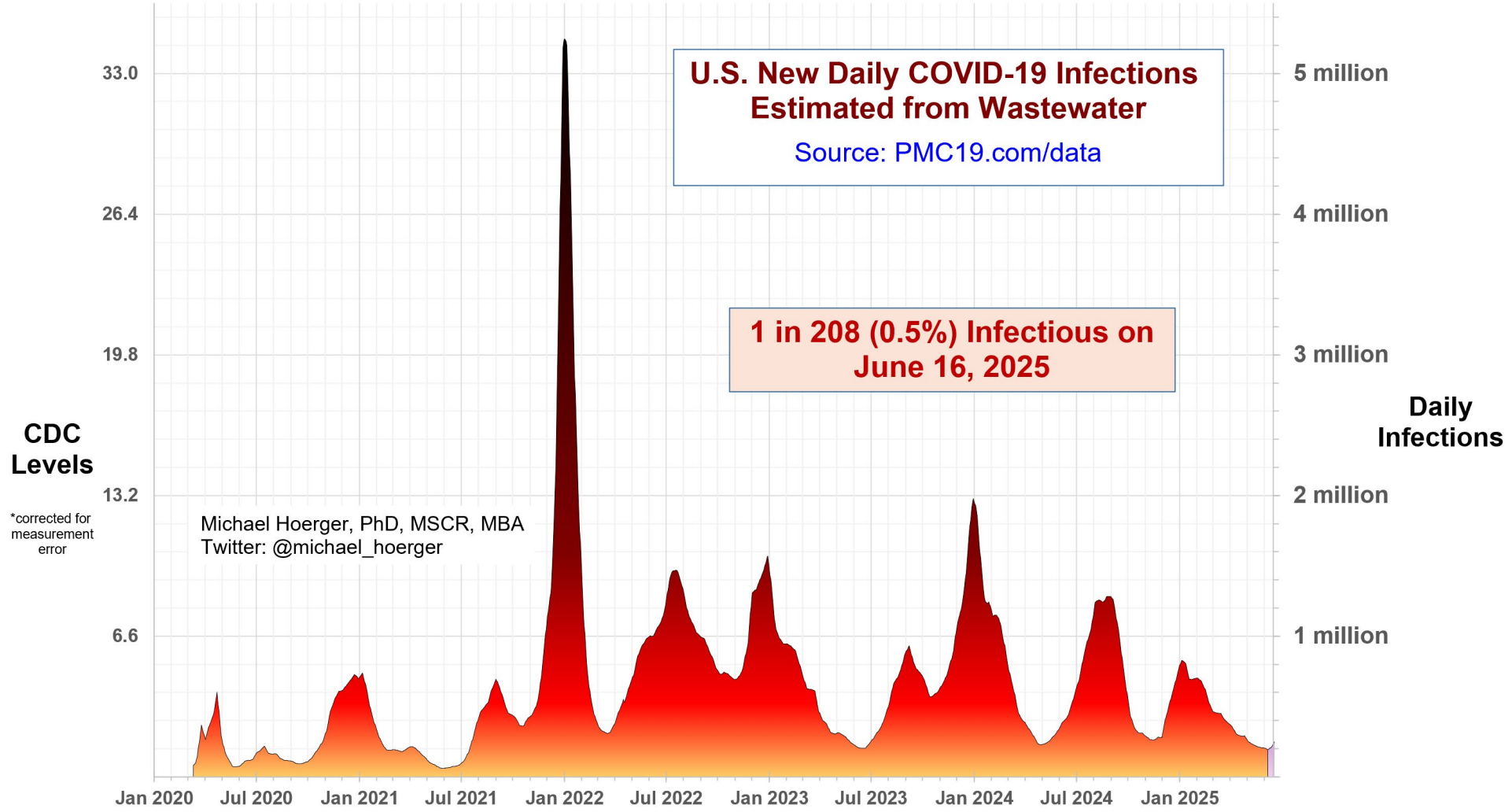
PMC U.S. COVID-19 Case Estimation and Forecasting Model: Report for June 16, 2025 pmc19.com/data

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



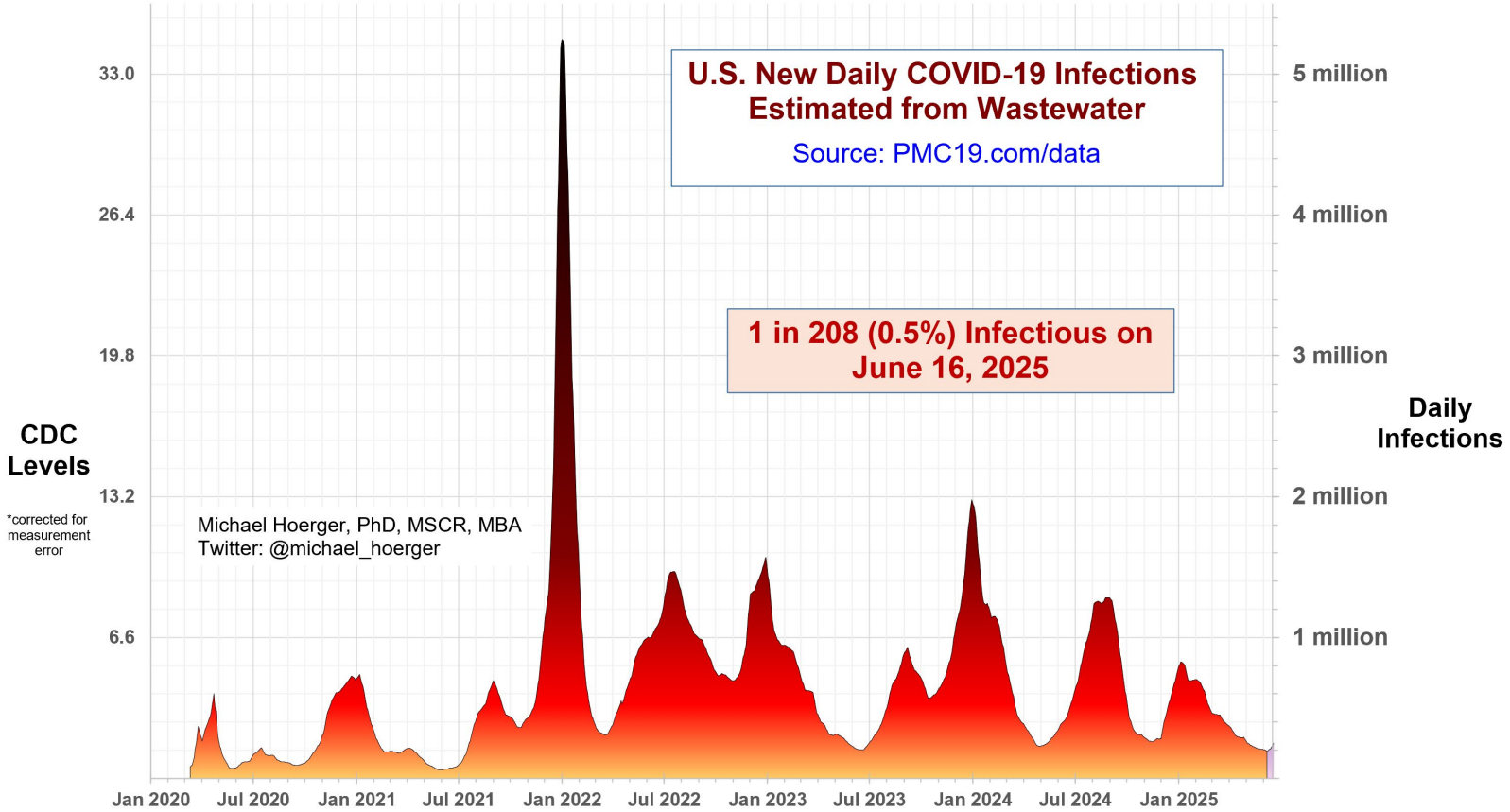
Cite as: Hoerger, M. (2025, June 16). *PMC U.S. COVID-19 Case Estimation and Forecasting Model: Report for June 16, 2025*. Pandemic Mitigation Collaborative. http://www.pmc19.com/data

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. The CDC retroactively corrected last week’s data downward, and Biobot corrected last week’s data upward. Both have transmission down this week relative to last week’s updated numbers. These are normal corrections, not something nefarious, and is good news in that the corrections amount to the relative “lull” lasting a little longer.

The Big-Picture View of the Pandemic

We are in a “lull” between Covid waves. Presently, an estimated 0.5% (1 in 208 people) are actively infectious. The national average for transmission may not get much lower for some time. Last week, we noted that “Barring retroactive corrections, the 10th wave is likely over, with the 11th wave on the way.” The retroactive corrections mean we *will* be in a lull a little longer than the uncorrected data suggested, but we are already seeing the West and South ticking up. The Midwest and Northeast appear to have bottomed out to the extent likely possible. We are not seeing a steep rise presently, as many were concerned about regarding NB.1.8.1, fortunately. In a relative sense, this is all good news.



Statistical Summary

Presently, we are seeing an estimated nearly 1.6 million weekly infections, likely to result in 80-320k Long COVID cases, and 600-1,000 excess deaths in the U.S. In a room of 50 people of average risk, there would be a 1 in 5 chance of exposure. Transmission rarely gets this low (<24% of all days of the pandemic), mostly in the first 1.5 years the onset of COVID-19 when universal precautions were the norm.

Current Levels for Jun 16, 2025
% of the Population Infectious
0.5% (1 in 208)
New Daily Infections
230,000
New Weekly Infections
1,610,000
Resulting Weekly Long COVID Cases
81,000 to 322,000
Resulting Weekly Excess Deaths
600 to 1,000

Monthly Forecast
Average % of the Population Infectious
0.8% (1 in 120)
Average New Daily Infections
398,400
New Infections During the Next Month
11,952,000
Resulting Monthly Long COVID Cases
598,000 to 2,390,000
Resulting Monthly Excess Deaths
4,300 to 7,100

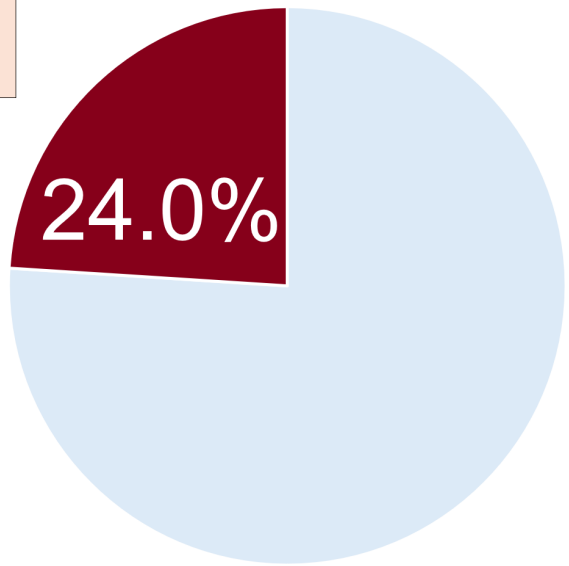
Running Totals
Infections Nationwide in 2025
73,043,000
Average Number of Infections Per Person All-Time, U.S.
3.77

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	7.0%
2	1.0%	20	9.2%
3	1.4%	25	11.4%
4	1.9%	30	13.5%
5	2.4%	35	15.5%
6	2.9%	40	17.5%
7	3.3%	50	21.4%
8	3.8%	75	30.4%
9	4.2%	100	38.3%
10	4.7%	300	76.5%

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

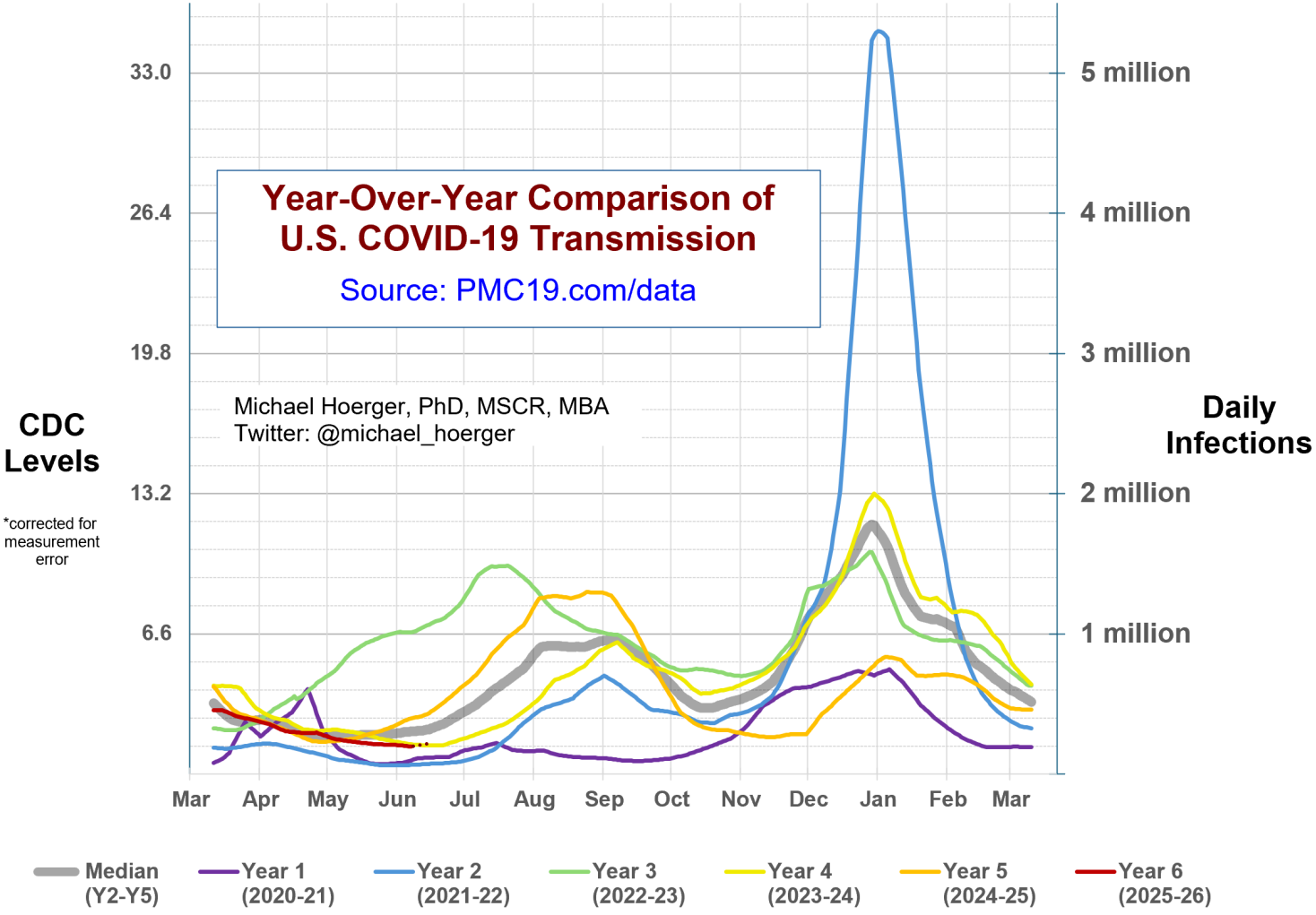
Michael Hoerger, PhD, MSCR, MBA
Twitter: @michael_hoerger



There is more COVID-19 transmission today than during 24% of the pandemic.

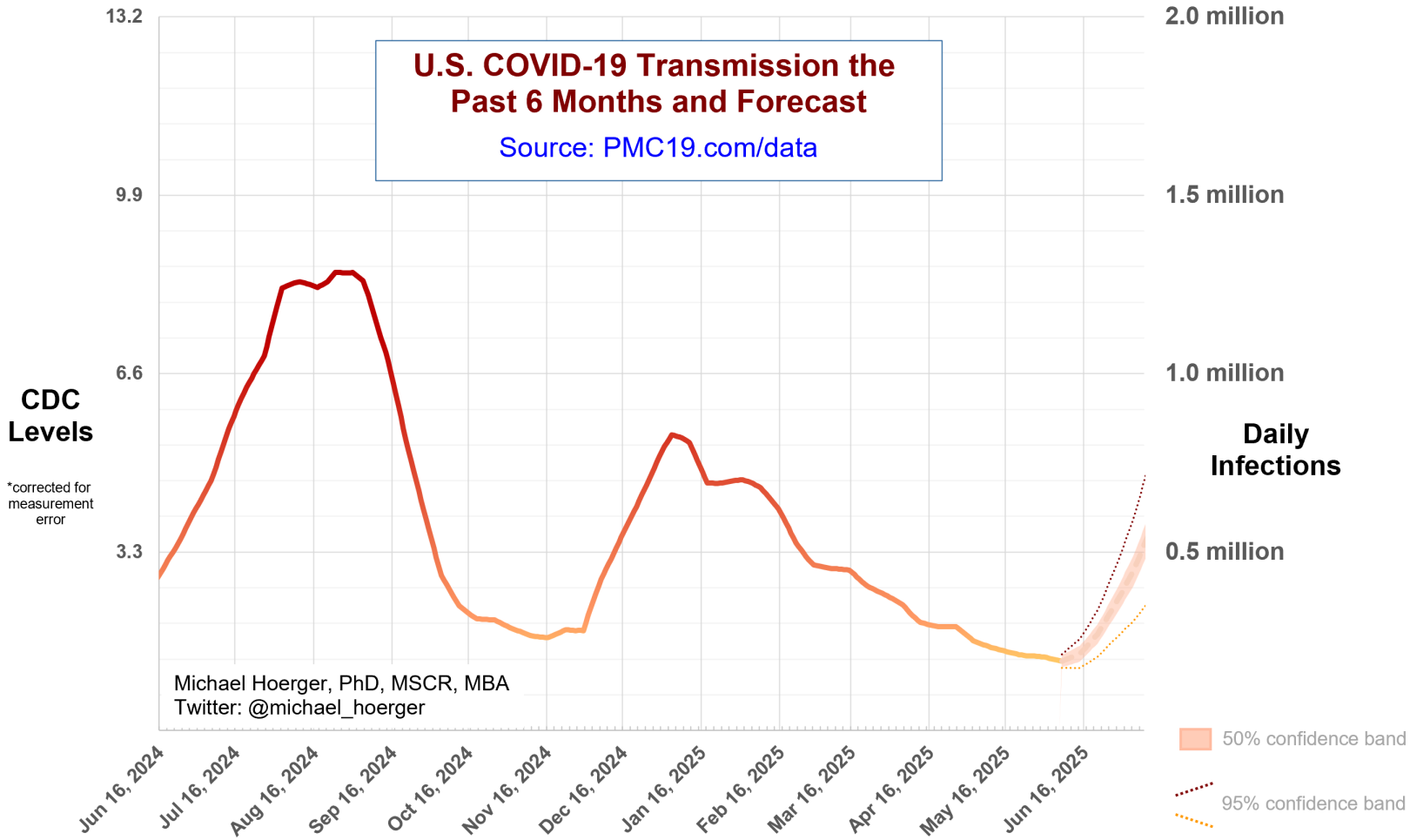
Year-Over-Year Comparisons

The year-over-year graph shows current transmission along the red line in the lower left corner. The model is tracking quite closely with yellow line (two years ago). Our forecast is a bit more aggressive about when we will hit the 500k daily infection mark, but a reasonable assumption would be that it will occur sometime between the 2nd week and end of July.



Close-up on the Current Forecast

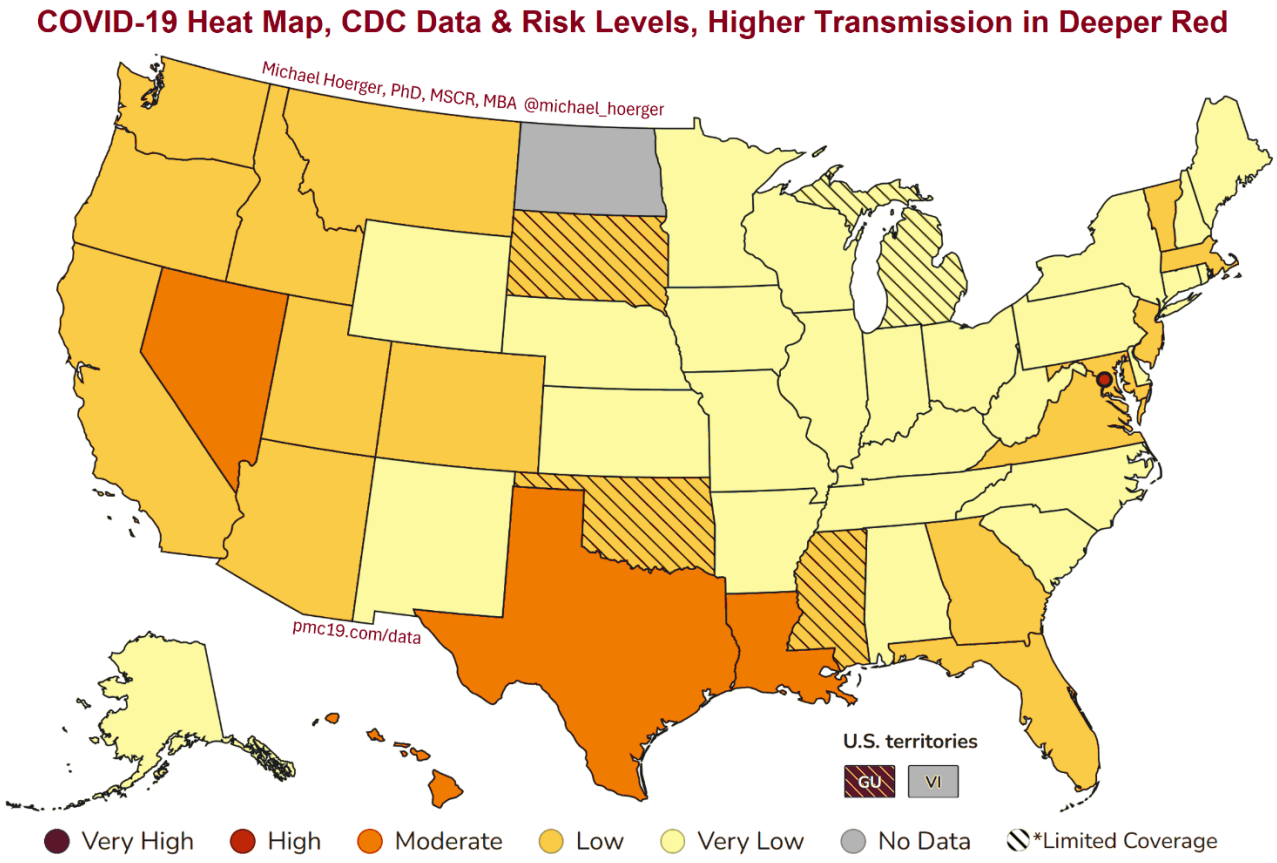
This graph shows the current forecast. Note that values for “today” are a forecast from data 9-12 days old. The current forecast is for increasing transmission over the next several weeks. The forecast has the U.S. reaching 500K daily infections around July 9. The 95% confidence intervals depict essentially 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 has been high in DC, which of course just had large political events. It is apparent that transmission is higher in the West and South.

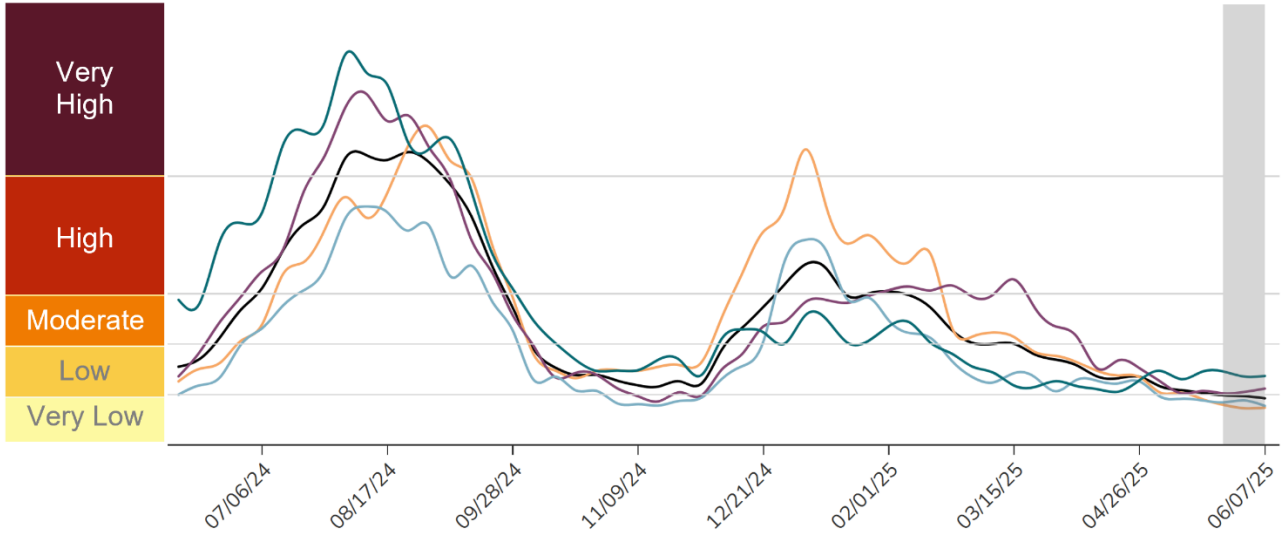


Regional Case Estimation

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 208)	0.4% (1 in 223)
Northeast	0.4% (1 in 248)	0.4% (1 in 266)
Midwest	0.4% (1 in 261)	0.4% (1 in 280)
South	0.6% (1 in 172)	0.5% (1 in 184)
West	0.7% (1 in 141)	0.7% (1 in 151)

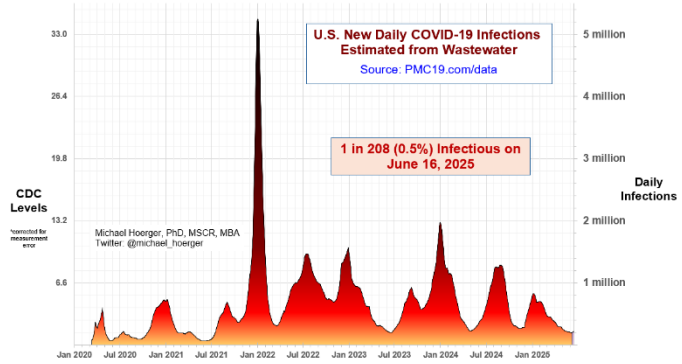
PMC Regional Multiplier*
0.314

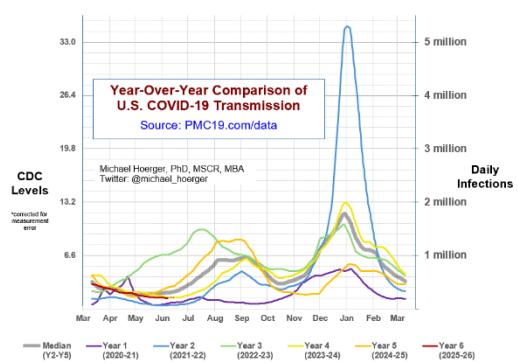
* CDC level multiplied by the PMC Regional Multiplier provides an approximate estimate of the percentage actively infectious.

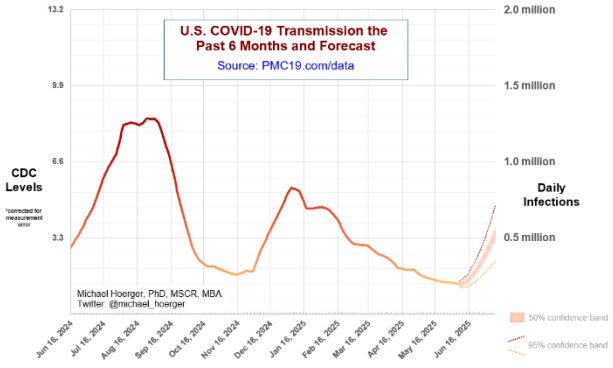
* The "Raw CDC" values are simply the value in the CDC chart multiplied by the PMC Regional Multiplier. The "PMC Model" estimates adjust those data by accounting for reporting time lag.

PMC COVID-19 Dashboard

Here is the complete PMC COVID-19 Dashboard. Please share the images across social media and other websites.
Michael Hoerger, PhD, MSCR, MBA | Pandemic Mitigation Collaborative | pmc19.com/data







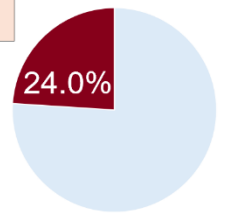
Current Levels for Jun 16, 2025	
% of the Population Infectious	0.5% (1 in 208)
New Daily Infections	230,000
New Weekly Infections	1,610,000
Resulting Weekly Long COVID Cases	81,000 to 322,000
Resulting Weekly Excess Deaths	600 to 1,000

Monthly Forecast	
Average % of the Population Infectious	0.8% (1 in 120)
Average New Daily Infections	398,400
New Infections During the Next Month	11,952,000
Resulting Monthly Long COVID Cases	598,000 to 2,390,000
Resulting Monthly Excess Deaths	4,300 to 7,100

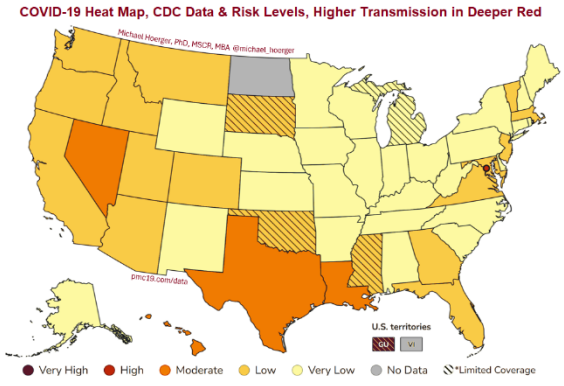
Running Totals	
Infections Nationwide in 2025	73,043,000
Average Number of Infections Per Person All-Time, U.S.	3.77

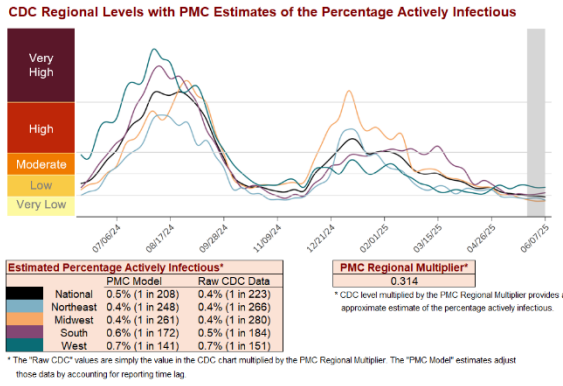
How Does Risk Increase with More Social Contacts?			
Number of People	Chances Anyone Is Infectious	Number of People	Chances Anyone Is Infectious
1	0.5%	15	7.0%
2	1.0%	20	9.2%
3	1.4%	25	11.4%
4	1.9%	30	13.5%
5	2.4%	35	15.5%
6	2.9%	40	17.5%
7	3.3%	50	21.4%
8	3.8%	75	30.4%
9	4.2%	100	38.3%
10	4.7%	300	76.5%

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 24% of the pandemic.





Estimated Percentage Actively Infectious*	PMC Model	Raw CDC Data
National	0.5% (1 in 208)	0.4% (1 in 223)
Northeast	0.4% (1 in 248)	0.4% (1 in 266)
Midwest	0.4% (1 in 261)	0.4% (1 in 280)
South	0.6% (1 in 172)	0.5% (1 in 184)
West	0.7% (1 in 141)	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.

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