State of Missouri COVID-19 Response
Vaccine Distribution Analysis
June 28, 2021
This document includes COVID-19 data analysis for the State of Missouri in support of their vaccine ordering and distribution process.

Follow the links below to view each section:

**Executive Summary** [3]

**Spotlight Analysis: Boone County Mobile Vaccination Planning** [4-16]

**COVID-19 Case Rate Hotspot Analysis** [17-18]

**Statewide Uptake (All Ages)** [19-21]

**18+ Population Analysis** [22-28]

**12-17 Population Analysis** [29-33]

**Appendix** [34-37]
Executive Summary | Key Insights

**Boone County Mobile Vaccination Planning**
- Eight Census Tracts were identified for Boone County's local health department to target with their mobile vaccination unit – based on an analysis of density of past and planned events, vaccination rates, and COVID-19 vulnerability

**COVID-19 Case Rate Hotspots**
- Hotspots again focused within Region D in the Greene County/Springfield and Joplin areas
- A hotspot is getting larger and more significant in Kennett within Dunklin County in the Bootheel region
- Linn-Livingston County hotspots moderated somewhat, with challenges remaining in south Livingston and a new hotspot appearing in Region H (Worth County)

**Census Tract Analysis**
- Vaccine uptake hotspots primarily emerged in the St. Louis metro region this week amid the backdrop of other statewide COVID-19 case rate hotspots

**Age Cohort Analyses**
- Similar to previous weeks, 18+ vaccine initiation largely remained consistent
- Consistent with previous trends, the refreshed COVID-19 Vulnerability Index (18+) indicates the top 150 CTs are within 4 regions across the State – Regions C, A, E and D
- There is a stark difference between 12-17 year-old vaccine uptake between urban and rural counties - 26.3% of this age cohort has initiated vaccination in urban counties, in comparison to 6.9% in rural counties

*Note:* Data on vaccinations include 1st round Moderna & Pfizer vaccinations and J&J vaccinations, are based on residence of the 18+ individual vaccinated (unless otherwise stated), and are from 06/22/2021. COVID-19 case rate data is a 14-day case rate change analysis using data from 06/10/21 to 06/24/21. Methodology, data sources, and limitations are available in the Appendix. Full data set provided in corresponding Excel file.
Spotlight Analysis:
Boone County Mobile Vaccination Planning
Purpose of this document

1. Identify additional areas within the county for the mobile vaccination unit to potentially target in the future, based on COVID-19 vulnerability, vaccination rates, and where the unit has gone so far.

2. Use location data provided by the State of Missouri to provide information on the demographic characteristics of the locations the Boone County mobile vaccination unit plans on going past 06/23/2021.

Key takeaways

- Based on our analysis of the relationship between density of prior/planned events, vaccination rates, and COVID-19 vulnerability, we have identified 8 Census Tracts to consider for future mobile vaccination events – 2 of which already have future events planned.

- The most vulnerable Census Tracts based on the COVID-19 Vulnerability Index (CVI) in Boone County are within the urban core of Columbia – where the majority of mobile events have taken place thus far.

- Future planned events are taking place in Census Tracts with varying levels of racial/ethnic diversity, populations living below 138% Federal Poverty Level (FPL), and educational attainment.

Note: Data on vaccinated individuals are based on 1st round Moderna & Pfizer vaccinations and J&J vaccinations, based on the residence of the 18+ individual vaccinated, and as of 06/15/2021. COVID-19 case burden as of 06/21/21. Vaccination, case burden, and event location data provided by the State of Missouri. Points of interest data from the State of Missouri and SafeGraph. Mobile vaccination events are tagged to “Planned” if they are to occur on or after 6/23 while “occurred” is any event before 6/23. Full data set provided in corresponding Excel file.
Potential Additional Mobile Events

Demographic Census Tract Information
Past & Future Mobile Vaccination Events in Boone County

Below are locations the mobile vaccination unit has already targeted (117 total events) in addition to future planned events (22) with an established location (19).

**FUTURE EVENTS (22)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Census Tract</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/26/2021</td>
<td>Mobile Vax &amp; Vote</td>
<td>29019001002</td>
</tr>
<tr>
<td>6/26/2021</td>
<td>Mobile Vax &amp; Vote</td>
<td>29019001502</td>
</tr>
<tr>
<td>6/26/2021</td>
<td>Mobile Vax &amp; Vote</td>
<td>29019002000</td>
</tr>
<tr>
<td>6/26/2021</td>
<td>Mobile Vax &amp; Vote</td>
<td>29019001400</td>
</tr>
<tr>
<td>6/26/2021</td>
<td>Mobile Vax &amp; Vote</td>
<td>29019001503</td>
</tr>
<tr>
<td>6/26/2021</td>
<td>Rock the Community</td>
<td>29019000900</td>
</tr>
<tr>
<td>6/29/2021</td>
<td>City Hall</td>
<td>29019002100</td>
</tr>
<tr>
<td>7/8/2021</td>
<td>Stephen's Lake Concert</td>
<td>29019001001</td>
</tr>
<tr>
<td>7/8/2021</td>
<td>Daniel Boone Reg Library</td>
<td>29019000600</td>
</tr>
<tr>
<td>7/9/2021</td>
<td>Islamic Center/School</td>
<td>29019000500</td>
</tr>
<tr>
<td>7/10/2021</td>
<td>Boone County Fire Station 1</td>
<td>29019001601</td>
</tr>
<tr>
<td>7/17/2021</td>
<td>Mobile Vax &amp; Vote</td>
<td>TBD</td>
</tr>
<tr>
<td>7/20/2021</td>
<td>City Hall</td>
<td>29019002100</td>
</tr>
<tr>
<td>7/21/2021</td>
<td>Family Fun Fest</td>
<td>29019001300</td>
</tr>
<tr>
<td>7/21/2021</td>
<td>Boone County Fair</td>
<td>29019001503</td>
</tr>
<tr>
<td>7/22/2021</td>
<td>Boone County Fair</td>
<td>29019001503</td>
</tr>
<tr>
<td>7/23/2021</td>
<td>Boone County Fair</td>
<td>29019001503</td>
</tr>
<tr>
<td>7/23/2021</td>
<td>Show-Me State Games</td>
<td>TBD</td>
</tr>
<tr>
<td>7/23/2021</td>
<td>Show-Me State Games</td>
<td>TBD</td>
</tr>
<tr>
<td>7/24/2021</td>
<td>Boone County Fair</td>
<td>29019001503</td>
</tr>
<tr>
<td>7/28/2021</td>
<td>Food Truck Round Up</td>
<td>29019001300</td>
</tr>
<tr>
<td>7/29/2021</td>
<td>Project Homeless Connect</td>
<td>29019002100</td>
</tr>
</tbody>
</table>

**Note:** Data provided by the State of Missouri. Mobile vaccination events are tagged to “Planned” if they are to occur on or after 6/23 while “Occurred” is any event before 6/23. Mobile vaccination events that occurred at the same location will only appear once on the map.

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Identifying Boone County’s Vulnerable Populations

The map below visualizes Census Tracts within Boone County by their COVID-19 Vulnerability Index (CVI) ranking.

**COVID-19 VULNERABILITY INDEX**

**FACTORS CONTRIBUTING TO VULNERABILITY**
- COVID-19 Case Burden
- Living below 138% of the Federal Poverty Level
- 1 or more medical comorbidity
- Minority populations
- Percent Unvaccinated

**KEY OBSERVATIONS**

- There are 3 Census Tracts in Boone County that fall in the 80th percentile based on the CVI across Missouri – all 3 located in the center of the county, within and around Columbia.
- These highly vulnerable Census Tracts tend to have varying levels of racial/ethnic diversity, above average populations living below 138% FPL, and/or with 1 or more medical comorbidities.

**Note:** Data on vaccinated individuals are based on 1st round Moderna & Pfizer vaccinations and J&J vaccinations, based on the residence of the 18+ individual vaccinated, and as of 06/15/2021. COVID-19 case burden data provided by the State of Missouri. Full data set provided in corresponding Excel file.

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To identify future target areas within Boone County, we analyzed the relationships between:

1. Density of prior and planned mobile events
2. Percent of population unvaccinated
3. Ranking based on the COVID-19 Vulnerability Index (CVI)

The following 8 Census Tracts emerged as having lower event coverage and higher rates of unvaccinated & vulnerable populations based on County specific quintiles:

<table>
<thead>
<tr>
<th>Unvaccinated (%) Rank</th>
<th>Census Tract</th>
<th>Planned Mobile Clinic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>29019001901*</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>29019002000*</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>29019001503</td>
<td>✓</td>
</tr>
<tr>
<td>4</td>
<td>29019001701</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>29019001601</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>29019000700</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>29019001504</td>
<td>✓</td>
</tr>
<tr>
<td>8</td>
<td>29019001202</td>
<td></td>
</tr>
</tbody>
</table>

*Deep-dive on these Census Tracts in the following slides

Note: Data on vaccinated individuals are based on 1st round Moderna & Pfizer vaccinations and J&J vaccinations, based on the residence of the 18+ individual vaccinated, and as of 06/15/2021. COVID-19 case burden as of 06/21/21. Vaccination, COVID-19 case burden, and mobile vaccination event data provided by the State of Missouri. Full data set provided in corresponding Excel file.
Of the 8 identified Census Tracts, this Census Tract had the highest percent unvaccinated. Below is a detailed profile of the Census Tract including information on: vaccination, demographics, and points of interest

CENSUS TRACT #1 - 29019001901

Potential Location: CT Profile by Highest Percentage Unvaccinated

| Total 18+ Population | Vaccination Gap (#) | Percent Unvaccinated | Cumulative Case Burden (per 100k) | Mobile Vax Events (Past | Planned) |
|----------------------|---------------------|----------------------|----------------------------------|-------------------------|
| 3,978                | 2,241               | 56%                  | 5,963                            | 2 | 0                        |

Note: Data on vaccinated individuals are based on 1st round Moderna & Pfizer vaccinations and J&J vaccinations, based on the residence of the 18+ individual vaccinated, and as of 06/15/2021. COVID-19 case burden as of 06/21/21. Vaccination, case burden, and event location data provided by the State of Missouri. Points of interest data from the State of Missouri and SafeGraph. Mobile vaccination events are tagged to “Planned” if they are to occur on or after 6/23 while “occurred” is any event before 6/23. Mobile vaccination events that occurred at the same location will only appear once on the map.

Legend
- Mobile - Occurred
- Police / fire
- Schools
- Worship
- Mobile vax
- Point of Interest

POTENTIAL LOCATIONS FOR MOBILE VACCINATION UNIT EVENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Woodlandville United Methodist Church</td>
<td>Worship</td>
<td>9801 W Wilhite Ln, Rocheport</td>
</tr>
<tr>
<td>Boone County Fire Protection District Station 7</td>
<td>Police / fire</td>
<td>525 W Dripping Springs Rd, Columbia</td>
</tr>
<tr>
<td>H Town Market And Cafe</td>
<td>Restaurant</td>
<td>241 W Sexton St, Harrisburg</td>
</tr>
</tbody>
</table>

CENSUS TRACT DEMOGRAPHIC CHARACTERISTICS

- 10% living below 138% FPL
- Majority (95%) White
- 23% obtained Bachelor’s degree
- 14% of adults have a disability
- 12% have no access to broadband
- 18% of households are multigenerational
- 25% are above the age of 65
- 1% of households are non-native English speakers
Of the 8 identified Census Tracts, this Census Tract had the second highest percent unvaccinated. Below is a detailed profile of the Census Tract including information on: vaccination, demographics, and points of interest

**CENSUS TRACT #2 - 29019002000**

<table>
<thead>
<tr>
<th>Total 18+ Population</th>
<th>Vaccination Gap</th>
<th>Percent Unvaccinated</th>
<th>Cumulative Case Burden (per 100k)</th>
<th>Mobile Vax Events (Past</th>
<th>Planned)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,407</td>
<td>2,377</td>
<td>54%</td>
<td>13,017</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

**Potential Locations for Mobile Vaccination Unit Events**

- **University of Missouri Columbia**
  - College
  - Address: 100 S Rollins St, Centralia

- **Centralia Family Health Clinic**
  - RHC
  - Address: 1021 E Hwy 22, Centralia

- **Prenger's Extreme Mart & Hardware**
  - Grocery
  - Address: 327 E. Singleton St., Centralia

- **Good Shepherd Lutheran Church**
  - Worship
  - Address: 110 W Gano Chance Dr, Centralia

**Census Tract Demographic Characteristics**

- **21%** living below 138% FPL
- **Majority (96%)** White
- **20%** obtained Bachelor's degree
- **21%** have no access to broadband
- **25%** are above the age of 65
- **21%** of adults have a disability
- **16%** of households are multigenerational
- **0.6%** of households are non-native English speakers

**Note:** Data on vaccinated individuals are based on 1st round Moderna & Pfizer vaccinations and J&J vaccinations, based on the residence of the 18+ individual vaccinated, and as of 06/15/2021. COVID-19 case burden as of 06/21/21. Vaccination, case burden, and event location data provided by the State of Missouri. Points of interest data from the State of Missouri and SafeGraph. Mobile vaccination events are tagged to “Planned” if they are to occur on or after 6/23 while “occurred” is any event before 6/23. Mobile vaccination events that occurred at the same location will only appear once on the map.
Past & Planned Mobile Events

Demographic Census Tract Information
Upcoming Mobile Vaccine Event: Census Tract Profile

Below is a detailed profile of a Census Tract hosting future mobile vaccination units, including information on vaccination, demographics, and points of interest.

CENSUS TRACT # 3 - 29019001503

<table>
<thead>
<tr>
<th>Total 18+ Population</th>
<th>Vaccination Gap (#)</th>
<th>Percent Unvaccinated</th>
<th>Cumulative Case Burden (per 100k)</th>
<th>Mobile Vax Events (Past</th>
<th>Planned)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,907</td>
<td>1,475</td>
<td>51%</td>
<td>3,684</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

18% obtained Bachelor's degree
18% have no access to broadband
15% are above the age of 65
15% have no access to broadband
4% of households are non-native English speakers

Majority (63%) White
30% Black and/or African American
19% of adults have a disability
13% of households are multigenerational

Potential Organizations to Collaborate With to Promote Mobile Vaccination Events

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boone County Fire Protection District Station 5</td>
<td>Fire Department</td>
<td>1675 E Prathersville Rd</td>
</tr>
<tr>
<td>Boys and Girls Club</td>
<td>Community</td>
<td>5801 Arbor Pointe Pkwy</td>
</tr>
<tr>
<td>Juvenile Justice Center</td>
<td>Schools</td>
<td>5665 Roger I Wilson Mem Drive</td>
</tr>
</tbody>
</table>

Note: Data on vaccinated individuals are based on 1st round Moderna & Pfizer vaccinations and J&J vaccinations, based on the residence of the 18+ individual vaccinated, and as of 06/15/2021. COVID-19 case burden as of 06/21/21. Vaccination, case burden, and event location data provided by the State of Missouri. Points of interest data from the State of Missouri and SafeGraph. Mobile vaccination events are tagged to “Planned” if they are to occur on or after 6/23 while “occurred” is any event before 6/23. Mobile vaccination events that occurred at the same location will only appear once on the map.
Upcoming Mobile Vaccine Event: Census Tract Profile

Below is a detailed profile of a Census Tract hosting future mobile vaccination units, including information on: vaccination, demographics, and points of interest

**CENSUS TRACT #7 - 29019001504**

<table>
<thead>
<tr>
<th>Total 18+ Population</th>
<th>Vaccination Gap (≠)</th>
<th>Percent Unvaccinated</th>
<th>Cumulative Case Burden (per 100k)</th>
<th>Mobile Vax Events (Past</th>
<th>Planned)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6,969</td>
<td>2,348</td>
<td>34%</td>
<td>33,366</td>
<td>0</td>
<td>6</td>
</tr>
</tbody>
</table>

**POTENTIAL ORGANIZATIONS TO COLLABORATE WITH TO PROMOTE MOBILE VACCINATION EVENTS**

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys &amp; Girls Club of America</td>
<td>Community</td>
<td>4000 Derby Ridge Dr</td>
</tr>
<tr>
<td>Columbia Fire Department Station 4</td>
<td>Police/Fire</td>
<td>2300 N Oakland Gravel Rd</td>
</tr>
<tr>
<td>5 Places of Worship</td>
<td>Worship</td>
<td>Various Locations</td>
</tr>
</tbody>
</table>

**CENSUS TRACT DEMOGRAPHIC CHARACTERISTICS**

- 19% living below 138% FPL
- Majority (70%) White
- 21% obtained Bachelor's degree
- 18% Black
- 4% Latinx
- 13% of adults have a disability
- 22% have no access to broadband
- 12% of households are multigenerational
- 7% of households are non-native English speakers
- 18% are above the age of 65

**Note**: Data on vaccinated individuals are based on 1st round Moderna & Pfizer vaccinations and J&J vaccinations, based on the residence of the 18+ individual vaccinated, and as of 06/15/2021. COVID-19 case burden as of 06/21/21. Vaccination, case burden, and event location data provided by the State of Missouri. Points of interest data from the State of Missouri and SafeGraph. Mobile vaccination events are tagged to “Planned” if they are to occur on or after 6/23 while "occurred" is any event before 6/23. Mobile vaccination events that occurred at the same location will only appear once on the map.
Upcoming Mobile Vaccine Event: Census Tract Profile

Below is a detailed profile of a Census Tract hosting future mobile vaccination units, including information on: vaccination, demographics, and points of interest

CENSUS TRACT 29019000900

Total 18+ Population: 1,065
Vaccination Gap: 467
Percent Unvaccinated: 44%
Cumulative Case Burden: 5,206
Mobile Vax Events: 0 | 7

POTENTIAL ORGANIZATIONS TO COLLABORATE WITH TO PROMOTE MOBILE VACCINATION EVENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moser’s Foods</td>
<td>Grocery</td>
<td>705 Business Loop 70 W, Columbia</td>
</tr>
<tr>
<td>Boys &amp; Girls Club</td>
<td>Community</td>
<td>1200 N 7th St, Columbia</td>
</tr>
<tr>
<td>Compass Health</td>
<td>FQHC</td>
<td>1101 N Providence Rd, Columbia</td>
</tr>
</tbody>
</table>

CENSUS TRACT DEMOGRAPHIC CHARACTERISTICS

- 42% living below 138% FPL
- Majority (51%) Black/African American
- 21% obtained Bachelor’s degree
- 25% of adults have a disability
- 4% of households are multigenerational
- 8% of households are non-native English speakers
- 22% have no access to broadband
- 16% are above the age of 65

Note: Data on vaccinated individuals are based on 1st round Moderna & Pfizer vaccinations and J&J vaccinations, based on the residence of the 18+ individual vaccinated, and as of 06/15/2021. COVID-19 case burden as of 06/21/21. Vaccination, case burden, and event location data provided by the State of Missouri. Points of interest data from the State of Missouri and SafeGraph. Mobile vaccination events are tagged to “Planned” if they are to occur on or after 6/23 while “occurred” is any event before 6/23. Mobile vaccination events that occurred at the same location will only appear once on the map.

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Upcoming Mobile Vaccine Event: Census Tract Profile

Below is a detailed profile of a Census Tract hosting future mobile vaccination units, including information on: vaccination, demographics, and points of interest.

**CENSUS TRACT 29019000600**

<table>
<thead>
<tr>
<th>Total 18+ Population</th>
<th>Vaccination Gap (#)</th>
<th>Percent Unvaccinated</th>
<th>Cumulative Case Burden (per 100k)</th>
<th>Mobile Vax Events (Past</th>
<th>Planned)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,011</td>
<td>1,104</td>
<td>25%</td>
<td>5,781</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

**POTENTIAL ORGANIZATIONS TO COLLABORATE WITH TO PROMOTE MOBILE VACCINATION EVENTS**

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schnucks</td>
<td>Grocery</td>
<td>111 S Providence Rd, Columbia</td>
</tr>
<tr>
<td>College Park</td>
<td>College</td>
<td>1114 College Park Dr, Columbia</td>
</tr>
<tr>
<td>Christian Academy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daniel Boone</td>
<td>Library</td>
<td>100 W Broadway, Columbia</td>
</tr>
<tr>
<td>Regional Library</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CENSUS TRACT DEMOGRAPHIC CHARACTERISTICS**

- **16% living below 138% FPL**
- **Majority (90%) White**
- **25% obtained Bachelor’s degree**
- **12% of adults have a disability**
- **3% have no access to broadband**
- **15% of households are multigenerational**
- **30% are above the age of 65**
- **3% of households are non-native English speakers**

**Legend**
- **Color**
  - College
  - Library
  - Mobile - Planned
  - Schools
  - Worship
- **Shape**
  - Mobile vax
  - Point of Interest

**Note:** Data on vaccinated individuals are based on 1st round Moderna & Pfizer vaccinations and J&J vaccinations, based on the residence of the 18+ individual vaccinated, and as of 06/15/2021. COVID-19 case burden as of 06/21/21. Vaccination, case burden, and event location data provided by the State of Missouri. Points of interest data from the State of Missouri and SafeGraph. Mobile vaccination events are tagged to “Planned” if they are to occur on or after 6/23 while “occurred” is any event before 6/23. Mobile vaccination events that occurred at the same location will only appear once on the map.
COVID-19 Case Rate Hotspot Analysis
Statistically significant case rate hotspots between 6/10/21 and 6/24/21 are displayed on the right – areas with high changes in case rates in comparison to surrounding areas.

COVID-19 Case Rate Comparisons
Classified Rates vs Statistical Hotspots

14-Day COVID-19 Case Rate Change
June 10th through June 24th

Regional COVID-19 outbreak hotspots again were focused within Region D in the Greene County/Springfield and Joplin areas. A hotspot is getting larger and more significant in Kennett within Dunklin County in the Bootheel region.

Linn-Livingston County hotspots moderated somewhat, with challenges remaining in south Livingston and a new hotspot appearing in Region H (Worth County).

Note: COVID-19 case rate data provided by the State of Missouri as of 06/24/21. Methodology, data sources, and limitations are available in the Appendix.
Uptake Analysis

All Eligible Populations
Vaccination uptake hotspots are displayed in red for Week 24 (MMWR), indicating Census Tracts where vaccinations have been administered at rates significantly higher than State averages.

**Vaccination Hotspots and Significance | Week 24**

**Hotspots of Vaccinations at the Census Tract Level**

Vaccination hotspots became concentrated in **Greater St. Louis**, particularly in **vulnerable suburbs**. Uptake rates evened out elsewhere, including **Kansas City**.

**Note:** Data on vaccinated individuals is based on 1st round Moderna & Pfizer vaccinations and J&J vaccinations, includes all ages, and indicates the residence of the individual vaccinated. Data as of 06/22/2021 using MMWR week in SMV, where Week 24 is 6/13 – 6/19. Methodology, data sources, and limitations are available in the Appendix.
Vaccination uptake deserts are displayed in blue for Week 24 (MMWR), indicating Census Tracts where vaccination uptake is significantly lower than State averages.

Vaccine Uptake Desert at the Census Tract Level

Urban and rural trends remained consistent with recent weeks, particularly regarding deserts in state’s southeast corner and bootheel regions. Recent increases in uptake east of Kansas City contrasts with regional (low) uptake rates. Uptake across St. Louis and surrounding suburbs continues to be patchy.

Note: Data on vaccinated individuals is based on 1st round Moderna & Pfizer vaccinations and J&J vaccinations, includes all ages, and indicates the residence of the individual vaccinated. Data as of 06/22/2021 using MMWR week in SMV, where Week 24 is 6/13 – 6/19. Methodology, data sources, and limitations are available in the Appendix.
18+ Population Analysis
Regional Overview

This table provides vaccination progress metrics at the regional level to understand how the share of vaccinations varies across the State.

<table>
<thead>
<tr>
<th>REGIONS</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>Statewide</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VACCINATION GAP (#)</strong></td>
<td>645k</td>
<td>93k</td>
<td>970k</td>
<td>441k</td>
<td>157k</td>
<td>196k</td>
<td>69k</td>
<td>106k</td>
<td>92k</td>
<td>2.8M</td>
</tr>
<tr>
<td><strong>% UNVACCINATED WITHIN REGION</strong></td>
<td>55.7%</td>
<td>63.51%</td>
<td>49.29%</td>
<td>61.0%</td>
<td>62.6%</td>
<td>50.0%</td>
<td>69.35%</td>
<td>57.0%</td>
<td>68.6%</td>
<td>54.8%</td>
</tr>
<tr>
<td><strong>SHARE OF ELIGIBLE STATEWIDE POPULATION</strong></td>
<td>22.91%</td>
<td>2.91%</td>
<td>38.92%</td>
<td>14.30%</td>
<td>4.94%</td>
<td>7.74%</td>
<td>1.97%</td>
<td>3.67%</td>
<td>2.64%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>SHARE OF STATEWIDE VACCINATIONS</strong></td>
<td>22.41%</td>
<td>2.34%</td>
<td>43.62%</td>
<td>12.34%</td>
<td>4.08%</td>
<td>8.54%</td>
<td>1.34%</td>
<td>3.49%</td>
<td>1.83%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>SHARE OF STATEWIDE REMAINING UNVACCINATED</strong></td>
<td>23.33%</td>
<td>3.37%</td>
<td>35.04%</td>
<td>15.92%</td>
<td>5.65%</td>
<td>7.07%</td>
<td>2.50%</td>
<td>3.82%</td>
<td>3.30%</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Note:** Data on vaccinations include 1st round Moderna & Pfizer vaccinations and J&J vaccinations, are based on residence of the 18+ individual vaccinated (unless otherwise stated), and are from 06/22/2021. Methodology, data sources, and limitations are available in the Appendix. Cells outlined in green indicate a greater than 1 percentage point discrepancy between share of eligible statewide population and share of statewide vaccinations.
Regional Vaccination Rates Over Time

This visualization displays the weekly change in percent vaccinated in each region over the last 5 weeks for the over 18 population.

18+ Additional Percent of Population Vaccinated by Region (Week 20 to Week 24)

% Change Last Week
- A: 0.4%
- B: 0.3%
- C: 0.4%
- D: 0.4%
- E: 0.3%
- F: 0.4%
- G: 0.3%
- H: 0.4%
- I: 0.4%

Calendar Week (MMWR)

KEY OBSERVATIONS

- Change in additional percent of the population vaccinated by region ranged from 0.29% to 0.43%
- Comparing week over week, initiations fell by 14%; vaccination completions fell by 18%
- Census Tracts in Jackson and St. Louis County made up 9/10 largest decreases in vaccinations week over week
- A Census Tract in Callaway County (29027070400) within Region F saw vaccinations increase by 74 week over week, an increase more than 4x larger than any other CT

Note: All weeks are calendar weeks, defined by SMW using MMWR week, where Week 24 is 6/13 – 6/19. Data on vaccinations include 1st round Moderna & Pfizer vaccinations and J&J vaccinations, are based on residence of the 18+ individual vaccinated (unless otherwise stated), and are from 06/22/2021. Methodology, data sources, and limitations are available in the Appendix.
Missouri counties are ranked by vaccination gap (the number of residents estimated to be unvaccinated and eligible) and percent unvaccinated (estimate of the percent of eligible residents that have not been vaccinated) for the over 18 population – based on vaccine initiations, not including second dose vaccinations.

**TOP 5 COUNTIES BY VACCINATION GAP (#)**

1. **St. Louis**: 410,000
2. **Jackson**: 314,400
3. **St. Charles**: 165,600
4. **Greene**: 127,500
5. **Jefferson**: 116,900

**TOP 5 COUNTIES BY UNVACCINATED (%)**

1. **Pulaski***: 80.3%
2. **Clark**: 76.2%
3. **Ozark**: 75.1%
4. **Putnam**: 74.7%
5. **Scotland**: 74.3%

*Pulaski has the highest percent unvaccinated, likely due to the large military presence and missing federal vaccination data.*

**Not**e: Data on vaccinations include 1st round Moderna & Pfizer vaccinations and J&J vaccinations, are based on residence of the 18+ individual vaccinated (unless otherwise stated), and are from 06/22/2021. Methodology, data sources, and limitations are available in the Appendix. No magnitude of change provided this week at the county level due to back-end data updates impacting county-level populations.

Blue indicates a county new to the list in comparison to last week. Full data set provided in corresponding Excel file.
Cumulative Vaccination Gap and Percent Unvaccinated for Eligible Populations

Darker shades on the map on the left indicate Census Tracts with larger vaccination gaps and higher percentages of unvaccinated on the right (for the 18+ population)

**VACCINATION GAP (#)**

**PERCENT UNVACCINATED (%)**

Areas with the largest vaccination gaps continue to align with the more urban areas of highest population across Missouri. Census Tracts with the highest percentages of unvaccinated populations are concentrated in more rural areas in Regions B, D, I, G, & E.

**Note:** Data on vaccinations include 1st round Moderna & Pfizer vaccinations and J&J vaccinations, are based on residence of the 18+ individual vaccinated (unless otherwise stated), and are from 06/22/2021. Methodology, data sources, and limitations are available in the Appendix. Full data set provided in corresponding Excel file.
The graph below visually depicts the updated COVID-19 Vulnerability Index – focus areas are consolidated in urban, low socio-economic and minority-focused communities.

**FACTORS CONTRIBUTING TO VULNERABILITY**
- COVID-19 Case Burden
- Living below 138% of the Federal Poverty Level
- 1 or more medical comorbidity
- Minority populations
- Percent Unvaccinated

**KEY OBSERVATIONS**
- The most vulnerable regions within the State of Missouri remain in the urban cores of Kansas City and St. Louis.
- Only 4 regions are represented in the Top 150 most vulnerable Census Tracts in Missouri – Regions C, A, E and D, respectively in order.

**Note:** Data on vaccinated individuals are based on 1st round Moderna, Pfizer, and J&J vaccinations, based on the residence of the individual (18+) vaccinated, and as of 06/15/21. COVID-19 case rate provided by the State of Missouri as of 6/21/21. Methodology, data sources, and limitations are available in the Appendix. Vaccination rates larger than 1 were set to 1 due to identified data quality issue that is being investigated.
Statewide Top 10 Census Tracts by the COVID-19 Vulnerability Index

Below are the top 10 Census Tracts across Missouri with the highest COVID-19 Vulnerability Index scores – notably all in St. Louis and Kansas City

<table>
<thead>
<tr>
<th>Vulnerability Index Rank</th>
<th>Census Tract</th>
<th>County</th>
<th>18+ Population</th>
<th>18+ Population as of 6/16/21 (%)</th>
<th>Cumulative COVID-19 Case Burden as of 6/21/21 (# per 100k)</th>
<th>1+ Medical Comorbidities (%)</th>
<th>Minority Populations (%)</th>
<th>Living Below 138% FPL (%)</th>
<th>Households without Internet Access (%)</th>
<th>Crowded Households (%)</th>
<th>Individuals with Education Level Below High School (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>54.51%</td>
<td>8,447</td>
<td>29.86%</td>
<td>20.43%</td>
<td>21.64%</td>
<td>17.42%</td>
<td>5.17%</td>
<td>9.98%</td>
</tr>
<tr>
<td>1</td>
<td>29510106200</td>
<td>St. Louis City</td>
<td>980</td>
<td>71.63%</td>
<td>7,443</td>
<td>38.98%</td>
<td>97.96%</td>
<td>70.32%</td>
<td>42.92%</td>
<td>11.68%</td>
<td>16.46%</td>
</tr>
<tr>
<td>2</td>
<td>29189212002</td>
<td>St. Louis</td>
<td>2,196</td>
<td>67.49%</td>
<td>16,402</td>
<td>39.71%</td>
<td>94.85%</td>
<td>54.19%</td>
<td>19.13%</td>
<td>9.19%</td>
<td>12.27%</td>
</tr>
<tr>
<td>3</td>
<td>29095013203</td>
<td>Jackson County</td>
<td>2,837</td>
<td>72.12%</td>
<td>9,786</td>
<td>42.30%</td>
<td>92.14%</td>
<td>55.73%</td>
<td>18.69%</td>
<td>10.85%</td>
<td>12.74%</td>
</tr>
<tr>
<td>4</td>
<td>29189212200</td>
<td>St. Louis</td>
<td>5,797</td>
<td>69.90%</td>
<td>5,262</td>
<td>62.69%</td>
<td>96.89%</td>
<td>38.00%</td>
<td>34.81%</td>
<td>11.04%</td>
<td>14.46%</td>
</tr>
<tr>
<td>5</td>
<td>29095005602</td>
<td>Jackson County</td>
<td>1,321</td>
<td>69.49%</td>
<td>8,146</td>
<td>49.36%</td>
<td>96.37%</td>
<td>47.05%</td>
<td>14.45%</td>
<td>3.64%</td>
<td>15.84%</td>
</tr>
<tr>
<td>6</td>
<td>29189213900</td>
<td>St. Louis</td>
<td>1,389</td>
<td>73.36%</td>
<td>7,461</td>
<td>34.05%</td>
<td>96.90%</td>
<td>58.13%</td>
<td>46.02%</td>
<td>6.55%</td>
<td>10.30%</td>
</tr>
<tr>
<td>7</td>
<td>29189213800</td>
<td>St. Louis</td>
<td>4,763</td>
<td>69.70%</td>
<td>7,411</td>
<td>58.56%</td>
<td>96.66%</td>
<td>33.78%</td>
<td>26.39%</td>
<td>11.36%</td>
<td>14.63%</td>
</tr>
<tr>
<td>8</td>
<td>29189212102</td>
<td>St. Louis</td>
<td>2,286</td>
<td>74.89%</td>
<td>5,261</td>
<td>42.26%</td>
<td>96.59%</td>
<td>47.16%</td>
<td>15.91%</td>
<td>14.01%</td>
<td>13.99%</td>
</tr>
<tr>
<td>9</td>
<td>29189213600</td>
<td>St. Louis</td>
<td>2,877</td>
<td>64.20%</td>
<td>7,016</td>
<td>50.78%</td>
<td>93.33%</td>
<td>44.35%</td>
<td>34.82%</td>
<td>13.18%</td>
<td>17.90%</td>
</tr>
<tr>
<td>10</td>
<td>29510107500</td>
<td>St. Louis City</td>
<td>2,287</td>
<td>73.50%</td>
<td>6,829</td>
<td>38.22%</td>
<td>96.98%</td>
<td>45.90%</td>
<td>41.42%</td>
<td>11.37%</td>
<td>21.04%</td>
</tr>
</tbody>
</table>

**Note:** Data on vaccinated individuals are based on 1st round Moderna & Pfizer vaccinations and J&J vaccinations, based on the residence of the individual (18+) vaccinated, and as of 06/15/21. COVID-19 case burden data provided by the State of Missouri as of 6/21/21. More information on methodology can be found in the Appendix.

For internal use only by State of Missouri. Output based on available data.
12-17 Population Analysis
The graph below shows the distribution of each county's percent unvaccinated for the 12-17 population, colored by urban/rural designation. For example, there are three counties (two urban, one rural) that have an unvaccinated percent between 85% and 87.5%

**KEY OBSERVATIONS**

- There is a **stark divide** in 12-17 year-old vaccine uptake between **rural and urban counties**

- Most counties have an unvaccinated percent between 90% and 100% of their 12-17 population
  - 88 counties have an unvaccinated rate between 90%-100% of their 12-17 population; 17 between 80%-90%; 6 between 80% and 70%; 3 between 70% and 60%; and 1 between 50% and 60%

**Note:** Urban/Rural designation is defined from Census. All weeks are calendar weeks, defined by ShowMeVax (SMV), where Week 24 is 6/13 – 6/19. Data on vaccinated individuals are based on 1st round Moderna & Pfizer vaccinations and J&J vaccinations, based on the residence of the individual vaccinated, and as of 06/22/2021. All vaccinations tagged to the "<18" age group were assumed to be between ages 12-17. Individuals who received a vaccine not tagged to a county were filtered out. Methodology, data sources, and limitations are available in the Appendix.
The graph below depicts the total vaccinations administered over the past 5 weeks, comparing the share of vaccinations that have gone to the under 18 population versus the over 18 population.

**Share of Vaccinations Comparison Between 12-17 and Adult (18+) Population**

**Note:** All weeks are calendar weeks, defined by MMWR pulled from SMV where Week 24 is 6/13 – 6/19. Data on vaccinated individuals are based on 1st round Moderna & Pfizer vaccinations and J&J vaccinations, based on the residence of the individual vaccinated, and as of 06/22/2021. All vaccinations tagged to the “<18” age group were assumed to be between ages 12-17. Individuals who received a vaccine not tagged to a county were filtered out. Methodology, data sources, and limitations are available in the Appendix.

**KEY OBSERVATIONS**

- Vaccine initiation **slightly fell** for both the 18+ and 12-17 population in the latest calendar week.
- The share of initiations for the 12-17 population **dropped to 20%** after remaining steady at ~25% for the previous 3 weeks.
- An estimated 1.5% of the 12-17 population initiated vaccination in Week 24.
Darker shades on the map on the left indicate counties with larger vaccination gaps and higher percentages of unvaccinated on the right (for the 12-17 population).

**VACCINATION GAP (#)**

**PERCENT UNVACCINATED (%)**

Region C has the largest 12-17 population (121,297) remaining eligible for vaccination.

Only 3 counties (Boone County, St. Louis County, and Platte County) have vaccinated 35% of their under 18 population.

Similar to 18+ trends, rural counties continue to experience lower vaccine uptake.

Note: Data on vaccinated individuals are based on 1st round Moderna & Pfizer vaccinations and J&J vaccinations, based on the residence of the individual vaccinated, and as of 06/22/2021. All vaccinations tagged to the “<18” age group were assumed to be between ages 12-17. Analysis ran at the county level due to several Census Tracts still with limited uptake thus far. Null counties were filtered out. Methodology, data sources, and limitations are available in the Appendix. Full data set provided in corresponding Excel file.
Darker shades on the map indicate counties with larger numerical vaccination uptake (for the 12-17 population)

VACCINE INITIATION BY COUNTY (#)

Note: Data on vaccinated individuals are based on 1st round Moderna & Pfizer vaccinations and J&J vaccinations, based on the residence of the individual vaccinated, and as of 06/22/2021. All vaccinations tagged to the “<18” age group were assumed to be between ages 12-17. Analysis ran at the county level due to several Census Tracts still with limited uptake thus far. Null counties were filtered out. Methodology, data sources, and limitations are available in the Appendix.

KEY OBSERVATIONS

- Regions A & C represent 8 of the top 10 counties with the highest number of vaccinations for individuals aged 12-17
  - St. Louis, Jackson, and St. Charles counties represent the top 3 counties with the most vaccinations for individuals aged 12-17
- 16 counties have vaccinated fewer than 20 individuals within the age 12-17 cohort – largely in rural areas in the north and south of the State (depicted in gray)
Appendix
Disclaimers about HealthPrism™ Content

Content is meant to supplement knowledge and resources already available to you.

Content may be used to complement local efforts already taking place in your State and to assist with providing a level of granularity and frequency of updates that are not available in public datasets.

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