Why coronavirus deaths remain low in the US despite surge in new cases

Advances in a number of treatments appears to have contained the death rate as records continue to be broken for new infections

By Josie Ensor NEW YORK
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Dr Joseph Varon has never seen so many patients in his intensive care unit. Most of the beds are occupied by cases of Covid-19.

But although his hospital in Houston, Texas, has found itself in the new epicentre of the US outbreak, he is not as worried as you might imagine.

“Our ward is full of coronavirus patients, but we’ve had amazing success in treating them,” said Dr Varon, chief medical officer at United Memorial Medical Center. “Around 95 per cent of people who have come in here have walked out.”

The US has been reporting record numbers of virus cases - hitting 77,000 in one day on Thursday - yet deaths have not been rising at the rate many had expected.

The country averaged just over 700 deaths a day the week to Wednesday - up from 500 in the first week of July but far lower than the 2,200 recorded during the deadliest phase of the outbreak in April.

According to the most recent death certificate data released by the Centers for Disease Control and Prevention (CDC), the percentage of deaths caused by Covid-19 and conditions linked to the virus decreased from 6.9 per cent for the last week of June to 5.5 per cent the first week of July, representing the eleventh consecutive week of decline.

“As cases rise, deaths decline. The disconnect between case and death trends is striking,” said Whet Moser from The Covid Tracking Project.

“In Brazil and India, the two other large countries reporting a rapid increase in infections, deaths have been rising in recent weeks as well.”
Some health experts now believe what was seen in the early days of the outbreak in New York and neighbouring New Jersey - and indeed much of Europe - was a “worst-case scenario”, and that a combination of factors could help spare current hotspots the same fate.

For months, it was a case of trial and error in New York. Doctors over-relied on ventilators, which yielded bad prognoses, and described “flying blind” when it came to drug treatments.

The state’s early strategy was chaotic. When hospitals became overwhelmed officials began advising that people stay home unless they were so unwell they were struggling to breathe. But by this point, doctors say, it was too late.

“We were seeing so many people in such a bad way, we thought we were failing because we didn’t know how to treat them,” Dr Samir Farhat, who runs the intensive care unit at New York Community Hospital, told the Telegraph back in April. “We kept experimenting to try to find something that worked.”

Antivirals such as remdesivir and steroids such as dexamethasone have recently been discovered to reduce fatalities in the sickest patients. So have high dose Vitamin C and zinc
treatments.

Dr Varon and colleagues from five different hospitals across America have created a cocktail of commonly separately-used drugs they have called the “Math+ Protocol”.

### US Covid-19 comparison

The combination of cortisone steroid, vitamins and anti-coagulants is helping them combat the two biggest dangers of the virus - inflammation and clotting - and it is having some staggering results.

The Math+ Protocol even managed to help a 92-year-old Covid sufferer undergoing chemotherapy for colon cancer.

“We learned so much in a few months,” Dr Varon, who has treated over 200 coronavirus patients, told The Telegraph. “We are constantly having to change and evolve as the virus does, but some things seem to be working well.

"No-one needs to die from coronavirus any more," he said.

Research published this week in medical journal Anaesthesia showed that the chances of survival for patients admitted to intensive care units have risen sharply as doctors have got better at treating Covid-19.

Overall mortality of patients fell to just under 42 per cent at the end of May from almost 60 per cent in March, according to analysis of two dozen studies involving more than 10,000 patients in North America, Europe and Asia.
One reason for lower mortality rates - in the US at least - may be to do with age.

The median age of those testing positive in the US is falling, suggesting that while older people continue to shelter and avoid infection, younger adults are being infected as they return to work and socialising.

The proportion of **infections in younger people increased** dramatically in June and July compared with March and April. Some blamed the decision by many southern states to begin reopening, sending young adults back into the workforce.

Another driver seemed to have been the large number of gatherings and parties held over Memorial Day weekend in the last days of May. Dr Varon said we can also expect a spike after the July 4 Independence Day holiday.

In Florida, another of the country’s new hotspots, the median age of people testing positive for Covid-19 fell from 54 to 35 between May and June. A similar pattern has emerged in Texas and California.
Half of the 25,000 deaths recorded in New York during its peak were nursing home residents - older populations at a high risk of being infected by, and dying from, the coronavirus.

Andrew Cuomo, New York’s governor, issued a directive in late March that effectively ordered nursing homes to accept elderly virus patients from hospitals. The goal was to free up beds, but it had the effect of allowing the virus to spread like wildfire among the most vulnerable communities.

There have been similar fears for Florida, which has one of the country’s oldest populations. So far, they have not yet borne out.

This week the state averaged about 82 deaths per day, up from about 72 a day last week. Nearly half of all deaths have been in long-term care facilities. By comparison, in April New York reported more than 800 deaths per day for several days in a row. Both have roughly the same population.

### US state Covid-19 comparison

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Nationwide, the US [deaths per million tally](https://www.telegraph.co.uk/news/2020/07/17/coronavirus-deaths-stubbornly-low-us-new-cases-soar/) is just under 400. The figure is inflated by the Northeast's death rate, which is more than double the national average at 1,100 deaths per million.

This is likely because of the nature of the spread of the virus. The outbreaks in New York and parts of Europe were highly concentrated in packed urban areas, before any social distancing measures were in place.
The virus has moved much more slowly across the South and West, giving hospitals and clinics time to prepare.

Some experts warn, however, that it is too early to read much into the numbers, pointing to what is known as a “death lag”.

According to the CDC, the average period from symptom onset to death is about two weeks. The average lag between death and the reporting of a death is just over seven days.

New daily positive cases only began to exceed the plateau around June 18-19, which means that an increase in deaths as a result of the rise in new cases would not be expected to show up until mid July.

Some 23 states are reporting more deaths each day than they were two weeks ago, according to a New York Times database. The numbers could continue increasing should hospitalised cases turn fatal.
In Florida, which recorded its highest single-day toll on Thursday with 156 deaths, more than 8,000 are currently in hospital with the virus.

Some experts also fear that while younger adults are driving new infections, states might not see deaths spike until infections overflow into older populations.

The populations in the South and West - the regions now hardest hit by the virus - account for 200 million of the country’s 328 million. The Northeast is home to only 56 million. Should the virus become more deadly, it could be far more devastating.

The University of Massachusetts's Amherst Reich lab, which is among the forecasts relied on by the CDC, this week predicted there could reach 151,000 deaths in the US by August 1.

California, Florida and Texas, which are the three most populous states in the country, will see 1,000 more deaths over the next four weeks compared to the previous four, according to their model.

“Should we expect that trend to plateau or move upwards? The lag times from infection to death, and death to reporting, mean it’s a possibility,” said Mr Whet. “But there’s also a lot we don’t know about this new phase of the pandemic, meaning trends in new cases and deaths may not correlate.”