Covid-19 Community Explorer

The best and worst performing counties in the U.S.[1]

Key findings for October 2021:

Community Profile One remains the best performing of the county profiles on average. These counties represent larger urban areas with the most diverse population with high levels of income and education. This profile's average vaccination rate is the highest (at 62.96%, more than ten percentage points higher than the following highest profile at 51.56%), and its case rate is the lowest (11,773 cases per 100,000) as is its death rate (179 deaths per 100,000). *Community Profile One represents 38 percent of the U.S. population and is the most ethnically diverse community with the highest income level. It is a highly educated cohort that resides in large metro areas.*

Community Profile Three remains arguably the worst performing of the county profiles on average. These counties are concentrated in the deep South and have lower income levels and larger Black populations. This profile has the highest average number of death at 353 per 100,000 people. While not the worst performing profile by case rate or vaccination rate, it is the second-worst performing profile for each of those indicators. The number of cases per 100,000 people is only slightly lower in Profile Three than in Community Profile Six (16,475 compared to 16,823), and while its average vaccination rate is higher than in Community Profile Four, it is higher by less than two percentage points (43.61% versus 41.63%). *Community Profile Three represents 12 percent of the U.S. population and has the largest Black population, with the lowest income of all the profiles. These counties are primarily concentrated in the Southeast.*

Alternatively, **Community Profile Six** is the other poorly performing county profile. These counties are mostly located in the West and Southwest and their population tends to be younger and with lower levels of education and less access to healthy food. These counties have large Hispanic populations. While this profile's average vaccination rate is actually the third highest among community profiles, behind only Profiles One and Two, its vaccination rate is still only 45.77%, less than five percentage points higher than Community Profile Four, the worst performer. It has the highest case rate at 16,823 per 100,000 and its death rate of 339 per 100,000 is second only to Profile Three. *Community Profile Six represents five percent of the U.S. population and is the youngest cohort of the profiles, with the largest Hispanic population, the lowest education level, and the least access to healthy food or health insurance. The counties are concentrated in the West and West South-Central regions.*

Community Profile Eight continues to demonstrate the most variation of the county profiles, containing several counties among the best and the worst performers. This profile represents the most rural and least populous counties, concentrated in the northern part of the country. Their populations tend to be older and Whiter, and to lack access to healthy food. Of the 76 counties that appear in the best ten percent of counties along one metric while simultaneously appearing in the worst ten percent of counties along with another metric, 32 (42%) are in this profile. *Community Profile Eight represents 3 percent of the U.S. population and is the most rural cohort, consisting of an older White population with limited access to healthy food. The counties are mostly in the north part of the West, Midwest, and Northeast regions.*

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[1] Here, "best performing" means falling within the highest 10% of U.S. counties by vaccination rate or the lowest 10% of U.S. counties by case or death rate; "worst performing" means falling within the lowest tenth of U.S. counties by vaccination rate or the highest tenth of U.S. counties by case or death rate.

For the best performing counties -Top 10%:

- **By vaccination rate**: close to three quarters of the 277 counties with the highest vaccination rate are within Profiles Two (31%), Eight (22%), or One (20%), that is mostly White counties in metro areas and in rural areas and large metro areas that are more ethnically diverse and highly populated. [2]

  - New York has the largest number of highly vaccinated counties, 26 in total, and an average vaccination rate of 59.20% statewide (66.90% within these 26 counties).

- **By number of cases per 100,000**: over 60% of the 316 counties with the least number of cases per 100,000 are within Profiles Eight (37%) and Two (25%).

  - Virginia has the largest number of counties or county-equivalents[3] with low case rates, 39 total, with an average county rate of 12,045 cases per 100,000 statewide (8,691 cases per 100,000 within these 39 county equivalents). Statewide, the case rate is 10,714 per 100,000.

  - Hawaii has the lowest state case rate, with 5,606 cases per 100,000.

- **By number of deaths per 100,000**: 31 counties have no recorded deaths from Covid-19; most of them (27) within Profile Eight.

  - 31 counties within the U.S. have no recorded deaths; Nebraska contains eight of these counties and Alaska contains six.

  - Alaska is the state with the most counties with low death rates (27); it has an average county death rate of 73 deaths per 100,000 across the entire state (64 deaths per 100,000 for these 27 counties). Statewide, the death rate is 96 per 100,000.

  - Vermont has the lowest state death rate, with 57 deaths per 100,000.

- **Most of the 59 counties that perform the best on all three Covid-19 metrics are split between Profiles Eight (31%), Two (29%), and One (25%).**

  - All four of Hawaii's counties are among the best performing 10% of counties by all three Covid-19 metrics, as are 10 of Maine's 16 counties; this makes Maine the state with the highest number of high performing counties and Hawaii the state with the highest percentage of its counties being considered high performing.

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[2] Community Profile Two represents 25 percent of the U.S. population and consists of highly educated, economically prosperous, mostly White counties in metro areas. Community Profile Eight represents three percent of the U.S. population and is the most rural cohort, consisting of an older White population with the most limited access to healthy food. The counties are mostly in the north part of the West, Midwest, and Northeast regions. Community Profile One represents 38 percent of the US population and is the most ethnically diverse community with the highest income level. It is a highly educated cohort that resides in large metro areas.

[3] Five of the 39 Virginia counties in the bottom decile by case rate are actually independent cities; VA has 38 independent cities that are considered county equivalents.
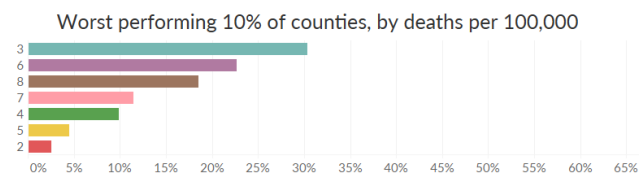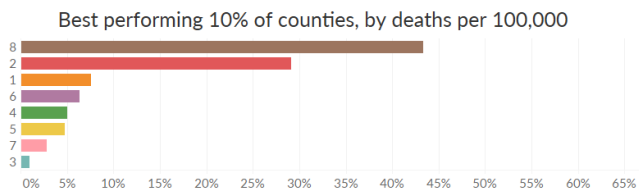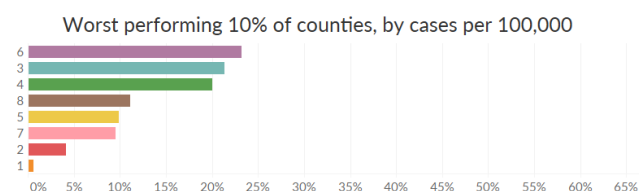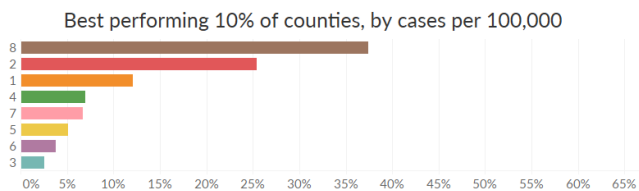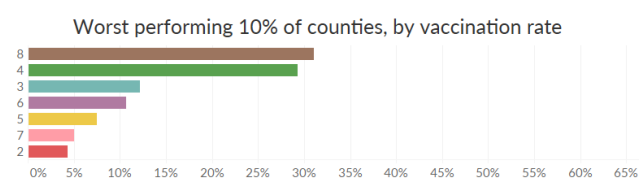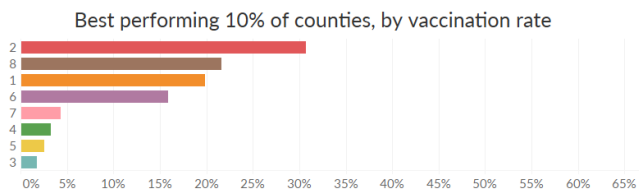
For the worst performing counties – Bottom 10%:

- **By vaccination rate**: more than 72% of the 280 counties with the worst vaccination rates is split between Profiles Four (29%), Eight (31%), and Three (12%)[4], that is White and Black population with the lowest income level of all the profiles and rural areas.

  - Missouri is the state with the highest number of poorly performing counties by vaccination rate, with 41 counties in the bottom tenth; statewide, the average county vaccination rate for Missouri is 36.81% (29.31% in those 41 counties). These 41 counties comprise more than one third of Missouri's 114 counties and one independent city (35.65%).

  - The number of Texas counties with vaccination rates in the bottom 10% of counties fell from 38 at the end of August to only 27 at the end of October. The average vaccination rate for Texas counties is 43.14%, higher than the county averages in 13 other states.

- **By number of cases per 100,000**: over 60% of the 314 worst performing counties in terms of cases per 100,00 are captured by Profiles Six (23%), Three (21%), and Four (20%)[5].

  - Tennessee has the largest number of counties with very high case rates and it is also the state with the highest proportion of such counties. Almost half of Tennessee counties (46 of 95) have case rates in the highest tenth, for a county average of 19,495 cases per 100,000 across all counties in the state (21,346 cases per 100,000 on average in the worst 46 counties). Statewide, Tennessee's case rate is 18,104 per 100,000.

  - Of the 67 poorly performing counties in Profile Three, they are largely located in the South (with concentrations in Georgia, Louisiana, and Mississippi); of the 73 poorly performing counties within Profile Six, 31 (42%) are located in Texas.

  - Only two of the worst-performing counties by case rate fall in Profile One. Miami-Dade county in Florida remains in the bottom tenth, with a case rate of 24,872 per 100,000. Anchorage, Alaska now also falls within the worst tenth, with a case rate of 19,420 per 100,000.

  - North Dakota has the highest state case rate, with 19,052 per 100,000.

- **By number of deaths per 100,000**: over 70% of the worst-performing counties in terms of deaths per 100,000 are in Profiles Three (30%), Six (23%), and Eight (19%)

  - Over 40% of the worst-performing counties by death rate are located in only two states: Texas (22.68%) and Georgia (17.89%).

  - 71 counties in Texas fall within the worst-performing tenth of counties by death rate; Texas' average county death rate is 383 deaths per 100,000 (in those 71 counties, the average death rate is 564 deaths per 100,000). Across the state of Texas, the death rate is 245 per 100,000.

  - Mississippi has the highest state death rate, with 340 deaths per 100,000.

- **Overall, three of the seven counties that can be considered among the worst performing by vaccination, case, *and* death rates fall within community Profile Three.**

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[4] Community Profile Three represents 12 percent of the U.S. population and has the largest Black population, whose income is the lowest of all the profiles. These counties are primarily concentrated in the Southeast. Community Profile Four represents seven percent of the U.S. population and has the largest White population. This population reports the lowest income of all the profiles. It encompasses mostly rural counties in the East North Central and Northeast regions. Community Profile Eight represents three percent of the U.S. population and is the most rural cohort, consisting of an older White population with the most limited access to healthy food. The counties are mostly in the north part of the West, Midwest, and Northeast regions.
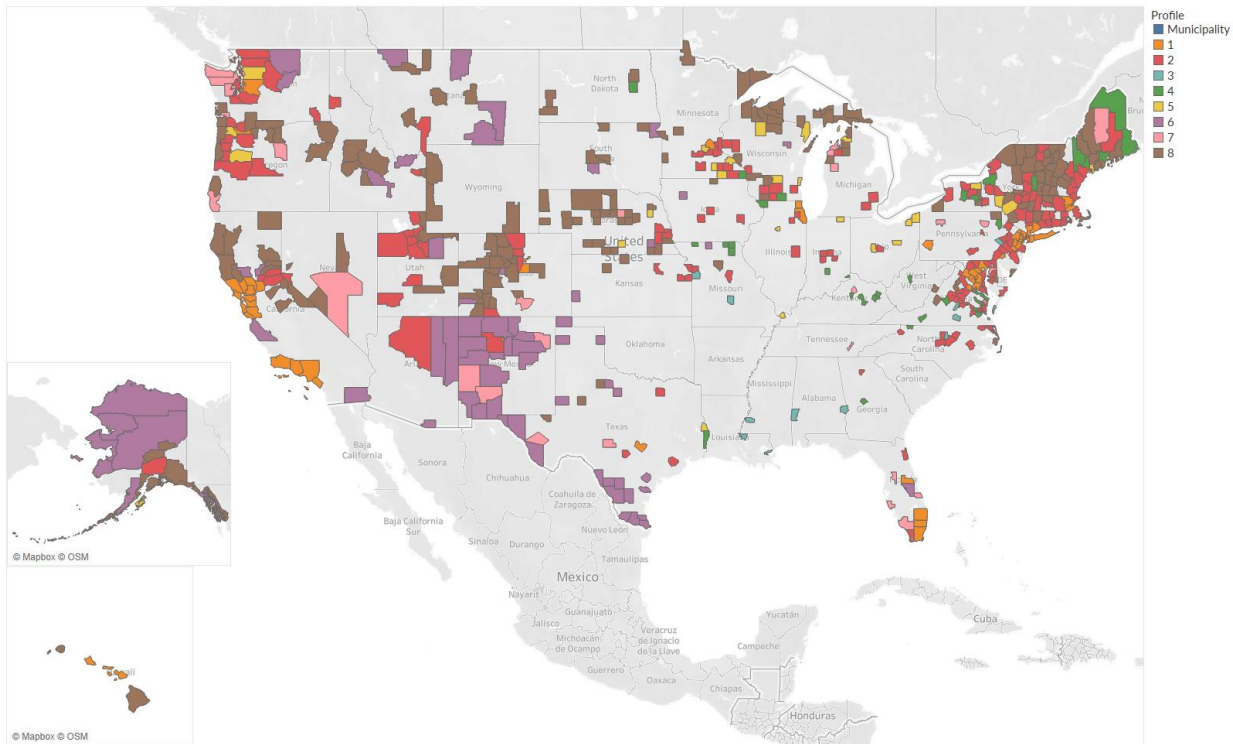
[5] Community Profile Six represents five percent of the U.S. population and is the youngest cohort of the profiles, with the largest Hispanic population, the lowest education level, and the least access to healthy food or health insurance. The counties are concentrated in the West and West South-Central regions.

Best and Worst Performing Counties Based on Three Covid-19 Measures

Best performing 10% of counties, by vaccination rate

Worst performing 10% of counties, by vaccination rate

Best performing 10% of counties, by cases per 100,000

Worst performing 10% of counties, by cases per 100,000

Best performing 10% of counties, by deaths per 100,000

Worst performing 10% of counties, by deaths per 100,000
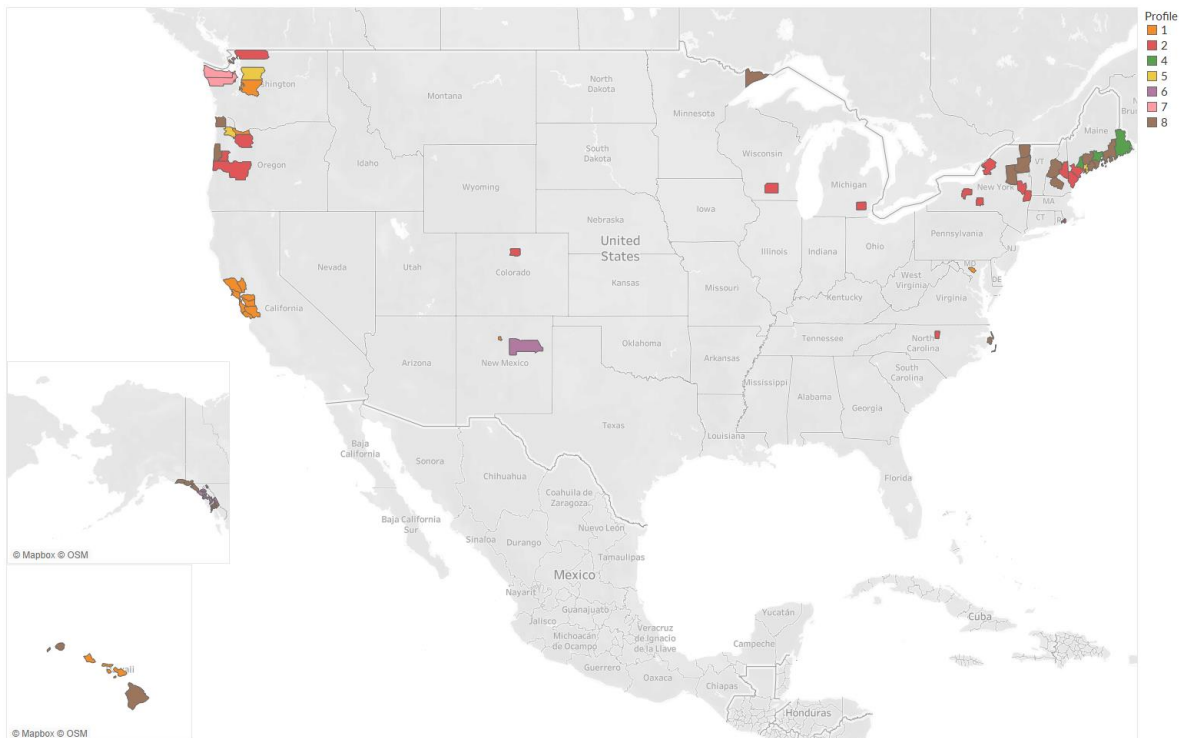
Where are the best performing counties?

The following map shows the 608 counties that fall within the best performing tenth of counties along at least one of the three Covid-19 metrics:
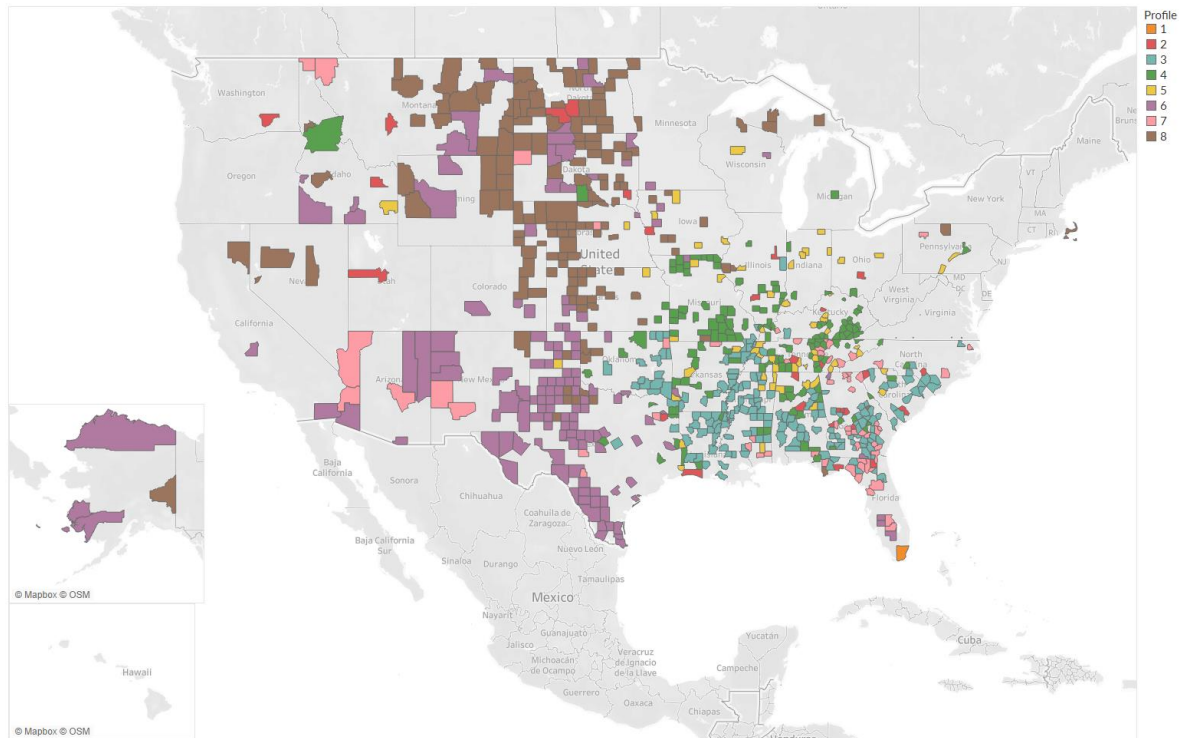

The following map shows the 59 counties that fall within the best performing 10% of counties along with all three Covid-19 metrics:
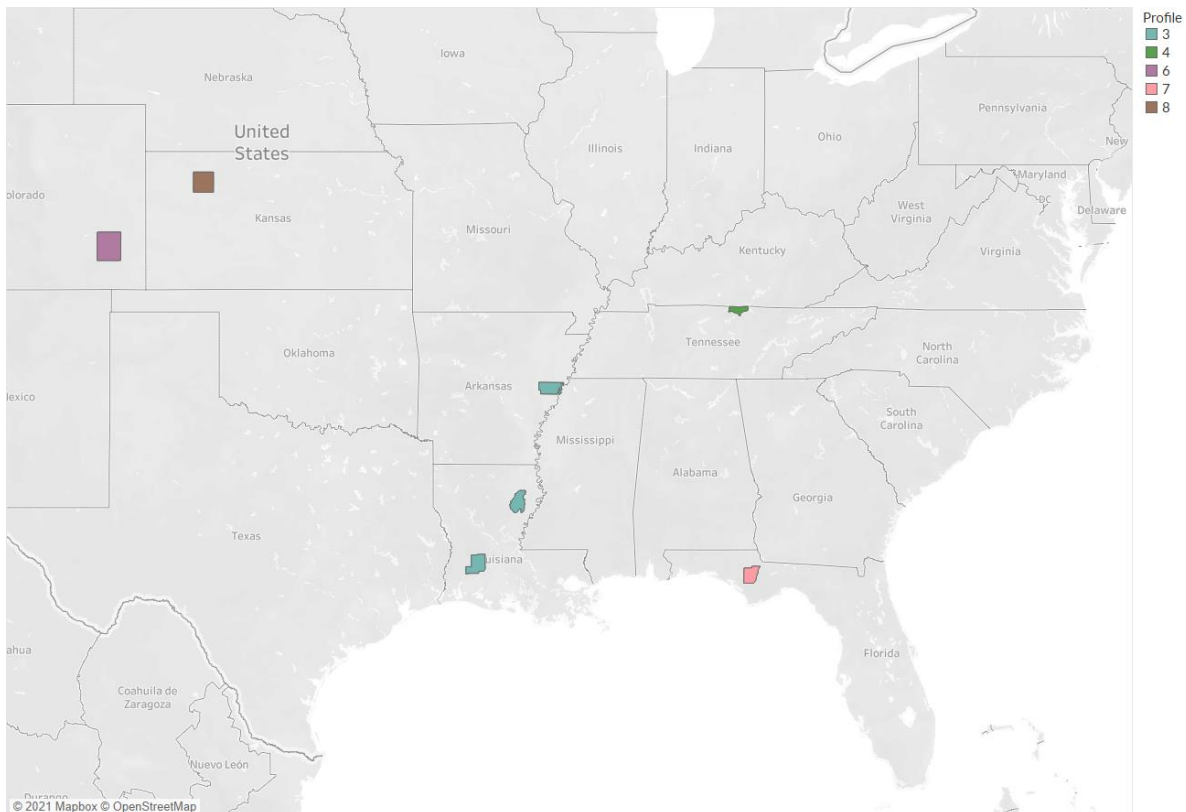
Where are the worst performing Counties?

The following map shows the 764 counties that fall within the worst performing tenth of counties along at least one of the three Covid-19 metrics:

The following map shows the seven counties that fall in the worst performing tenth of counties along with all three Covid-19 metrics:

	Average Vaccination Rate	Average Deaths per 100,000	Average Cases per 100,000
Profile 1	62.96%	179	11,773
Profile 2	51.56%	188	13,707
Profile 3	43.61%	357	16,475
Profile 4	41.63%	281	15,630
Profile 5	44.38%	265	15,732
Profile 6	45.77%	339	16,823
Profile 7	45.61%	315	15,120
Profile 8	45.43%	228	13,769
Total	45.99%	269	15,042