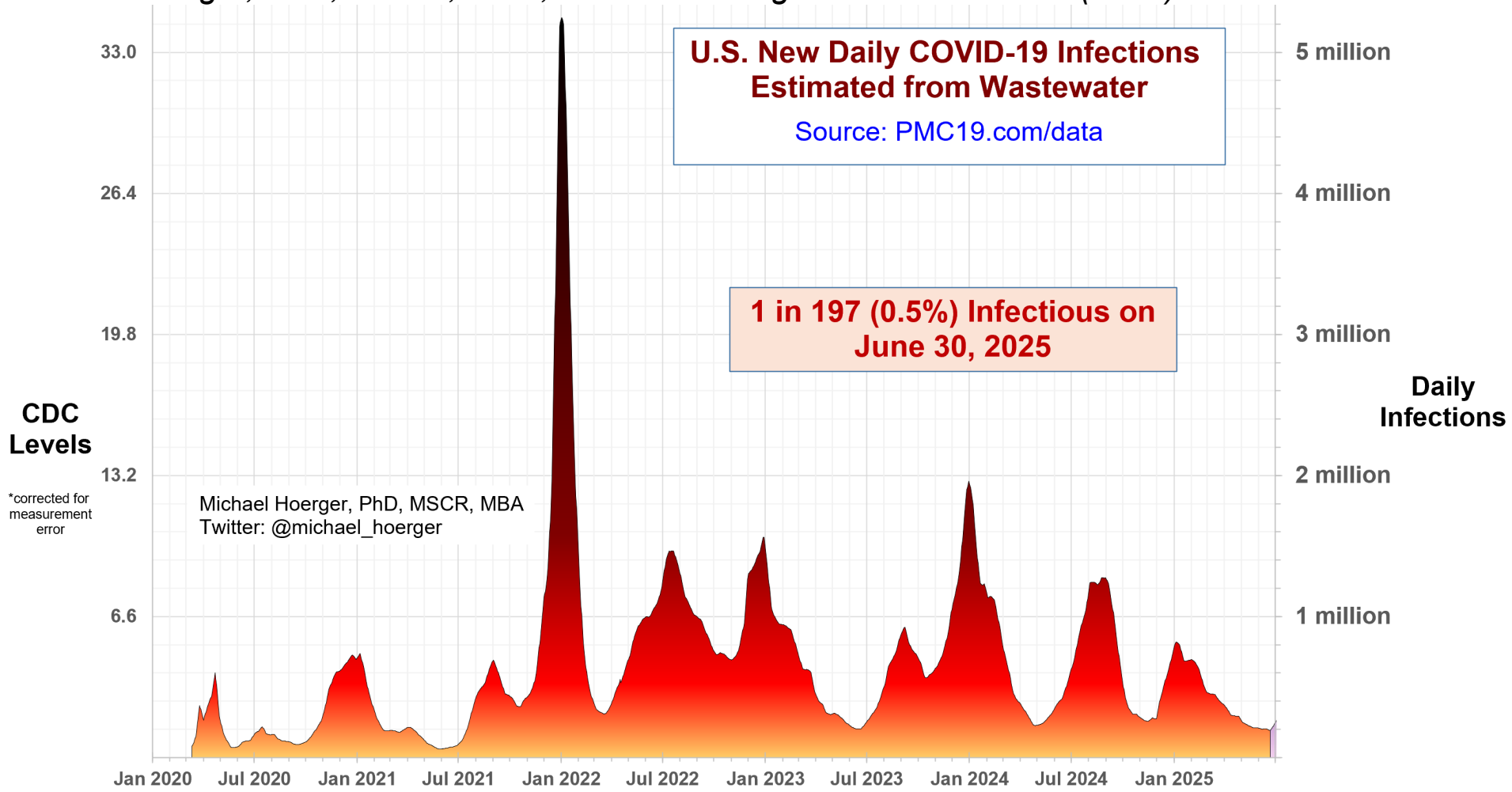
PMC U.S. COVID-19 Case Estimation and Forecasting Model: Report for June 30, 2025 pmc19.com/data

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



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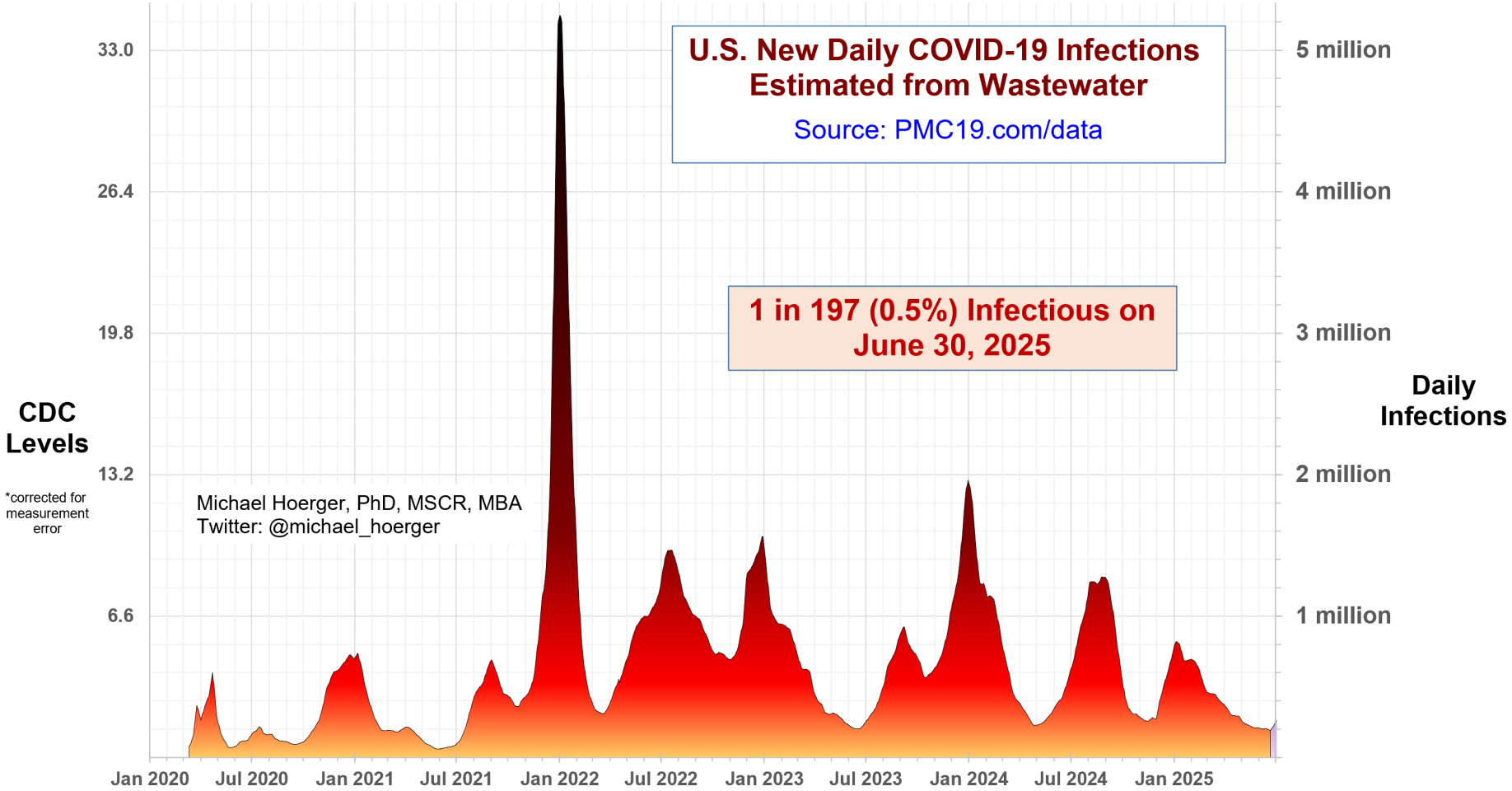
Announcements

Data Quality Note: The CDC (80% model weight) and Biobot (20% model weight) both reported this week. Long-term data quality is ‘high,’ but real-time data quality is ‘low/moderate’ and prone to retroactive correction. The CDC posted last week that transmission had increased by the highest amount since January, only to revise this week with flat transmission. This pushes back the summer wave substantially, by about 10 days by current data. Data quality will be upgraded back to ‘moderate’ after 3 weeks without substantial retroactive changes. Note that in next week’s or the following week’s update, the CDC is anticipated to restandardize their Jan-Jun data, which may also affect the best estimates of current, recent, and future transmission. Biobot may do the same, though their cadence for major data revisions is less predictable.

New Feature: The dashboard now includes links to sources for state-level and international surveillance data. Scroll down the page.

The Big-Picture View of the Pandemic

We are in a relative “lull” between Covid waves. Last week, the CDC indicated the largest increase in transmission since early January but has revised estimates to indicate flat transmission. Such revisions happen, and we indicated last week there was a <10% chance of such a possibility. It is a major revision. Biobot data also show flat transmission, so this is nothing nefarious, just that transmission levels may be correlated with lags in reporting at the moment. Presently, an estimated 0.5% (1 in 197 people) are actively infectious.



Statistical Summary

Presently, we are seeing an estimated nearly 1.7 million weekly infections, likely to result in 85-340K Long COVID cases, and 600-1,000 excess deaths in the U.S. The most plausible scenario from Swiss Re is that the U.S. would average approximately 3,365 resulting excess deaths from each week's infections in 2025, so as we exit the lull, bear in mind that the weekly infections during the height of the 11th wave could plausibly result in >5,000 excess deaths. In a room of 40-50 people of average risk, there would be a 1 in 5 chance of exposure. Although transmission is like beginning to rise, it rarely gets this low in most places, which is a reminder of the importance of timely care. Check your local levels using the new information provided at the bottom of the dashboard.

Current Levels for Jun 30, 2025
% of the Population Infectious
0.5% (1 in 197)
New Daily Infections
243,000
New Weekly Infections
1,701,000
Resulting Weekly Long COVID Cases
85,000 to 340,000
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Monthly Forecast
Average % of the Population Infectious
0.9% (1 in 107)
Average New Daily Infections
448,267
New Infections During the Next Month
13,448,000
Resulting Monthly Long COVID Cases
672,000 to 2,690,000
Resulting Monthly Excess Deaths
4,800 to 8,000

Running Totals
Infections Nationwide in 2025
75,441,000
Average Number of Infections Per Person All-Time, U.S.
3.77

How Does Risk Increase with More Social Contacts?

Number of People	Chances Anyone Is Infectious	Number of People	Chances Anyone Is Infectious
1	0.5%	15	7.4%
2	1.0%	20	9.7%
3	1.5%	25	12.0%
4	2.0%	30	14.2%
5	2.5%	35	16.3%
6	3.0%	40	18.4%
7	3.5%	50	22.5%
8	4.0%	75	31.8%
9	4.5%	100	39.9%
10	5.0%	300	78.3%

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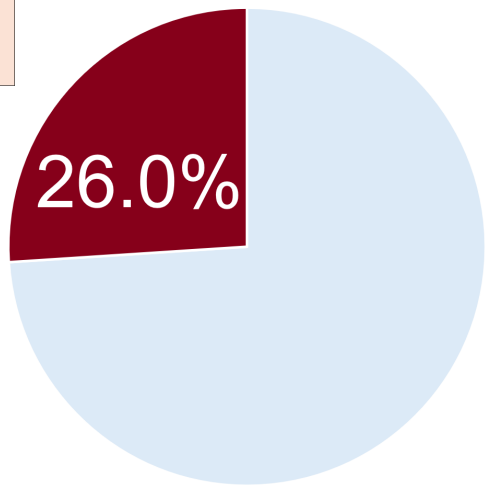
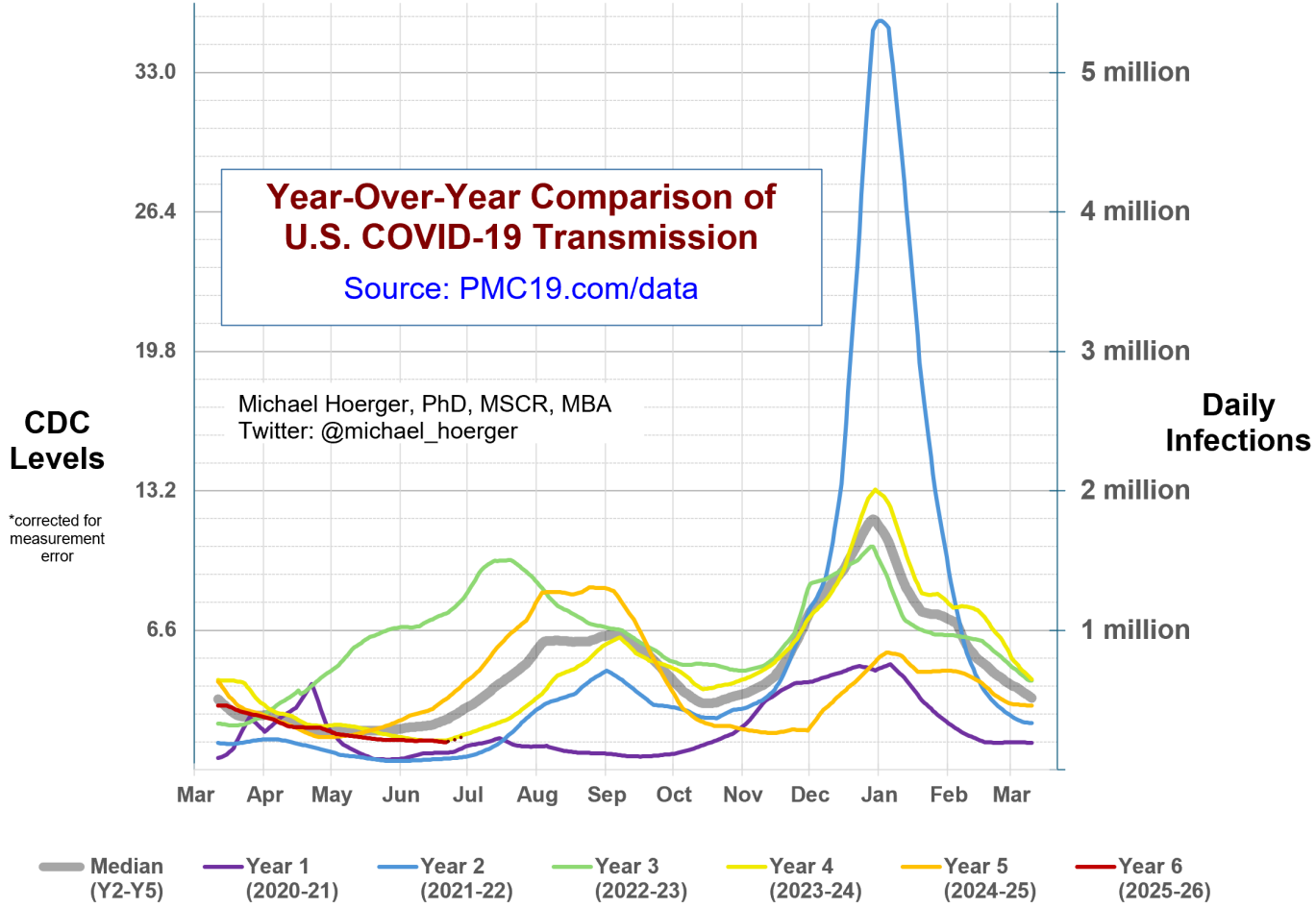


There is more COVID-19 transmission today than during 26% of the pandemic.

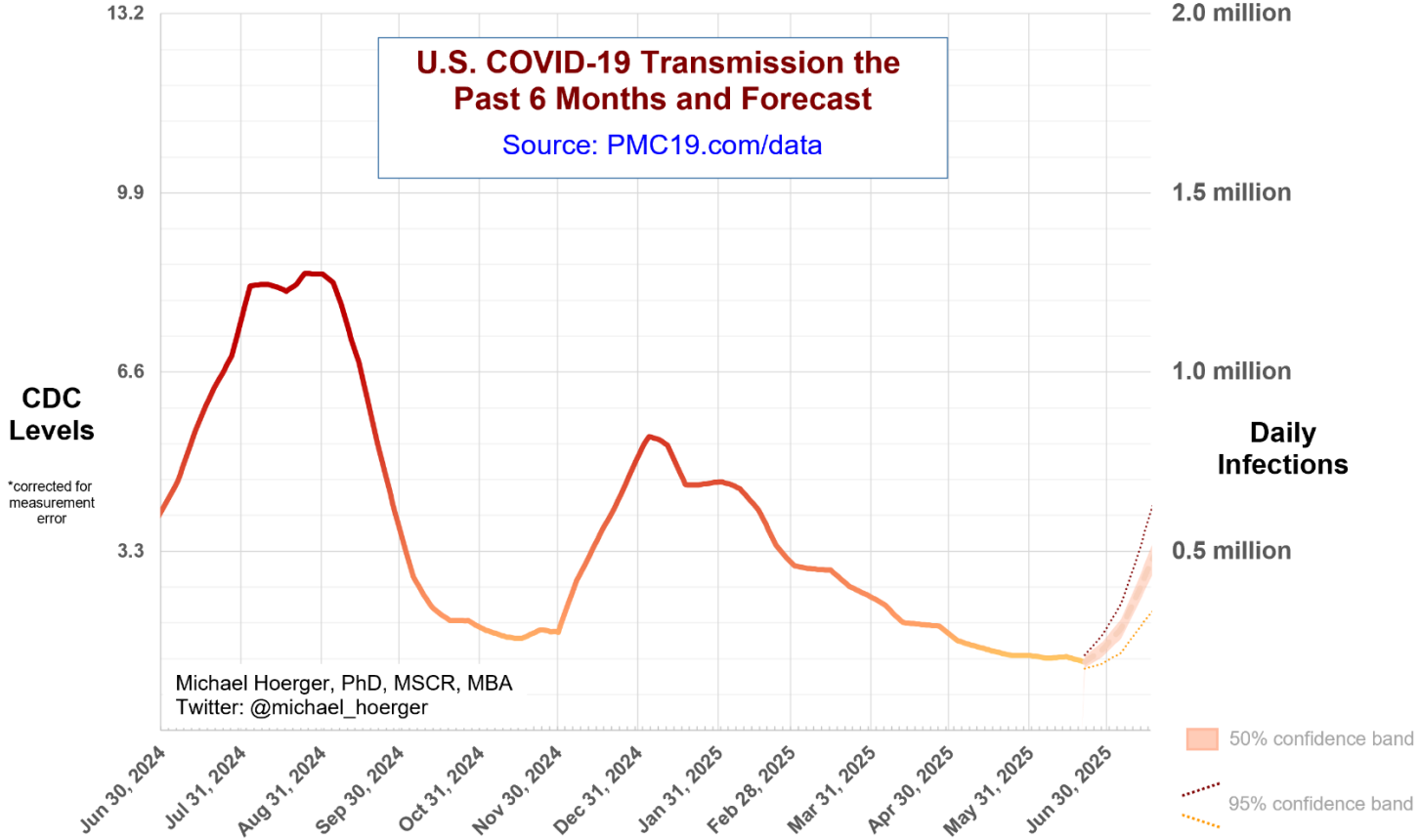
Year-Over-Year Comparisons

The year-over-year graph shows current transmission along the red line in the lower left corner. Now that the CDC has revised last week's number to indicate no major uptick, the model is again tracking quite closely with yellow line (two years ago). As noted last week, "As the retroactive corrections and the next two weeks of data come in, we will have a better sense of whether we are headed on a trajectory closer to the yellow line or the median gray line." The yellow line is now looking more and more plausible.



Close-up on the Current Forecast

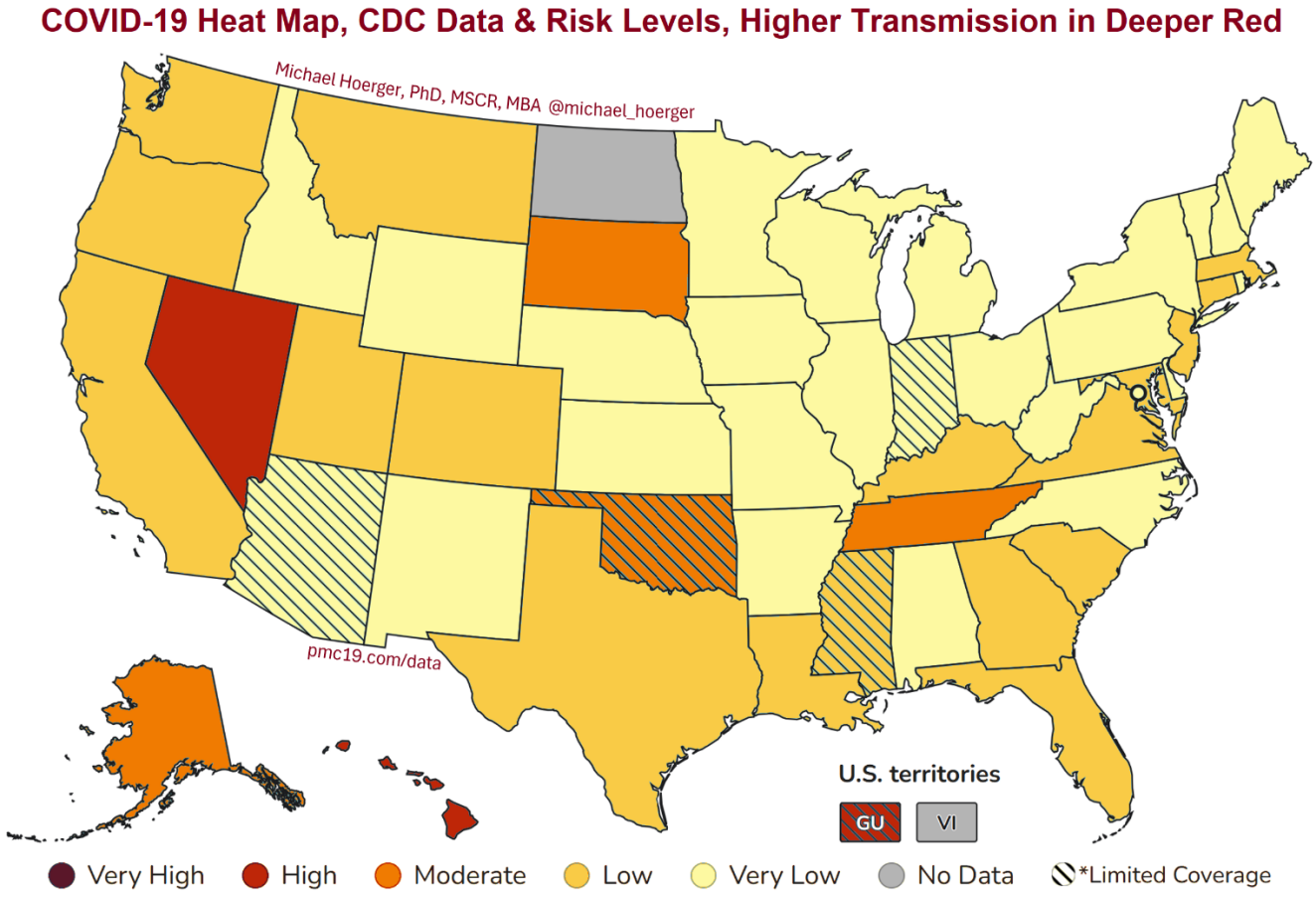
This graph shows the current forecast. Note that values for “today” are a forecast from data 9-12 days old. The current forecast is for increasing transmission over the next several weeks. With the CDC’s major revision to their reported numbers last week, the anticipated rise in transmission is pushed back about 10 days, with the U.S. expected to reach 500K daily infections around July 19. The 95% confidence intervals depict essentially best case and worst case scenarios. It is important to note that the 10th wave was quite oddly shaped, with a slow burn on the back end of the wave. The precise implication of that is unclear but may explain any unusual variation in transmission we see in the remainder of 2025.



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 Hawai’i, Nevada, and Guam.

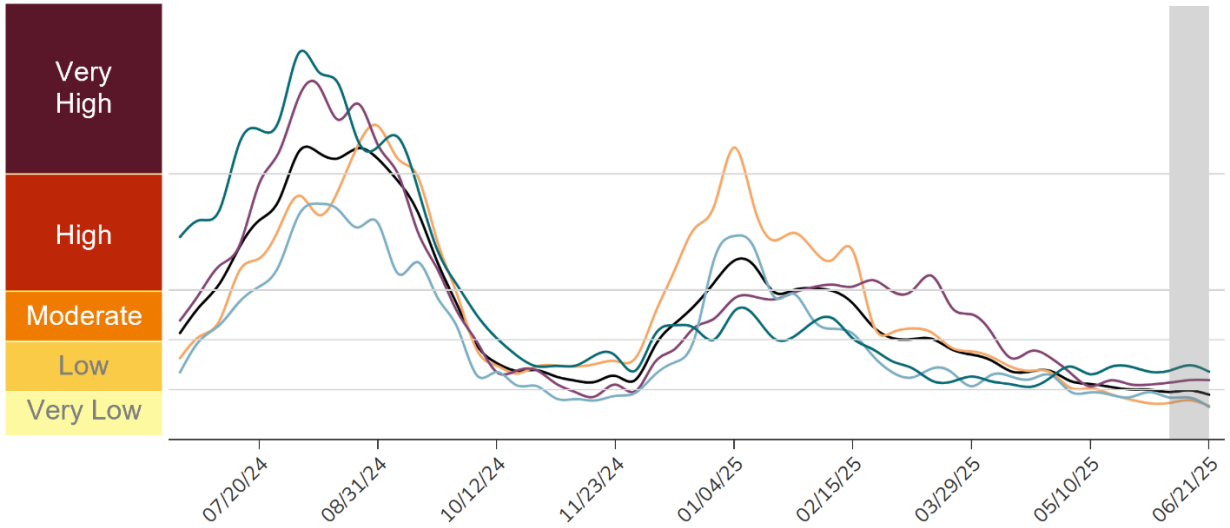


Regional Case Estimation

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



Estimated Percentage Actively Infectious*		PMC Model	Raw CDC Data
	National	0.5% (1 in 197)	0.4% (1 in 232)
	Northeast	0.4% (1 in 271)	0.3% (1 in 320)
	Midwest	0.4% (1 in 263)	0.3% (1 in 311)
	South	0.7% (1 in 149)	0.6% (1 in 176)
	West	0.8% (1 in 130)	0.7% (1 in 154)

PMC Regional Multiplier*
0.310

* CDC level multiplied by the PMC Regional Multiplier provides an approximate estimate 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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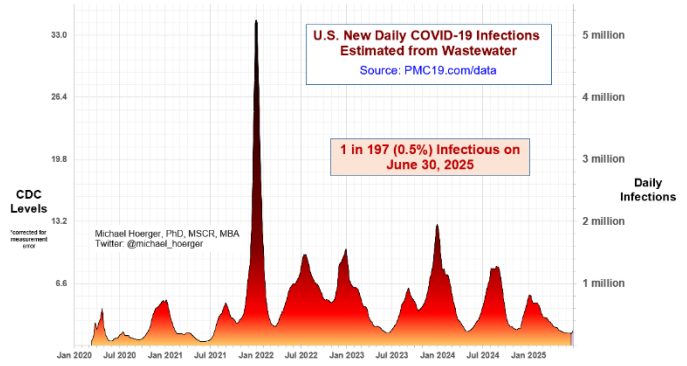

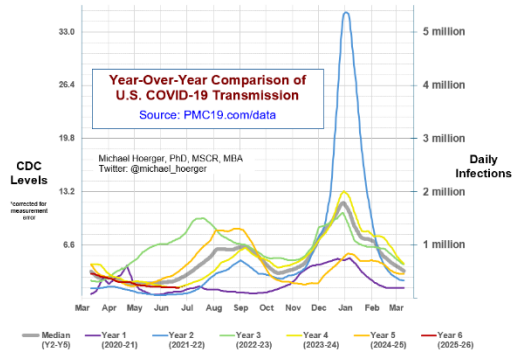

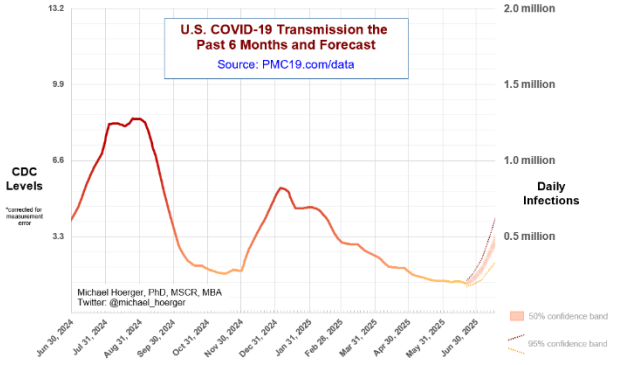

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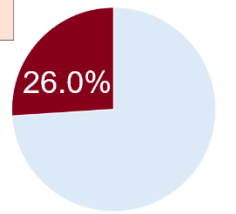

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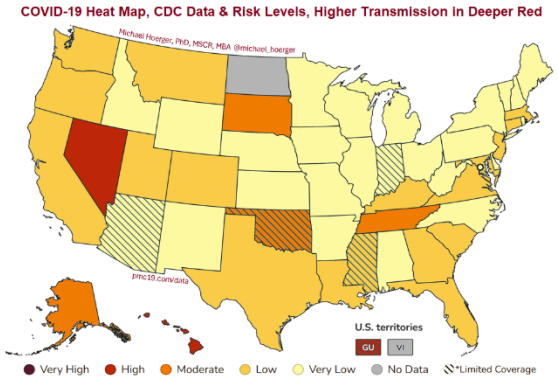

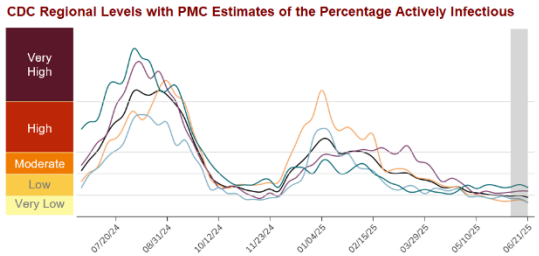

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A separate document called a Technical Appendix appears on the dashboard page and has more methodologic info.