



| NURSING HOME SAFETY DURING COVID: CASES & VACCINES

Cases drop by 80 percent after mass vaccinations,
but 400+ homes report first cases in 2021 after none in 2020

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| Executive summary

Hundreds of U.S. nursing homes this year are reporting their very first cases of COVID-19 after avoiding any cases all of last year.

That surprising revelation is among the findings of a new analysis of government data by U.S. PIRG Education Fund and Frontier Group. The nation's 15,000 nursing homes were among the early hotspots as the pandemic started tearing through the United States a year ago. While nursing homes contain less than one-half of 1 percent of the U.S. population, they've produced 2 percent of COVID cases and 24 percent of deaths. ¹

The devastation, while horrible, made sense. Residents are in nursing homes round-the-clock, the environment is dense, residents are generally older and in poorer health than the overall population, and staff can't socially distance from residents when they're feeding or bathing them or giving them medication.

The high number of nursing homes that experienced their very first cases of COVID-19 this year -- while fending them off during the horror of 2020 -- is among the clear indications that this pandemic isn't over.

There are many reasons for optimism, particularly the huge turnaround that started in the second half of December when vaccines started rolling out. We found that has led to a decline in nursing home cases exceeding 80 percent. But this is not a time to act irresponsibly or get overly confident.

Our latest analysis, the third in [our series of reports](#) about nursing homes, points to other areas of concern, including: More than 600 nursing homes nationwide reported three or more *new* resident cases during the first week of February. In addition, more than 7,000 nursing home residents contracted COVID once last year, recovered and then were reinfected between late November and early February. ²

Also troubling: There were nearly as many new COVID cases among staff during the first week of February as there were among residents, even though there are many more residents than staff in homes. And perhaps related: While shortages of masks, gowns and other personal protective equipment have improved, nearly 6 percent of nursing homes in February reported a critical shortage of N95 masks, which experts say are the single best protection against contracting COVID-19. ³

Meanwhile, vaccinations in nursing homes are inconsistent, an alarming percentage of workers have passed on vaccines for now and visitation guidelines were just relaxed considerably this month and allow unvaccinated visitors indoors.

“They’re going to bring the virus and possibly variants into the home,” said Dr. Joseph Ouslander, past-President of the American Geriatrics Society and

professor at the Charles E. Schmidt College of Medicine of Florida Atlantic University. ⁴ “I still think nursing homes are a tinderbox. People can get sick and die.”

It seems, unfortunately, that carelessness, impatience and incompetence could needlessly put lives and communities at risk. Again.

I Key findings

The biggest takeaways: While the speed of the vaccine development and effectiveness of vaccines have both been amazing, nursing homes are still at huge risk because in-home vaccinations have fallen off and some homes are relaxing restrictions to allow unvaccinated visitors.

Since last May, nursing homes have been expected every week to report to the Centers for Medicare & Medicaid Services (CMS) nearly 100 pieces of data related to COVID-19, including diagnosed cases, deaths, tests, PPE shortages and shortages of nurses, aides and clinical staff, which includes doctors.

At any point in time, there are about 1.3 million people⁵ with short-term rehabilitation needs or long-term illnesses who reside in the nation's 15,000 nursing homes.⁶ During the period we examined, from May 31, 2020, through Feb. 7, 2021, we found that:

- Cases among residents have been declining rapidly since December. The first vaccinations were administered in the United States on Dec. 14 and nursing homes residents were among the highest-priority groups.⁷ New cases in nursing homes peaked at

33,212 nationwide for the week ending Dec. 20.⁸ A month later, the number of new weekly cases was at 21,085.⁹

By early February, the number of weekly cases had plunged to 5,573 -- a decrease of 83 percent in seven weeks.¹⁰

- Cases among staff peaked the week before, on Dec. 13, at 28,457. A month later, the number of weekly cases stood at 23,287. By early February, the weekly cases were at 5,308 -- a decrease of 81 percent in eight weeks.¹¹
- 437 nursing homes nationwide reported their first laboratory-confirmed positive cases of COVID-19 in 2021 after having zero confirmed cases last year.¹²
- Deaths from COVID among residents also peaked for the week ending Dec. 20, at 5,910. We know deaths are a lagging indicator, so they didn't drop quite as quickly as infections. Deaths per week declined by 66 percent by Feb. 7, with 2,016 deaths that week.

- Nationally, the percentage of homes reporting three or more new cases each week has been declining since Dec. 20, when it peaked at 18.8 percent of homes. As of Feb. 7, the percentage of homes with three or more new cases was at 4.5 percent.¹³

A Kaiser Family Foundation brief from January summarized 30 studies conducted between April 2020 and January 2021, and found COVID cases and deaths in long-term care facilities are higher in facilities with lower staffing levels and lower CMS star quality ratings; in communities where there are outbreaks; and in facilities with higher percentages of people of color or in communities with a large share of people of color.¹⁴

- Shortages of masks peaked in early August but still persist. By early February, 5.7 percent of homes had a critical shortage of N95 masks, down from 18 percent in early August. For surgical masks and the other four categories of PPE, 2 to 3 percent of nursing homes reported critical shortages in early February.¹⁵

- In August, CMS issued guidelines for testing, which included the recommendation that facilities should always conduct “outbreak testing for all residents and staff” if a new COVID case is confirmed, except in “limited situations,” such as if there aren’t enough tests.¹⁶ The government database stopped reporting testing in nursing homes after Nov. 22. For that week, only 17.7 percent of nursing homes tested residents with new symptoms that might indicate COVID. That was the high point for the three months.
- Perhaps more concerning, only 40.5 percent of nursing homes tested asymptomatic residents facility-wide as of Nov. 22 if a positive case was diagnosed, as they’re expected to do by CMS, to help identify and contain one case from becoming a full-blown outbreak.¹⁷ That 40.5 percent figure was up from 10 percent in August. This is still appallingly low. If homes didn’t have enough tests or capacity, that’s unacceptable. If they did have enough tests and capacity, and just weren’t testing, that’s unacceptable.

The coast wasn't clear

In the last week of May 2020, 466 nursing homes nationwide reported their very first cases. That spiked to 500 on July 19.¹⁸

With visitation to nursing homes largely shut off last spring, the virus was most likely being transmitted from newly admitted residents or from staff, some who worked at more than one facility or were contracting COVID in their own homes or the community.

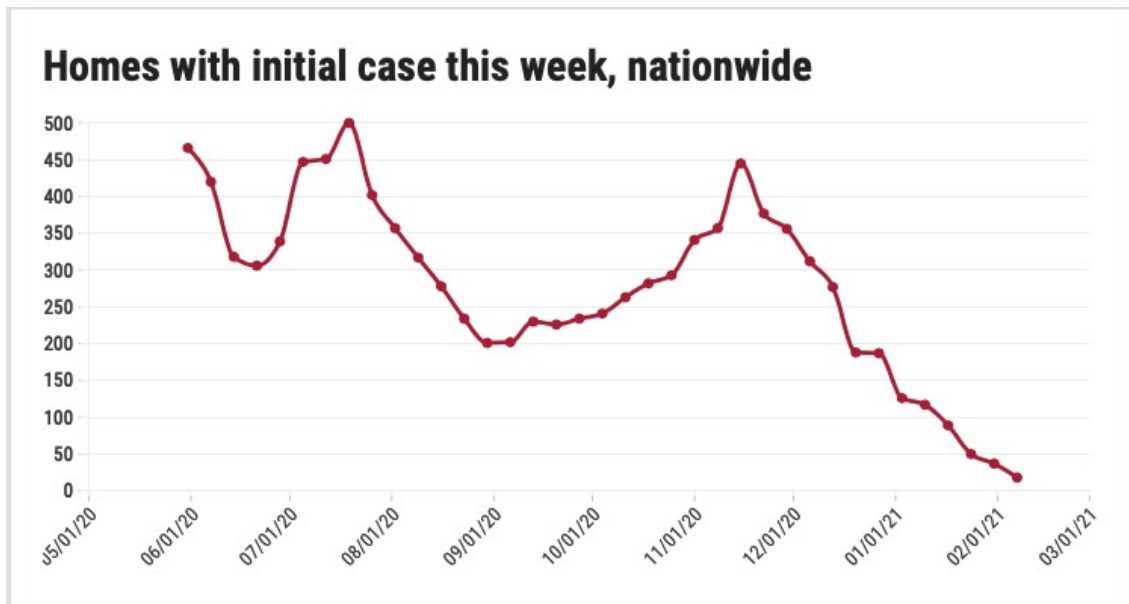
The number of nursing homes reporting their first cases declined throughout the rest of July and August but started climbing again in September.¹⁹

By Nov. 15, it was edging toward a new high, with 445 nursing homes reporting their first cases of COVID, after escaping

them all year to that point. That represented 3 percent of nursing homes.²⁰

While the trend started moving downward again, transmission of the virus was still a problem, with nearly 1,000 of the nation's 15,000 nursing homes reporting their very first cases during the month of December. This phenomenon has declined tremendously, but still during the first six weeks of 2021, 437 nursing homes that had beat back COVID during all of last year suddenly were dealing with their first cases.

“We can't say for certain why that is happening. We know that COVID cases in nursing homes are primarily caused



by high prevalence in their surrounding communities,” said Dr. David Gifford, chief medical officer at American Health Care Association and National Center for Assisted Living (AHCA/NCAL).²¹

“It’s all the more reason to remind everyone, including members of the public, that even though the vaccines are here, we are not out of the woods yet, and we must remain vigilant -- wearing masks, social distancing -- until we defeat the virus,” he said.²²

The new variant strains could have played a role in these cases, said Dr. Michael Barnett, assistant professor at the Harvard T.H. Chan School of Public Health, who has studied COVID in nursing homes extensively. “The surge from November to January was enormous,” he said. “I’m not surprised there is a tail end of nursing homes getting their first cases very late.”²³

Vaccines to the rescue

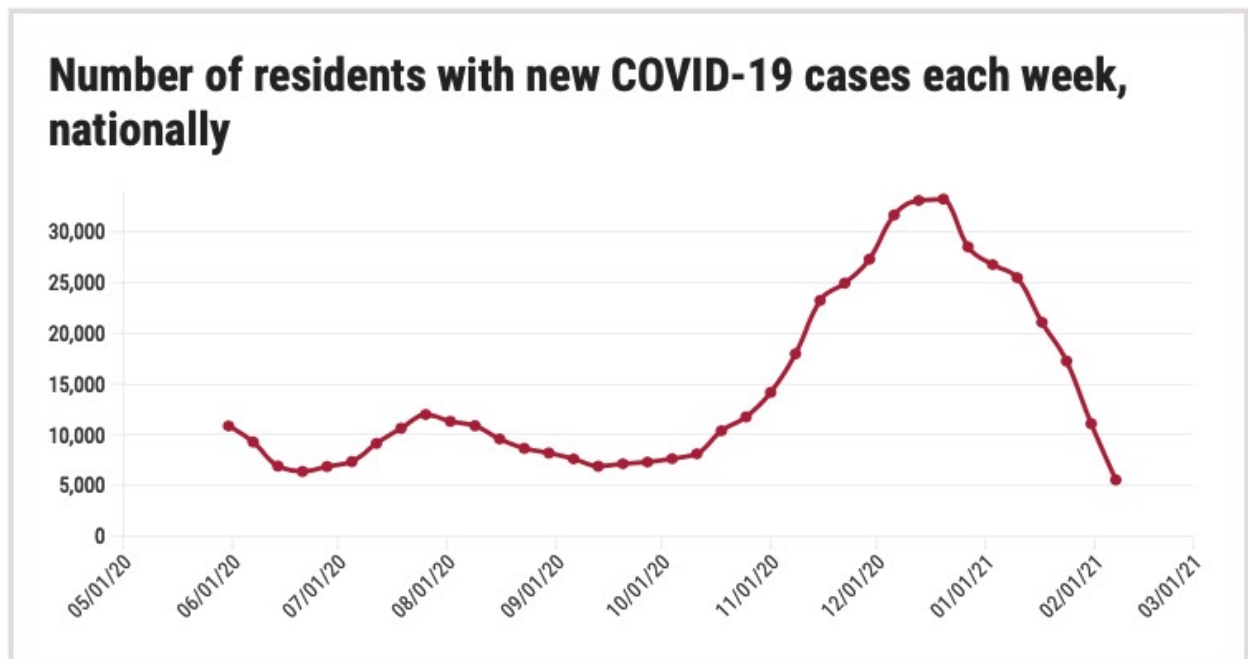
When the coronavirus arrived in the United States early 2020, nursing homes residents and workers were among the hardest hit populations. By late May and early June, when CMS started collecting data from nursing homes, some states were reporting hundreds of new cases among residents every week, while states including Hawaii, Maine, Vermont, Montana, Wyoming and West Virginia were reporting no new cases or fewer than a half-dozen for weeks.²⁴

All states were eventually affected, though the worst came at different times: New Jersey's worst time for new resident cases was in May. For Maine, the worst weeks for new cases of the entire pandemic hit just two months ago, in January. Many states such as

California and Texas saw spikes in July and August, then declines, then skyrocketing numbers of cases and deaths in late November and into December. Some states, such as Colorado and Wisconsin, didn't see summer increases, but new cases surged in November and December.²⁵

Then, it was as if the COVID spigot magically shut off.

The Centers for Disease Control and Prevention (CDC) in November created a public-private partnership to administer onsite vaccinations of residents and workers in nursing homes and other long-term care facilities nationwide. Called the Pharmacy Partnership for Long Term Care



Program, the partnership involves CVS Pharmacy, Walgreens and Managed Health Care Associates, Inc.²⁶

The first vaccines were given in nursing homes across the country on Dec. 18.²⁷ Even if you didn't know that, you could easily figure out the timing by looking at the preceding graphic because of how dramatically cases dropped.

After topping 10,000 new resident cases a week nationwide for four straight weeks in July and August, new COVID cases fell to 7,000 and then jumped above 10,000 again in mid-October.²⁸ By mid-November, new cases exceeded 23,000 for one week. A month later, new cases exceeded 33,000 for one week.

Then boom -- cases in late December dropped by several thousand in just one week. Within a month, cases were nearly cut in half, from 33,212 for the week ending Dec 20, to 17,269 for the week ending Jan. 24. Two weeks later, new cases plunged to 5,573 for the week -- a decline of more than 83 percent in seven weeks.²⁹

The declines were similarly impressive for new cases among staff. For the week ending Dec. 20, there were 27,535 new cases among nursing home workers nationwide. That dropped to 19,065 a month later and then dropped to 5,308

three weeks after that -- a decrease of 81 percent in seven weeks.³⁰

Nearly all states reported similarly sharp declines in resident cases between Dec. 20 and Feb. 7. On the high end, Oregon enjoyed a 98 percent decline in cases, while California's and West Virginia's declines were 95 percent. A handful were notably below the national average: including Florida, Georgia, Maryland, Maine and New York. With these states, their peak week for new cases was Jan. 10 or 17, not Dec. 20.³¹ After that, they saw steep declines, suggesting they got a later start on vaccines, for whatever reason.

A study released last month by the Center for Health Policy Evaluation in Long-Term Care showed vaccinated nursing homes saw a 48 percent drop in new resident cases three weeks after their first vaccination clinic, compared with a 21 percent decline in nursing homes in the same county that had not provided any vaccines.³²

Meanwhile, new cases among staff dropped by 33 percent in vaccinated nursing homes compared with an 18 percent decline in non-vaccinated facilities.³³ The study looked at 797 nursing homes that issued vaccines from Dec. 18 to Dec. 27 and compared them to 1,709 nursing homes in the same county that hadn't yet administered any vaccines.³⁴

| The challenge: Getting everyone vaccinated

In a separate report, the Centers for Disease Control and Prevention said 12,702 skilled nursing facilities were enrolled in the vaccination partnership, and 90 percent of facilities, or 11,460, had at least one vaccination clinic during the first month. During those vaccination sessions, a median of 77.8 percent of residents and 37.5 percent of staff members received at least one vaccine shot. A total of 713,909 residents and 582,104 staff members received at least one shot.³⁵

The value of those first shots is clear, and the decline in cases after just the first shot isn't surprising. While the Pfizer and Moderna vaccines require two shots weeks apart to hit the desired efficacy of 90-plus percent, both have demonstrated more than 50 percent effectiveness after just one shot in early studies.³⁶

Gifford of AHCA/NCAL said researchers believe, based on the study, that vaccines may not only be preventing severe illness, but may also reduce spread. He added that nursing homes, which right now have much higher vaccination rates than the general population, are seeing cases fall at a much faster rate than in the overall population. "With the dramatic decline,

it is evident the vaccine is the reason for this tremendous progress," he said.³⁷

In its own report, the AHCA/NCAL, which represents more than 14,000 nursing homes and long term care facilities nationwide, pointed to the week when vaccinations started as the time when things changed for the better.³⁸

Further, the AHCA/NCAL is encouraging more staff to get vaccinated, because nursing homes still face risks and the vaccines work, AHCA/NCAL President and CEO Mark Parkinson said in a statement.

"The rapid decline of nursing home cases is incredibly encouraging and a major morale boost for frontline caregivers who have been working tirelessly for a year to protect our residents," Parkinson said. "We hope this will help persuade those staff members who preferred to wait and see how the vaccines went that they are safe and effective, and that by each of us doing our part, we can save lives."³⁹

"I've long said there is a light at the end of the tunnel, but we still have a long road ahead. The more of us that receive the vaccine, the quicker we can end the pandemic and be together again."⁴⁰

The AHCA is working with the CDC on a #GetVaccinated campaign, financed in part by the CDC. Its website, getvaccinated.us, includes medical information from respected medical professionals and scientists, and urges vaccinated staff to share their personal experiences on social media. ⁴¹ Its goal is to get 75 percent of staff vaccinated by June 30. ⁴²

While information on how many homes in each state vaccinated during the first week isn't publicly available, it's interesting to see which states with at least 50 new resident cases on Dec. 20 had the biggest declines in new cases in the three weeks after the vaccine rollout: ⁴³

Illinois: 60 percent decrease
Kentucky: 54 percent decrease
Pennsylvania: 52 percent decrease
Colorado: 52 percent decrease
Delaware: 48 percent decrease

Other states had notable increases in resident cases during the same period after the vaccine launch, including Florida, Georgia, Louisiana, Maryland, Maine and New York. ⁴⁴ They may have rolled out mass nursing home vaccinations in January.

The scary consideration here: New resident cases nearly quadrupled during a 10-week period from Oct. 11 to Dec. 20. How much would cases have continued to increase if vaccines hadn't arrived? Thankfully, we'll never know.

"My guess is that most of the fall is because of aggressive vaccination campaigns prioritizing this population," said Barnett of Harvard. ⁴⁵

He added that there may have been other smaller contributing factors, including better control measures, improved PPE availability, improved testing capacity and herd immunity within individual nursing homes, given how widespread infections were.

| Glitch in the system

The on-site Pharmacy Partnership for nursing homes provides for three vaccination clinics, with roughly a month in between each of them. The vaccination program sounds great, until you realize there aren't necessarily provisions to vaccinate new residents who were admitted after the second clinic and got only one shot, or who were admitted after the last session and got no vaccination.

"This is absolutely on our radar," said Jocelyn Bogdan, program and policy specialist at National Consumer Voice for Quality Long-Term Care of Washington D.C., a consumer advocacy group. "We recently wrote to the CDC and CMS asking about this very concern -- CMS said that they'd circle back with us." ⁴⁶

The way the procedures generally work, people aren't necessarily required to be vaccinated before being admitted and coming into contact with other residents or staff who may not be fully vaccinated. ⁴⁷ Nursing homes generally test new residents for COVID and place them in a 10- to 14-day quarantine regardless of the results, which ensures they don't bring COVID into the home. ⁴⁸ But quarantining alone does nothing to prevent them from contracting it in the home once the quarantine is over if they're not vaccinated, particularly since

CMS relaxed visitation guidelines this month to allow unvaccinated residents to have visitors, who aren't required to be tested or show documentation of vaccination.

And it can set in motion the risk of another outbreak in a nursing home.

This is the tragedy that occurred this month at an unidentified nursing home in Kentucky, according to state Public Health Commissioner Steven Stack. He said an unvaccinated person brought in a COVID variant, infecting 41 people — 27 residents and 14 staff. It wasn't disclosed whether the person was a new resident, worker or visitor. At least five people were hospitalized. At this home, 85 percent of residents and 48 percent of workers had been vaccinated. Among those vaccinated, 30 percent showed symptoms. Among those unvaccinated, 83 percent showed symptoms. Further, among the 13 unvaccinated residents, four are hospitalized. Among the 71 vaccinated, only one is hospitalized. ^{49 50}

This probably won't be the last new outbreak, particularly with some homes allowing unvaccinated, indoor visitors.

"I think the trends are troubling," said Dr. Kavita Patel, a non-resident fellow at the Brookings Institution.

“The nursing home in my mind meets the definition of a congregate facility, so it would be a bad idea to have mixing of unvaccinated individuals at this time,” Patel said. “So yes, I think it would be helpful to restrict visitation.” She said she realizes allowing only vaccinated people to visit “is still really punitive.” Some homes could allow unvaccinated visitors, preferably outdoors and only with strict protocols, including masks and social distancing. But this “puts a lot of burden on the staff.”

Consumer Voice is also worried about new residents who entered homes after the second or third vaccine clinic at that home who don't receive both vaccines.

“For example, there are residents now being admitted to facilities who received their first dose at the third vaccine clinic and are being told that they are responsible for obtaining the second dose on their own,” Bogdan said.⁵¹

“This leaves residents to schedule and find transport to an off-site visitation appointment which can be very difficult logistically. The burden will, in most cases, fall to residents’ family or loved ones, but fails to take into account residents who do not have support to help them obtain the vaccine. It's even more complicated because in many areas, it may be difficult to obtain the vaccine within the required three to four weeks or even to receive the same vaccine.”⁵²

The nightmare doesn't end there. You also have unvaccinated individuals who are entering nursing homes after the third vaccine clinic “and have no means of obtaining the vaccine in the facility,” she said.⁵³

“These gaps in vaccinations leave residents at risk of infection and harm,” Bogdan said.⁵⁴

The CDC says that after a home has had its third vaccination clinic, it can continue working with the pharmacy it was matched with or another pharmacy that is enrolled to provide COVID vaccinations. “It is important to ensure LTCFs [long-term care facilities] have continued access to COVID-19 vaccine for new or unvaccinated residents and staff,” the CDC said.⁵⁵

But that's not happening across the board, AHCA/NCAL and Consumer Voice said.

The AHCA/NCAL is calling on federal and state authorities to allow the pharmacies connected with long-term care facilities to get authorized to administer vaccines, and then be prioritized for weekly shipments “so that new admissions and new hires have the opportunity to get vaccinated at the facility or with as little hassle as possible.”⁵⁶

Ouslander, the Florida geriatrician, agrees but said responsibility shouldn't

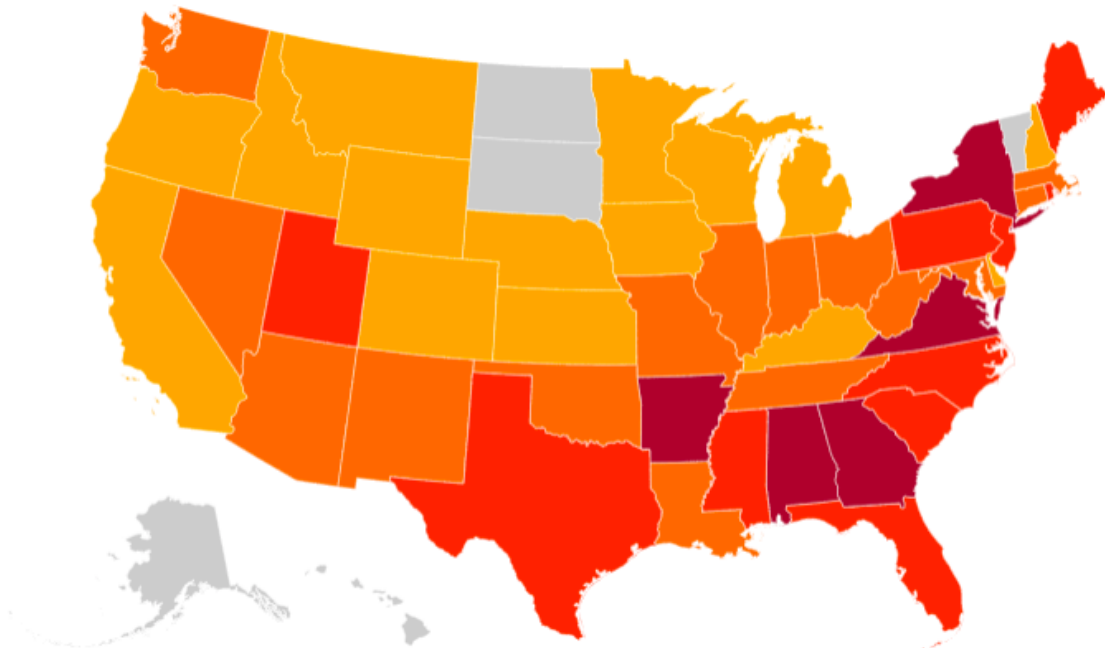
lie just with nursing homes. Getting people vaccinated, particularly new admissions, will require a joint effort involving hospitals that are discharging patients, families and nursing homes. Ideally, if a hospital has vaccines, they

should vaccinate people before they're released to a nursing home, he said.⁵⁷

Gifford said industry officials "support transparency" and would like homes to share their vaccination rates publicly as long as it doesn't create an unnecessary extra burden.⁵⁸

Percentage of nursing homes with 3 or more new resident cases during week ending Feb. 7

0% 0.1-2.9% 3-4.9% 5-7.9% 8% or more



NOTE: Data as of 2/7/2021

I PPE shortages persist

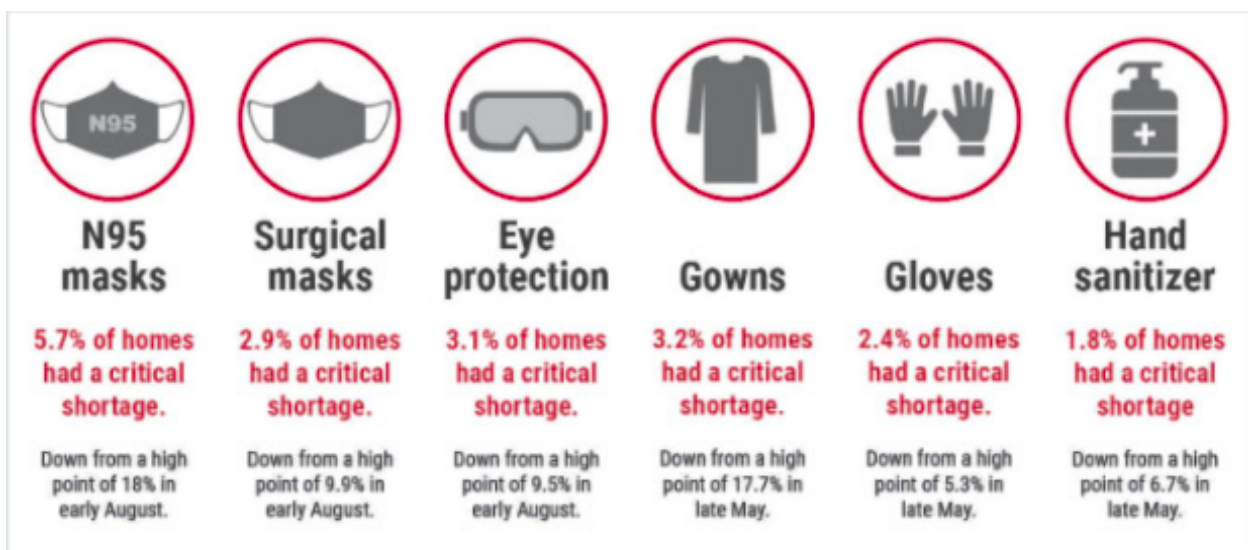
Personal protective equipment has been a problem for nursing homes throughout the pandemic. They didn't have ample supplies when the pandemic started, and the federal government didn't provide access to any supplies it may have had in the Strategic National Stockpile,⁵⁹ which is a series of warehouses in undisclosed locations nationwide that contain PPE, medication, vaccines and medical equipment in case there's a public health emergency or natural disaster.

In normal times, nursing homes buy PPE on their own through third-party suppliers. But the disruption of the supply chain threw the whole system into chaos, leaving workers to try to buy PPE from online merchants or re-use items like masks and gowns for days, when they're supposed to actually use a new one for every patient they see.

By late August, 20 percent of nursing homes had a critical shortage of one or more types of PPE such as masks, gowns or gloves. A critical shortage is defined as a less-than-one-week supply, which can quickly be reduced to zero supply if cases spike. Plus, homes have no guarantee when they'll get their next shipment, so they often start rationing PPE when the supply drops to less than one week. [Our analysis last fall](#) found that 226,495 residents in 2,981 nursing homes nationwide were at risk because of the shortages.⁶⁰

The situation has improved significantly but shortages still existed as of Feb. 7:⁶¹

- N95 masks: 5.7 percent of homes had a critical shortage, down from a high point of 18 percent in early August.



- Surgical masks: 2.9 percent of homes had a critical shortage, down from a high point of 9.9 percent in early August.
- Eye protection: 3.1 percent of homes had a critical shortage, down from a high point of 9.5 percent in early August.
- Gowns: 3.2 percent of homes had a critical shortage, down from a high point of 17.7 percent in May.
- Gloves: 2.4 percent of homes had a critical shortage, down from a high point of 5.3 percent in May.
- Hand sanitizer: 1.8 percent of homes had a critical shortage, down from a high point of 6.7 percent in May.

One might wonder how there can still be critical shortages of supplies a year after everyone knew we were in a pandemic. It's notable that nursing homes aren't alone. In fact, various entities are so desperate that they request supplies from GetUsPPE, a nonprofit created by emergency room physicians that gets PPE via donations and manufacturers and delivers it at no charge to facilities in need.⁶² In February, 7 percent of all requests to GetUsPPE came from long-term care facilities; another 7 percent came from

hospitals. (Others in need include schools and home health agencies.)⁶³

The AHCA/NCAL said shortages, while smaller, still exist because challenges remain with the supply chain. Nitrile gloves are in short supply worldwide, Gifford said. And some suppliers still have shortages of the fitting kits for N95 masks.⁶⁴

GetUsPPE said the biggest issue is price. Although N95 masks prices have come down since last spring for large bulk orders, prices remain high for smaller orders, said GetUsPPE spokeswoman Amanda Peery-Wolf.⁶⁵ NIOSH-approved N95 masks cost 40 cents each before the pandemic. Now, for small orders, they're \$4 to \$7 each. "For a single person buying a few N95s, several dollars per mask might not seem like very much, but for a healthcare facility trying to keep its workers protected, this adds up very quickly."⁶⁶

Nursing homes and other healthcare facilities may finally get the help they need to get caught up on PPE with funds in the American Rescue Plan that was signed into law March 11. It provides \$10 billion for using the Defense Production Act to produce and purchase PPE and other COVID-related supplies.⁶⁷ This isn't aimed just at nursing homes, but it should help.

I Impact of the American Rescue Plan

The much-heralded \$1.9 trillion

American Rescue Plan that Congress approved this month will help nursing homes in a few ways, although it doesn't go as far as some in the industry would have wanted.

Besides the \$10 billion for PPE and other COVID supplies for healthcare facilities nationwide, the package includes:

- \$250 million to pay for "strike teams" to go into skilled nursing facilities that have diagnosed or suspected COVID cases.⁶⁸ Staff shortages have been another critical problem for nursing homes throughout the pandemic, with shortages increasing as 2020 went on, with 23 percent of homes in December dealing with shortages of nurses, aides or doctors severe enough that it affected patient care.⁶⁹

The strike teams in the new bill will help with clinical care, infection control or staffing during the emergency period and for one year following. This should shore up but not eliminate short-term shortages. It won't address long-term issues. Nursing homes overall had staffing shortages before the pandemic started and they will after it's over.⁷⁰

- \$7.5 billion for vaccines -- planning, distributing, administering, tracking, etc.⁷¹ Again, this isn't just for nursing homes but will help the cause, particularly as the industry tries to move the percentage of vaccinated staffers from 38 percent to its 75 percent goal in the next three months.

| What needs to be done

The rollout of vaccinations and the funds for extra personnel to help nursing homes are both huge in the efforts to wipe out COVID. But more is needed, and not just from the federal government:

Among the solutions that are still needed:

- States should designate pharmacies connected with nursing homes as priority vaccine providers and get more vaccines to nursing homes to get all existing residents and workers fully vaccinated as quickly as possible.
- Nursing homes shouldn't allow new residents to move in until they're fully vaccinated, unless they're coming from a hospital and there's no option. In these cases, and for any unvaccinated person already in a home, they should be quarantined until vaccinated and be treated only by vaccinated staff. This policy would offer maximum protection to existing residents and staff.
- Hospitals should be directed to vaccinate patients with the one-shot Johnson & Johnson vaccine before they're discharged to a nursing home. They shouldn't discharge to a nursing home until then.
- People planning to enter any long-term care facility should be given priority access to vaccination.
- All nursing homes should be required to report vaccination rates of residents and staff publicly to CMS to hold the homes accountable to families and prospective residents.
- The federal and state governments should prioritize PPE to providers coping with severe shortages and make sure homes have the money to buy PPE, which remains priced higher than in the past. Government offices can also buy in bulk and sell directly to smaller facilities at affordable prices.
- Because experts believe staffing shortages have contributed to outbreaks, homes should be encouraged to allow select family caregivers to provide care for their loved ones, as they often did before the pandemic. This obviously would require safety

precautions such as PPE and COVID screening/testing for unvaccinated caregivers, consistent with CMS guidelines. Loved ones can help reduce the burden on aides and nurses for basic needs, such as refilling a water pitcher or helping someone to the restroom.

- CMS should revise its new guidelines⁷² issued March 10 that now allow indoor visitation “at all times and for all residents, regardless of vaccination status of the resident or visitor.” There are a few situations when the CMS still recommends restrictions, such as if the resident actually has COVID or if less than 70 percent of the home’s residents are fully vaccinated. The CMS says “visitation can be conducted through various means based on a facility’s structure and residents’ needs, including in resident rooms, visitation spaces, and outdoors.” It goes on to say:

“While visitor testing and vaccination can help prevent the spread of COVID-19, visitors should not be required to be tested or vaccinated (or show proof of such) as a condition of visitation.”

As with the states that are carelessly getting rid of mask mandates and allowing large gatherings, it seems nursing homes may act too hastily to ease restrictions and needlessly pose a risk to residents, especially those who haven’t had the opportunity to be fully vaccinated. While no one disputes the emotional trauma that many nursing home residents have dealt with while unable to see loved ones, it’s irresponsible to eliminate restrictions now when we may be only a few weeks away from a much safer environment in nursing homes.

I Methodology

The findings in this report are based on an analysis of data from the Center for Medicare and Medicaid Services (CMS), COVID-19 Nursing Home Dataset, downloaded from <https://data.cms.gov/Special-Programs-Initiatives-COVID-19-Nursing-Home/COVID-19-Nursing-Home-Dataset/s2uc-8wxxp> on 22 February 2021.

Each record in the dataset contains data for one nursing home for one week. Records were excluded from the analysis if entries were marked “N” for the field “Submitted Data” or marked “N” for “Passed Quality Assurance Check.” A detailed explanation of CMS’s quality assurance check process can be found on the CMS website.¹ This analysis does not include data for the week ending 5/24/2020, as the CMS website reports that data reported for that week may actually include reporting from multiple weeks.² The analysis includes data labeled 5/31/2020 to 2/7/2021 for the “Week Ending” date.

Analysis of Cases and Deaths

The number of new COVID-19 cases among nursing home residents nationally and by state was determined by calculating the sum of “Residents Weekly Confirmed COVID-19” for each week. That number was then divided by the corresponding week’s sum of “Total Number of Occupied Beds” to determine the percentage of residents with a confirmed case. The same process was repeated for new resident deaths from all causes using the field “Residents Weekly All Deaths,” for new resident deaths caused by COVID-19 using the field “Residents Weekly COVID-19 Deaths,” and for new resident reinfection cases using the field “Number of Residents with a New Positive COVID-19 Test Result who are Reinfected.” CMS did not start tracking reinfected resident cases until 11/29/2020.

The number of total resident cases nationally and by state since 1/1/2020 was determined by calculating the sum of “Residents Total Confirmed COVID-19” for each week. The same process was repeated for total resident deaths from all causes using the field “Residents Total All Deaths” and for total resident deaths caused by COVID-19 using the field “Residents Total COVID-19 Deaths.” In some cases the calculated total number of state or national cases or deaths declines from one week to the next. This is a

¹ Center for Medicare and Medicaid Services, *CMS/CDC Nursing Home COVID-19 Data Quality Assurance Process*, downloaded from <https://data.cms.gov/download/bqa5-3dzf/application%2Fpdf> on 19 October 2020.

² Center for Medicare and Medicaid Services, *COVID-19 Nursing Home Dataset*, accessed at: <https://data.cms.gov/Special-Programs-Initiatives-COVID-19-Nursing-Home/COVID-19-Nursing-Home-Dataset/s2uc-8wxxp> on 9 September 2020.

result of fewer homes reporting for certain weeks.

The number of new staff cases nationally and by state was determined by calculating the sum of "Staff Weekly Confirmed COVID-19." The same process was repeated for the number of new staff deaths caused by COVID-19 using the field "Staff Weekly COVID-19 Deaths," and for new staff reinfection cases using the field "Number of Staff and/or Personnel with a New Positive COVID-19 Test Result who are Reinfected." CMS did not start tracking reinfected staff cases until 11/29/2020.

The number of total staff cases nationally and by state since 1/1/2020 was determined by calculating the sum of "Staff Total Confirmed COVID-19" for each week. The same process was repeated for total staff deaths caused by COVID-19 using the field "Staff Total COVID-19 Deaths." In some cases the calculated total number of state or national cases or deaths declines from one week to the next. This is a result of fewer homes reporting for certain weeks.

The number of homes nationwide and by state that had three or more cases of COVID-19 each week was calculated by a count of homes that reported "Y" to the field "Three or More Confirmed COVID-19 Cases This Week." That number was then divided by the number of homes that reported "N" or "Y" in that field to determine the percentage of homes. The same process was repeated to determine the number and percentage of homes that reported their first-ever COVID-19 case each week using the field "Initial Confirmed COVID-19 Case This Week."

Analysis of Testing

To determine the number and percent of homes nationally and by state that tested symptomatic residents the count of homes reporting "Y" to the field "Tested Residents with New Signs or Symptoms" was calculated. That number was then divided by the number of homes that reported "N" or "Y" in that field to determine the percentage of homes. The same process was repeated for testing of asymptomatic residents using the field "Tested Asymptomatic Residents Facility-Wide After a New Case," testing of symptomatic staff using the field "Tested Staff and/or Personnel with New Signs or Symptoms," and testing of asymptomatic staff using the field "Tested Asymptomatic Staff and/or Personnel Facility-Wide After a New Case." CMS only recorded data on all of the fields regarding testing from 8/16/2020 to 11/22/2020.

Analysis of PPE Shortages

Six types of PPE shortages were calculated for this report: “one-week supply” shortages of N95 masks, surgical masks, eye protection, gowns, gloves, and hand sanitizer. The percentage of homes that reported a shortage each week nationwide was calculated by dividing the number of homes that reported “N” (indicating that they did not have a one-week supply of the PPE in question) by the total number of homes that reported “N” or “Y”. For each week, any homes that left this category blank were not included.

Appendix

NEW CASES PER WEEK AMONG RESIDENTS, BY STATE

State	5/31/20	6/7/20	6/14/20	6/21/20	6/28/20	7/5/20	7/12/20	7/19/20	7/26/20	8/2/20	8/9/20	8/16/20	8/23/20	8/30/20
AK	5	14	3	0	1	1	4	1	1	1	2	3	2	2
AL	126	125	117	229	293	314	390	400	481	421	402	384	332	259
AR	73	68	73	83	109	106	59	86	156	175	138	164	176	153
AZ	88	115	77	136	242	272	223	199	169	119	95	61	50	35
CA	637	705	634	749	935	967	1106	1370	1317	1313	932	978	898	666
CO	58	45	36	20	25	30	35	47	64	44	30	33	31	30
CT	190	164	109	78	52	38	51	35	28	13	20	11	11	12
DC	25	6	11	4	4	3	2	4	15	13	7	9	4	4
DE	32	24	23	20	8	13	9	22	23	11	13	7	7	12
FL	354	403	320	450	725	1090	2095	2288	2154	1530	1383	1154	899	644
GA	254	198	204	144	187	256	377	494	461	390	420	363	277	224
GU	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HI	0	3	1	4	1	0	1	4	2	2	4	3	16	27
IA	107	71	75	46	66	122	107	117	141	108	82	70	158	143
ID	8	10	6	7	16	42	40	40	67	82	50	62	41	24
IL	558	429	334	346	184	198	186	217	208	225	297	344	345	301
IN	187	167	172	226	220	128	107	140	198	122	169	176	150	152
KS	29	33	42	50	42	52	59	65	76	70	77	70	128	103
KY	83	60	45	80	128	104	101	105	97	94	84	195	130	182
LA	312	165	208	228	251	265	362	470	477	431	390	397	258	172
MA	386	148	105	56	28	31	66	104	105	90	102	63	52	58
MD	336	256	200	88	82	111	155	187	129	128	127	83	113	64
ME	2	5	8	7	10	9	5	2	5	6	4	9	9	5
MI	354	161	102	76	108	164	217	242	217	192	188	150	100	129
MN	172	138	75	49	54	67	63	66	75	80	96	93	112	159
MO	83	79	103	83	123	180	170	234	196	200	222	285	229	270
MS	187	178	93	86	103	172	245	255	340	261	241	230	157	131
MT	0	1	0	0	1	5	3	5	4	5	7	5	8	4
NC	146	122	135	110	104	164	210	210	283	293	291	299	302	342
ND	20	13	7	10	19	16	21	9	51	30	43	52	42	59
NE	46	47	25	21	19	26	32	36	40	53	40	40	38	41
NH	46	45	54	29	24	14	14	7	5	10	4	3	3	9
NJ	996	554	262	151	160	107	101	73	84	99	88	64	64	64
NM	8	15	13	15	22	21	30	48	36	31	13	22	25	12
NV	31	62	14	12	11	61	44	41	37	70	50	104	42	36
NY	2188	1731	1006	899	754	500	418	351	365	264	213	193	242	189
OH	305	174	118	163	249	330	280	299	290	317	338	386	347	422
OK	15	48	42	14	39	25	46	75	116	75	96	97	101	129
OR	3	5	37	25	13	24	16	18	40	32	24	24	17	22
PA	326	314	193	239	290	351	342	446	356	268	248	188	169	198
PR	0	0	0	0	0	0	0	1	0	0	0	0	0	15
RI	52	61	24	28	20	19	32	40	23	30	21	19	33	37
SC	96	96	110	84	132	162	254	269	310	246	222	160	135	130
SD	30	12	11	12	17	18	18	25	13	11	10	16	16	43
TN	55	28	23	65	69	147	262	335	385	447	345	343	306	345
TX	197	449	358	574	682	1094	1569	1817	1695	1339	1020	743	674	534
UT	29	20	15	64	48	52	48	66	65	46	42	40	16	11
VA	165	161	126	78	78	101	204	121	158	138	137	135	123	124
VT	0	0	0	0	0	0	0	0	0	0	0	0	0	1
WA	68	42	55	48	43	40	56	103	112	123	88	59	54	22
WI	94	61	53	49	44	36	54	58	89	93	81	72	51	83
WV	0	4	1	1	4	6	14	13	13	43	30	46	91	80
WY	3	0	1	0	0	2	4	9	3	1	2	3	2	1

NEW CASES PER WEEK AMONG RESIDENTS, BY STATE, CONTINUED

State	9/6/20	9/13/20	9/20/20	9/27/20	10/4/20	10/11/20	10/18/20	10/25/20	11/1/20	11/8/20	11/15/20	11/22/20	11/29/20	12/6/20
AK	2	0	6	4	9	1	20	11	12	11	15	18	33	13
AL	256	236	173	183	155	123	190	190	224	233	288	392	382	468
AR	190	213	260	291	281	256	297	323	375	358	408	433	432	397
AZ	39	46	52	28	39	40	49	74	83	99	126	261	293	361
CA	530	378	413	439	386	314	316	343	390	529	901	1282	1386	2478
CO	47	28	36	39	52	62	84	169	214	357	448	503	670	713
CT	8	11	34	24	41	42	66	87	90	134	204	266	288	423
DC	5	3	5	6	4	9	12	9	13	1	17	17	31	28
DE	8	7	23	49	34	37	39	44	17	35	77	51	57	60
FL	642	583	553	400	356	289	396	308	341	396	664	610	543	630
GA	217	312	296	221	193	182	145	194	181	200	245	195	207	296
GU	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HI	28	21	12	16	7	12	6	6	1	2	1	3	2	3
IA	144	197	274	256	251	229	343	417	513	765	870	737	753	717
ID	37	25	40	93	52	73	64	89	89	91	128	161	92	99
IL	350	299	318	316	305	383	654	717	1006	1197	1747	1546	1294	1337
IN	187	256	273	268	378	400	528	577	617	835	1110	1041	751	1056
KS	146	147	143	229	173	172	274	193	290	417	585	575	681	648
KY	152	149	163	226	201	328	387	300	354	460	605	640	658	783
LA	135	154	105	104	117	112	78	94	80	127	209	238	257	317
MA	52	26	59	43	70	60	82	125	124	148	257	308	380	416
MD	139	87	69	43	51	53	75	89	97	149	323	446	461	462
ME	2	8	2	7	2	4	4	6	6	24	56	53	79	95
MI	119	93	98	160	185	168	254	266	415	514	799	870	709	784
MN	147	164	195	201	208	243	343	337	514	725	988	1000	896	837
MO	375	427	538	590	494	472	531	573	702	854	879	885	907	897
MS	172	138	100	86	92	72	143	129	116	218	173	178	175	284
MT	8	15	26	18	56	66	83	96	90	113	133	168	119	103
NC	280	355	291	277	294	294	334	351	360	342	426	443	515	570
ND	79	76	139	155	155	142	180	202	265	424	400	295	226	188
NE	52	57	90	99	127	142	170	223	261	419	458	361	292	311
NH	4	12	17	17	15	6	15	22	21	40	55	92	72	86
NJ	93	71	56	70	60	84	78	110	185	177	365	349	406	573
NM	14	12	9	16	15	26	43	77	126	219	248	198	175	148
NV	38	23	42	23	27	42	30	47	41	71	132	160	140	138
NY	227	153	163	149	194	186	170	250	335	450	528	623	890	1252
OH	401	315	349	268	356	431	557	701	834	1135	1672	1775	2315	2586
OK	146	179	153	159	178	229	244	196	271	416	479	437	462	464
OR	24	18	36	34	47	24	38	35	36	103	98	97	99	118
PA	215	217	243	211	237	266	319	459	515	676	1075	1449	1702	2163
PR	1	2	5	4	4	2	0	3	0	0	1	0	0	1
RI	20	25	30	30	22	25	24	29	56	88	161	155	170	273
SC	161	165	145	116	110	107	128	130	122	133	124	127	120	210
SD	60	43	75	102	82	84	127	136	242	289	293	241	176	128
TN	276	278	278	284	322	349	291	320	417	479	595	700	650	761
TX	506	633	673	568	417	501	588	708	841	1094	1226	1271	1168	1279
UT	21	29	56	74	93	80	57	131	110	114	138	191	162	184
VA	175	180	149	141	129	173	213	174	248	245	283	206	293	415
VT	0	1	0	2	0	2	3	1	1	1	7	12	21	42
WA	41	35	55	88	62	53	74	76	68	145	175	255	197	241
WI	72	101	152	179	288	332	465	558	714	837	1014	715	531	515
WV	80	29	57	34	35	37	62	121	95	100	133	197	165	260
WY	3	3	7	18	17	16	38	41	66	87	89	100	74	68

NEW CASES PER WEEK AMONG RESIDENTS, BY STATE, CONTINUED

State	12/13/20	12/20/20	12/27/20	1/3/21	1/10/21	1/17/21	1/24/21	1/31/21	2/7/21
AK	20	13	6	11	5	5	9	6	2
AL	632	688	574	567	415	357	319	224	119
AR	414	458	448	387	376	239	229	183	221
AZ	354	335	288	342	286	182	143	86	43
CA	3564	3980	3618	3610	2751	1962	1134	682	162
CO	594	518	388	311	274	233	162	74	52
CT	366	353	390	370	311	240	196	130	84
DC	31	41	33	43	41	42	51	31	9
DE	83	92	67	85	81	116	52	52	22
FL	772	931	963	1090	1255	968	878	709	373
GA	312	448	506	586	627	557	413	271	158
GU	0	0	0	0	0	0	0	0	0
HI	3	1	11	5	5	3	3	2	0
IA	542	420	379	369	321	217	178	120	84
ID	103	99	74	66	67	39	40	19	9
IL	1326	1117	862	704	652	635	467	269	172
IN	1196	899	727	672	752	713	732	202	125
KS	595	489	462	403	407	229	140	98	54
KY	699	652	462	395	403	336	295	169	95
LA	332	297	325	330	431	338	228	191	98
MA	461	467	486	490	509	429	323	209	105
MD	393	435	320	348	356	377	276	167	92
ME	88	81	86	143	150	112	71	25	32
MI	952	751	467	465	435	411	301	205	121
MN	699	493	367	293	267	203	135	81	70
MO	733	634	559	578	468	397	286	176	102
MS	315	291	262	307	302	233	226	123	66
MT	78	52	44	46	35	30	26	12	6
NC	745	926	857	980	954	799	595	386	256
ND	116	84	70	46	54	33	15	21	12
NE	260	200	150	127	131	98	79	36	25
NH	138	129	167	133	107	99	59	43	22
NJ	391	419	423	445	442	439	318	228	140
NM	123	122	104	100	134	81	52	45	13
NV	131	120	94	115	135	90	48	39	19
NY	1233	1214	1517	1663	1848	1925	1944	1288	735
OH	2451	2033	1676	1400	1407	1018	870	470	303
OK	548	503	485	445	396	338	174	128	77
OR	118	150	89	103	111	46	38	36	10
PA	2089	2066	1612	1426	1203	1029	784	562	268
PR	0	0	1	0	0	1	2	0	0
RI	194	129	165	152	191	135	107	56	27
SC	315	332	305	402	389	380	310	163	148
SD	133	98	65	48	65	30	22	13	7
TN	752	812	636	726	556	415	319	217	116
TX	1451	1703	1582	1654	1727	1343	1126	760	364
UT	100	106	133	117	96	102	50	53	32
VA	496	482	452	587	631	478	336	212	118
VT	27	17	4	10	8	9	5	6	6
WA	264	206	276	162	186	161	112	68	40
WI	435	378	308	254	292	223	153	105	60
WV	224	228	229	255	195	152	72	51	23
WY	66	43	30	36	47	38	29	15	11

NEW CASES PER WEEK AMONG RESIDENTS, NATIONALLY

Week Ending	Number New Cases
5/31/20	10882
6/7/20	9301
6/14/20	6936
6/21/20	6399
6/28/20	6887
7/5/20	7372
7/12/20	9160
7/19/20	10654
7/26/20	12009
8/2/20	11331
8/9/20	10900
8/16/20	9602
8/23/20	8676
8/30/20	8221
9/6/20	7639
9/13/20	6920
9/20/20	7160
9/27/20	7325
10/4/20	7660
10/11/20	8138
10/18/20	10409
10/25/20	11774
11/1/20	14190
11/8/20	17985
11/15/20	23239
11/22/20	24944
11/29/20	27300
12/6/20	31652
12/13/20	33079
12/20/20	33212
12/27/20	28514
1/3/21	26767
1/10/21	25474
1/17/21	21085
1/24/21	17269
1/31/21	11106
2/7/21	5573

PERCENTAGE DECLINE OF NEW RESIDENT CASES, BY STATE, AFTER MASS VACCINATION ROLLOUT

State	12/20/20	12/27/20	1/3/21	1/10/21	1/17/21	1/24/21	1/31/21	2/7/21	Percentage decrease in new cases 12/20 to 2/7
AK	8	3	5	2	0	3	9	1	87.5 %
AL	855	582	533	455	411	425	268	91	89.3 %
AR	600	395	415	425	306	219	203	161	73.2 %
AZ	324	280	226	201	229	224	164	59	81.8 %
CA	4813	4247	3998	3023	2421	1576	884	232	95.2 %
CO	468	315	222	226	185	165	93	48	89.7 %
CT	448	493	353	343	280	203	170	85	81 %
DC	42	24	23	25	46	55	38	7	83.3 %
DE	143	64	79	74	145	68	40	18	87.4 %
FL	994	1017	1019	1136	878	829	690	372	62.6 %
GA	627	755	693	872	767	674	445	290	53.7 %
HI	3	7	7	11	2	0	0	0	100%
IA	426	431	349	297	149	178	110	97	77.2 %
ID	75	53	56	51	36	9	10	8	89.3 %
IL	1579	1167	793	638	707	706	355	175	88.9 %
IN	1099	961	875	820	717	695	253	111	89.9 %
KS	562	471	359	419	222	168	79	57	89.9 %
KY	886	552	474	412	336	348	139	71	92 %
LA	324	362	401	456	332	264	206	96	70.3 %
MA	531	520	502	464	516	345	195	140	73.6 %
MD	265	238	314	398	353	335	191	124	53.2 %
ME	80	99	224	142	155	63	52	45	43.8 %
MI	721	519	411	417	438	323	241	100	86.1 %
MN	434	312	230	233	145	85	46	40	90.8 %
MO	828	720	648	611	453	294	201	131	84.2 %
MS	368	296	331	354	288	301	166	90	75.5 %
MT	29	38	53	33	21	11	2	11	62.1 %
NC	1149	1017	1123	1256	1122	813	548	255	77.8 %
ND	41	18	13	15	16	6	6	4	90.2 %
NE	166	101	109	138	95	46	27	16	90.4 %
NH	209	149	142	125	155	118	57	19	90.9 %
NJ	514	457	480	418	468	392	304	150	70.8 %
NM	103	174	131	135	57	38	29	10	90.2 %
NV	128	152	140	97	97	52	29	16	87.5 %
NY	1259	1427	1758	2075	1749	1584	1092	685	45.6 %
OH	2565	2075	1782	1541	987	744	456	232	91 %
OK	730	654	524	518	361	208	155	88	88 %
OR	188	148	100	114	49	53	54	4	97.9 %
PA	2626	1817	1701	1255	1189	1085	684	351	86.6 %
PR	0	1	0	0	0	0	0	0	--
RI	218	224	144	183	137	147	60	40	81.7 %
SC	370	285	282	346	459	477	285	105	71.6 %
SD	79	48	64	50	30	14	7	6	92.4 %
TN	960	808	898	679	552	416	255	110	88.5 %
TX	2365	2204	2145	2132	1681	1589	1127	462	80.5 %
UT	82	143	99	119	104	68	74	48	41.5 %
VA	725	746	771	951	709	493	364	211	70.9 %
VT	11	1	0	0	0	1	2	1	90.9 %
WA	288	375	149	183	169	123	84	31	89.2 %
WI	409	275	254	217	142	123	80	39	90.5 %
WV	390	261	330	319	166	92	68	18	95.4 %
WY	105	33	35	70	53	21	9	12	88.6 %
US AVG	33,212							5,573	83.2 %

HOMES WITH FIRST CASE OF ENTIRE PANDEMIC THIS WEEK, NATIONALLY

Week Ending	Initial Case this Week
5/31/20	466
6/7/20	420
6/14/20	318
6/21/20	306
6/28/20	339
7/5/20	447
7/12/20	451
7/19/20	500
7/26/20	402
8/2/20	357
8/9/20	317
8/16/20	278
8/23/20	234
8/30/20	201
9/6/20	202
9/13/20	230
9/20/20	226
9/27/20	234
10/4/20	241
10/11/20	263
10/18/20	282
10/25/20	293
11/1/20	341
11/8/20	357
11/15/20	445
11/22/20	377
11/29/20	356
12/6/20	312
12/13/20	277
12/20/20	188
12/27/20	187
1/3/21	126
1/10/21	117
1/17/21	89
1/24/21	50
1/31/21	37
2/7/21	18

Notes

1. As of March 10, there were 130,079 COVID deaths among residents in nursing homes and 639,658 confirmed cases, according to the Center for Medicare and Medicaid Services. <https://data.cms.gov/stories/s/bkwz-xpvg>. In the U.S., there were 538,917 deaths and 29.8 million cases as of March 10, per WorldOMeter. <https://www.worldometers.info/coronavirus/country/us/>
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8. Based on Frontier Group analysis of CMS Nursing Home COVID-19 data
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22. Interview, March 2021
23. Interview, March 2021
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27. Nursing Home Resident and Staff Covid-19 Cases After the First Vaccination Clinic"
<https://www.ahcancal.org/Data-and-Research/Center-for-HPE/Documents/C-HPE-Report-Vaccine-Effectiveness-Feb2021.pdf>
28. Based on Frontier Group analysis of CMS Nursing Home COVID-19 data
29. Based on Frontier Group analysis of CMS Nursing Home COVID-19 data
30. Based on Frontier Group analysis of CMS Nursing Home COVID-19 data
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32. "Nursing Home Resident and Staff Covid-19 Cases After the First Vaccination Clinic"
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