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BRIEF19

A daily review of covid-19 research and policy.

RESEARCH BRIEFING

Two studies of pediatric outcomes in hospitalized patients. Infants, children, and adolescents have been spared the higher mortality rates seen in adults and especially seniors during the covid-19 pandemic. Such outcomes were never a guarantee, as the 1918 influenza pandemic (H1N1, or “Spanish flu”) hit younger aged patients hard. The percent of pediatric cases is thought to be approximately 1.7 percent in the United States; [global estimates](#) range from 1 to 6 percent, which again may reflect testing capacity and testing policy. Early in the SARS-CoV-2 outbreak, [reports](#) out of China found that infants and children generally experienced excellent outcomes, including a 15 percent rate of asymptomatic disease among the youngest age groups, higher than the fraction of symptom-free adults detected there. However, such observations may have been influenced by the testing strategies in use. In recent days, two new entries in the medical literature have appeared describing outcomes of pediatric infections among patients seen in New York City and in ten regions of Italy. The New York study, appearing in *JAMA Pediatrics* describes the features and outcomes of 50 patients who were found to be positive for SARS-CoV-2 who were ill enough to require hospitalization. During the study period (March 1 through April 15), testing was performed on 387 unique patients; 73 of the patients were eventually found to be positive for the virus (15 percent). Of these 73, fifty patients (68 percent) were hospitalized (four additional symptom-free patients were found during routine testing for psychiatric admissions). One finding different from what has been seen in adults is the shorter timespan between first symptoms and hospital admission; 1 to 5 days in children overall (average of 2 days), with adolescents having a longer period of symptoms prior to hospitalization and younger children and infants having shorter durations of illness prior to admission (1-2 days). It is unclear whether this difference reflects that pediatric patients with more serious illnesses progress more quickly than adults do, or rather, that the pattern results from physicians and parents preferring admission for monitoring even among milder cases. There is some suggestion that these cases were more severe than adult cases, though; some degree of breathing support was needed for 32 percent of the hospitalized children, and 18 percent required mechanical ventilation. A previous study of [hospitalized adults](#) in the New York City area found somewhat lower rates of mechanical ventilation (12 percent). The most important risk factor for children developing particularly serious disease was obesity (22 percent). Obesity also figured into higher rates of mechanical ventilation in patients older than 2 years of age. Most patients (80 percent) had fever. Only 6 percent had the characteristic loss of smell, though among young children, subtle differences in smell may have been challenging to detect. Meanwhile, the study out of Italy found slightly lower rates of hospitalization (58 percent), and fewer children needed any kind of support for breathing (12 percent). Whether these differences reflect differences in the relative health of American and Italian children or differences in physician and parent preferences in the two nations remains an open question. —*Jeremy Samuel Faust MD, MS*

POLICY BRIEFING

Rubber bullets discouraged by experts. In light of the ongoing protests, some police officers have resorted to the use of rubber bullets as a “non-lethal” measure for controlling crowds. Rubber bullets are also referred to as kinetic impact projectiles (KIP). Contrary to its name, rubber bullets can be built around a metal core and coated with rubber, plastic, or wood. Though less lethal than

live ammunition, rubber bullets have been associated with significant injuries and even death. [A 2017 BMJ Open](#) article that reviewed the topic identified KIP misuse as a cause of serious injury or death in crowd-control scenarios. Compounding the misuse is the limited regulation and data collection surrounding associated injuries. [Physicians for Human Rights](#) has created a petition to ban the use of rubber bullets. Some [California lawmakers](#) are calling for legislation which would regulate the use of these bullets and to create a standard regarding the use of force in protests. Meanwhile, [Amnesty International](#) has raised concerns over the inaccuracy of KIPs and is calling for a ban on devices that fires multiple rounds of KIPs. The organization also recommends the use of KIPs be limited to violent situations only, which would preclude their use in most of the protests in the US, which so far have mostly been peaceful. Additionally, these devices should not be aimed at the head, upper body, or groin. Avoiding these areas reduces the risk of significant and unnecessary injury. Audible warnings should also be employed prior to use. *Various.*

–Onyeka Otugo MD, MPH

The WHO causes confusion on contagion. Yesterday, during a [press conference](#), Dr. Maria Van Kerkhove (World Health Organization technical lead for covid-19) suggested, without evidence, that rates of symptom-free spread might be far lower than believed. Truly asymptomatic spread was described as “very rare.” This led to outcry on social media. However, it may be that contact tracing—the topic of that part of the press conference—is not the correct tool for tracking long periods of symptom-free spread, an unusual but important feature of SARS-CoV-2. *CNBC.*

–Jeremy Samuel Faust, MD MS

Needed: Thousands of contact tracers. As Big Tech develops apps to trace suspected coronavirus contacts and Congress focuses on developing privacy rules for those products, experts are [raising alarms](#) that not enough is being done to build the human army of contract tracers that is needed to track the virus. While the Director of the Centers for Disease Control and Prevention (CDC), Dr. Robert Redfield, has said that the country needs between 30,000 and 100,000 contact tracers by the fall to help stave off a new surge in infections, others are calling for up to 300,000 such workers. Contact tracers interview those infected with coronavirus to determine their recent close contacts, then reach out to those individuals and recommend that they quarantine themselves. Congress allocated \$25 billion as part of the late-April stimulus package for testing and contact tracing. The Association of State and Territorial Health Officials is now asking for an additional \$7.6 billion to hire contact tracers. Several states are behind in meeting their goals to hire and train contract tracers, and some localities have faced bureaucratic obstacles in seeking funds to hire people. One problem is that experts say contact tracing is most effective when numbers of cases are relatively low; if case numbers are high, the system becomes overwhelmed and it is difficult to contain the virus’s spread. *The Hill.*

–Joshua Lesko, MD

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Brief19 is a daily executive summary of covid-19-related medical research, news, and public policy. It was founded and created by frontline emergency medicine physicians with expertise in medical research critique, health policy, and public policy.