Global Spotlights

How the on-going conflict in Ukraine is impacting cardiovascular health

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Following the outbreak of war in Ukraine on 24 February 2022, we are witnessing a conflict that has led to many civilian, military, and volunteer civil defence force casualties. Those civilians living in a theatre of war are directly exposed to combat-attributable trauma and risks from explosive ordnance. The United Nations Office for the High Commissioner for Human Rights (UNHCR) reported that by 4th September, there had been 13,917 confirmed casualties in the non-combatant civilian population with 5,718 deaths; these figures are likely to be significant underestimates. It is believed that ~18 million people have been directly impacted by the hostilities with more than 8 million internally displaced. Given the widespread destruction of housing and civil infrastructure, including the disconnection of basic utilities, initial activity to aid those affected has focused on ensuring safe shelter with humanitarian support in the form of clean water, nutrition, sanitation, and clothing.

Medical services have been badly disrupted. Monitored by the World Health Organization Surveillance System for Attacks on Health Care, as of 6th September, there had been 512 attacks against healthcare facilities, personnel, patients, transportation, and supply depots, with 100 people killed and 129 injured. Some of the remaining clinical resources, particularly those in central Ukraine, have been repurposed as trauma centres to receive casualties from the battlefront if staff are available. These professionals inevitably face ethical treatment dilemmas concerning the allocation of increasingly scarce medicines and equipment, a possible source of moral distress. This war is being pursued against the civil population in Ukraine, and hence those for CVD and hypertension. While more frequent cardiovascular and stroke mortality has been reported in combat zones, a heightened sympathetic drive variably mediating hypercoagulability, arrhythmias, and labile hypertension.

Regarding non-communicable diseases, Ukraine has a high burden of cardiovascular disease (CVD). In 2017, the European Association of Preventive Cardiology reported that CVD accounted for 772 and 441 deaths per 100,000 men and women, respectively, representing ~68% of the annual national mortality. Cardiometabolic disorders and tobacco use remain common, an enhanced primary prevention strategy having only recently been implemented. Hypertension and ischaemic heart disease are leading causes of preventable premature mortality, with relatively low rates of coronary intervention. Clinical services for other disease states such as heart failure are also comparatively underdeveloped as evidenced in the European Society of Cardiology (ESC) Heart Failure Association Atlas.

For anyone subject to the physical and emotional stressors arising from war, acute cardiovascular conditions could come into play, or underlying chronic cardiac disease may destabilise and become life-threatening. An increased incidence of acute coronary syndromes, sudden cardiac death, and acute decompensated heart failure have been reported in combat zones, a heightened sympathetic drive variably mediating hypercoagulability, arrhythmias, and labile hypertension.

Reduced availability of clinical services and cessation of prescription medication due to interruption of the medical supply chain may be contributory. According to the health cluster survey from the UN Office for Coordination of Humanitarian Affairs, 30% of those displaced are over 60 years of age, and therefore prone to the illnesses and co-morbidity typical of that age group. Of these, 35% reported poor access to healthcare and medication. Amongst the most difficult drugs to source were those for CVD and hypertension. While more frequent CVD event rates and such logistic issues are particularly pertinent during the phase of active warfare, there is also a legacy effect, as upward trends in the incidence of ischaemic heart disease and stroke tend to persist for some years into the post-conflict period.

By 2nd September, the UNHCR reported that more than 11.9 million people had been forced to travel to neighbouring countries as...
refugees (see Figure 1), the greatest proportions estimated at 4.8 and 1.2 million crossing into Poland and Romania, respectively. This exodus has triggered activation of the European Union Temporary Protection Directive which allows freedom of movement, and most of these refugees have moved on and are now widely distributed across Europe. Others have chosen to return to Ukraine. On 5 April 2022, the European Centre for Disease Prevention and Control issued guidance on the clinical assessment of Ukrainian refugees and other forcibly displaced third country nationals for use by frontline healthcare professionals deployed at border crossing points, reception, and transit centres and for national agencies in countries providing sanctuary to such individuals. This advice emphasized the need to offer comprehensive triage and care not only for potential acute conditions but also to urgently assess and manage any underlying chronic diseases, specifically highlighting the timely provision of therapy for CVD and proposing the establishment of a fast-track referral path to nominated specialist services for those cases deemed complex or at risk of deterioration. Opportunistic screening for unstable, undertreated, or undetected CVD may be useful, but in establishing robust clinical protocols, care must be taken not to overwhelm local healthcare capacity in receiving countries.

Identification of those requiring clinical assessment and care is crucial, but the lack of a central registration system has hindered tracking and the accurate collation of demographic and clinical data relating to these externally displaced people. In their hurry to escape, refugees may not carry formal documentation, and details of their medical histories and treatment may be incomplete. In Ukraine, the Ministry of Health is responsible for the delivery of clinical services, nominally free at the point of care. However, this healthcare system has been in a long period of transition, still struggling to implement a series of reforms dating back to the end of the Soviet era in 1991 and lacks coherence. Many patients opt to pay for their care formally or informally through parallel health systems, and medical records are fragmented and decentralized at regional or subregional levels and likely to be inaccessible. Furthermore, while non-governmental organizations are providing some translation services to obviate possible language difficulties, older people with CVD often exhibit varying degrees of cognitive impairment and may be unable to soundly contribute, or given their recent lived experience, could be emotionally fragile and reticent about disclosing personal details of their prior or current clinical status to official representatives of foreign states.

Thus, implementation of these processes presents challenges and opportunities. National cardiac societies affiliated to the ESC in countries bordering Ukraine, or in territories hosting refugees dispersed beyond their original place of safety, are ideally placed to optimally configure accessible, coordinated, and adequately resourced systems of care consistent with the structure of their local health economies. Such initiatives, underpinned by international collaboration, will best ensure delivery of the comprehensive CVD services required to manage the pressing and wide-ranging needs of this unanticipated influx of émigré(e)s.

Acknowledgement

We appreciate the helpful comments of Professor Barbara Casadei on an earlier version of this manuscript.

Funding

None declared.

Conflict of interest: None declared.

References


Figure 1 Refuges from Kharkiv, 73 and 69 years, at the Medyka border crossing point, southeastern Poland, 14 March 2022. Photo and information courtesy of Jacobia Dahm, Berlin, and Yuliya Talmazan, London, respectively, with permission.