JOE RAEDLE/GETTY

Supported by Kamala Harris, Joe Biden briefed the media on his pandemic plans last week.

JOE BIDEN'S COVID PLAN IS TAKING SHAPE — AND RESEARCHERS APPROVE

Scientists praise the US president-elect's coronavirus advisory board and updated strategy.

By Nidhi Subbaraman

Just two days after being declared victors in the US election, future president Joe Biden and vice-president Kamala Harris announced that they had set up a COVID-19 advisory board stacked with infectious-disease researchers and former public-health advisers to help them to craft a pandemic plan as they transition into office.

The speed of the announcement, alongside an updated COVID-19 plan, has scientists and doctors hopeful that the United States can correct its course in its handling of the outbreak: so far, 10 million Americans have been infected and more than 240,000 have died. And the numbers continue to rise.

"I really think they put together an outstanding and stellar team to advise the new administration on what is clearly one of their highest priorities," says Helene Gayle, president and chief executive of the Chicago Community Trust in Illinois and co-chair of a US National Academies of Sciences, Engineering, and Medicine committee that recommended a coronavirus vaccine-allocation plan for the country.

Eric Goosby, an infectious-diseases researcher at the University of California, San Francisco, who led past White House AIDS responses, and Vivek Murthy, a doctor who served as US surgeon-general between 2014 and 2017, are among the 13 advisory-board members who will brief the future leaders. Observers say the board members are an experienced and impressive team.

"It seems like a terrific group — it's a real relief to have great experts providing guidance," says Joshua Sharfstein, a health-policy researcher and vice-dean at the Johns Hopkins Bloomberg School of Public Health in Baltimore, Maryland, who served as principal deputy commissioner of the US Food and Drug Administration under former president Barack Obama.

The immediate naming of the board is in stark contrast to President Donald Trump's efforts to contain the pandemic. He has been criticized for ignoring the advice of public-health specialists, worsening the pandemic's toll on the country.

But if Biden and Harris follow the science, communicate honestly and openly and have an organized response, it would be "three big resets" from Trump's administration, says Tom Frieden, who led the Centers for Disease Control and Prevention (CDC) as director from 2009 to 2017.

Among the Biden–Harris team's top priorities is a strong COVID testing and contact-tracing strategy. The team says it will create a "Nationwide Pandemic Dashboard" to display transmission rates of the virus in regions across the country. Other nations, such as South Korea, have dashboards on which officials report outbreaks and daily case numbers. The United States has been late or lacking in presenting disease-incidence data, in part because of political push-back and also because of decades of neglect of public-health infrastructure.

"It's critically important that we maintain a national surveillance system," says Gayle.

But the public-health agency that would normally take charge in this situation, the CDC, has been sidelined during the pandemic by Trump's administration. Instead, its parent agency, the Department of Health and Human Services, has taken charge of collecting coronavirus data from hospitals.

Once Biden and Harris are in office, the CDC will be in charge of announcing recommendations for when it is safe to open or close restaurants, schools and businesses, according to the updated plan. Frieden would like to see the CDC more frequently brief the press and the public about outbreaks — he sees it as a way of building trust in evidence and science, which scientists feel has been eroded over the course of the past year.

Addressing inequality

Another update to the Biden–Harris pandemic strategy is the proposal to create a task force to address the coronavirus's disproportionate effect on people of colour in the United States. The COVID-19 mortality rate for Black, Latino and Indigenous people in the United States is more than three times as high as the rate among white people.

Researchers who study health and racism have suggested that such a task force could build trust among minority groups in the United States who have been hit hardest by the pandemic because of the jobs they hold and the places they live in.

"I hope that, whatever shape or form the task force takes, that it will include people who are closest to that lived experience," says Rachel Hardeman, a health-policy researcher who studies inequality at the School of Public Health at the University of Minnesota in Minneapolis. Quoting Massachusetts Representative Ayanna Pressley, she adds: "The people closest to the pain should be closest to the power."

Hardeman would have liked that principle to have been applied to the recently announced COVID-19 advisory board, too: nurses have been on the front lines of responding to the pandemic, so that group should be better represented, she says. She would also have liked to have seen even more public-health researchers on the team, whose focus is on preventing disease rather than treating it.

The Biden team won't take the helm at

the White House and install leaders at public-health agencies until Inauguration Day on 20 January. As *Nature* went to press, however, Trump had refused to concede the election, delaying the typical transition of power. According to several US news reports, in outlets including *The Washington Post* and *The New York Times*, a Trump appointee in the General Services Administration has not given Biden access to funding and office space typically provided to new administrations to ensure a smooth handover.

Meanwhile, Biden has echoed public-health advice in his own remarks. In a 9 November address, he urged people in the United States to wear masks — his plan proposes that all governors introduce mask mandates in their states. The Trump administration has presented conflicting advice on mask wearing, even though scientists have been saying for months that the coverings are a necessary first line of virus defence.

"This is just a simple thing that everybody can do," says Gayle. "The fact that there's a part of our population that has resisted that message is unfortunate."

COVID MINK ANALYSIS SHOWS MUTATIONS ARE NOT DANGEROUS — YET

But scientists say the coronavirus's rampant spread among the animals means mink still need to be killed.

By Smriti Mallapaty

Health officials in Denmark have released genetic and experimental data on a cluster of SARS-CoV-2 mutations circulating in farmed mink and in people, days after they announced the mutations could jeopardize the effectiveness of potential COVID-19 vaccines.

News of the mutations prompted Danish Prime Minister Mette Frederiksen to announce plans to end mink farming for the foreseeable future — and cull some 17 million animals — sparking a fierce debate about whether such action was legal. But scientists were careful not to raise the alarm until they saw the data.

Now, scientists who have reviewed the data say the mutations themselves aren't particularly concerning, because there is little evidence that they allow the virus to spread more easily among people, make it more deadly or will jeopardize therapeutics and vaccines. "The mink-associated mutations we know of are not associated with rapid spread, nor with any changes in morbidity and mortality," says Astrid Iversen, a virologist at the University of Oxford, UK.

The coronavirus SARS-CoV-2 transmits rapidly among mink.

OLE JENSEN/GETTY

But researchers say culling the animals is probably necessary, given the virus's rapid and uncontrolled spread in mink — it has been detected on more than 200 farms since June — which makes the animals a massive viral source that can easily infect people. In regions with affected mink farms, the number of people with COVID-19 increases a lot, says Iversen. And there are roughly three times more mink than people in Denmark. "The mink cull is necessary," she says.

Uncontrolled spread in mink also increases the opportunity for the virus to evolve and develop mutations that could be concerning, says Jannik Fonager, a virologist at the State Serum Institute, the Danish health authority leading the investigations, based in Copenhagen. He says scientists shared their concerns with the government, but that the government decided to cull the mink.

The government submitted legislation to enable the cull on 10 November, and has urged farmers to begin the process.

Mink mutations

Fonager says researchers in Denmark have sequenced viral samples from 40 mink farms and identified some 170 coronavirus variants. In viral samples from people — representing about one-fifth of the country's confirmed COVID-19 cases — they've found some 300 individuals with variants that contain mutations thought to have first emerged in mink. "That is something we really want to keep a close eye on," adds Fonager.

In the viral samples from mink and people, researchers have identified several mutations in the gene encoding the spike protein that the coronavirus uses to enter cells. This concerns researchers because changes in this region could affect the immune system's ability to detect infection. Many vaccines also train the immune system to block the spike protein.

Of particular concern is a virus variant containing a unique combination of mutations called Cluster-5, which was found in 5 farms and 12 people in the North Jutland region of northern Denmark. Fonager says the Cluster-5 variant causes three amino-acid changes and two deletions in the spike protein.

Preliminary cell experiments suggest that antibodies from some people who had recovered from COVID-19 found it more difficult to recognize the Cluster-5 variant than to spot coronaviruses that did not carry these mutations. This suggests that the variant could be less responsive to antibody treatments or vaccines, and informed the government's decision to cull the farmed mink, according to a letter from Denmark's chief veterinary officer to the World Organisation for Animal Health. "It is the right thing to do in a situation where the