

School Openings and the Spread of the Coronavirus: Evidence from Two Summers in Germany

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School closures have been among the most common non-pharmaceutical interventions to slow down the spread of the novel coronavirus (SARS-CoV-2) but are associated with large economic and societal costs. This talk presents two studies on the effect of school re-openings after summer breaks in 2020 and 2021 on the spread of SARS-CoV-2 in Germany. Both papers exploit the staggered timing of summer breaks across federal states, which allows to implement event study designs. The analyses are based on official daily counts of confirmed coronavirus infections by age groups across all 401 German counties. For 2020, the results do not reveal a positive effect of the end of summer breaks on case numbers. Rather, they indicate that school re-openings had a negative but insignificant effect on the number of new confirmed cases. Analyses of Google Trends data suggest that behavioral changes of parents may have contributed to contain larger outbreaks after school re-openings. In 2021, the pandemic situation has substantially changed due to the availability of vaccines as well as mutations of SARS-CoV-2 bringing about more contagious variants. With respect to the school setting, another major change was the introduction of mandatory testing in schools. Accordingly, we find a short-term increase in case numbers right after summer breaks, indicating the uncovering of otherwise undetected (asymptomatic) cases through the mandatory testing. After a period of about 2-3 weeks after school re-openings, the growth of case numbers is smaller in states which re-opened schools compared to the control group of states still in summer break. We conclude that school re-openings in Germany under strict hygiene measures combined with quarantine and containment measures have not increased the number of newly confirmed SARS-CoV-2 infections. In addition, the combination of mandatory testing and compulsory school attendance can provide an unbiased and near-complete surveillance of the pandemic. Thus, under certain conditions open schools can play a role in containing the spread of the coronavirus. The trade-off between reducing contacts and losing an important monitoring device has to be taken seriously when re-considering school closures as a non-pharmaceutical intervention under the current circumstances. This is especially important given the large societal costs of closing schools in terms of learning losses and reductions in children's and families' well-being.

References:

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