

New data on COVID-19 patients with diabetes show that one in five die within

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Updated results from the CORONADO study, analysing the outcomes of patients with diabetes admitted to hospital with COVID-19, shows that one in five patients die within 28 days while around half are discharged. The study is published in *Diabetologia* (the journal of the European Association for the Study of Diabetes [EASD]), and is by Professor Bertrand Cariou and Professor Samy Hadjadj, diabetologists at l'institut du thorax, University Hospital Nantes, INSERM, CNRS, and University of Nantes, France, and colleagues.

In May 2020, preliminary results from CORONADO (Coronavirus SARS-CoV-2 and Diabetes Outcomes), with a smaller sample size, showed that 10% of patients with [diabetes](#) and COVID-19 died within 7 days of [hospital](#) admission.

This updated analysis included 2796 participants from 68 centres across France: almost two thirds (64%) were men, mean age 70 years, with median body mass index of 28 kg/m² (falling into the overweight range). Microvascular and macrovascular diabetic complications were found in 44% and 39% of participants, respectively.

Within 28 days, 1404 (50%) of the patients were discharged from hospital with a median duration of hospital stay of 9 days, while 577 participants died (21%). Of the remaining patients, 12% remained hospitalised at day 28, while 17% had been transferred to facilities different from their initial hospital.

Computer modelling revealed various factors such as younger age, routine diabetes therapy with the drug metformin, and longer symptom duration on admission were associated with a higher chance of discharge from hospital.

History of microvascular complications, routine anticoagulant therapy (to prevent [blood clots](#)), shortness of breath on admission, abnormal levels of liver enzymes, higher white blood cell counts and higher levels of the systemic inflammatory marker C-reactive protein were all associated with a lower chance of discharge and a higher risk of [death](#). Patients whose diabetes was regularly treated with insulin (possibly indicating a more advanced state of diabetes) were at a 44% increased risk of death compared with those not treated with insulin.

An unusual finding from this study was a 42% increased risk of death for patients with diabetes receiving statin treatment for high cholesterol—however, the authors make clear since this is an observational study, it is difficult to make definite conclusions about any relationship with statins, or any other treatment.

The study also found that long term blood sugar control assessed with pre-admission or admission glycated haemoglobin (HbA1c) did not impact on the fate of COVID-19 patients, with no significant association with death or with discharge within 28 days. In contrast, an increased level of plasma glucose on admission was a strong predictor of death and, consistently, of a lower chance of discharge.

The authors conclude: "The identification of favourable variables associated with hospital discharge and unfavourable variables associated with death can lead to patient reclassification and help to use resources adequately according to individual patient profile."

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