

Organ transplants fell by a third worldwide during first wave of COVID-19 pandemic

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The number of solid organ transplants performed during the first wave of COVID-19 in 2020 plunged by 31% compared to the previous year, according to a new global study presented today at the European Society for Organ Transplantation (ESOT) Congress 2021.

According to modeling calculations, the slowdown in transplants resulted

in more than 48,000 years of patient life loss.

The research leveraged international data from 22 countries across four continents and revealed major variations in the response of transplant programs to the COVID-19 pandemic, with transplant activity dropping by more than 90 percent in some countries.

Kidney transplantation showed the largest reduction across nearly all countries during 2020 compared to 2019, with the study finding a decrease in living donor transplants (-40 percent) and [liver transplants](#) (-33 percent). For deceased donor transplants, there was a reduction in kidney (-12 percent), liver (-9 percent), lung (-17 percent) and heart (-5 percent) transplants.

The research, published today in the *Lancet Public Health*, highlighted how some countries managed to sustain the rate of transplant procedures while others experienced serious reductions in the number of transplants compared to the previous year and, in some areas, living donor kidney and liver transplantation ceased completely. Overall, there was a strong temporal association between increased COVID-19 infection rate and reductions in deceased and living solid organ transplants.

Dr. Olivier Aubert, assistant professor at the Paris Translational Research Centre for Organ Transplantation and lead author of the study, said, "The first wave of COVID-19 had a devastating impact on the number of transplants across many countries, affecting patient waiting lists and regrettably leading to a substantial loss of life."

Professor Alexandre Loupy, head of the Paris Translational Research Center for Organ Transplantation and last author of the study, said, "Living donor transplantation, which reduced more substantially, requires significant resources and planning compared to deceased donor transplantation. This is extremely difficult during a pandemic when

resources are stretched and staff redeployed. There are also major ethical concerns for the wellbeing and safety of the donor."

"It's clear that there are many indirect deaths associated with COVID-19 and our study confirms that the pandemic has far-reaching consequences on many medical specialties." added Prof. Loupy.

The estimated numbers of life-years lost were 37,664 years for patients waitlisted for a kidney, 7,370 for a liver, 1,799 years for a lung, and 1,406 for a heart, corresponding to a total 48,239 life-years lost.

Dr. Aubert added, "Beyond the near universal reduction in transplant activity, certain countries and regions managed to carry-out procedures despite major challenges presented by the pandemic. These findings warrant further analysis on a regional, national and global level to understand why reductions did or did not occur."

"Understanding how different countries and healthcare systems responded to COVID-19-related challenges can facilitate improved [pandemic preparedness](#) and how to safely maintain transplant programs to provide life-saving procedures for patients."

To facilitate understanding of the temporal trends and consequences of the pandemic on worldwide, national and regional solid organ transplant activities for researchers, clinicians, and public health authorities, the authors created an open-access dashboard that presents data interactively for solid organ [transplant](#) activities and COVID-19 cases.

More information: COVID-19 pandemic and worldwide organ transplantation: a population-based study, *Public Health* (2021). [DOI: 10.1016/S2468-2667](https://doi.org/10.1016/S2468-2667)

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