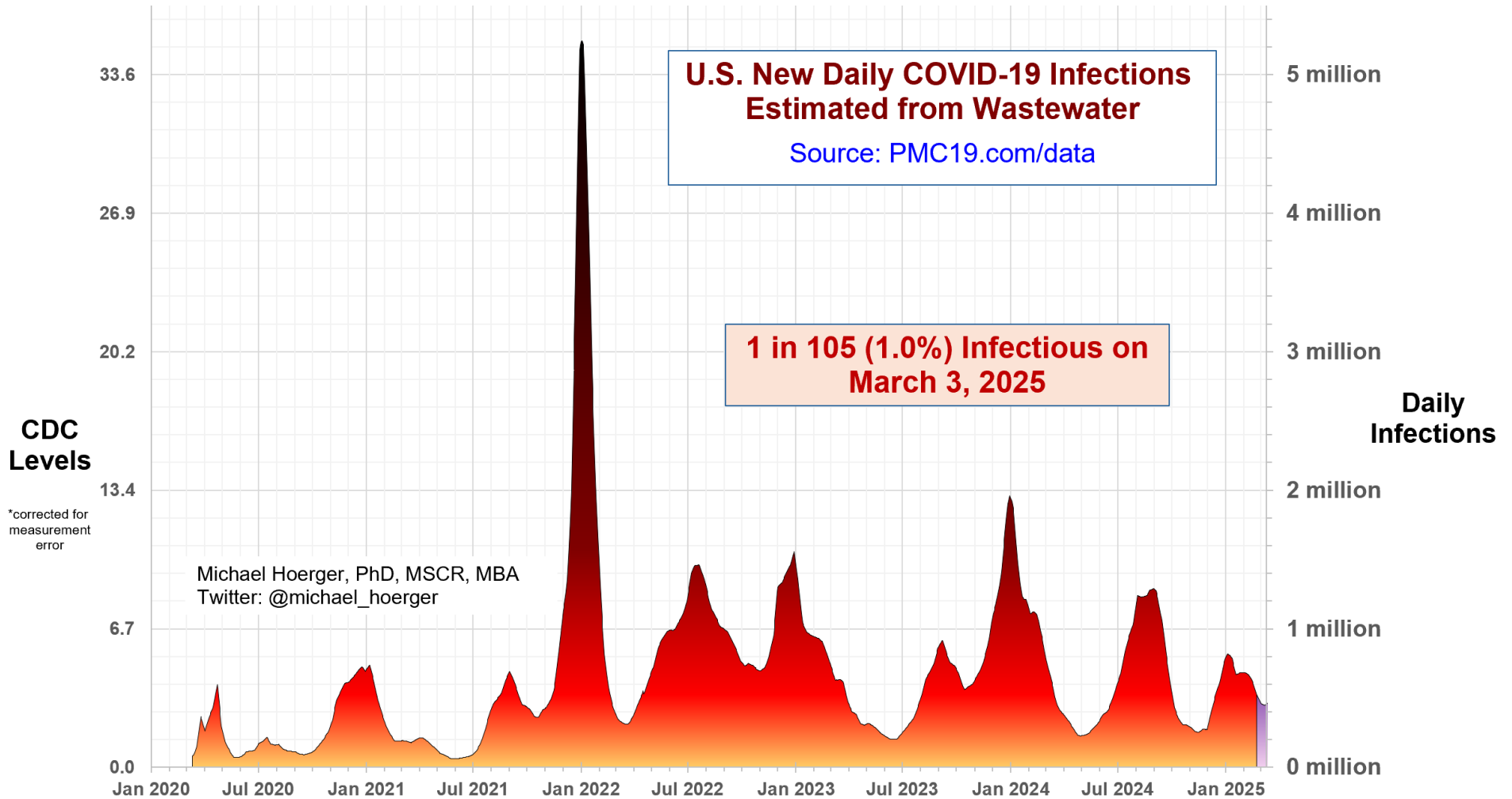


# PMC U.S. COVID-19 Case Estimation and Forecasting Model: Report for March 3, 2025, [pmc19.com/data](http://pmc19.com/data)

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



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## Announcements

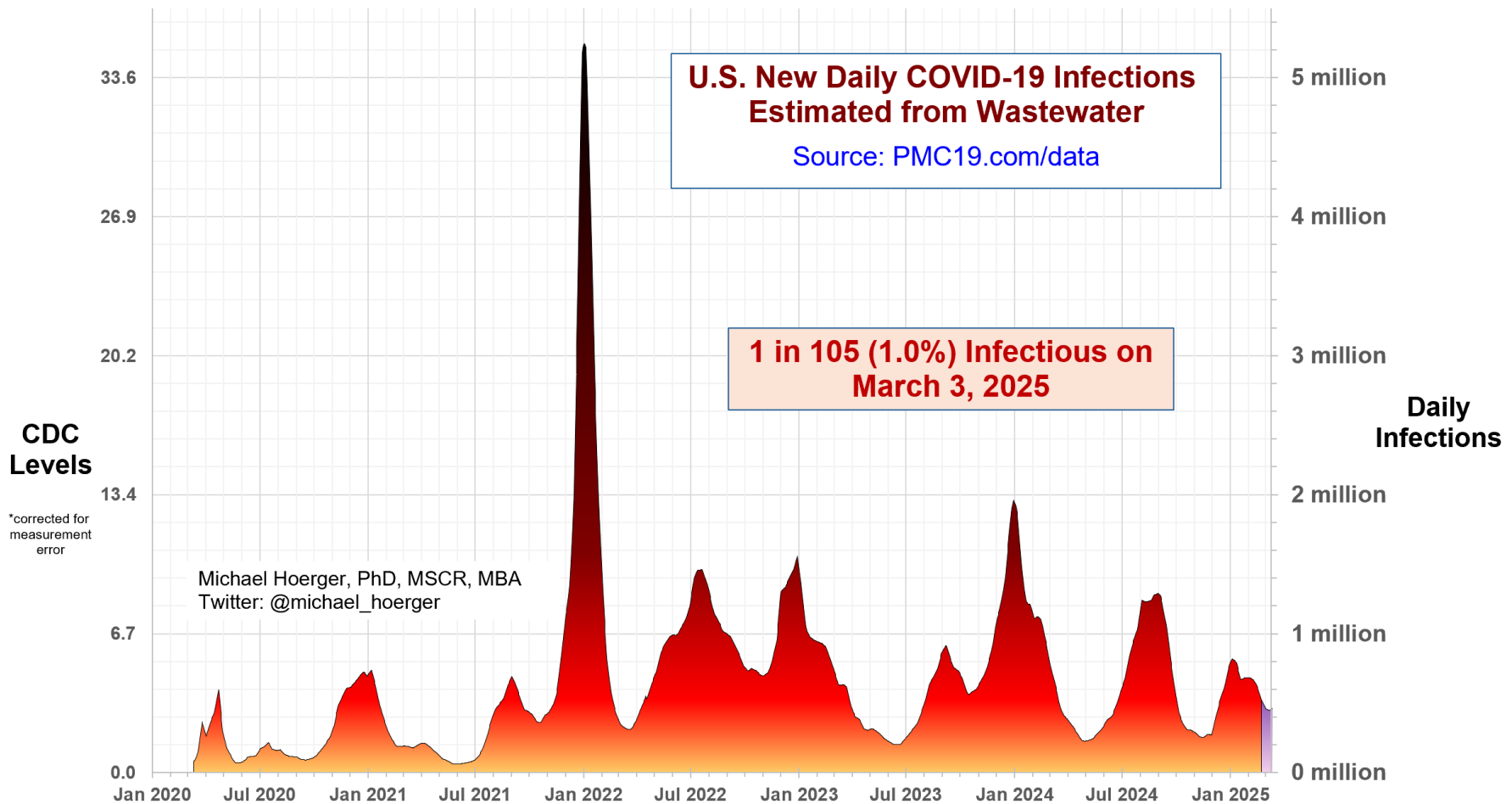
**Data Quality Note:** The CDC (80% model weight) reported data this week, whereas Biobot (20% model weight) has not reported in a month. Data quality remains moderate, and current transmission patterns are atypical, so monitor closely. The biggest factor in the forecasted trajectory is the accuracy 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/>

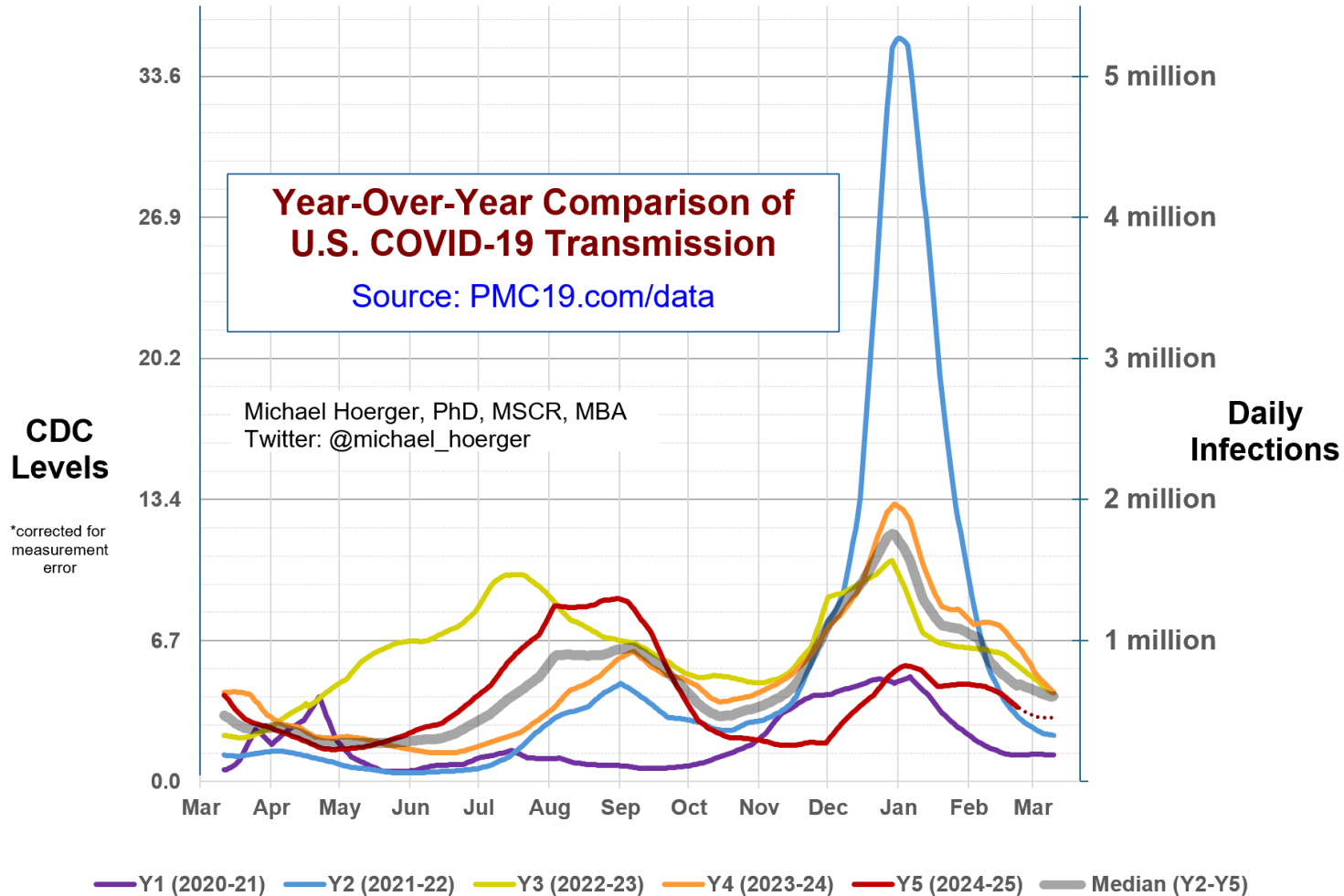
# The Big-Picture View of the Pandemic

We have passed the peak of the 10<sup>th</sup> 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. SNL guests were surprised to spread COVID among each other, for example. Presently, an estimated 1.0% (1 in 105 people) are actively infectious.



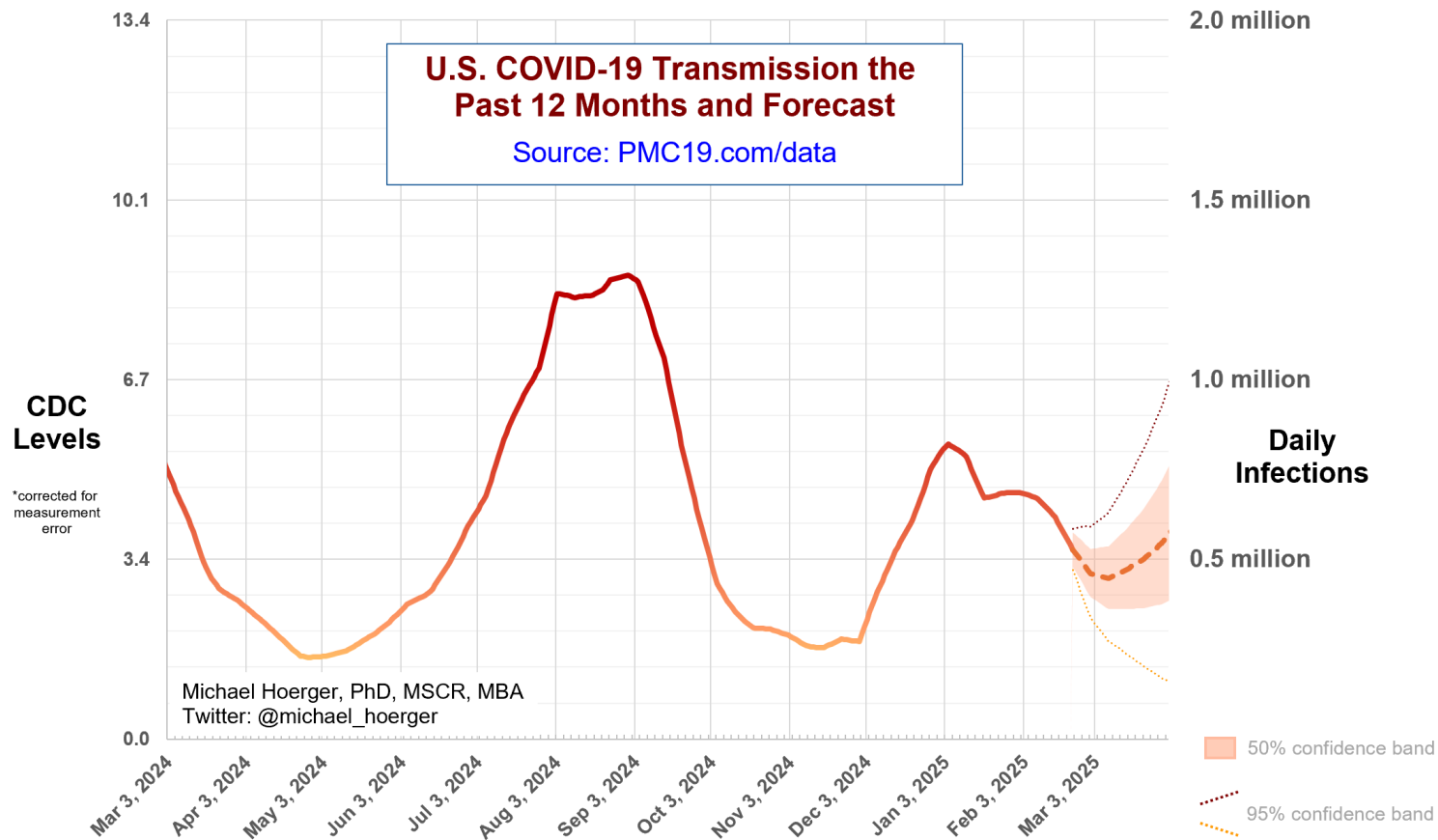
# Year-Over-Year Comparisons

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.



# 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. We are likely to see 400-600 thousand daily infections the next month, if the present real-time data hold. Note that even a minor retroactive correction downward could place us more along the bottom line of the peach area (400,000 daily infections) or perhaps slightly lower. Keep tabs on this the next week or two, and we should have a better sense of how deep the “lull” may be.



## Supplemental Statistics

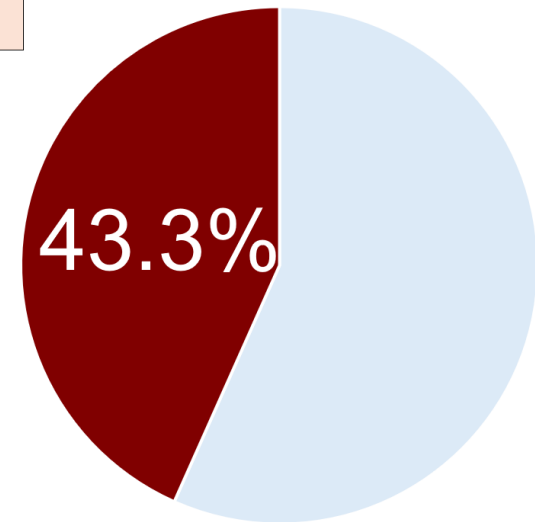
These supplemental statistics may prove useful in conversations about transmission and mitigation. In a group of 40 people, there is a 1-in-3 chance of exposure if average risk and no firm testing/isolation policies. Large social gatherings may lead to “surprise” infections. Locally, the risk during Mardi Gras remains serious, but elsewhere, school, work, religious, political, and other large gatherings may too lead to “surprise” infections.

Current Levels for Mar 3, 2025	
<b>% of the Population Infectious</b>	1.0% (1 in 105)
<b>New Daily Infections</b>	457,000
<b>New Weekly Infections</b>	3,199,000
<b>Resulting Weekly Long COVID Cases</b>	160,000 to 640,000

Monthly Forecast	
<b>Average % of the Population Infectious</b>	1.0% (1 in 97)
<b>Average New Daily Infections</b>	491,067
<b>New Infections During the Next Month</b>	14,732,000
<b>Resulting Monthly Long COVID Cases</b>	737,000 to 2,946,000

Running Totals	
<b>Infections Nationwide in 2025</b>	40,934,000
<b>Average Number of Infections Per Person All-Time, U.S.</b>	3.66

How Does Risk Increase with More Social Contacts?			
Number of People	Chances Anyone Is Infectious	Number of People	Chances Anyone Is Infectious
1	1.0%	15	13.4%
2	1.9%	20	17.5%
3	2.8%	25	21.4%
4	3.8%	30	25.0%
5	4.7%	35	28.6%
6	5.6%	40	31.9%
7	6.5%	50	38.1%
8	7.4%	75	51.4%
9	8.3%	100	61.7%
10	9.2%	300	94.4%



**There is more COVID-19 transmission today than during 43.3% of the pandemic.**

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

Michael Hoerger, PhD, MSCR, MBA  
 Twitter: @michael\_hoerger

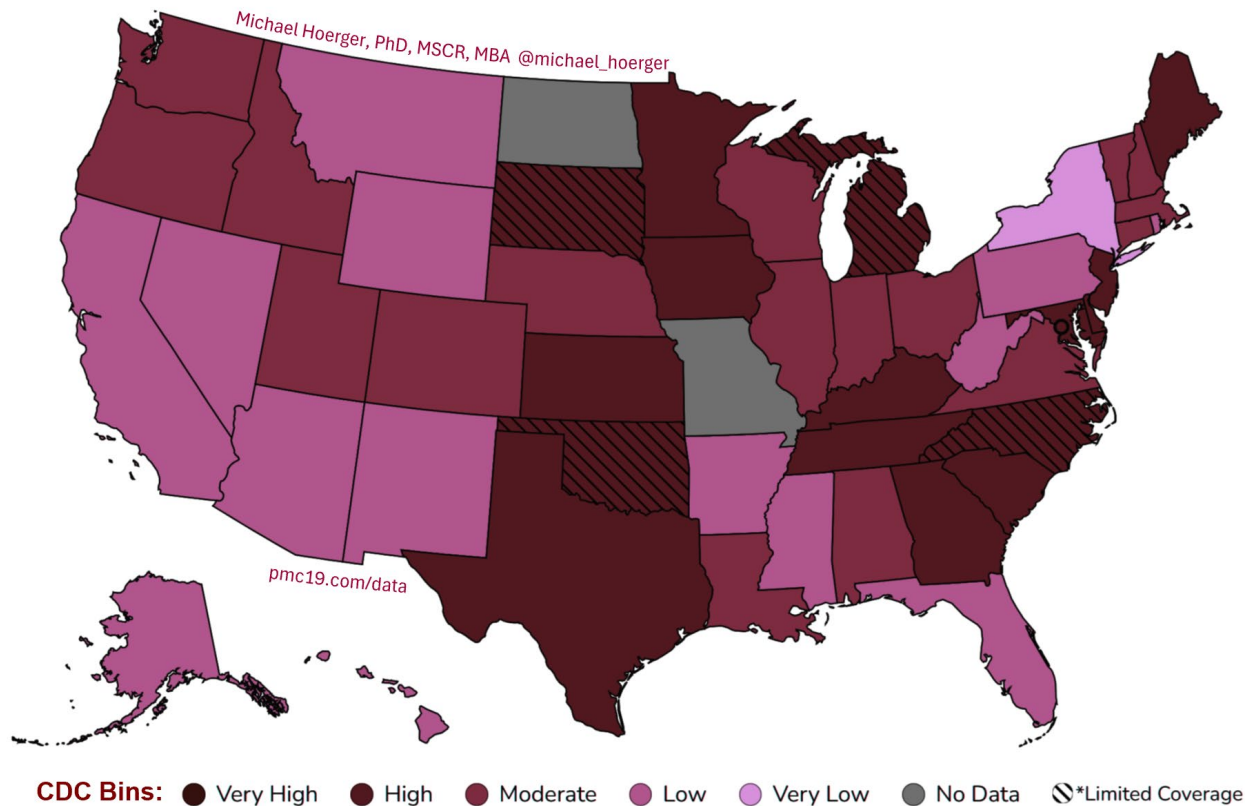
# CDC COVID-19 Heat Map

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>

Note, the CDC has changed the lowest bin label from “minimal” to “very low.”

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



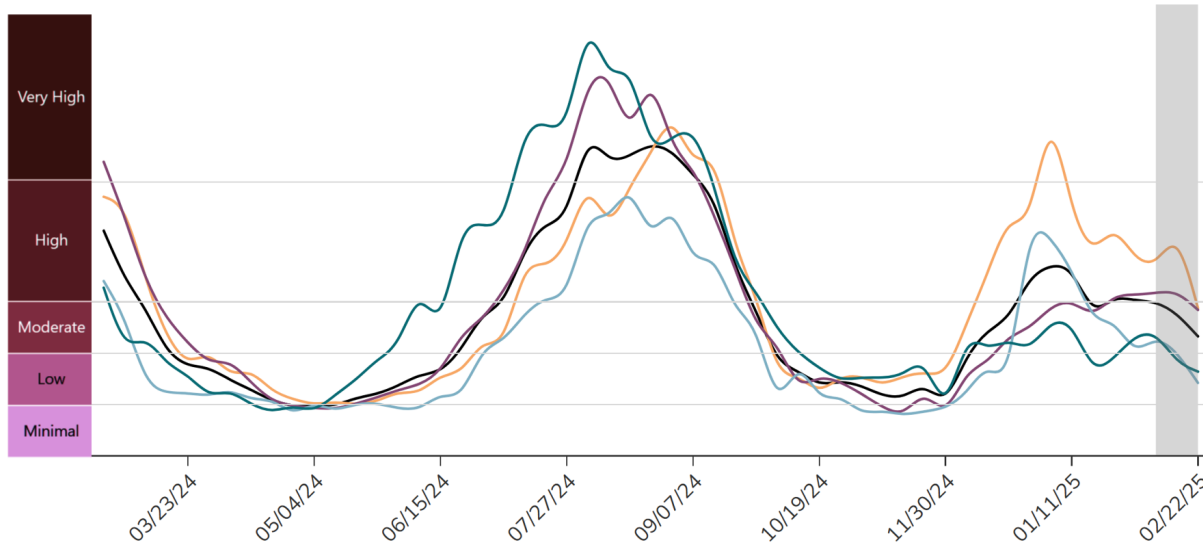
# Regional Case Estimation






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 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>



Estimated Percentage Actively Infectious*			
		PMC Model	Raw CDC Data
	National	1.0% (1 in 105)	1.1% (1 in 92)
	Northeast	0.6% (1 in 171)	0.7% (1 in 151)
	Midwest	1.2% (1 in 85)	1.3% (1 in 75)
	South	1.2% (1 in 86)	1.3% (1 in 76)
	West	0.7% (1 in 148)	0.8% (1 in 131)

PMC Regional Multiplier*
0.310

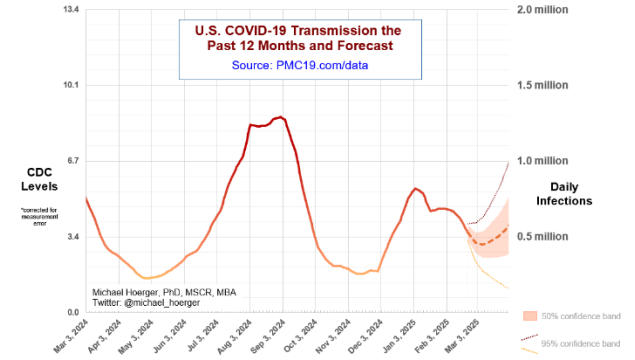
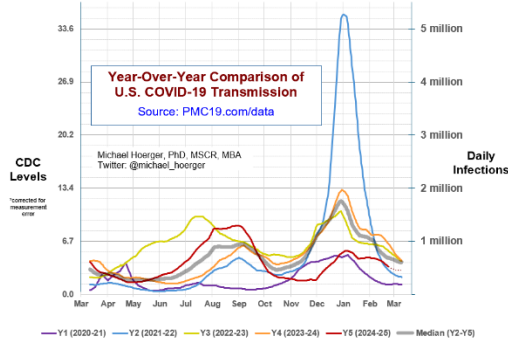
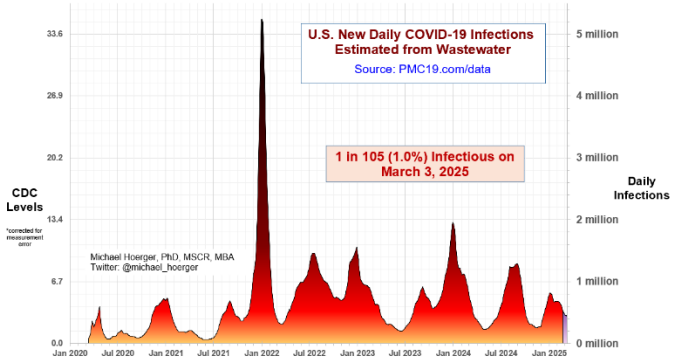
\* CDC level multiplied by the PMC Regional Multiplier provides an approximate estimate of the percentage actively infectious.

\* 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. Michael Hoerger, PhD, MSCR, MBA | Pandemic Mitigation Collaborative | [pmc19.com/data](http://pmc19.com/data)



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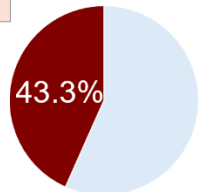
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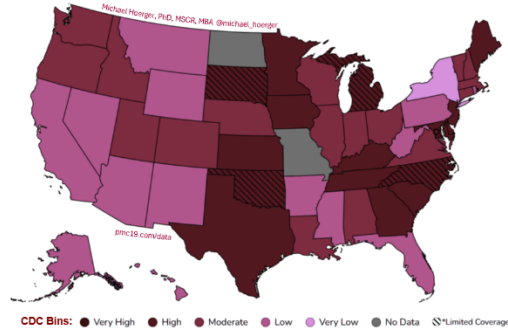
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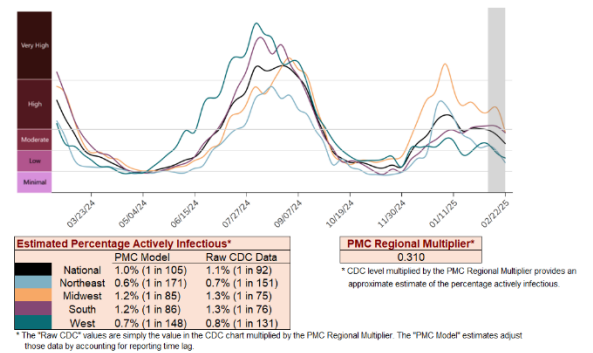


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COVID-19 Heat Map, CDC Data & Risk Levels, Higher Transmission in Deeper Red



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.**