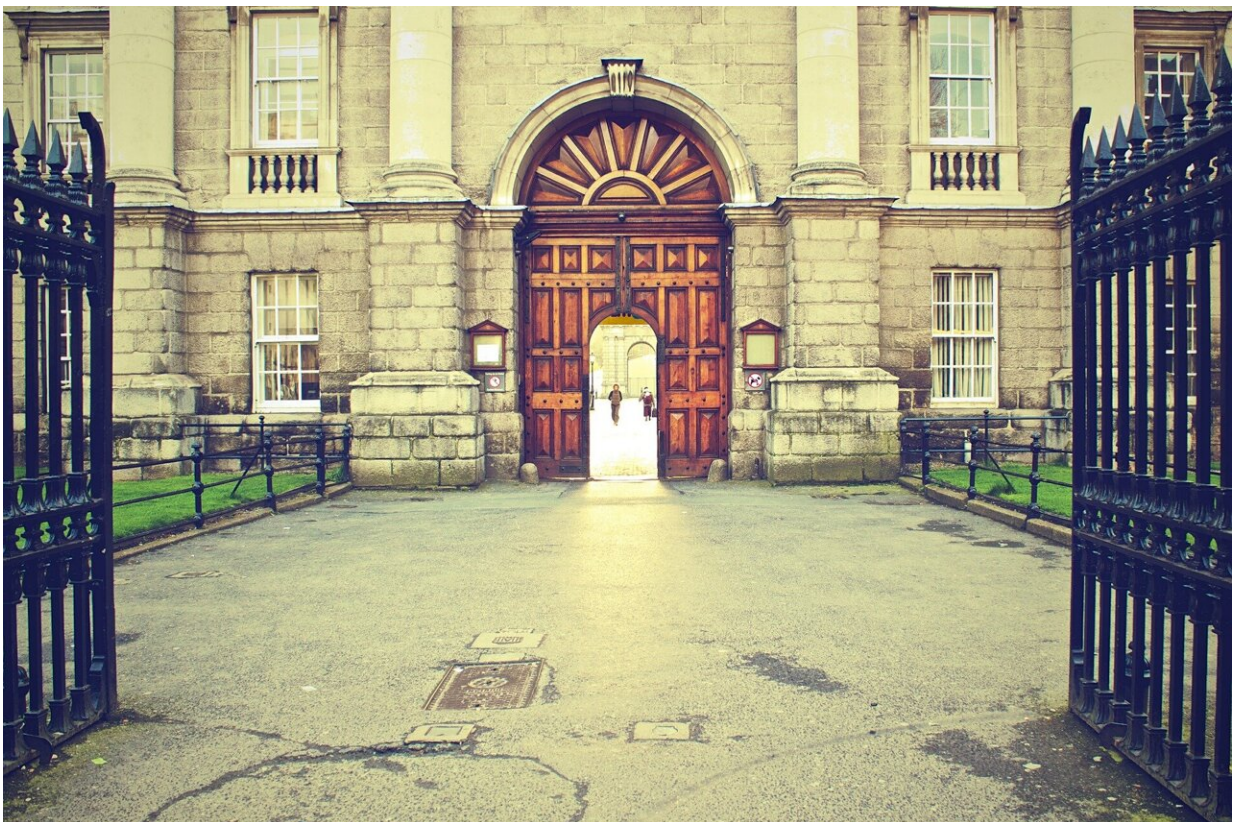


High vaccination levels the single most powerful determinant of college campus safety

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A modeling study found that vaccination level will be the single most powerful determinant of campus safety this fall. According to the

authors from Yale School of Public Health, colleges that can achieve vaccination rates higher than 90% may safely return to normalcy with minimal additional distancing, masking, or testing. The findings are published in *Annals of Internal Medicine*.

To help college administrators design and evaluate customized COVID-19 safety plans, the researchers developed a dynamic, compartmental model using a modified "susceptible-exposed-infected-recovered" (SIER) framework for a hypothetical population of 5,000 students, faculty, and staff living and working within close proximity on [campus](#). The model captured essential features facing college decision-makers including the epidemiology of SARS-CoV-2, the natural history of COVID-19 illness, and the availability and accuracy of testing technologies. The model also considered decision-maker values and preferences.

Under base-case assumptions, the model showed that if 90% coverage can be attained with a [vaccine](#) that is 85% protective against infection and 25% protective against asymptomatic transmission, the campus activities could safely be resumed while holding cumulative cases below 5% of the population without the need for routine, asymptomatic testing. With 50% population coverage using such a vaccine, a similar cap on cumulative cases would require either daily asymptomatic testing of unvaccinated persons or a combination of less frequent testing and resumption of aggressive distancing and other nonpharmaceutical prevention policies.

Based on these findings, the authors say that [college](#) administrators planning a return to pre-COVID campus activities without either broad vaccination coverage or high-frequency asymptomatic testing and aggressive distancing/masking interventions are placing their students and staff at risk of widespread viral transmission. Even with high [vaccination rates](#), however, the authors warn that administrators should

remain prepared to reinstitute or expand testing and distancing policies on short notice, if needed.

More information: A. David Paltiel et al, Assessing COVID-19 Prevention Strategies to Permit the Safe Opening of Residential Colleges in Fall 2021, *Annals of Internal Medicine* (2021). [DOI: 10.7326/M21-2965](https://doi.org/10.7326/M21-2965)

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