

War in the Time of COVID-19 Crisis: A Public Health Emergency in Ukraine

Muhammad Mainuddin Patwary;^{1,2}  Matthew H.E.M. Browning;³ Alfonso J. Rodriguez-Morales^{4,5,6}

1. Environment and Sustainability Research Initiative, Khulna, Bangladesh
2. Environmental Science Discipline, Life Science School, Khulna University, Khulna, Bangladesh
3. Department of Parks, Recreation, and Tourism Management, Clemson University, Clemson, South Carolina USA
4. Grupo de Investigación Biomedicina, Faculty of Medicine, Fundacion Universitaria Autónoma de las Américas, Pereira, Colombia
5. Master of Clinical Epidemiology and Biostatistics, Universidad Científica del Sur, Lima, Peru
6. School of Medicine, Universidad Privada Franz Tamayo, Cochabamba, Bolivia

Correspondence:

Muhammad Mainuddin Patwary
Environment and Sustainability Research Initiative
Khulna 9208 Bangladesh
E-mail: raju.es111012@gmail.com

Conflicts of interest/funding: This research received no external funding. The authors declare no conflict of interest.

Keywords: conflicts; COVID-19; emergency care; planetary health; public health; SARS-CoV-2; Ukraine

Abbreviations:

COVID-19: coronavirus disease 2019
SARS-CoV-2: severe acute respiratory syndrome coronavirus 2
UN: United Nations

Received: March 25, 2022

Accepted: April 24, 2022

doi:[10.1017/S1049023X22000863](https://doi.org/10.1017/S1049023X22000863)

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Patwary MM, Browning MHEM, Rodriguez-Morales AJ. War in the time of COVID-19 crisis: a public health emergency in Ukraine. *Prehosp Disaster Med.* 2022;37(4):568–569.

A pandemic has ravaged the world. Now, a war has generated a humanitarian catastrophe in Ukraine. On February 24, 2022, the Russian military invaded Ukraine unprovoked and unwarranted. As of writing this letter, Russian troops have edged closer to the Capital city; seized control of the Chernobyl Nuclear Plant and attacked the Zaporizhzhia Nuclear Power Plant (the largest nuclear plant in Europe); and killed large numbers of Ukrainian civilians, including children and women - all in violation of International Law.¹ The Office of the United Nations (UN) High Commissioner for Human Rights (OHCHR; Geneva, Switzerland) has documented 1,663 civilian casualties in the country, including 596 killed and 1,067 injured up to March 12, 2022. The actual number could be much higher. Moreover, 85 children have been killed and more than 100 have been injured due to the invasion, as reported by the Prosecutor General Office of Ukraine. According to the UN, another 2.8 million citizens, mostly women and children, have fled the country to neighboring Poland, Hungary, Romania, and Slovakia, and the number of internally displaced individuals continues to rise.^{2,3}

While the war threatens the sovereignty of Ukraine, the spike in coronavirus disease 2019 (COVID-19) cases has intensified the disaster response and increased unwarranted morbidity and mortality. According to a World Health Organization (WHO; Geneva, Switzerland) report, there were 791,021 new cases of COVID-19 and 8,012 fatalities in the region surrounding Ukraine from March 3 through March 9, 2022, with 25,000 new daily cases reported in Ukraine alone.^{4,5} Although case counts are now declining, case counts may spike once again due to the country's low vaccination rates. A similar situation was observed during the first year of the pandemic during the conflict between Armenia and Azerbaijan, followed by massive COVID-19 surges in both countries.⁶ Only 34% of people in Ukraine have received two doses of a COVID-19 vaccine, and less than two percent have received a third dose.⁷ Such low vaccination rates are insufficient to keep highly contagious viruses like severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) under control.⁷

Further, low vaccination rates in Ukraine are likely to increase COVID-19 infections in neighboring countries as millions of Ukrainians flee to those countries. Neighboring countries like Poland have ensured free COVID-19 testing and vaccination for Ukrainian refugees.⁸ The political and social upheaval that comes with war makes it more likely that new strains of the virus could emerge, putting the world at risk. Accelerating vaccinations and adopting public health measures like mask use, social distancing, and hygiene practices are essential to halting the spread of infection. Still, these measures are impossible to enforce when a country is under seizing.

Also horrifying are the Russian attacks on health care facilities. Thirty-one Ukrainian facilities have been attacked, and 24 have been damaged or destroyed. These attacks have caused at least 46 casualties and 12 deaths.⁵ Attacking health care infrastructure leads to the killing and severe injuries of both patients and health care workers. Moreover, attacks impede access to essential health care services, including for children, women, and other vulnerable populations. Few humanitarian groups have distributed protective equipment and provided shelter and essential services in Mariupol, Ukraine. The city has also been bombarded and prevented the further entrance of aid services.⁹ At least three major oxygen plants in Ukraine have been damaged, making treatment uncertain for approximately 2,000 people requiring high oxygen flow.¹⁰

Leading up to these attacks, the COVID-19 pandemic had already devastated Ukraine's health care system, so such attacks have been truly catastrophic. Casualties among health care workers and damage to health care facilities have disrupted the country's pandemic response. Due to a lack of diagnostic facilities, health care staff have been instructed to

monitor only the clinical signs of COVID-19. Consequently, the country has seen declines in COVID-19 cases for the past two weeks, but such statistics cannot accurately reflect the country's current situation. An earlier report shows Ukrainian people were relatively disciplined with COVID-19 mandates prior to the invasion. However, millions of Ukrainians have fled from their homes, crowded into evacuated public transportation systems, and taken shelter in temporary housing where social distances are impossible.¹¹ Some estimates suggest that an astonishingly high number of Ukrainian and Russian military – at least 90% – have fortunately been vaccinated, which may reduce the likelihood of breakouts on the battlefield.¹²

Compared to other SARS-CoV-2 strains, the dominant strain (omicron) does not seem to be as closely linked with life-threatening sickness as prior strains. Still, the sheer number of infections may translate to many Ukrainians potentially requiring hospitalization and ventilation. Overcrowding of trauma patients will inevitably lead to more limited space in emergency departments and intensive care units.¹² Ukrainian hospitals may run out of resources and increasingly handle war injuries, complicating diagnosis and treatment of potential and confirmed COVID-19 infections. Such disruptions are likely to spread infections among health care workers and the inability to perform their duties.

We urge solidarity and the immediate cessation of the Russian invasion of Ukraine. Simultaneously, we urge other European countries to employ evidence-based methods in providing aid and health care to individuals who have left Ukraine. In this humanitarian crisis, it is foremost a priority to ensure easy and safe access of humanitarian actors to all Ukrainian civilians in need,

wherever they may be. Since vaccination is essential to halt the spread of COVID-19, we endorse mobile vaccination stations for people who have left home and sheltered in communal settings, particularly those who are elderly and otherwise vulnerable. Health care facilities must be protected from all violations and obstruction so that essential health services, such as vaccinations against COVID-19 and the supply of life-saving medicines to Ukrainian civilians and refugees, can be safely maintained and strengthened. We urge the international community to reinforce pressure on Russia, hold them accountable for these anti-humanitarian actions, and call to mobilize the international humanitarian support in Ukraine. Finally, we call for global coordination among public health experts and recommend an international organization to gather more data about the war-related injuries amid pandemics to document and publicize their nature and extent.

Author Contributions

Muhammad Mainuddin Patwary: Conceptualization, writing-original draft, review, and editing.

Matthew H. E. M. Browning: Writing-review and editing.

Alfonso J. Rodriguez-Morales: Writing-review and editing.

Acknowledgement

The authors would like to give thanks to Dr. David Leon, Professor of Epidemiology, London School of Hygiene & Tropical Medicine, UK; and Dr. Iryna Sharaievska, Assistant Professor of Parks, Recreation, and Tourism Management, Clemson University, USA, for reading this manuscript and providing good insights on it.

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