

Study: COVID infection rates rose faster in fully reopened businesses

September 30 2021, by Landon Hall



Credit: Pixabay/CC0 Public Domain

Concerned about the economic toll of COVID-19 lockdowns, state and local governments began to experiment with lifting restrictions on businesses as early as last spring, leading to an ever-shifting array of rules that varied widely from place to place. Now, a new USC study of

more than 80 counties nationwide reveals the difference more or less restrictive policies may have had on the spread of COVID-19.

The research, published in the *Journal of Public Health*, showed businesses that fully reopened during the height of the pandemic last fall saw more than a 10% rise in the COVID-19 [infection](#) rate in their first two weeks, nearly double the rise of establishments that only partially reopened, according to new USC research.

Among the businesses that fully reopened, with no additional restrictions in areas like capacity limits, gyms had the highest rise in infection rate, followed by hair salons and barber shops. Surprisingly, in this category, bars actually had the lowest change in infection rate among business types examined. But among businesses that only partially reopened, bars had the highest rise in infection rates, followed by gyms.

"Bars were among the last businesses to open and at the time of the study, only 13 counties allowed bars to be fully open, so there were fewer data points to analyze" said co-first author Alexander Bruckhaus, a National Science Foundation Research Experience for Undergraduates fellow in the lab of Dominique Duncan, Ph.D., at the Laboratory of Neuro Imaging at the USC Stevens Neuroimaging and Informatics Institute (USC Stevens INI). "The high change in infection rate among partially reopened bars could be indicative that bars are a dangerous place to be during a pandemic because first, when people drink, they're not wearing their masks, and second, they could be intoxicated, and they wouldn't necessarily adhere to the safety precautions."

On an aggregate level, fully reopened businesses were associated with an average 14-day infection rate increase of 10.124%. When businesses only partially reopened, a 5.765% associated increase in infection rate was observed.

The researchers looked at 83 counties, including Los Angeles County, that had reported at least 20,000 COVID-19 cases as of Nov. 4, 2020. That data set was cross-referenced with the dates when businesses either partially or fully reopened after a lockdown, as well as infection rates on the 1st and 14th days after reopening. The study included several types of businesses open to the public, including bars, restaurants, gyms, hair salons/barbers, public schools, houses of worship and "non-essential retail."

The researchers also examined variables like mask usage frequency, median household income, population density and social distancing. They found a low degree of mask wearing was associated with a high rise in infection rates, particularly in restaurants, bars and gyms.

"When comparing other factors to the change in infection rate, mask usage plays a substantial role in curtailng/rising infection rates when restaurants and bars reopen," the authors wrote.

The findings could help policymakers plan for future lockdowns by knowing which businesses and what types of openings tend to foster quicker spread of the virus.

"We believe this research gives great insight about the dynamics of certain types of business reopenings," Bruckhaus said.

Co-first author Aubrey Martinez, like Bruckhaus an undergraduate research fellow in Duncan's lab at USC Stevens INI, said the data show that reopenings of certain businesses shouldn't be rushed. "If we had taken it slower, maybe we would have realized, "As we're opening this particular [business](#) up and seeing cases rise, maybe we should hold off on reopening other similar types of things."

More information: Alexander Bruckhaus et al, Post-lockdown

infection rates of COVID-19 following the reopening of public businesses, *Journal of Public Health* (2021). DOI: [10.1093/pubmed/fdab325](https://doi.org/10.1093/pubmed/fdab325)

Provided by University of Southern California

Citation: Study: COVID infection rates rose faster in fully reopened businesses (2021, September 30) retrieved 26 April 2024 from <https://medicalxpress.com/news/2021-09-covid-infection-rose-faster-fully.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.