Using Data to Inform COVID-19 Vaccination Efforts
Reducing Racial & Ethnic Disparities in COVID-19 Vaccination:
Identifying Communities in Need and Limited Access

Urban League of Greater Oklahoma City
July 2022

Data-Informed Technical Assistance to Inform Vaccine Outreach

As part of CDC's *Partnering for Vaccine Equity* program, CDC provides awardees and community partners additional data analysis support, if needed, to use a data-driven approach to promote vaccine confidence and uptake.

The **Data-Informed Technical Assistance** team pulls from publicly available and commercially available data sources to explore a variety of topics, down to the neighborhood and household level, including vulnerability, potential access barriers, and population characteristics. We work together with your team to design an analysis that will be beneficial for the activities you are looking to conduct and the populations you are looking to serve.

Sample questions we've helped use data to answer:

○ Where are the communities most in need of COVID-19 vaccine outreach?

○ Where are there access barriers?

○ What population characteristics could support tailored COVID-19 vaccine outreach and messaging?

Partnering for **Vaccine Equity**

2

This Report Can Help Answer the Following Questions:

Population Characteristics:

Uninsured Population

Where are the individuals unlikely to have health insurance coverage?

Internet Access Barrier

Where are communities that lack access to the internet?

Vehicle Access Barrier

Where are communities that lack access to a vehicle?

Maternity and New Parent Population

Where are the individuals who are likely pregnant or are new parents?

Health Attitude Persona and Behavioral Characteristics:

Health Attitude Personas, developed from observable behavior and population surveying, provide insight to better understand the health attitudes and/or behavioral preferences of your priority populations*

This report focuses on:

Health Attitude Persona 3: "Values Independence"

Where are the individuals who are unlikely to prioritize health?

Health Attitude Persona 5: "Not Right Now"

Where are the adults who are younger and do not have major health issues?

*Each Health Attitude Persona is described in the Appendix

Uninsured Analysis

Where are the Black or African American adults in Health Attitude Persona 3 within Oklahoma County who are likely uninsured?

Top Census Tracts with the Largest Number of Black or African American Adults in Health Attitude Persona 3 who are Likely Uninsured

© 2022 Mapbox © OpenStreetMap

# of Black or African American Adults in Health Attitude Persona 3 who are Likely Uninsured

0 ————————————————————————————— 72
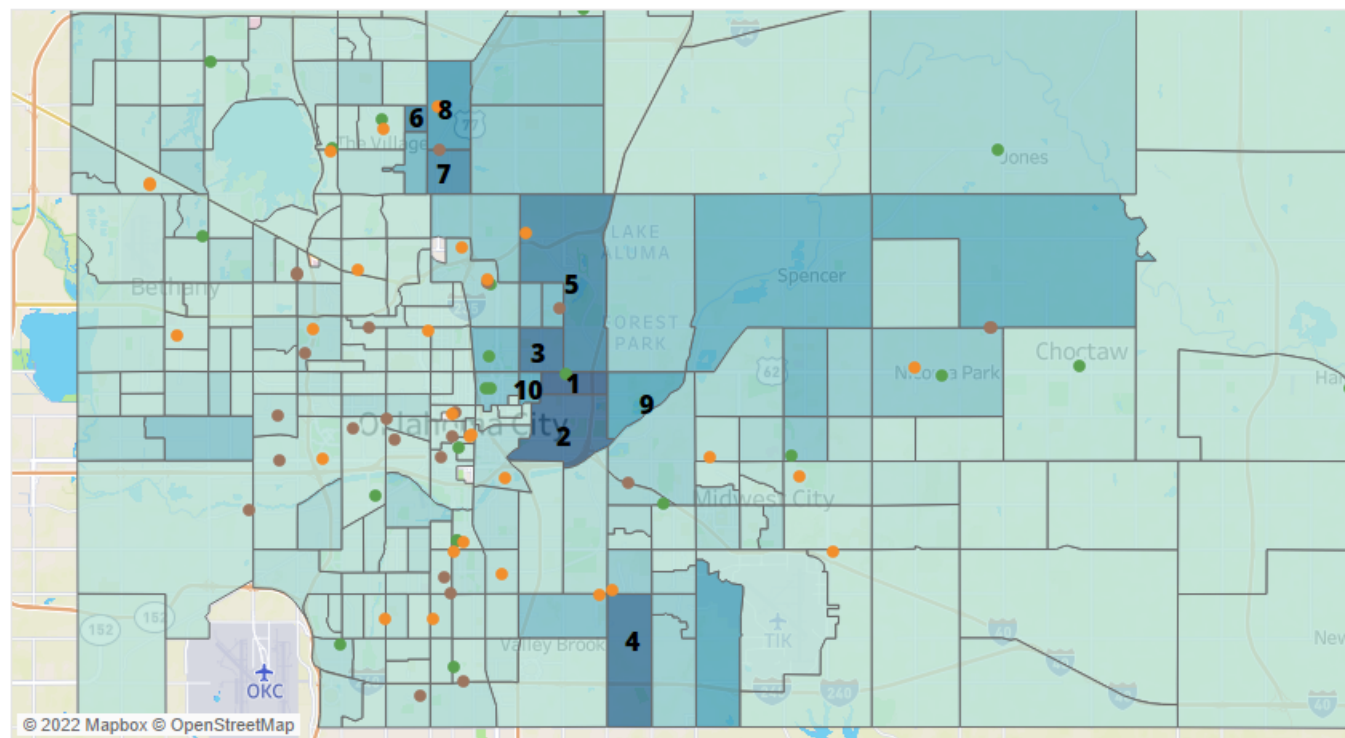
Points of Interest
- Community Org.
- FQHC
- Library

How to Interpret the Map

➢ **Adults who are likely uninsured** is defined as **adults who likely do not have access to health insurance coverage.**

➢ **Health Persona 3: "Value Independence"** includes individuals who are **unlikely to prioritize health.** They are likely **skeptical** about the medical establishment and prefer to rely on their own knowledge.

➢ The *blue/green gradient* on the map shows the census tracts with the **largest populations that are likely uninsured.**

➢ Consider partnering with the **health locations** overlayed on the map **for vaccination outreach and administration.**
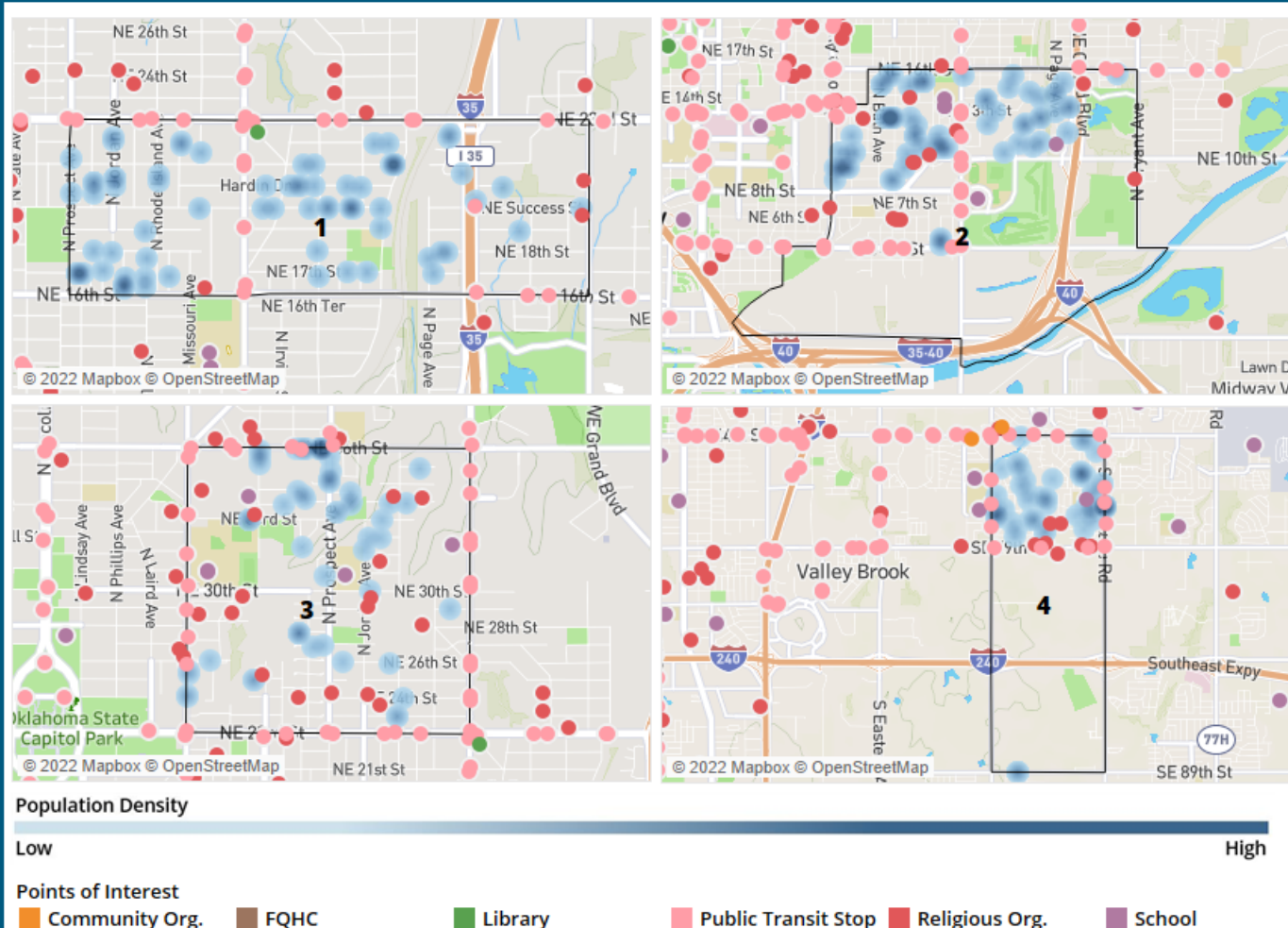
The map on the left uses a HealthPrism™ predictive model to estimate the population likely uninsured (*see the appendix for more details*).

Where are the Black or African American adults in Health Attitude Persona 3 within Oklahoma County who are likely uninsured?

Density Map of Top 4 Census Tracts with the Largest Number of Black or African American Adults in Health Attitude Persona 3 who are Likely Uninsured

Population Density

Low — High

Points of Interest
Community Org.   FQHC   Library   Public Transit Stop   Religious Org.   School

Top Census Tracts with the Largest Number of Black or African American Adults in Health Attitude Persona 3 who are Likely Uninsured

#	Census Tract	Locality	ZIP Codes	Est. # of Adults
1	40109101300	Oklahoma County	73111,73117, 73121	72
2	40109109500	Oklahoma County	73117	66
3	40109100400	Oklahoma County	73111	61
4	40109107401	Oklahoma County	73135	60
5	40109106100	Oklahoma County	73111,73121	53
6	40109108309	Oklahoma County	73114	52
7	40109106301	Oklahoma County	73114	51
8	40109106302	Oklahoma County	73114	42
9	40109107900	Oklahoma County	73117,73121	37
10	40109101400	Oklahoma County	73111,73117	35

Internet Access Analysis

Where are the Black or African American individuals in Oklahoma County without internet access?

Top Census Tracts with the Largest Number of Black or African American Individuals Without Internet Access

© 2022 Mapbox © OpenStreetMap

# of Black or African American Individuals Without Internet Access

0 — 1,046

Points of Interest
- Community Org.
- FQHC
- Library

How to Interpret the Map

➤ **Individuals without internet access** is defined as individuals who **accessed the Internet without a subscription and those with no internet access at all,** based on U.S. Census Bureau estimates.

➤ The *blue/green gradient* on the map shows the census tracts with the **largest populations without internet access**.

➤ Consider partnering with the **health locations** overlayed on the map **for vaccination outreach and administration**.

The map on the left uses estimates from the U.S. Census Bureau to estimate the population likely without internet access (*see the appendix for more details*).

Where are the Black or African American individuals in Oklahoma County without internet access?

Top 4 Census Tracts with the Largest Number of Black or African American Individuals Without Internet Access

Points of Interest
- Community Org.
- FQHC
- Library
- Public Transit Stop
- Religious Org.
- School
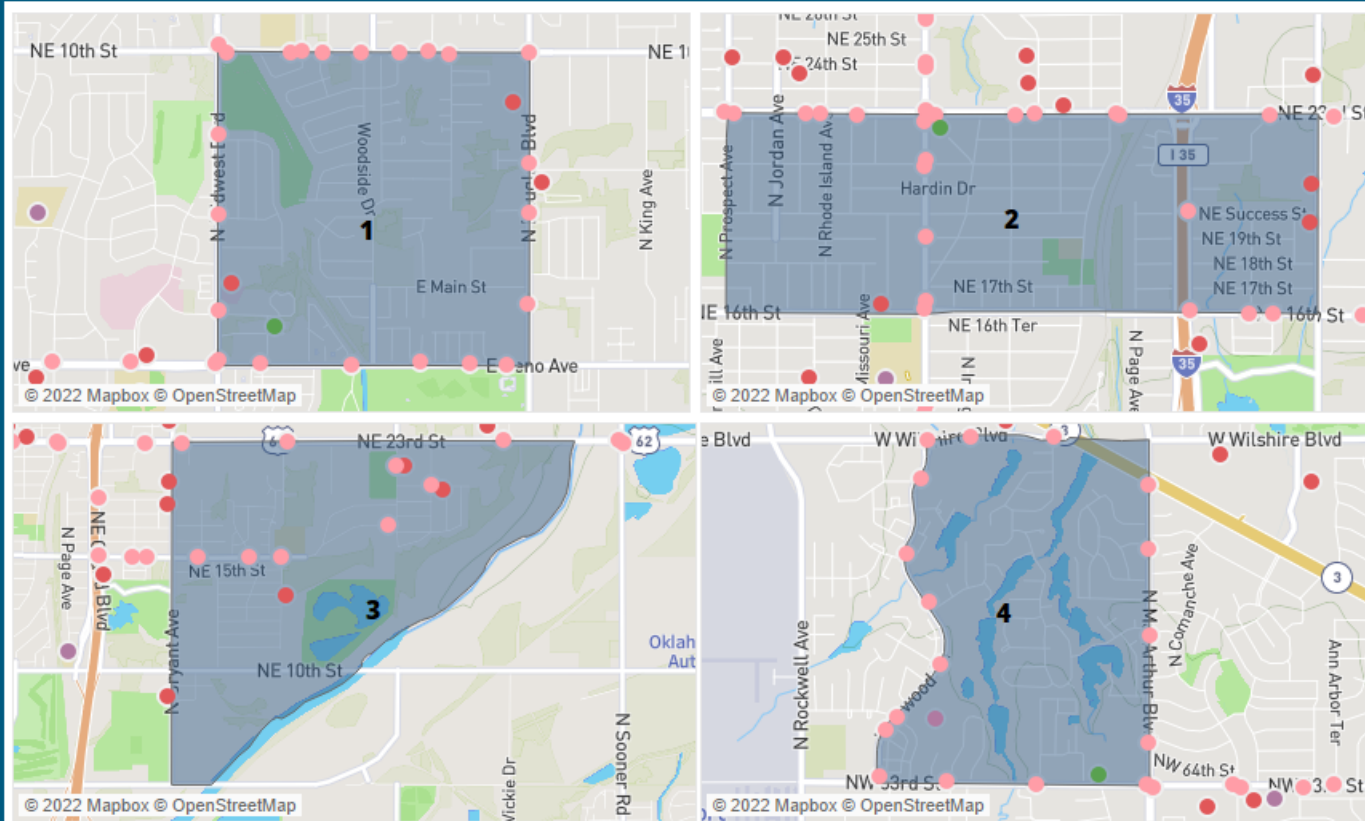
Top Census Tracts with the Largest Number of Black or African American Individuals Without Internet Access

#	Census Tract	Locality	ZIP Codes	Est. # of Individuals	
1	40109108008	Oklahoma County	73110,73130, 73140		1046
2	40109101300	Oklahoma County	73111,73117, 73121		1018
3	40109107900	Oklahoma County	73117,73121		832
4	40109106710	Oklahoma County	73132		723
5	40109109500	Oklahoma County	73117		716
6	40109106301	Oklahoma County	73114		712
7	40109106302	Oklahoma County	73114		617
8	40109100400	Oklahoma County	73111		614
9	40109106100	Oklahoma County	73111,73121		587
10	40109108309	Oklahoma County	73114		448

Vehicle Access Analysis

Where are the Black or African American adults ages 18 to 30 years in Health Attitude Persona 5 within Oklahoma County without vehicle access?

Top Census Tracts with the Largest Number of Black or African American Adults Ages 18 to 30 Years in Health Attitude Persona 5 Without Vehicle Access

© 2022 Mapbox © OpenStreetMap
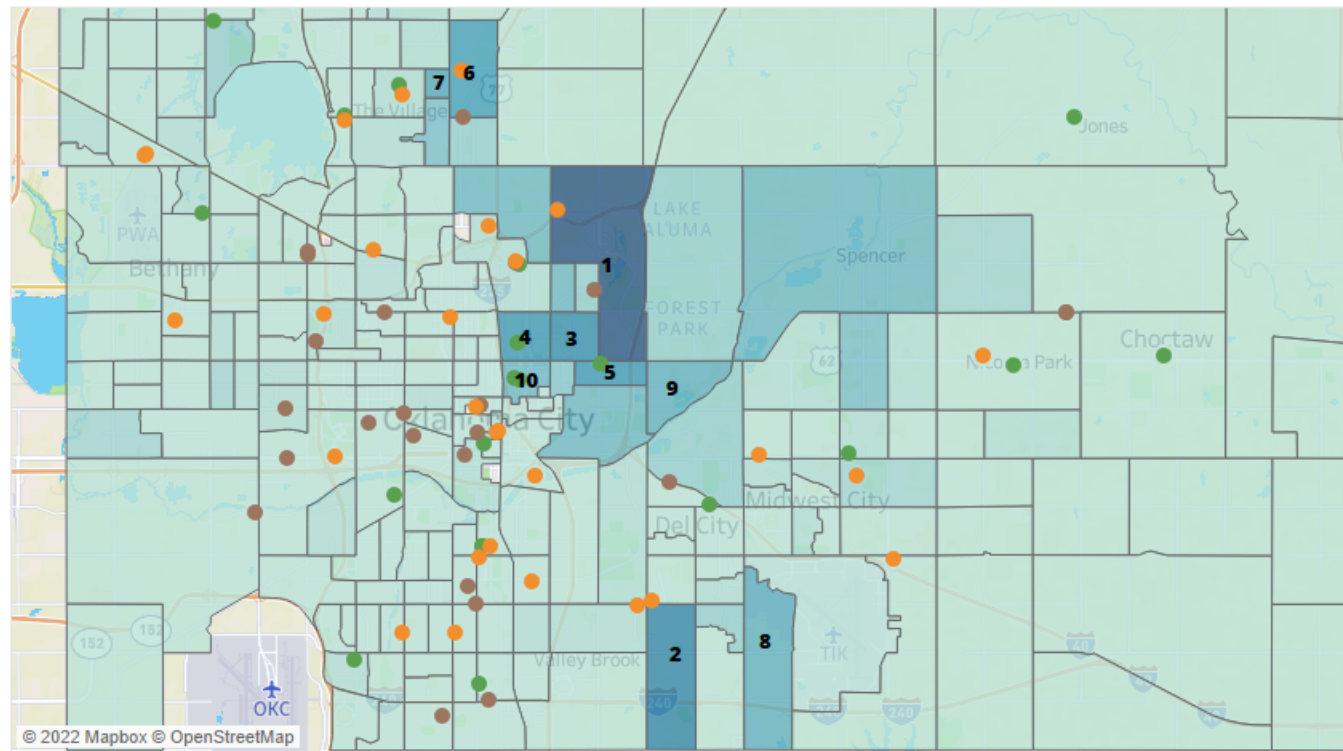
# of Black or African American Adults Ages 18 to 30 Years in Health Attitude Persona 5 Without Vehicle Access

0   **<25**

Points of Interest
- 🟧 Community Org.
- 🟫 FQHC
- 🟩 Library

How to Interpret the Map

➤ **Adults without vehicle access** is defined as **adults who live in a household that does not own a car.**

➤ **Health Persona 5: "Not Right Now"** includes individuals who are **younger and do not have major health issues**. Daily life often takes priority over preventative health.

➤ The *blue/green gradient* on the map shows census tracts with the **largest adult population without vehicle access**.

➤ Consider partnering with the **health locations** overlayed on the map **for vaccination outreach and administration**.

The map on the left uses a HealthPrism™ predictive model to estimate the population without vehicle access (*see the appendix for more details*).

Where are the Black or African American adults ages 18 to 30 years in Health Attitude Persona 5 within Oklahoma County without vehicle access?

Density Map of Top 4 Census Tracts with the Largest Number of Black or African American Adults Ages 18 to 30 Years in Health Attitude Person 5 Without Vehicle Access

Population Density

Low → High

Points of Interest
- 🟠 Community Org.
- 🟤 FQHC
- 🟢 Library
- 🟣 Public Transit Stop
- 🔴 Religious Org.
- 🟪 School
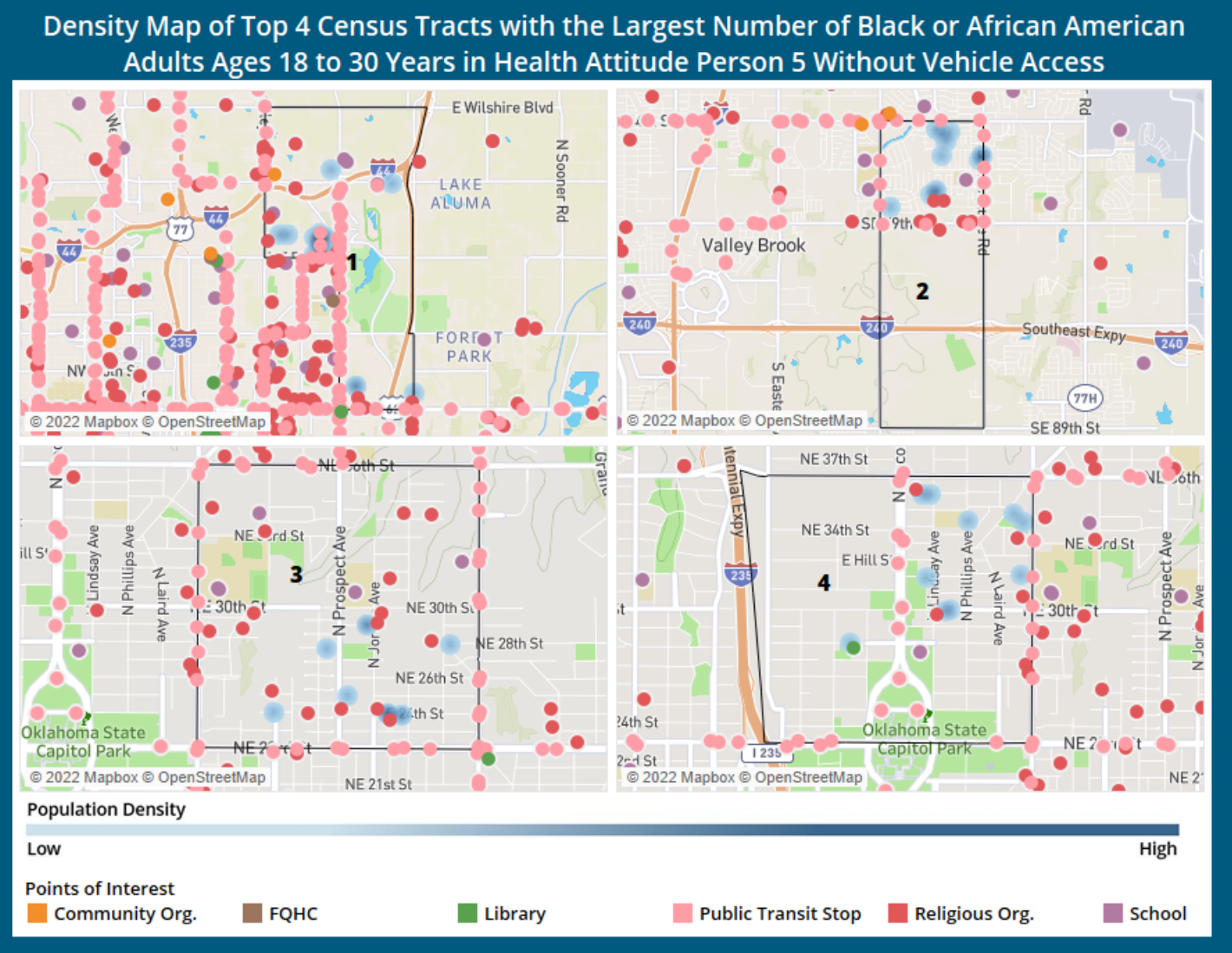
Top Census Tracts with the Largest Number of Black or African American Adults Ages 18 to 30 Years in Health Attitude Persona 5 Without Vehicle Access

| #	Census Tract	Locality	ZIP Codes	Est. # of Adults
1	40109106100	Oklahoma County	73111,73121	<25
2	40109107401	Oklahoma County	73135	<25
3	40109100400	Oklahoma County	73111	<25
4	40109100500	Oklahoma County	73105	<25
5	40109101300	Oklahoma County	73111,73117, 73121	<25
6	40109106302	Oklahoma County	73114	<25
7	40109108309	Oklahoma County	73114	<25
8	40109107406	Oklahoma County	73135,73145	<25
9	40109107900	Oklahoma County	73117,73121	<25
10	40109101500	Oklahoma County	73104,73105	<25

Vehicle Access Analysis:
Likely Pregnant or New Parent Population

Where are the Black or African American adults ages 18 to 30 years in Health Attitude Persona 5 within Oklahoma County who are likely pregnant or new parents without vehicle access?

> ➤ Adults who are **likely pregnant** is defined as adults who are **currently pregnant or will likely become pregnant within the next year**, based on medical claims.
> ➤ Adults who are **new parents** is defined as **adults who live in households where the oldest child in the house is 2 years or younger.**
> ➤ Adults **without vehicle access** is defined as **adults who live in a household that does not own a car.**
> ➤ **Health Persona 5: "Not Right Now"** includes individuals who are **younger and do not have major health issues.**

Density Map Highlighting Areas with the Largest Number of Black or African American Adults Ages 18 to 30 Years in Health Persona 5 within Oklahoma County who are Likely Pregnant or New Parents Without Vehicle Access

Points of Interest
- Community Org.
- FQHC
- Library
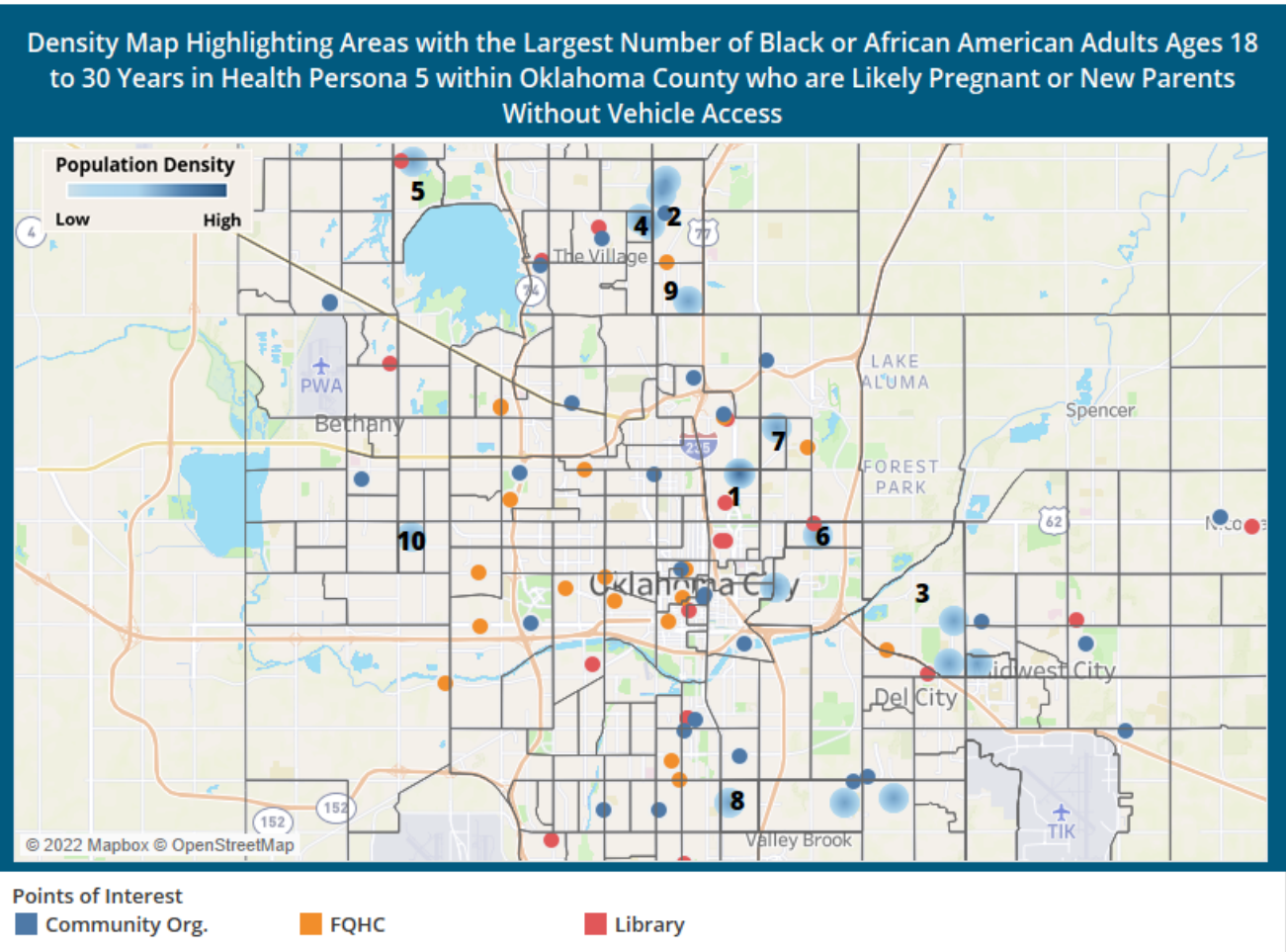
Top Census Tracts with the Largest Number of Black or African American Adults Ages 18 to 30 Years in Health Persona 5 within Oklahoma County who are Likely Pregnant or New Parents Without Vehicle Access

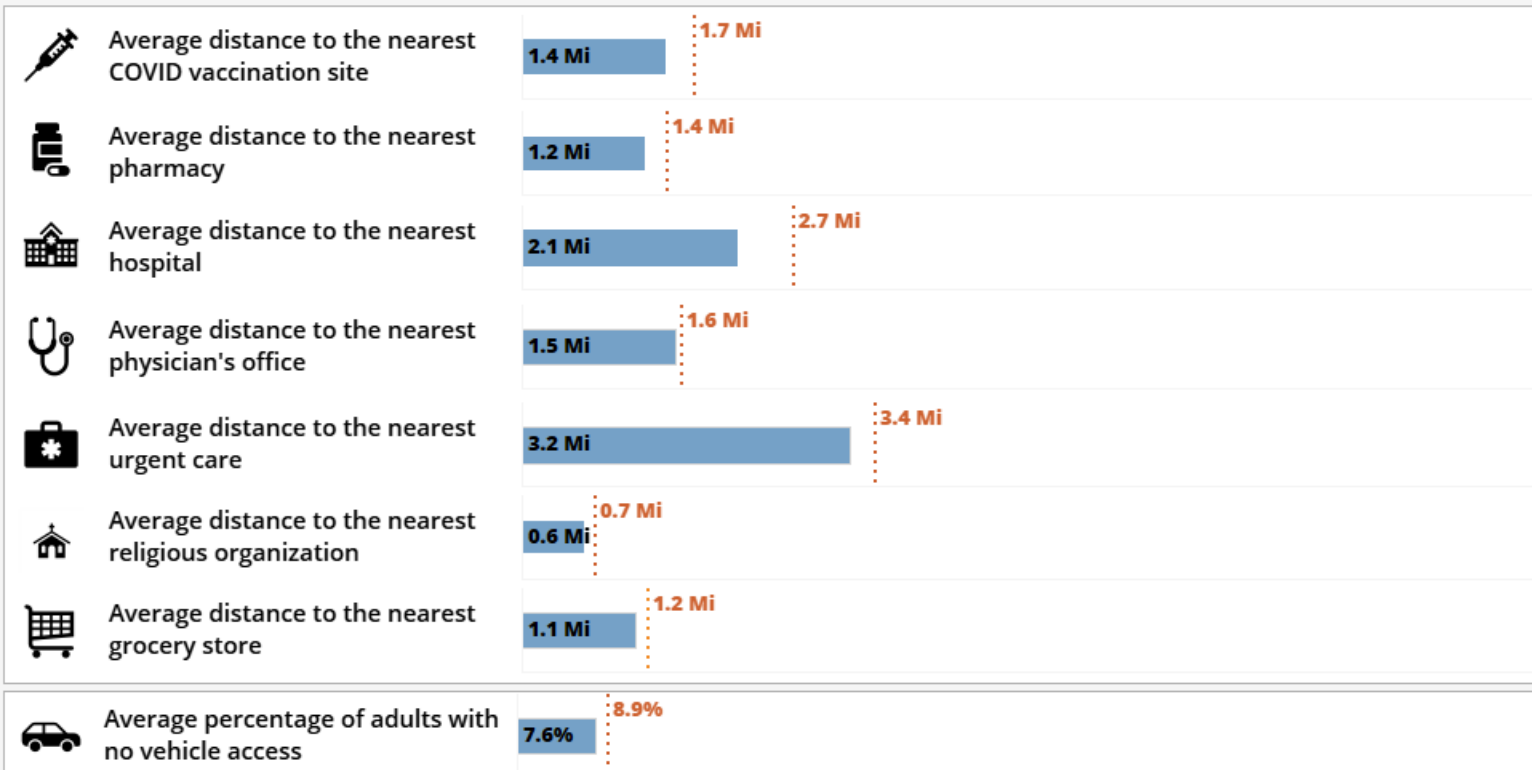| #	Census Tract	Zip Code	Estimated # of Adults
1	40109100500	73105	<25
2	40109106302	73114	<25
3	40109107806	73110,73115,73117	<25
4	40109108309	73114	<25
5	40109108536	73130,73162	<25
6	40109101300	73111,73117,73121	<25
7	40109105201	73111	<25
8	40109105400	73129	<25
9	40109106301	73114	<25
10	40109106917	73127	<25

COVID-19 Vaccine Provider Analysis

Access and Barriers in Oklahoma County | Black or African American Adults Ages 18 to 30 Years in Health Attitude Persona 5: "Not Right Now"
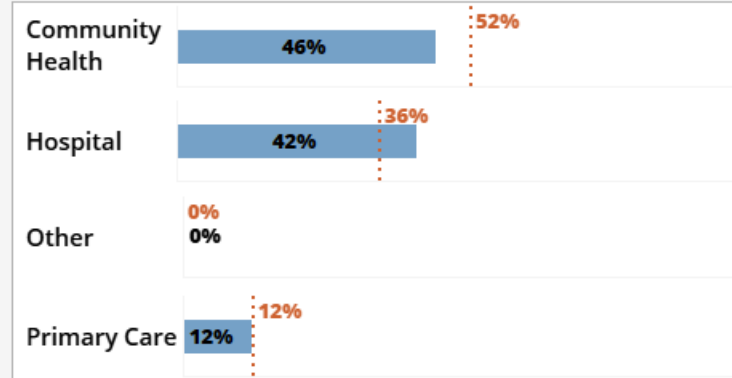
How to Interpret

➢ The bar in *blue* shows the **average distance** to local **points of interest, potential barriers to accessing vaccines, and healthcare facility & media source preferences** for the **priority population** described in the title

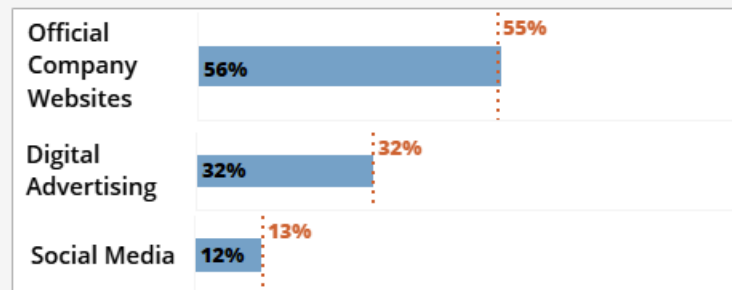➢ The dotted bar/text in *orange* shows reference values for the overall state

Access to Point of Interest & Potential Barriers

		Blue	Orange
💉	Average distance to the nearest COVID vaccination site	1.4 Mi	1.7 Mi
💊	Average distance to the nearest pharmacy	1.2 Mi	1.4 Mi
🏥	Average distance to the nearest hospital	2.1 Mi	2.7 Mi
🩺	Average distance to the nearest physician's office	1.5 Mi	1.6 Mi
🧰	Average distance to the nearest urgent care	3.2 Mi	3.4 Mi
⛪	Average distance to the nearest religious organization	0.6 Mi	0.7 Mi
🛒	Average distance to the nearest grocery store	1.1 Mi	1.2 Mi
🚗	Average percentage of adults with no vehicle access	7.6%	8.9%

Preferred Healthcare Facility

	Blue	Orange
Community Health	46%	52%
Hospital	42%	36%
Other	0%	0%
Primary Care	12%	12%

Preferred Healthcare Media Source

	Blue	Orange
Official Company Websites	56%	55%
Digital Advertising	32%	32%
Social Media	12%	13%

Preferred Contact Channel

1. Text	1. Text
2. Cell	2. Cell
3. Email	3. Email

COVID-19 Vaccine Provider Analysis:
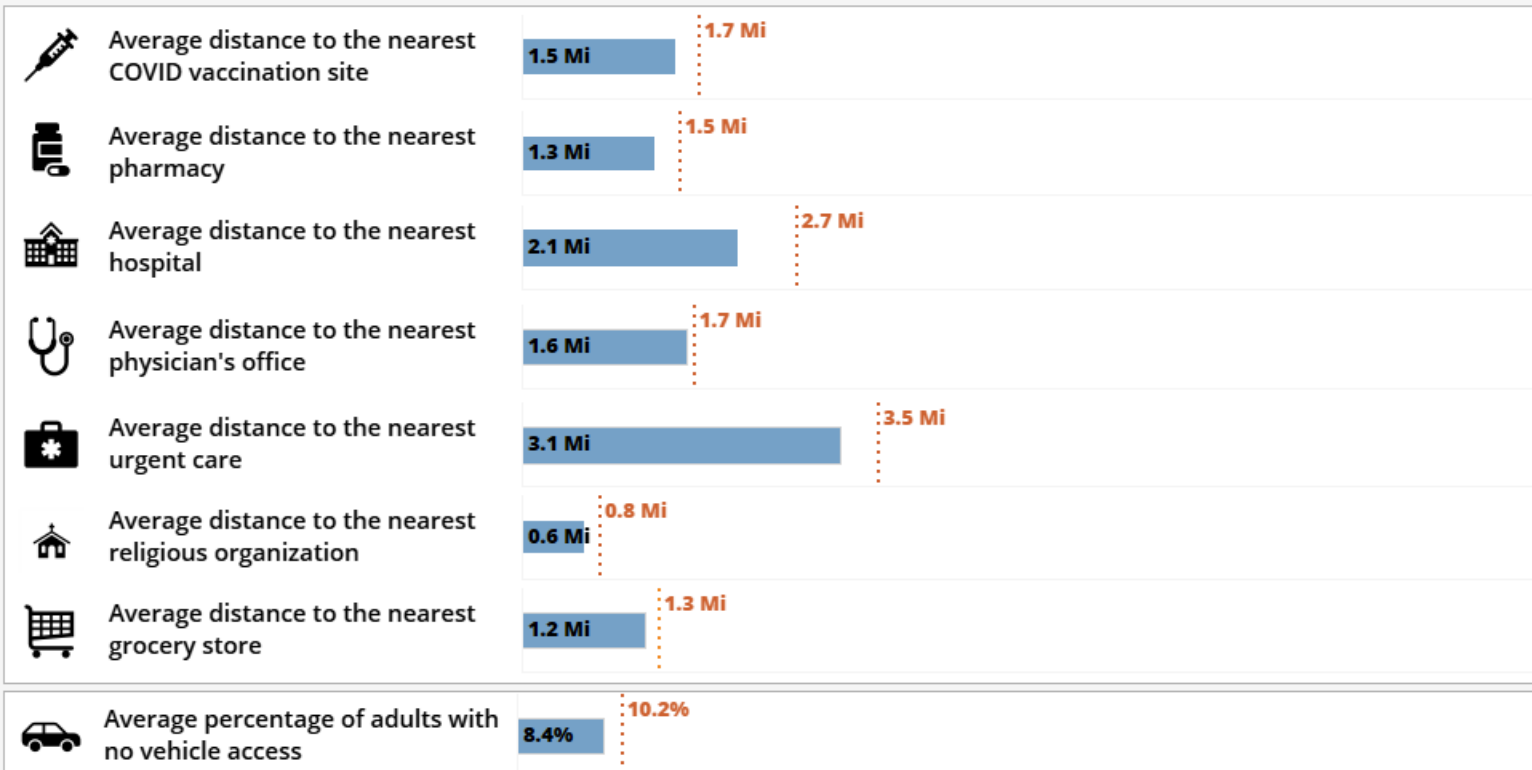# Likely Pregnant or New Parent Population

Access and Barriers in Oklahoma County | Black or African American Adults Ages 18 to 30 Years who are Likely Pregnant or a New Parent in Health Attitude Persona 5: "Not Right Now"
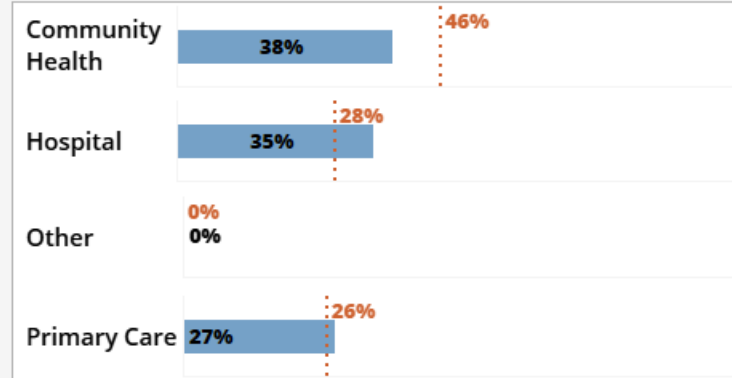
How to Interpret

➤ The bar in *blue* shows the **average distance** to local **points of interest, potential barriers to accessing vaccines, and healthcare facility & media source preferences** for the **priority population** described in the title
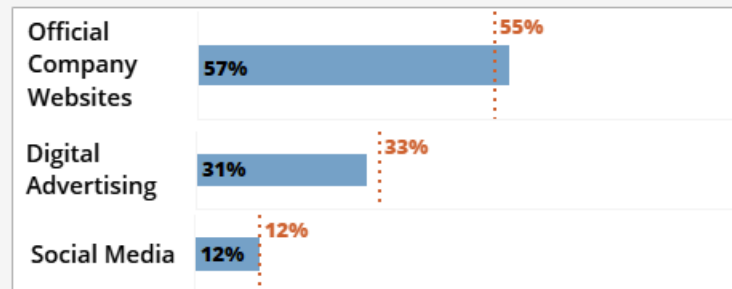➤ The dotted bar/text in *orange* shows reference values for the overall state

Access to Point of Interest & Potential Barriers

Metric	Priority	State
Average distance to the nearest COVID vaccination site	1.5 Mi	1.7 Mi
Average distance to the nearest pharmacy	1.3 Mi	1.5 Mi
Average distance to the nearest hospital	2.1 Mi	2.7 Mi
Average distance to the nearest physician's office	1.6 Mi	1.7 Mi
Average distance to the nearest urgent care	3.1 Mi	3.5 Mi
Average distance to the nearest religious organization	0.6 Mi	0.8 Mi
Average distance to the nearest grocery store	1.2 Mi	1.3 Mi
Average percentage of adults with no vehicle access	8.4%	10.2%

Preferred Healthcare Facility

Facility	Priority	State
Community Health	38%	46%
Hospital	35%	28%
Other	0%	0%
Primary Care	27%	26%

Preferred Healthcare Media Source

Source	Priority	State
Official Company Websites	57%	55%
Digital Advertising	31%	33%
Social Media	12%	12%

Preferred Contact Channel

1. Text	1. Text
2. Email	2. Email
3. Cell	3. Mail

Next Steps

Ways to Use This Report

This report includes supplemental data to support your jurisdiction's COVID-19 vaccination outreach strategy. Consider the following strategies and resources that may be helpful in using these analyses to support on-the-ground efforts.

Uninsured Population

Consider partnering with organizations providing health and social services to the community

Internet Access Barrier

Prioritize in-person outreach at highly-visited locations like schools and grocery stores to reach this population

Vehicle Access Barrier

Provide mobile vaccination or at-home vaccination options to those who rely on public transportation

Health Attitudes & Behavioral Characteristics

Consider how outreach and messaging strategies could be tailored to the most prominent health attitudes

Additional Resources

The below links from the CDC may help inform your organization's COVID-19 vaccination strategies

Address Vaccine Hesitancy

- Acknowledging Tough Questions and Building Trust
- COVID-19 State of Vaccine Confidence Insights Reports
- 12 COVID-19 Vaccination Strategies for Your Community
- COVID-19 Vaccine Community Features

Provide COVID-19 & Flu Vaccine Support

- CDC's Strategy to Reinforce Confidence in COVID-19 Vaccines
- How to Tailor COVID-19 Vaccine Information to Your Specific Audience

Identify Trusted Messengers & Use Effective Messaging

- Increasing COVID-19 Vaccine Uptake Among Members of Racial and Ethnic Minority Communities
- CDC Influenza Social Media Toolkit

Appendix

Health Attitude Persona[1] Complete Descriptions

Health Attitude Persona 1: "Leading the Way"	Health Attitude Persona 2: "In It For Fun"	Health Attitude Persona 3: "Value Independence"	Health Attitude Persona 4: "I Need a Plan"	Health Attitude Persona 5: "Not Right Now"	Health Attitude Persona 6: "Get Through the Day"
People in this segment **view health as a core value** and **feel empowered to stay healthy**. While they are not immune to health challenges, they **exercise, eat well**, and **prioritize preventative care**. They are **active health information seekers** and engaged in their **personal health management** and wellness. Leading the Way tend to **avoid artificial ingredients** preferring natural and organic foods. They have a **positive outlook** on life and prioritize hobbies, personal interests and eliminating stress. On average, this segment **tends to be wealthier**.	Members of this segment **enjoy competition and challenge** to excel in their careers, personal lives, and health. This segment is **driven by physical fitness and exercise** as part of their **image** and surround themselves with others who inspire them. They are open to including **healthy** additives to their diet. Like the "Leading the Way" segment, these individuals **feel they can control their health outcomes**. This segment tends to **enjoy helping the environment**, learning new things, and are **avid users of technology and mobile apps to track health and fitness goals.**	Members of this segment are **unlikely to prioritize health.** They are likely **skeptical** about the medical establishment and prefer to rely on their own knowledge. They **may not see value in health screenings** or medications (preferring natural remedies). They are less likely to rely on health professionals and have a **'do-it-yourself' attitude**-pulling from multiple sources, to develop their own health strategy. Their "patch-work" health strategies are **often ineffective** and many struggle with **chronic conditions**, work life balance, and **excess stress.**	Members of this segment **trust health care professionals and the health system.** They likely **have health insurance and prescription medications to keep them healthy.** This segment likes **a step-by-step plan** but struggles with discipline. They engage in preventative care but are **less likely to exercise.** They tend to be **older adults** with **conservative values** who may feel **overwhelmed** by the amount of health information available in the media. They likely feel a responsibility to themselves and the community to **do the right thing**.	Individuals in this segment are **younger and do not have major health issues**. Daily life often takes priority over preventative health. They are **family-oriented** with **at least one child**. While they lead healthy lifestyles, **many have a vice**--such as smoking or junk food. Their **motivation for healthy behaviors is driven by appearance** and **social relationships** rather than preventive health. These individuals **feel successful at finding information.** While they lead fulfilling lives, **they often feel overwhelmed and stressed by many competing priorities.**	Members of this segment likely have **chronic conditions**, or long-term health challenges. They are **willing to try new strategies** for improving their health but are often disappointed by the results. They may have **conditions preventing them from exercising** or engaging in other health promotion behaviors. They tend to spend a lot of time **online searching** for health information. These individuals are often **overwhelmed** by the health challenges and more likely to feel that **health is a losing battle.** On average this segment tends to be the **least wealthy**.

Data Sources

Metric	Source	Description
Insurance	Deloitte HealthPrism™ (Source 1, 2)	Uninsured population estimates are derived from a HealthPrism™ predictive model to support local planning.
Vehicle Access	Deloitte HealthPrism™ (Source 1, 2)	Predictive model-based variable that indicates if an individual is likely to own a vehicle or not.
Access to Places of Interest	Deloitte HealthPrism™ (Source 1, 2)	Average estimated drive distance from each household to the closest places of interest (POI.
Health Attitude Personas	Deloitte HealthPrism™ (Source 1, 2)	Health attitude personas come from third-party consumer marketing data and are modeled based on both observable behavior and population surveys. Personas are not developed specifically for a health condition or vaccination purposes and findings do not assume any one persona is more/less at-risk for a health condition or more/less vaccinated.
Preferred Healthcare Media Source	Deloitte HealthPrism™ (Source 1, 2)	Preferred healthcare media source predicts the likelihood of an individual being open and willing to receive information via company websites or blogs, social media or digital advertising. Preferred healthcare media sources come from third-party consumer marketing data and are modeled based on both observable behavior and population surveys. These predictions are not specific to vaccination-related media.
FQHC Locations	HRSA Data Warehouse	HRSA-funded health center locations across the United States.
Pregnancy	Deloitte HealthPrism™ (Source 1, 2)	Predictive model-based variable that indicates if an individual is likely to be pregnant or not based on parameters such as age, household composition, and financial variables.
New Parent	Deloitte HealthPrism™ (Source 1, 2)	Predictive model-based variable that indicates if an individual is likely to b have a child between the ages 0 and 2.
Internet Access	US Census Bureau 2020 5 Year American Community Survey	Percent of households either with a computer but without an Internet subscription or without a computer.
Religious Organization Locations	SafeGraph	Geographic location of religious organizations provided by SafeGraph's places of interest dataset.

Data Sources (cont.)

Metric	Source	Description
Public Library Locations	SafeGraph	Geographic location of libraries provided by SafeGraph's places of interest dataset.
Public Transportation Stop Locations	MobilityData	Geographic location of public transportation stops provided by MobilityData, a non-profit organization that improves and extends mobility data formats.
School Locations	SafeGraph	Geographic locations of elementary schools, secondary schools, professional schools, colleges and universities provided by SafeGraph's places of interest dataset.