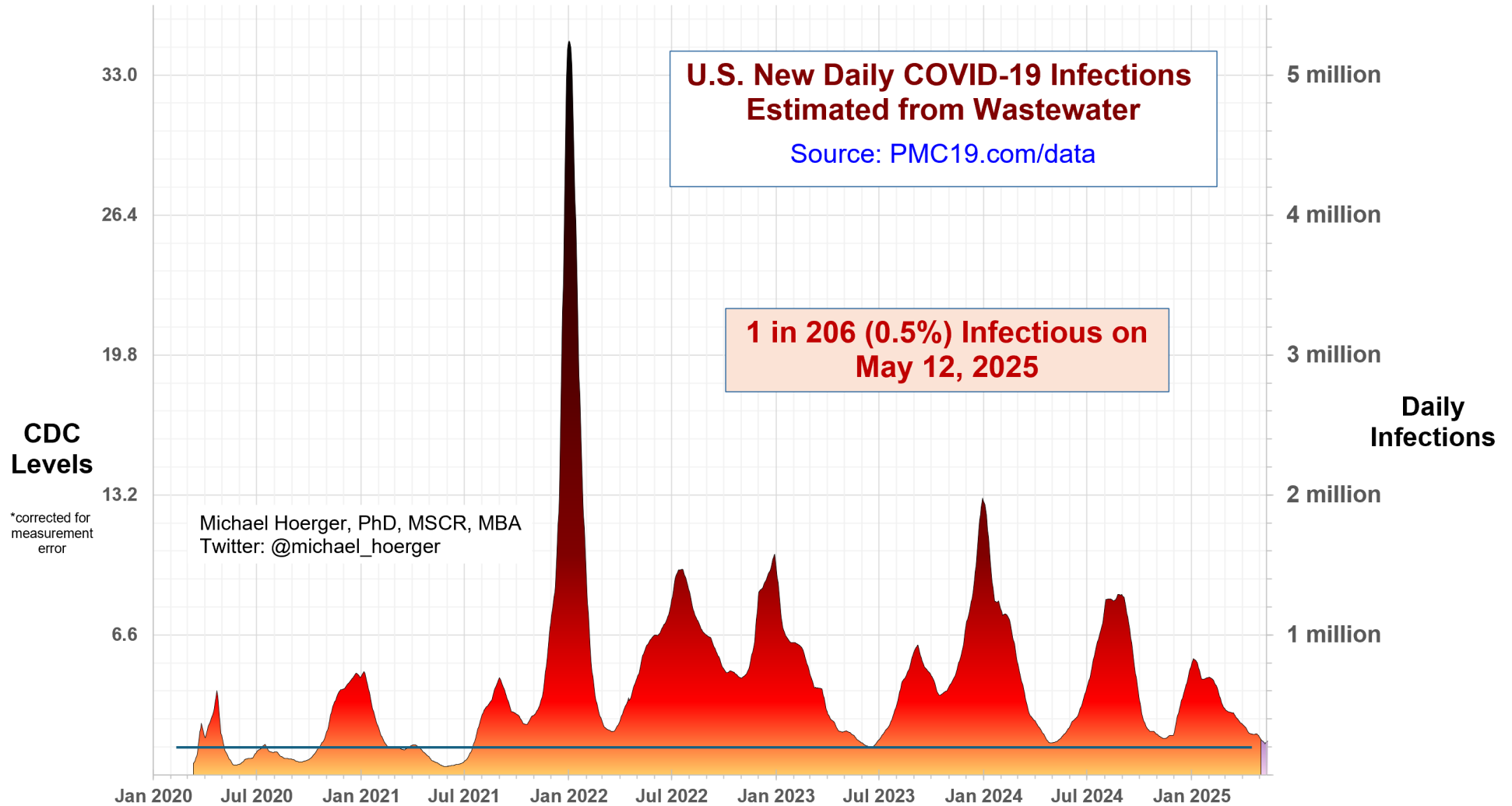


PMC U.S. COVID-19 Case Estimation and Forecasting Model: Report for May 12, 2025, pmc19.com/data

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



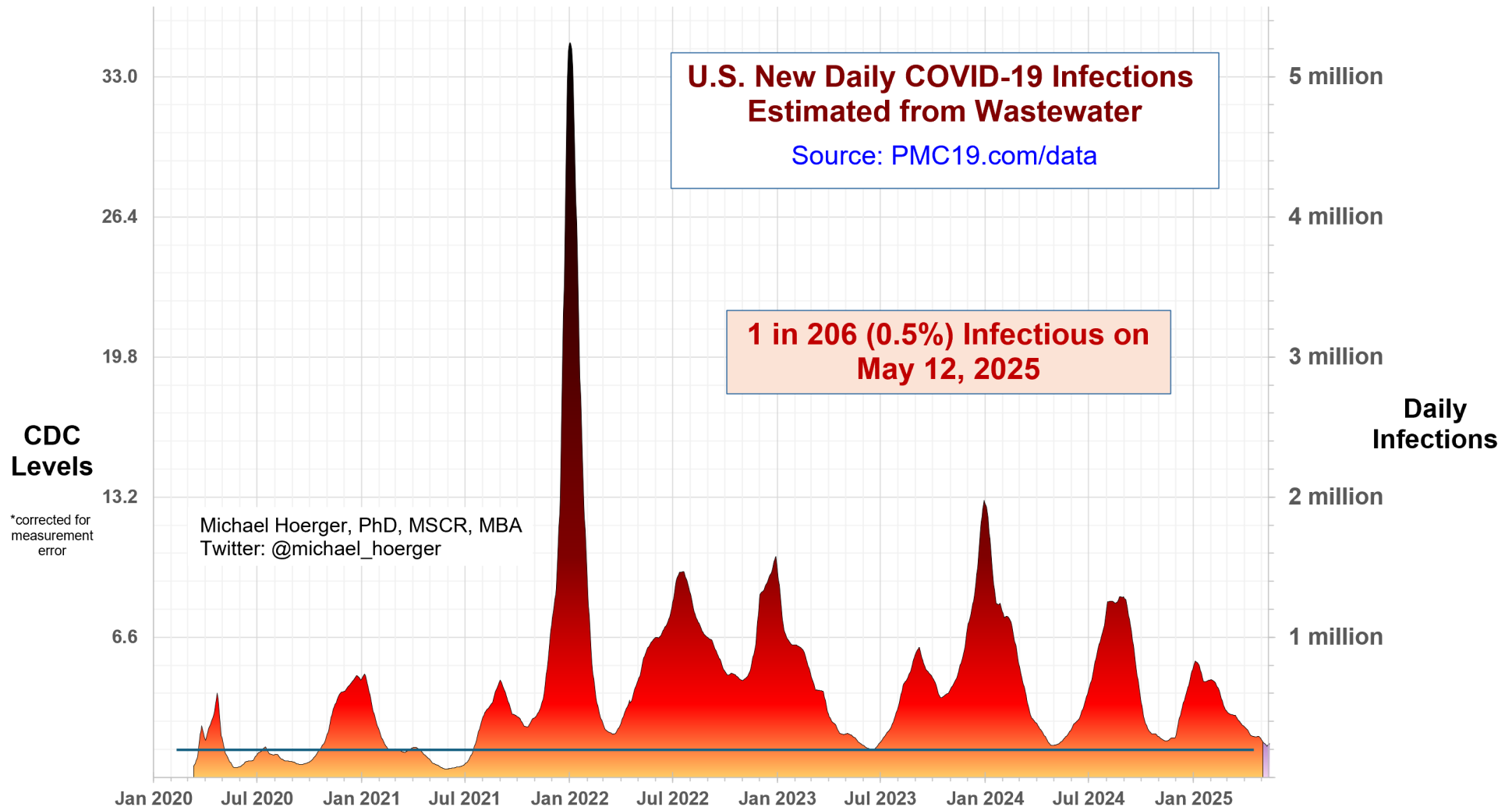
Cite as: Hoerger, M. (2025, May 12). *PMC U.S. COVID-19 Case Estimation and Forecasting Model: Report for May 12, 2025*. Pandemic Mitigation Collaborative. <http://www.pmc19.com/data>

Announcements

Data Quality Note: The CDC (80% model weight) and Biobot (20% model weight) both reported this week. Data quality is moderate.

The Big-Picture View of the Pandemic

We are in a “lull” between Covid waves. Presently, an estimated 0.5% (1 in 206 people) are actively infectious. The national average for transmission may not get much lower for some time. The horizontal line illustrates that transmission rarely falls below 200,000 daily infections, last in July 2021. Unless we head toward an atypically low lull, transmission will percolate and tick up before long.



Statistical Summary

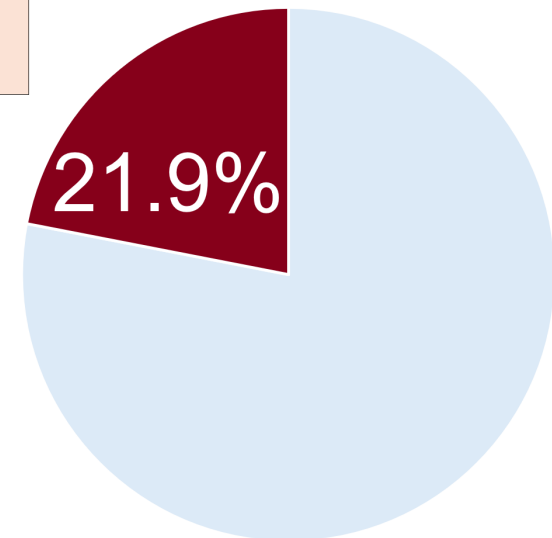
Presently, we are seeing an estimated nearly 1.6 million weekly infections, likely to result in 80-325k Long COVID cases, and 600-1,000 excess deaths in the U.S. In a room of 50 people of average risk, there would be a 1 in 5 chance of exposure. Transmission rarely gets this low (<22% of all days of the pandemic), mostly in the first 1.5 years the onset of COVID-19 when universal precautions were the norm.

Current Levels for May 12, 2025	
% of the Population Infectious	0.5% (1 in 206)
New Daily Infections	232,000
New Weekly Infections	1,624,000
Resulting Weekly Long COVID Cases	81,000 to 325,000
Resulting Weekly Excess Deaths	600 to 1,000

Monthly Forecast	
Average % of the Population Infectious	0.8% (1 in 123)
Average New Daily Infections	388,033
New Infections During the Next Month	11,641,000
Resulting Monthly Long COVID Cases	582,000 to 2,328,000
Resulting Monthly Excess Deaths	4,200 to 6,900

Running Totals	
Infections Nationwide in 2025	65,095,000
Average Number of Infections Per Person All-Time, U.S.	3.75

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	9.3%
3	1.4%	25	11.5%
4	1.9%	30	13.6%
5	2.4%	35	15.7%
6	2.9%	40	17.7%
7	3.3%	50	21.6%
8	3.8%	75	30.6%
9	4.3%	100	38.5%
10	4.7%	300	76.8%



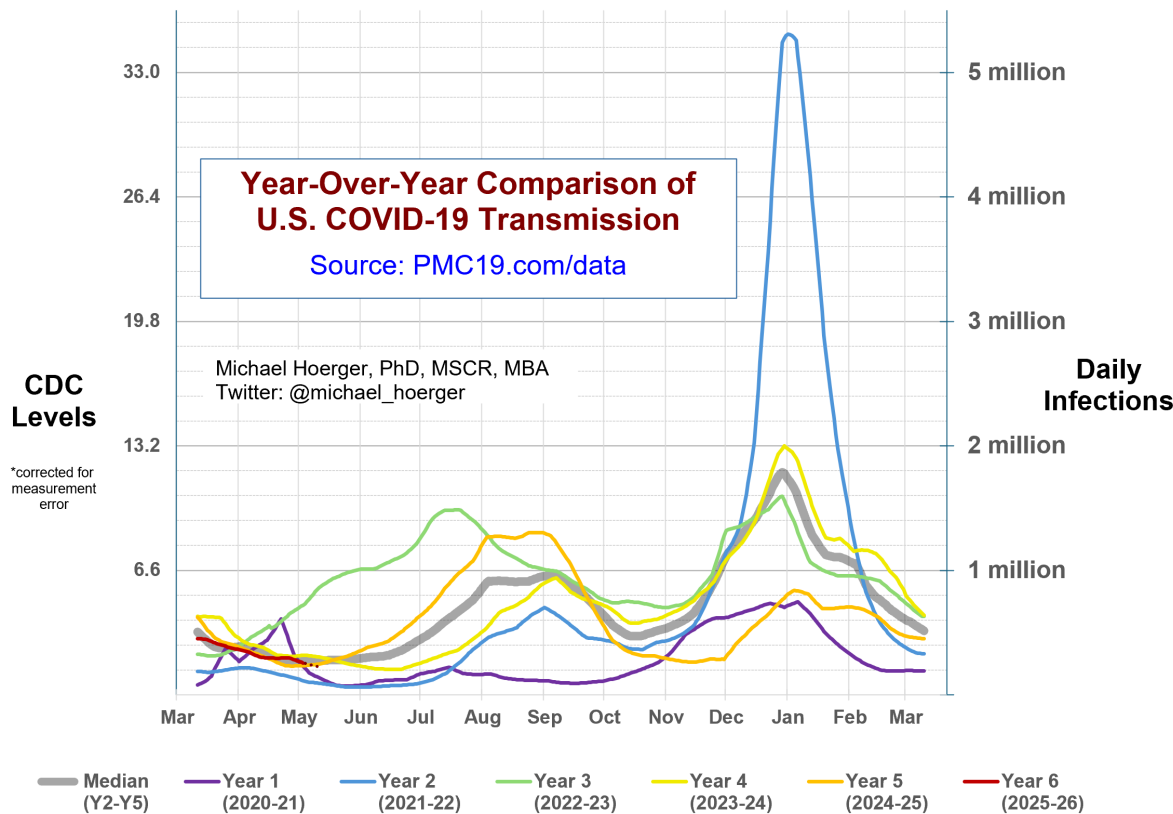
There is more COVID-19 transmission today than during 21.9% of the pandemic.

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

Michael Hoerger, PhD, MSCR, MBA
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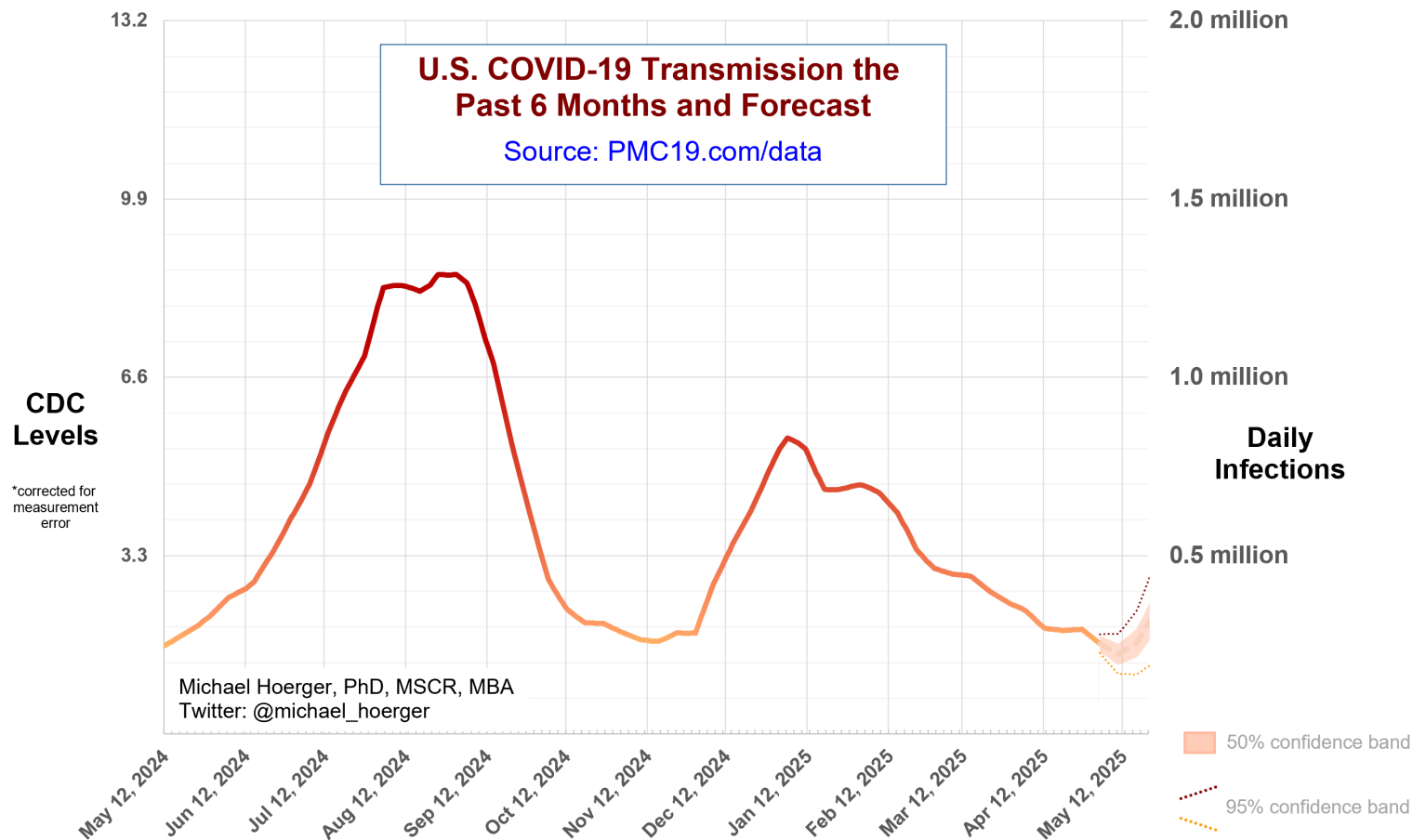
Year-Over-Year Comparisons

The year-over-year graph shows current transmission along the red line in the lower left corner. Note that transmission is tracking closely with median transmission (grey line), year 4 (yellow line), and year 5 (orange line). A reasonable default multi-month forecast would be to assume cautiously that we are on a trajectory similar to the median with the potential for transmission to pick up considerably between mid-June and early August with a peak of 0.9 to 1.4 million daily infections, basically somewhere between the yellow and orange scenarios. Local transmission may vary, and data to the contrary would override that default assumption. Know what is “typical” and monitor for something atypical.



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 steady transmission of 200-400k daily infections the next several weeks. Avoid overinterpreting the minor forecasted uptick. This time of year, transmission often bounces around, rather than leading into a wave. There are no current warning signs of a wave, so transmission may hover closer to the 300k mark for some time. With minor retroactive corrections, transmission could remain similar for some time or dip slightly lower. This is a good time to monitor local data.



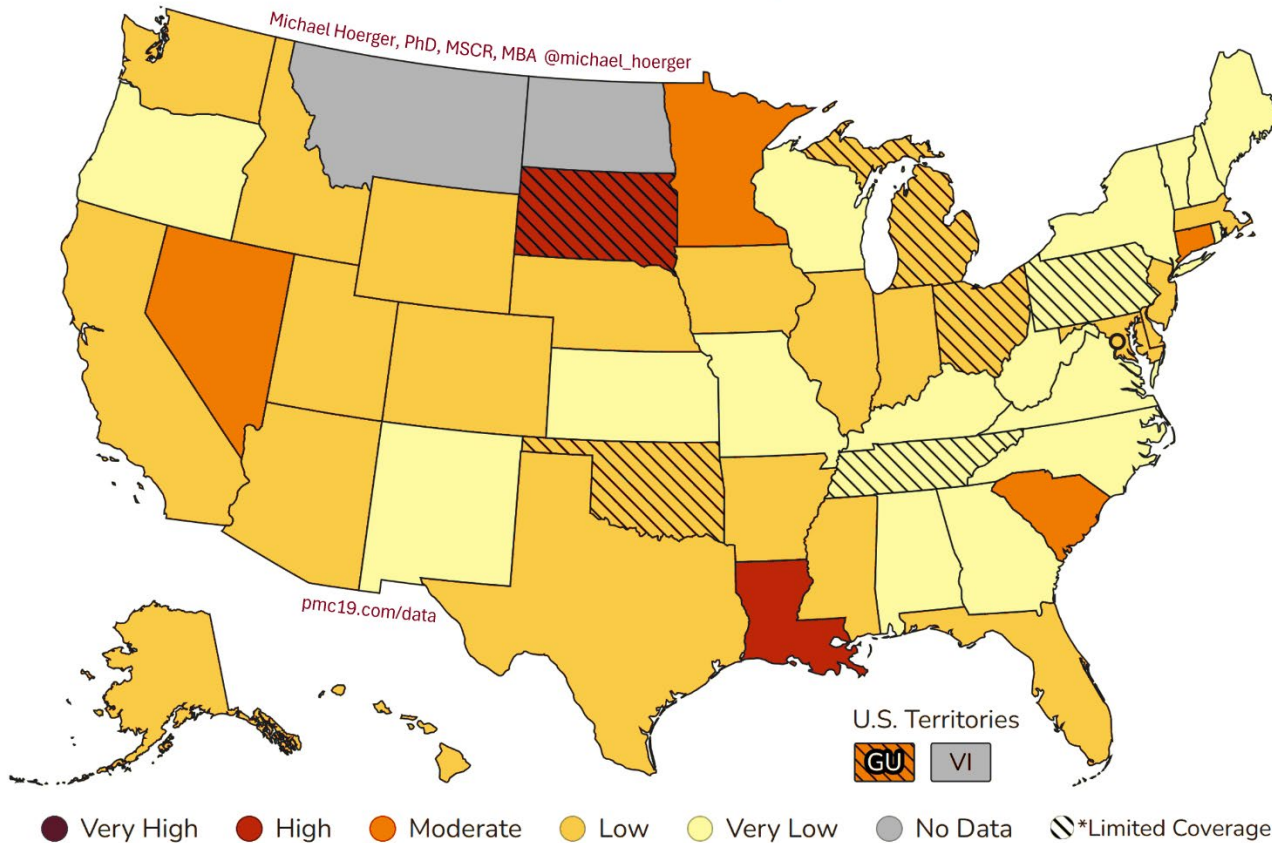
CDC COVID-19 Heat Map

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>

Louisiana leads on transmission (about 1 in 58 actively infectious), followed by South Dakota (about 1 in 67 actively infectious), both the only states in the ‘high’ transmission range.

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



Regional Case Estimation

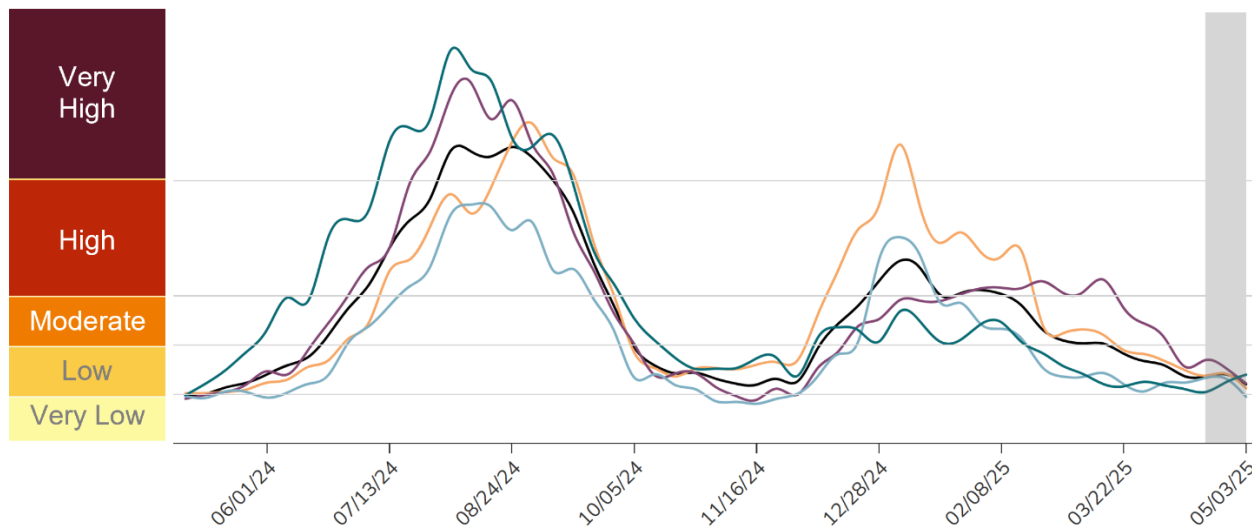
This graph from the CDC shows regional variation in transmission. You can use the “PMC Regional Multiplier” to get a ballpark estimate the proportion of a given region actively infectious with COVID-19 (see Technical Appendix document on the dashboard page).

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



Estimated Percentage Actively Infectious*			
		PMC Model	Raw CDC Data
	National	0.5% (1 in 206)	0.6% (1 in 177)
	Northeast	0.4% (1 in 261)	0.4% (1 in 225)
	Midwest	0.5% (1 in 221)	0.5% (1 in 190)
	South	0.5% (1 in 203)	0.6% (1 in 174)
	West	0.6% (1 in 177)	0.7% (1 in 152)

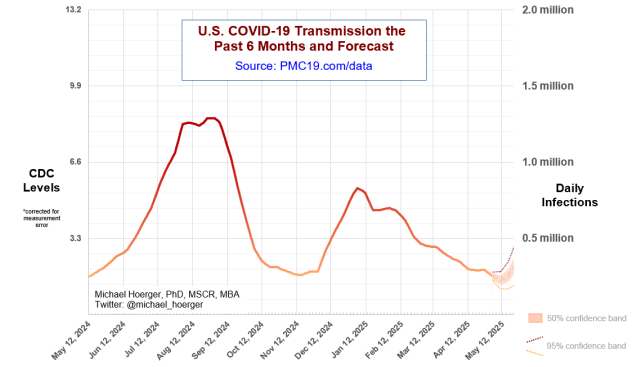
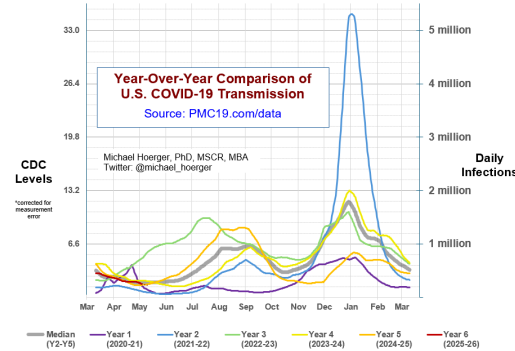
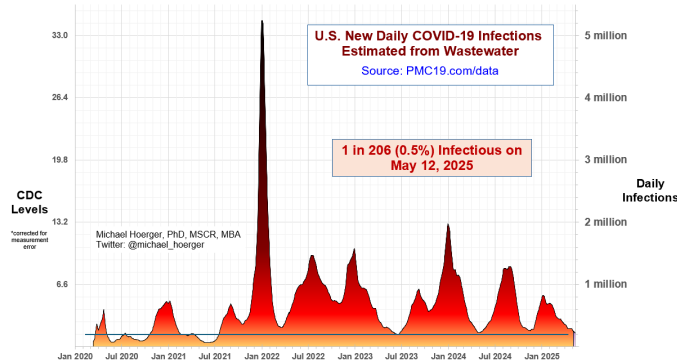
PMC Regional Multiplier*
0.313

* 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 May 12, 2025

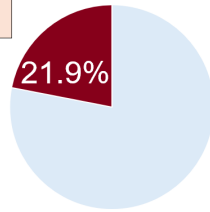
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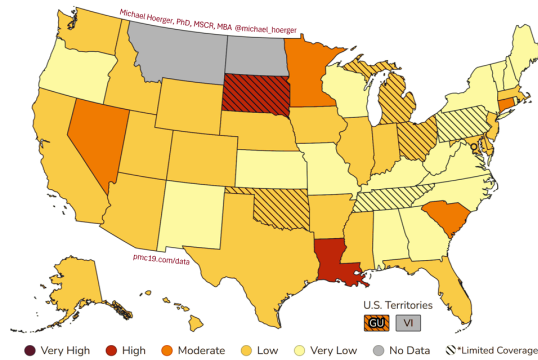
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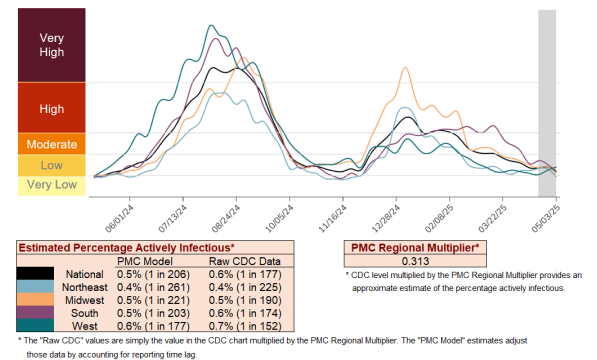
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COVID-19 Heat Map, CDC Data & Risk Levels, Higher Transmission in Deeper Red



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.