Catastrophic Health Consequences of the War in Ukraine

Phil B. Fontanarosa, MD, MBA; Annette Flanagin, RN, MA; Robert M. Golub, MD

The Russian invasion of Ukraine has caused an abhorrent situation that represents the antithesis of all that medicine and public health strive to achieve. Physicians and other health professionals, who are dedicated to healing and preserving life,



Viewpoint

are once again on the forefront of emergency aid and humanitarian relief efforts

during war.¹ The barbaric attacks affecting Ukrainian civilians, destruction of residential areas and health care centers, devastation of public infrastructures and cities, and blocking of humanitarian corridors have resulted in substantial morbidity and mortality and created a catastrophic health and humanitarian crisis. Reports have recorded 3167 civilian Ukrainian casualties (including 1232 killed and 1935 injured),² an estimated 4 million refugees have been forced to flee Ukraine,³ and 6.5 million people have been internally displaced within the country,³ including an estimated 4.3 million children (nearly half of the child population of Ukraine).⁴

While most physicians and other health professionals have not experienced the challenges of practicing during war or civil conflict, those in Ukraine are bravely doing just that, as others have done in recent conflicts in Syria, Yemen, and elsewhere. In a recent article in *JAMA*⁵ and a related audio interview, ⁶ several physicians poignantly described their experiences with providing care to patients in Ukrainian cities under attack. These physicians vividly described disruptions in health care services and facilities, severe shortages of supplies and medications, and caring for and evacuating children and other patients with severe illnesses and medical emergencies.

In this issue of *JAMA*, Gostin and Rubenstein⁷ discuss several important aspects of the war in Ukraine beyond the immediate and wider health consequences. They underscore that attacks on health care facilities, personnel, and patients and other civilians represent violations of international health law and are considered war crimes. They also review issues related to accountability for perpetrators of these attacks and emphasize the pressing need to provide international humanitarian health aid to Ukraine and to assist refugees who have fled the country as well as those who have been internally displaced.

These reports, and articles in other medical and scientific journals, 8-10 augment and chronicle the global response generated by Russia's invasion of Ukraine. The United Nations General Assembly adopted resolutions condemning the Russian invasion of Ukraine and highlighted the humanitarian consequences of the Russian attacks. 11 Many nations and international organizations, such as the European Union, have imposed sanctions on Russian institutions, officials, and oligarchs. 12 In a rare display of unity, the usually divided US Senate unanimously passed a resolution that condemned Russian President Vladimir Putin as a war criminal. 13

Ultimately, as Galea¹⁴ stated, "fundamentally war is about health. The near-term and long-term consequences of war can be catastrophic for health." The mortality and morbidity and public health consequences resulting from the war in Ukraine are difficult to comprehend and impossible to tolerate—and will have long-lasting effects that will require the aid and attention of physicians and health care professionals throughout the world. 1,14 Individuals can help by contributing to organizations that provide emergency aid and health care for Ukrainian people living in the war zones, those forcefully displaced from their homes within the country, and those living as refugees in other countries. Medical journals can help by publishing accurate reports about the public health crisis caused by this war^{5-10,15} as well as reports to guide the emergency aid and care for those injured during the conflict16 and to plan for longer-term needs and care of survivors and refugees. 17,18 Journals can also provide free access to content to health care professionals and institutions in Ukraine, 19 as many journals, including the JAMA Network journals, have done.

The war in Ukraine must cease immediately. Yet, in recognition that peace is not on the near horizon and of the devastation that has occurred, the international community must continue united support for Ukraine by funding and providing humanitarian aid and emergency medical care, documenting and reporting war-related morbidity and mortality, and planning to address the near- and long-term health consequences of this catastrophic war.

ARTICLE INFORMATION

Author Affiliations: Interim Editor in Chief, JAMA and the JAMA Network (Fontanarosa); Executive Managing Editor, JAMA and the JAMA Network (Flanagin); Executive Deputy Editor, JAMA and the JAMA Network (Golub).

Corresponding Author: Phil B. Fontanarosa, MD, MBA, Interim Editor in Chief, *JAMA*, 330 N Wabash Ave, Chicago, IL 60611-5885 (Phil.Fontanarosa@iamanetwork.org).

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