



COVID-19

research update

Wednesday, May 13, 2020

Considerations for school reopening

A [World Health Organization document school reopening](#) (WHO, May 10) provides considerations for decision-makers and educators on how or when to reopen or close schools in the context of COVID-19. It includes a list of considerations for the reopening process as well as recommended strategies and adaptations to make when reopening schools. According to the authors, policymakers should consider the following when deciding whether to open or close schools: Current understanding about COVID-19 transmission and severity in children, local situation and epidemiology of COVID-19 where the school(s) are located and school setting and ability to maintain COVID-19 prevention and control measures. Additional factors to consider include assessing what harm might occur due to school closure and the need to maintain schools at least partially open for children whose caregivers are 'key workers' for the country.

Clinical risk score modeling

An [article assessing COVID-19 risk](#) (JAMA, May 12) describes the development and validation of a risk score (COVID-GRAM) to predict the development of critical illness in patients with COVID-19. Risk score predictors include: Chest radiography abnormality, age, hemoptysis, dyspnea, unconsciousness, number of comorbidities, cancer history, neutrophil-to-lymphocyte ratio, lactate dehydrogenase, and direct bilirubin. The article includes a [link](#) to a risk score calculator from the Guangzhou Institute of Respiratory Health. This risk scoring tool could be evaluated for use in Ohio and shared with healthcare providers.

Effectiveness of non-pharmaceutical interventions

A [study of non-pharmaceutical interventions](#) (National Bureau of Economic Research (NBER), May 2020) provides evidence for the effectiveness of NPIs to "flatten the curve" in infectious disease pandemics. It also provides cautionary lessons about the importance of maintaining NPIs in place for long enough to sustain positive impacts on total mortality. The study analyzed historic data on implementation of strategies such as school closings, prohibitions on public gatherings and quarantine/isolation and mortality rates in U.S. cities during the second wave of the Great Influenza Pandemic of 1918-1919. The analysis finds that although an increase in NPIs reduced the relative peak

death rate (“flattened the curve”), the estimated effect on overall deaths over time was small and statistically insignificant. The relatively short duration of NPI implementation was cited as the likely reason for NPIs not being more successful in curtailing total mortality. The average duration of school closings and prohibitions of public gatherings was only 36 days. The author concludes that NPI implementation of 12 weeks would likely have been more effective at reducing total deaths.

A [study of non-pharmaceutical interventions on infection rates and population immunity](#) (Science, May 13) used models applied to hospital and death data in France to show the massive impact that the French lockdown had on SARS-CoV-2 transmission and can inform exit strategies for the stay-at-home order in Ohio. By May 11, the authors project 3,900 daily infections across France, down from between 150,000–390,000 immediately prior to the lockdown. They also find that the basic reproductive number (R_0) prior to the implementation of the lockdown was 2.90, and that the lockdown resulted in a 77% reduction in transmission, dropping the R to 0.67. Population immunity appears insufficient to avoid a second wave if all control measures are released at the end of the lockdown.