

EVIDENCE SEARCH REPORT

RESEARCH QUESTION: What is the evidence and rationale describing the key public health principles to consider for school re-openings and precautions regarding school closures during COVID-19?	UNIQUE IDENTIFIER: EOC070901v2-01 ESR
RESOURCES USED:	
<ul style="list-style-type: none"> • PHAC (website) • Government of Saskatchewan • Government of British Columbia • Government of Alberta • Government of Manitoba • Government of Ontario • Government of Quebec • Government of Nova Scotia • Government of Nunavut • Government of Yukon • Public Health Ontario • WHO • CDC – Centers for Disease Control (US) • MedRxiv • BioRxiv • SSRN • TRIP Pro • CADTH 	<ul style="list-style-type: none"> • Evidence Check (Australia) • Cochrane • HSE • Norwegian Institute of Public Health • National Academies of Sciences, Engineering and Medicine • John Hopkins 2019 Novel Coronavirus Research Compendium • GOARN (WHO) • USHER Network • Evidence Aid • IPAC • Google • Google News • COVID-19 Primer • NICE • NCCMT (McMaster) • European Centre for Disease Control
LIMITS/EXCLUSIONS/INCLUSIONS: English	REFERENCE INTERVIEW COMPLETED: August 5 2020
DATE COMPLETE: August 6 2020	
LIBRARIAN: Lukas Miller, Mark Mueller	REQUESTOR: Dr. Gary Groot Dr. Nazeem Muhajarine - update
TEAM: EOC	
SEARCH ALERTS CREATED: NO	
CITE AS: Miller, L; Mueller, M. What is the evidence and rationale describing the key public health principles to consider for school re-openings and precautions regarding school closures during COVID-19? 2020 Aug 6; Document no.: EOC070901v2-01 ESR. In: COVID-19 Rapid Evidence Reviews [Internet]. SK: SK COVID Evidence Support Team, c2020. 25 p. (CEST evidence search report)	

LIBRARIAN NOTES/COMMENTS

Greetings,

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This search received an update per EOC knowledge synthesis team meetings taking August 5 and 6, 2020 (with Dr. Nazeem in attendance).

Search parameters were refined to include feedback from prior searches. This is an update with revisions to the search strategy to target appropriate sources.

This update focuses strictly on gathering the most recent and relevant information on this topic. News and grey literature, especially, are limited to materials updated within 1-2 weeks. Research articles from databases were included but not before July 1, 2020 (the original search report should cover any older literature. There might be some overlap in findings).

Many search results were journal articles discussing medical education programs and their responses to COVID. These were excluded in selection given that this question pertains primarily to the paediatric population. The grey literature below is listed by the responsible organization, with news-media/journalistic items gathered in a separate list further below.

Please advise us of any questions, comments and/or concerns.

Yours,
Lukas & Mark

SEARCH RESULTS

To obtain the full-text articles or to request offsite access, email library@saskhealthauthority.ca.

SUMMARIES, GUIDELINES & OTHER RESOURCES

Canadian & Provincial

Government of Saskatchewan

- Guidance for Schools. [August 4, 2020]. Available from <https://www.saskatchewan.ca/government/health-care-administration-and-provider-resources/treatment-procedures-and-guidelines/emerging-public-health-issues/2019-novel-coronavirus/public-health-measures/guidance-for-schools>
- Safe Schools Plan Released. [August 4, 2020]. Available from <https://www.saskatchewan.ca/government/news-and-media/2020/august/04/safe-school-plan>
- Safe Schools Plan for Return to In-Classroom Learning. [August 4, 2020]. Available from <https://www.saskatchewan.ca/-/media/news-release-backgrounders/2020/aug/return-to-school-info-pamphlet.pdf>

Public Health Agency of Canada

- Guidance for Post-Secondary Institutions During the COVID-19 Pandemic. [Updated July 24, 2020]. Available from <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/guidance-documents/covid-19-guidance-post-secondary-institutions-during-pandemic.html>
- Risk Mitigation Tool for Child and Youth Settings Operating During the COVID-19 Pandemic. [Updated July 20, 2020]. Available from <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/guidance-documents/covid-19-risk-mitigation-tool-child-youth-settings-operating-during-pandemic.html>

BC Centre for Disease Control

- COVID-19: Public Health Guidance for K-12 School Settings. [Updated July 29, 2020]. Available from http://www.bccdc.ca/Health-Info-Site/Documents/COVID_public_guidance/Guidance-k-12-schools.pdf

Public Health Ontario

- Rapid Review: COVID-19 Pandemic School Closure and Reopening Impacts. [August 4, 2020]. Available from <https://www.publichealthontario.ca/-/media/documents/ncov/main/2020/08/covid-19-school-closure-reopening-impacts.pdf?la=en>

Hospital for Sick Children

- Updated: COVID-19: Guidance for School Reopening. [July 29, 2020]. Available from https://www.sickkids.ca/PDFs/About-SickKids/81407-COVID19-Recommendations-for-School-Reopening-SickKids.pdf?fbclid=IwAR1Yo_s7B7jBu1xLCb1QRSThD6QX7iDSwakygCkEZfnKiXWX-GaM8MGITY

Government of Alberta

- 2020-21 School Re-Entry Plan. [Updated July 21, 2020]. Available from <https://open.alberta.ca/publications/2020-21-school-re-entry-plan>

- COVID-19 Information: Guidance for School Re-Entry – Scenario 1. [Updated July 21, 2020]. Available from <https://open.alberta.ca/publications/covid-19-information-guidance-school-re-entry-scenario-1>

Government of Manitoba

- Welcoming Our Students Back: Restoring Safe Schools: K-12 Guidelines for September 2020. [July 30, 2020]. Available from https://www.gov.mb.ca/asset_library/en/covid/k-12-reopeningplan-stage-2.pdf

Government of Ontario

- Guide to Reopening Ontario's School. [Updated August 2, 2020]. Available from <https://www.ontario.ca/page/guide-reopening-ontarios-schools>

Government of Nova Scotia

- Nova Scotia's Back to School Plan. [July 2020]. Available from <https://novascotia.ca/coronavirus/docs/back-to-school-plan.pdf>

Government of Quebec

- Back-to-School Plan for Education and Higher Education – Fall 2020 (COVID-19). [July 14, 2020]. Available from <https://www.quebec.ca/en/education/cegeps-and-universities/back-to-school2020-cegep-university/>

Government of Nunavut

- 2020-21 Opening Plan for Nunavut Schools: Health and Safety. [July 24, 2020]. Available from https://gov.nu.ca/sites/default/files/files/2020-21_opening_plan_for_nunavut_schools_-_eng.pdf

Government of Yukon

- Guidelines for K-12 School Settings. [July 23, 2020]. Available from <https://yukon.ca/en/guidelines-k-12-school-settings>

USA & International

Centers for Disease Control and Prevention (US)

- Preparing K-12 School Administrators for a Safe Return to School in Fall 2020. [August 1, 2020]. Available from <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/prepare-safe-return.html>
- Screening K-12 Students for Symptoms of COVID-19: Limitations and Considerations. [July 23, 2020]. Available from <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/symptom-screening.html>
- Guidance for K-12 School Administrators on the Use of Cloth Face Coverings in Schools. [July 23, 2020]. Available from <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/cloth-face-cover.html>

Institute for Disease Modeling

- Schools Are Not Islands: We Must Mitigate Community Transmission to Reopen Schools. [July 13, 2020]. Available from https://covid.idmod.org/data/Schools_are_not_islands_we_must_mitigate_community_transmission_to_reopen_schools.pdf

European Centre for Disease Prevention and Control

- COVID-19 in children and the role of school settings in COVID-19 transmission. [August 6, 2020]. Available from <https://www.ecdc.europa.eu/en/publications-data/children-and-school-settings-covid-19-transmission>

California Department of Public Health

- Updated: COVID-19 Industry Guidance: Schools and School-Based Programs. [August 3, 2020]. Available from <https://files.covid19.ca.gov/pdf/guidance-schools.pdf>
- COVID-19 and Reopening In-Person Learning. [July 17, 2020]. Available from <https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/COVID-19/Schools%20Reopening%20Recommendations.pdf>

County of Los Angeles Department of Public Health

- Reopening Protocols for K-12 Schools. [July 27, 2020]. Available from http://publichealth.lacounty.gov/media/coronavirus/docs/protocols/Reopening_K12Schools.pdf

Georgia Department of Public Health

- Updated: Return to School Guidance after COVID-19 Illness or Exposure. [June 22, 2020]. Available from <https://dph.georgia.gov/document/document/return-school-guidance/download>

Minnesota Department of Health

- 2020-2021 Planning Guide for Schools: Health Considerations for Navigating COVID-19. [June 30, 2020]. Available from <https://www.health.state.mn.us/diseases/coronavirus/schools/k12planguide.pdf>

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Washington State Department of Health

- Child Care, Youth Development, and Summer Day Camps During the Covid-19 Outbreak. [Updated July 22, 2020]. Available from <https://www.doh.wa.gov/Portals/1/Documents/1600/coronavirus/DOH-OSPI-DYCF-SchoolsChildCareGuidance.pdf>

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Wisconsin Department of Public Instruction

- School Health Services Interim COVID-19 Infection Control and Mitigation: Toolkit. [July 28, 2020]. Available from https://dpi.wi.gov/sites/default/files/imce/sspw/pdf/School_Health_Services_Interim_COVID-19_Infection_Control_and_Mitigation_Toolkit.pdf

Texas Education Agency

- Public Health Planning Guidance for School Year 2020-2021. [August 4, 2020]. Available from <https://tea.texas.gov/sites/default/files/covid/SY-20-21-Public-Health-Guidance.pdf>

UK Department of Education

- Guidance for Full Opening: Schools. [July 27, 2020]. Available from <https://www.gov.uk/government/publications/actions-for-schools-during-the-coronavirus-outbreak/guidance-for-full-opening-schools>
- Supporting Children and Young People with SEND as Schools and Colleges Prepare for Wider Opening. [July 24, 2020]. Available from <https://www.gov.uk/government/publications/coronavirus-covid-19-send-risk-assessment-guidance>
- Coronavirus (COVID-19): Guidance on Isolation for Residential Education Settings. [July 20, 2020]. Available from <https://www.gov.uk/government/publications/coronavirus-covid-19-guidance-on->

[isolation-for-residential-educational-settings](#)

- Safe Working in Education, Childcare and Children’s Social Care. [July 21, 2020]. Available from <https://www.gov.uk/government/publications/safe-working-in-education-childcare-and-childrens-social-care>

Department of Education and Skills (Ireland)

- Reopening Our Schools: The Roadmap for the Full Return to School. [July 27, 2020]. Available from <https://assets.gov.ie/82145/40753991-21a5-4715-a5a1-0f193df95ade.pdf>

LIBRARIAN’S NOTE: See pages 10-19 for Measures and Operational Changes to be implemented in Schools for information on containment.

National Academies of Sciences, Engineering and Medicine

- Reopening K-12 Schools During the COVID-19 Pandemic. [July 13, 2020]. Available from <https://www.nap.edu/resource/25858/NAS%20BOSE%20K12%20Schools%20COVID%2007132020-HS2.pdf>

United Nations

- Policy Brief: Education During COVID-19 and Beyond. [August 2020]. Available from https://www.un.org/sites/un2.un.org/files/sg_policy_brief_covid-19_and_education_august_2020.pdf

Usher Network for COVID-19 Evidence Reviews

- Summary: What is the evidence for transmission of COVID-19 by children [or in schools]? [July 2, 2020]. Available from https://www.ed.ac.uk/files/atoms/files/uncover_children_transmission_of_sars-cov-2_update_4_final.pdf

World Health Organization

- Considerations for School-Related Public Health Measures in the Context of COVID-19. Available from <https://www.who.int/publications/i/item/considerations-for-school-related-public-health-measures-in-the-context-of-covid-19%20%EF%BB%BF>

LIBRARIAN’S NOTE: WHO Guidance still points to this document though it is dated from May

News Articles

Some journalistic commentary/editorials are included.

1. Is it Safe to Reopen Schools During the Pandemic? The Associated Press. Published August 6, 2020. Accessed August 6, 2020. Available from <https://apnews.com/9acd2a3f7af12421a4f39572afe5baac>
2. School can safely reopen if they follow two important procedures, studies find. CTV News. Published August 3, 2020. Accessed August 6, 2020. Available from <https://www.ctvnews.ca/health/coronavirus/school-can-safely-reopen-if-they-follow-two-important-procedures-studies-find-1.5049607>
3. Coronavirus (COVID-19) Update: FDA Posts New Template for At-Home and Over-the-Counter Diagnostic Tests for Use in Non-Lab Settings, Such as Homes, Offices or Schools. FDA News (US). Published July 29, 2020. Accessed August 6, 2020. Available from <https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-fda-posts-new-template-home-and-over-counter-diagnostic-tests-use-non>
4. When Covid Subsided, Israel Reopened Its Schools. It Didn’t Go Well. New York Times. Published August 4, 2020. Accessed August 6, 2020. Available from <https://www.nytimes.com/2020/08/04/world/middleeast/coronavirus-israel-schools-reopen.html>
5. U.S. debates school reopening, WHO warns 'no return to normal'. CTV News. Published July 13, 2020. Accessed August 6, 2020. Available from <https://www.ctvnews.ca/health/coronavirus/u-s-debates-school-reopening-who>

[warns-no-return-to-normal-1.5021704](#)

6. Back to school: How provinces are planning for start of school year during pandemic. CBC. Published July 30, 2020. Accessed August 6, 2020. Available from <https://www.cbc.ca/news/canada/edmonton/provinces-back-to-school-pandemic-1.5669376>
7. All Manitoba students to return to school, but some high schools won't be full time. CBC News. Published July 30, 2020. Accessed August 6, 2020. Available from <https://www.cbc.ca/news/canada/manitoba/manitoba-school-reopening-plan-1.5668819>
8. Ontario health officials explain how schools will handle potential COVID-19 outbreaks. CP 24. Published July 31, 2020. Accessed August 6, 2020. Available from <https://www.cp24.com/news/ontario-health-officials-explain-how-schools-will-handle-potential-covid-19-outbreaks-1.5046658>
9. CLASSROOM LEARNING TO RESUME IN SEPTEMBER FOR ALL MANITOBA KINDERGARTEN TO GRADE 12 STUDENTS. Government of Manitoba News. Published July 30, 2020. Accessed August 6, 2020. Available from <https://news.gov.mb.ca/news/?archive=&item=48837>
10. Most BC Students to Return to School Full Time in September. CBC News. Updated July 30, 2020. Accessed August 6, 2020. Available from <https://www.cbc.ca/news/canada/british-columbia/bc-back-to-school-plan-1.5666749>
11. No mandatory masks or reduced class sizes planned when Sask. students return to schools in Sept. CBC News. Published August 5, 2020. Accessed August 6, 2020. Available from <https://www.cbc.ca/news/canada/saskatoon/saskatchewan-back-to-school-plan-1.5673597>
12. 5 things to know before Saskatoon schools reopen in September. Published August 5, 2020. CBC News. Accessed August 6, 2020. Available from <https://www.cbc.ca/news/canada/saskatoon/saskatoon-school-plans-1.5675324>
13. P.E.I. return to schools relies heavily on grouping students, enhanced cleaning. CBC News. Published August 5, 2020. Accessed August 6, 2020. Available from <https://www.cbc.ca/news/canada/prince-edward-island/pei-return-school-plan-1.5675042>
14. As other provinces mandate masks in schools, Manitoba still mulls over decision. CBC News. Published August 5, 2020. Accessed August 6, 2020. Available from <https://www.cbc.ca/news/canada/manitoba/manitoba-masks-school-education-1.5674583>
15. Manitoba parents, educators thrilled for back-to-school, but much work to be done. CBC News. Published July 30, 2020. Accessed August 6, 2020. Available from <https://www.cbc.ca/news/canada/manitoba/manitoba-back-to-school-covid-19-1.5669960>
16. Education unions in Toronto call on TDSB to rethink school restart plan. CBC News. Published August 5, 2020. Accessed August 6, 2020. Available from <https://www.cbc.ca/news/canada/toronto/unions-bargaining-units-open-letter-toronto-district-school-board-reopening-plan-1.5675933>
17. Transmission trouble: Statistician concerned over back-to-school plan. CBC News. Published August 1, 2020. Accessed August 6, 2020. Available from <https://www.cbc.ca/news/canada/ottawa/statistician-worried-back-to-school-plan-risky-1.5671012>
18. Review of COVID-19 spread by kids offers comfort about schools reopening, prof says. CBC News. Published August 2, 2020. Accessed August 6, 2020. Available from <https://www.cbc.ca/news/canada/new-brunswick/nb-covid-19-research-1.5670945>
19. Georgia school starts 1st day of classes, within hours student tests positive for coronavirus. Global News. Published August 6, 2020. Accessed August 6, 2020. Available from <https://globalnews.ca/news/7254294/coronavirus->

[student-tests-positive-georgia-school/](#)

20. How Safe Is Your School's Reopening Plan? Here's What To Look For. NPR. Published August 6, 2020. Accessed August 6, 2020. Available from <https://www.npr.org/sections/health-shots/2020/08/06/897295450/how-safe-is-your-schools-reopening-plan-here-s-what-to-look-for>
21. WATCH: House Oversight hearing on challenges of reopening schools amid COVID-19 pandemic. PBS News [video recording]. Published August 6, 2020. Accessed August 6, 2020. Available from <https://www.pbs.org/newshour/education/watch-live-house-oversight-hearing-on-challenges-of-reopening-schools-amid-covid-19-pandemic>
22. Five big questions about when and how to open schools amid COVID-19. Science News. Published August 4, 2020. Accessed August 6, 2020. Available from <https://www.sciencenews.org/article/covid-19-coronavirus-kids-schools-opening-when-how-risks>
23. Radical shift in COVID-19 testing needed to reopen schools and businesses, researchers say. Science News. Published August 3, 2020. Accessed August 6, 2020. Available from <https://www.sciencemag.org/news/2020/08/radical-shift-testing-strategy-needed-reopen-schools-and-businesses-researchers-say>
24. Will Opening Schools Make the Pandemic Worse? Education Week. Published July 31, 2020. Accessed August 6, 2020. Available from http://blogs.edweek.org/edweek/inside-school-research/2020/07/will_opening_schools_worsen_th.html
25. Back to school plan has four scenarios based on community transmission outcomes. Prince Albert Daily Herald. Published August 4, 2020. Accessed August 6, 2020. Available from <https://www.newsoptimist.ca/news/back-to-school-plan-has-four-scenarios-based-on-community-transmission-outcomes-1.24181156>
26. Pandemic Expert: Schools Need Testing in Place to Safely Reopen. WebMD News Brief. Published August 4, 2020. Accessed August 6, 2020. Available from <https://www.webmd.com/lung/news/20200804/expert-says-schools-need-testing-to-safely-reopen>
27. Teachers and scientists sound alarm over plans to reopen schools in England. The Guardian (UK). Published August 1, 2020. Accessed August 6, 2020. <https://www.theguardian.com/education/2020/aug/01/now-teachers-sound-alarm-over-plans-to-reopen-schools>
28. School can safely reopen if they follow two important procedures, studies find. CTV News. Published August 3, 2020. Accessed August 6, 2020. Available from <https://www.ctvnews.ca/health/coronavirus/school-can-safely-reopen-if-they-follow-two-important-procedures-studies-find-1.5049607>

ARTICLES

Note: References are sorted by year (newest to oldest)

1. Abdollahi E, Haworth-Brockman M, Keynan Y, et al. Simulating the effect of school closure during COVID-19 outbreaks in Ontario, Canada. BMC Med. 2020;18(1):230. DOI: 10.1186/s12916-020-01705-8

ABSTRACT: BACKGROUND: The province of Ontario, Canada, has instituted indefinite school closures (SC) as well as other social distancing measures to mitigate the impact of the novel coronavirus disease 2019 (COVID-19) pandemic. We sought to evaluate the effect of SC on reducing attack rate and the need for critical care during COVID-19 outbreaks, while considering scenarios with concurrent implementation of self-isolation (SI) of symptomatic cases. METHODS: We developed an age-structured agent-based simulation model and parameterized it with the demographics of Ontario stratified by age and the latest estimates of COVID-19 epidemiologic characteristics. Disease transmission was simulated within and between different age groups by considering inter- and intra-group contact patterns. The effect of SC of varying durations on the overall attack rate, magnitude and peak time of the outbreak, and requirement for intensive care unit (ICU) admission in the population was estimated. Secondly, the effect of concurrent community-based voluntary SI of

symptomatic COVID-19 cases was assessed. RESULTS: SC reduced attack rates in the range of 7.2-12.7% when the duration of SC increased from 3 to 16 weeks, when contacts among school children were restricted by 60-80%, and in the absence of SI by mildly symptomatic persons. Depending on the scenario, the overall reduction in ICU admissions attributed to SC throughout the outbreak ranged from 3.3 to 6.7%. When SI of mildly symptomatic persons was included and practiced by 20%, the reduction of attack rate and ICU admissions exceeded 6.3% and 9.1% (on average), respectively, in the corresponding scenarios. CONCLUSION: Our results indicate that SC may have limited impact on reducing the burden of COVID-19 without measures to interrupt the chain of transmission during both pre-symptomatic and symptomatic stages. While highlighting the importance of SI, our findings indicate the need for better understanding of the epidemiologic characteristics of emerging diseases on the effectiveness of social distancing measures.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32709232>

DOI: 10.1186/s12916-020-01705-8

2. Agoratus L. RESTARTING SCHOOL FOR STUDENTS WITH DISABILITIES: SPECIAL CHALLENGES CONTINUE. *Exceptional Parent*. 2020;50(7):40-2.

ABSTRACT: The article talks about the challenges that parents and schools in the U.S. are facing in restarting school for students with disabilities amidst the coronavirus disease-2019 (COVID-19) pandemic. Topics covered include their concern about the changing landscape of special education during the pandemic, the concern of school districts that the recommended guidelines for reopening will be difficult to implement, and questions posed by a district administrator on how to proceed with reopening.

URL:

<https://www.thefreelibrary.com/RESTARTING+SCHOOL+FOR+STUDENTS+WITH+DISABILITIES+SPECIAL+CHALLENGES...-a0630831617>

3. Al-Taweel D, Al-Haqan A, Bajis D, et al. Multidisciplinary academic perspectives during the COVID-19 pandemic. *Int J Health Plann Manage*. 2020;03:03. DOI: 10.1002/hpm.3032

ABSTRACT: To date, the outbreak of the novel coronavirus (COVID-19) has infected more than 5 million people and caused around 350 000 deaths globally. In most countries, the world as we knew it came to a sudden stop and this led to the biggest shift of employees to remotely conduct their work. Academic institutions were extensively affected, as teaching and assessment activities were hampered, and graduation ceremonies were cancelled. In addition, there was an imminent disruption in academic and research activities including face-to-face conferences and conventions. Among many challenges, academics had to grapple to remain engaged professionally and socially with students and colleagues. Digital technology being an integral part of life has become essential for connectivity and communication. In this commentary, multidisciplinary academics from Kuwait and Saudi Arabia share perspectives and experiences in adapting to the COVID-19 reality. From healthcare sciences to engineering, and from business to education, this paper highlights the role academics play in combating professional and social challenges during COVID-19.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32744757>

DOI: 10.1002/hpm.3032

4. Armann JP, Unrath M, Kirsten C, et al. Anti-SARS-CoV-2 IgG antibodies in adolescent students and their teachers in Saxony, Germany (SchoolCoviDD19): very low seroprevalence and transmission rates. *medRxiv*.

2020:2020.07.16.20155143. DOI: 10.1101/2020.07.16.20155143

ABSTRACT: Background: School closures are part of the SARS-CoV-2 pandemic control measures in many countries, based on the assumption that children play a similar role in transmitting SARS-CoV-2 as they do in transmitting influenza. We therefore performed a SARS-CoV-2 seroprevalence-study in students and teachers to assess their role in the SARS-CoV-2 transmission. Methods: Students grade 8-11 and their teachers in 13 secondary schools in eastern Saxony, Germany, were invited to participate in the SchoolCoviDD19 study. Blood samples were collected between May 25th and June 30th, 2020. Anti-SARS-CoV-2 IgG were assayed using chemiluminescence immunoassay technology and all samples with a positive or equivocal test result were re-tested with two additional serological tests. Findings: 1538 students and 507 teachers participated in this study. The seroprevalence for SARS-CoV-2 was 0.6%. Even in schools with reported Covid-19 cases before the Lockdown of March 13th no clusters could be identified. 23/24 participants with a household history of COVID-19 were seronegative. By using a combination of three different immunoassays we could exclude 16 participants with a positive or equivocal results after initial testing. Interpretation: Students and teachers do not play a crucial role in driving the SARS-CoV-2 pandemic in a low prevalence setting. Transmission in families occurs very infrequently, and the number of unreported cases is low in this age group, making school closures not appear appropriate as a strategy in this low prevalence settings. Funding: This study was supported by a grant from the state of SaxonyCompeting Interest

StatementThe authors have declared no competing interest.Clinical TrialDRKS00022455Funding StatementThis study was supported by a grant from the state of SaxonyAuthor DeclarationsI confirm all relevant ethical guidelines have been followed, and any necessary IRB and/or ethics committee approvals have been obtained.YesThe details of the IRB/oversight body that provided approval or exemption for the research described are given below:The SchoolCoviDD19 study was approved by the Ethics Committee of the Technische Universitaet (TU) Dresden (BO-EK-156042020)All necessary patient/participant consent has been obtained and the appropriate institutional forms have been archived.YesI understand that all clinical trials and any other prospective interventional studies must be registered with an ICMJE-approved registry, such as ClinicalTrials.gov. I confirm that any such study reported in the manuscript has been registered and the trial registration ID is provided (note: if posting a prospective study registered retrospectively, please provide a statement in the trial ID field explaining why the study was not registered in advance).Yes I have followed all appropriate research reporting guidelines and uploaded the relevant EQUATOR Network research reporting checklist(s) and other pertinent material as supplementary files, if applicable.YesThe authors confirm that the data supporting the findings of this study are available within the article

URL: <https://www.medrxiv.org/content/medrxiv/early/2020/07/28/2020.07.16.20155143.full.pdf>

DOI: 10.1101/2020.07.16.20155143

5. Arowoshola L. Medical education engagement during the COVID-19 era - A student parents perspective. Med Educ Online. 2020;25(1):1788799. DOI: 10.1080/10872981.2020.1788799

ABSTRACT: The COVID-19 pandemic has affected the delivery of medical education and has limited the ability of student parents to fully engage with their studies. Student parents have been faced with additional challenges such as increased childcare roles and home-schooling responsibilities, splitting their focus. Identifying the issues student parents face and adopting workable solutions at all levels, will ensure the best outcomes for these students and better preparedness for the future.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32608339>

DOI: 10.1080/10872981.2020.1788799

6. Auger KA, Shah SS, Richardson T, et al. Association Between Statewide School Closure and COVID-19 Incidence and Mortality in the US. JAMA. 2020. DOI: 10.1001/jama.2020.14348

ABSTRACT: Importance: In the US, states enacted nonpharmaceutical interventions, including school closure, to reduce the spread of coronavirus disease 2019 (COVID-19). All 50 states closed schools in March 2020 despite uncertainty if school closure would be effective. Objective: To determine if school closure and its timing were associated with decreased COVID-19 incidence and mortality. Design, Setting, and Participants: US population-based observational study conducted between March 9, 2020, and May 7, 2020, using interrupted time series analyses incorporating a lag period to allow for potential policy-associated changes to occur. To isolate the association of school closure with outcomes, state-level nonpharmaceutical interventions and attributes were included in negative binomial regression models. States were examined in quartiles based on state-level COVID-19 cumulative incidence per 100000 residents at the time of school closure. Models were used to derive the estimated absolute differences between schools that closed and schools that remained open as well as the number of cases and deaths if states had closed schools when the cumulative incidence of COVID-19 was in the lowest quartile compared with the highest quartile. Exposures: Closure of primary and secondary schools. Main Outcomes and Measures: COVID-19 daily incidence and mortality per 100000 residents. Results: COVID-19 cumulative incidence in states at the time of school closure ranged from 0 to 14.75 cases per 100000 population. School closure was associated with a significant decline in the incidence of COVID-19 (adjusted relative change per week, -62% [95% CI, -71% to -49%]) and mortality (adjusted relative change per week, -58% [95% CI, -68% to -46%]). Both of these associations were largest in states with low cumulative incidence of COVID-19 at the time of school closure. For example, states with the lowest incidence of COVID-19 had a -72% (95% CI, -79% to -62%) relative change in incidence compared with -49% (95% CI, -62% to -33%) for those states with the highest cumulative incidence. In a model derived from this analysis, it was estimated that closing schools when the cumulative incidence of COVID-19 was in the lowest quartile compared with the highest quartile was associated with 128.7 fewer cases per 100000 population over 26 days and with 1.5 fewer deaths per 100000 population over 16 days. Conclusions and Relevance: Between March 9, 2020, and May 7, 2020, school closure in the US was temporally associated with decreased COVID-19 incidence and mortality; states that closed schools earlier, when cumulative incidence of COVID-19 was low, had the largest relative reduction in incidence and mortality. However, it remains possible that some of the reduction may have been related to other concurrent nonpharmaceutical interventions.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32745200>

DOI: 10.1001/jama.2020.14348

7. Bewick S, Ludden E, Robertson S, et al. The COVID-19 Consequences of College Class Continuity Calculator: A Tool to Provide Students and Administrators with Estimated Risks of Returning to Campus. medRxiv : the preprint server for health sciences. 2020. DOI: 10.1101/2020.07.31.20165761

ABSTRACT: As schools prepare for the start of the Fall 2020 semester, many are struggling to make decisions regarding whether or not to return to on-campus classes or whether to remain fully online. Unfortunately, there is no "one-size-fits-all" answer, and schools must balance their own risks against the costs of remote learning. We present a tool that integrates information about study body composition with predictions of COVID-19 infection rates in order to provide clarity and insight into the decisions facing colleges and universities nationwide. Our tool is freely available and currently hosted at the following location: <https://bewicklab.shinyapps.io/covid-1/>
URL: <https://dx.doi.org/10.1101/2020.07.31.20165761>
DOI: 10.1101/2020.07.31.20165761

8. Chin ET, Huynh BQ, Lo NC, et al. Projected geographic disparities in healthcare worker absenteeism from COVID-19 school closures and the economic feasibility of child care subsidies: a simulation study. BMC Med. 2020;18(1):218. DOI: 10.1186/s12916-020-01692-w

ABSTRACT: BACKGROUND: School closures have been enacted as a measure of mitigation during the ongoing coronavirus disease 2019 (COVID-19) pandemic. It has been shown that school closures could cause absenteeism among healthcare workers with dependent children, but there remains a need for spatially granular analyses of the relationship between school closures and healthcare worker absenteeism to inform local community preparedness. METHODS: We provide national- and county-level simulations of school closures and unmet child care needs across the USA. We develop individual simulations using county-level demographic and occupational data, and model school closure effectiveness with age-structured compartmental models. We perform multivariate quasi-Poisson ecological regressions to find associations between unmet child care needs and COVID-19 vulnerability factors. RESULTS: At the national level, we estimate the projected rate of unmet child care needs for healthcare worker households to range from 7.4 to 8.7%, and the effectiveness of school closures as a 7.6% and 8.4% reduction in fewer hospital and intensive care unit (ICU) beds, respectively, at peak demand when varying across initial reproduction number estimates by state. At the county level, we find substantial variations of projected unmet child care needs and school closure effects, 9.5% (interquartile range (IQR) 8.2-10.9%) of healthcare worker households and 5.2% (IQR 4.1-6.5%) and 6.8% (IQR 4.8-8.8%) reduction in fewer hospital and ICU beds, respectively, at peak demand. We find significant positive associations between estimated levels of unmet child care needs and diabetes prevalence, county rurality, and race ($p < 0.05$). We estimate costs of absenteeism and child care and observe from our models that an estimated 76.3 to 96.8% of counties would find it less expensive to provide child care to all healthcare workers with children than to bear the costs of healthcare worker absenteeism during school closures. CONCLUSIONS: School closures are projected to reduce peak ICU and hospital demand, but could disrupt healthcare systems through absenteeism, especially in counties that are already particularly vulnerable to COVID-19. Child care subsidies could help circumvent the ostensible trade-off between school closures and healthcare worker absenteeism.
URL: <https://www.ncbi.nlm.nih.gov/pubmed/32664927>
DOI: 10.1186/s12916-020-01692-w

9. Claudio N, Guido N. The Effectiveness of School Closures and Other Pre-Lockdown COVID-19 Mitigation Strategies in Argentina, Italy, and South Korea. CEDLAS, Universidad Nacional de La Plata; 2020 Aug.

ABSTRACT: The rapid spread of COVID-19 forced policy-makers to swiftly find solutions to reduce infection rates and keep mortality as low as possible. Empirical analyses on the effectiveness of control measures are hereby of primary importance. School closures were among the earliest measures enacted by the governments of most countries. However, while schools are now reopening in many countries, the impact of school closures on the course of the epidemic is still an open question. Adopting parametric and non-parametric synthetic control methods we estimate the effectiveness of pro-active school closures, and other early social distancing interventions, in three countries that reacted relatively early during the course of the pandemic. Our findings suggest that these interventions were effective at reducing the mortality rate of COVID-19, especially when enacted early.
URL: <https://ideas.repec.org/p/dls/wpaper/0266.html>
DOI: DOI:

10. Coddling RS, Collier-Meek M, Jimerson S, et al. School Psychology reflections on COVID-19, antiracism, and gender and racial disparities in publishing. Sch Psychol. 2020;35(4):227-32. DOI: 10.1037/spq0000399

ABSTRACT: School Psychology is an outlet for research on children, youth, educators, and families that has scientific, practice, and policy implications. The novel coronavirus 2019 (COVID-19) pandemic has significantly disrupted K-12

schooling as well as university training, impacting educational attainment and highlighting longstanding inequality. Furthermore, the killing of Breonna Taylor and George Floyd has precipitated worldwide protests against antiblack racism, white supremacy, and police brutality. In this editorial, we highlight the potential impacts to our field, including prioritizing research related to educational equity, identifying new research questions related to technology, and utilizing new research methods. We also consider the impact of gender and racial disparities in publications during this time. Finally, given these events, we discuss how best our editorial team can serve the field. (PsycInfo Database Record (c) 2020 APA, all rights reserved).

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32673051>

DOI: 10.1037/spq0000399

11. Combe LG. Converging Pandemics Impact on Students, Schools, and Communities: COVID-19 and Racism. *NASN Sch Nurse*. 2020:1942602X20945324. DOI: 10.1177/1942602X20945324

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32684148>

DOI: 10.1177/1942602X20945324

12. Darras KE, Spouge RJ, de Bruin ABH, et al. Undergraduate Radiology Education During the COVID-19 Pandemic: A Review of Teaching and Learning Strategies. *Can Assoc Radiol J*. 2020:846537120944821. DOI: 10.1177/0846537120944821

ABSTRACT: The Coronavirus disease 2019 (COVID-19) pandemic has altered how medical education is delivered, worldwide. Didactic sessions have transitioned to electronic/online platforms and clinical teaching opportunities are limited. These changes will affect how radiology is taught to medical students at both the pre-clerkship (ie, year 1 and 2) and clinical (ie, year 3 and 4) levels. In the pre-clerkship learning environment, medical students are typically exposed to radiology through didactic lectures, integrated anatomy laboratories, case-based learning, and ultrasound clinical skills sessions. In the clinical learning environment, medical students primarily shadow radiologists and radiology residents and attend radiology resident teaching sessions. These formats of radiology education, which have been the tenets of the specialty, pose significant challenges during the pandemic. This article reviews how undergraduate radiology education is affected by COVID-19 and explores solutions for teaching and learning based on e-learning and blended learning theory.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32749165>

DOI: 10.1177/0846537120944821

13. Drezner JA, Heinz WM, Asif IM, et al. Cardiopulmonary Considerations for High School Student-Athletes During the COVID-19 Pandemic: NFHS-AMSSM Guidance Statement. *Sports Health*. 2020:1941738120941490. DOI: 10.1177/1941738120941490

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32640879>

DOI: 10.1177/1941738120941490

14. Edmunds WJ. Finding a path to reopen schools during the COVID-19 pandemic. *The Lancet Child & Adolescent Health*. 2020. DOI: 10.1016/s2352-4642(20)30249-2

URL: [https://dx.doi.org/10.1016/s2352-4642\(20\)30249-2](https://dx.doi.org/10.1016/s2352-4642(20)30249-2)

DOI: 10.1016/s2352-4642(20)30249-2

15. Elmer T, Mepham K, Stadtfeld C. Students under lockdown: Comparisons of students' social networks and mental health before and during the COVID-19 crisis in Switzerland. *PLoS One*. 2020;15(7):e0236337. DOI: 10.1371/journal.pone.0236337

ABSTRACT: This study investigates students' social networks and mental health before and at the time of the COVID-19 pandemic in April 2020, using longitudinal data collected since 2018. We analyze change on multiple dimensions of social networks (interaction, friendship, social support, co-studying) and mental health indicators (depression, anxiety, stress, loneliness) within two cohorts of Swiss undergraduate students experiencing the crisis (N = 212), and make additional comparisons to an earlier cohort which did not experience the crisis (N = 54). In within-person comparisons we find that interaction and co-studying networks had become sparser, and more students were studying alone. Furthermore, students' levels of stress, anxiety, loneliness, and depressive symptoms got worse, compared to measures before the crisis. Stressors shifted from fears of missing out on social life to worries about health, family, friends, and their future. Exploratory analyses suggest that COVID-19 specific worries, isolation in social networks, lack of interaction and emotional support, and physical isolation were associated with negative mental health trajectories. Female students appeared to have worse mental health trajectories when controlling for different levels of social integration and COVID-19 related stressors. As universities and researchers discuss future strategies on how to combine on-site teaching with online courses, our results indicate the

importance of considering social contacts in students' mental health and offer starting points to identify and support students at higher risk of social isolation and negative psychological effects during the COVID-19 pandemic.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32702065>

DOI: 10.1371/journal.pone.0236337

16. Elsner P, Fartasch M, Schliemann S. Dermatological recommendations on hand hygiene in schools during the COVID-19 pandemic. *J Dtsch Dermatol Ges.* 2020;12:12. DOI: 10.1111/ddg.14170

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32656884>

DOI: 10.1111/ddg.14170

17. Fantini MP, Reno C, Biserni GB, et al. COVID-19 and the re-opening of schools: a policy maker's dilemma. *Ital J Pediatr.* 2020;46(1):79. DOI: 10.1186/s13052-020-00844-1

ABSTRACT: The epidemic of coronavirus disease 2019 (COVID-19) broke out in Wuhan, China, in December 2019 and rapidly spread across the world. In order to counter this epidemic, several countries put in place different restrictive measures, such as the school's closure and a total lockdown. However, as the knowledge on the disease progresses, clinical evidence showed that children mainly have asymptomatic or mild disease and it has been suggested that they are also less likely to spread the virus. Moreover, the lockdown and the school closure could have negative consequences on children, affecting their social life, their education and their mental health. As many countries have already entered or are planning a phase of gradual lifting of the containment measures of social distancing, it seems plausible that the re-opening of nursery schools and primary schools could be considered a policy to be implemented at an early stage of recovery efforts, putting in place measures to do it safely, such as the maintenance of social distance, the reorganisation of classes into smaller groups, the provision of adequate sanitization of spaces, furniture and toys, the prompt identification of cases in the school environment and their tracing. Therefore, policy makers have the task of balancing pros and cons of the school re-opening strategy, taking into account psychological, educational and social consequences for children and their families. Another issue to be considered is represented by socio-economic disparities and inequalities which could be amplified by school's closure.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32517815>

DOI: 10.1186/s13052-020-00844-1

18. Fung IC, Cheung CN, Handel A. SARS-CoV-2 viral and serological testing when college campuses reopen - some practical considerations. *Disaster Med Public Health Prep.* 2020:1-11. DOI: 10.1017/dmp.2020.266

ABSTRACT: The coronavirus disease 2019 (COVID-19) pandemic prompted universities across the United States to close campuses in Spring 2020. Universities are deliberating whether, when, and how they should resume in-person instruction in Fall 2020. In this essay, we discuss some practical considerations for the use of two potentially useful control strategies based on testing: 1) SARS-CoV-2 RT-PCR testing followed by case-patient isolation and quarantine of close contacts, and 2) serological testing followed by an "immune shield" approach; i.e., low social distancing requirements for seropositive persons. The isolation of case-patients and quarantine of close contacts may be especially challenging, and perhaps prohibitively difficult, on many university campuses. The "immune shield" strategy might be hobbled by a low positive predictive value of the tests used in populations with low seroprevalence. Both strategies carry logistical, ethical and financial implications. The main non-pharmaceutical interventions will remain methods based on social distancing (e.g., capping class size) and personal protective behaviors (e.g., universal facemask wearing in public space) until vaccines become available, or unless the issues discussed herein can be resolved in such a way that using mass testing as main control strategies becomes viable.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32713384>

DOI: 10.1017/dmp.2020.266

19. Goldstein E, Lipsitch M, Cevik M. On the effect of age on the transmission of SARS-CoV-2 in households, schools and the community. *medRxiv : the preprint server for health sciences.* 2020:2020.07.19.20157362. DOI:

10.1101/2020.07.19.20157362

ABSTRACT: There is limited information on the effect of age on the transmission of SARS-CoV-2 infection in different settings. We undertook a review of published data/studies on detection of SARS-CoV-2 infection in contacts of COVID-19 cases, as well as serological studies, and studies of infections in the school setting to examine those issues. Those sources suggest significantly lower susceptibility to infection for children aged under 10 years compared to adults, for elevated susceptibility to infection in adults aged over 60y, and for the risk of SARS-CoV-2 infection associated with sleeping close to an infected individual. Those sources also suggest that younger adults (particularly those aged under 35y) often have high

rates of SARS-CoV-2 infection in the community. Additionally, there is evidence of robust spread of SARS-CoV-2 in high schools, and more limited spread in primary schools. Some countries with relatively large class sizes in primary schools (e.g. Chile and Israel) reported sizeable outbreaks in some of those schools, though the amount of transmission occurring in these schools (vs. outside) is not clear from current reports. Nonetheless, these reports suggest that classroom crowding and other factors related to social distancing in classrooms/schools may play a role in the spread of SARS-CoV-2 in primary schools. Those findings should have implications for school openings in different age groups of children, and they suggest the need to better protect adults over the age of 60 during the community spread of SARS-CoV-2.

URL: <https://pubmed.ncbi.nlm.nih.gov/32743609>
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7386533/>
DOI: 10.1101/2020.07.19.20157362

20. Gray DJ, Kurscheid J, Mationg ML, et al. Health-education to prevent COVID-19 in schoolchildren: a call to action. *Infect Dis Poverty*. 2020;9(1):81. DOI: 10.1186/s40249-020-00695-2

ABSTRACT: BACKGROUND: There is currently considerable international debate around school closures/openings and the role of children in the transmission of coronavirus disease 2019 (COVID-19). Whilst evidence suggests that children are not impacted by COVID-19 as severely as adults, little is still known about their transmission potential, and with a lot of asymptomatic cases they may be silent transmitters (i.e. infectious without showing clinical signs of disease), albeit at a lower level than adults. In relation to this, it is somewhat concerning that in many countries children are cared for, or are often in close contact with, older individuals such as grandparents horizontal line the age group most at risk of acquiring serious respiratory complications resulting in death. MAIN TEXT: We emphasise that in the absence of a vaccine or an effective therapeutic drug, preventive measures such as good hygiene practices horizontal line hand washing, cough etiquette, disinfection of surfaces and social distancing represent the major (in fact only) weapons that we have against COVID-19. Accordingly, we stress that there is a pressing need to develop specific COVID-19 prevention messages for schoolchildren. CONCLUSION: An entertainment education intervention for schoolchildren systematically implemented in schools would be highly effective and fill this need. With such measures in place there would be greater confidence around the opening of schools.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32611385>
DOI: 10.1186/s40249-020-00695-2

21. Greenhawt M, Shaker M, Stukus DR, et al. Rostrum: Managing Food Allergy in Schools During the COVID-19 Pandemic. *J Allergy Clin Immunol Pract*. 2020;22:22. DOI: 10.1016/j.jaip.2020.07.016

ABSTRACT: In the wake of the COVID-19 pandemic and massive disruptions to daily life in the spring of 2020, in May 2020 the CDC released guidance recommendations for schools regarding how to have students attend while adhering to principles of how to reduce the risk of contracting SARS-CoV-2. As part of physical distancing measures, the CDC is recommending that schools who traditionally have had students eat in a cafeteria or common large space instead have children eat their lunch or other meals in the classroom at already physically distanced desks. This has sparked concern for the safety of food-allergic children attending school, and some question of how the new CDC recommendations can co-exist with recommendations in the 2013 CDC Voluntary Guidelines on Managing Food Allergy in Schools as well as accommodations that students may be afforded through disability law that may have previously prohibited eating in the classroom. This expert consensus explores the issues related to evidence-based management of food allergy at school, the issues of managing the health of children attending school that are acutely posed by the constraints of an infectious pandemic, and how to harmonize these needs so that all children can attend school with minimal risk from both an infectious and allergic standpoint.

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DOI: 10.1016/j.jaip.2020.07.016

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DOI: 10.1002/ppul.24973

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URL: <https://www.ncbi.nlm.nih.gov/pubmed/32723165>

DOI: 10.1080/10872981.2020.1800981

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DOI: 10.1016/j.ajp.2020.102305

25. Iwata K, Doi A, Miyakoshi C. Was school closure effective in mitigating coronavirus disease 2019 (COVID-19)? Time series analysis using Bayesian inference. *Int J Infect Dis.* 2020;31:31. DOI: 10.1016/j.ijid.2020.07.052
ABSTRACT: OBJECTIVES: The Coronavirus disease 2019 (COVID-19) pandemic is causing significant damage to many nations. For mitigating its risk, Japan called on all elementary, junior high and high schools nationwide to close beginning March 1, 2020. However, its effectiveness in decreasing the disease burden has not been investigated. METHODS: We used daily data of the COVID-19 and coronavirus infection incidence in Japan until March 31, 2020. Time series analyses were conducted using the Bayesian method. Local linear trend models with interventional effect were constructed for the number of newly reported cases of COVID-19, including asymptomatic infections. We considered that the effects of the intervention started to appear 9 days after the school closure. RESULTS: The intervention of school closure did not appear to decrease the incidence of coronavirus infection. If the effectiveness of school closure began on March 9, the mean coefficient alpha for effectiveness of the measure was calculated to be 0.08 (95% confidence interval -0.36 to 0.65), and the actual reported cases were more than predicted, yet with a rather wide confidence interval. Sensitivity analyses using different dates also did not demonstrate the effectiveness of the school closure. DISCUSSION: School closure carried out in Japan did not show any mitigating effect on the transmission of novel coronavirus infection.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32745628>

DOI: 10.1016/j.ijid.2020.07.052

26. Khattab N, Abbas A, Abbas AR, et al. Children returning to schools following COVID-19: A balance of probabilities - Letter to the Editor. *Int J Surg.* 2020;79:202-3. DOI: 10.1016/j.ijisu.2020.05.084

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32505646>

DOI: 10.1016/j.ijisu.2020.05.084

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ABSTRACT: Although there has been consistent evidence indicating that school closures have only limited efficacy in reducing community transmission of coronavirus disease 2019 (COVID-19), the question of whether children should be kept home from school has attracted extensive and often divisive public debate in Australia. In this article we analyse the factors that drove high levels of concern among parents, teachers and the public and led to both demands for school closures in late March 2020, and to many parents' reluctance to return their children to school in May 2020. We discuss how the use of well-established principles of risk communication might have reduced much of this community concern. Then we set out a range of practical suggestions for communication practices that build trust and hence diminish concerns in relation to managing schools over the long term of the COVID-19 pandemic.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32601650>

DOI: 10.17061/phrp3022007

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URL: <https://www.ncbi.nlm.nih.gov/pubmed/32726550>

DOI: 10.1056/NEJMms2024920

29. Li TMH, Leung CSY. Exploring student mental health and intention to use online counselling in Hong Kong during the COVID-19 pandemic. *Psychiatry Clin Neurosci.* 2020;20:20. DOI: 10.1111/pcn.13117

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32686896>

DOI: 10.1111/pcn.13117

30. Li X, Xu W, Dozier M, et al. The role of children in transmission of SARS-CoV-2: A rapid review. *J Glob Health.* 2020;10(1):011101. DOI: 10.7189/jogh.10.011101

ABSTRACT: Background: Understanding the role of children in the transmission of SARS-CoV-2 is urgently required given its policy implications in relation to the reopening of schools and intergenerational contacts. Methods: We conducted a rapid review of studies that investigated the role of children in the transmission of SARS-CoV-2. We synthesized evidence for four categories: 1) studies reporting documented cases of SARS-CoV-2 transmission by infected children; 2) studies presenting indirect evidence on the potential of SARS-CoV-2 transmission by (both symptomatic and asymptomatic) children; 3) studies reporting cluster outbreaks of COVID-19 in schools; 4) studies estimating the proportions of children infected by SARS-CoV-2, and reported results narratively. Results: A total of 16 unique studies were included for narrative synthesis. There is limited evidence detailing transmission of SARS-CoV-2 from infected children. We found two studies that reported a 3-month-old whose parents developed symptomatic COVID-19 seven days after caring for the infant and two children who may have contracted COVID-19 from the initial cases at a school in New South Wales. In addition, we identified six studies presenting indirect evidence on the potential for SARS-CoV-2 transmission by children, three of which found prolonged virus shedding in stools. There is little data on the transmission of SARS-CoV-2 in schools. We identified only two studies reporting outbreaks of COVID-19 in school settings and one case report of a child attending classes but not infecting any other pupils or staff. Lastly, we identified six studies estimating the proportion of children infected; data from population-based studies in Iceland, Italy, South Korea, Netherlands, California and a hospital-based study in the UK suggest children may be less likely to be infected. Conclusions: Preliminary results from population-based and school-based studies suggest that children may be less frequently infected or infect others, however current evidence is limited. Prolonged faecal shedding observed in studies highlights the potentially increased risk of faeco-oral transmission in children. Further seroprevalence studies (powered adequately for the paediatric population) are urgently required to establish whether children are in fact less likely to be infected compared to adults. Note: We plan to update this rapid review as new data becomes available. These updates are available at <https://www.ed.ac.uk/usher/uncover/completed-uncover-reviews>. URL: <https://www.ncbi.nlm.nih.gov/pubmed/32612817> DOI: 10.7189/jogh.10.011101

31. Liu Z, Tang H, Jin Q, et al. Sleep of preschoolers during the coronavirus disease 2019 (COVID-19) outbreak. *J Sleep Res.* 2020:e13142. DOI: 10.1111/jsr.13142

ABSTRACT: Coronavirus disease 2019 (COVID-19) has resulted in a significantly large number of psychological consequences, including sleep health. The present study evaluated sleep patterns, sleep disturbances, and associated factors in Chinese preschoolers confined at home during the COVID-19 outbreak. Caregivers of 1619 preschoolers (aged 4-6 years) recruited from 11 preschools in Zunyi, Guizhou province completed the Children's Sleep Habit Questionnaire (CSHQ) between 17th and 19th February 2020. Data were compared to a sociodemographically similar sample of preschoolers (included in the 11 preschools) in 2018. Compared to the 2018 sample, the confined preschoolers demonstrated changes in sleep patterns characterized by later bedtimes and wake times, longer nocturnal and shorter nap sleep durations, comparable 24-hr sleep duration, and fewer caregiver-reported sleep disturbances. Moreover, behavioural practices (sleeping arrangement, reduced electronic device use, regular diet) and parenting practices (harmonious family atmosphere and increased parent-child communication) were associated with less sleep disturbances in the confined sample. The present study provides the first description of the impact of prolonged home confinement during the COVID-19 outbreak on sleep patterns and sleep disturbances in preschoolers, as well as highlighting the importance of the link between sleep health and family factors. Given that disrupted and insufficient sleep has been linked to immune system dysfunction, our findings also have potential implications for resilience to infection in young children during the COVID-19 pandemic. Future studies should further explore deficient sleep as a risk factor for coronavirus infection.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32716566>

DOI: 10.1111/jsr.13142

32. Luthar SS, Ebbert AM, Kumar NL. The Well-Being Index (WBI) for schools: A brief measure of adolescents' mental health. *Psychol Assess.* 2020;13:13. DOI: 10.1037/pas0000913

ABSTRACT: Schools are increasingly concerned with the well-being of the whole child - likely, more so since the COVID-19 pandemic - and goals here were to document the psychometric properties of a brief new measure of adolescent mental health, the Well-Being Index (WBI). The measure assesses 4 symptom areas, 2 each of internalizing and externalizing symptoms-Depression, Anxiety, Rule-Breaking, and Substance Use-and an optional scale on Isolation at School. A total of 2,444 students from 2 high schools completed the WBI, the Youth Self-Report (YSR), and other related measures. Alpha coefficients showed acceptable internal consistency, with values for the 5 WBI subscales at .83, .84, .78, .79, and .74, respectively. Both exploratory and confirmatory factor analyses demonstrated consistent factorial validity. Correlations with corresponding YSR subscales indicated good convergent and discriminant validity. The WBI Substance Use and Isolation at School subscales, similarly, had high correlations with subscales from preexisting measures. Criterion-related

validity was indicated in significant correlations between WBI subscales and conceptually related dimensions of close relationships. Also examined was the percentage of youth falling above clinical cutoffs on both the WBI and YSR, and findings demonstrated high concurrent validity. Collectively, results suggest the promise of the WBI as a brief, psychometrically sound measure to assess the adjustment of adolescents, along with perceptions of school climate that can be modified toward fostering their overall well-being. (PsycInfo Database Record (c) 2020 APA, all rights reserved).

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32658519>

DOI: 10.1037/pas0000913

33. Macartney K, Quinn HE, Pillsbury AJ, et al. Transmission of SARS-CoV-2 in Australian educational settings: a prospective cohort study. *The Lancet Child & Adolescent Health*. 2020. DOI: [https://doi.org/10.1016/S2352-4642\(20\)30251-0](https://doi.org/10.1016/S2352-4642(20)30251-0)
ABSTRACT: Summary Background School closures have occurred globally during the COVID-19 pandemic. However, empiric data on transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) among children and in educational settings are scarce. In Australia, most schools have remained open during the first epidemic wave, albeit with reduced student physical attendance at the epidemic peak. We examined SARS-CoV-2 transmission among children and staff in schools and early childhood education and care (ECEC) settings in the Australian state of New South Wales (NSW). Methods Laboratory-confirmed paediatric (aged ≤ 18 years) and adult COVID-19 cases who attended a school or ECEC setting while considered infectious (defined as 24 h before symptom onset based on national guidelines during the study period) in NSW from Jan 25 to April 10, 2020, were investigated for onward transmission. All identified school and ECEC settings close contacts were required to home quarantine for 14 days, and were monitored and offered SARS-CoV-2 nucleic acid testing if symptomatic. Enhanced investigations in selected educational settings included nucleic acid testing and SARS-CoV-2 antibody testing in symptomatic and asymptomatic contacts. Secondary attack rates were calculated and compared with state-wide COVID-19 rates. Findings 15 schools and ten ECEC settings had children (n=12) or adults (n=15) attend while infectious, with 1448 contacts monitored. Of these, 633 (43.7%) of 1448 had nucleic acid testing, or antibody testing, or both, with 18 secondary cases identified (attack rate 1.2%). Five secondary cases (three children; two adults) were identified (attack rate 0.5%; 5/914) in three schools. No secondary transmission occurred in nine of ten ECEC settings among 497 contacts. However, one outbreak in an ECEC setting involved transmission to six adults and seven children (attack rate 35.1%; 13/37). Across all settings, five (28.0%) of 18 secondary infections were asymptomatic (three infants [all aged 1 year], one adolescent [age 15 years], and one adult). Interpretation SARS-CoV-2 transmission rates were low in NSW educational settings during the first COVID-19 epidemic wave, consistent with mild infrequent disease in the 1.8 million child population. With effective case-contact testing and epidemic management strategies and associated small numbers of attendances while infected, children and teachers did not contribute significantly to COVID-19 transmission via attendance in educational settings. These findings could be used to inform modelling and public health policy regarding school closures during the COVID-19 pandemic. Funding NSW Government Department of Health.

URL: <http://www.sciencedirect.com/science/article/pii/S2352464220302510>

DOI: [https://doi.org/10.1016/S2352-4642\(20\)30251-0](https://doi.org/10.1016/S2352-4642(20)30251-0)

34. Marchetti F, Tamburlini G. Time to go back to school: several good reasons beyond low infection risk. *BMJ*. 2020;370:m2625. DOI: 10.1136/bmj.m2625

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32646861>

DOI: 10.1136/bmj.m2625

35. Mayurasakorn K, Pinsawas B, Mongkolsucharitkul P, et al. School closure, COVID-19 and lunch programme: Unprecedented undernutrition crisis in low-middle income countries. *J Paediatr Child Health*. 2020;56(7):1013-7. DOI: 10.1111/jpc.15018

ABSTRACT: The coronavirus disease 2019 pandemic has affected nearly 70% of children and teenagers around the world due to school closure policies. School closure is implemented widely in order to prevent viral transmission and its impact on the broader community, based on preliminary recommendations and evidence from influenza. However, there is debate with regard to the effectiveness of school closures. Growing evidence suggests that a child's SARS-CoV-2 infection is often mild or asymptomatic and that children may not be major SARS-CoV-2 transmitters; thus, it is questionable if school closures prevent transmission significantly. This question is important as a majority of children in low- and middle-income countries depend on free school meals; unexpected long-term school closure may adversely impact nutrition and educational outcomes. Food insecurity is expected to be higher during the pandemic. In this viewpoint, we argue for a more thorough exploration of potential adverse impacts of school closures in low- and middle-income countries and recommend actions to ensure that the health and learning needs of vulnerable populations are met in this time of crisis.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32619327>

DOI: 10.1111/jpc.15018

36. McDonald CC. Reopening Schools in the Time of Pandemic: Look to the School Nurses. *J Sch Nurs*. 2020;36(4):239-40.

DOI: 10.1177/1059840520937853

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32552237>

DOI: 10.1177/1059840520937853

37. Mechili EA, Saliq A, Kamberi F, et al. Is the mental health of young students and their family members affected during the quarantine period? Evidence from the COVID-19 pandemic in Albania. *J Psychiatr Ment Health Nurs*. 2020;13:13. DOI: 10.1111/jpm.12672

ABSTRACT: INTRODUCTION: The use of quarantine method has a significant impact on mental health status. AIM: This study aimed to assess the levels of depression among bachelor and master university students (nurses/midwives) and their family members' during the quarantine period of COVID-19 pandemic. METHOD: A cross-sectional study was conducted in Vlora University, Albania. Patient Health Questionnaire (PHQ-9) was used. Institutional e-mails of all active students were used for their recruitment. RESULTS: In total, 863 students and 249 family members participated in the study. The mean PHQ-9 score was 6.220 (SD=5.803) and 6.280 (SD=5.857) for students and family members, respectively. Being unsatisfied with COVID-19 prevention measures, beliefs that COVID-19 infection and quarantine process can cause problems on their health status were the key factors for students to be screened positive for mental problems in multiple regression analysis. For parents, the last two factors were found to contribute significantly. DISCUSSION: Our findings indicate that quarantine measures have a significant impact on the levels of depression among both university students and their family members. Broader population studies are necessary to safeguard these results. IMPLICATIONS FOR PRACTICE: Provision of mental health services during the quarantine period is of paramount significance. Mental health first aid training and support could benefit both students and their parents significantly. Additionally, follow up services after the end of quarantine are recommended.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32657469>

DOI: 10.1111/jpm.12672

38. Patsali ME, Mousa DV, Papadopoulou EVK, et al. University students' changes in mental health status and determinants of behavior during the COVID-19 lockdown in Greece. *Psychiatry Res*. 2020;292:113298. DOI:

10.1016/j.psychres.2020.113298

ABSTRACT: INTRODUCTION: The aim of the study was to investigate mental health in university students in Greece, during lockdown due to COVID-19. MATERIAL AND METHODS: The data were collected online and anonymously, during lockdown; they included 1104 females (aged 22.08+/-4.96) and 431 males (aged 22.35+/-3.11). The analysis included transformation of the data with post-stratification method, descriptive statistics, Chi-square tests, Factorial Analysis of Variance and Relative Risk ratios RESULTS: : The results suggest that during, lockdown major depression was present in 12.43% with 13.46% experiencing severe distress. Risk factors were female sex, history of self-injury, suicidal attempts and following theoretical studies (RR=2-5.71). Conspiracy theories were accepted by 20-68%, with students of theoretical studies manifesting higher rates. DISCUSSION: The results of the current study confirmed that students are at high risk to develop depression and suicidality in relation to the COVID-19 outbreak. They also identified specific risk factors and pointed to the role of believing in conspiracy theories in coping with stress. They also identified populations with higher prevalence of these beliefs. Further targeted research is necessary as well as targeted intervention in vulnerable groups but concerning mental health as well as the reduction of believing in conspiracy theories.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32717710>

DOI: 10.1016/j.psychres.2020.113298

39. Quattrone F, Borghini A, Emdin M, et al. Protecting higher education institutions from COVID-19: insights from an Italian experience. *J Am Coll Health*. 2020:1-2. DOI: 10.1080/07448481.2020.1791885

ABSTRACT: Higher education institutions (HEIs) worldwide have been deeply affected by the Coronavirus Disease 2019 (COVID-19) pandemic and subsequent lockdown measures. HEIs are environments at high risk of COVID-19 diffusion, due to the high number of people sharing the same environment, and complex to protect, because of the multiple functions present (e.g. teaching rooms, research facilities, dormitories). Protection of HEIs is therefore a serious, but apparently neglect, public health issue. Italy was the first country to be heavily hit in Europe by COVID-19. Italian HEIs had to quickly respond to the emergency with multifaceted interventions to protect all the people on campus while guaranteeing the continuity of research and teaching activities. The purpose of this viewpoint is to propose and discuss a list of priority

actions for the protection of HEIs, based on international guidelines and the experience of a small size Italian Public University and Research campus.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32701399>

DOI: 10.1080/07448481.2020.1791885

40. Rosales CK, Erazo PV, Valderrama JF, et al. Sport COVID-19 orientations: Recommendations for return to physical activity and sports in children and adolescents. [Spanish]. *Revista Chilena de Pediatría*. 2020;91(7):1-16.

ABSTRACT: The COVID-19 pandemic, originated in December 2019 in Wuhan, China, forced a massive quarantine in most countries including Chile to avoid the propagation of SARS-CoV2. Since March 2020 in Chile, it affected the participation of children and youth athletes as well in education, physical activity and sports. In an effort to assess the scarce available evidence about return to sport and exercise in children and adolescents post COVID-19 pandemic and gather the opinion of experts of 4 Chilean scientific and academic societies (Sociedad Chilena de Medicina del Deporte, Sociedad Chilena de Pediatría, Sociedad Chilena de Kinesiología Deportiva and Consejo Académico Nacional de Educación Física) we have produced recommendations for a safe return to activities in Physical Activity and Health class, School Sports and Federation Sports to reduce the risks associated with the effects of confinement and to avoid the propagation of COVID-19 and. Additionally, a recommendation for parents and teachers and another for physicians for surveillance and evaluation of children and adolescents who were or will become COVID-19 patients and wish to return to sports and exercise. Copyright © 2020, Sociedad Chilena de Pediatría. All rights reserved.

41. Schiaffini R, Barbetti F, Rapini N, et al. School and pre-school children with type 1 diabetes during Covid-19 quarantine: The synergic effect of parental care and technology. *Diabetes Res Clin Pract*. 2020;166:108302. DOI:

10.1016/j.diabres.2020.108302

ABSTRACT: INTRODUCTION: Management of Type 1 Diabetes (T1D) poses numerous challenges, especially for young children and their families. Parental care positively influences the outcomes of children with T1D, while there are often criticisms in school environment. The COVID-19 pandemic has forced children and parents to spend many hours at home and diabetes care has returned mainly in the hands of parents. AIM OF THE STUDY: To evaluate the effectiveness of exclusive return to parental care in pre-school and school children with T1D treated with Tandem Basal IQ system during the COVID-19 pandemic. PATIENTS AND METHODS: 22 children (M:F = 14:8) with T1D have been evaluated. We compared insulin and CGM data (TIR, TBR and TAR) of two periods: PRE-COV and IN-COV, in which children have transitioned from normal school attendance to the exclusive care of their parents. RESULTS: During the IN-COV period a significantly ($p < 0.001$) higher median value of TIR (66,41%) was observed as compared to PRE-COV period (61,45%). Patients also showed a statistically significant difference ($p < 0.002$) between the IN-COV period and the PRE-COV period as concerning the TAR metric: respectively 29,86 +/- 10,6% vs 34,73 +/- 12,8%. The difference between the bolus insulin doses was statistically significant (PRE-COV 5,3 IU/day, IN-COV 7,9 IU/day - $p < 0.05$). CONCLUSION: Our observational real-life study confirms the positive effect of parental care in T1D very young children and demonstrates that during the COVID-19 pandemic it was possible to obtain a good glycometabolic compensation despite the significant change in lifestyle.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32623034>

DOI: 10.1016/j.diabres.2020.108302

42. Sheikh A, Sheikh A, Sheikh Z, et al. Reopening schools after the COVID-19 lockdown. *J Glob Health*. 2020;10(1):010376.

DOI: 10.7189/jogh.10.010376

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32612815>

DOI: 10.7189/jogh.10.010376

43. Simonsen AB, Ruge IF, Quaade AS, et al. High incidence of hand eczema in Danish school children following intensive hand hygiene during the COVID-19 pandemic - a nationwide questionnaire study. *Br J Dermatol*. 2020;22:22. DOI:

10.1111/bjd.19413

ABSTRACT: During the COVID-19 pandemic of Spring 2020, Denmark was one of the first countries to introduce lockdown measures. This included closing of all schools throughout Denmark by 16 March 2020. Primary schools were reopened on 15 April 2020 for grades zero to five. Specific hand hygiene guidelines were issued by the Danish Health Authorities to prevent the transmission of coronavirus: children were instructed to wash their hands for 45-60 seconds with water and soap at least every two hours and specifically upon arrival at school, before and after meals, after toilet visits, after coughing/sneezing, and whenever hands were visibly dirty.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32697848>

DOI: 10.1111/bjd.19413

44. Soest TV, Pedersen W, Bakken A, et al. Compliance with infection control rules among adolescents in Oslo during the COVID-19 pandemic. *Tidsskr Nor Laegeforen*. 2020;140(10):30. DOI: 10.4045/tidsskr.20.0449
ABSTRACT: BACKGROUND: Effective infection control is crucial for combatting the COVID-19 pandemic. We investigated whether adolescents in Oslo reported compliance with the Norwegian infection control rules during the pandemic and whether compliance with the rules was associated with sociodemographic characteristics, trust in the authorities and acceptance of the infection control rules. MATERIAL AND METHOD: Students in lower and upper secondary schools completed an electronic questionnaire (N = 12 686, 37 % response rate) during a period with strict infection control measures in force. We used self-reporting of compliance with the infection control rules, sociodemographic characteristics, trust in the authorities and people in general, and acceptance of the infection control rules. We used logistic regression analysis. RESULTS: The majority reported that they always or to a large extent complied with the rules for hand washing (n = 9 915, 84 %), refrained from shaking hands/hugging (n = 8 730, 74 %) and avoided large groups (n = 8 565, 73 %). Fewer reported to maintain physical distance (n = 5 859, 50 %). The level of trust in the government (n = 8 742, 80 %) and health authorities (n = 9 962, 92 %) was high. The highest compliance with the rules was among girls, adolescents from immigrant backgrounds, those with a high level of trust in the authorities and people in general, and those who showed acceptance of the infection control rules. INTERPRETATION: A large proportion reported to comply with the infection control rules. Adolescents from immigrant backgrounds and those who were living in the outer eastern suburbs of Oslo also more frequently reported to comply with the rules. Trust and acceptance of the rules were also important factors.
URL: <https://www.ncbi.nlm.nih.gov/pubmed/32602306>
DOI: 10.4045/tidsskr.20.0449

45. Stein-Zamir C, Abramson N, Shoob H, et al. A large COVID-19 outbreak in a high school 10 days after schools' reopening, Israel, May 2020. *Euro Surveill*. 2020;25(29):07. DOI: 10.2807/1560-7917.ES.2020.25.29.2001352
ABSTRACT: On 13 March 2020, Israel's government declared closure of all schools. Schools fully reopened on 17 May 2020. Ten days later, a major outbreak of coronavirus disease (COVID-19) occurred in a high school. The first case was registered on 26 May, the second on 27 May. They were not epidemiologically linked. Testing of the complete school community revealed 153 students (attack rate: 13.2%) and 25 staff members (attack rate: 16.6%) who were COVID-19 positive.
URL: <https://www.ncbi.nlm.nih.gov/pubmed/32720636>
DOI: 10.2807/1560-7917.ES.2020.25.29.2001352

46. Torres JP, Pinera C, De La Maza V, et al. SARS-CoV-2 antibody prevalence in blood in a large school community subject to a Covid-19 outbreak: a cross-sectional study. *Clin Infect Dis*. 2020;10:10. DOI: 10.1093/cid/ciaa955
ABSTRACT: BACKGROUND: A SARS-CoV-2 outbreak affecting 52 people from a large school community in Santiago, Chile was identified (March 12), nine days after the first country case. We assessed the magnitude of the outbreak and the role students and staff played using a self-administered antibody detection test and survey. METHODS: The school was closed on March 13, and the entire community was placed under quarantine. We implemented a home-delivery, self-administered, IgG/IgM antibody test and survey to a classroom stratified sample of students and all staff from May 4-19. We aimed to determine overall seroprevalence rates by age group, reported symptoms, contact exposure and to explore dynamics of transmission. RESULTS: Antibody positivity rates were 9.9% (95%CI: 8.2-11.8) for 1,009 students and 16.6% (95%CI: 12.1-21.9) for 235 staff. Among students, positivity was associated with younger age (P=0.01), lower grade level (P=0.05), prior RT-PCR positivity (P=0.03), and history of contact with a confirmed case (P<0.001). Among staff, positivity was higher in teachers (P=0.01) and in those previously RT-PCR positive (P<0.001). Excluding RT-PCR positive individuals, antibody positivity was associated with fever in adults and children (P=0.02; P=0.002), abdominal pain in children (P=0.001), and chest pain in adults (P=0.02). Within antibody positive individuals, 40% of students and 18% of staff reported no symptoms (P=0.01). CONCLUSIONS: Teachers were more affected during the outbreak and younger children were at higher infection risk, likely because index case(s) were teachers and/or parents from preschool. Self-administered antibody testing, supervised remotely, proved to be a suitable and rapid tool. Our study provides useful information for school re-openings.
URL: <https://www.ncbi.nlm.nih.gov/pubmed/32649743>
DOI: 10.1093/cid/ciaa955

47. Vermund SH, Pitzer VE. Asymptomatic transmission and the infection fatality risk for COVID-19: Implications for school reopening. *Clin Infect Dis*. 2020;25. DOI: 10.1093/cid/ciaa855
ABSTRACT: Asymptomatic infection occurs for numerous respiratory viral diseases, including influenza and COVID-19. We seek to clarify confusion in three areas: age-specific risks of transmission and/or disease; various definitions for the COVID-

19 "mortality rate", each useful for specific purposes; and implications for student return strategies from pre-school through university settings.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32584967>

DOI: 10.1093/cid/ciaa855

48. Viner RM, Bonell C, Drake L, et al. Reopening schools during the COVID-19 pandemic: governments must balance the uncertainty and risks of reopening schools against the clear harms associated with prolonged closure. *Arch Dis Child*. 2020;03:03. DOI: 10.1136/archdischild-2020-319963

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32747375>

DOI: 10.1136/archdischild-2020-319963

49. Wai Wong C, Tsai A, Jonas JB, et al. Digital Screen Time During COVID-19 Pandemic: Risk for a Further Myopia Boom? *Am J Ophthalmol*. 2020;29:29. DOI: 10.1016/j.ajo.2020.07.034

ABSTRACT: PURPOSE: To review the impact of increased digital device usage arising from lockdown measures instituted during the COVID-19 pandemic on myopia, and make recommendations for mitigating potential detrimental effects on myopia control. DESIGN: Perspective METHODS: Review of studies focused on digital device usage, near work, and outdoor time in relation to myopia onset and progression. Public health policies on myopia control, recommendations on screen time and information pertaining to the impact of COVID-19 on increased digital device use were presented. Recommendations to minimize the impact of the pandemic on myopia onset and progression in children were made. RESULTS: Increased digital screen time, near work and limited outdoor activities were found to be associated with the onset and progression of myopia, and could potentially be aggravated during and beyond the COVID-19 pandemic outbreak period. While school closures may be short-lived, increased access, adoption and dependence on digital devices could have a long term negative impact on childhood development. Raising awareness among parents, children and government agencies is key to mitigating myopigenic behaviours that may become entrenched during this period. CONCLUSIONS: While it is important to adopt critical measures to slow or halt the spread of COVID-19, close collaboration between parents, schools and ministries is necessary to assess and mitigate the long term collateral impact of COVID-19 on myopia control policies.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32738229>

DOI: 10.1016/j.ajo.2020.07.034

50. Workman J. How Much May COVID-19 School Closures Increase Childhood Obesity? *Obesity (Silver Spring)*. 2020;08:08. DOI: 10.1002/oby.22960

ABSTRACT: In a recent paper entitled, "COVID-19 Related School Closings and Risk of Weight Gain Among Children" Rundle et al. (2020) proposed the COVID-19 pandemic may increase obesity among American children because the pandemic, "will likely double out-of-school time this year for many children in the United States and will exacerbate the risk factors for weight gain associated with summer recess" (pg. 1). I add support to Rundle et al.'s argument by demonstrating that doubling of out-of-school time alone may lead to a sizable increase in childhood obesity.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32640077>

DOI: 10.1002/oby.22960

51. Zar HJ, Dawa J, Fischer GB, et al. Challenges of COVID-19 in children in low- and middle-income countries. *Paediatr Respir Rev*. 2020;25:25. DOI: 10.1016/j.prrv.2020.06.016

ABSTRACT: As the coronavirus pandemic extends to low and middle income countries (LMICs), there are growing concerns about the risk of coronavirus disease (COVID-19) in populations with high prevalence of comorbidities, the impact on health and economies more broadly and the capacity of existing health systems to manage the additional burden of COVID-19. The direct effects of COVID are less of a concern in children, who seem to be largely asymptomatic or to develop mild illness as occurs in high income countries; however children in LMICs constitute a high proportion of the population and may have a high prevalence of risk factors for severe lower respiratory infection such as HIV or malnutrition. Further diversion of resources from child health to address the pandemic among adults may further impact on care for children. Poor living conditions in LMICs including lack of sanitation, running water and overcrowding may facilitate transmission of SARS-CoV-2. The indirect effects of the pandemic on child health are of considerable concern, including increasing poverty levels, disrupted schooling, lack of access to school feeding schemes, reduced access to health facilities and interruptions in vaccination and other child health programs. Further challenges in LMICs include the inability to implement effective public health measures such as social distancing, hand hygiene, timely identification of infected people with self-isolation and universal use of masks. Lack of adequate personal protective equipment, especially N95 masks is a key concern for health

care worker protection. While continued schooling is crucial for children in LMICs, provision of safe environments is especially challenging in overcrowded resource constrained schools. The current crisis is a harsh reminder of the global inequity in health in LMICs. The pandemic highlights key challenges to the provision of health in LMICs, but also provides opportunities to strengthen child health broadly in such settings.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32654854>

DOI: 10.1016/j.prrv.2020.06.016

52. Zhang Y, Cao X, Wang P, et al. Emotional "inflection point" in public health emergencies with the 2019 new coronavirus pneumonia (NCP) in China. *J Affect Disord.* 2020;276:797-803. DOI: 10.1016/j.jad.2020.07.097

ABSTRACT: BACKGROUND: The outbreak of the new coronavirus pneumonia (NCP) in Wuhan, Hubei, has caused very serious consequences and severely affected people's lives and mental health. The outbreak will cause bad emotions such as tension, anxiety, fear, and so on. College students who have returned home from school face infection, isolation, and delay in starting school, and thus, their emotional stress should be observed. METHODS: This study used self-designed questionnaires and artificial intelligence (AI) to assess and analyze the emotional state of over 30,000 college students during the outbreak period in January (T1) and home quarantine in February (T2). This survey used online questionnaire (www.wjx.cn) to investigate the emotion information of college students. RESULTS: In the T1 survey, the "Typhoon Eye Effect" appeared. College students in Hubei are calmer than those outside Hubei in T1. However, in T2, an emotional "infection point" appeared, there was an "Exposure Effect", the negative emotions of students in Hubei largely increased and became higher than students outside Hubei. CONCLUSION: This survey found that there is an emotional "infection point" in February among college students, especially in the Hubei area. College students in Hubei are calmer than those outside Hubei in T1. In contrast, college students in Hubei were more nervous and scared than those outside Hubei in T2. This epidemic has caused the students to experience significant pressure and negative emotions. Therefore, universities and society should pay attention to their emotional adjustment, there are some suggestions such as establish the mental health organizations, test students' emotion status regularly.

URL: <https://www.ncbi.nlm.nih.gov/pubmed/32738664>

DOI: 10.1016/j.jad.2020.07.097

SEARCH STRATEGIES

Embase <1974 to 2020 August 05>

#	Searches	Results
1	*student/ or elementary student/ or high school student/ or middle school student/	36074
2	*school/ or high school/ or kindergarten/ or middle school/ or nursery school/ or primary school/	51907
3	(student? or school? or schoolhouse? or seminary or kindergar?en* or education* institut* or academic* or class or classes or inclass or classroom* or gradeschool* or preschool* or pre-school*).ti,kw. or (student? or school? or schoolhouse? or seminary or kindergar?en* or education* institut* or academic* or class or classes or inclass or classroom* or gradeschool* or preschool* or pre-school*).ab. /freq=2	644755
4	*teacher/ or school teacher/ or teaching assistant/	9574
5	(universit* or college?).ti. or (universit* or college?).ab. /freq=2	184447
6	(teacher? or schoolteacher or instructor? or education* worker? or education personnel or education assistant? or educator?).tw,kw.	94158
7	or/1-6	842714
8	*epidemic/ or exp *disease transmission/ or *communicable disease/	95811
9	(outbreak? or pandemic? or epidemic? or surge or re-surge or re-infect* or ((disease? or infect*) adj2 (transmit* or transmission? or communicat*)) or infect* or contagious or communicable).tw,kw.	2384500
10	8 or 9	2414420
11	exp coronavirinae/	17170
12	((corona* or corono*) adj1 (virus* or viral* or virinae*)) or (coronavirus* or coronavirus* or coronavirinae* or CoV)).ti,ab,kw.	35309

13	("2019-nCoV" or 2019nCoV or nCoV2019 or "nCoV-2019" or "COVID-19" or COVID19 or "CORVID-19" or CORVID19 or "WN-CoV" or WNCov or "HCoV-19" or HCoV19 or "2019 novel*" or Ncov or "n-cov" or "SARS-CoV-2" or "SARSCoV-2" or "SARSCoV2" or "SARS-CoV2" or SARSCov19 or "SARS-Cov19" or "SARSCov-19" or "SARS-Cov-19" or Ncover or Ncorona* or Ncorono* or NcovWuhan* or NcovHubei* or NcovChina* or NcovChinese* or SARS2 or "SARS-2" or SARSCoronavirus2 or "SARS-coronavirus-2" or "SARSCoronavirus 2" or "SARS coronavirus2" or SARSCoronavirus2 or "SARS-coronavirus-2" or "SARSCoronavirus 2" or "SARS coronavirus2").ti,ab,kw.	37197
14	((respiratory* adj2 (symptom* or disease* or illness* or condition*) adj10 (Wuhan* or Hubei* or China* or Chinese* or Huanan*)) or (("seafood market*" or "food market*" or pneumonia*) adj10 (Wuhan* or Hubei* or China* or Chinese* or Huanan*)) or ((outbreak* or wildlife* or pandemic* or epidemic*) adj1 (Wuhan* or Hubei* or China* or Chinese* or Huanan*))).ti,ab,kw.	2353
15	"severe acute respiratory syndrome*".ti,ab,kw.	9313
16	or/11-15	61834
17	(reopen* or resume? or resumption? or return* or post-lockdown or after lockdown or post-closure? or re-open* or restart* or re-start*).ti. or (reopen* or resume? or resumption? or return* or post-lockdown or after lockdown or post-closure? or re-open* or restart* or re-start*).ab. /freq=2	78976
18	7 and 10 and 16 and 17	23
19	7 and 10 and 17	306
20	18 or 19	306
21	limit 20 to dd=20200701-20200807	14
22	from 21 keep 1-5, 7, 12, 14	8

Ovid MEDLINE(R) ALL <1946 to August 04, 2020>

#	Searches	Results
1	exp *Students/ or exp *Schools/	133230
2	(student? or school? or schoolhouse? or seminary or kindergar?en* or education* institut* or academic* or class or classes or inclass or classroom* or gradeschool* or preschool* or pre-school*).ti,kw. or (student? or school? or schoolhouse? or seminary or kindergar?en* or education* institut* or academic* or class or classes or inclass or classroom* or gradeschool* or preschool* or pre-school*).ab. /freq=2	533588
3	(universit* or college?).ti. or (universit* or college?).ab. /freq=2	139469
4	1 or 2 [schools/students]	567823
5	*School Teachers/	985
6	(teacher? or schoolteacher or instructor? or education* worker? or education personnel or education assistant? or educator?).tw,kf.	78432
7	5 or 6 [school teachers]	78494
8	4 or 7 [school OR teachers]	607864
9	exp *Disease Outbreaks/ or exp *Disease Transmission, Infectious/	107783
10	(outbreak? or pandemic? or epidemic? or surge or re-surge or re-infect* or ((disease? or infect*) adj2 (transmit* or transmission? or communicat*)) or infect* or contagious or communicable).tw,kf.	1948049
11	9 or 10 [outbreaks]	1978571
12	exp coronavirus/ or exp coronavirus infections/	30647
13	((corona* or corono*) adj1 (virus* or viral* or virinae*)) or (coronavirus* or coronavirus* or coronavirinae* or CoV)).ti,ab,kw,kf.	33975

14	("2019-nCoV" or 2019nCoV or nCoV2019 or "nCoV-2019" or "COVID-19" or COVID19 or "CORVID-19" or CORVID19 or "WN-CoV" or WNCov or "HCoV-19" or HCoV19 or "2019 novel*" or Ncov or "n-cov" or "SARS-CoV-2" or "SARSCoV-2" or "SARSCoV2" or "SARS-CoV2" or SARSCov19 or "SARS-Cov19" or "SARSCov-19" or "SARS-Cov-19" or Ncover or Ncorona* or Ncorono* or NcovWuhan* or NcovHubei* or NcovChina* or NcovChinese* or SARS2 or "SARS-2" or SARScoronavirus2 or "SARS-coronavirus-2" or "SARScoronavirus 2" or "SARS coronavirus2" or SARScoronavirus2 or "SARS-coronavirus-2" or "SARScoronavirus 2" or "SARS coronavirus2").ti,ab,kw,kf.	38242
15	((respiratory* adj2 (symptom* or disease* or illness* or condition*) adj10 (Wuhan* or Hubei* or China* or Chinese* or Huanan*)) or (("seafood market*" or "food market*" or pneumonia*) adj10 (Wuhan* or Hubei* or China* or Chinese* or Huanan*))).ti,ab,kw,kf. or ((outbreak* or wildlife* or pandemic* or epidemic*) adj1 (Wuhan* or Hubei* or China* or Chinese* or Huanan*)).ti,ab,kw.	2177
16	"severe acute respiratory syndrome*".ti,ab,kw,kf.	9142
17	or/12-16 [covid-19 hedge]	62222
18	(reopen* or resume? or resumption? or return* or post-lockdown or after lockdown or post-closure? or re-open* or restart* or re-start*).ti. or (reopen* or resume? or resumption? or return* or post-lockdown or after lockdown or post-closure? or re-open* or restart* or re-start*).ab. /freq=2	60188
19	4 and 11 and 17 and 18	28
20	4 and 11 and 17	844
21	4 and 11 and 18	139
22	19 or 20 or 21	955
23	limit 22 to dt=20200701-20200807	232
24	from 23 keep 2-3, 5-7, 9-10, 13, 15-16, 18-19...	50

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#	Query	Limiters/Expanders	Results
S1	(MM "Schools") OR (MH "Schools, Elementary") OR (MH "Schools, Middle") OR (MH "Schools, Secondary")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	16,292
S2	(MM "Students") OR (MH "Students, High School") OR (MH "Students, Middle School")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	21,841
S3	(MM "Teachers")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	5,859
S4	TI ((student* or school* or schoolhouse* or seminary or kindergar?en* or education* institut* or class or classes or inclass or classroom* or gradeschool* or preschool* or pre-school*)) OR MW ((student* or school* or schoolhouse* or seminary or kindergar?en* or education* institut* or class or classes or inclass or classroom* or gradeschool* or preschool* or pre-school*))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	475,241
S5	TI ((teacher* or schoolteacher* or instructor* or education* worker? or education personnel or education assistant* or	Expanders - Apply equivalent subjects	27,720

	educator*) OR MW ((teacher* or schoolteacher* or instructor* or education* worker? or education personnel or education assistant* or educator*)	Search modes - Boolean/Phrase	
S6	S1 OR S2 OR S3 OR S4 OR S5	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	490,898
S7	(MM "Disease Outbreaks+") OR (MM "Disease Transmission+")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	28,050
S8	TI ((outbreak* or pandemic* or epidemic* or surge or re-surge or re-infect* or ((disease* or infect*) N2 (transmit* or transmission* or communicat*)) or infect* or contagious or communicable)) OR MW ((outbreak* or pandemic* or epidemic* or surge or re-surge or re-infect* or ((disease* or infect*) N2 (transmit* or transmission* or communicat*)) or infect* or contagious or communicable))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	343,985
S9	S7 OR S8	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	344,467
S10	TI (reopen* or resume* or resumption* or return* or post-lockdown or after lockdown or post-closure* or re-open* or restart* or re-start*) OR MW (reopen* or resume* or resumption* or return* or post-lockdown or after lockdown or post-closure* or re-open* or restart* or re-start*)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	11,921
S11	S6 AND S9 AND S10	Limiters - Published Date: 20200101-20200831 Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	6

Google Scholar

(covid-19|corona|covid|coronavirus) AND

Search terms for other resources used in various combinations:

(Schools | Education | Classes)

(Reopen | Resume | Resumption | Return | Post-Closure | Post-Lockdown | Post Closure | Post-Closure)

(Pandemic | Epidemic | COVID-19 | Corona | COVID | Coronavirus)

Public Health

School Boards