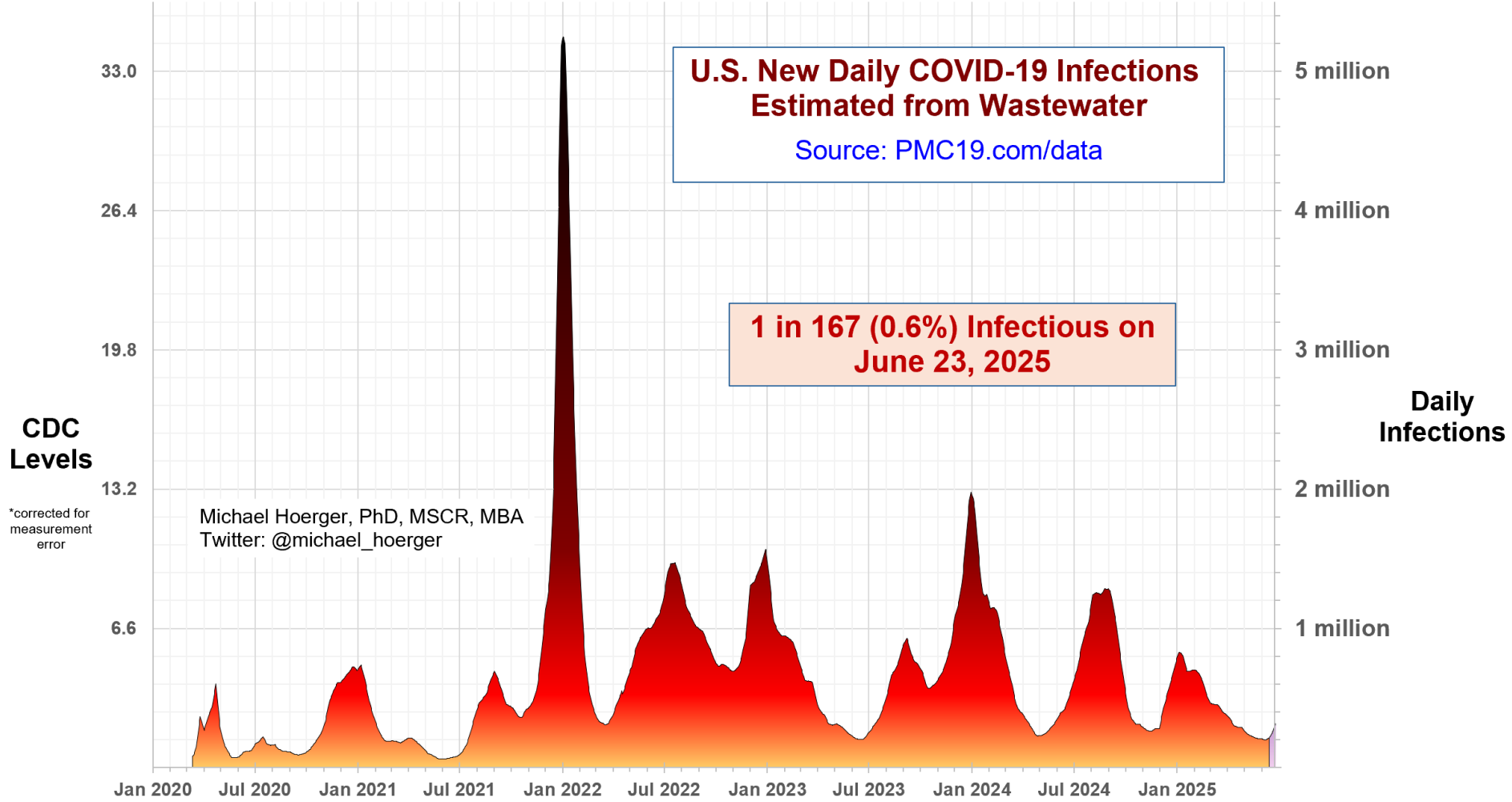
PMC U.S. COVID-19 Case Estimation and Forecasting Model: Report for June 23, 2025 pmc19.com/data

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



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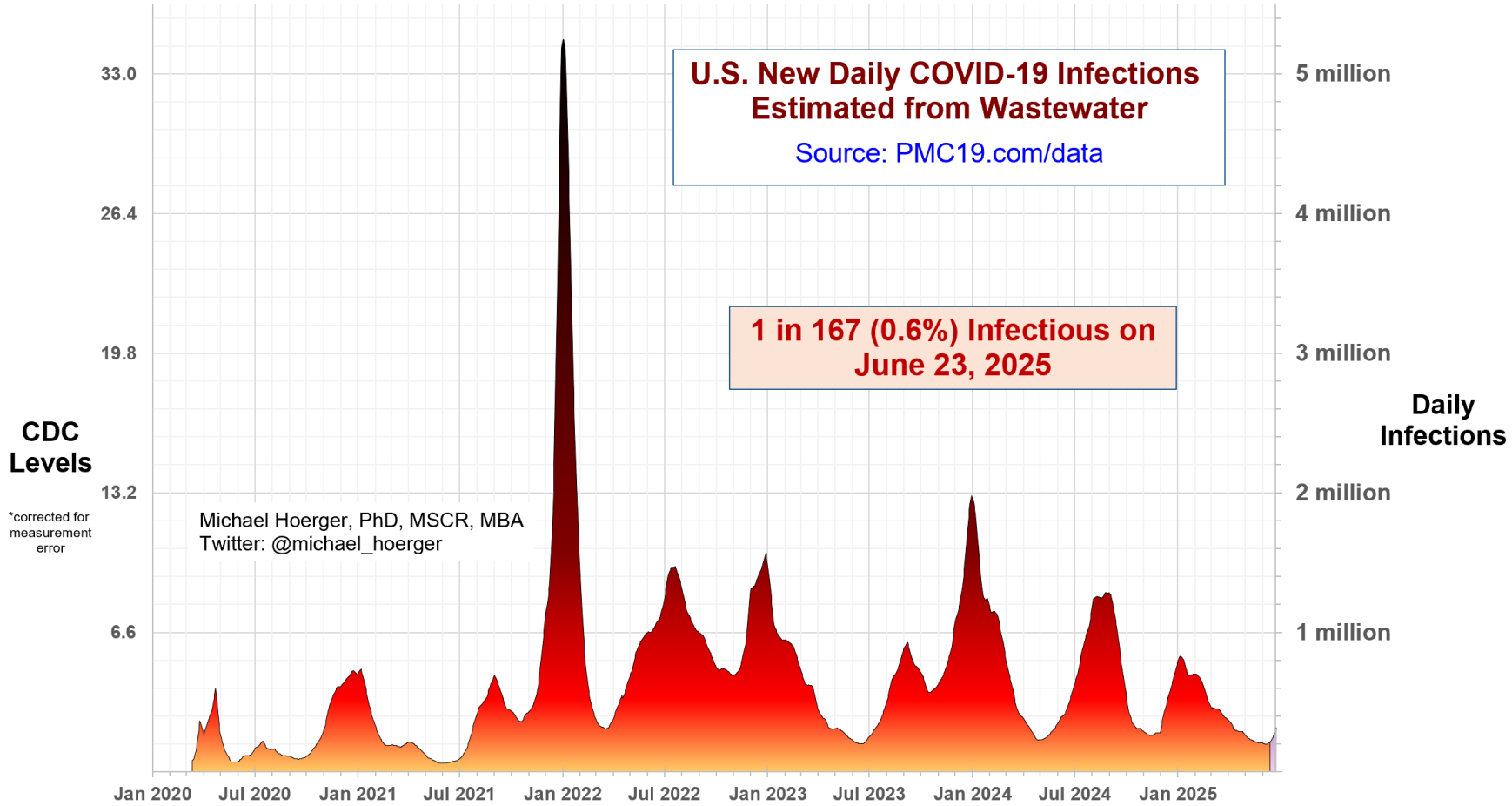
Announcements

Data Quality Note: The CDC (80% model weight) and Biobot (20% model weight) both reported this week. Data quality is moderate. The CDC data continue to run a bit “hotter” than Biobot on transmission. Biobot retroactively corrected last week’s numbers upward significantly, so if that happens again, current and forecasted levels may be marginally higher than reported here.

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, but transmission is increasing. Presently, an estimated 0.6% (1 in 167 people) are actively infectious. As noted, the Biobot and CDC data sources have experienced some sizeable retroactive corrections in recent weeks. Barring further sizeable corrections, the lull point has passed. Considerable uncertainty remains regarding how quickly the 11th wave will rise. All four regions experienced increased transmission in the most recent surveillance reports, in fact, the highest overall increase since early January.



Statistical Summary

Presently, we are seeing an estimated nearly 2.0 million weekly infections, likely to result in 100-400K Long COVID cases, and 700-1,200 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 50 people of average risk, there would be a 1 in 4 chance of exposure. Although transmission is likely rising, 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 23, 2025
% of the Population Infectious
0.6% (1 in 167)
New Daily Infections
287,000
New Weekly Infections
2,009,000
Resulting Weekly Long COVID Cases
100,000 to 402,000
Resulting Weekly Excess Deaths
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Monthly Forecast
Average % of the Population Infectious
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493,300
New Infections During the Next Month
14,799,000
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Running Totals
Infections Nationwide in 2025
74,869,000
Average Number of Infections Per Person All-Time, U.S.
3.78

How Does Risk Increase with More Social Contacts?			
Number of People	Chances Anyone Is Infectious	Number of People	Chances Anyone Is Infectious
1	0.6%	15	8.6%
2	1.2%	20	11.3%
3	1.8%	25	14.0%
4	2.4%	30	16.5%
5	3.0%	35	19.0%
6	3.5%	40	21.4%
7	4.1%	50	26.0%
8	4.7%	75	36.3%
9	5.3%	100	45.2%
10	5.8%	300	83.6%

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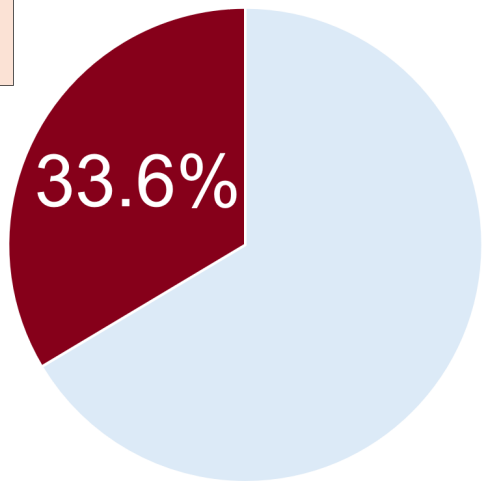
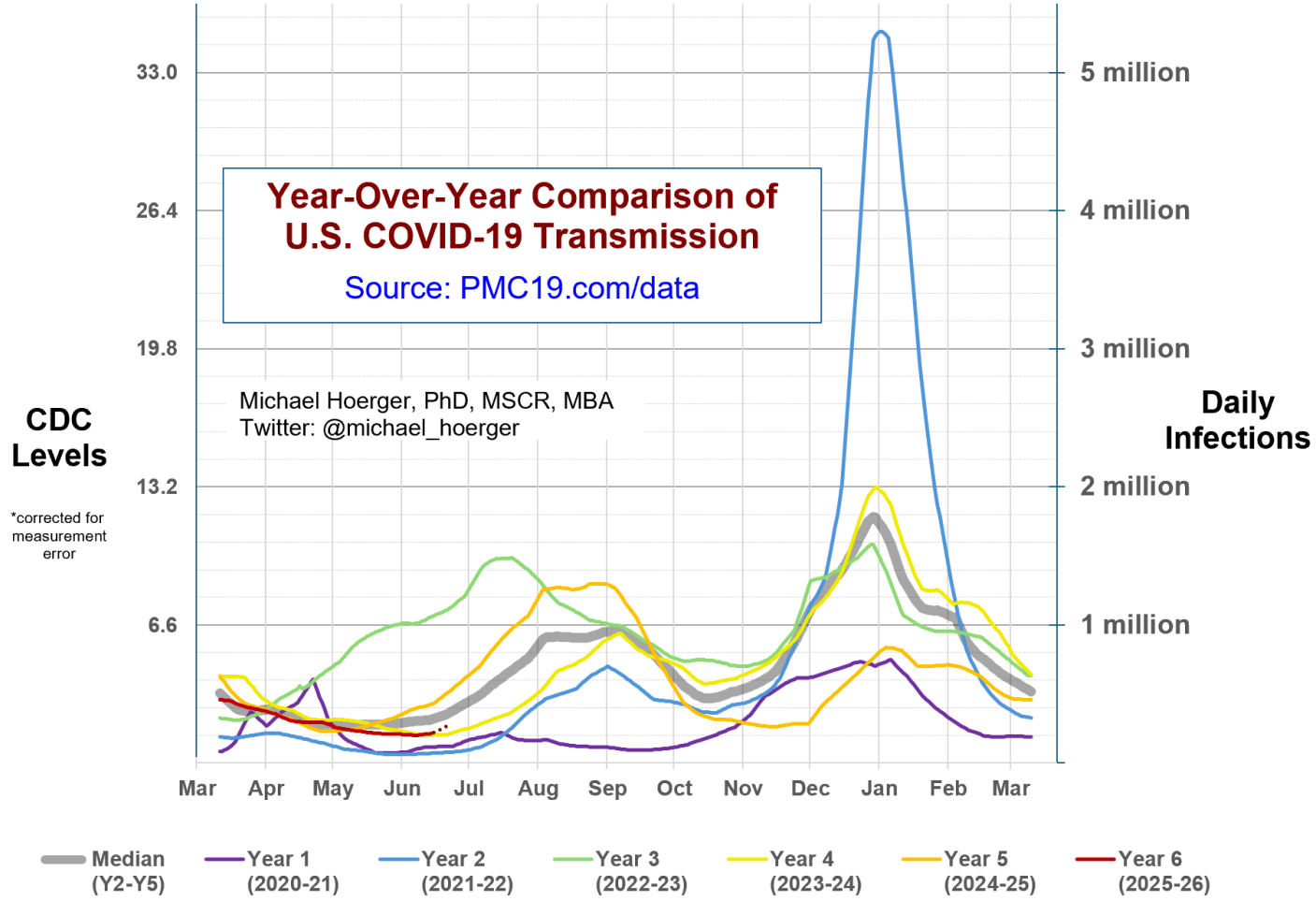


There is more COVID-19 transmission today than during 33.6% of the pandemic.

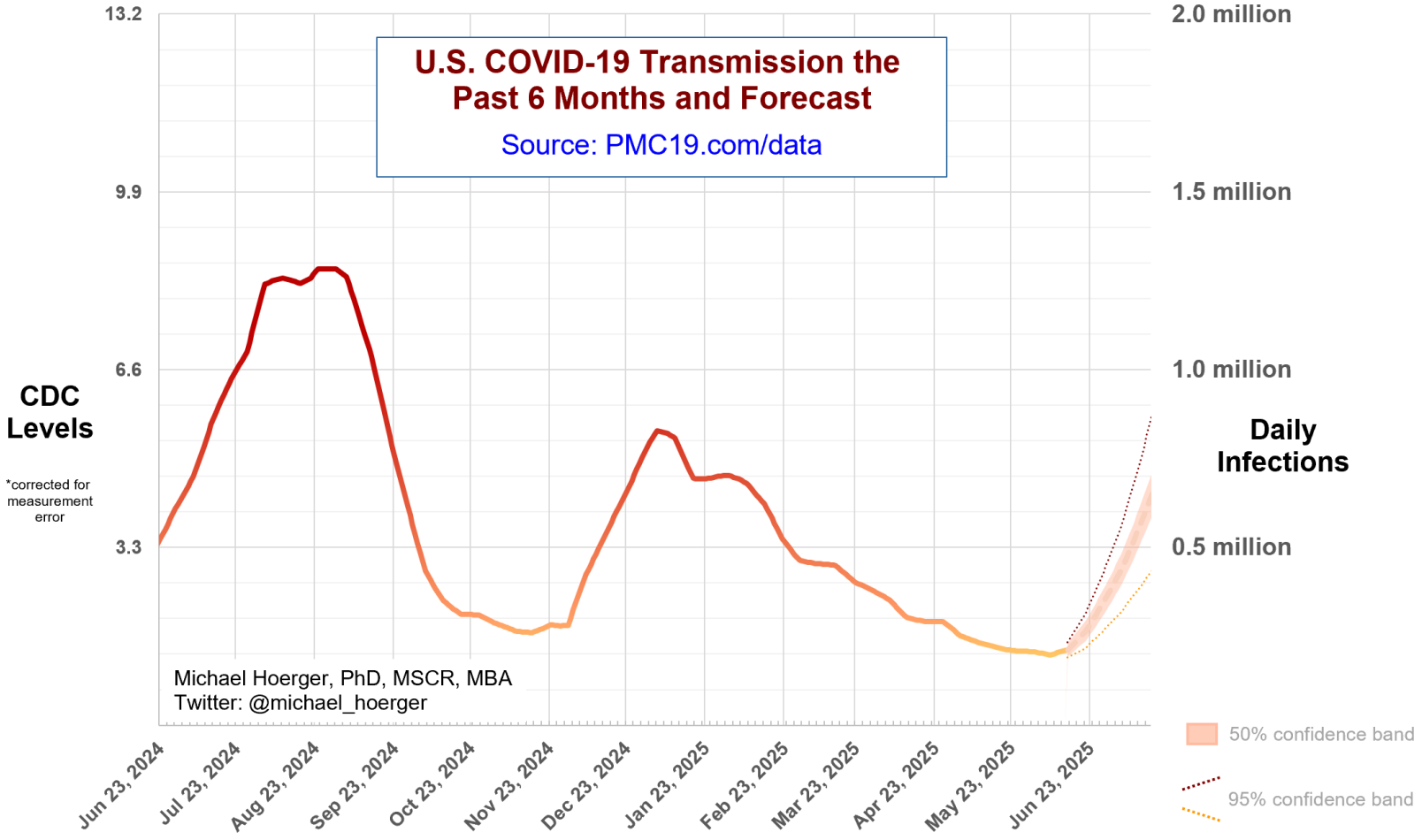
Year-Over-Year Comparisons

The year-over-year graph shows current transmission along the red line in the lower left corner. The model was tracking quite closely with yellow line (two years ago). 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.



Close-up on the Current Forecast

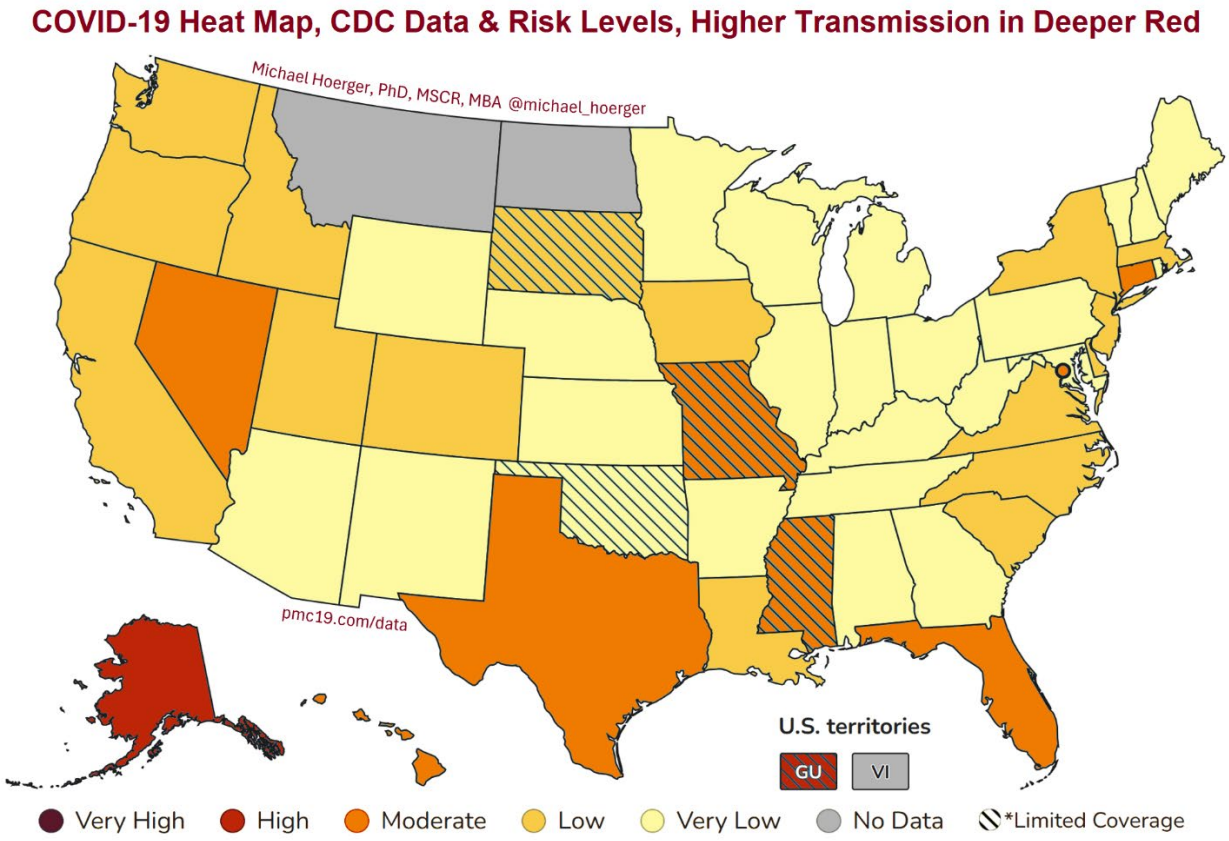
This graph shows the current forecast. Note that values for “today” are a forecast from data 9-12 days old. The current forecast is for increasing transmission over the next several weeks. The forecast has the U.S. reaching 500K daily infections around July 9 – the same as forecasted last week, as the forecasted values held true with the incoming data. 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 Alaska and Guam, while many states so transmission increase this week.

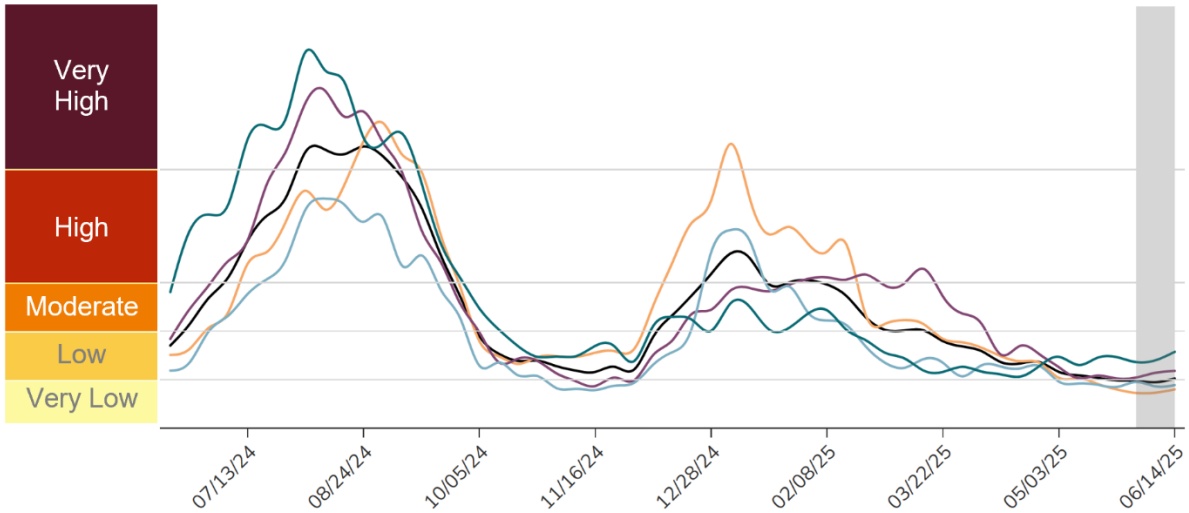


Regional Case Estimation

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	0.6% (1 in 167)	0.5% (1 in 202)
Northeast	0.5% (1 in 220)	0.4% (1 in 266)
Midwest	0.4% (1 in 231)	0.4% (1 in 280)
South	0.7% (1 in 152)	0.5% (1 in 184)
West	0.8% (1 in 125)	0.7% (1 in 151)

PMC Regional Multiplier*

0.314

* 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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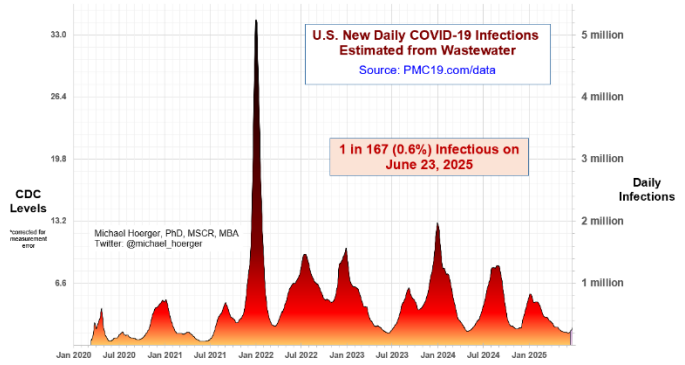

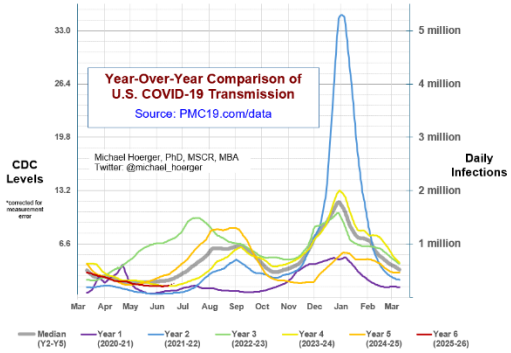

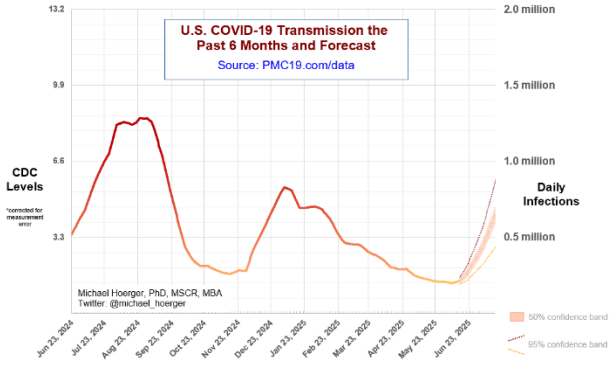

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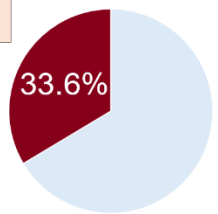

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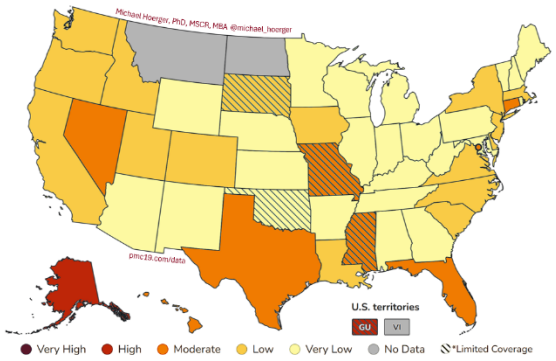
COVID-19 Heat Map, CDC Data & Risk Levels, Higher Transmission in Deeper Red



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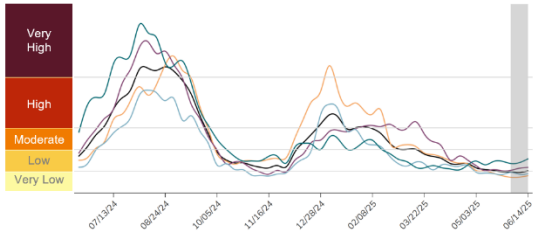

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A separate document called a Technical Appendix appears on the dashboard page and has more methodologic info.