

## - Virus / Medical awareness

# Long-term effects of Covid – study

Diamond Fields Advertiser · 23 Apr 2021 · 8 · ANI CORRESPONDENT

RESEARCHERS at Washington University School of Medicine in St Louis showed that Covid-19 survivors, including those not sick enough to be hospitalised, have an increased risk of death in the six months following diagnosis with the virus.

The researchers also have catalogued the numerous diseases associated with Covid-19, providing a big-picture overview of the longterm complications of Covid-19; revealing the massive burden this disease is likely to place on the world's population in the coming years.

The study, involving more than 87 000 Covid-19 patients and nearly five million control patients in a federal database, appears in the journal Nature.

"Our study demonstrates that up to six months after diagnosis, the risk of death following even a mild case of Covid-19 is not trivial and increases with disease severity," said senior author, Ziyad Al-aly, MD, an assistant professor of medicine.

In the new study, the researchers were able to calculate the potential scale of the problems first glimpsed from anecdotal accounts and smaller studies that hinted at the wide-ranging side effects of surviving Covid-19, from breathing problems and irregular heart rhythms to mental health issues and hair loss.

The investigators showed that, after surviving the initial infection (beyond the first 30 days of illness), Covid-19 survivors had an almost 60% increased risk of death over the following six months compared with the general population.

At the six-month mark, excess deaths among all Covid-19 survivors were estimated at eight people per 1 000 patients. Among patients who were ill enough to be hospitalised with Covid-19 and who survived beyond the first 30 days of illness, there were 29 excess deaths per 1 000 patients over the following six months.

The researchers analysed data from the national healthcare databases of the US Department of Veterans Affairs. The dataset included 73 435 VHA patients with confirmed Covid-19 but who were not hospitalised and, for comparison, almost five million VHA patients who did not have a Covid-19 diagnosis and were not hospitalised during this time frame.

To help understand the long-term effects of more severe Covid-19, the researchers harnessed VHA data to conduct a separate analysis of 13 654 patients hospitalised with Covid-19 compared with 13 997 patients hospitalised with seasonal flu. All patients survived at least 30 days after hospital admission, and the analysis included six months of follow-up data.

The researchers confirmed that, despite being initially a respiratory virus, long Covid-19 can affect nearly every organ system in the body.

Evaluating 379 diagnoses of diseases possibly related to Covid-19, 380 classes of medications prescribed and 62 laboratory tests administered, the researchers identified newly diagnosed major health issues that persisted in Covid-19 patients over at least six months and that affected nearly every organ and regulatory system in the body, including:

- Respiratory system: persistent cough, shortness of breath and low oxygen levels in the blood.
- Nervous system: stroke, headaches, memory problems and problems with senses of taste and smell.
- Mental health: anxiety, depression, sleep problems and substance abuse.
- Metabolism: new onset of diabetes, obesity and high cholesterol.
- Cardiovascular system: acute coronary disease, heart failure, heart palpitations and irregular heart rhythms.
- Gastrointestinal system: constipation, diarrhoea and acid reflux.
- Kidney: acute kidney injury and chronic kidney disease that can, in severe cases, require dialysis.

- Coagulation regulation: blood clots in the legs and lungs.
- Skin: rash and hair loss.
- Musculoskeletal system: joint pain and muscle weakness.
- General health: malaise, fatigue and anaemia.

While no survivor suffered from all of these problems, many developed a cluster of several issues that have a significant impact on health and quality of life.

Among hospitalised patients, those who had Covid-19 fared considerably worse than those who had influenza, according to the analysis. Covid-19 survivors had a 50% increased risk of death compared with flu survivors, with about 29 excess deaths per 1 000 patients at six months. Survivors of Covid-19 also had a substantially higher risk of long-term medical problems.

In addition, the researchers found that the health risks from surviving Covid-19 increased with the severity of disease, with hospitalised patients who required intensive care being at the highest risk of long Covid-19 complications and death.