POSITION PAPER:

Lowering the risk - Curtailing the use of chemical irritants during the COVID-19 pandemic

Omega Research Foundation

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LOWERING THE RISK - CURTAILING THE USE OF CHEMICAL IRRITANTS DURING THE COVID-19 PANDEMIC

Chemical irritants and health risks associated with their use

Chemical irritants are substances that produce sensory irritation and pain in the eyes and upper respiratory tract.[1] They can also cause inflammation of the mucous membranes, including in the respiratory tract. The chemicals most commonly used are the irritant agents CN (2-Chloroacetophenone) or CS (o-chlorobenzylidene malonitrile) – often called tear gas – and the inflammatory agents OC/Pepper (Oleoresin capsicum) or PAVA (pelargonic acid vanillylamide) – often called pepper spray. Chemical irritants are most commonly delivered through hand-held aerosol sprays, shoulder-worn and backpack sprayers, fogger machines, hand-thrown grenades, weapon-launched projectiles and grenades, and via water cannons. They are frequently used to disperse public gatherings and, in some countries, their use is permitted in places of detention.

The risks associated with the use of chemical irritants vary and depend on a range of factors, including the type of chemical agent and means of delivery used, the location and environmental conditions, the concentration and quantity of irritant used, and the age and physical condition of those exposed. People with respiratory illnesses, children, the elderly and pregnant people are particularly vulnerable to adverse health effects. The method of delivery can present a risk of injury, for example, a direct impact by a weapon-launched projectile may cause penetration wounds, concussions, other head injuries and death.

Exposure to chemical irritants results in profuse tearing of the eyes, coughing, chest tightness and difficulty breathing. It can lead, particularly in large amounts or high concentrations, to vomiting, chemical burns and blistering of the skin. The European Court of Human Rights has referred to a long list of potential medical effects the use of such irritants can cause, including: **"respiratory problems,** nausea, vomiting, **irritation of the respiratory tract, irritation of the tear ducts and eyes,** spasms, chest pain, dermatitis or allergies. In strong doses, it may cause **necrosis of tissue in the respiratory or digestive tract, pulmonary oedema** or internal haemorrhaging (haemorrhaging of the suprarenal gland)"[2] (Emphasis added). In extreme cases, exposure can cause death, either through asphyxiation or chemical poisoning.

International human rights standards mandate that "chemical irritants should only be deployed where a law enforcement official has reason to believe there is an imminent threat of injury,[3] not just of damage to property. They should not be used to disperse peaceful protests, or "where there are older people, children or others who may have difficulty in moving away to avoid the chemicals, in confined spaces or in sports stadiums where exits are restricted and there is a danger of crush injuries".[4] Omega policy is reflected in the UNODC / OHCHR Resource Book on the Use of Force and Firearms in Law Enforcement, which states, "Never use riot control agent grenades in wide areas against larger groups, unless the level of violence has reached such a high level that [law enforcement officials] cannot address the threat by directly targeting violent persons only"[5]. When chemical irritants are used, people should not be subjected to repeated or prolonged exposure.[6] In addition to these existing concerns, the use of chemical irritants during the pandemic may carry a heightened risk of causing unintentional adverse impacts.

Increased risks due to COVID-19

The American Thoracic Society has called for a moratorium on the use of tear gas and other chemical agents deployed by law enforcement against protestors participating in demonstrations, citing "the lack of crucial research, the escalation of tear gas use by law enforcement, and the likelihood of compromising lung health and promoting the spread of COVID-19"[7].

A wide range of medical professionals and public health experts have also underlined the risk presented by chemical irritants used during the pandemic, particularly in the context of the Black Lives Matters protests in the United States of America (US). Nearly 1,300 medical professionals stated their opposition to the use of chemical irritants, which **"could increase the risk of COVID-19 by making the respiratory tract more susceptible to infection, exacerbating existing inflammation, and inducing coughing"**[8] (emphasis added).

Nasal discharge and salivation caused by exposure to chemical irritants diminishes the layer of mucus in the nose, mouth and lungs, thereby damaging the body's protection against viruses and other pathogens. According to Peter Chin-Hong, a professor of infectious disease at the University of California, this causes inflammation and increases the likelihood of catching an infection.[9]

This appears to be supported by certain medical studies, notably a 2014 US Army study that found that recruits were almost 2.5 times more likely to develop an acute respiratory illness (ARI) such as influenza, bronchitis or pneumonia after being exposed to CS (tear gas).[10] The study was not carried out during the cold and flu season and subjects were exposed to CS on just a single occasion. Given that they were engaged in military training, subjects were likely to be in good health and with a good level of fitness. The study concluded that elevated concentration of CS exposure was likely to increase the risk of developing ARIs.

According to the World Health Organisation, **"the COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes"**[11] (emphasis added). Chemical irritants cause people to cough, sneeze and rub their eyes and face, and mucus and tears to stream from the nose and eyes, thus increasing the risk of spreading COVID-19.

The use of chemical irritants to police public gatherings during the pandemic

Omega has documented instances of law enforcement officials using chemical irritants to enforce COVID-19 related restrictions in at least 11 countries[12]. Examples include the use of tear gas grenades against protesters in Paris, including against those already dispersing; and the use of large quantities of tear gas to break up social gatherings in La Guajira, Colombia, forcing people in the vicinity to evacuate their homes in the middle of the night. Using large quantities of chemical irritants to disperse public gatherings is unlikely to combat the spread of COVID-19, but rather risks contributing to its spread.

Public gatherings frequently involve large groups of people in urban areas. The use of chemical irritants in such contexts is likely to cause people to panic and flee, and is likely to bring them into close proximity even if they had been maintaining distance from one another. Coughing, sneezing and increased touching of the face caused by chemical irritants heightens the risk of spreading COVID-19 when people are crowded together. This risk is exacerbated by the fact that people will need to remove protective face masks contaminated by chemical irritants.

The urban setting for most public gatherings poses specific risks in the context of the pandemic. Where chemical irritants are used near residential areas, there is a risk of affecting people not involved in the gathering, some of whom may have underlying health conditions that make them especially vulnerable to COVID-19. On a related note, crowds are not homogenous and law enforcement officials will not always know when there are people with underlying health conditions present. This risk should be considered by commanders when evaluating whether the use of chemical irritants would meet the principle of proportionality.

The pandemic has coincided with the global Black Lives Matter movement and other social protests, and widespread use of chemical irritants to disperse public gatherings has continued in many countries. For instance, the Armed Conflict Location & Event Data Project (ACLED) has reported that US public security officials used force (including tear gas and pepper spray) in 54% of the demonstrations they engaged with between 24 May and 22 August 2020.[13]

Use of tear gas and pepper spray during the pandemic has also been documented by human rights organisations. In just 12 days beginning on 25 May 2020, Amnesty International documented 89 instances where tear gas was used "unnecessarily" in 34 US states and a further 21 where pepper spray was used "unlawfully".[14] Reportedly, "these chemical irritants were used as a matter of first resort to disperse a peacefully assembled crowd or in response to non-compliance of some specific order, rather than as a **last resort** in response to widespread violence on the part of the protesters"[15]. Such use would violate international use of force standards and poses a significant public health risk during the pandemic.

Several US cities have responded to the repeated arbitrary use of tear gas against peaceful protesters by suspending or restricting its use.[16] Omega believes that suspension is appropriate in circumstances of serious and repeated misuse and is in line with the precautionary principle, particularly in light of the lack of research into the interaction between exposure to chemical irritants and the spread of COVID-19. Where use has not been abusive, and appropriate safeguards are in place, Omega considers that chemical irritants may still be used as a last resort, where there is an imminent threat of injury and in order to avoid resorting to potentially more harmful means. Even then, law enforcement officials should only use the minimum amount of irritant for the shortest time necessary to reduce the level of violence and re-establish control. Chemical irritants must not be used in confined spaces, or where opportunities for the crowd to disperse are blocked. All efforts should be made to avoid contamination of residences, and they should not be used solely to protect property.

Recommendation

The Omega Research Foundation recommends that the use of chemical irritants in the context of public gatherings should be brought into line with international human rights standards as a matter of urgency, particularly in light of the risk of exacerbating the spread of COVID-19. They should only be used when the level of violence has reached such a degree that law enforcement officials cannot contain the threat by directly targeting violent persons, and even then, only using the absolute minimum amount of chemical irritant necessary, and only after an appropriate warning, giving people time to act and allowing them a safe escape route to a safe place.

Where there have been repeated instances of alleged unlawful use of chemical irritants, their use should be suspended until measures are taken to bring usage into line with international human rights standards.

Increased risk of using chemical irritants in places of detention

When chemical irritants are used in places of detention during the pandemic, the effects on prisoners are likely to be more severe than those described above for several reasons.

Firstly, prisoners are often kept in enclosed spaces with poor ventilation, where exposure to high concentrations of chemical irritants carries an increased risk of causing serious injury or death.[17] Exposure in places of detention is more likely to be highly-concentrated, particularly if use is prolonged or repeated, or when prisoners are not provided with a viable escape route to an uncontaminated space / fresh air or able to fully decontaminate themselves (i.e. by washing the affected areas, changing clothes, etc.). In contrast, public gatherings normally take place outdoors and participants can usually vacate the contaminated area more easily.

Secondly, causing people to cough and sneeze in closed and often overcrowded prison environments carries a higher risk of carriers of the virus passing it on to others, compared to a public gathering taking place outdoors.

Thirdly, people deprived of their liberty often come from vulnerable socioeconomic backgrounds. They frequently have limited access to health care before imprisonment, and this can be exacerbated by poor healthcare facilities in prison, inadequate food and/or substance abuse.[18] These risks may be further exacerbated during the pandemic, when it may be even more difficult to see a healthcare practitioner and prisoners may not be able to receive food from visitors while visits are suspended. Exposing people in detention to chemical irritants risks making an already vulnerable population even more vulnerable to contracting the virus.

It is important to note that increasing the risk of spreading COVID-19 in places of detention does not exclusively affect prisoners. Any prison staff would also be placed at additional risk at a time when staffing levels are likely to have been reduced due to the virus. This creates a further risk of increasing the spread of the virus in the local community, when prison staff return to their homes and go about their lives outside of work.

These risks exacerbate others associated with the use of chemical irritants in enclosed spaces under normal circumstances. In 2020, the Office of the United Nations High Commissioner for Human Rights issued the UN Guidance on less lethal weapons, which provides that "chemical irritants should not be used in closed environments without adequate ventilation or where there is no viable exit, owing to the risk of death or serious injury from asphyxiation."[19] The UN Subcommittee for the Prevention of Torture (SPT) has similarly stated that it has "serious reservations about the use of irritant gases in confined spaces, as it may entail health risks and cause unnecessary suffering"[20]. These risks are exacerbated by the COVID-19 pandemic. Failure to adapt use of force policy and practice to this new reality may amount to a breach of a state's human rights obligations.

Recommendation

The Omega Research Foundation recommends that the use of chemical irritants in places of detention is drastically curtailed to situations where there is an imminent threat to life. This should be until either the pandemic is over, or an independent body of medical, scientific, legal and other experts has rigorously assessed the effect of their use in places of detention during the pandemic and can subsequently demonstrate a legitimate and safe use consistent with human rights law and standards.

Endnotes

1 Many types of chemical irritant are classified as "riot control agents" under international instruments, notably the Chemical Weapons Convention, and associated national laws and regulations.
2 Case of Oya Ataman v. Turkey, Judgment of 5 December 2006, paras. 17-18; Case of Ali Güneş v. Turkey, judgment of 10 April 2012, para. 37.
3 UN Guidance on Less Lethal Weapons, 2020, https://www.ohchr.org/Documents/HRBodies/CCPR/LLW_Guidance.pdf, para. 7.2.3.
4 ODIHR, Human Rights Handbook on Policing Assemblies, 2016, https://www.osce.org/odihr/226981, p. 79.
5 UNODC & UN OHCHR, Resource Book on the Use of Force and Firearms in Law Enforcement, 2017, https://www.unodc.org/documents/justice-and-prison-reform/17-03483_ebook.pdf, p. 88.
6 UN Guidance on Less Lethal Weapons, 2020, https://www.ohchr.org/Documents/HRBodies/CCPR/LLW_Guidance.pdf, para. 7.2.7.
7 American Thoracic Society, "Tear Gas Use During COVID-19 Pandemic Irresponsible; Moratorium Needed, Says American Thoracic Society", 11 June 2020, available at https://www.thoracic.org/about/newsroom/press-releases/journal/2020/tear-gas-use-during-covid-19-pandemic-irresponsible-moratorium-needed,-says-american-thoracic-society.php, accessed 22 July 2020.
8 See https://drive.google.com/file/d/1Jyfn4Wd2i6bRi12ePghMHtX3ys1b7K1A/view, accessed 15 July 2020.
9 https://grist.org/justice/tear-gas-and-coronavirus-are-a-recipe-for-disaster-experts-warn/, accessed 15 July 2020.
10 Hout, J. et al, "o-Chlorobenzylidene Malononitrile (CS Riot Control Agent) Associated Acute Respiratory Illnesses in a U.S. Army Basic Combat Training Cohort", Military Medicine, 179: 7 (July 2014) 793–798.
11 https://www.who.int/health-topics/coronavirus#tab=tab_1, accessed 15 July 2020.
12 https://omegaresearchfoundation.org/covid.php, accessed 4 November 2020
13 *Supra note* 11.
14 Amnesty International, USA: The World is Watching. Mass Violations by U.S. Police of Black Lives Matter Protesters' Rights, 2020, https://www.amnesty.org/download/Documents/AMR5128072020ENGLISH.PDF, p. 29.
15 Ibid.
16 Nicole Chavez, "Portland is the latest city to suspend the use of tear gas on protesters", CNN, 7 June 2020, https://edition.cnn.com/2020/06/06/us/portland-police-tear-gas-protests/index.html, accessed 4 November 2020.
17 Rothenberg, C. et al, "Tear gas: an epidemiological and mechanistic reassessment", Annals of the New York Academy of Sciences, 1378 (2016) 96–107, 99.
18 See International Committee of the Red Cross, "COVID-19: Protecting prison populations from infectious coronavirus disease", 11 March 2020, available at https://www.icrc.org/en/document/protecting-prison-populations-infectious-disease, accessed 27 July 2020.
19 UN Guidance on Less Lethal Weapons, para. 7.2.7.
20 UN Subcommittee on Prevention of Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, Report on the visit of the Subcommittee on Prevention of Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment to Brazil, 5 July 2012, UN doc. CAT/OP/BRA/1, para. 128.

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