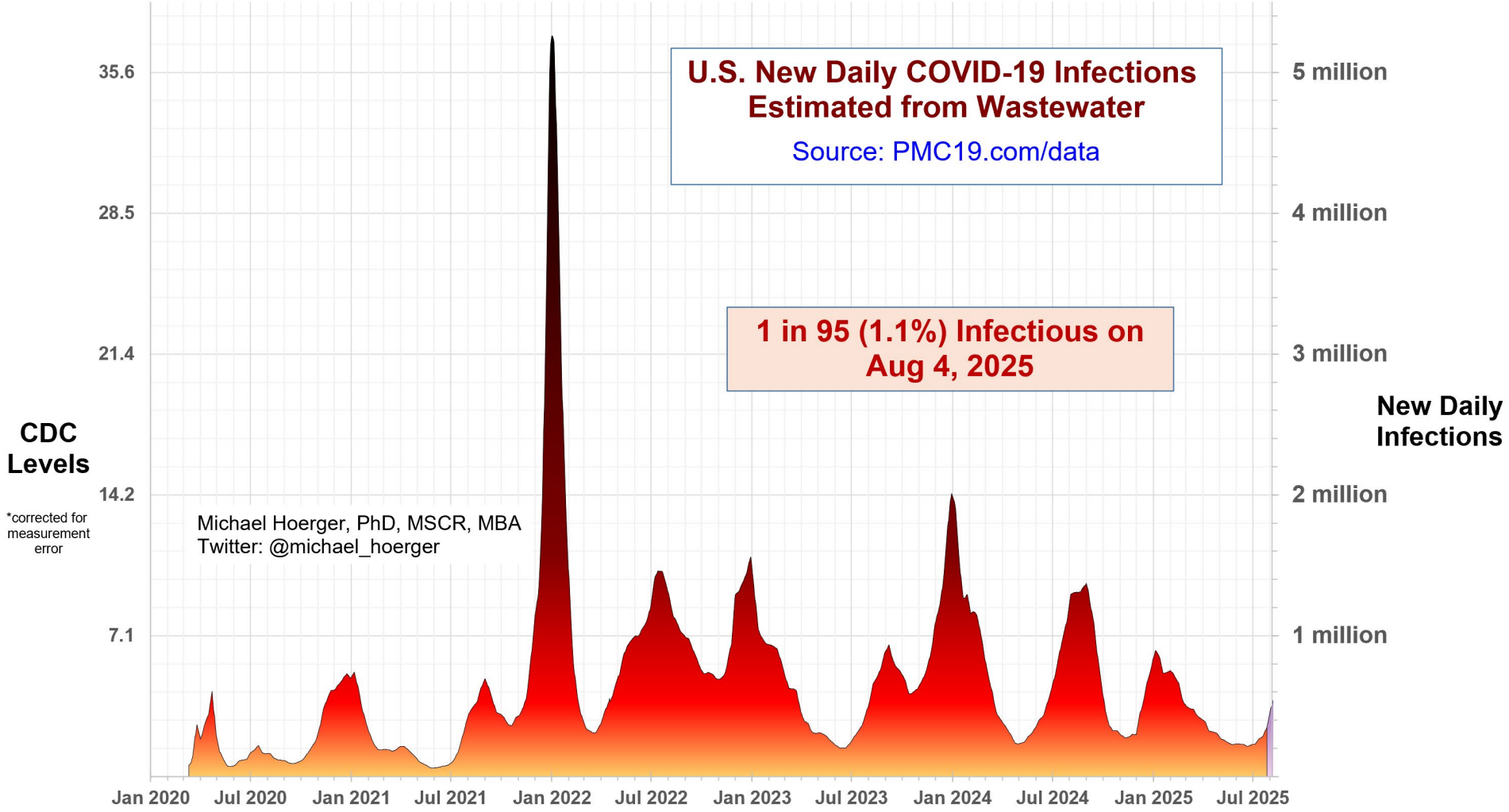
PMC U.S. COVID-19 Case Estimation and Forecasting Model: Report for August 4, 2025 pmc19.com/data

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



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Announcements

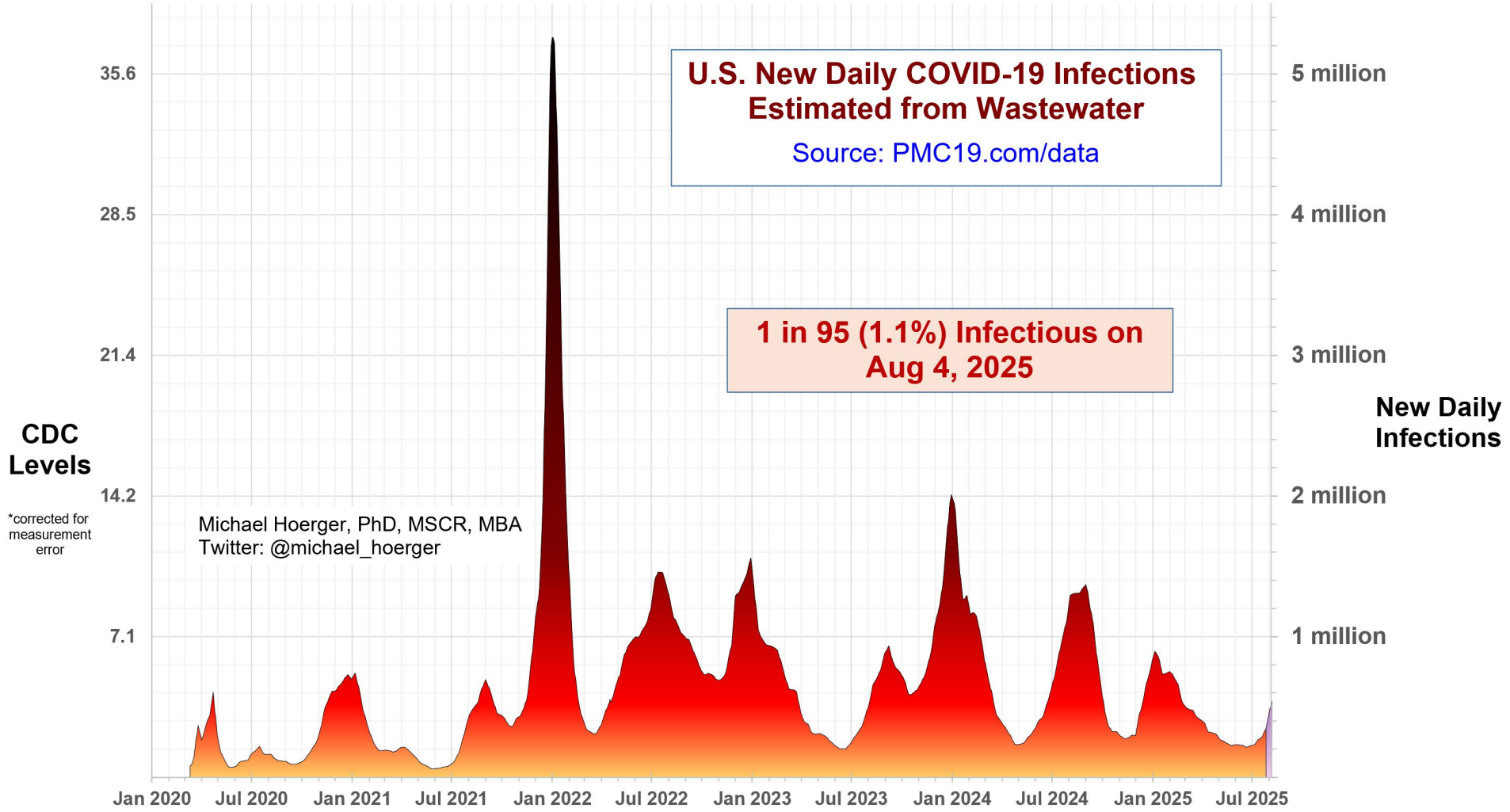
Data Quality Note: Long-term data quality is 'high,' but real-time data quality is 'low' and prone to retroactive correction. The CDC (80% model weight) has limited or no data for 4 states. Biobot (20% model weight) is caught up on reporting the past 2 weeks after major lags. New York state is undergoing major updates with low reporting. These constraints add uncertainty to forecasts beyond historical norms and will lead to inconsistencies in media reporting about specific variants, wave timing and peaks, and local transmission. Assume the worst, hope for the best, and monitor closely. On the website, we added links to more localized U.S. data and international dashboards to help with this uncertainty.

Announcements:

- Dr. Malek made this helpful video for clinicians: https://www.youtube.com/watch?v=GPUTTjjdT4A
- The TODAY Show is tracking vaccinations and transmission, including using the PMC dashboard: https://www.today.com/health/coronavirus/covid-2025-summer-surge-rcna218754
- Drs. Hoerger, Stone, and Tamargo will host a virtual back-to-school forum on August 17. Register to join: http://bit.ly/MTAHealthForum

The Big-Picture View of the Pandemic

Transmission picked up considerably in the most recent CDC and Biobot data. An estimated 1 in 95 people are actively infectious. The lull point appears to have occurred at June 21 with 213,000 new daily infections.



Statistical Summary

Transmission is presently higher than during the majority of the ongoing pandemic. Presently, we are seeing an estimated nearly 3.5 million new weekly infections, likely to result in 177-707K Long COVID cases, and 1,300-2,100 excess deaths in the U.S. In a room of 25-30 people of average risk, there would be a 1 in 4 chance of exposure. Although transmission is rising in most states, there is significant geographic variation. Check your local levels using the new information provided at the bottom of the dashboard website.

Current Levels for Aug 4, 2025
% of the Population Infectious
1.1% (1 in 95)
New Daily Infections
505,000
New Weekly Infections
3,535,000
Resulting Weekly Long COVID Cases
177,000 to 707,000
Resulting Weekly Excess Deaths
1,300 to 2,100

Monthly Forecast
Average % of the Population Infectious
1.5% (1 in 65)
Average New Daily Infections
738,400
New Infections During the Next Month
22,152,000
Resulting Monthly Long COVID Cases
1,108,000 to 4,430,000
Resulting Monthly Excess Deaths
7,900 to 13,200

Running Totals
Infections Nationwide in 2025
92,407,000
Average Number of Infections Per Person All-Time, U.S.
3.86

How Does Risk Increase with More Social Contacts?

Number of People	Chances Anyone Is Infectious	Number of People	Chances Anyone Is Infectious
1	1.1%	15	14.7%
2	2.1%	20	19.1%
3	3.1%	25	23.3%
4	4.2%	30	27.3%
5	5.2%	35	31.0%
6	6.2%	40	34.6%
7	7.2%	50	41.2%
8	8.1%	75	54.9%
9	9.1%	100	65.4%
10	10.1%	300	95.9%

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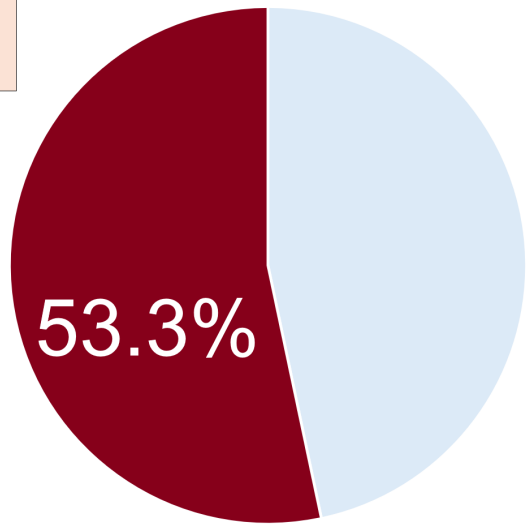
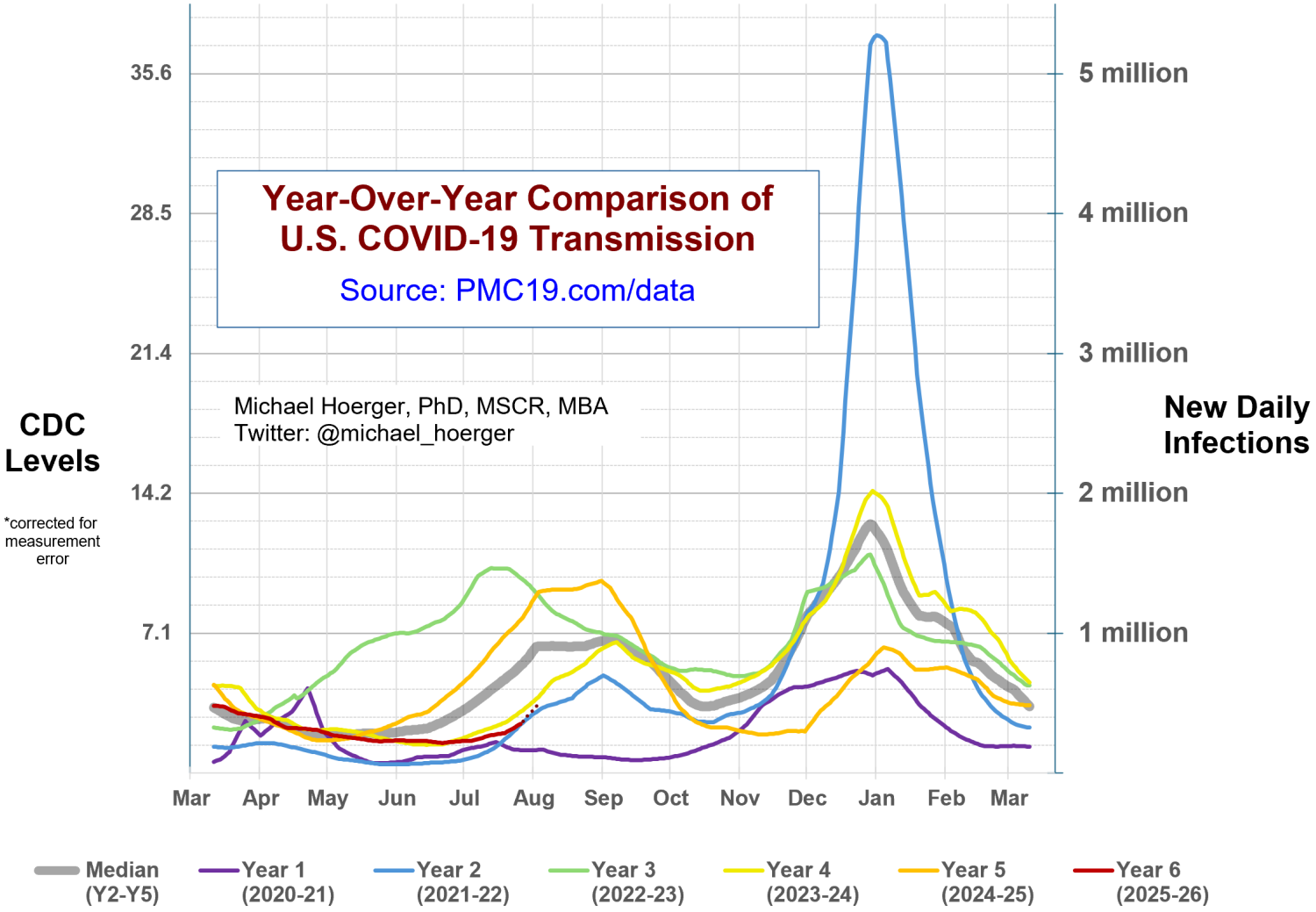


There is more COVID-19 transmission today than during 53.3% of the pandemic.

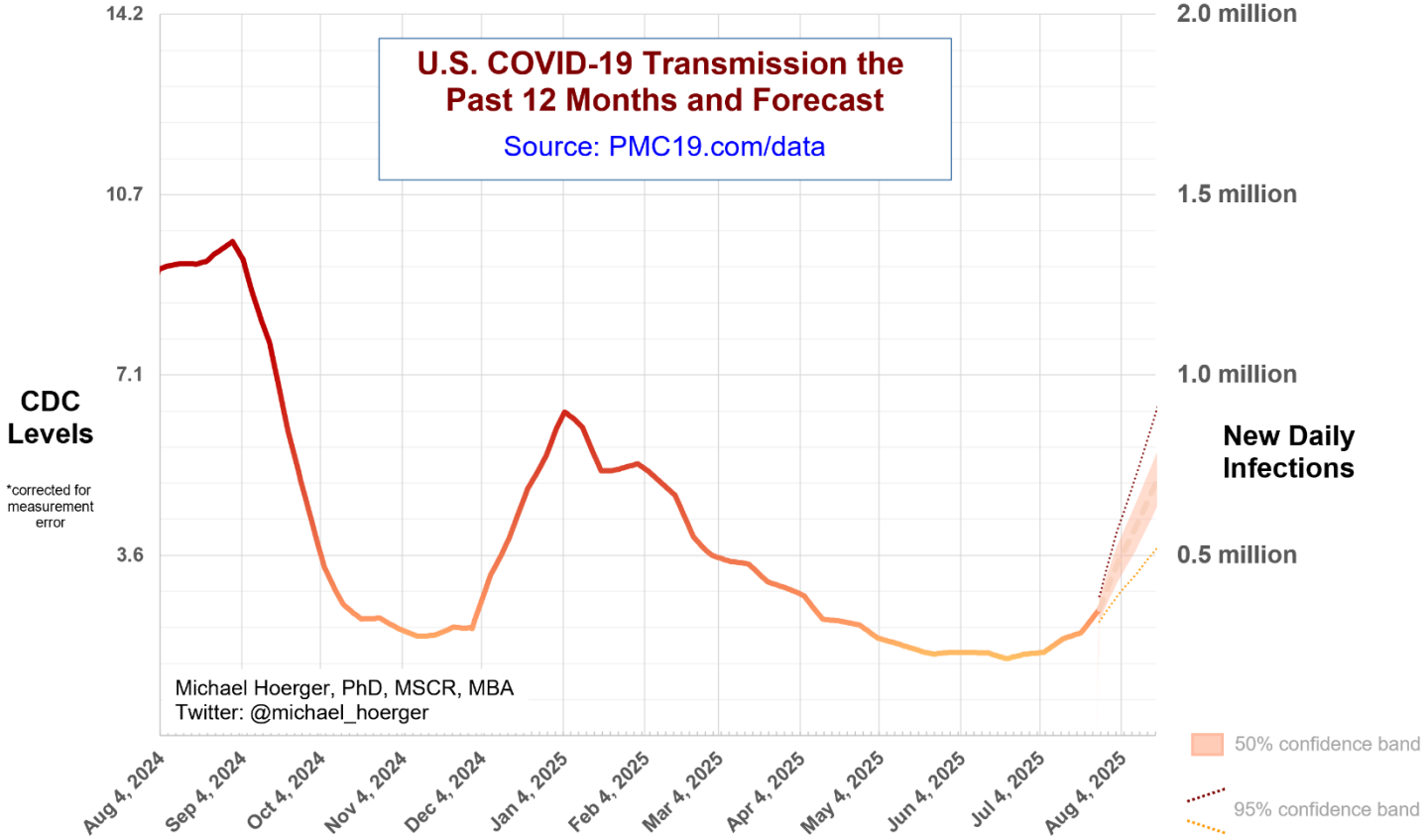
Year-Over-Year Comparisons

The year-over-year graph shows current transmission along the red line. The solid line represents the real-time data and dotted line the forecast. The year-over-year data show how transmission is somewhere between the Delta wave (blue line, summer 2021) and two years ago (yellow line, summer 2023).



Close-up on the Current Forecast

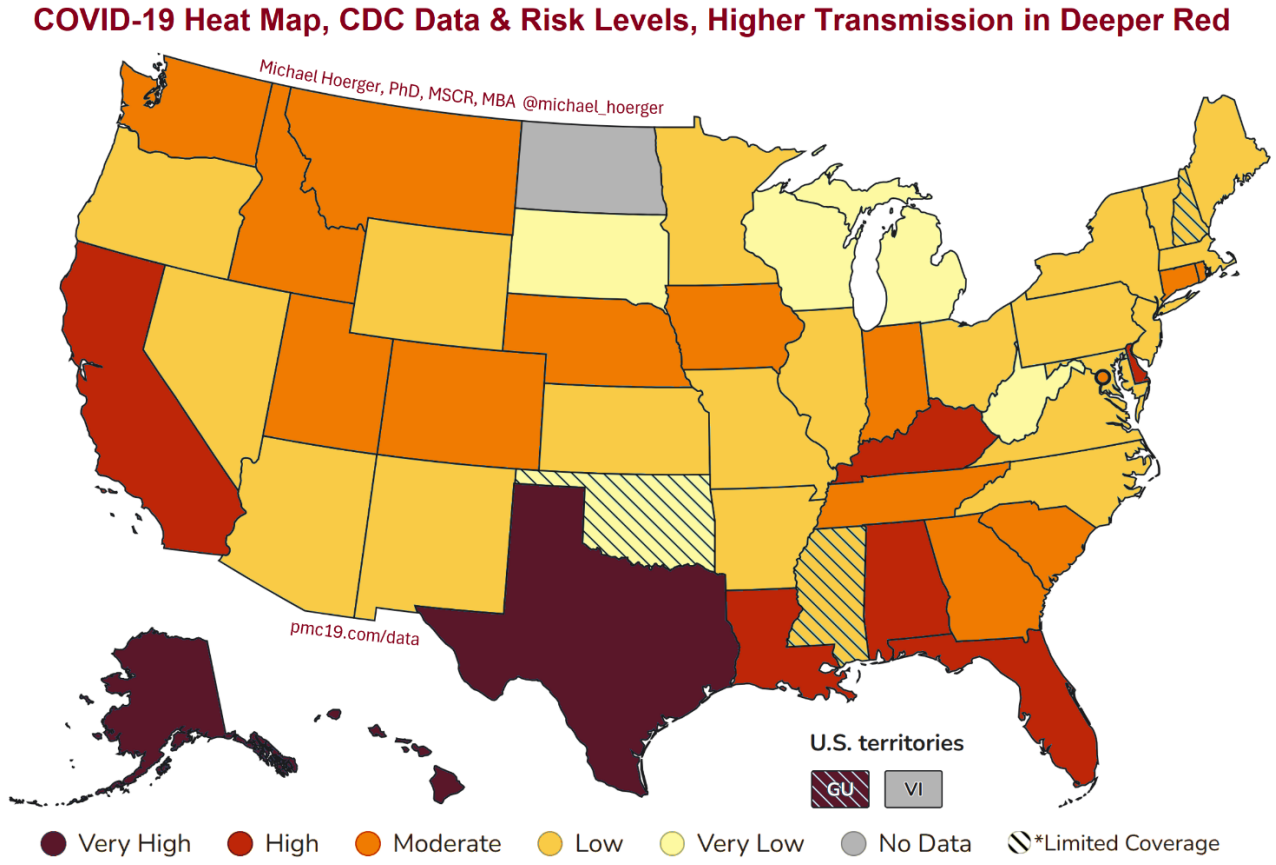
This graph shows the current forecast. Note that values for “today” are a forecast from data 9-12 days old. The current forecast is for increasing transmission over the next several weeks. With low-quality real-time data coming in, the forecast only shows 3 weeks forward from the most recent data point provided. Currently, the U.S. is seeing approximately 500,000 new daily infections, but that estimate could be anywhere from 400,000 to 600,000 daily, based on eventual retroactive corrections. Barring retroactive downward corrections, the 11th wave is in full swing.



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 very high (Alaska, Hawai’i, Texas, Guam) or high (California, Louisiana, Kentucky, Alabama, Florida, Delaware) in 10 states and increasing.

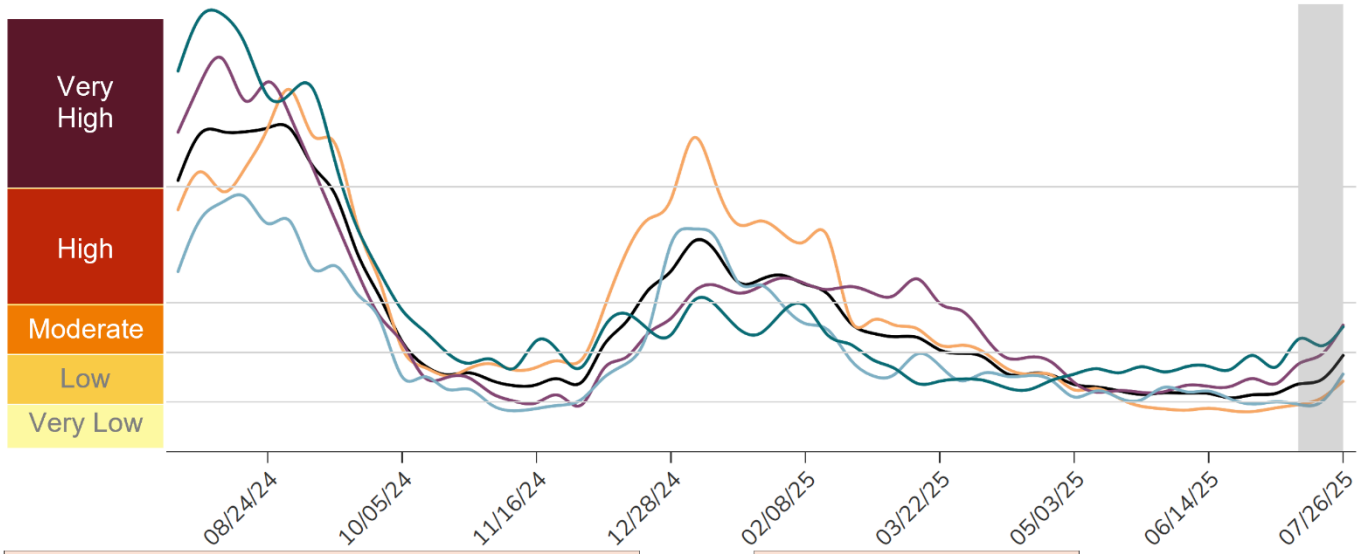


Regional Case Estimation

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	1.1% (1 in 95)	0.9% (1 in 114)
Northeast	0.9% (1 in 117)	0.7% (1 in 142)
Midwest	0.8% (1 in 129)	0.6% (1 in 156)
South	1.4% (1 in 72)	1.1% (1 in 87)
West	1.4% (1 in 73)	1.1% (1 in 88)

PMC Regional Multiplier*
0.293

* 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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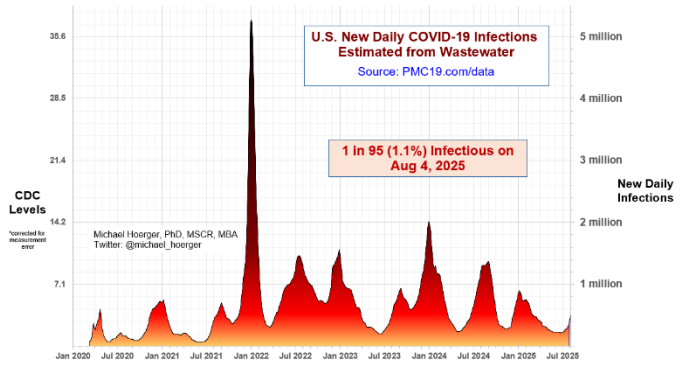

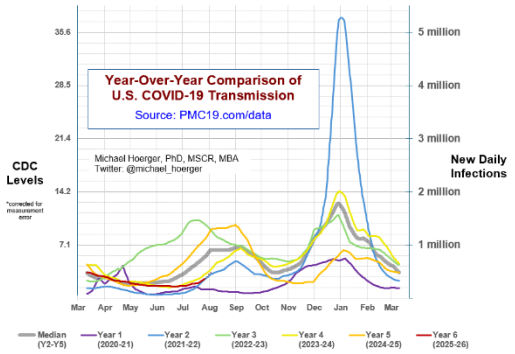

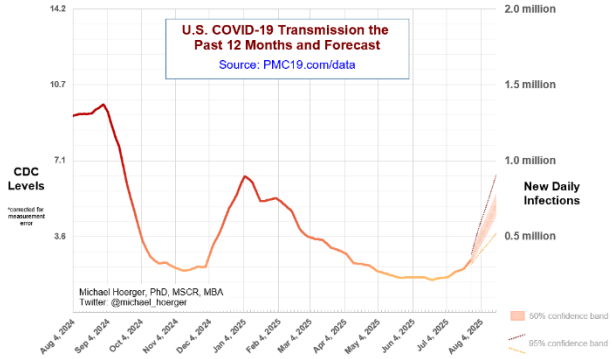

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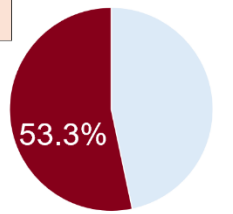

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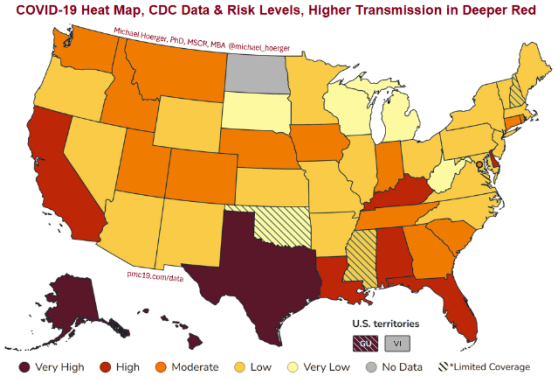

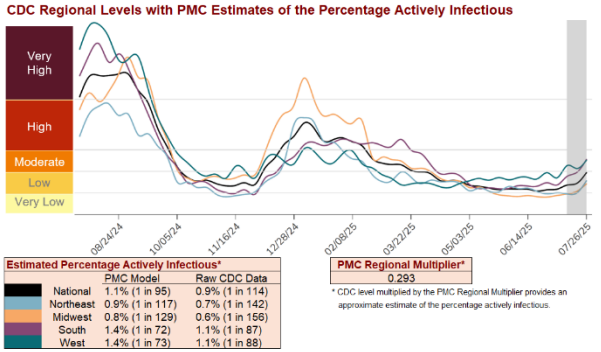

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A separate document called a Technical Appendix appears on the dashboard page and has more methodologic info.