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Research Letter

COVID-19 and the Ukraine–Russia conflict: warnings from history

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Dear Editor

The current crisis in Ukraine has global implications for the COVID-19 pandemic and, by extension, surgical systems[1]. Surgical care worldwide has already had to adapt to the novel coronavirus given its impacts regarding aerosol-generating procedures, personal protective equipment, triage, preoperative screening, delay to surgery after infection and, most recently, large-scale vaccination. With global cases only just beginning to trend down after the peak associated with the Omicron variant in January 2022, the rapidly evolving military conflict in eastern Europe could see a rapid spread of the virus, particularly as nations other than Ukraine and Russia become involved.

Historically, war has provided a fertile environment for the development and spread of infectious disease[2]. Examples from previous wars provide cautionary tales. After World War I came the 1915 typhus epidemic (150 000 deaths) and the 1918 H1N1 'Spanish' influenza pandemic (40 000 000 deaths). The Syrian civil war resulted in epidemics of poliomyelitis, measles, and leishmaniasis. Recent civil wars in the Democratic Republic of Congo and Afghanistan were associated with resurgences of trypanosomiasis and malaria respectively.

The mechanisms by which war potentiates the development and spread of infectious diseases are manifold. Conflict involving multiple nations necessitates international travel. Wartime environments frequently involve crowding and restrictions to usual hygiene and sanitation practices. Within the military forces and general populations of the nations involved, malnourishment, population displacement, inadequacy of temporary housing, and hospital overcrowding may also be significant contributing factors. Wars may also contribute to the emergence of infectious diseases by destroying infrastructure and reducing local capacity for disease surveillance[3]. Humanitarian aid may help ameliorate these factors, but in multiple previous instances increased rates of infectious disease manifested, irrespective of this support.

In view of these risks, there is concern regarding the potential impact of the current conflict in Ukraine on COVID-19. Currently, the global transmission and death rates associated with SARS-CoV-2 have been declining with increasing vaccination rates and infection precaution measures. However, past historical examples of wartime conflicts warn that similar factors in Ukraine may contribute to an international COVID-19 surge. In Ukraine, there was significant vaccine hesitancy and a delayed start to a national COVID-19 vaccination programme that lagged behind those of many other European nations[4]. In late January and early February 2022, Ukraine experienced its highest rate of new cases over the duration of the pandemic; however, death rates were only slightly higher than those at the same time of year in 2021. With many nations around the world closely monitoring the current conflict, it is possible that more nations will become involved in the near future. This may result in significant intermingling of international travellers, and new virulent strains may emerge that could result in resurgence of COVID-19 infections. At this stage, the concern is hypothetical. However, with limited capacity for local surveillance, COVID-19 modelling to predict and identify future epidemiological changes in Ukraine may be limited.

Lessons from history highlight the importance of striving for a cessation to armed conflict, not only because of the horrors of the conflict itself, but also because of the associated risk of infectious disease spread that may significantly compound surgical morbidity and mortality. There is the potential for war to bring together environmental and human factors that may produce novel COVID-19 variants, and associated case and death surges at a time when the global community was establishing control.

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