaps are and how or what we can do to address them.**"*

What Did Jurisdiction Staff Think? 2

- **100%** agreed that the session met the objective: *Analyze the current HIV service delivery landscape and discuss how to utilize EHE funds most strategically to meet the needs of priority populations.*
- **100%** agreed with: *I learned something new as a result of this session.*
- **100%** agreed with: *I plan to use what I learned from this session in my work.*

Feedback from the Intensive Session

"... with new resources we can target highly effective treatment resources precisely to those ***people and places in most need***."

"... this work means taking a hard look at ***who has been excluded*** from services, and take immediate steps to ***overcome systematic barriers***."

New Directions

- The mapping we do is continually evolving and improving.
- Jurisdictions are provided with information that should prod actionable steps to serve PWH in their communities.
- Spatial analyses:
  - What is the average walking time to access HIV services?
  - Are services near public transportation?
  - How far are services in relation to where PWH live?

How to Request TA

Email: tap-in@caiglobal.org

Thank you

Acknowledgements:

Tony Jimenez, Dawn Middleton, Rama Murali, Will Murphy, Sharon Novey, Lindsay Senter, Brittany Trnka

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Questions?

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