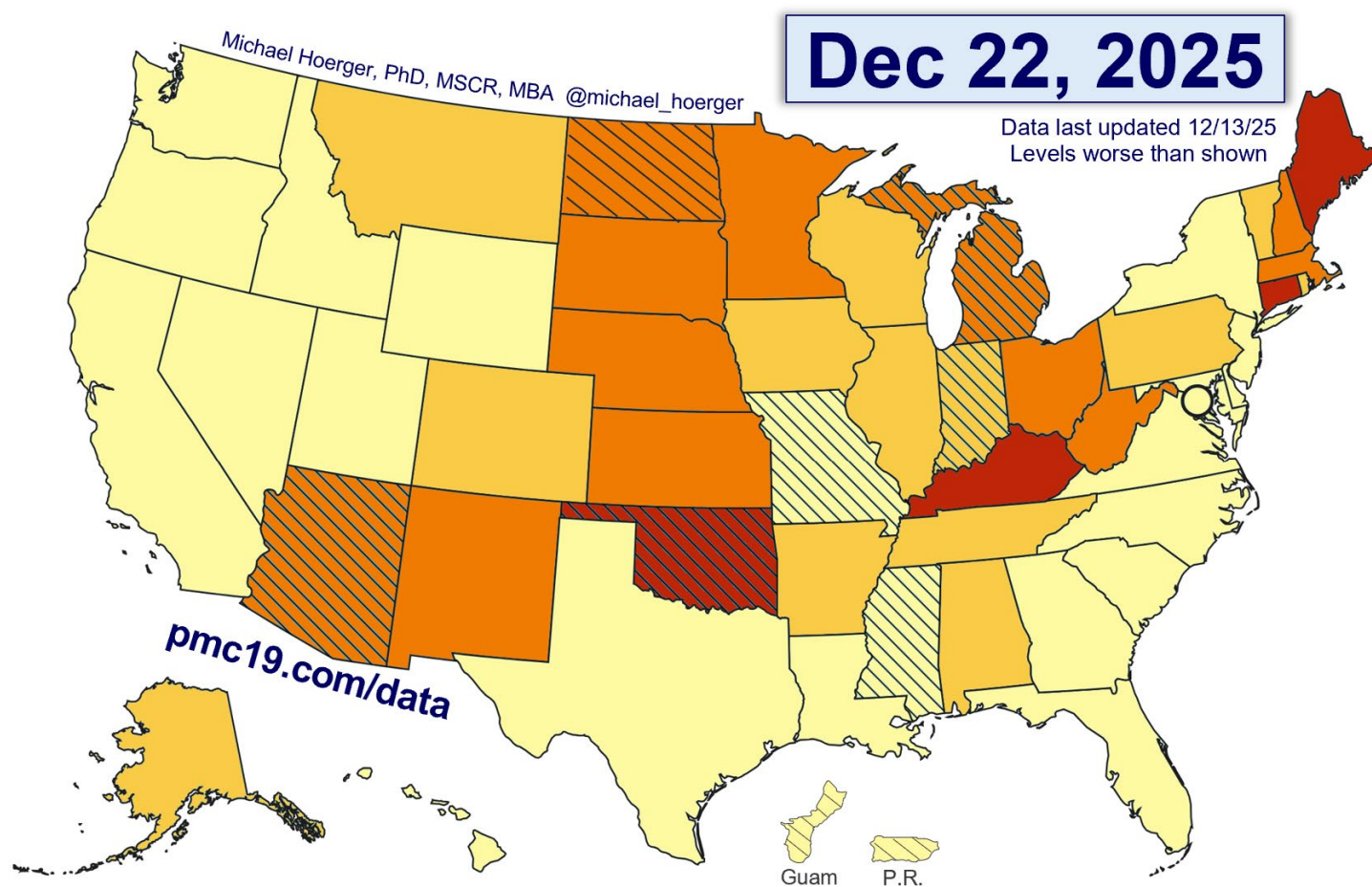# PMC U.S. COVID-19 Report for December 22, 2025. pmc19.com/data

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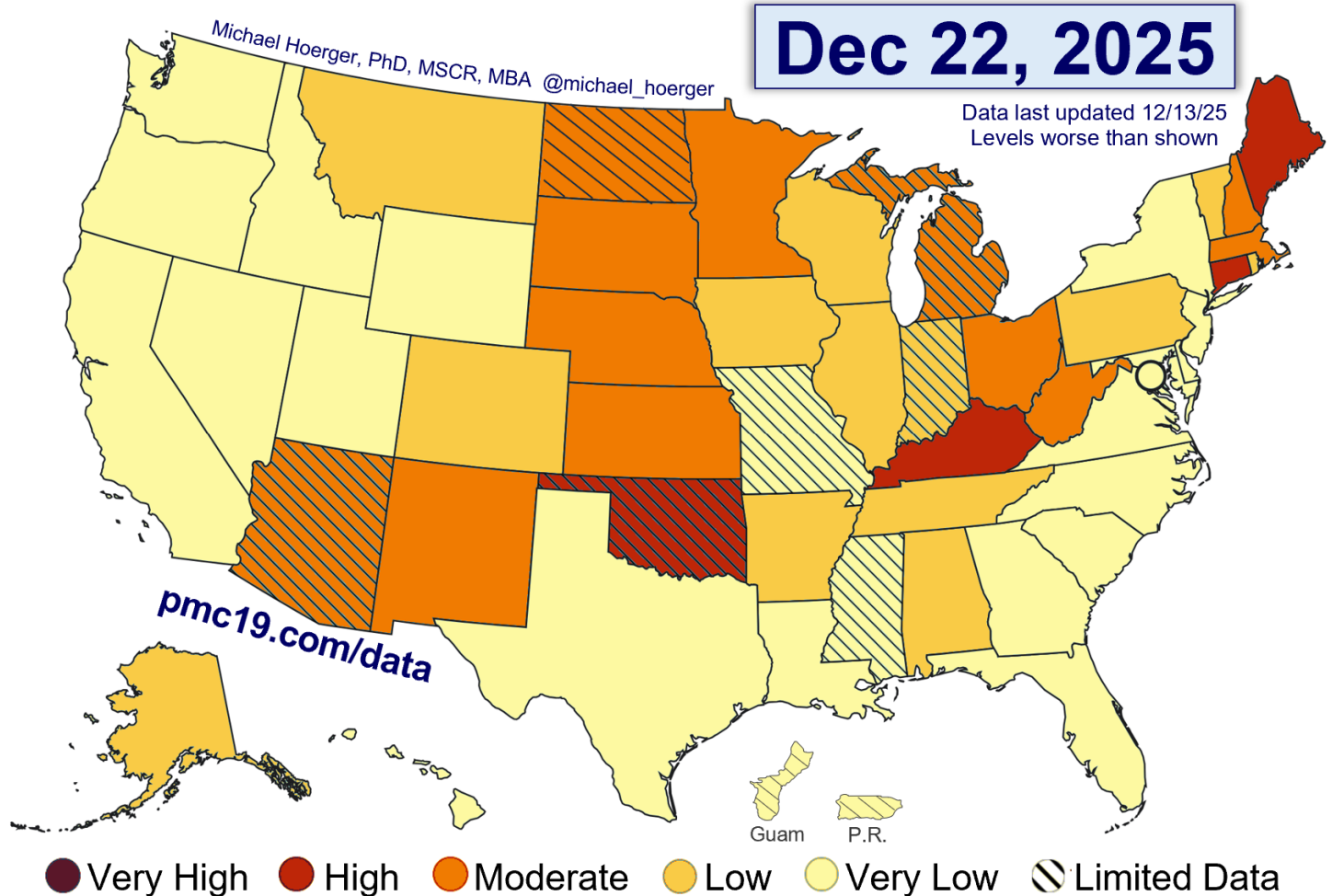

Cite as: Hoerger, M. (2025, December 22). *PMC U.S. COVID-19 Report for December 22, 2025*. Pandemic Mitigation Collaborative. http://www.pmc19.com/data

Announcements

Data Quality
- The CDC (80% model weight) reported this week, whereas Biobot (20% model weight) did not. The CDC retroactively corrected recent estimates downward, so you may see some of our estimates also corrected downward, with levels rising but from a lower baseline.

COVID-19 Heat Map, Based on CDC Wastewater Data and Levels (U.S.)

Michael Hoerger, PhD, MSCR, MBA @michael_hoerger

Dec 22, 2025

Data last updated 12/13/25
Levels worse than shown

pmc19.com/data

Guam   P.R.

● Very High ● High ● Moderate ● Low ● Very Low ⊘ Limited Data

The U.S. has is now in a 12th COVID wave. As of December 13, there were 16 states with moderate to very high transmission, with levels likely markedly higher today (see next). In the "Very Low" regions, there is considerable variability, with some wastewater sites showing higher levels.
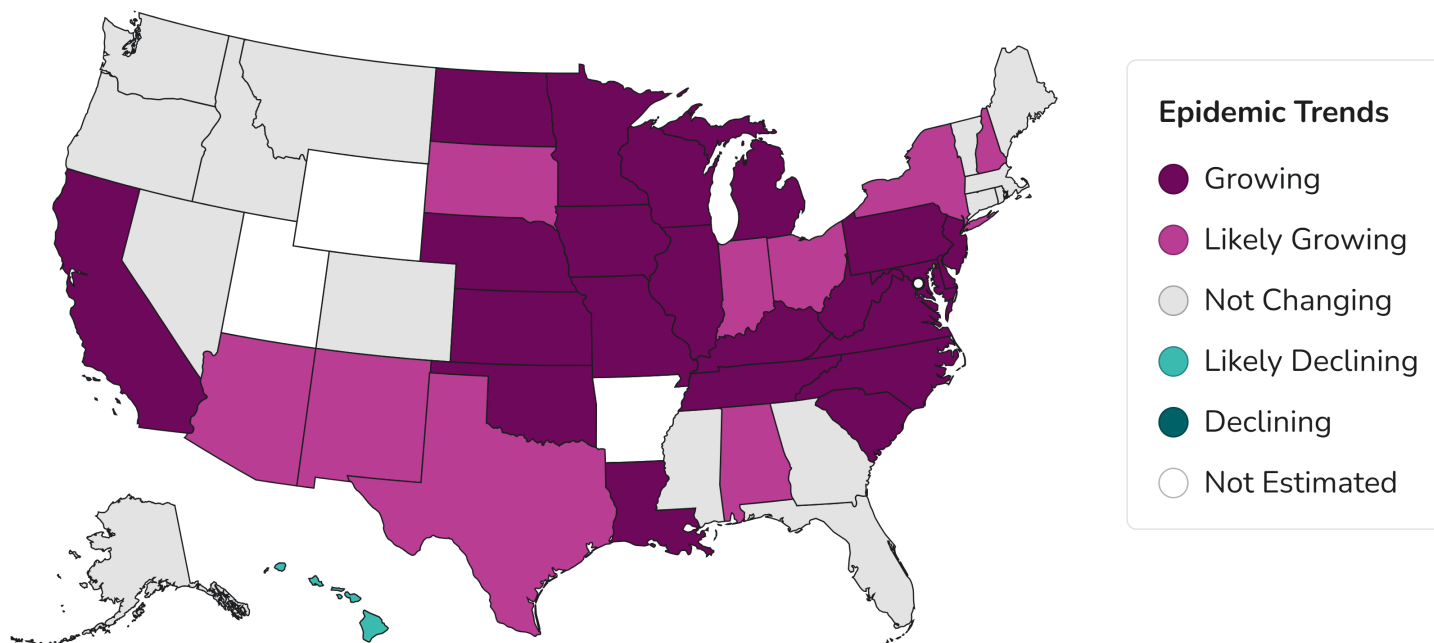
Note that the CDC state-level forecast, which is based on changes in ED visits, has COVID stable or increasing in every state but Hawai'i. Given reporting lags, the heat map on the prior page is likely much worse today.

Source: https://www.cdc.gov/cfa-modeling-and-forecasting/rt-estimates/index.html

COVID-19 State Prevalence Estimates

pmc19.com/data   *Dec 22, 2025*

State	CDC Level	PMC Estimate, % Actively Infectious	Chances anyone is infectious in a room of 10 to 100 people			
			10	25	50	100
Alabama	Low	1 in 80 (1.2%)	12%	27%	47%	71%
Alaska	Low	1 in 81 (1.2%)	12%	27%	46%	71%
Arizona	Moderate*	1 in 61 (1.6%)	15%	34%	56%	81%
Arkansas	Low	1 in 63 (1.6%)	15%	33%	55%	80%
California	Very Low	1 in 392 (0.3%)	3%	6%	12%	23%
Colorado	Low	1 in 97 (1.0%)	10%	23%	40%	65%
Connecticut	**High**	1 in 36 (2.8%)	25%	51%	76%	94%
Delaware	Very Low	1 in 181 (0.6%)	5%	13%	24%	43%
District of Columbia	Very Low	1 in 150 (0.7%)	6%	15%	28%	49%
Florida	Very Low	1 in 415 (0.2%)	2%	6%	11%	21%
Georgia	Very Low	1 in 300 (0.3%)	3%	8%	15%	28%
Guam	Very Low	1 in 915 (0.1%)	1%	3%	5%	10%
Hawaii	Very Low	1 in 693 (0.1%)	1%	4%	7%	13%
Idaho	Very Low	1 in 175 (0.6%)	6%	13%	25%	44%
Illinois	Low	1 in 64 (1.6%)	15%	33%	55%	79%
Indiana	Low*	1 in 95 (1.1%)	10%	23%	41%	65%
Iowa	Low	1 in 71 (1.4%)	13%	30%	51%	76%
Kansas	Moderate	1 in 43 (2.3%)	21%	45%	69%	91%
Kentucky	**High**	1 in 30 (3.4%)	29%	57%	82%	97%
Louisiana	Very Low	1 in 144 (0.7%)	7%	16%	29%	50%
Maine	**High**	1 in 33 (3.0%)	26%	53%	78%	95%
Maryland	Very Low	1 in 127 (0.8%)	8%	18%	33%	55%
Massachusetts	Moderate	1 in 48 (2.1%)	19%	41%	65%	88%
Michigan	Moderate*	1 in 62 (1.6%)	15%	34%	56%	81%
Minnesota	Moderate	1 in 44 (2.3%)	21%	44%	69%	90%
Mississippi	Very Low*	1 in 297 (0.3%)	3%	8%	16%	29%

* Limited data reporting   Data last updated 12/13/25

Most of these levels are considerably higher today, given lagged reporting at the state level.

COVID-19 State Prevalence Estimates

pmc19.com/data
Dec 22, 2025

State	CDC Level	PMC Estimate, % Actively Infectious	Chances anyone is infectious in a room of 10 to 100 people			
			10	25	50	100
Missouri	Very Low*	1 in 113 (0.9%)	9%	20%	36%	59%
Montana (1 week lag)	Low	1 in 89 (1.1%)	11%	25%	43%	68%
Nebraska	Moderate	1 in 42 (2.4%)	22%	46%	70%	91%
Nevada	Very Low	1 in 248 (0.4%)	4%	10%	18%	33%
New Hampshire	Moderate	1 in 57 (1.7%)	16%	36%	58%	83%
New Jersey	Very Low	1 in 144 (0.7%)	7%	16%	29%	50%
New Mexico	Moderate	1 in 57 (1.7%)	16%	36%	59%	83%
New York	Very Low	1 in 215 (0.5%)	5%	11%	21%	37%
North Carolina	Very Low	1 in 184 (0.5%)	5%	13%	24%	42%
North Dakota	Moderate*	1 in 56 (1.8%)	16%	36%	59%	83%
Ohio	Moderate	1 in 44 (2.3%)	21%	44%	69%	90%
Oklahoma	High*	1 in 40 (2.5%)	22%	47%	72%	92%
Oregon	Very Low	1 in 112 (0.9%)	9%	20%	36%	59%
Pennsylvania	Low	1 in 63 (1.6%)	15%	33%	55%	80%
Rhode Island	Low	1 in 94 (1.1%)	10%	23%	41%	66%
South Carolina	Very Low	1 in 110 (0.9%)	9%	20%	37%	60%
South Dakota	Moderate	1 in 52 (1.9%)	18%	38%	62%	85%
Tennessee	Low	1 in 64 (1.6%)	15%	33%	55%	79%
Texas	Very Low	1 in 200 (0.5%)	5%	12%	22%	39%
Utah	Very Low	1 in 210 (0.5%)	5%	11%	21%	38%
Vermont	Low	1 in 78 (1.3%)	12%	28%	48%	73%
Virginia	Very Low	1 in 215 (0.5%)	5%	11%	21%	37%
Washington	Very Low	1 in 215 (0.5%)	5%	11%	21%	37%
West Virginia	Moderate	1 in 54 (1.8%)	17%	37%	61%	84%
Wisconsin	Low	1 in 70 (1.4%)	13%	30%	51%	76%
Wyoming	Very Low	1 in 242 (0.4%)	4%	10%	19%	34%

* Limited reporting; ND has no data, averages MN, MT, & SD   Data last updated 12/13/25

Note that while Puerto Rico provides qualitative estimates, useful for the heat map, quantitative levels do not appear to be reported publicly. Most of these levels are considerably higher today, given lagged reporting at the state level.

SARS-CoV-2 New Daily Infections, Wastewater-Derived Estimates (U.S.)

pmc19.com/data

Dec 22, 2025

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← 732,000

0 NDIs

2020 2021 2022 2023 2024 2025 ■ Forecast
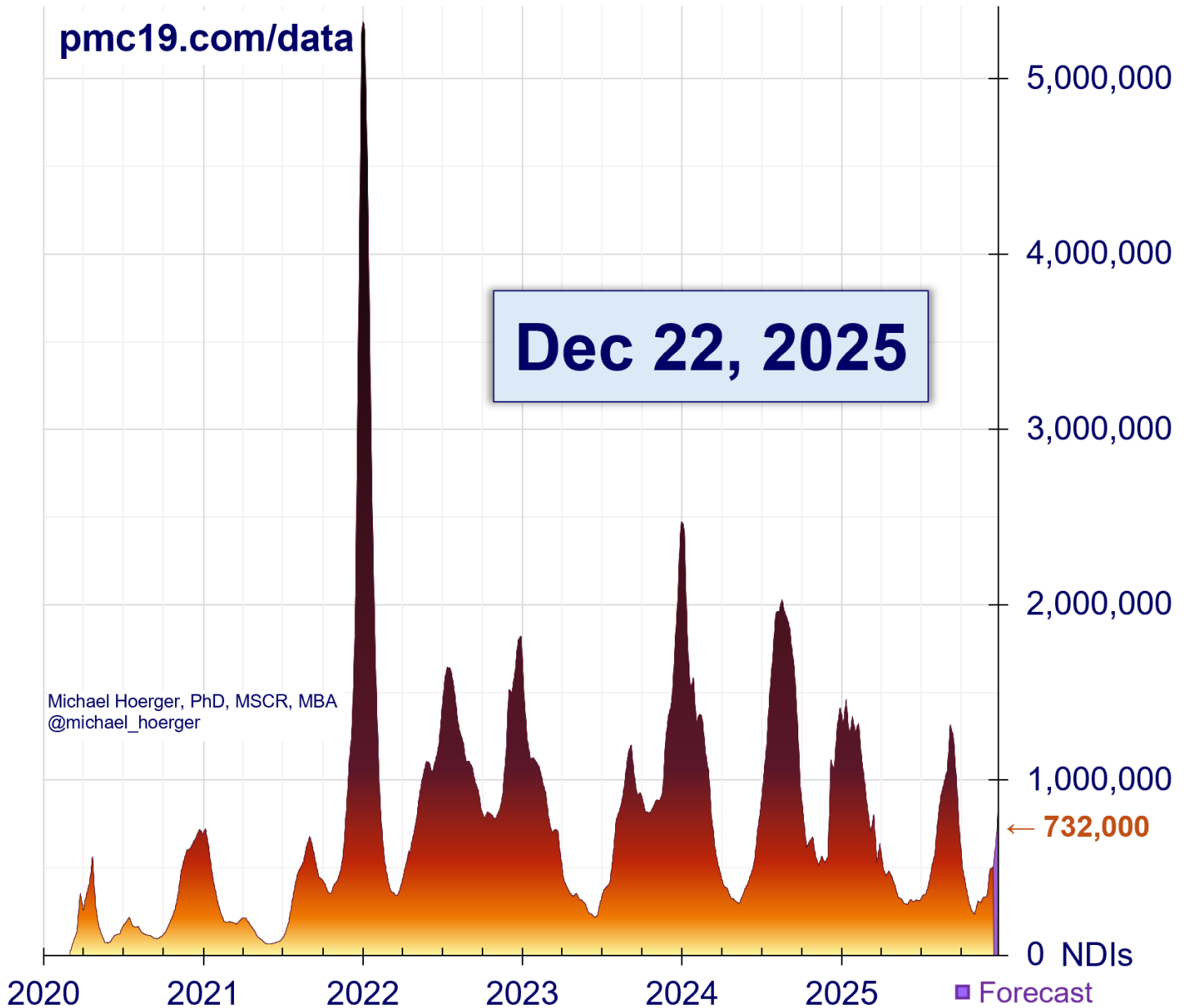
The U.S. is in a 12th COVID wave. With CDC transmission levels revised marginally downward, our estimates are also revised downward. We anticipate a wave peak of around 1.0 million new daily infections around January 3.

National COVID-19 Estimates (U.S.)

Dec 22, 2025   **pmc19.com/data**

Infections

Proportion Actively Infectious	1 in 67 (1.5%)
New Daily Infections	732,000
Infections the Past Week	4,470,000
Infections in 2025	232,000,000
Cumulative Infections per Person	4.86

Long COVID

Long COVID Cases Resulting from New Daily Infections	37,000 to 146,000
Long COVID Cases Resulting from New Weekly Infections	224,000 to 890,000

Excess Deaths

Excess Deaths Resulting from New Daily Infections	220 to 360
Excess Deaths Resulting from New Weekly Infections	1,300 to 2,200

New daily infections are estimated at 732,000 presently, about the same as last week. The 4.5 million weekly infections are expected to result in >200,000 new chronic conditions and approximately 2,000 excess deaths.
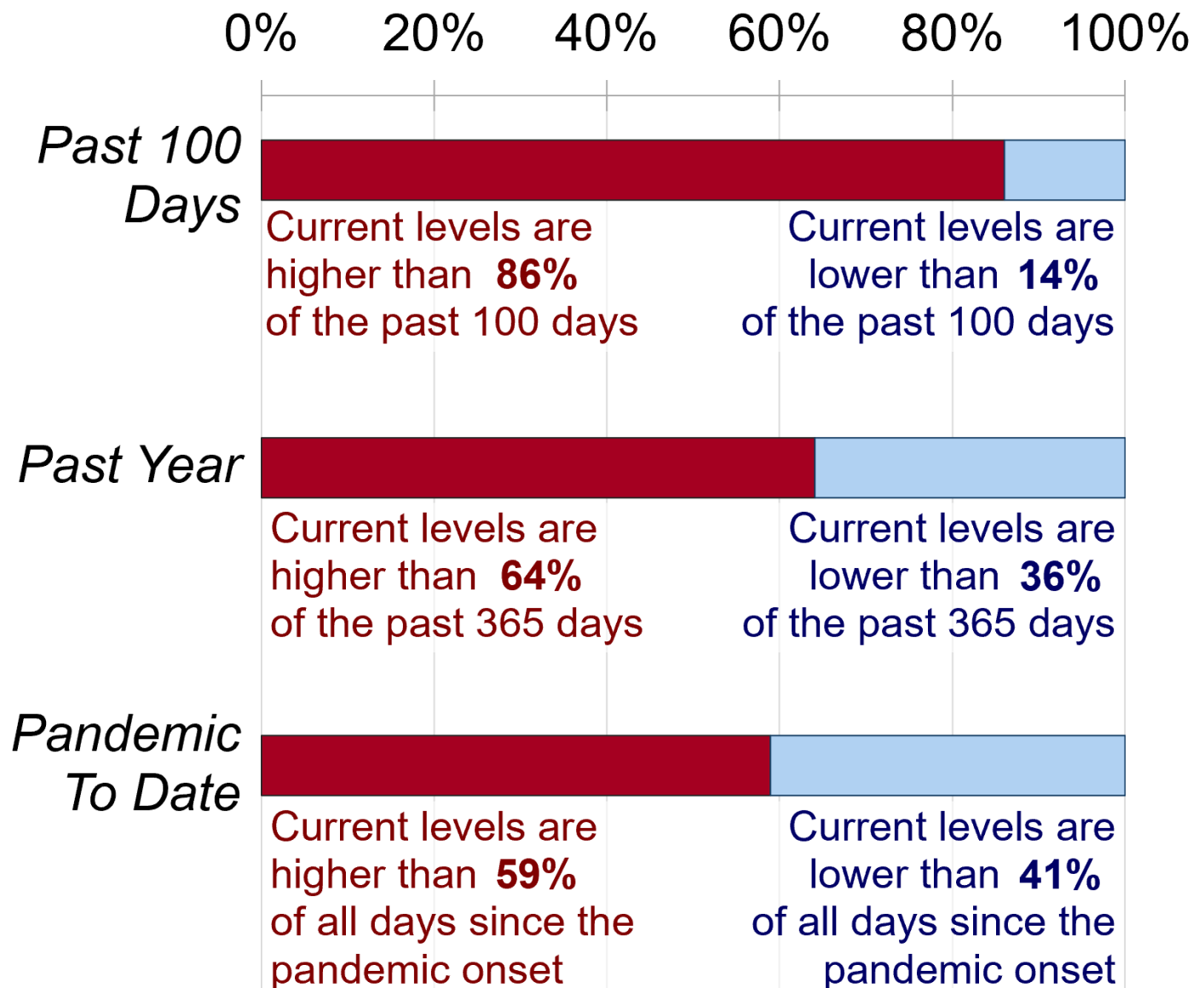
National COVID-19 Risk Table (U.S.)

Dec 22, 2025   pmc19.com/data

Number of People	Chances Anyone is Infectious
1	1.5%
2	3.0%
3	4.4%
4	5.9%
5	7.3%
10	14.0%
15	20.2%
20	26.0%
25	31.4%
30	36.4%
50	53.0%
75	67.7%
100	77.9%
200	95.1%
300	98.9%

This national risk table indicates the probability of a SARS-CoV-2 exposure based on number of social interactions, if the individuals are of average national risk and not engaging in testing or isolation protocols. With just 1 in 65 people (1.5%) estimated actively infectious, exposure risk remains troubling in schools and much larger gatherings.
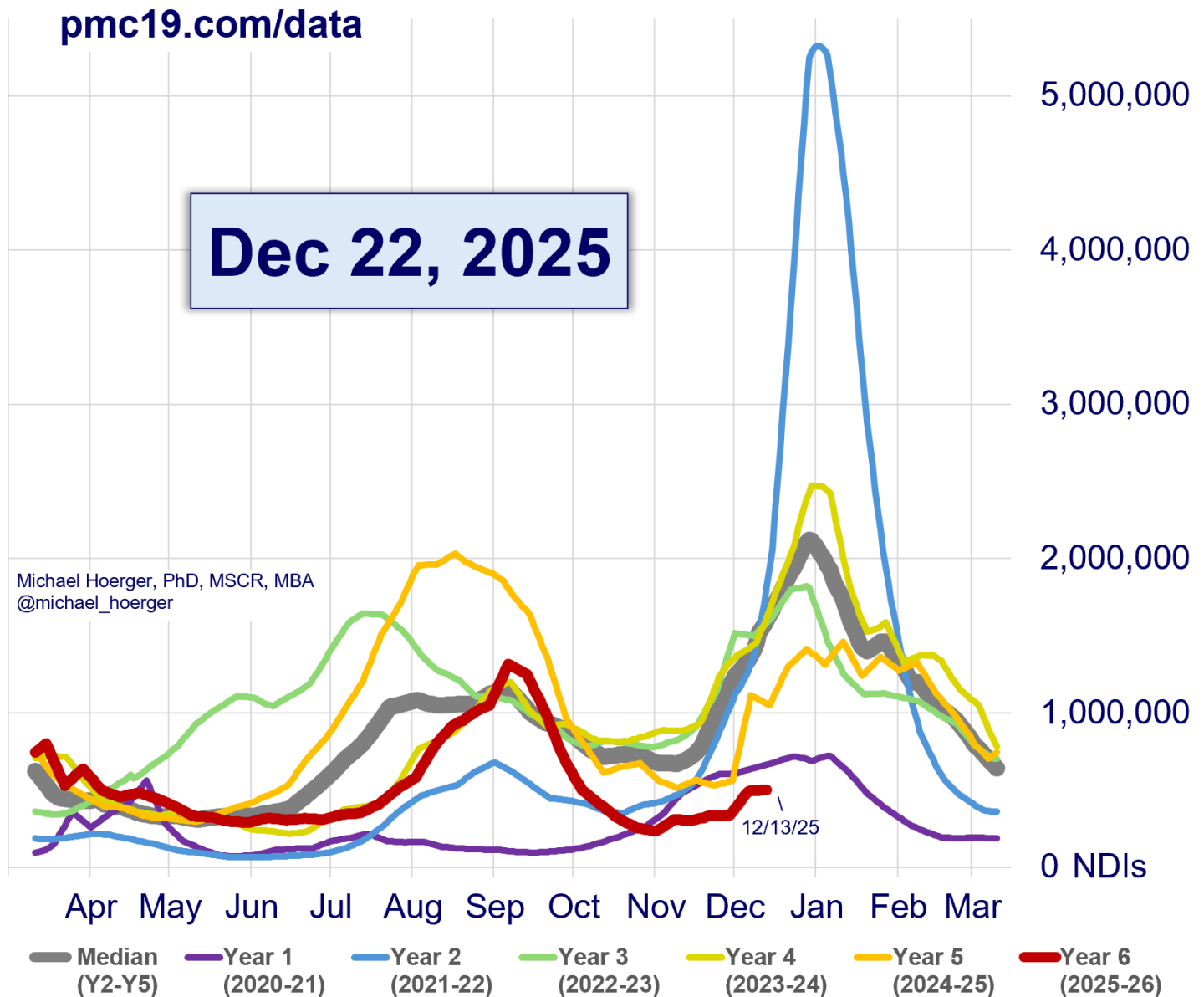
SARS-CoV-2 Relative Transmission "Barometer" (U.S.)

Dec 22, 2025   **pmc19.com/data**

| 0% | 20% | 40% | 60% | 80% | 100% |

Past 100 Days

Current levels are higher than **86%** of the past 100 days

Current levels are lower than **14%** of the past 100 days

Past Year

Current levels are higher than **64%** of the past 365 days

Current levels are lower than **36%** of the past 365 days

Pandemic To Date

Current levels are higher than **59%** of all days since the pandemic onset

Current levels are lower than **41%** of all days since the pandemic onset

These gauges show moderate-to-high relative transmission. Transmission has steadily risen since the most recent lull point and is now estimated as higher than 86 of the past 100 days nationally.
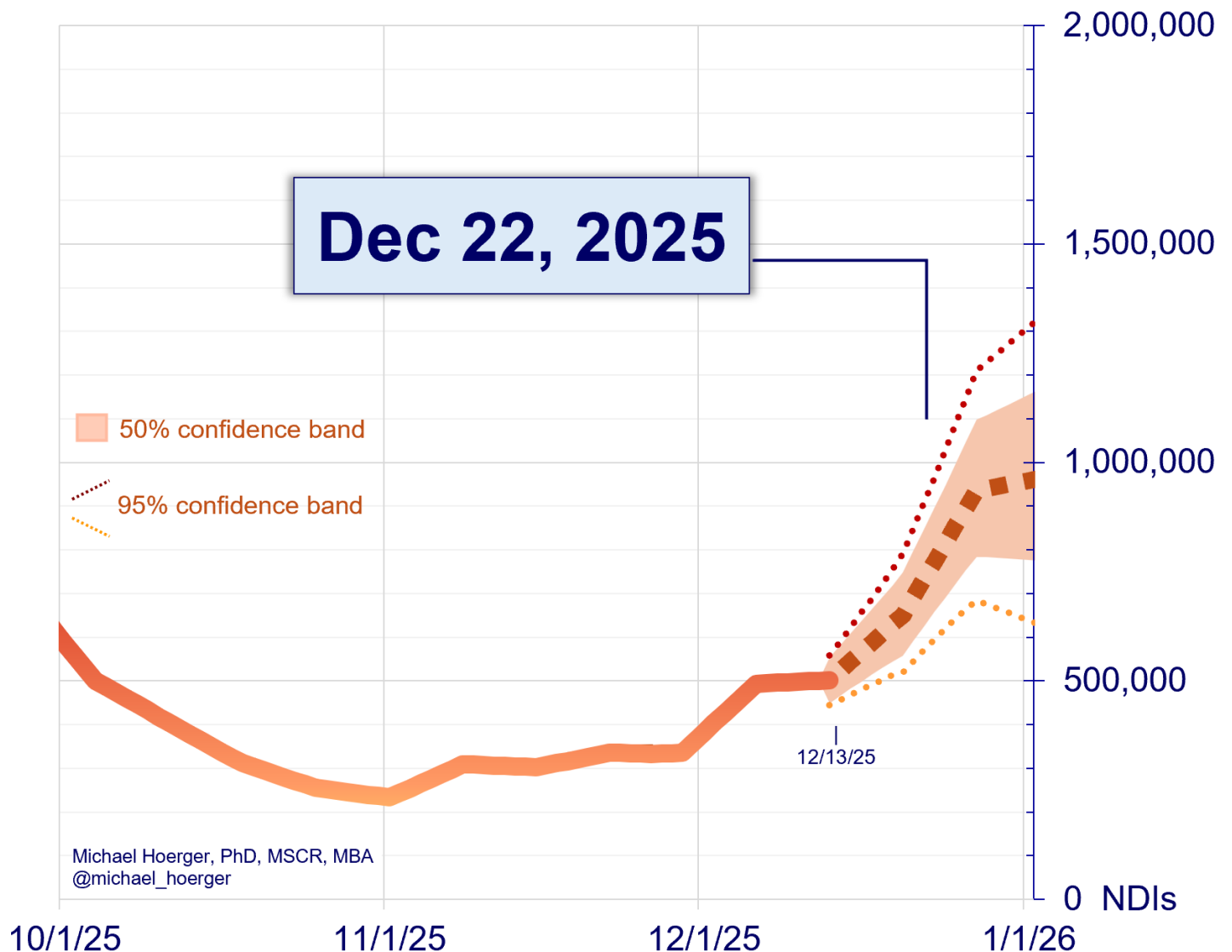
SARS-CoV-2 Year-Over-Year Estimates of Transmission (U.S.)

pmc19.com/data

Dec 22, 2025

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12/13/25

| Median (Y2-Y5) | Year 1 (2020-21) | Year 2 (2021-22) | Year 3 (2022-23) | Year 4 (2023-24) | Year 5 (2024-25) | Year 6 (2025-26) |

Transmission (red) looks very similar to last year's pattern, even percolating in the most recent week. If that persists, expect a steep rise in transmission from Dec 13 to Dec 31, with transmission plateauing around the 1.0 million (0.8 to 1.2 million) new daily infection range.

SARS-CoV-2 Transmission Forecast, Wastewater-Derived Estimates (U.S.)

pmc19.com/data

Legend:
- 50% confidence band
- 95% confidence band

Dec 22, 2025

12/13/25

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Y-axis (NDIs): 0, 500,000, 1,000,000, 1,500,000, 2,000,000

X-axis: 10/1/25, 11/1/25, 12/1/25, 1/1/26

The model presently estimates that the U.S. will have approximately 1.0 million new daily infections around Christmas Day. Data remain prone to retroactive corrections that could push estimates downward toward a peak of

800,000 new daily infections, or higher, closer to 1.2 million new daily infections. This could be the smallest winter wave since 2020-21, but still larger than the Delta wave, for example.

A separate document called a Technical Appendix appears on the dashboard page and has more methodologic info. Search for key answers there first, and then send a public comment tagging Dr. H. on Twitter if further help is needed.