

Disaster Management During War and COVID-19: Humanitarian and Prehospital Interventions

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COVID-19: coronavirus disease 2019
UNHCR: United Nations High Commissioner for Refugees
WHO: World Health Organization

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Natural disasters, famine, drought, pandemics, war, and conflict take their toll on people, economies, and governments. Large-scale disasters like war and the conflict between Russia and Ukraine require immediate medical attention, food, water, shelter, and security for affected populations. A recent article published in *Prehospital and Disaster Medicine* presented the medical experiences from a consular repatriation and evacuation operation during the war in Afghanistan.¹ The United Nations High Commissioner for Refugees (UNHCR; Geneva, Switzerland) reports that the number of Ukrainian refugees fleeing the country is rising rapidly and has reached one million people. If the situation escalates, four million people could flee Ukraine.² This increased travel will certainly lead to a spike in coronavirus disease 2019 (COVID-19) cases in the country and those bordering it—like Poland, Hungary, Slovakia, Romania, and Moldova—while overwhelming their health care systems. The risks of an escalation are unimaginable. War in the middle of the COVID-19 pandemic is a threat to humanity.

Wars and epidemics have a long and close history. In World War I, the 1918 influenza pandemic hampered efforts to mobilize the American Expeditionary Forces. More than 60% of casualties on both sides of the American Civil War were attributed to disease.³ In a similar way, Russia's invasion of Ukraine is situated in the middle of another pandemic. The World Health Organization (WHO; Geneva, Switzerland) says that the prolonged conflict in the region threatens a humanitarian crisis and the growing rates of COVID-19 infection in Eastern Europe, where six countries—including Russia and Ukraine—have seen a doubling in case counts over the last two weeks.⁴ As of this writing, data from Johns Hopkins University (Baltimore, Maryland USA) suggests that there were 5,040,518 confirmed COVID-19 cases and 253,340 new COVID-19 cases in Ukraine from February 7 through February 13, 2022. Over 112,459 people died in Ukraine from COVID-19. Only 34.29% of the population is fully vaccinated, leaving many vulnerable to severe symptoms.⁵ In general, low vaccination rates have been a continuing problem for Ukraine long before the COVID-19 pandemic and war. Ukraine's relatively low vaccination rate could have implications for how additional surges of cases, both in Ukraine and in the European region, occur as a result of war.

Wars and armed conflicts have devastating consequences for the physical and mental health of all involved. The COVID-19 pandemic will be exacerbated by the war and herd immunity will be difficult to achieve. There is also a possibility of spike in infections and the potential emergence of new COVID-19 variants which put the whole world at risk. Vaccination and mitigation measures such as wearing of face mask, face shield, social distancing, and basic hygiene are critical for curbing the spread of the COVID-19 but are impossible to implement in the context of war and armed conflict. Added to the pandemic, war and armed conflict cause a significant loss to human life and are a major cause of disability and human rights violations world-wide. It increases the prevalence of infectious disease in refugee populations, which revealed a spike in new infectious diseases. Studies have shown that war has a negative impact on the mental health of both those involved in the conflict and civilians.⁶ This inevitably causes damage to a person's psychological well-being.

Almost a decade and a half ago, the WHO found that 65% of major infectious disease outbreaks in the 1990s were among refugee populations and conflict zones.⁷ However, whenever possible, interventions are needed to mitigate further lost lives and suffering. First, there is need for humanitarian interventions in the context of war and pandemic. Humanitarian interventions aim to meet the most basic needs of the population: food, water, shelter, and health care. Humanitarian intervention aims to mitigate the scale of death and

suffering and promises to save as many lives as possible. There is an urgent need for preparedness and pre-disaster planning to mitigate the effects of the war and pandemic. In fact, based on the recent data from the UNHCR from February 24 through March 1, 2022, there were 688 civilian casualties in Ukraine, 44% of which took place in Donetsk and Luhansk regions. At least 180 killed (26 men, 21 women, four boys, three girls, as well as six children and 120 adults whose sex is yet unknown) and 508 injured (37 men, 29 women, seven girls, two boys, as well as 19 children and 414 adults whose sex is yet unknown). Figures are believed to be higher, especially in government-controlled areas, albeit figures are difficult to corroborate due to on-going hostilities across the county. Most of these casualties were caused by the use of explosive weapons with a wide impact area, including shelling from heavy artillery, multiple

launch rocket systems, and air strikes.⁸ Second, there is an urgent need for prehospital and medical care. Hospitals will likely be hit hardest by the influx of refugees in the middle of the pandemic. In scenarios of forced evacuation, early and advanced prehospital care should be included in the chain of survival. The question is who will be prioritized in the context of war and pandemics? War-related injuries will take precedence over COVID-19 care, which will only make it easier for the virus to spread. Indeed, future efforts should focus on improving prehospital interventions and prospective validation of emergency-medicine-based prehospital care and medical direction. The disastrous effects of war and pandemic might last for generations to come. In his speech, the United Nations Secretary-General António Guterres said that: "It's not too late to save this generation from the scourge of war. We need peace."⁹

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