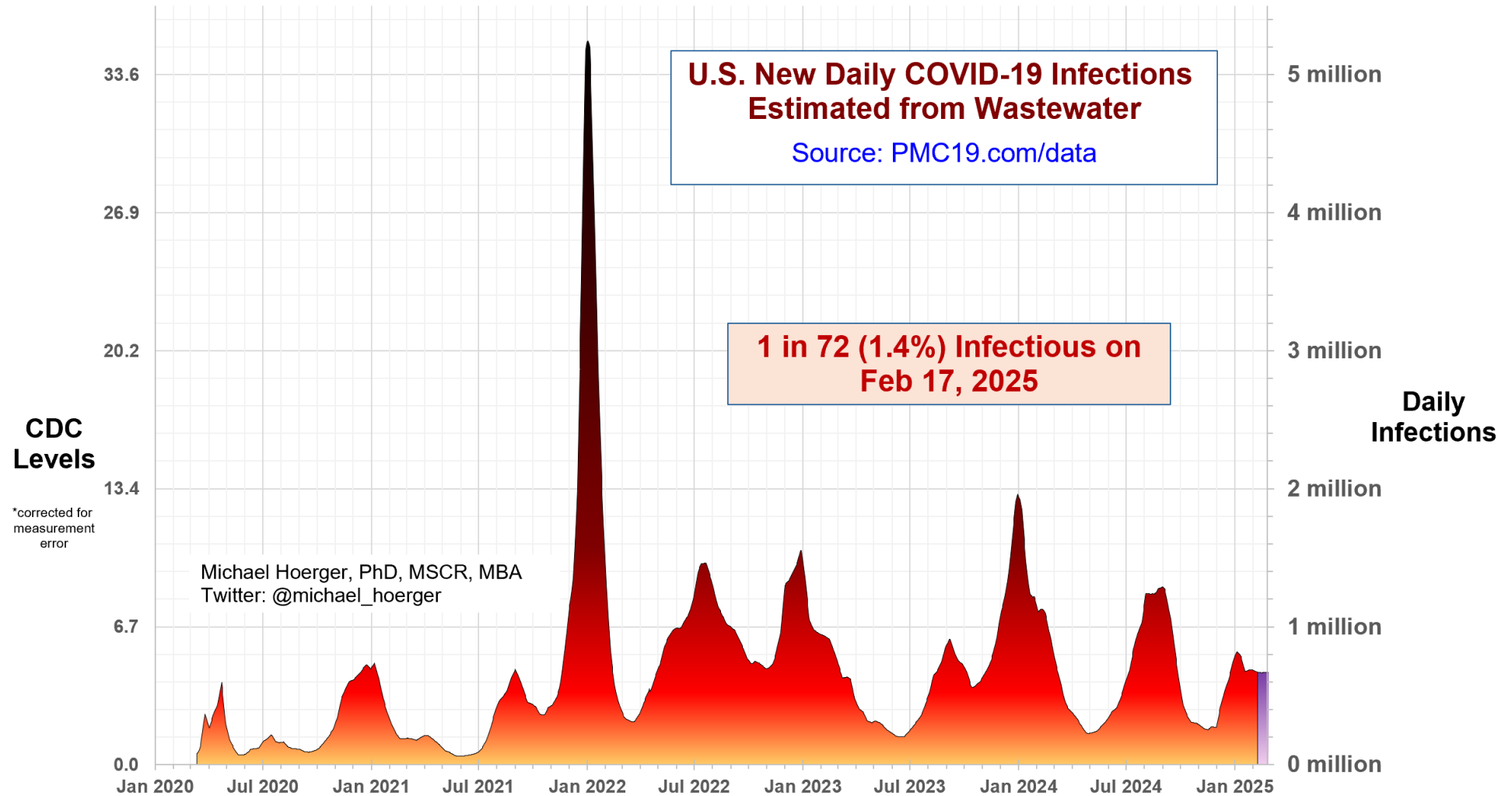


PMC U.S. COVID-19 Case Estimation and Forecasting Model: Report for February 17, 2025, pmc19.com/data

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



Cite as: Hoerger, M. (2025, Feb 17). *PMC U.S. COVID-19 Case Estimation and Forecasting Model: Report for February 17, 2025*. Pandemic Mitigation Collaborative. <http://www.pmc19.com/data>

Announcements

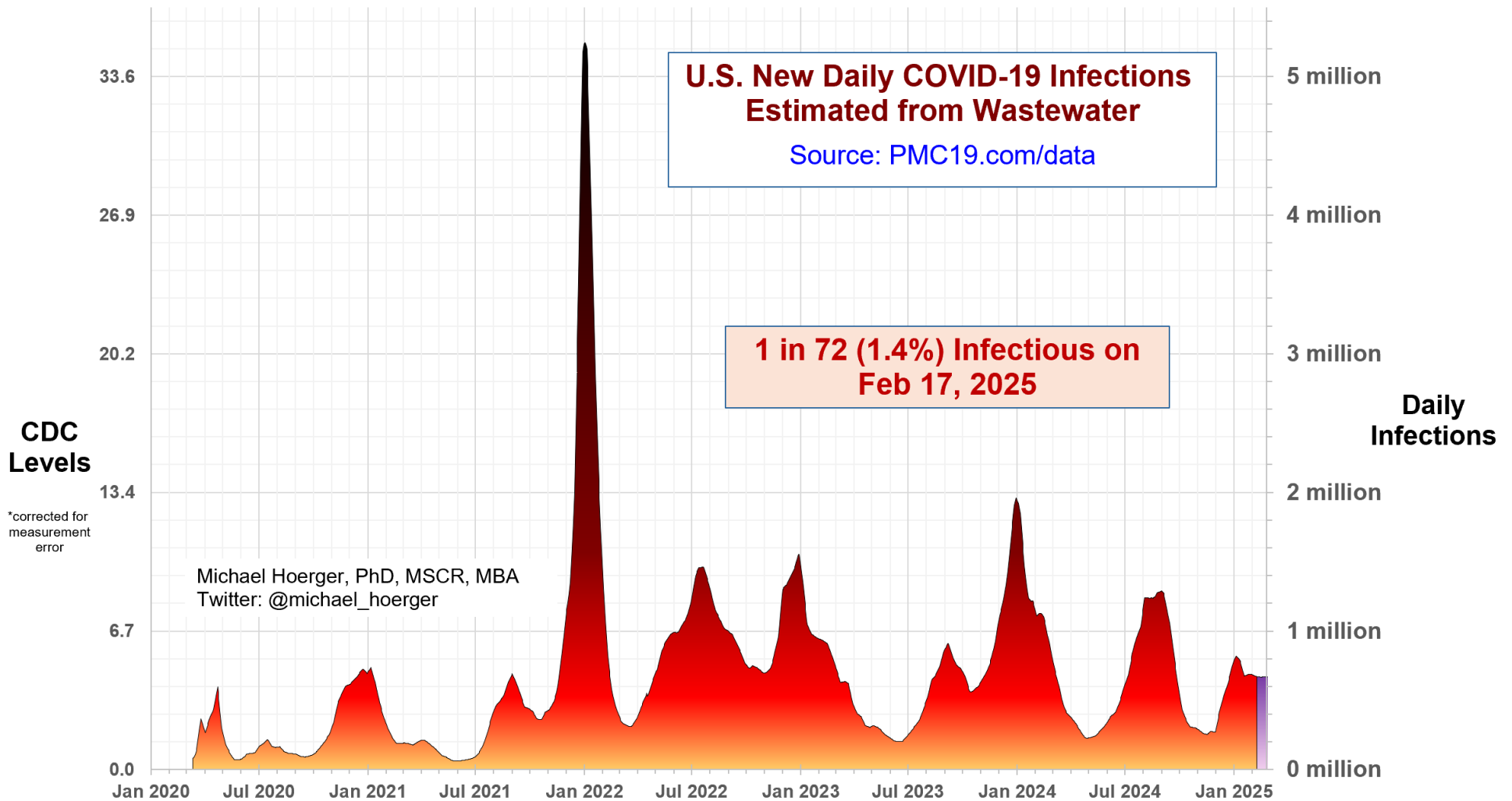
Data Quality Note: The CDC (80% model weight) reported data this week, whereas Biobot (20% model weight) did not. Data quality remains moderate, and current transmission patterns are atypical, so monitor closely. The biggest factor in the forecasted trajectory is the accuracy of the most recent week's incoming data.

Recent News Coverage:

- CNN: <https://www.cnn.com/2024/12/31/health/covid-holiday-surge-us/index.html>
- The Atlantic: <https://www.theatlantic.com/health/archive/2024/12/covid-christmas-winter-wave/681133/>
- TODAY: <https://www.today.com/health/coronavirus/us-silent-covid-surge-holidays-2024-rcna184828>
- USA Today: <https://www.usatoday.com/story/news/health/2024/12/24/covid-winter-2024-cdc-data/77199841007/>

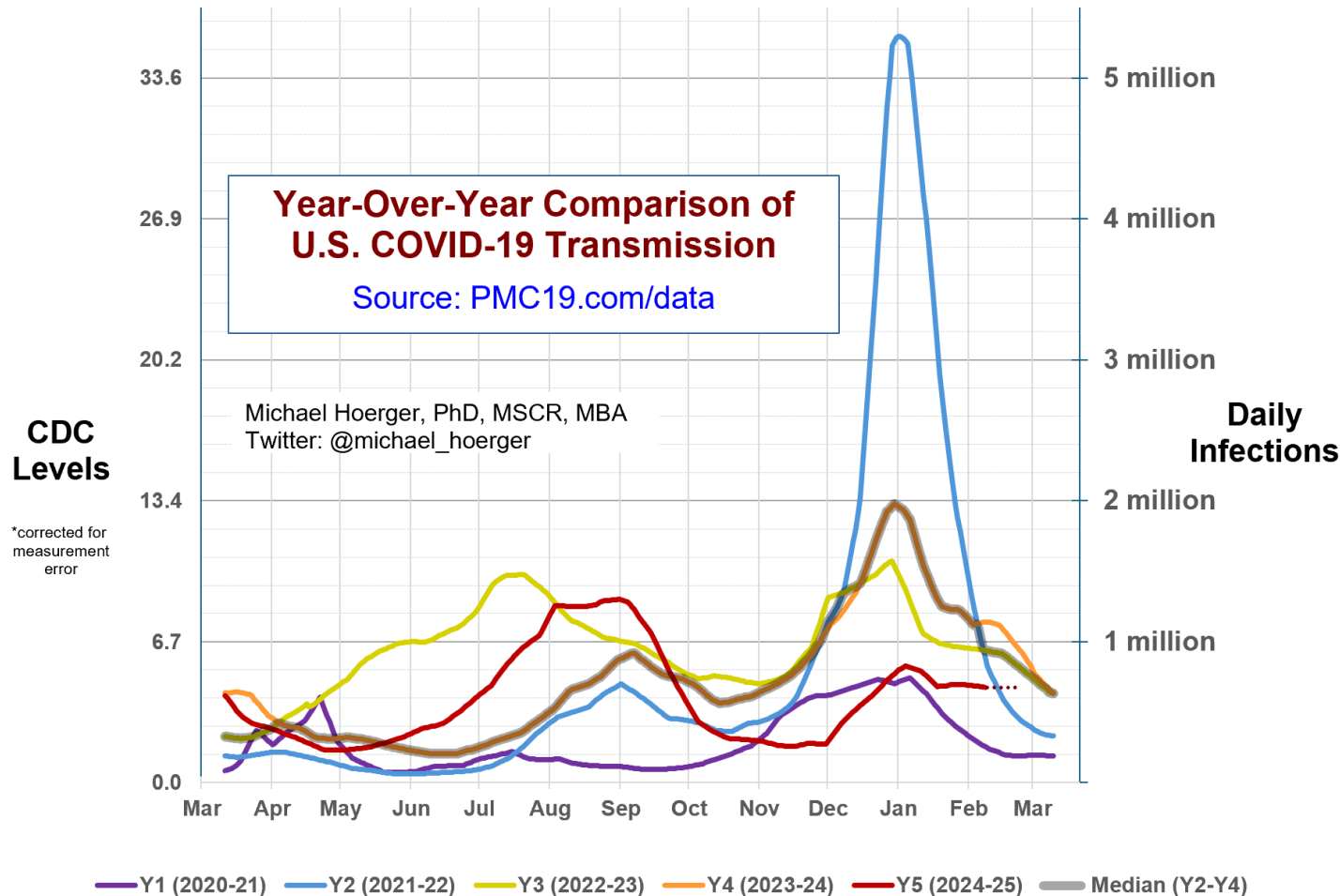
The Big-Picture View of the Pandemic

We have likely passed the peak of the 10th wave in much of the U.S. Substantial transmission is occurring after the initial peak, so many people will remain caught off guard when infected – the so-called “silent surge” we began warning of in mid-December. Presently, an estimated 1.4% (1 in 72 people) are actively infectious.



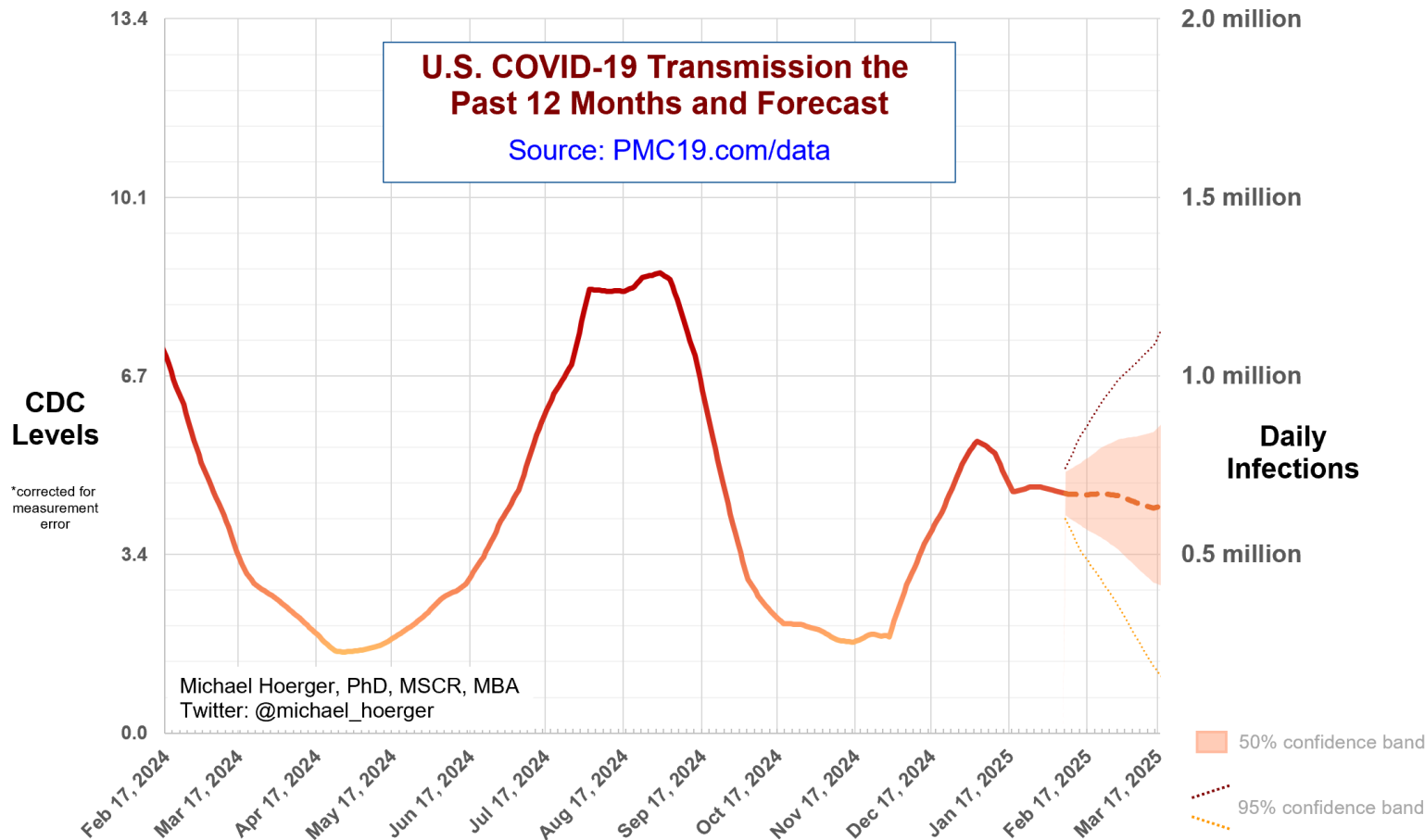
Year-Over-Year Comparisons

The year-over-year graph shows how the current winter wave departs from the pattern of prior years. See the late onset, yet the presumed peak occurring very near the “usual” time point. The wave is unique with an extended phase of quite flat high transmission. This is a medium-sized wave, which denotes substantial transmission. Transmission is 3x that of mid-February in 2021, when more comprehensive mitigation was in place.



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 average (dashed) line reflects all possible scenarios with an emphasis on steady to lightly declining transmission the next several weeks. The accuracy of the real-time data are what is driving the substantial variation in potential forecasts. If real-time reports are underestimates, transmission may climb gradually or considerably, depending on the extent of the miss. If real-time reports are overestimates, transmission may decline quickly or very quickly. This would be an excellent time to get vaccinated against COVID and influenza for those who have not yet had a chance to do so this winter.



Supplemental Statistics

These supplemental statistics may prove useful in conversations about transmission and mitigation. In a group of 25-30 people, there is a 1-in-3 chance of exposure if average risk and no firm testing/isolation policies. Large social gatherings may lead to “surprise” infections.

Current Levels for Feb 17, 2025	
% of the Population Infectious	1.4% (1 in 72)
New Daily Infections	668,000
New Weekly Infections	4,676,000
Resulting Weekly Long COVID Cases	234,000 to 935,000

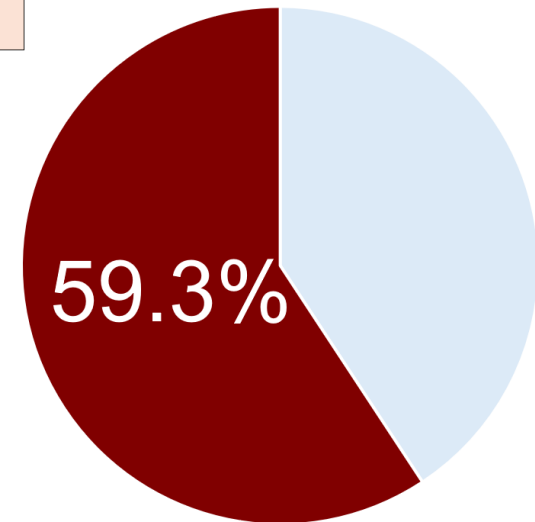
Monthly Forecast	
Average % of the Population Infectious	1.4% (1 in 73)
Average New Daily Infections	653,833
New Infections During the Next Month	19,615,000
Resulting Monthly Long COVID Cases	981,000 to 3,923,000

Running Totals	
Infections Nationwide in 2025	34,200,000
Average Number of Infections Per Person All-Time, U.S.	3.64

How Does Risk Increase with More Social Contacts?			
Number of People	Chances Anyone Is Infectious	Number of People	Chances Anyone Is Infectious
1	1.4%	15	19.0%
2	2.8%	20	24.5%
3	4.1%	25	29.7%
4	5.5%	30	34.4%
5	6.8%	35	38.9%
6	8.1%	40	43.0%
7	9.4%	50	50.5%
8	10.6%	75	65.2%
9	11.9%	100	75.5%
10	13.1%	300	98.5%

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

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



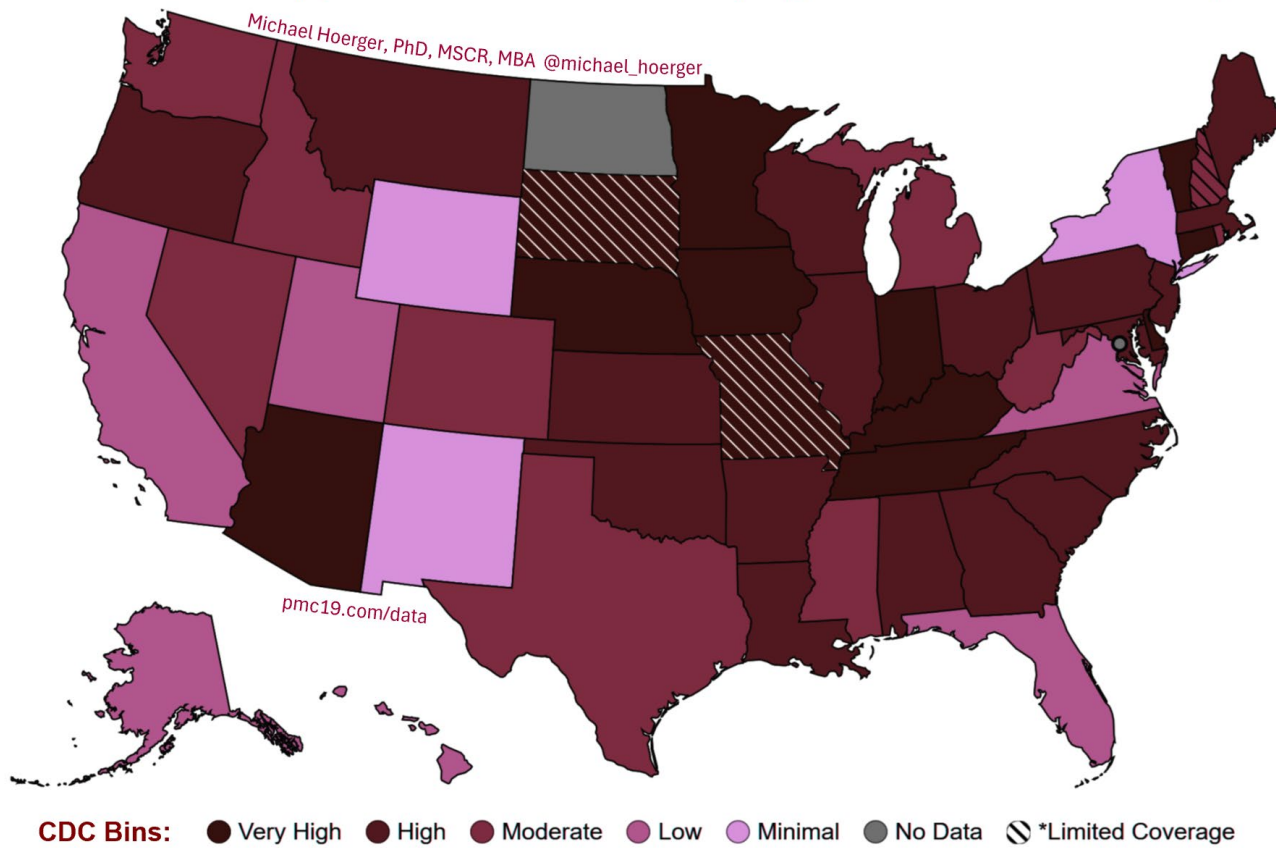
There is more COVID-19 transmission today than during 59.3% of the pandemic.

CDC COVID-19 Heat Map

This map uses the CDC state-by-state data to show areas with higher transmission in deeper red. Notice the considerable geographic variation. The CDC version of the map, colored in cool blue is available online. Blue tends to confuse people into thinking transmission is “cool” or low, so we and various popular media outlets (e.g., Newsweek) tend to recolor. The dashed lines indicate atypically low representation from the wastewater sites within a state.

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

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



Regional Case Estimation

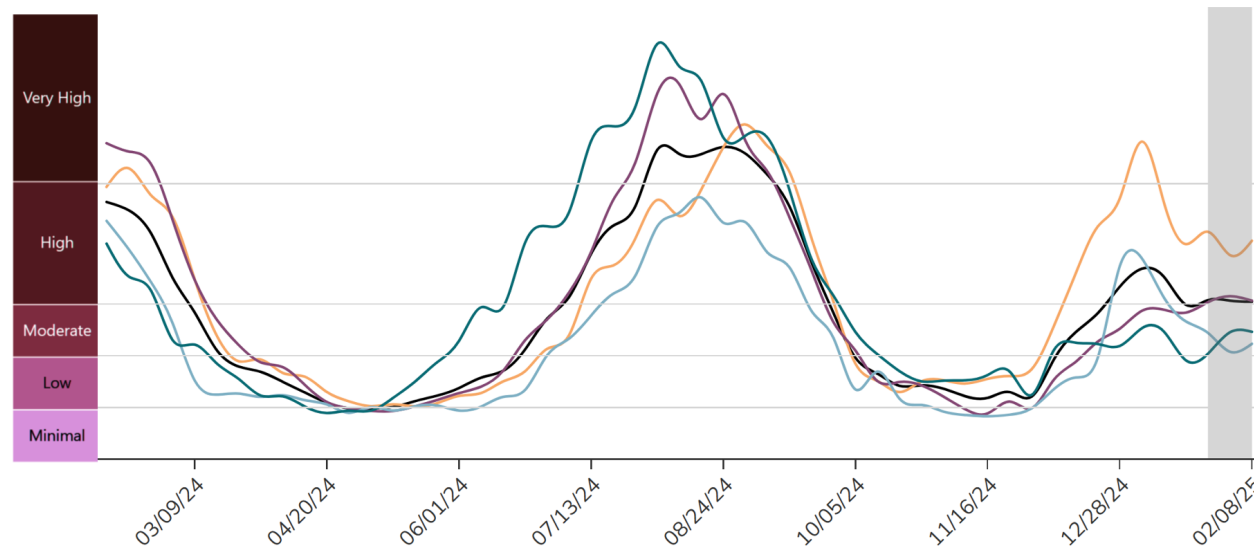
This graph from the CDC shows regional variation in transmission. You can use the “PMC Regional Multiplier” to get a ballpark estimate the proportion of a given region actively infectious with COVID-19 (see Technical Appendix document on the dashboard page). Note the persistent high to very high transmission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

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	1.4% (1 in 72)	1.4% (1 in 71)
	Northeast	1.0% (1 in 98)	1.0% (1 in 97)
	Midwest	1.9% (1 in 52)	2.0% (1 in 51)
	South	1.4% (1 in 71)	1.4% (1 in 70)
	West	1.1% (1 in 88)	1.1% (1 in 88)

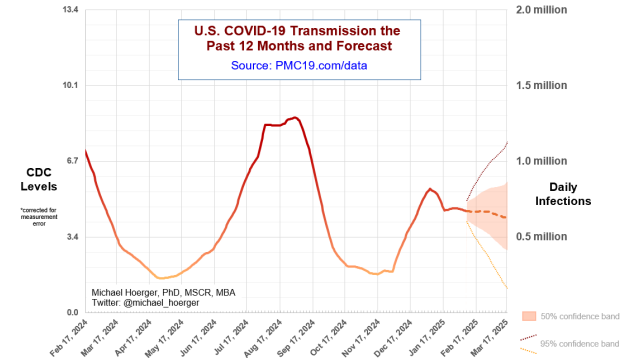
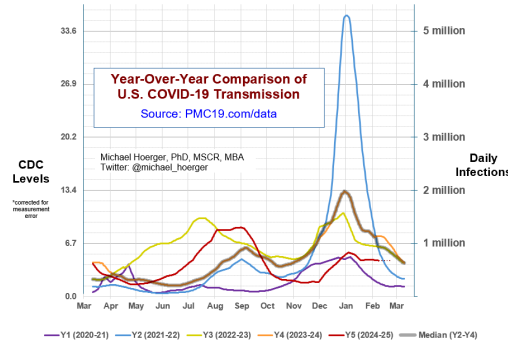
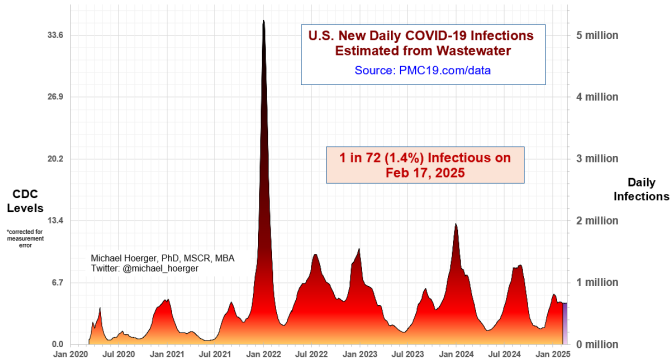
PMC Regional Multiplier*
0.308

* 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 Feb 17, 2025

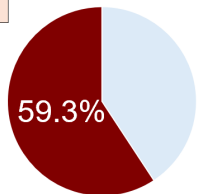
% of the Population Infectious	1.4% (1 in 72)
New Daily Infections	653,833
New Weekly Infections	4,676,000
Resulting Weekly Long COVID Cases	234,000 to 935,000

Monthly Forecast

Average % of the Population Infectious	1.4% (1 in 73)
Average New Daily Infections	653,833
New Infections During the Next Month	19,615,000
Resulting Monthly Long COVID Cases	981,000 to 3,923,000

Running Totals

Infections Nationwide in 2025	34,200,000
Average Number of Infections Per Person All-Time, U.S.	3.64



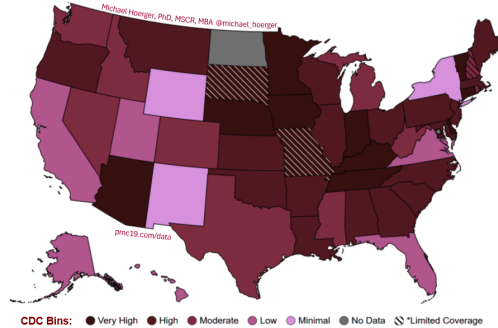
There is more COVID-19 transmission today than during 59.3% of the pandemic.

How Does Risk Increase with More Social Contacts?

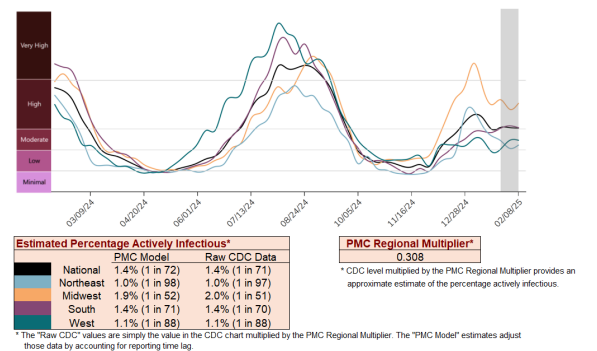
Number of People	Chances Anyone Is Infectious	Number of People	Chances Anyone Is Infectious
1	1.4%	15	19.0%
2	2.8%	20	24.5%
3	4.1%	25	29.7%
4	5.5%	30	34.4%
5	6.8%	35	38.9%
6	8.1%	40	43.0%
7	9.4%	50	50.5%
8	10.8%	75	65.2%
9	11.9%	100	75.5%
10	13.1%	300	98.5%

Assumes no testing/isolation protocols (U.S. only) Michael Hoerger, PhD, MSCR, MBA pmc19.com/data Twitter: @michael_hoerger

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.