This document includes data on COVID-19 vaccinations for Missouri's total population over the age of 18 to support the State of Missouri's vaccine ordering and distribution process.

Follow the links below to view each section:

- **Executive Summary** [3]
- **Statewide | Regional & County-Level Analyses** [4-8]
- **Statewide | Census-Tract Level Analyses** [9-14]
- **Appendix** [15-17]
STATEWIDE UPTAKE

- Consistent with week-over-week trends, ~43k individuals initiated vaccination – 3k fewer than last week
- The slowing of vaccine initiations in recent weeks is manifesting in lower dose 2 administrations, which decreased from 112k in Week 19 to 70k in Week 20

REGIONAL & COUNTY TRENDS

- 78 of the top 100 counties by percent unvaccinated are rural, compared to 52 of the top 100 counties by raw vaccination gap
- Regions C, A, and D continue to have the largest vaccination gaps due to large urban centers
- Region C experienced the largest percentage point increase in percent vaccinated population (0.8) for the second week in a row
- Region I is now the only region across the State with less than 30% of its 18+ population vaccinated

CENSUS TRACT ANALYSIS

- Vulnerable areas within North St Louis County and North St Louis City have revolved between limited regional uptake hotspots and regional uptake deserts over the past few weeks
- Vulnerable census tracts within Region A's I-435 corridor are consistently within vaccine uptake and vaccine network deserts
- Broad swaths of Census Tracts representing low population density areas continue as vaccine uptake deserts throughout rural Missouri

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 05/18/2021. Methodology, data sources, and limitations are available in the Appendix. Full data set provided in corresponding Excel file.
Statewide Analysis

Region & County-Level
## Regional Overview

<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>Vaccination Gap (#)</td>
<td>682K</td>
<td>97K</td>
<td>1,114K</td>
<td>466K</td>
<td>160K</td>
<td>204K</td>
<td>68K</td>
<td>125K</td>
<td>94K</td>
<td>3,011K</td>
</tr>
<tr>
<td>% Unvaccinated Within Region</td>
<td>59.66%</td>
<td>66.65%</td>
<td>56.57%</td>
<td>64.8%</td>
<td>65.0%</td>
<td>52.88%</td>
<td>71.8%</td>
<td>68.62%</td>
<td>71.21%</td>
<td>59.98%</td>
</tr>
<tr>
<td>Share of Eligible Statewide Population</td>
<td>22.8%</td>
<td>2.9%</td>
<td>39.2%</td>
<td>14.3%</td>
<td>4.9%</td>
<td>7.7%</td>
<td>1.9%</td>
<td>3.6%</td>
<td>2.6%</td>
<td>100%</td>
</tr>
<tr>
<td>Share of Statewide Vaccinations</td>
<td>23.0%</td>
<td>2.4%</td>
<td>42.6%</td>
<td>12.6%</td>
<td>4.3%</td>
<td>9.1%</td>
<td>1.3%</td>
<td>2.9%</td>
<td>1.9%</td>
<td>100%</td>
</tr>
<tr>
<td>Share of Statewide Remaining Unvaccinated</td>
<td>22.6%</td>
<td>3.2%</td>
<td>37%</td>
<td>15.5%</td>
<td>5.3%</td>
<td>6.8%</td>
<td>2.3%</td>
<td>4.2%</td>
<td>3.1%</td>
<td>100%</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 vaccinated, and as of 05/18/21. 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 10 weeks (all weeks are calendar weeks, defined by ShowMeVax, where Week 20 is 5/9 – 5/15)

**Weekly Change in Vaccination Last Ten Weeks (SMV Week 11 to Week 20)**

<table>
<thead>
<tr>
<th>Region</th>
<th>% Vaccinated (Cumulative)</th>
<th>Week 19 to 20 Change</th>
<th>Weekly Change Max (Week 11 to Week 20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>40.1%</td>
<td>0.7%</td>
<td>3.5%</td>
</tr>
<tr>
<td>B</td>
<td>33.3%</td>
<td>0.4%</td>
<td>2.8%</td>
</tr>
<tr>
<td>C</td>
<td>43.0%</td>
<td>0.8%</td>
<td>4.1%</td>
</tr>
<tr>
<td>D</td>
<td>35.0%</td>
<td>0.5%</td>
<td>3.6%</td>
</tr>
<tr>
<td>E</td>
<td>34.8%</td>
<td>0.5%</td>
<td>3.1%</td>
</tr>
<tr>
<td>F</td>
<td>46.3%</td>
<td>0.6%</td>
<td>4.0%</td>
</tr>
<tr>
<td>G</td>
<td>28.2%</td>
<td>0.6%</td>
<td>2.0%</td>
</tr>
<tr>
<td>H</td>
<td>31.4%</td>
<td>0.5%</td>
<td>2.8%</td>
</tr>
<tr>
<td>I</td>
<td>28.6%</td>
<td>0.5%</td>
<td>2.1%</td>
</tr>
</tbody>
</table>

**KEY OBSERVATIONS**

- Percent difference (slope) has **decreased substantially** for each region the last ten weeks with all regions under **1% additional percent vaccinated** this week

- Regions G and I, the lowest cumulative percent vaccinated regions, had a **lower peak of % change** than the other regions

- Regions F and C, the highest cumulative percent vaccinated regions, have experienced the **sharpest decline** from their peak

**Note:** Partial Week 21 data is tabulated due to data receipt timing. 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 05/18/2021. Methodology, data sources, and limitations are available in the Appendix. Negative vaccination changes were set to zero due to identified data quality issue that is being investigated.
Missouri counties were ranked by vaccination gap (how many residents are unvaccinated and estimated to be eligible) and percent unvaccinated (estimate of eligible residents that have not been vaccinated).

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

1. St. Louis: 455,600 ↓ -10.8k
2. Jackson: 334,400 ↓ -5.2k
3. St. Charles: 180,800 ↓ -3.2k
4. St. Louis City: 162,000 ↓ -3.0k
5. Jefferson: 134,500 ↓ -1.8k

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

1. Pulaski*: 81.3% ↑ -0.7%
2. Newton: 80.7% ↑ -0.4%
3. McDonald: 80.2% ↑ -0.5%
4. Reynolds: 78.0% ↑ -1.0%
5. Clark: 76.8% ↑ -0.3%

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

**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 05/18/21. Methodology, data sources, and limitations are available in the Appendix. Full data set provided in the corresponding Excel file. Magnitude of change is a numerical difference between the 2 weeks for vaccination gap and a percentage point difference for percent unvaccinated. Blue indicates a county new to the list in comparison to last week. ▲ ◾ indicates no change in rank since last week. ▲ ◾ indicates increase and decrease in rank since last week, respectively.

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Change in Percent Vaccinated This Week

Darker shades indicate a larger, more positive delta between a county’s percent vaccinated last week and this week.

- **KEY OBSERVATIONS**
  - All counties increased their percent vaccinated by **less than 2 percentage points**
  - Region C experienced the **largest increase in percent vaccinated** from last week to this week
  - Regions B, D, and H had smaller changes week to week compared to the rest of the state
  - The **largest changes** occurred in Douglas (1.72%), Dunklin (1.32%) and St. Louis (1.25%) counties, whereas the **smallest changes** were in Putnam (.19%), Buchanan (0.23%), and Shelby (0.25%) counties

**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 05/18/21. Methodology, data sources, and limitations are available in the Appendix. Negative vaccination changes were set to zero due to identified data quality issue that is being investigated.

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Statewide Analysis

Census Tract Level
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.

Vaccination Gap (#)

PERCENT UNVACCINATED (%)

Areas with the largest vaccination gaps continue to align with the urban areas of highest population across Missouri. Census Tracts with the highest unvaccinated populations are concentrated in more rural areas in Regions B, D, I, and G. Regions A, C, E, and F have the greatest number of Census Tracts within the lowest quintile for the percent unvaccinated.

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 05/18/21. Methodology, data sources, and limitations are available in the Appendix. Full data set provided in corresponding Excel file.
Vaccination uptake hotspots are displayed in red for Week 20, indicating Census Tracts where vaccinations have been administered at rates significantly higher than State averages.

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

Vaccine uptake hotspots **do not exist** in the urban core of Kansas City or St Louis during Week 20, but the suburban regions of both metro regions show varying levels of vaccine uptake expansion.

**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 05/18/21. Methodology, data sources, and limitations are available in the Appendix.
Vaccination uptake deserts are displayed in blue for Week 20, indicating Census Tracts where vaccination uptake is significantly lower than State averages.

**Vaccine Uptake Desert at the Census Tract Level**

The Kansas City region continued to show limited impact in vaccinating areas of high COVID-19 vulnerability during Week 20, where the St. Louis region experienced higher rates in the outskirts of North St Louis 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 05/18/21. Methodology, data sources, and limitations are available in the Appendix.

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Statewide Geospatial Visualization of COVID-19 Vulnerable Populations

Highlighted in darker red are areas of vulnerability according to our COVID-19 Vulnerability Index

KEY OBSERVATIONS

- The most vulnerable regions within the State of Missouri remain in the **urban cores of Kansas City and St. Louis**
- The **Bootheel** has emerged as the third most vulnerable region in the State

**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

**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 05/18/2021. More information on methodology can be found in the Appendix.

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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

### Variables Included in the CVI

- Unvaccinated as of 5/18/21 (%)
- Cumulative COVID-19 Case Burden as of 5/20/21 (# per 100k)
- 1+ Medical Comorbidities (%)
- Minority Populations (%)
- Living Below 138% FPL (%)
- Households without Internet Access (%)
- Crowded Households (%)
- Individuals with Education Level Below High School (%)

<table>
<thead>
<tr>
<th>Vulnerability Index Rank</th>
<th>Census Tract</th>
<th>County</th>
<th>18+ Population</th>
<th>Variables Included in the CVI</th>
<th>Additional Demographic Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Statewide Census Tract Average</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57.46%</td>
<td>8,293</td>
</tr>
<tr>
<td>1</td>
<td>29510106200</td>
<td>St. Louis City</td>
<td>980</td>
<td>76.02%</td>
<td>7,268</td>
</tr>
<tr>
<td>2</td>
<td>29189212002</td>
<td>St. Louis</td>
<td>2,196</td>
<td>71.36%</td>
<td>15,978</td>
</tr>
<tr>
<td>3</td>
<td>29095013203</td>
<td>Jackson</td>
<td>2,837</td>
<td>75.68%</td>
<td>9,406</td>
</tr>
<tr>
<td>4</td>
<td>29189212200</td>
<td>St. Louis</td>
<td>5,797</td>
<td>72.62%</td>
<td>5,193</td>
</tr>
<tr>
<td>5</td>
<td>29189213900</td>
<td>St. Louis</td>
<td>1,389</td>
<td>77.11%</td>
<td>7,183</td>
</tr>
<tr>
<td>6</td>
<td>29095005602</td>
<td>Jackson</td>
<td>1,321</td>
<td>72.52%</td>
<td>8,006</td>
</tr>
<tr>
<td>7</td>
<td>29189212102</td>
<td>St. Louis</td>
<td>2,286</td>
<td>78.39%</td>
<td>5,000</td>
</tr>
<tr>
<td>8</td>
<td>29189213800</td>
<td>St. Louis</td>
<td>4,763</td>
<td>72.60%</td>
<td>7,162</td>
</tr>
<tr>
<td>9</td>
<td>29510125700</td>
<td>St. Louis City</td>
<td>1,929</td>
<td>70.14%</td>
<td>3,194</td>
</tr>
<tr>
<td>10</td>
<td>29189213600</td>
<td>St. Louis</td>
<td>2,877</td>
<td>68.89%</td>
<td>6,754</td>
</tr>
</tbody>
</table>

Note: Statewide average is taken across all census tracts in Missouri. 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 05/18/2021. More information on methodology can be found in the Appendix.
Appendix
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