



COVID-19 Community Explorer: The Best- and Worst-Performing Counties in the US

Key Findings for November 2021

1) Community Profile Perspective

There is no clear “worst” performer anymore; while Community Profile Three continues to have the second-lowest average vaccination rate, its case rate growth was by far the lowest of all profiles (2.38 percent growth from October to November, compared to a nationwide county average of 7 percent). Its death rate growth over the same time is also the lowest of all profiles, 3.73 percent compared to 8.6 percent nationwide. This attenuation of cases and deaths in what was previously the worst performing county profile despite relatively weak vaccination rates is perhaps an indication that the most vulnerable residents of counties in Community Profile Three have already been sickened by the virus. Counties in other profiles appear to be “catching up” to the dire situation already experienced by Community Profile Three.

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 64.40 percent, more than ten percentage points higher than the following highest profile at 52.77 percent), and its case rate is the lowest (12,317 cases per 100,000) as is its death rate (185 deaths per 100,000).

Community Profile Three remains arguably the worst performing of the county profiles on average, however relatively faster growth in case rates in other Community Profiles and slower vaccination growth in Community Profile Four mean that it is not necessarily the worst. These counties are concentrated in the deep South and have lower income levels and larger Black populations. This profile has the highest number of deaths per 100,000 people at 370. The number of cases per 100,000 people, however, has not increased as much in Profile Three as in other profiles, so this profile is third in case rate to Community Profiles Six and Five (16,876 compared to 17,811 and 17,064 respectively). Its average vaccination rate is higher than in Community Profile Four, however it is higher by only about two percentage points (44.89 percent versus 42.59 percent).

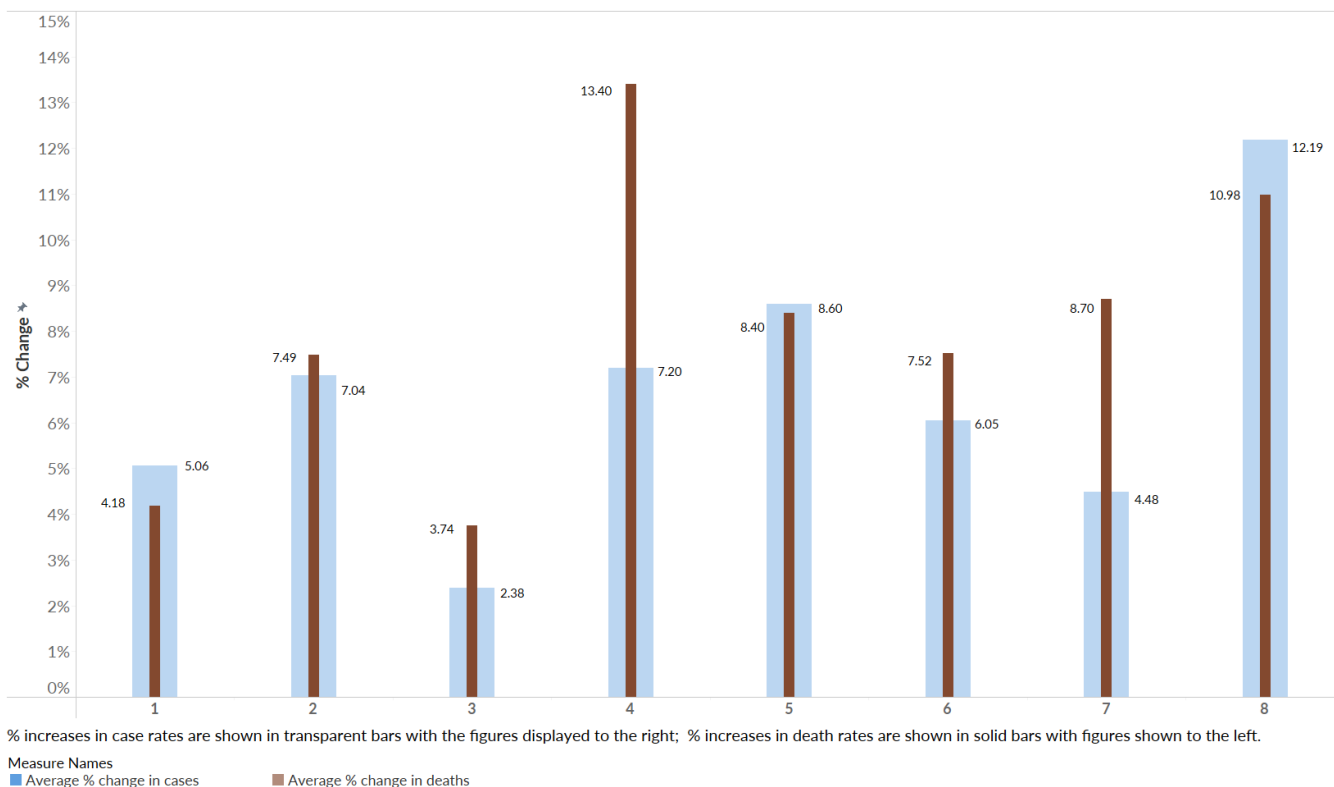
Profiles Eight and Six demonstrate the most variation of the county profiles, containing several counties among the best and the worst performers. Of the 81 counties that appear in the best ten percent of counties along one metric while simultaneously appearing in the worst ten percent of counties along with another metric, 33 (40 percent) are in Community Profile Eight; 31 of these counties (38 percent) fall in Community Profile Six.

Table 1. Average Vaccination Rate, Booster Rate, Cases per 100,000, Deaths per 100,000, and Fatality Rate by Community Profile (November 2021)

Community Profile	Vaccination Rate (%)	Cases per 100,000	Deaths per 100,000	Fatality Rate (%)
Profile 1	64.40%	12,317	185	1.51
Profile 2	52.77%	14,678	201	1.38
Profile 3	44.89%	16,876	370	2.21
Profile 4	42.59%	16,720	312	1.90
Profile 5	45.39%	17,064	285	1.69
Profile 6	47.18%	17,811	358	2.08
Profile 7	46.87%	15,755	338	2.18
Profile 8	46.68%	15,318	247	1.58
All Counties	47.19%	16,076	288	1.80

Source: Milken Institute (2022)

Figure 1. Increases in Cases versus Deaths per 100,000 (October to November 2021), by Community Profile

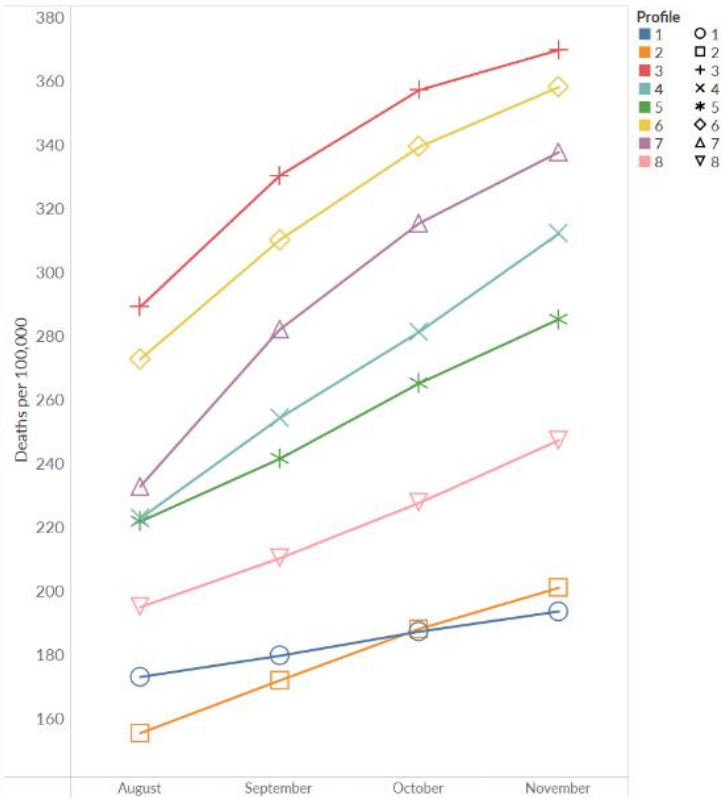
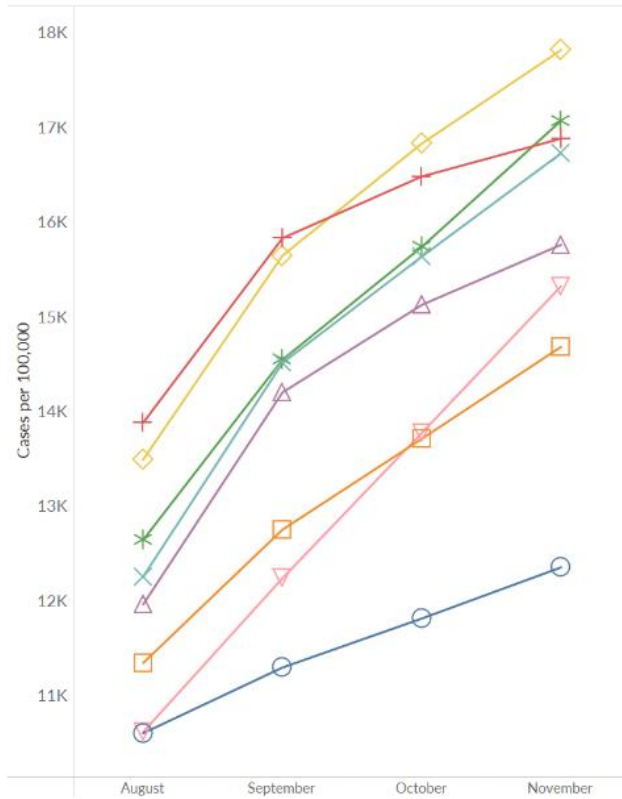


Source: Milken Institute (2022)

Figure 2. Four-Month Trends by Community Profile (August to November 2021)

2A. Four-Month Trends in Cases per 100,000

2B. Four-Month Trends in Deaths per 100,000



Source: Milken Institute (2022)

Source: Milken Institute (2022)

2) State- and County-Specific Perspective

Best-Performing Counties: Top 10 Percent (see Figure 3)

- Vaccination rate:** Close to three quarters of the 277 counties with the highest vaccination rate are within Profiles Two (32 percent), Eight (21 percent), or One (20 percent), that is mostly White counties in metro areas and in rural areas and large metro areas that are more ethnically diverse and highly populated.
 - Over 60 percent of counties in Community Profile One fall in the top tenth of U.S. counties by vaccination rate.
 - New York has the largest number of highly vaccinated counties, 26 in total. A typical New York county would have a vaccination rate of 60.48 percent; the average rate within these 26 counties 68.33 percent.
 - In both Hawaii and Rhode Island, every county falls in the “most-vaccinated” tenth of US counties.
- Number of cases per 100,000:** Almost 60 percent of the 315 counties with the lowest number of cases per 100,000 are within Profiles Eight (32 percent) and Two (28 percent).
 - Virginia has the largest number of counties or county-equivalents¹ with low case rates, 46 total. A typical Virginia county would have a rate of 12,739 cases per 100,000, and the average rate is 9,562 cases per 100,000 within the well-performing 46 counties. Statewide, the case rate is 11,228 per 100,000.
 - Hawaii has the lowest state case rate, with 5,824 cases per 100,000 statewide; a typical Hawaii county would have a case rate of 4,691 per 100,000.
- Number of deaths per 100,000²**
 - Thirty-one counties within the US have no recorded deaths; Nebraska contains eight of these counties, followed by Utah and Colorado, with three each.

- Nebraska is the state with the most counties with low death rates (30); a typical Nebraska county would have a death rate of 164 deaths per 100,000 (57 deaths per 100,000 for these 30 counties). Statewide, the death rate is 144 per 100,000.
- Vermont has the lowest state death rate, with 64 deaths per 100,000; all of its counties fall within the best-performing tenth of counties.
- **Vaccination, case, and death rates**
 - Most of the 60 counties that perform the best on all three COVID-19 metrics are split between Profiles Eight (30 percent), Two (30 percent), and One (27 percent) (see Figure 4).
 - All four of Hawaii's counties are among the best performing 10 percent of counties by all three COVID-19 metrics, as are 10 of California's 58 counties; this makes California 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.

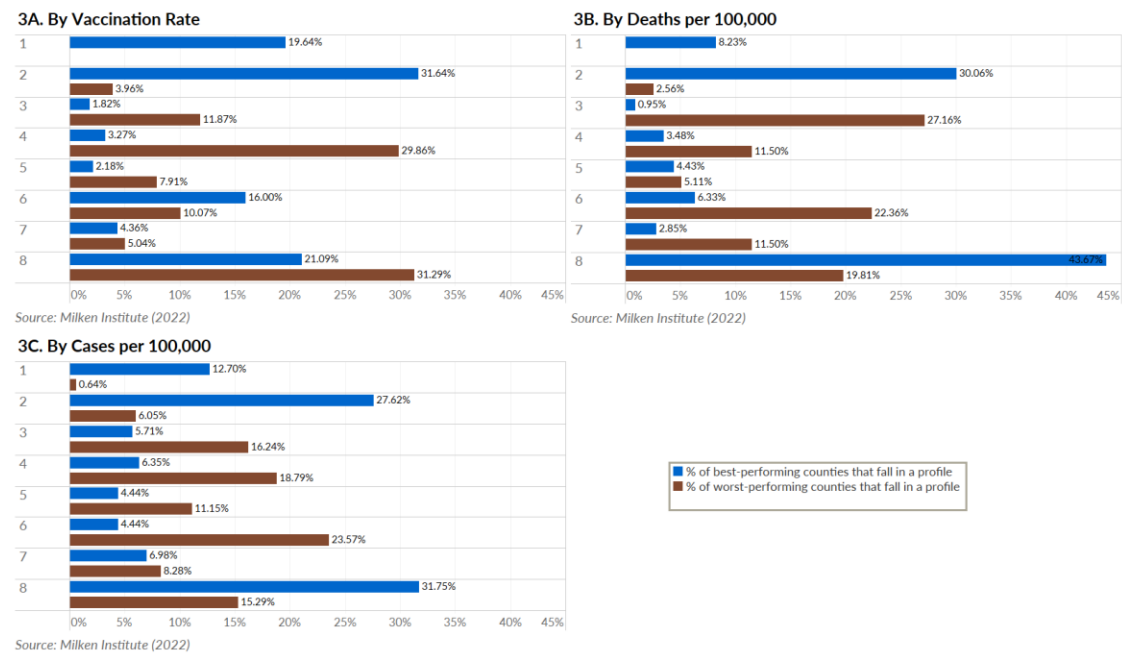
Worst-Performing Counties: Bottom 10 Percent (see Figure 3):

- **Vaccination rate:** More than 60 percent of the 278 counties with the worst vaccination rates is split between Profiles Four (30 percent) and Eight (31 percent), mostly White and Black populations in rural areas with the lower incomes.
 - Missouri is the state with the highest number of poorly performing counties by vaccination rate, with 41 counties in the bottom tenth; a typical Missouri county would have a vaccination rate of 37.59 percent (30.02 percent in those 41 counties). These 41 counties comprise more than one-third of Missouri's 114 counties and one independent city (35.65 percent), making it the state with the highest percentage of its counties in the worst vaccinated tenth of US counties, followed closely by Nebraska, with 34.41 percent (32 of its 93 counties).
- **Number of cases per 100,000:** Almost one quarter of the 314 worst performing counties in terms of cases per 100,00 are captured by Profile Six (23.57 percent).
 - Tennessee has the largest number of counties with very high case rates. Almost half of Tennessee counties (44 of 95) have case rates in the highest tenth. A typical Tennessee county would have a rate of 20,053 cases per 100,000 (21,968 cases per 100,000 on average in the worst 46 counties). Statewide, Tennessee's case rate is 18,620 per 100,000.
 - Arizona has the highest proportion of its counties with case rates in the top tenth, seven out of 15 counties. A typical Arizona county would have a case rate of 18,695 cases per 100,000 people; in those seven well-performing counties it is 21,597 per 100,000. Statewide, Arizona's case rate is 17,755 per 100,000.
 - 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 25,139 per 100,000. Anchorage, Alaska also falls within the worst tenth, with a case rate of 20,925 per 100,000.
 - North Dakota has the highest state case rate, with 20,836 per 100,
- **Number of deaths per 100,000:** Almost 70 percent of the worst-performing counties in terms of deaths per 100,000 are in Profiles Three (27 percent), Six (22 percent), and Eight (20 percent).
 - Almost 40 percent of the worst-performing counties by death rate are located in only two states: Texas (22 percent) and Georgia (17 percent).
 - Georgia and Arizona are now tied for the state with the highest percentage of its counties falling in the worst tenth by death rate with one-third of counties in each of these states among the worst performing
 - Sixty-nine counties in Texas fall within the worst-performing tenth of counties by death rate; a typical Texas county would have a rate 397 deaths per 100,000 (in those 69 counties, the average death rate is 583 deaths per 100,000). Across the state of Texas, the death rate is 254 per 100,000.
 - Mississippi has the highest state death rate, with 347 deaths per 100,000, much higher than the next highest state, Alabama, whose rate is 321 per 100,000

- **Vaccination, case, and death rates**

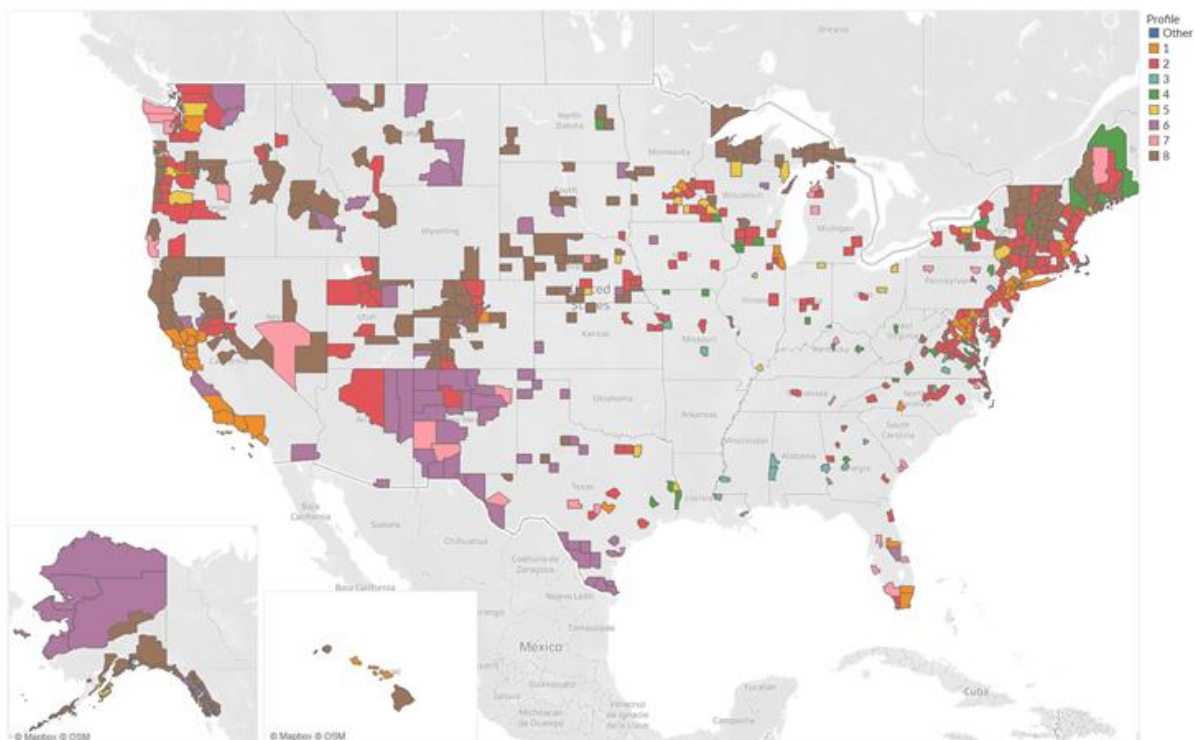
- Once again, three of the seven counties that can be considered among the worst performing by vaccination, case, and death rates fall within community Profile Three.

Figure 3. Distribution of Best- and Worst-Performing Counties by Community Profile (November 2021)



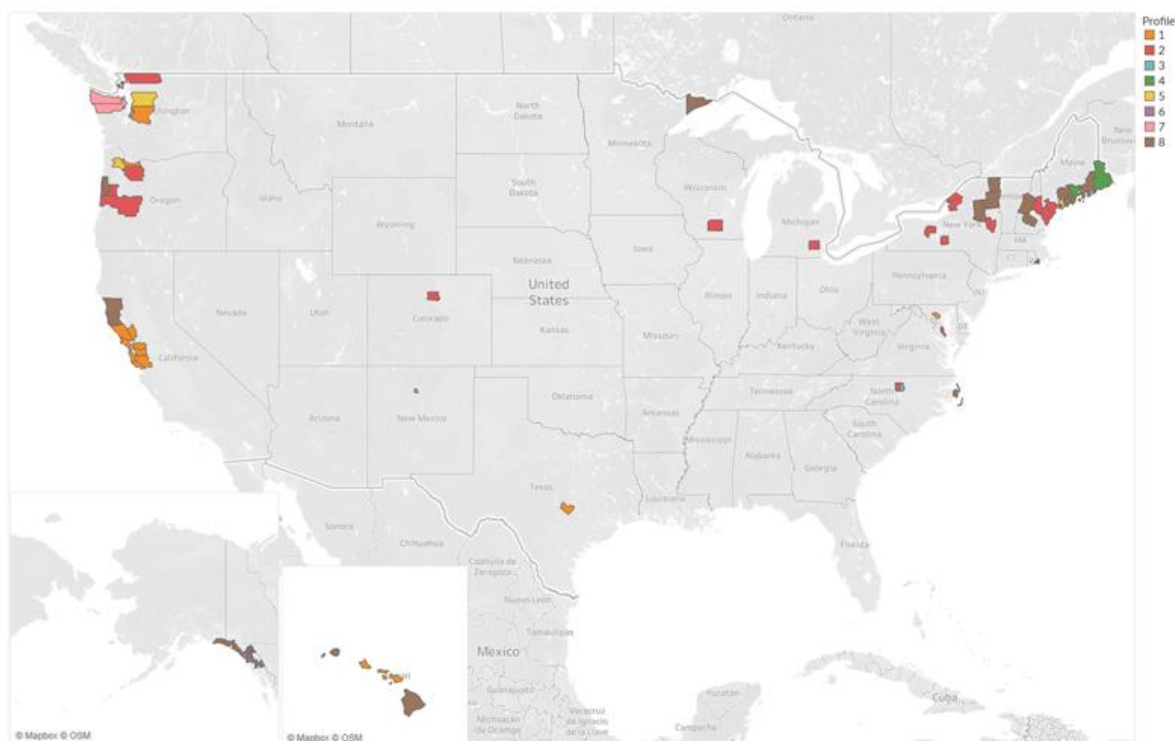
3) Where are the Best-Performing Counties?

Figure 4. The Best-Performing Tenth of Counties Based on At Least One of the Three COVID-19 Metrics (November 2021)



Source: Milken Institute (2022)

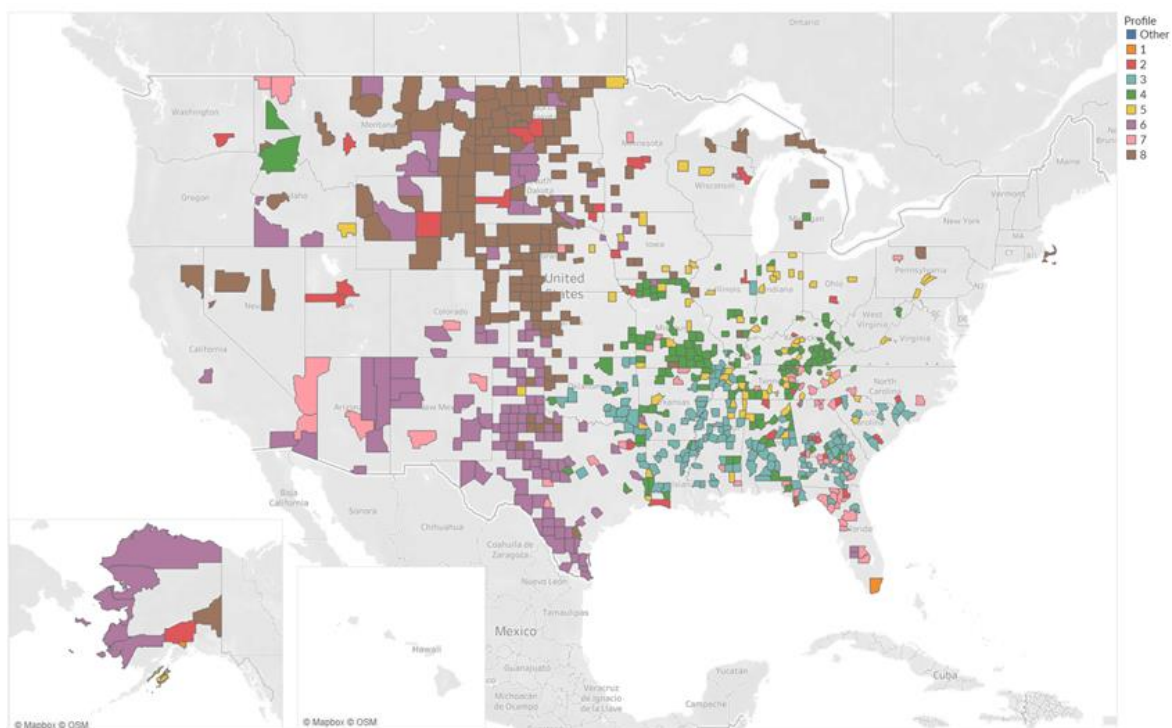
Figure 5. The Best-Performing Tenth of Counties Based on All Three COVID-19 Metrics (December 2021)



Source: Milken Institute (2022)

4) Where Are the Worst-Performing Counties?

Figure 6. The Worst-Performing Tenth of Counties Based on At Least One of the Three COVID-19 Metrics (November 2021)



Source: Milken Institute (2022)

Figure 7. The Worst-Performing Tenth of Counties Based on All Three COVID-19 Metrics (November 2021)



Source: Milken Institute (2022)

Table 2. Cutoff Points for Best- and Worst-Performing Deciles (November 2021)

		Vaccination Rate (%)	Cases per 100,000	Deaths per 100,000	Fatality Rate (%)
Best-Performing Decile	Maximum	N/A ³	11,381	118	0.91
	Minimum	61.7	1,220	0	0
	Average	68.31	9,281	79	0.60
Worst-Performing Decile	Maximum	34.4	64,046 ⁴	1,333	2.83
	Minimum	1.4	20,332	468	8.00
	Average	29.70	22,852	572	3.50

Source: Milken Institute (2022)

Table 3. Best- and Worst-Performing Counties and States in the United States (November 2021)

		Vaccination Rate	Cases per 100,000	Deaths per 100,000	Fatality Rate
Counties	Best	Bristol Bay Borough, AK ³	Kalawao County, HI	N/A ²	N/A ²
	Profile	8	7		
	Worst	Nantucket County, MA	Chattahoochee County, GA ⁴	McMullen County, TX	Harding County, NM
	Profile	8	2	6	7
States	Best		Hawaii	Vermont	Alaska
	Value		5,824	64	0.57%
	Worst		North Dakota	Mississippi	New Jersey
	Value		20,836	347	2.27%

Source: Milken Institute (2022)

¹ 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.

² 26 counties have no recorded deaths from COVID-19; most of them (24) fall within Profile Eight.

³ The Centers for Disease Control and Prevention (CDC) caps its own estimates of county vaccination rates at 95 percent; Bristol Bay Borough, AK is the only county with an estimated vaccination rate higher than 95 percent at 95.2%.

⁴ Chattahoochee County population has not been adjusted for Ft. Benning, meaning this figure is likely incorrect.

Notes on Terminology and Community Profiles

Throughout this report, counties are divided by deciles. If a county is referred to as “highly vaccinated” or having a low case or death rate, it is considered “well performing” or among the “best performers” nationwide. This means it has a vaccination rate that puts it in the top 10 percent of US counties (the highest decile) or a case or death rate that puts it in the bottom 10 percent of US counties (the lowest decile). Counties referred to as having a low vaccination rate or a high case or death rate, those deemed “poorly performing” or the “worst performers,” are those within the 10 percent of US counties with the lowest vaccination rates (lowest decile) or the highest case or death rates (highest deciles). Current figures for the 90th and 10th percentiles, along each of these metrics, are available in Table 2.

State-level analyses provide metrics for a “typical” county in a given state: this metric represents the “numerical average” of that metric by the number of counties in the state. Statewide metrics, by contrast, do not represent an average but instead are calculated using every recorded instance of that metric in the state as a fraction of the entire state population (for incidence rates, this is then multiplied by 100,000). For states with a heavy population concentration in a few counties, the statewide metrics will likely differ from the value for a “typical” county; statewide rates in these instances will be much closer to the rate in highly populous counties than to the mean county rate.

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.

Community Profile Two represents 25 percent of the US population and consists of highly educated, economically prosperous, mostly White counties in metro areas.

Community Profile Three represents 12 percent of the US population and has the largest Black population. It is the lowest Black population income across all the profiles. These counties are primarily concentrated in the Southeast.

Community Profile Four represents 7 percent of the US 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 Five represents 6 percent of the US population and consists of predominantly White counties whose economies depend mostly on manufacturing and are located around the Midwest region.

Community Profile Six represents 5 percent of the US population. It captures the youngest cohort of the profiles, with the largest Hispanic population and the lowest education level, access to healthy food, and health insurance. The counties are concentrated in the West and South-Central regions.

Community Profile Seven represents 4 percent of the US population. Its cohort is the oldest of the profiles and consists of mostly White, elderly retirement communities.

Community Profile Eight represents 3 percent of the US 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.

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