

Impact of Ukrainian- Russian War on Health Care and Humanitarian Crisis

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Letter to the Editor

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Abstract

Authors explore the influence of Russian aggression on Ukrainian health care and humanitarian crises. On February 24, 2022, Ukraine faced an unprovoked brutal Russian invasion resulting in multiple negative consequences. During the 3 mo of full-scale war, Russians damaged more than 600 hospitals and killed at least 12 medics. Access to health care is severely impacted due to security concerns, restricted mobility, broken supply chains, and mass population displacement. Health care continues to come under attack (including attacks against health facilities, transport, personnel, patients, supplies, and warehouses), with a total of 295 attacks on health care, resulting in 59 injuries and 76 deaths, reported between February 24 and June 15. Ministry of Health reported that 1658 medical workers had been forced to change their residence and became employed in other regions of the country. Russian aggression negatively influenced not only the medical system and economics, but it led to a humanitarian crisis in the whole of Ukraine.

On February 24, 2022, Ukraine faced an unprovoked brutal Russian invasion resulting in multiple negative consequences. On that day, shelling and bombardment of civilian infrastructure, including schools and hospitals all over the country woke Ukrainians up.

Since then, Ukrainian doctors and patients have encountered unthinkable challenges; they have adapted to the new reality of providing health care. The medical care system is one of the areas that Russians try to “denazify” in Ukraine. During the 3 mo of full-scale war, they damaged more than 600 hospitals. At least 12 medics were killed.

The Russians are blocking the supply of drugs to the temporarily occupied territories, threatening doctors with reprisals, and doing everything possible to prevent Ukrainians from surviving.

Minister of Health of Ukraine, Viktor Lyashko, mentioned in his interview “Ukrainian truth. Life” that there are 672 damaged or looted health facilities. One hundred fifteen medical institutions have been destroyed and cannot be rebuilt. Only 34.4 billion hryvnias are needed to repair the damaged objects, and 15 billion 211 million are needed to restore the destroyed ones. It is only a matter of restoration, not modernization. Four hundred twenty-six pharmacies were also destroyed or looted, and 33 of them cannot be restored.

Ukraine’s health system is facing multiple challenges. Access to health care is severely impacted due to security concerns, restricted mobility, broken supply chains, and mass displacement. Health-care continues to come under attack (including attacks against health facilities, transport, personnel, patients, supplies, and warehouses), with a total of 295 attacks on health care, resulting in 59 injuries and 76 deaths, were reported between February 24 and June 15. Further attacks are being verified. These attacks deprive people of urgently needed care, endanger health-care providers, and undermine health systems, according to World Health Organization’s (WHO’s) Surveillance System for Attacks on Health Care.¹

Efforts are ongoing to deliver medical supplies from the WHO supply and logistics base in Lviv to affected oblasts amidst fuel shortages, limited warehouse capacity, and security restrictions due to ongoing military operations. Delivery of life-saving supplies to hard-to-reach locations remains a foremost priority for WHO.

One in 4 people in Ukraine is over 60, and the impact of the ongoing war on older people, including those with disabilities, has been substantial. Essential life-saving support and necessary evacuation assistance should be provided to those who have not been able or willing to leave their homes, including those living in care institutions. On 14 June, WHO released a joint statement with the Office of the United Nations High Commissioner for Human Rights (OHCHR), United Nations Population Fund (UNFPA), and HelpAge International on working toward upholding the rights and safeguarding the health and well-being of older people through improving and sustaining health and social care provisions.

Between March 13 and June 12, Emergency Medical Teams (EMTs) in Ukraine responded to 4604 outpatient visits, of which 16% (736 outpatient visits) were infectious diseases and 14%

Table 1. Ukrainian refugees who entered some East European countries between 24 February and 15 June

Country	Number of refugees entered the country between 24 February and 15 June Ukrainian.	Comments
Czech Republic	373,965 Ukrainian refugees entered Czechia.	
Hungary	An estimated 764,216 Ukrainian refugees entered Hungary.	
Poland	3,954,957 Ukrainian refugees entered Poland, accounting for 52% of the total refugee population.	As of 13 June, the MoH reported that 1,500 people of Ukrainian nationality were currently being treated in Polish hospitals.
Republic of Moldova	498,896 Ukrainian refugees entered the Republic of Moldova.	To date, 87 refugee accommodation centers provide shelter to 37,306 people (total capacity: 7,351). Of these, 18% are pregnant and lactating women, 25% are people with disabilities, 3% are people with severe medical conditions, 6% are minors aged 0–2 years, 37% are children between 2 and 18 years old, and 9% are older people.
Romania	642,159 Ukrainian refugees entered Romania. However, most are in transit to other countries, primarily Hungary (30%) and Bulgaria (20%).	
Slovakia	An estimated 501,335 Ukrainian refugees entered Slovakia.	As of 14 June, 81,288 refugees have requested temporary protection in Slovakia, and 189 people have applied for asylum.

(644 outpatient visits) were trauma. Among infectious diseases, the majority (640 outpatient visits) were acute respiratory infections.

As of June 14, at least 641 patients (78% of the requests) have been evacuated for medical reasons from Poland, the Republic of Moldova, Slovakia, and Ukraine by means of the European Union (EU) Civil Protection Mechanism to 13 European countries (Belgium, Denmark, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Romania, Spain, and Sweden).

According to the International Organization for Migration (IOM), as of June 14, approximately 7.13 million people have been internally displaced, and there are 7.3 million refugees.

Table 1 shows the Ukrainian refugees who entered some European countries between February 24 and June 15. According to WHO, as of 15 June 2022, there are 10,046 civilian casualties due to Russian aggression: 5565 injuries and 4481 deaths among civilians.

However, this information is inaccurate because the mayor of the Ukrainian port city of Mariupol, Vadim Boychenko, said on April 12, 2022, that only in Mariupol more than 10,000 civilians had died during the Russian siege of the city and the death toll could exceed 20,000.

Attacks on health facilities and workers are verified and published through

WHO's Surveillance System for Attacks on Health Care (SSA).¹ The SSA defines an attack on health care as: "Any act of verbal or physical violence or obstruction or threat of violence that interferes with the availability, access, and delivery of curative and preventive health services during emergencies."²

Due to the conflict, many health-care workers have had to leave their health facilities. As of April 9, the Ministry of Health reported that 1658 medical workers had been forced to change their residence and are employed in other regions of the country.

Among them: 1023 doctors; 429 specialists (nurses, midwives, paramedics, pharmacist assistants); and 206 technical workers. Most employed doctors who moved from other areas are now in the Lviv region, 250 people; in the Poltava region, 74 people; and in the Volyn region, 70 people.³ Before the conflict escalation, along the line of contact in Donetsk and Luhansk region, there was a shortage of medical staff (from 20% to 40% depending on the settlement), and approximately 60% of available primary care physicians were in preretirement and retirement age.⁴

As of April 28, 2022, a total of 175 reports of attacks on health care had been verified by WHO¹ in line with global SSA SOPs: 109 "confirmed", 12 "probable", 2 "possible" certainty levels; 73 deaths, 52 injuries; 157 impacted health facilities; 18 impacted transport; 24 impacted health personnel; 12 impacted patients; 36 impacted the delivery of medical supplies; and 5 impacted medical warehouses.

Access to health services, essential medicines, and market goods is limited by security concerns and movement restrictions related to the hostilities and the imposed martial law and curfews. Based on the shifting context, more than 200 health facilities have found themselves along conflict lines or in changed control areas. Three hundred seven health facilities were damaged by shelling.⁵ Many rural settlements do not have pharmacies or medical centers. Barriers to care include active hostilities, martial law (curfew), access to medicine (availability, access to pharmacies, cost), and access to health-care facilities (distance, damage to roads, transportation, lack of mass transport, fuel shortages, restricted movement through military checkpoints, safety concerns in facilities, lack of specialized beds and equipment, few disability accommodations, limited telemedicine, health workforce shortages, inadequate information systems, and poor patient satisfaction).⁶

Since February 24, more than 160 verified attacks on health-care facilities in Ukraine has been curtailing the services available. Access to reproductive, maternal, antenatal, and mental health care in Ukraine has also been severely affected by security concerns, restricted mobility, broken supply chains, and mass displacement. All wartime patients fall into several categories. The first group consists of military people who suffer from battlefield injuries and unfavorable environmental impacts, and the second group consists of the civilians in the occupied territories or territories close to the combat zones. Those people are suffering from limited or no access to health care and medical supplies.

Many medical professionals fled to safe territories; medical supply deliveries were disrupted during the first days of the war. Patients from this category were forced to pause or even stop their treatments because they did not have medicines. Insulins, anticoagulants, glucocorticoids, and immunobiological medicines were exceptionally scarce.

The third group consists of people who stayed in bomb shelters and basements for a long time, forming another category of

patients. Some Kyiv and Kharkiv residents stayed in underground stations. According to the site <https://alerts.in.ua>, which publishes real-time information about air raid signals, there were 366 air raid alerts in Kyiv during the 3 mo of the war. The air raids lasted 15 d, 11 h, and 26 min. In Kharkiv, the situation is worse. The total duration of air raids was 19 d, 15 h, and 3 min with 545 alerts. Conditions of the basement-located shelters such as poor illumination, lack of sunlight, humidity, dampness, longer-lasting winter cold, poor sanitary conditions, lack of necessities, malnutrition, lack and low quality of fresh water, inadequate ventilation, and insufficient space resulted in the exacerbation of chronic illnesses and musculoskeletal diseases.

The fourth group consists of patients who were temporarily displaced. Many left behind their medical records or lost them while on the move. In the new residence, many could not access medical services, confirm diagnoses and receive treatment, especially immunobiological therapy.

The identified drivers of chronic illnesses exacerbation and new diseases include stress, mechanical overload of joints, injuries, and microtrauma. In addition, those who spend much time in bomb shelters suffer from the consequences of immobilization, lack of exercise, changes in dietary routines, dehydration, hypothermia, no or limited emergency and regular medical care, and disturbed administration of treatments. On April 22, the WHO released the health-care survey report.⁷ According to this report, 30% of Ukrainians face problems with access to health care during the war.

According to the UN, the Russian invasion forced 12 million into displacement; 2.9 million more people plan to flee. According to the latest WHO survey, 2 of 5 households have at least 1 member with a chronic disease. Nearly one-third of those people suffered from a lack of health-care services. Fewer than 30% of the 1000 households that have so far responded to the needs assessment survey said that they had sought health services recently, mainly (39% of respondents) because of the security

situation, although around 27% said there were no health-care services in their area.

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References

1. WHO. Surveillance system for attacks on health care. Accessed April 28, 2022. <https://extranet.who.int/ssa/Index.aspx>
2. Zachariou M. Ukraine: one in three people with chronic conditions have problems accessing healthcare. *BMJ*. 2022;377:o1040. doi:10.1136/BMJ.o1040
3. Ukraine Ministry of Health. 9 April 9, 2022. Ukrinform. <https://www.ukrinform.ua/rubricsociety/3453195-v-ukraini-1658-medikam-dovelosa-pereihati-ta-zminitimisce-roboti-moz.html>
4. Médicos del Mundo. Impact of health reform on the primary healthcare level in conflict-affected areas of Donetsk and Luhansk Oblasts [EN/UK]. Accessed December 22, 2022. <https://reliefweb.int/report/ukraine/impact-healthcare-reform-primaryhealthcare-level-conflict-affected-areas-donetsk-and>
5. Ukrainian National News Agency. In Ukraine, 307 health facilities were damaged by shelling on 9 April 2022. https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/phsa_ukraine-longform-290422-en.pdf
6. WHO. Emergency in Ukraine: external situation report #15, published 16 June 2022: Reporting period: 2–15 June 2022. Accessed December 22, 2022. <https://www.who.int/publications/i/item/WHO-EURO-2022-5152-44915-65074>
7. WHO. Stopping attacks on health care. Accessed April 14, 2022. <https://www.who.int/activities/stopping-attacks-on-health-care>