The 13th COVID-19 wave crests as the US heads into winter with lowest immunity since 2021

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While the national peak of the 13th wave of the pandemic most likely fell between September 9 and September 12, the Pandemic Mitigation Collaborative (PMC), an independent modeling group led by Michael Hoerger of Tulane University, warned in its September 21 update that the course of infections this year now resembles 2021-22, the year that culminated in the devastating Omicron winter surge. As of September 12, half of US states showed rising transmission while half showed declines, the pattern PMC notes is expected at the summit of a wave.

According to PMC's September 21 estimates, roughly one in 91 Americans, or 1.1 percent of the population, is actively infectious, with daily new infections standing at approximately 542,000, weekly infections reaching 3.81 million, and cumulative 2026 infections totaling 111 million. PMC estimates indicate that a single week of transmission at this volume generates between 900 and 1,700 excess deaths.

Though cresting nationally, the wave continues to expand geographically, with PMC now identifying outbreaks across at least 40 states and territories, up from 33 two weeks earlier, including the New York City metropolitan area, with viral activity notably elevated on the Big Island of Hawaii. PMC estimates indicate Texas remains highest rate of active infection, at one in every 15 people, followed by the US Virgin Islands at one in 16, Montana at one in 19, and Puerto Rico and Guam at one in 23, with California and Florida each at one in 25. Meanwhile, Arizona dropped from one in 22 two weeks ago to one in 43, illustrating a wave shifting across regions rather than dissipating, while PMC cites Idaho, Louisiana, Maryland, and Tennessee as states likely to have outbreaks that poor monitoring cannot confirm.

PMC tracks within-year cumulative infections by counting from March to March, placing the start of pandemic year seven in March 2026. PMC reports that year seven closely tracked year one, 2020-21, until the summer surge, but now resembles year two, 2021-22. Year two opened with the Delta wave in mid-2021 and ended in the Omicron BA.1 wave, which PMC estimates peaked at over 5 million daily infections in January 2022 as the pandemic's largest wave. Year two concluded with roughly 300 million total infections by PMC's estimate, compared with roughly 55 million estimated so far in year seven.

In modeling the remainder of year seven, PMC outlines two possible trajectories rather than making a prediction. Under an optimistic scenario, year seven finishes near 150 million infections. In a pessimistic scenario, PMC warns that limited boosting and fewer recent infections have left very little short-term immunity against infection, so that a saltation variant, one arriving through a sudden jump in mutations rather than gradual genetic change, as Omicron did in November 2021, could accelerate transmission as in year two, or with a slightly lower ceiling.

A candidate carrying significant divergence is BA.3.2, nicknamed Cicada, which a report by the Centers for Disease Control and Prevention (CDC) in the March 19, 2026 issue of *Morbidity and Mortality Weekly Report* (MMWR) described as carrying approximately 70 to 75 changes in its spike protein relative to the JN.1 and LP.8.1 strains targeted by recent vaccines. First detected in South Africa in November 2024, BA.3.2 reached about 30 percent of sequenced cases in Denmark, Germany, and the Netherlands between November 2025 and January 2026, though it has co-circulated alongside other lineages rather than overtaking them, and CDC data put it below 10 percent of US cases. PMC notes that major upward data corrections by both the CDC and Biobot add uncertainty to forecasting.

Dianne Zakaria and colleagues at the Public Health Agency of Canada, writing in the September 2026 *Canada Communicable Disease Report*, surveyed 8,809 Canadian adults from January 2020 to June 2023, examining the health effects of repeated infection. Adults reporting two or more SARS-CoV-2 infections had 1.76 times the odds of a newly diagnosed health condition compared with adults reporting no infections, along with 5.03 times the odds of a respiratory condition and 3.79 times the odds of back problems, after adjusting for age, sex, income, education, obesity, smoking status, preexisting conditions and time at risk. Notably, a single infection showed no statistically significant association with

newly diagnosed conditions, indicating that it is repeated infection that raises the risk. PMC estimates Americans have now averaged 5.41 infections apiece since 2020.

By PMC's estimate, each week of current transmission produces between 191,000 and 760,000 new cases of Long COVID. *Smithsonian* reported this month that roughly 21 million American adults have experienced Long COVID, with more than one million kept out of the workforce.

On August 27, the Food and Drug Administration (FDA) approved four updated COVID-19 vaccines targeting the XFG variant, each approved only for adults 65 and older and for younger individuals with qualifying underlying conditions.

Miao Cai, Yan Xie and Ziyad Al-Aly of the Veterans Affairs St. Louis Health Care System, writing in *JAMA Internal Medicine* on June 15, 2026, compared more than one million veterans receiving influenza vaccines between September and December 2024, of whom 349,085 also received that season's COVID-19 vaccine. The study tracked major adverse cardiovascular events, defined as cardiovascular death, heart attack, stroke or hospitalization for heart failure. Over eight months, the COVID-19 vaccine was associated with a 50.7 percent lower risk of cardiovascular events linked to COVID-19 among veterans older than 75. Across all ages, vaccinated veterans had about 24 fewer major cardiovascular events from any cause, 30 fewer hospitalizations and 16 fewer deaths per 10,000 people, figures that Al-Aly estimated equal roughly one death averted for every 600 people vaccinated over eight months.

The reductions in cardiovascular events from any cause were far larger than those formally attributed to COVID-19. Al-Aly told *Federal Practitioner* that the vaccine appears to be "preventing events precipitated by infections that were never tested for and never recognized," pointing to a hidden burden of undetected infection that the official record does not count. The study noted that the benefit against explicitly COVID-linked events was statistically significant only among participants over 75, within a study population that was 92 percent male with a mean age of 70. In an accompanying commentary, former FDA commissioner Robert Califf observed that while absolute differences remain small among low-risk individuals, the overall evidence indicates a favorable balance of benefit to risk across the population.

These findings complement a study by Ruth Link-Gelles and colleagues at the CDC, published in *JAMA Network Open* in June, which found adults receiving the 2025-26 vaccine were about 50 percent less likely to need emergency care for COVID-19 and 55 percent less likely to be hospitalized. That study had been scheduled for the March 19 issue of the MMWR until Jay Bhattacharya, director of the National Institutes of Health (NIH) and then also acting director of the CDC, pulled it. The March 19 issue went out carrying the CDC's report on BA.3.2, the variant most distant from the vaccines, and without the study showing that the vaccines work. CDC survey data show that 17.5 percent of adults had received the 2025-26 vaccine by February 22, down from 21 percent the season before, while 9.7 percent of children were up to date as of May 9.

On August 4 and 5, Robert Kadlec of the Department of Defense and Bhattacharya signed a ten-year agreement to transfer NIH funds to the Pentagon for the advanced development of medical countermeasures. Kadlec originally sought $1.9 billion, roughly a third of the budget of the National Institute of Allergy and Infectious Diseases (NIAID), with discussions now centering on up to $700 million. *Nature* reported on September 4 that the agreement is set to be finalized by the end of September, when the fiscal year closes.

This transfer of resources coincides with the structural abandonment of federal preparation for emerging viral threats. The Strategic Plan for fiscal years 2026 to 2030 issued by NIAID, created August 28 and signed by acting director John H. Powers III, contains the word "pandemic" once in its 78 pages, within an appendix listing past legislation, while the terms "pandemic preparedness" and "biodefense" do not appear at all. Powers, then a senior adviser at the institute, said at a January 30 NIH event that one way for people to be prepared is to "be healthier, eat better and exercise."

While the 13th wave has most likely crested, the Pandemic Mitigation Collaborative warns that short-term immunity against infection is low, booster uptake is limited, and a variant that has diverged sharply from the vaccines is circulating in a year tracking the one that ended in the Omicron surge. The CDC's own evidence that the vaccine works reached the public only through a journal the government does not control, while the institute responsible for infectious disease research has written pandemic preparedness out of its plan and is moving countermeasure work to the Pentagon.