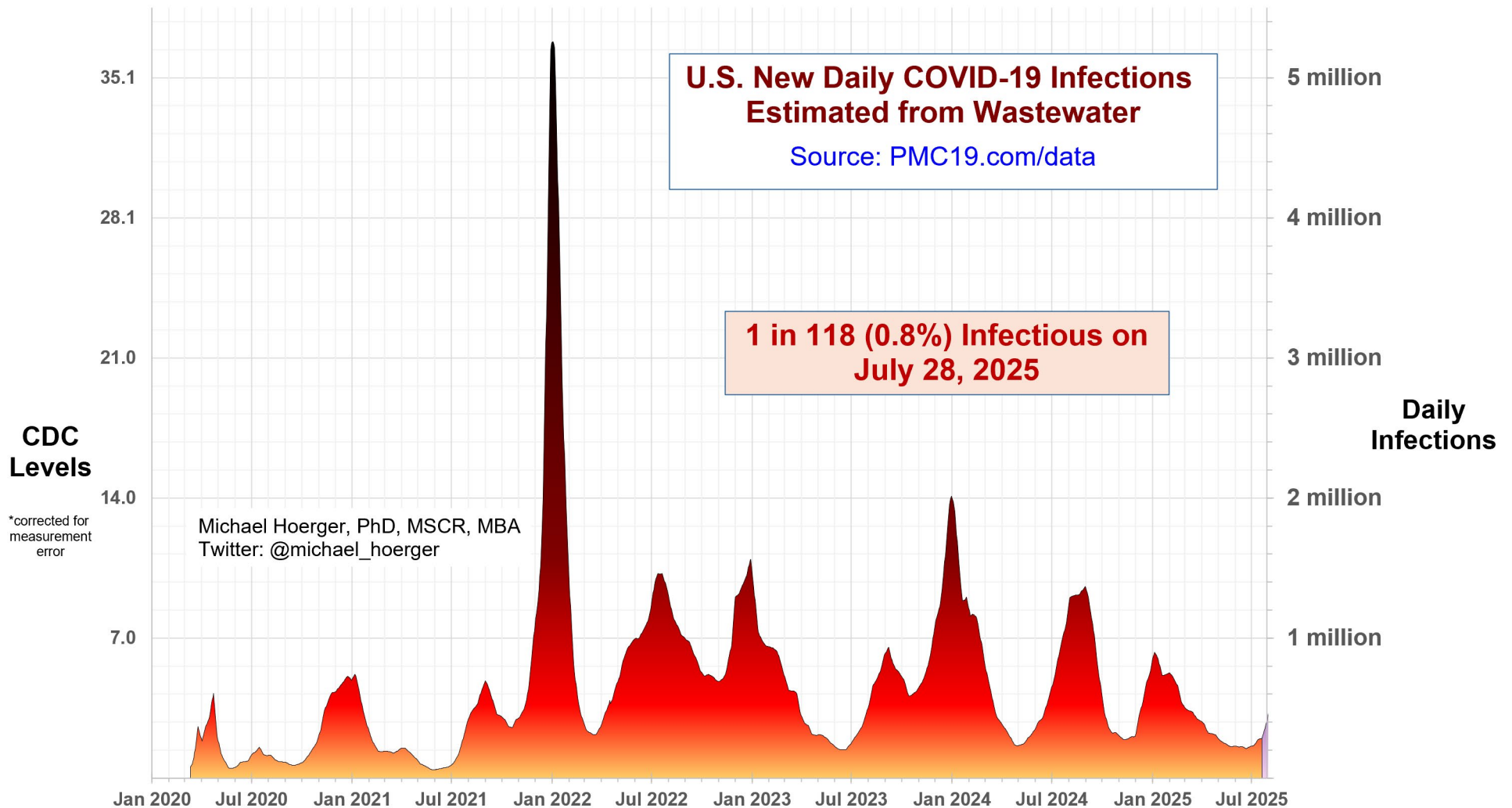


PMC U.S. COVID-19 Case Estimation and Forecasting Model: Report for July 28, 2025 pmc19.com/data

Michael Hoerger, PhD, MSCR, MBA, Pandemic Mitigation Collaborative (PMC)



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Announcements

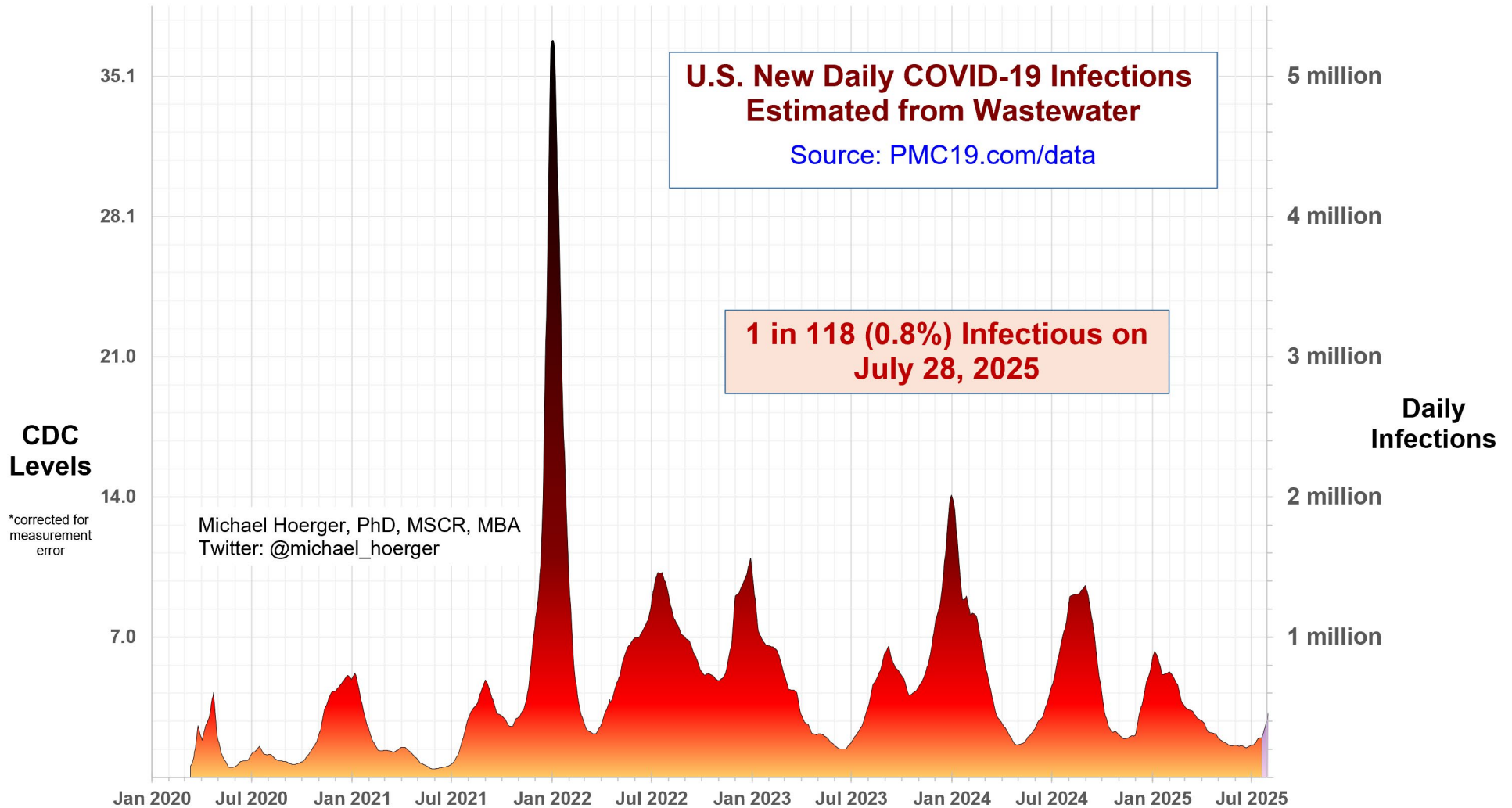
Data Quality Note: Long-term data quality is 'high,' but real-time data quality is 'low' and prone to retroactive correction. The CDC (80% model weight) has limited or no data for 4 states. Biobot (20% model weight) caught up on reporting this week after an extended lag. These constraints add uncertainty to forecasts beyond historical norms. These constraints will also lead to inconsistencies in media reporting about specific variants, wave timing and peaks, and local transmission. Assume the worst, hope for the best, and monitor closely. On the website, we added links to more localized U.S. data and international dashboards to help with this uncertainty.

Announcements:

- Dr. Malek made this helpful video for clinicians: <https://www.youtube.com/watch?v=GPUTTjjdT4A>
- The TODAY Show is tracking vaccinations and transmission, including using the PMC dashboard: <https://www.today.com/health/coronavirus/covid-2025-summer-surge-rcna218754>
- We have added an additional California Bay Area wastewater site and a Puerto Rico site to the directory

The Big-Picture View of the Pandemic

Transmission picked up slightly in the most recent CDC and Biobot data. An estimated 1 in 118 people are actively infectious. The lull point appears to have occurred at June 21 with 211,000 new daily infections.



Statistical Summary

Presently, we are seeing an estimated nearly 2.8 million new weekly infections, likely to result in 142-568K Long COVID cases, and 1,000-1,700 excess deaths in the U.S. In a room of 35 people of average risk, there would be a 1 in 4 chance of exposure. Although transmission is rising in most states, there is significant geographic variation. Check your local levels using the new information provided at the bottom of the dashboard website.

Current Levels for Jul 28, 2025

% of the Population Infectious

0.8% (1 in 118)

New Daily Infections

406,000

New Weekly Infections

2,842,000

Resulting Weekly Long COVID Cases

142,000 to 568,000

Resulting Weekly Excess Deaths

1,000 to 1,700

Monthly Forecast

Average % of the Population Infectious

1.4% (1 in 72)

Average New Daily Infections

659,733

New Infections During the Next Month

19,792,000

Resulting Monthly Long COVID Cases

990,000 to 3,958,000

Resulting Monthly Excess Deaths

7,100 to 11,800

Running Totals

Infections Nationwide in 2025

89,130,000

Average Number of Infections Per Person All-Time, U.S.

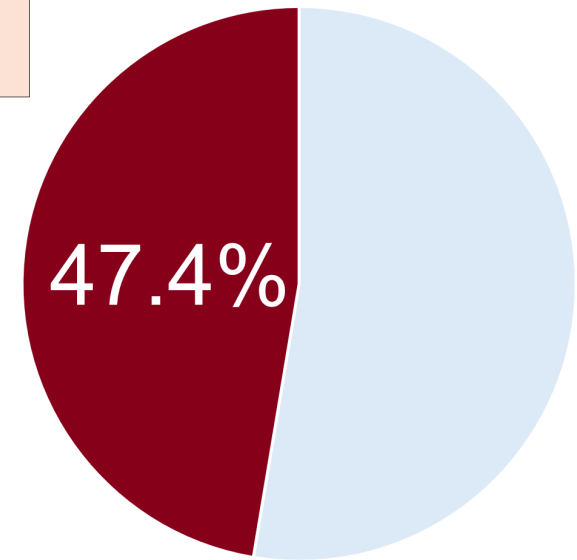
3.85

How Does Risk Increase with More Social Contacts?

Number of People	Chances Anyone Is Infectious	Number of People	Chances Anyone Is Infectious
1	0.8%	15	12.0%
2	1.7%	20	15.7%
3	2.5%	25	19.2%
4	3.4%	30	22.6%
5	4.2%	35	25.8%
6	5.0%	40	28.9%
7	5.8%	50	34.7%
8	6.6%	75	47.3%
9	7.4%	100	57.4%
10	8.2%	300	92.3%

Assumes no testing/isolation protocols (U.S. only)
pmc19.com/data

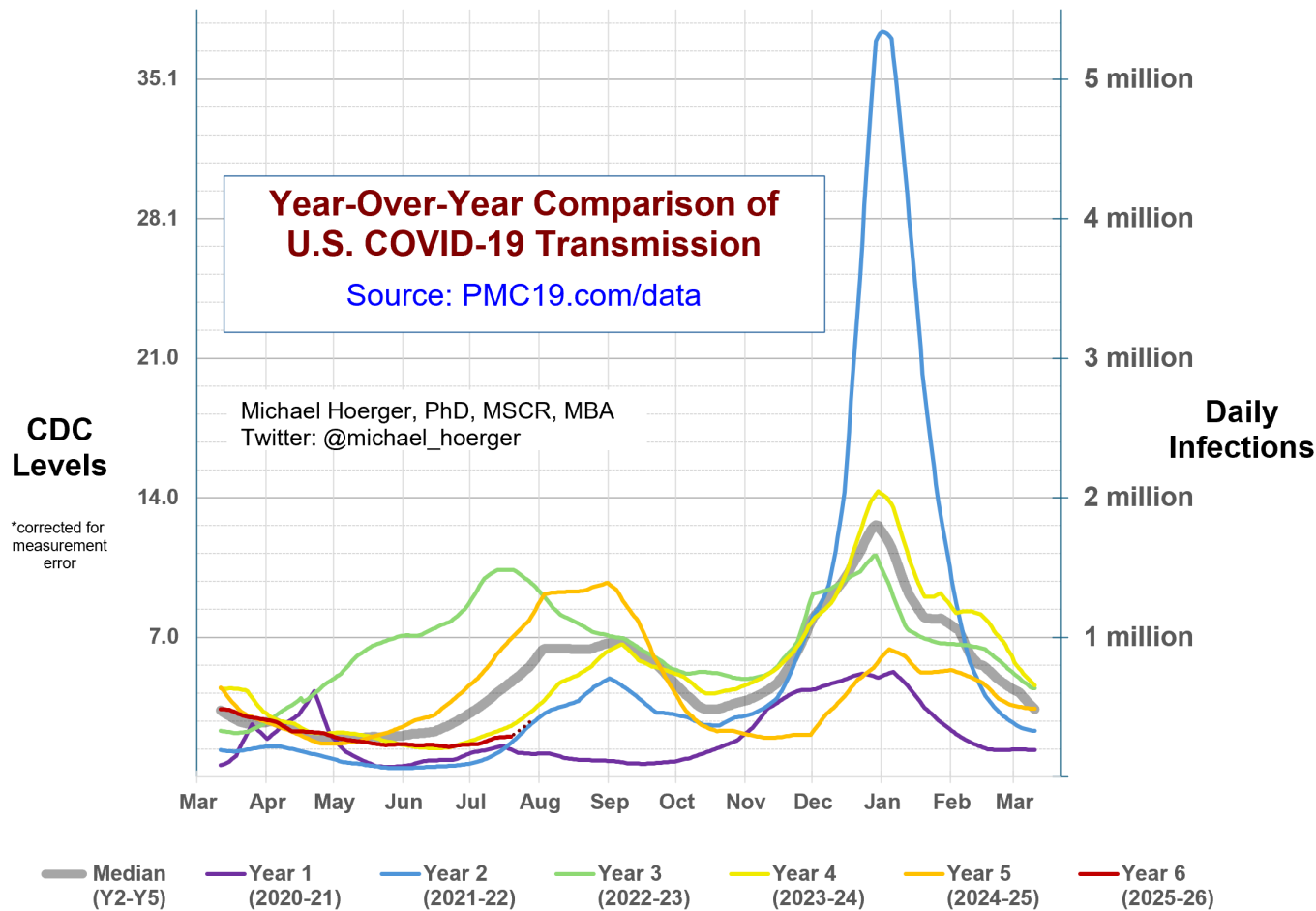
Michael Hoerger, PhD, MSCR, MBA
Twitter: @michael_hoerger



There is more COVID-19 transmission today than during 47.4% of the pandemic.

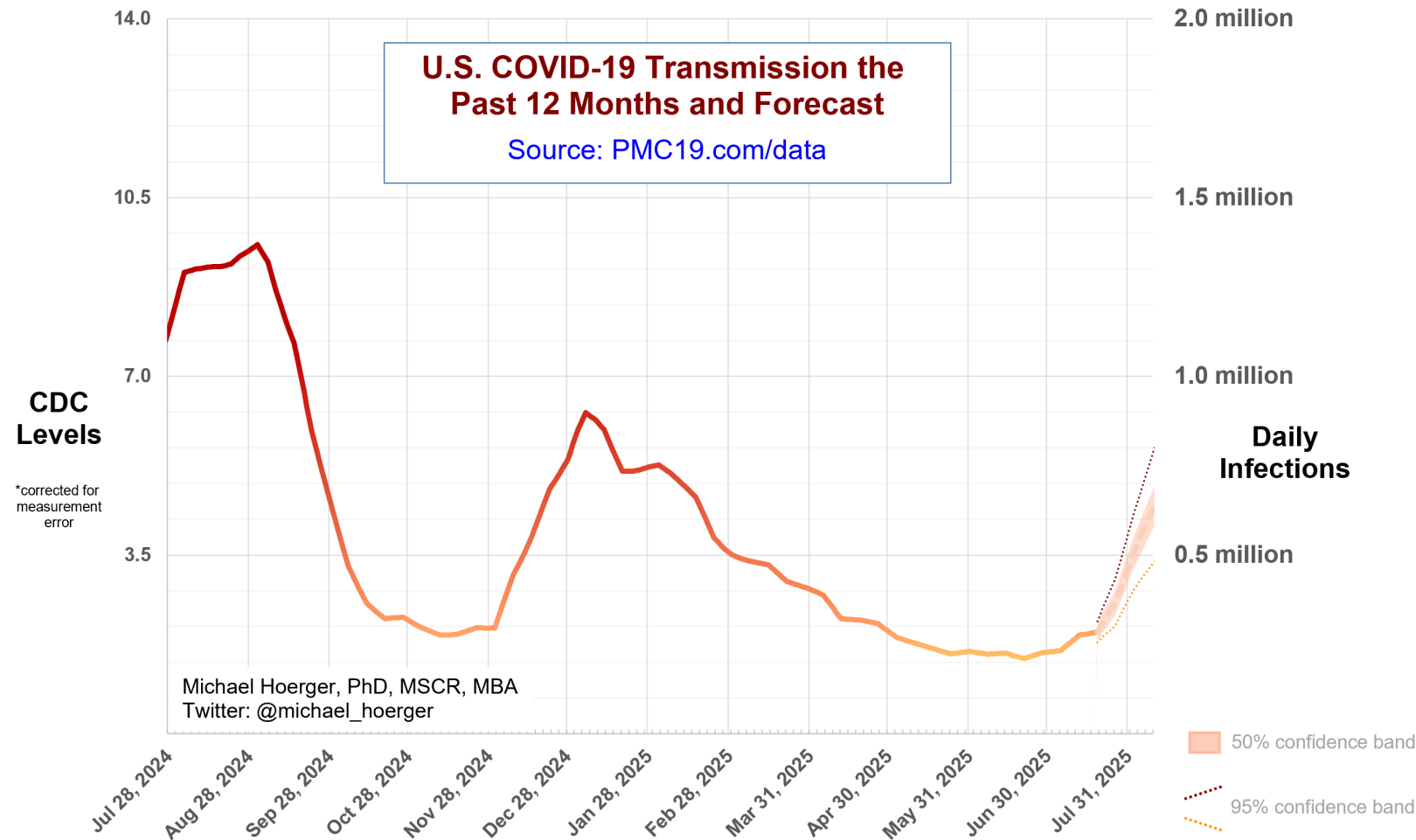
Year-Over-Year Comparisons

The year-over-year graph shows current transmission along the red line. The solid line represents the real-time data and dotted line the forecast. Note that the red solid line was closely tracking the yellow line (2 years ago) until this week, when it departed closer to the blue line (4 years ago, Delta wave). There were a lot of missing data this week, so it may get retroactively corrected upward, closer to the yellow line again. If not, we could be headed more toward transmission like the Delta wave.



Close-up on the Current Forecast

This graph shows the current forecast. Note that values for “today” are a forecast from data 9-12 days old. The current forecast is for increasing transmission over the next several weeks. With low-quality real-time data coming in, the forecast only shows 3 weeks forward from the most recent data point provided. Currently, the U.S. is seeing approximately 400,000 new daily infections, but that estimate could be anywhere from 300,000 to 500,000 daily, based on eventual retroactive corrections. The forecast is to reach 500,000 new daily infections on August 2; it is possible we are already there, or that with a sizable downward correction, that level remains some time off.



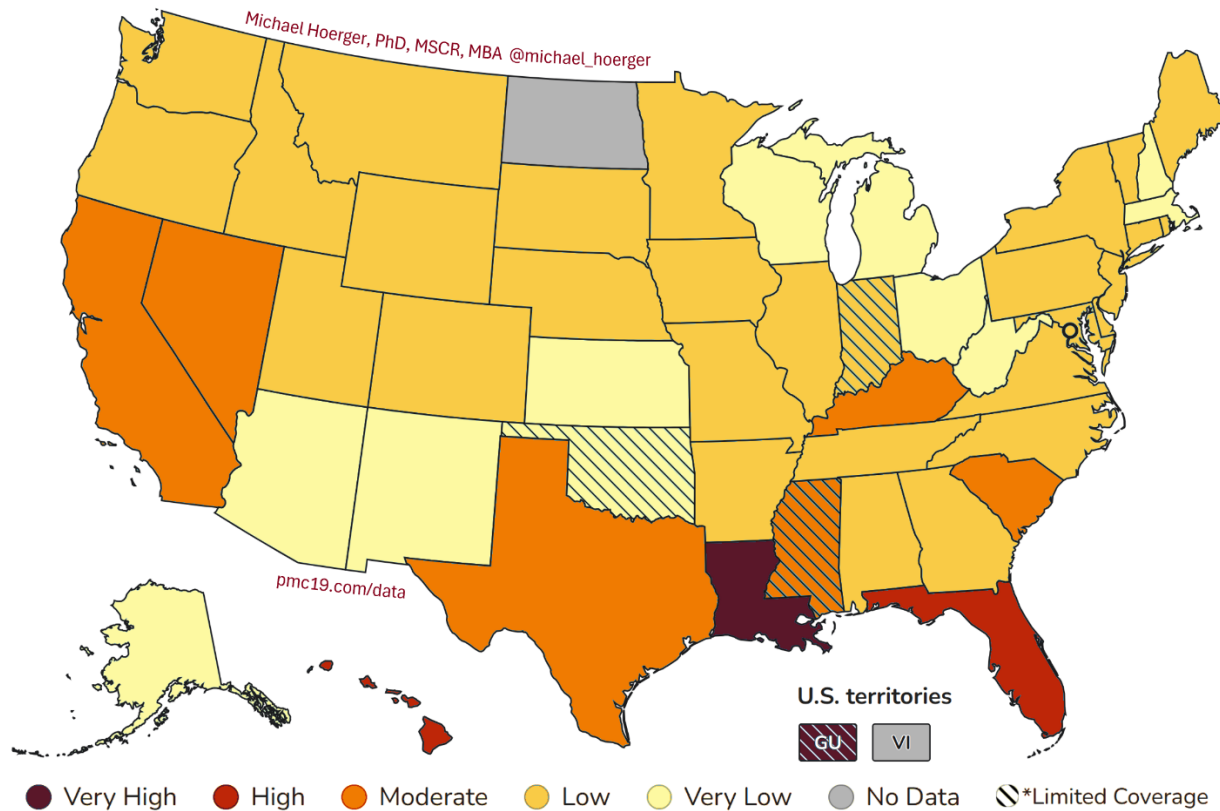
CDC COVID-19 Heat Map

This map uses the CDC state-by-state data to show areas with higher transmission in deeper red. The CDC version of the map, colored in cool blue is available online. Blue tends to confuse people to thinking transmission is “cool” or low, so we and various popular media outlets (e.g., Newsweek) tend to recolor.

<https://www.cdc.gov/nwss/rv/COVID19-currentlevels.html>

Transmission is high in Guam (very high), Louisiana (very high), Florida, and Hawai'i.

COVID-19 Heat Map, CDC Data & Risk Levels, Higher Transmission in Deeper Red



Regional Case Estimation

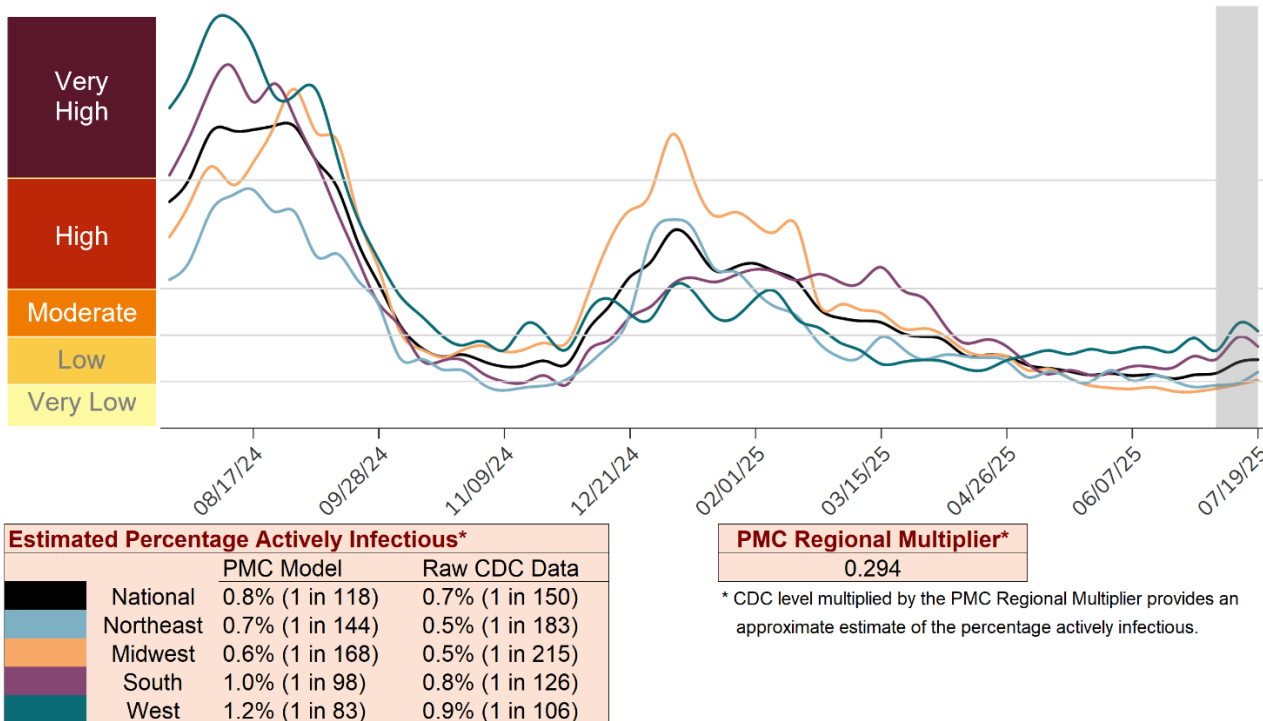
This graph from the CDC shows regional variation in transmission. You can use the “PMC Regional Multiplier” to get a ballpark estimate the proportion of a given region actively infectious with COVID-19 (see Technical Appendix document on the dashboard page).

The CDC regional data are available online:

<https://www.cdc.gov/nwss/rv/COVID19-nationaltrend.html>

State-level data are also available: <https://www.cdc.gov/nwss/rv/COVID19-statetrend.html>

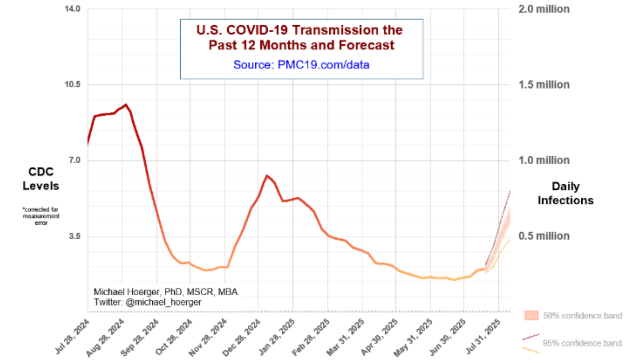
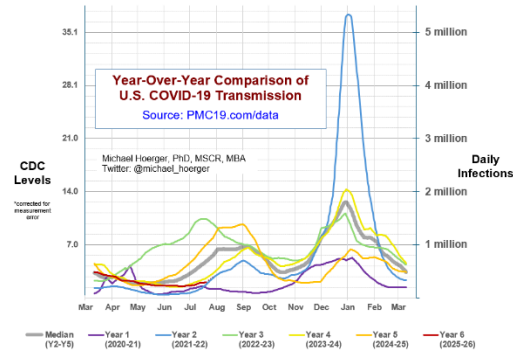
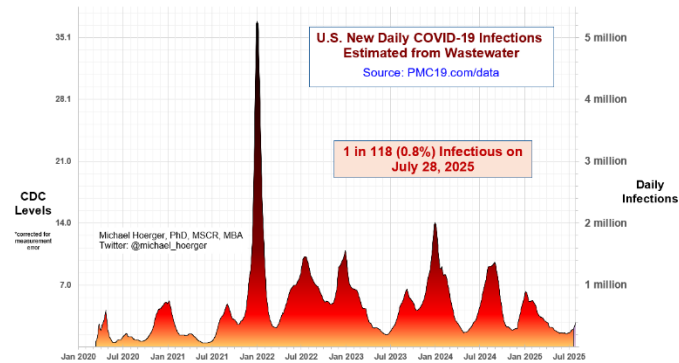
CDC Regional Levels with PMC Estimates of the Percentage Actively Infectious



* The "Raw CDC" values are simply the value in the CDC chart multiplied by the PMC Regional Multiplier. The "PMC Model" estimates adjust those data by accounting for reporting time lag.

PMC COVID-19 Dashboard

Here is the complete PMC COVID-19 Dashboard. Please share the images across social media and other websites.
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Running Totals

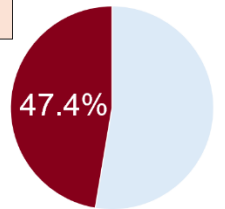
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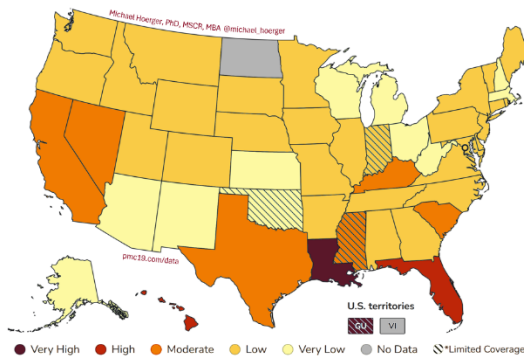
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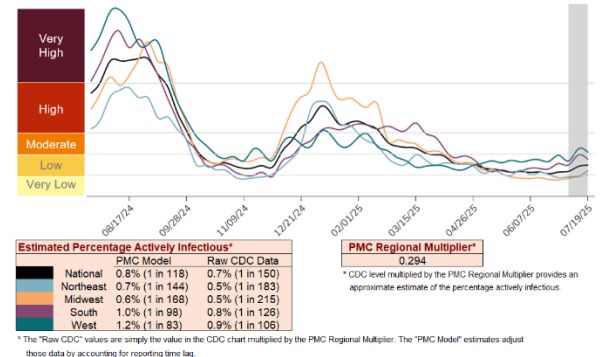


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COVID-19 Heat Map, CDC Data & Risk Levels, Higher Transmission in Deeper Red



CDC Regional Levels with PMC Estimates of the Percentage Actively Infectious



A separate document called a Technical Appendix appears on the dashboard page and has more methodologic info.