



2019-nCoV Literature

Situation Report (Lit

Rep)

December 9, 2020

The scientific literature on COVID-19 is rapidly evolving and these articles were selected for review based on their relevance to Washington State decision making around COVID-19 response efforts. Included in these Lit Reps are some manuscripts that have been made available online as pre-prints but have not yet undergone peer review. Please be aware of this when reviewing articles included in the Lit Reps.

Key Takeaways

- **Following school reopening in England between June 1 and July 17, 2020, only 177 COVID-19 events were identified among 57,600 educational settings. Of these, 113 consisted of a single case, nine involved two or more cases that occurred close enough in time such that secondary infection was unlikely, and 55 involved outbreaks of at least two epidemiologically linked cases. There was a median of 1 secondary case in the outbreaks. The risk of an outbreak was positively associated with the level of community COVID-19 incidence. [More](#)**
- **Poor mental health was most prevalent during the early days of lockdown in England but improved rapidly, with researchers observing a sharp decline in both depressive symptoms and anxiety as early as the second week. [More](#)**

Transmission

- The risk of SARS-CoV-2 infections and outbreaks were low in educational settings since reopening in the summer half-term in England, with the likelihood of a school outbreak strongly associated with the regional level of COVID-19 incidence. A prospective cohort study among 57,600 educational settings in England reported that there were 113 educational settings in which a single infected individual was identified, nine settings in which two or more cases were detected within 48 hours (no evidence of a chain of transmission), and 55 outbreaks (at least two epidemiologically linked cases, with sequential cases diagnosed within 14 days in the same educational setting). The outbreaks involved 210 epidemiologically linked cases. This analysis corresponds to a reopening period from June 1-July 17, 2020, with enhanced surveillance after the first national lockdown.
- The risk of outbreaks increased by 72% for every five cases per 100,000 population increase in community incidence ($p < 0.0001$). Most cases linked to outbreaks (73% of 210) were in staff members and the median number of secondary cases in outbreaks was 1 (IQR 1–2) for student index cases and 1 (IQR 1–5) for staff index cases. Staff-to-staff transmission was most common, while student-to-student transmission was rare.

Ismail et al. (Dec 9, 2020). SARS-CoV-2 Infection and Transmission in Educational Settings: A Prospective, Cross-Sectional Analysis of Infection Clusters and Outbreaks in England. The Lancet Infectious Diseases. [https://doi.org/10.1016/S1473-3099\(20\)30882-3](https://doi.org/10.1016/S1473-3099(20)30882-3)

Mental Health and Personal Impact

- Data pertaining to symptoms of anxiety and depression collected from adults during the first 20 weeks of lockdown in England suggest that poor mental health was most prevalent during the early



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days of lockdown. Researchers observed a sharp decline in both depressive symptoms and anxiety as early as the second week of lockdown, suggesting rapid adaptation to circumstances. Although inequalities in mental health experiences persisted for the entire 20-week period, some groups, including women, younger adults, and individuals with lower educational attainment, had faster improvements in symptoms.

Fancourt et al. (2020). Trajectories of Anxiety and Depressive Symptoms during Enforced Isolation Due to COVID-19: Longitudinal Analyses of 36,520 Adults in England. The Lancet Psychiatry.
<https://doi.org/10.1101/2020.06.03.20120923>

Public Health Policy and Practice

- *[Preprint, not peer-reviewed]* Using publicly available neighborhood-level data on COVID-19 cases from 58 US urban counties and the two largest cities in Canada, Saha et al. reported a consistent finding that the most racially and/or economically privileged neighborhoods had the lowest rates of COVID-19 cases and deaths. No consistent trends were found for the relationship between SARS-CoV-2 testing rates and neighborhood deprivation.

Saha et al. (Dec 9, 2020). Neighbourhood-Level Racial/Ethnic and Economic Inequities in COVID-19 Burden Within Urban Areas in the US and Canada. Pre-print downloaded Dec 9 from
<https://www.medrxiv.org/content/10.1101/2020.12.07.20241018v1>

- To address inconsistencies in how policies related to closing and reopening elements of society are described and analyzed, researchers developed a framework to categorize the various policies in place in 12 US states. A comparative content analysis using a 16-element framework, including domains such as bars, restaurants, childcare, and religious gatherings, revealed high granularity and nuance between state-level policy taxonomies, with some domains (e.g. restaurants and movie theaters) showing bimodal policy intensity distributions compatible with binary (yes/no) coding, and some domains (e.g. childcare and religious gatherings) showing broader variability that would be missed without more granular coding. The framework may be useful for describing specific stages of closing and reopening, as well as for comparing the effects of different policies in various areas.

Lane et al. (Dec 8, 2020). Strengthening Policy Coding Methodologies to Improve COVID-19 Disease Modeling and Policy Responses: A Proposed Coding Framework and Recommendations. BMC Medical Research Methodology. <https://doi.org/10.1186/s12874-020-01174-w>

Other Resources and Commentaries

- [Challenges in Translating National and State Reopening Plans Into Local Reopening Policies During the COVID-19 Pandemic](#) – Public Health Reports (Dec 8)
- [Physical Distancing in Schools for SARS-CoV-2 and the Resurgence of Rhinovirus](#) – The Lancet Respiratory Medicine (Oct 22)
- [The US Public Health Service House-to-House Canvass Survey of the Morbidity and Mortality of the 1918 Influenza Pandemic](#) – American Journal of Public Health (Dec 8)
- [The Effect of the COVID-19 Pandemic on Childhood Immunizations: Ways to Strengthen Routine Vaccination](#) – Pediatric Annals (Dec 1)
- [Ensuring Safety of Operation Warp Speed Vaccines for COVID-19](#) – Journal of the National Medical Association (Dec 5)
- [Strengthening Vaccine Confidence and Acceptance in the Pediatric Provider Office](#) – Pediatric Annals (Dec 1)
- [Risk Factors for SARS-CoV-2 in a Statewide Correctional System](#) – New England Journal of Medicine (Nov 24)

- [Natural SARS-CoV-2 Infections Including Virus Isolation among Serially Tested Cats and Dogs in Households with Confirmed Human COVID-19 Cases in Texas USA](#) – BioRxiv (Dec 8)
- [Four COVID-19 Lessons for Achieving Health Equity](#) – JAMA (Dec 8)
- [All-Cause Mortality Supports the COVID-19 Mortality in Belgium and Comparison with Major Fatal Events of the Last Century](#) – Archives of Public Health (Nov 13)
- [Evidence of SARS-CoV-2 RNA in an Oropharyngeal Swab Specimen, Milan, Italy, Early December 2019](#) – Emerging Infectious Diseases (Dec 8)
- [Using Smartwatch Data to Detect COVID-19 Cases Early](#) – JAMA (Dec 8)

Report prepared by the UW Alliance for Pandemic Preparedness and Global Health Security and the START Center in collaboration with and on behalf of WA DOH COVID-19 Incident Management Team