

# Covid-19: U.S. Vaccination Pace Increases to 2 Million Doses a Day

Last Updated March 23, 2021

Connecticut has joined Texas and Mississippi in easing restrictions, while Alabama extended its mask mandate. Italy blocked a vaccine shipment to Australia.

*Follow the latest on the Covid-19 pandemic.*

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## The United States is now averaging 2 million vaccine doses administered per day.

The average number of vaccine doses being administered across the United States per day topped two million for the first time on Wednesday, according to data from the Centers for Disease Control and Prevention. A month ago, the average was about 1.3 million.

President Biden set a goal for the country shortly after taking office to administer more than 1.5 million doses a day, which the nation has now comfortably exceeded.

Mr. Biden has also promised to administer 100 million vaccines by his 100th day in office, which is April 30. As of Thursday, 54 million people have received at least one dose of a Covid-19 vaccine. Johnson & Johnson's one-shot vaccine was authorized for emergency use on Saturday, but those doses do not appear yet in the C.D.C. data.

The milestone was yet another sign of momentum in the nation's effort to vaccinate every willing adult, even as state and city governments face several challenges, from current supply to logistics to hesitancy, of getting all of those doses into people's arms.

Mass vaccination sites across the country are opening up or increasing their capacity, in part to respond to the new influx of doses from Johnson & Johnson. In New York, Gov. Andrew M. Cuomo announced on Thursday that three short-term mass vaccination sites will open in the state on Friday. Three other state-run sites, including one at Yankee Stadium, will begin administering shots around the clock. In Georgia, Gov. Brian Kemp announced five new sites will open on March 17.

The Federal Emergency Management Agency has recently helped open seven mega-sites in California, New York and Texas, that are staffed with active-duty troops. In Chicago, a vaccination site at the United Center will open next week, with a capacity of 6,000 shots a day. Many more such sites are planned.

There have been some hiccups in the massive logistical challenge of distributing millions of doses across the country, with special requirements for storage and handling. In Texas, more than 2,000 doses went to waste over the past two weeks, according to an analysis by The Houston Chronicle. A majority of those losses were blamed on blackouts that swept the state in February, leaving millions of homes and businesses without power, some for multiple days.

And Mr. Biden has made equity a major focus of his pandemic response, saying he wants pharmacies, mobile vaccination units and community clinics that help underserved communities to help increase the pace of vaccinations. Experts say that Black and Latino Americans are being vaccinated at lower rates because they face obstacles like language barriers and inadequate access to digital technology, medical facilities and transportation. But mistrust in government officials and doctors also plays a role and is fed by misinformation that is spread on social media. In cities across the country, wealthy white residents are lining up to be vaccinated in low-income Latino and Black communities.

The president said on Tuesday that the country would have enough doses available for every American adult by the end of May, though he said it would take longer to inoculate everyone and he urged people to remain vigilant by wearing masks.

The administration also announced it had brokered a deal in which the drug giant Merck & Co. will help manufacture the new Johnson & Johnson vaccine. The unusual agreement between two rivals in the pharmaceutical industry was “historic,” Mr. Biden said on Tuesday. “This is a type of collaboration between companies we saw in World War II.”

Mr. Biden was also going to invoke the Defense Production Act, a Korean War-era law, to give Johnson & Johnson access to supplies for manufacturing and packaging vaccines.

— Ruth Graham

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#### United States >

On March 22

14-day change

New cases

55,641

-8% →

New deaths

650

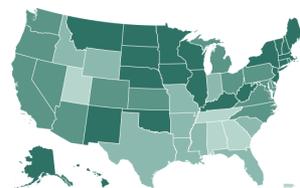
-35% ↘

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#### U.S. vaccinations >



Fully vaccinated

14%

At least one dose

25%

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## Connecticut lifts capacity limits on many businesses but keeps mask mandate.

Connecticut will later this month end capacity limits in restaurants, offices and several other businesses, Ned Lamont, the state's governor, said on Thursday, following moves by other states that have eased some virus-related restrictions.

But Mr. Lamont, a Democrat, will not lift his state's mask mandate, drawing a distinction between his announcement and moves made by the Republican governors of Texas and Mississippi this week.

"This is not Texas, this is not Mississippi — this is Connecticut," Mr. Lamont said at a news conference.

Starting on March 19, restaurants, retail stores, libraries, personal care services, gyms, offices and houses of worship will no longer have their capacity restricted.

But businesses will be required to enforce rules on face coverings and to ensure six feet of space or plexiglass barriers between those inside — customers and employees — which will effectively limit capacity at several businesses.

Several other limits will remain in place, including safety and cleaning protocols at gyms and personal care services like salons and spas. Bars that do not serve food will remain closed. Unlike neighboring Massachusetts, Connecticut will not lift a curfew that requires restaurants and entertainment venues to close by 11 p.m.

"Your mother used to tell you nothing good happens after 11 o'clock at night," Mr. Lamont said. "You know, it gets more fun sometimes, but we're going to push that off a little bit longer."

Mr. Lamont's announcement — made nearly a year after Connecticut's first confirmed case of the virus — is a significant step forward for the state's reopening.

It followed several weeks in which new cases, hospitalizations and deaths have declined in the state, a decrease that Mr. Lamont attributed to successful mask mandates and Connecticut's vaccination rollout program.

As of Thursday, the state had 433 people hospitalized with the virus. Its average positive test rate over the past seven days is at 2.3 percent, which Mr. Lamont said was the lowest rate in nearly four months.

"We're beginning to get a handle on what works," he said, pointing to the decline.

Still, over the past week, Connecticut has reported an average of 22 new virus cases a day per 100,000 people, a rate that is the 10th highest per capita among all states.

The United States as a whole is averaging 19 new daily cases per 100,000 people. Federal health officials, including the head of the Centers for Disease Control and Prevention, have urged governors not to relax their rules, warning that the country may be leveling off at a relatively high number of daily virus cases.

But Mr. Lamont said that he did not believe that the capacity limits on businesses were having a significant enough effect on curbing the virus that they needed to remain in place.

"It's not so much a question of how you adjust the dial and go 'capacity up 10 percent' or 'down 10 percent,' or whether you have a curfew for two weeks or four weeks, and then you go back," Mr. Lamont said. "I think we're finding what works is wearing the mask, social distancing and vaccinations."

Mr. Lamont's announcement reflected decisions by other states to loosen virus-related restrictions as vaccination programs were ramping up and the number of new cases were starting to plateau. Throughout the pandemic, officials have had to adjust restrictions, finding a balance between safety, economic concerns and political pressure.

The governors of New York and New Jersey, both also Democrats, with whom Mr. Lamont has collaborated significantly on the pandemic response, have raised capacity limits in businesses, including restaurants, in the past month. Both of those states have been reporting new cases at the highest rates in the country.

— *Michael Gold*

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## **Some scientists question the W.H.O. inquiry into the pandemic's origins.**

A small group of scientists and others who believe the novel coronavirus that spawned the pandemic could have originated from a lab leak or accident is calling for an inquiry independent of the World Health Organization's team of independent experts sent to China last month.

While many scientists involved in researching the origins of the virus continue to assert that the SARS-CoV-2 pandemic almost certainly began with a leap from bats to an intermediate animal and then to humans, other theories persist and have gained new visibility with the W.H.O.-led team of experts' recent visit to China.

Officials with the W.H.O. have said in recent interviews that it was “extremely unlikely” but not impossible that the spread of the virus was linked to some sort of lab accident.

In an open letter, first reported in *The Wall Street Journal* and *Le Monde*, the French newspaper, the signers list what they cast as flaws in the joint W.H.O.-China inquiry, and argue that it could not adequately address the possibility that the virus leaked from a lab.

Many of those who signed the letter were based in France. Richard Ebright, a molecular biologist at Rutgers University and one of the scientists who signed the letter, said it grew out of a series of online discussions among scientists, policy experts and others who came to be known informally as the Paris group.

Dr. Ebright said that no one in the group thought that the virus had been intentionally created as a weapon, but they were all convinced that an origin in a lab through research or by accidental infection was as likely as a spillover occurring in nature from animals to humans.

Asked to respond to the letter, Tarik Jasarevic, a spokesman for the W.H.O., replied in an email that the team of experts that had gone to China “is working on its full report as well as an accompanying summary report, which we understand will be issued simultaneously in a couple of weeks.”

— *James Gorman*

## Alabama's governor says masks remain required in public, breaking with other Republican governors.

Gov. Kay Ivey of Alabama on Thursday said she was extending the statewide mask order for another month, breaking with two other Republican governors who have announced plans to lift mandates in their states against the advice of federal health officials.

Aside from her decision on the mask mandate, which will now be in place until April 9, Ms. Ivey said other virus related restrictions, including allowing restaurants and breweries to operate at full capacity, will also be lifted then.

“There’s no question that wearing masks has been one of my greatest tools in combating the virus,” she said at a news conference.

New coronavirus cases, hospitalizations and deaths are down in the state, according to a New York Times database. About 14 percent of the residents in the state have received at least one dose of the vaccine. The state’s health officer, Dr. Scott Harris, said the state had already given more than a million vaccine shots.

“We need to get past Easter and hopefully allow more Alabamians to get their first shot before we take a step some other states have taken to remove the mask order altogether and lift some other restrictions,” Ms. Ivey said on Thursday. “Folks we’re not there yet, but goodness knows we’re getting closer.”

In recent days, the director of the Centers for Disease Control and Prevention, Dr. Rochelle Walensky, has been pleading with state officials not to relax health precautions now, warning about the trajectory of cases nationwide and the detection of more cases of virus variants across the country.

“We are just on the verge of capitalizing on the culmination of a historic scientific success: the ability to vaccinate the country in just a matter of three or four more months,” Dr. Walensky said on Wednesday. “How this plays out is up to us. The next three months are pivotal.”

And President Biden on Wednesday criticized officials in several states, including Texas and Mississippi, for lifting mask mandates, describing their actions as “Neanderthal thinking” and insisting that it was a “big mistake” for people to stop wearing masks.

Ms. Ivey issued a statewide mask order last summer when the number of cases in the state soared less than three months after she eased restrictions at the end of April. The mask mandate has drawn criticism from members of her own party. She extended it in January when the state was seeing a second surge of cases.

On Thursday, she said she planned to wear her mask around others, even after the statewide order was lifted. She urged residents to “use common sense and do the same thing.”

Gov. Mike DeWine of Ohio, a Republican, is also taking a more measured approach. He said he will lift all public health measures once coronavirus cases drop to 50 or fewer new cases per 100,000 people over two weeks.

Mr. DeWine put the numbers in context: On Dec. 3, Ohio was at 731 cases per 100,000 people over two weeks; by Feb. 3, that number dropped to 445 and to 179 per 100,000 on Thursday.

“This is our path back,” he said in a news conference Thursday. “We are in the last few miles of what has been a grueling marathon.”

— Eileen Sullivan and Remy Tumin

## ‘I live a nightmare every day,’ said the owner of an overwhelmed funeral home.

The chapel at Continental Funeral Home was once a place where the living remembered the dead. Now the pews, chairs and furniture have been pushed aside to make room, and the dead far outnumber the living.

On a Thursday afternoon last month in Continental’s chapel in East Los Angeles, across the street from a 7-Eleven, there were four bodies in cardboard boxes.

And two bodies in open coffins, awaiting makeup.

And seven wrapped in white and pink sheets on wheeled stretchers.

And 18 in closed coffins where the pews used to be.

And 31 on the shelves of racks against the walls.

The math numbed the heart as much as the mind — 62 bodies.

Elsewhere at Continental — in the hallways beyond the chapel, in the trailers outside — there were even more.

“I live a nightmare every day,” said Magda Maldonado, 58, the owner of the funeral home. “It’s a crisis, a deep crisis. When somebody calls me, I beg them for patience. ‘Please be patient,’ I say, ‘that’s all I’m asking you.’ Because nothing is normal these days.”

Funeral homes are places America often prefers to ignore. As the coronavirus pandemic surged in Los Angeles in recent months, the industry went into disaster mode, quietly and anonymously dealing with mass death on a scale for which it was unprepared and ill-equipped. Like those in Queens and Brooklyn in the spring or South Texas in the summer, funeral homes in parts of Los Angeles have become hellish symbols of Covid-19’s toll.

Continental has been one of the most overwhelmed funeral homes in the country. Its location at the center of Southern California’s coronavirus spike, its popularity with working-class Mexican and Mexican-American families who have been disproportionately affected by Covid-19, its decision to expand its storage capacity — all have combined to turn the day-to-day into a careful dance of controlled chaos. For more than six weeks, a reporter and a photographer were allowed by Ms. Maldonado, her employees and the relatives of those who died to document the inner workings of the mortuary and the heartache of funeral after funeral after funeral.

Beverly Hills has had 32 deaths. Santa Monica has had 150. East Los Angeles — an unincorporated part of Los Angeles County that is one of the largest Mexican-American communities in the United States — has had 388.

With more than 52,000 virus-related deaths, California has recorded the most of any state but about average per capita. At Continental, the brutal reality of the death toll hits the gut first, the eyes second.

— *Manny Fernandez*

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## The E.U. gives Austria extra vaccines to deal with an outbreak, and other news from the world.

Austrian officials will carry out a mass vaccination drive in the western district of Schwaz in the hopes of stabilizing the alpine area, which has been battered by a surge in new coronavirus infections driven in part by the variant B.1.351, first identified in South Africa.

The pilot program in Austria is the first such inoculation drive in the European Union. Like most of the rest of the bloc, the country is lagging behind some other wealthy nations — such as Britain, Israel and the United States — in its vaccine rollout. Only 5 percent of residents in the alpine state of Tyrol, which includes Schwaz, have received at least one shot.

All residents above the age of 16 will be able to get free vaccinations when the drive begins next week. The European Union has allocated 100,000 extra doses of the Pfizer-BioNTech vaccine for the area near the western Austrian city of Innsbruck, which is home to about 86,000 people.

Chancellor Sebastian Kurz said on Wednesday that the effort would be “our chance to eradicate the variant in the region of Schwaz.”

The infection rate in the broader Tyrol region has declined from its peak of about 800 cases per 100,000 people over a seven-day period in November to just over 100 per 100,000 in the past week. But the German government closed its side of the border with the area on Wednesday night when it became clear that a high percentage of those infections were caused by the B.1.351 variant.

On Thursday, Mr. Kurz traveled to Israel where, together with Prime Minister Mette Frederiksen of Denmark, he planned to speak with experts about collaborating on future vaccines.

In other news from around the world:

- The state of São Paulo, **Brazil**, will head into its toughest restrictions yet this weekend, Gov. João Doria told reporters on Wednesday, as cases surge in the region. All bars, restaurants and nonessential stores will close until at least March 19, according to The Associated Press. The restrictions come as the country grapples with a concerning new variant that has lashed the Amazonian city of Manaus, in the northwest, and is spreading to other places. Brazil recorded its highest single-day toll of the pandemic this week.
- Prime Minister Jacinda Ardern of **New Zealand** said that a snap lockdown imposed last week on the country’s largest city, Auckland, would end on Sunday morning. Social gatherings will be capped at 100 people and other restrictions will remain in place. The lockdown was imposed after the authorities discovered an untraceable case. They have since conducted more than 50,000 tests and traced more than 6,000 contacts.
- **Japan** plans to extend its state of emergency for the Tokyo metropolitan area until March 21, even as it prepares to lift that declaration in six other prefectures, the national broadcaster, NHK, reported on Friday. The restrictions in greater Tokyo, which include an order for restaurants and bars to close by 8 p.m., had been scheduled to end on Sunday.
- **Germany’s** independent vaccine panel has said that the Oxford-AstraZeneca vaccine can be used on people 65 and over, reversing earlier guidance. Although the European drug regulator authorized use of the shots in January, the German panel had initially refused to recommend the vaccine because it had not been tested enough in that age group. Because Germany is still focusing its vaccination drive on those over 80, much of the AstraZeneca doses had lingered in storage.
- **Hungary** announced on Thursday that it would introduce a new round of restrictions next week, with some schools closed and nonessential stores shuttered, to combat a sharp rise in coronavirus cases. The announcement comes as a blow to Prime Minister Viktor Orban, who had been vocal about his hopes for the country to begin reopening this month.
- **France** on Thursday vowed to vaccinate at least 10 million people by mid-April as the government, still stopping short of a nationwide lockdown, extended restrictions on movements and gatherings to areas in the country where there have been surges in local cases. So far, only about 3.1 million people, or 4.7 percent of the country’s population, have received a first injection, and only 1.7 million people, or 2.5 percent of the population, have been fully vaccinated, which puts France behind other European countries in

the vaccination rollout. Jean Castex, the prime minister, said at a news conference that starting in mid-April, all people ages 50 to 74 would be eligible for the vaccine, regardless of pre-existing health conditions.

Albee Zhang contributed research.

— *Christopher F. Schuetze, Benjamin Novak, Aurelien Breeden and Natasha Frost*

## Children with Covid-19 often experience kidney injuries, doctors report.

One in 10 children hospitalized with Covid-19 at four New York area hospitals last spring and summer developed acute kidney injury, a new study has found. The rate was even higher among children also found to have a serious inflammatory condition associated with Covid-19: almost one in five of them experienced sudden kidney injury.

Children with the inflammatory condition and kidney injury frequently had poor heart function and stayed in the hospital for longer, the researchers found. The study, published in the journal *Kidney International*, was carried out by investigators at the Feinstein Institutes for Medical Research, which is part of Northwell Health.

Acute kidney injury, or acute kidney failure, develops rapidly. It occurs when the kidneys stop working properly and cannot filter waste from the blood. The condition is seen most commonly in critically ill patients, and it can be fatal. It is treated with fluids, medications and dialysis.

The researchers reviewed the medical records of 152 children under age 18 with Covid-19 who were admitted to four Northwell Health hospitals from March 9 to Aug. 13. Among them were 55 children who had the inflammatory condition, called multisystem inflammatory syndrome in children, or MIS-C.

Acute kidney injury is known to be a complication of Covid-19 disease in adults; another Northwell study found that the condition was diagnosed in over one-third of adult patients hospitalized with Covid-19. But less is known about how often kidney injury occurs in children.

Estimates of the incidence in children have varied from as low as 1 percent, in China, to as high as 44 percent, as reported in a preliminary multicenter study at 32 hospitals in the United States.

In the new study, the most common first symptoms for children with acute kidney injury were gastrointestinal, such as diarrhea and vomiting, the report said. The injury resolved in most of the children by the time they were discharged from the hospital.

Black children appeared to be at nearly three times the risk of developing acute kidney injury, researchers said. But the number of children in the study was small, and investigators were not able to tease out the effects of socioeconomic status, pre-existing conditions or other factors.

Pediatricians treating children after a hospitalization for Covid-19 may need to check their blood pressure and urine regularly, the researchers said. An episode of acute kidney injury may increase the chances of kidney disease in the future.

“This informs care down the road,” said Dr. Abby Basalely, the paper’s first author, a pediatric nephrologist who is an investigator at the Feinstein Institutes. “Thinking about whether there were kidney injuries sometimes falls to the wayside, but it may be an important thing to follow up on.”

— *Roni Caryn Rabin*

## A medal for Fauci, and a gift for the Smithsonian.

Dr. Anthony S. Fauci, the director of the National Institute of Allergy and Infectious Diseases, is donating his three-dimensional model of the coronavirus to the Smithsonian’s National Museum of American History.

“I wanted to pick something that was really meaningful to me and important because I used it so often,” Dr. Fauci said in an interview on Wednesday about his decision to give the model to the museum.

The model, which he said was made with a 3-D printer at the National Institutes of Health, is a blue sphere studded with spikes replicating the spiked proteins that can latch onto cells in our airway, allowing the virus to slip inside. Dr. Fauci said he had often used it as a visual aid when briefing members of Congress and former President Donald J. Trump about the virus.

“It’s a really phenomenally graphic way to get people to understand,” he said.

Dr. Fauci announced the donation and showed off the model as he was being awarded the museum’s Great Americans medal on Tuesday for his leadership of the nation’s Covid-19 response and his contributions to the fights against other infectious diseases, such as AIDS. The model will become part of the museum’s national medicine and science collection, Smithsonian officials said.

The National Museum of American History said its curators have been collecting items from the pandemic for a future exhibition, called “In Sickness and in Health,” that will examine “more than 200 years of medicine in the U.S. including Covid-19.”

Dr. Fauci said he could see himself donating other items to museums and institutions in the future, whether from his time managing the country’s response to the coronavirus pandemic or from his leadership of federal efforts to combat H.I.V., SARS, the 2009 swine pandemic, MERS and Ebola.

“I think when you reach a certain stage you have things that are more valuable to the general public than they are to you keeping them,” he said.

— *Allyson Waller*

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## **China subjects some travelers to anal swabs, angering foreign governments.**

China is requiring some travelers arriving from overseas to receive an invasive anal swab test as part of its coronavirus containment measures, a move that has outraged and shocked several foreign governments.

Japanese officials said on Monday that they had formally asked China to exempt Japanese citizens from the test, adding that some who had received it complained of “psychological distress.” And the United States State Department last month said it had registered a protest with the Chinese government after some of its diplomats were forced to undergo anal swabs, though Chinese officials denied that.

It is not clear how many such swabs have been administered or who is subject to them. Chinese state media has acknowledged that some arrivals to cities including Beijing and Shanghai are required to take the tests, though the reports said the requirements might vary depending on whether the travelers were deemed to be high-risk.

Chinese experts have suggested that traces of the virus may survive longer in the anus than in the respiratory tract and that samples of the former may prevent false negatives. China has imposed some of the strictest containment measures in the world, including barring most foreign arrivals, and has largely suppressed the epidemic.

Lu Hongzhou, an infectious disease specialist at Fudan University in Shanghai, told the state-controlled Global Times tabloid that nasal or throat swabs could cause “uncomfortable reactions,” leading to subpar samples. He acknowledged that fecal samples could replace anal swabs, to prevent similar discomfort.

But other experts — including in China — have questioned the need for anal samples. The Global Times quoted another expert, Yang Zhanqiu, as saying that nasal and throat swabs are still the most effective because the virus is contracted through the respiratory tract.

Benjamin Cowling, a public health professor at the University of Hong Kong, said in an interview that even if someone did test positive on an anal swab but not a respiratory one, he or she would likely not be very contagious.

“The value of detecting people with the virus is to stop transmission,” Professor Cowling said. “If someone has got an infection but they’re not contagious to anyone else, we didn’t need to detect that person.”

A spokesman for the Chinese Foreign Ministry said this week that the government would make “science-based adjustments” to its containment policies.

Professor Cowling said he did not know what the scientific rationale was behind the existing policies. “I presume there’s some evidence leading to this decision, but I haven’t seen that evidence,” he said.

— Vivian Wang

## San Diego Zoo apes get an experimental animal vaccine against coronavirus.

The San Diego Zoo has given nine apes an experimental coronavirus vaccine developed by Zoetis, a major veterinary pharmaceuticals company.

In January, a troop of gorillas at the zoo’s Safari Park tested positive for the virus. All are recovering, but even so, the zoo requested help from Zoetis in vaccinating other apes. The company provided an experimental vaccine that was initially developed for pets and is now being tested in mink.

Nadine Lamberski, a conservation and wildlife health officer at San Diego Zoo Global, said the zoo vaccinated four orangutans and five bonobos with the experimental vaccine, which is not designed for use in humans. Among the vaccinated orangutans was an ape named Karen, who made history in 1994 when she became the first orangutan to have open-heart surgery.

Dr. Lamberski said one gorilla at the zoo was also scheduled to be vaccinated, but the gorillas at the wildlife park were a lower priority because they had already tested positive for infection and had recovered. She said she would vaccinate the gorillas at the wildlife park if the zoo received more doses of the vaccine.

Mahesh Kumar, senior vice president of global biologics for Zoetis, said the company is increasing production, primarily for its pursuit of a license for a mink vaccine, and will provide more doses to the San Diego and other zoos when possible. “We have already received a number of requests,” he said.

Infection of apes is a major concern for zoos and conservationists. They easily fall prey to human respiratory infections, and common cold viruses have caused deadly outbreaks in chimpanzees in Africa. Genome research has suggested that chimpanzees, gorillas and other apes will be susceptible to SARS-CoV-2, the virus that has caused the pandemic. Lab researchers are using some monkeys, like macaques, to test drugs and vaccines and develop new treatments for the virus.

Scientists are worrying not just about the danger the virus poses to great apes and other animals, but also about the potential for the virus to gain a foothold in a wild animal population that could become a permanent reservoir and emerge at a later date to reinfect humans.

Infections in farmed mink have produced the biggest scare so far. When Danish mink farms were devastated by the virus, which can kill mink just as it kills people, a mutated form of the virus emerged from the mink and reinfected humans. That variant showed resistance to some antibodies in laboratory studies, raising suspicion that vaccines might be less effective against it.

That virus variant has not been found in humans since November, according to the World Health Organization. But other variants have emerged in people in several countries, proving that the virus can become more contagious and in some cases can diminish the effectiveness of some vaccines.

Denmark ended up killing as many as 17 million mink — effectively wiping out its mink farming industry. In the United States, thousands of mink have died, and one wild mink has tested positive for the virus.

Although many animals, including dogs, domestic cats, and big cats in zoos, have become infected by the virus through natural spread, and others have been infected in laboratory experiments, scientists say that widespread testing has yet to find the virus in any animal in the wild other than the one mink.

National Geographic first reported the vaccination of the apes at the San Diego Zoo.

— *James Gorman*

## **Some governors across the U.S. are taking different approaches to mask mandates.**

Some governors across the United States are taking widely diverging approaches to mask mandates, as federal officials, including President Biden, warn that despite a drop in coronavirus cases, it is too soon to stop wearing masks.

On Thursday, Gov. Kay Ivey of Alabama, a Republican, extended her state’s mask mandate for another month. Striking a different tone than those of her Republican peers in Mississippi and Texas, she said she wanted to keep what she called an effective policy to require masks for a bit longer, telling residents that masks would not be required in public beyond April 9 when other restrictions would also be lifted.

“There’s no question that wearing masks has been one of my greatest tools in combating the virus,” she said at a news conference.

In response to decisions this week to lift statewide mask mandates by Gov. Tate Reeves of Mississippi and Gov. Greg Abbott of Texas, Mr. Biden said on Wednesday that those moves were a “big mistake.”

“The last thing we need is Neanderthal thinking that in the meantime, everything’s fine, take off your mask and forget it,” Mr. Biden told reporters at the White House. “It’s critical, critical, critical, critical that they follow the science.”

Even a fellow Republican, Gov. Jim Justice of West Virginia, said it was a bad idea to ignore the advice of the experts.

“I don’t know really what the big rush to get rid of the mask is, because these masks have saved a lot, a lot of lives,” Mr. Justice said Thursday on CNN, adding that he, too, looks forward to the day when he doesn’t have to wear a mask.

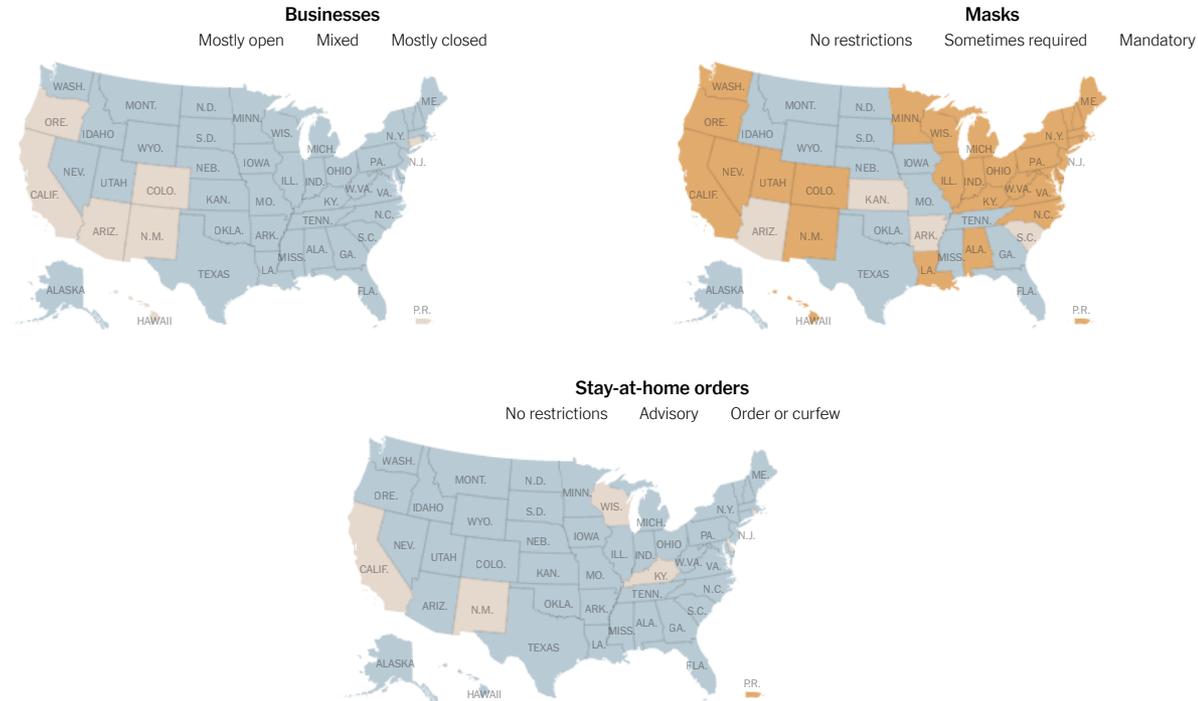
The governor issued a mask mandate over the summer instructing people to wear masks indoors when social distancing was not possible. In November, he extended the mandate to wearing a mask at all times except when eating or drinking, and in recent months has become a Biden ally, at least on the stimulus package.

“If we don’t watch out, we can make some mistakes,” Mr. Justice said.

Mr. Biden has asked that for his first 100 days in office, which ends in April, Americans fight the spread of the virus in a variety of ways, including wearing a mask, getting vaccinated and continuing to follow health precautions. He and his top health advisers have emphasized the benefit of wearing masks, and warned about the trajectory of cases nationwide and the detection of more cases of virus variants across the country.

## Coronavirus Restrictions by State

See more detail on restrictions in your state as of March 23 »



At the White House on Thursday, Jen Psaki, the press secretary, said the president’s comments about “Neanderthal thinking” was “a reflection of his frustration and exasperation” with the governors of Mississippi and Texas for undermining the message about the need to continue wearing masks.

“Our concern here is on the health, welfare and well being — and survival, frankly — of people across the country and in states where the recommendations from leadership is not following health and medical guidelines,” she said. “So we have concerns about the impact on the population.”

On Thursday, Dr. Anthony Fauci, the nation’s top infectious disease expert and an adviser to Mr. Biden, called the loosening of restrictions “unfortunate” at a time of high level community spread, “which is what we have now.”

Speaking on CNN, he urged people to abide by public health measures and to get vaccinated: “That’s what we need do right now. We will be able to open up the country, open up the economy, but right now we want to get that level of virus much, much lower than it currently is.”

Dr. Fauci said the possibility of variants spreading more widely across the United States “might become likely,” especially if public health measures were not enforced. “That’s one of the reasons why I keep saying now is not the time to pull back,” he said.

In Mississippi, Mr. Reeves was unrepentant after Mr. Biden’s admonishment.

“Mississippians don’t need handlers,” he said. “As numbers drop, they can assess their choices and listen to experts. I guess I just think we should trust Americans, not insult them.”

Mr. Reeves did, however, encourage his citizens to “do the right thing” and wear a mask.

So did Mr. Abbott this week in Texas, where vaccinations considerably trail the national average, more than 7,000 new cases are being reported a day and, in recent weeks, ominous variants of the virus have appeared.

On Tuesday, Mr. Abbott framed his decision as long-awaited relief after an exhausting stretch of isolation and hardship.

Kaitlyn Urenda-Culpepper, a Dallas resident whose mother died from Covid-19 in July, said there was no choice now but to hope that the governor had made a wise decision.

“I don’t want him to be wrong,” she said. “But, obviously, for the greater good of the people, I’m like, ‘Man, you better be right and not cost us tens of thousands more people.’”

Remy Tumin and Erin Coulehan contributed reporting.

— *Eileen Sullivan and Michael D. Shear*

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## Italy blocks an export shipment of AstraZeneca vaccine headed for Australia.

Italy blocked a shipment of the Oxford-AstraZeneca vaccine from being flown to Australia on Thursday, making good on the European Union’s recent threats to clamp down on exports of the shots and ratcheting up a global tug of war over vaccine supplies.

It was the first time that a member country used new E.U. regulations to keep vaccine from being exported. The shipment consisted of more than 250,000 doses.

Italy’s foreign ministry said that Italy acted because Australia is regarded as a “nonvulnerable” country under the new regulations; because vaccines are in short supply in Italy and the European Union generally; and because of delays in AstraZeneca’s vaccine deliveries to the bloc’s member countries.

The new regulations empower the E.U.’s members to keep any vaccine doses made within the bloc from being sent abroad if the manufacturer has not yet met its supply obligations to member countries. Pfizer and AstraZeneca are the two companies currently manufacturing vaccines within the bloc.

So far, the European Commission has approved 174 requests for export authorizations.

Australia has had fewer coronavirus cases, relative to its size, than almost any other large developed country, and has been recently averaging only nine new cases a day, according to a New York Times database. Italy, with more than double the population of Australia, is averaging more than 18,000 new cases a day.

AstraZeneca applied on Feb. 24 for an authorization for the Australia shipment. Two days later, Italy told the European Commission it intended to deny the application, the foreign ministry said in statement Thursday night. After the commission offered no objection, the ministry said it notified AstraZeneca of the denial on Tuesday.

For earlier shipments, “Italy gave its authorization because they were small quantities aimed at activities of scientific research,” the foreign ministry said. “However, this time it was 250,700 doses.”

AstraZeneca declined to comment.

The company infuriated E.U. officials in January when it said it would significantly cut its planned February and March deliveries to member nations. They accused the company of sending doses to Britain that had been promised to the European Union, in breach of contractual obligations.

Valdis Dombrovskis, a top commission official, said in announcing the new export control regulations that the situation had “left us with no choice other than to act.”

The commission has maintained that the controls are about transparency, not vaccine nationalism. But with Europe’s sluggish vaccination campaigns lagging behind those of other developed nations and the bloc growing desperate for doses, member countries have signaled a willingness to use the rules for their own benefit.

Prime Minister Mario Draghi of Italy pressed fellow European leaders in a meeting last week to use all tools at hand to hold pharmaceutical companies accountable for delays in delivering doses.

— *Emma Bubola, Monika Pronczuk and Benjamin Mueller*

## **Pope Francis’ planned trip to Iraq raises concerns that it may help spread the virus.**

A surge in coronavirus cases has prompted Iraqi officials to impose lockdowns. Shia authorities have suspended religious pilgrimages. And on Sunday, the Vatican’s ambassador contracted the virus and went into isolation.

For good measure, suicide bombings, rocket attacks and geopolitical tensions have increased, too.

But Pope Francis — to the bewilderment of many — is intent on going anyway.

After more than a year cooped up behind the Vatican walls, Francis is to fly to Baghdad on Friday at one of the most virulent moments of the entire pandemic, sending a message that flies in the face of nearly all public health guidelines.

“The day after tomorrow, God willing, I will go to Iraq for a three-day pilgrimage,” the pope said on Wednesday in his weekly address. “I ask that you accompany this apostolic trip with prayer so that it can occur in the best way possible, bear the hoped-for fruit. The Iraqi people await us.”

Francis was vaccinated in mid-January, and has called on wealthy countries to give vaccines to poorer ones, calling a refusal to vaccinate “suicidal.”

The pope’s entourage is also vaccinated, but there is anxiety among his supporters that a trip intended largely to bring encouragement to Iraq’s long-suffering Christians has the potential to be a superspreader event. The possibility of the 84-year-old pope’s inadvertently endangering an Iraqi population with practically no access to vaccines is not lost on his allies back in Rome.

“There is this concern that the pope’s visit not put the people’s health at risk, this is evident,” said Antonio Spadaro, a Jesuit priest and close ally of Francis. “There is an awareness of the problem.”

The Vatican insists the trip will be a safe, socially distanced and sober visit devoid of the usual fanfare and celebrations. And a Vatican spokesman played down the number of cases in Iraq when reporters asked how the pope could possibly justify not delaying a trip that could endanger so many.

Andrea Vicini, a medical doctor, Jesuit priest and professor of moral theology and bioethics at Boston College, said he admired the pope's willingness to put his own skin in the game for peace when it came to promoting dialogue with Islam and protecting the persecuted and people at the margins.

“He wants to show that he is ready to risk,” Father Vicini said. “The problem is that others will be at risk.”

— *Jason Horowitz*

## **The W.H.O. warns of a resurgence of cases in Central and Eastern Europe.**

Central and Eastern Europe is experiencing a resurgence in coronavirus infections partly driven by new variants but also by the relaxing of restrictions, the World Health Organization's top official in Europe said on Thursday.

After six successive weeks of declining infection numbers across Europe, the continent experienced a 9 percent rise in coronavirus cases in the past week, Hans Kluge, the W.H.O.'s regional director told reporters. More than half of the 53 countries in the European region had recorded an increase in infections, he said, including some in Western Europe.

“Over a year into the pandemic, our health systems should not be in this situation,” Mr. Kluge said. “We need to get back to basics.”

The increase came as 43 European countries reported cases of the B.1.1.7 variant first identified in Britain, which has much higher transmissability, he said, adding that 26 countries had found cases of the B.1.351 variant first discovered in South Africa and that 15 had reported cases of the P.1 variant first discovered in Brazil.

The B.1.1.7 variant already accounts for more than half of the new cases of infection in several countries, including Britain and Denmark, and is expected to soon pass that level in Germany.

But W.H.O. officials stressed that new variants were only part of the problem, calling for a gradual lifting of restrictions and travel bans when there was evidence to support it and for an accelerated rollout of shots.

Vaccinations have started in 45 European countries, Mr. Kluge said, but only around a quarter of health workers in 20 European countries have completed vaccination against Covid-19.

Frustration at the slow introduction of vaccines in Europe has driven several governments to bypass the European Union's purchase program in favor of bilateral supply deals, but the W.H.O. underscored that countries could not rely solely on vaccines to curb infections.

Catherine Smallwood, health emergencies expert for the W.H.O. in Europe, said, “We are not going to take the heat out of transmission immediately” through inoculations. “It's going to take a long time,” she noted, “so we will have to be patient and we need to use all of the other measures we have at our disposal.”

— *Nick Cumming-Bruce*

## **As Palestinians clamored for vaccines, their leaders diverted shots to a favored few.**

Most Palestinians living in the occupied territories have yet to be vaccinated against the coronavirus, setting off a rancorous debate about whether Israel has a duty to vaccinate Palestinians living under Israeli occupation.

But among Palestinians in the occupied West Bank, questions are now being asked of their own leadership, which has been accused of siphoning some of the few doses allocated for Palestinians and distributing them to the senior ranks of the governing party, allies in the news media and even to family members of top dignitaries.

Like many governments worldwide, the Palestinian Authority, which exercises limited control over parts of the occupied territories, has officially prioritized its senior administrative leadership and frontline health workers, as well as people who come into regular contact with the authority's president and prime minister.

But in secret, the authority has diverted some of the thousands of vaccines it has received to some senior members of the ruling party in the West Bank who have no formal role in government, according to two senior Palestinian officials and a senior official from the party, Fatah, who all spoke on condition of anonymity.

Vaccines have also been secretly given to top figures at major news outlets run by the authority, according to one of the senior Palestinian officials and two employees at those outlets. Family members of certain government officials and Fatah leaders were also given the vaccines, the senior official and a former government official said.

Already frustrated at their exclusion from Israel's world-leading vaccination program, ordinary Palestinians now accuse their leaders of hoarding some of the relatively few vaccines that the authority has obtained, even amid a surge in infections and tightened restrictions.

"Of course it's understandable and acceptable that the president, prime minister and ministers take the vaccination before others — this is the case everywhere in the world," said Hasan Ayoub, the chairman of the political science department at An Najah University in Nablus. "But there's absolutely no justification for giving the very small number of vaccines we have to other people close to power at the expense of those who most need them."

Several government officials did not respond to requests for comment on the accusations.

In public statements, the Health Ministry did not admit to any wrongdoing. It has acknowledged receiving 12,000 vaccines — 10,000 from Russia and 2,000 from Israel. Of those, it says that 2,000 were sent to the Gaza Strip, which is under the de facto authority of Hamas, the militant group, and 200 to the royal court in Jordan, where some Palestinian leaders live. And of the remaining 9,800, 90 percent were given to frontline health workers, the ministry said in a statement on Tuesday.

The ministry said that the remainder had been given to officials in the presidency and prime ministry, election officials, some international embassies, members of the national soccer team and roughly 100 students who needed the vaccine to travel.

— *Adam Rasgon and Patrick Kingsley*

## **It's unclear how easily vaccinated people may spread the virus. Until the answer arrives, scientists urge caution.**

With 50 million Americans at least partly immunized against the coronavirus, and millions more joining the ranks every day, the urgent question on many minds is: When can I throw away my mask?

It's a deeper question than it seems — about a return to normalcy, about how soon vaccinated Americans can hug loved ones, get together with friends, and go to concerts, shopping malls and restaurants without feeling threatened by the coronavirus.

It seems clear that small groups of vaccinated people can get together without much worry about infecting one another. The Centers for Disease Control and Prevention is expected shortly to issue new guidelines that will touch on small gatherings of vaccinated Americans.

But the pandemic is not yet over, and scientists are counseling patience. Vaccinated people being able to ditch their masks in public spaces will depend on how quickly the rates of disease drop and what percentage of people remain unvaccinated in the surrounding community.

Why? Scientists do not know whether vaccinated people spread the virus to those who are unvaccinated. While all of the Covid-19 vaccines are spectacularly good at shielding people from severe illness and death, the research is unclear on exactly how well they stop the virus from taking root in an immunized person's nose and then spreading to others.

It's not uncommon for a vaccine to forestall severe disease but not infection. Inoculations against the flu, rotavirus, polio and pertussis are all imperfect in this way.

The research available so far on how well the vaccines prevent transmission is preliminary but promising. Even an 80 percent drop in transmissibility might be enough for immunized people to toss their masks, experts said — especially once a majority of the population is inoculated, and as rates of cases, hospitalizations and deaths plummet.

But most Americans are still unvaccinated, and more than 1,500 people are dying every day. So given the uncertainty around transmission, even people who are immunized must continue to protect others by wearing masks, experts said.

That proof is not yet in hand because the clinical trials for vaccines were designed to test whether the vaccines prevent serious illness and death, which usually reflects the virus's impact on the lungs. Transmission, on the other hand, is driven by its growth in the nose and throat.

Primed by the vaccine, the body's immune fighters should curb the virus soon after infection, shortening the infection period and curtailing the amounts in the nose and throat. That ought to significantly reduce the chances that a vaccinated person might infect others.

More data is expected in the coming months from both Pfizer-BioNTech and Moderna.

But clinical trials may overestimate the power of a vaccine, because the type of people who choose to participate already tend to be careful and are counseled on precautions during the trial.

Some researchers instead are tracking infections among immunized people in real-world settings. But to get a true assessment of transmission, researchers really need to know which immunized people become infected, and then trace the spread of the virus among their contacts with genetic analysis.

But what precautions should immunized people take until the results from such studies become available? At the moment, many experts believe that what's permissible will depend to a large extent on the number of cases in the surrounding community.

The higher the number of cases, the greater the likelihood of transmission — and the more effective vaccines must be in order to stop the spread.

Mask-wearing policies also will depend on how many unvaccinated people remain in the population. Americans may need to remain cautious as long as vaccination rates are low.

“A lot of people have in mind that masks are the first thing that you let up on,” said Zoe McLaren, a health policy expert at the University of Maryland, Baltimore County. In fact, she said, masks provide more freedom by allowing people to go to concerts, travel on buses or airplanes, or go shopping even with unvaccinated people around.

— *Apoorva Mandavilli*

**A popular drug, ivermectin, doesn't alleviate mild Covid-19 symptoms, a new study says.** 

Ivermectin, an anti-parasitic drug that has been touted as a potential Covid-19 treatment, does not speed recovery in people with mild cases of the disease, according to a randomized controlled trial published in the journal JAMA today.

Ivermectin is typically used to treat parasitic worms in both people and animals. Scientists have previously reported that the drug can prevent some viruses from replicating in cells. Last year, researchers in Australia found that high doses of ivermectin suppressed SARS-CoV-2, the virus that causes Covid-19, in cell cultures.

The finding raised hopes that the drug might prove effective against Covid-19, and it has been widely used during the pandemic, especially in Latin America.

But rigorous data on the drug's effectiveness in people has been lacking, and some scientists suspect that effectively inhibiting the coronavirus may require extremely high, potentially unsafe doses of the drug. The Covid-19 treatment guidelines from the National Institutes of Health note that there is not enough evidence "to recommend either for or against" using the drug in Covid-19 patients.

In the new study, a team of researchers in Colombia randomly assigned more than 400 people who had recently developed mild Covid-19 symptoms to receive a five-day course of either ivermectin or a placebo. They found that Covid-19 symptoms lasted about 10 days, on average, among people who received the drug, compared to 12 days among those who received the placebo, a statistically insignificant difference.

The new trial adds much-needed clinical data to the debate over using the drug to treat Covid-19, said Dr. Regina Rabinovich, a global health researcher at Harvard's T.H. Chan School of Public Health, who was not involved in the study.

But she noted that the trial was relatively small and that it did not answer the most pressing clinical question, which is whether ivermectin can prevent severe disease or death. "Duration of symptoms may not be the most important either clinical or public health parameter to look at," she said.

Bigger trials, some of which are currently underway, could help provide more definitive answers, said Dr. Rabinovich, who noted that she was "totally neutral" on ivermectin's potential usefulness. "I just want data because there's such chaos in the field."

— *Emily Anthes*

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**A look at the Covax program in Ghana, featuring refrigerated trucks and drone deliveries.** 

When 600,000 doses of the Oxford-AstraZeneca vaccine arrived in Ghana last week, Owusu Akoto, chief executive of a logistics company, was there alongside health officials to receive them.

Mr. Akoto's company, FreezeLink, has a fleet of temperature-controlled trucks and was one of a few private companies helping the government to keep vaccines cooled before distribution. He is also partnering with a drone operator to reach some rural communities.

A former management consultant, Mr. Akoto founded his company in the hope of addressing food waste in Ghana, but he said that being involved in vaccine distribution had brought both pride and a sense of relief.

"It's emotional. It feels a bit raw," Mr. Akoto said in an interview from the Ghanaian capital, Accra. He said that his cousin had recently died after contracting the coronavirus. "The vaccine could have saved his life."

The doses were the first delivery in a global initiative called Covax, created to ensure that poorer countries that would struggle to buy coronavirus shots on the open market could still receive them. Officials hope to deliver two billion vaccines worldwide through the initiative this year, though they say that the program faces a funding gap of billions of dollars.

By Thursday, about 10 million doses had been delivered to 11 countries in Africa through the Covax program, according to the World Health Organization.

Some vaccines, like those of Pfizer and Moderna, must be kept at deep-freeze temperatures for much of their time in storage and during delivery, a requirement that has long been a concern for distributors in areas with less infrastructure. But the AstraZeneca vaccine only needs to be stored at a temperature of 2 to 8 degrees Celsius, or about 35 to 46 degrees Fahrenheit, which makes it easier to handle by regular cold-storage companies.

Mr. Akoto said that a priority so far had been in areas with a surge in new infections. His company is also working with Zipline, a drone company, that is helping to deliver vaccines to more rural parts of Ghana that are harder to reach by road. Zipline said it was providing "on-demand, last-mile delivery" of the vaccine.

Mr. Akoto acknowledged that Ghana had a long way to go to inoculate the entire population of about 30 million, and he said he was concerned about vaccine skepticism.

"But the journey of a million miles just became that much shorter," he said.

— *Isabella Kwai*

## **Tell us about the moment when you knew the coronavirus would upend your life.**

Daily life for most Americans has been transformed in countless ways by the coronavirus. We wear masks and keep our distance when we run errands. Commuting to work may mean shuffling from one room to another at home, or braving the outside world in protective gear to avoid exposure. Big occasions and planned vacations have been repeatedly postponed.

March 11, 2020, was the day that global health officials declared the health crisis a pandemic, but that may not be the date you remember most vividly. For some of us, it was when we were told to start working remotely, or when the actor Tom Hanks said he had the coronavirus, or when the N.C.A.A. canceled March Madness. For others, it was the far more sobering time when a loved one got sick.

When was the crucial moment for you? We want to hear your story.

