

BRIEF19

A daily review of covid-19 research and policy.

POLICY BRIEFING

Tear gas agents increase risk of SARS-CoV-2. Experts are worried. As thousands of people have taken to the streets to mourn George Floyd and protest police brutality, many public health experts have simultaneously [supported](#) the protests while expressing concerns that such mass gatherings might increase the spread of SARS-CoV-2. Some protesters have worn masks, but while masks lower the risk of transmission, they do not eliminate it entirely. Concerns have been [heightened](#) by the decision by some law enforcement agencies to deploy tear gas agents such as pepper spray (capsaicin) and o-chlorobenzylidene Malononitrile gas (CS or “riot control agent”). The White House itself has faced criticism, after law enforcement officers used such agents to clear a path for President Trump’s brief photo-op in front of St. John’s Church last week. (Attorney General William Barr defended the use over the weekend, [falsely stating](#) that pepper spray is not a chemical.) Experts’ concerns about tear gas are these: First, as irritants, they induce coughing and pain. Intense coughing and loud vocalizations associated with pain are droplet-increasing activities. Victims of tear gas also often experience the sensation of drowning, which has been seen to cause some demonstrators to rip off their masks and cough in panic. Such risks are well-known to medical professionals and researchers, but have never before been compounded with the concerns of the spread of a lethal pandemic pathogen such as SARS-CoV-2. For example, a 2014 [study](#) found that US Army military recruits were more likely to require hospitalizations for respiratory illnesses after being exposed to CS tear gas during training; the military has since decreased the use of these chemical agents for training purposes. *Brief19* has [previously reported](#) on the disproportionate toll covid-19 has taken on Black Americans and Americans who live in areas with more air [pollution](#). The use of tear gas agents such as capsaicin spray and CS gas adds another layer of risk to communities already reeling from the effects of systemic racism manifesting in healthcare and environmental policy. Many physicians and public health professionals nationwide have [condemned](#) the use of these tear gas agents by law enforcement during these protests. *National Public Radio*. [8 June 2020](#). –Aida Haddad M. Div.

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. 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. 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*. [9 June 2020](#). –Onyeka Otugo MD, MPH

Vaccine candidates to enter massive clinical trials. Following what have been reported in the media as successful initial trials, though not yet published, the U.S. government plans to [begin](#) more robust studies on the effectiveness of candidate vaccines for the novel coronavirus. The trials, known as Phase 3 studies, will determine if the vaccines are both safe and effective for use in humans. It is expected that tens of thousands of clinical subjects will be enrolled around the country. Typically, vaccine development and testing can take several years. However, given the toll of the coronavirus pandemic on the global economy and health care systems around the world, every effort has been made by federal agencies to speed the process. This includes coordination across several competing trials, including the use a shared oversight committee. Under normal circumstances, competing clinical trials would have a different group monitoring the safety and progress of the trials. President Trump has previously stated he believes a vaccine may be widely available by October, though infectious disease experts have stated they believe it could take at least 18 months from the time that initial trials begin until a vaccine is widely available. Concerns have already arisen that there may be difficulty in manufacturing of a vaccine in adequate quantities even after one or more products gains approval for use in the United States, due to anticipated shortages in some of the raw materials that will be needed, including glass vials that will hold the vaccine serum. *Wall Street Journal*. [11 June 2020](#). –Jordan M. Warchol, MD, MPH

Covid-19 could increase human trafficking, experts fear. Human trafficking involves using force, fraud or coercion to compel someone to engage in commercial sex or other work. It is recognized as a major global [public health problem](#) and often occurs [before, during, and after](#) major crises such as covid-19. Trafficking can adversely affect individual health. Health issues that can be caused or exacerbated by human trafficking include traumatic injury, infections, unwanted pregnancy, malnutrition, exposure to toxins, PTSD and depression. The results of these stressors can include family strife/disintegration, community bias/discrimination, business drive for exploitable/unpaid labor, and societal expectations of cheap consumer goods. Because trafficking is a clandestine criminal activity, its prevalence is [difficult to quantify](#). Based on [2016 estimates](#), internationally there may be as many as 24.9 million people currently in forced labor. Covid-19 has likely increased the risks associated with trafficking in at [least three ways](#): 1) increasing the health risks for those already exploited; 2) heightening the risk of new victims being exploited and; 3) disrupting response efforts. *We asked expert Hanni Stoklosa, MD, MPH to summarize the human trafficking and the additional health risks due to physical and psychological injuries as it may pertain to covid-19. For the full brief, please see Brief19 for 12 June 2020.*

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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.