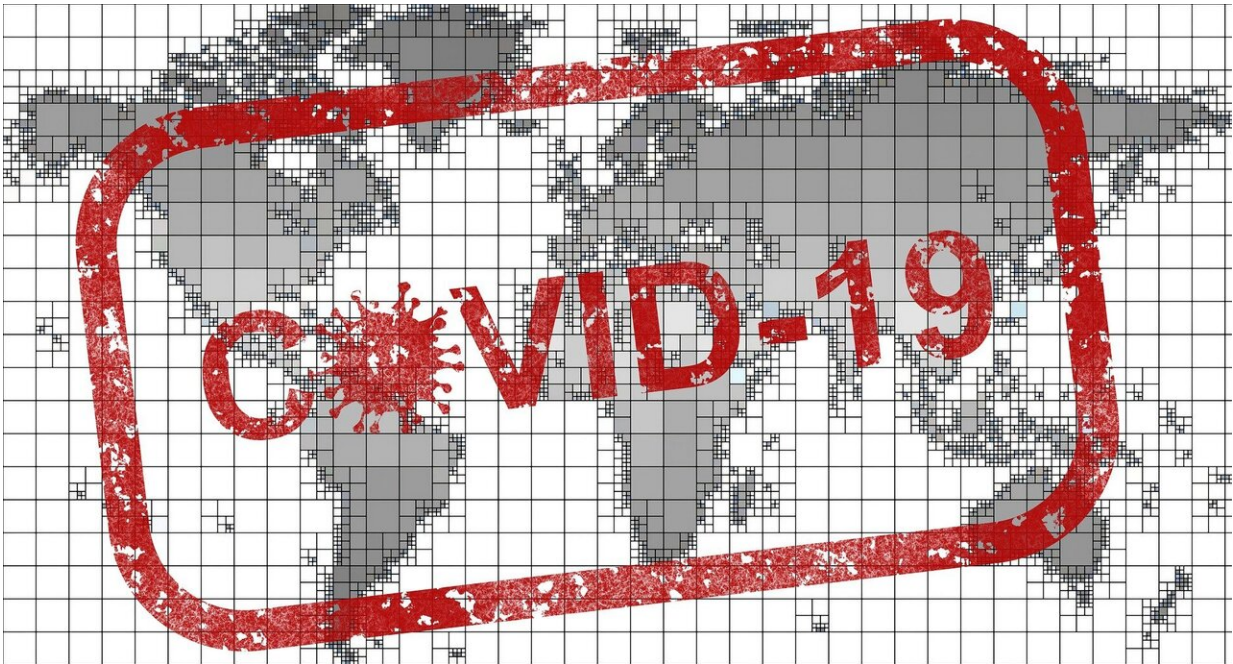


Age groups that sustain resurging COVID-19 epidemics in the United States

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As of October 2020, individuals aged 20-49 were the only groups sustaining COVID-19 transmission with reproduction numbers well above 1 in the US, according to the latest publication in *Science* today by the Imperial College COVID-19 Response team.

Following initial declines, numbers of COVID-19 cases started to rise

again halfway through 2020 in the United States and Europe. In September the team published report 32, using age-specific mobility data from across the United states and linking these to age-specific COVID-19 mortality. Their findings pointed out that targeting interventions to adults aged 20-49 could facilitate safe reopening of schools and kindergartens.

The peer reviewed publication in *Science* today includes new data up to October 2020. The updated analysis of aggregated age-specific mobility data from more than 10 million individuals in the US, shows that 65 of 100 COVID-19 infections still originated from individuals aged 20-49 in the US.

Across the US as a whole, the mobility trends indicate substantial initial declines in venue visits (such as visit by an individual to locations like supermarkets and restaurants) followed by a subsequent rebound for all age groups. In contrast with the large fluctuations in the share of age groups among reported COVID-19 cases, the study describes the share of age groups among the observed COVID-19 deaths remarkably constant.

The researchers find that in locations where novel highly-transmissible SARS-CoV-2 lineages have not yet established, additional interventions among adults aged 20-49, such as mass vaccination with transmission-blocking vaccines, could bring resurgent COVID-19 epidemics under control and avert deaths.

The work is presented in the latest report from Imperial's Department of Mathematics and the WHO Collaborating Centre for Infectious Disease Modelling within the MRC Centre for Global Infectious Disease Analysis, Abdul Latif Jameel Institute for Disease and Emergency Analytics (J-IDEA), Imperial College London.

Since the emergence of the new coronavirus (COVID-19) in December 2019, the Imperial College COVID-19 Response Team has adopted a policy of immediately sharing research findings on the developing pandemic.

Dr. Samir Bhatt, from Imperial College London, said, "This work is a big step in understanding how age affects the dynamics of COVID-19 epidemics. We would like thank in particular all epidemiologists at state Departments of Health who work tirelessly to update data on the evolving COVID19 epidemics. Without this effort, this study would not have been possible."

Dr. Melodie Monod, from Imperial College London, said, "We find adults aged 20-49 are a main driver of the COVID-19 [epidemic](#) in the United State and are the only age groups contributing disproportionately to onward spread, relative to their population size. While children and teens contribute more to COVID19 spread since school closure mandates have been lifted in fall 2020, we find these dynamics have not changed substantially since school re-opening."

Dr. Oliver Ratmann, from Imperial College London, concluded, "We believe this study is important because we demonstrate that adults aged 20-49 are the only [age groups](#) that have consistently sustained COVID-19 spread across the US, despite large variations in the scale and timing of local epidemics. Thus—at least where highly transmissible variants have not established—additional interventions targeting the 20-49 age group could bring resurgent epidemics under control and avert deaths."

More information: "Age groups that sustain resurging COVID-19 epidemics in the United States," *Science* (2021).
[science.sciencemag.org/cgi/doi ... 1126/science.abe8372](https://science.sciencemag.org/cgi/doi/10.1126/science.abe8372)

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