

To whom it may concern:

I am a physician and Oregonian parent and I am alarmed by the use of tear gas as a means to control crowds at current protests in Portland, Oregon and across our nation. We are still battling the COVID-19 pandemic, and tear gas, combined with crowds, could worsen this ongoing public health crisis and tear gas can be directly lethal when unleashed on high-risk individuals. In my work as a healthcare professional, I have treated patients ill with COVID-19, and many of my colleagues have seen people die of this virus firsthand. We have also seen our patients suffer from systemic racism, and we stand with those peacefully protesting against police brutality. We write to urge you to ban the use of tear gas and other chemical weapons on peaceful protestors.

A succinct statement from Oregon Health and Science University Hospital's President Dr Danny Jacobs explains how "tear gas is a chemical that attacks the mucous membranes of the eyes, nose, throat and lungs and causes severe pain and irritation; exposure to tear gas can result in blindness, bleeding, crying and coughing. The release of airborne droplets through tear gas-induced coughing could accelerate the spread of COVID-19 and lead to a surge in new cases. Damage to the respiratory tract can put individuals at greater risk of adverse outcomes if they become infected with COVID-19."

Although many protestors and police officers are wearing masks and some other forms of personal protective equipment, these precautions are not enough when tear gas is released. People can be asymptomatic carriers of the COVID-19 virus and shed it unknowingly. An encounter with tear gas will lead those affected to take off masks and touch their faces as their eyes well up and as they cough forcefully and persistently. Social distancing cannot be observed when well-meaning individuals are rushing to assist others suffering from tear gas exposure. A large gathering of such interactions increases the risk of being infected with COVID-19. This risk applies to protestors, bystanders, and police officers; the virus is indiscriminate.

In addition to potentially exacerbating the COVID19 pandemic's loss of life, tear gas may have the power to kill directly through non-infectious means. Tear gas (a name for a collection of compounds designed to induce pain through severe irritant means, whether ocular, cutaneous, or respiratory) has been studied by our own military. Studies on military recruits, who are generally young and healthy, have found that exposure to tear gas more than doubles the rate of pneumonia, bronchitis and viral illness. This is data for young healthy military recruits in basic training- we know that those protesting for civil rights also include the elderly, children and medically vulnerable, therefore the rates of those affected, sickened, and killed will be higher. New, emerging evidence is revealing that tear gas is an abortifacient that can potentially increase the risk of spontaneous abortion in protesting pregnant women. Releasing this chemical on a general population cannot be characterized as a "non-lethal" intervention at the population level. There are surely people who will die from this tool if deployed in large numbers. Asthma affects around 11% of the population in Oregon, and tear gas can be a lethal cause of bronchospasm, provoking severe respiratory distress and potential sudden respiratory collapse in people with asthma. Indiscriminately firing tear gas into a crowd will have the risk of killing people, and it must be considered as an intervention with the potential for lethal effect.

The use of tear gas can exacerbate the pandemic in Oregon by harming all of us: protestors, bystanders, essential employees working during the protest, law enforcement, families, and entire communities. Tear gas on non-violent crowds at these protests threatens to reverse that progress and sabotage our management of the pandemic. Its status as being "non-lethal" is in question if it facilitates

the spread and infection of COVID-19 and damages the airway so that patients face increased morbidity or mortality from its use.

This is a public health issue. As a doctor, I urge you to stop using this dangerous chemical agent with potential lethal effect on our communities. Lives depend on it.

Thank you.

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