

Mutual support through military healthcare: the United Kingdom stands with Ukraine

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It may surprise some that the Defence Medical Services (DMS) of the UK has been supporting Ukraine for over a decade. Initially, this was through medical training and the provision of medical supplies. Shortly after the full-scale invasion of Ukraine by Russia, this increased to encompass mentoring of surgical reconstruction in the country. This in turn led to a comprehensive support package that has improved the quality and capacity for rehabilitation of wounded Ukrainian defenders through Project RENO-VATOR.¹ Large-scale combat operations (LSCO), as demonstrated by the Ukraine–Russian war, have demonstrated fundamental changes that will need to be made not only by defence but also the NHS and UK society in general to optimise patient outcomes and the survivability of the medical chain, such as through Reception Arrangements for Military Patients.² We describe below examples of the ever-strengthening relationship between Ukraine and the UK, leading to military medical learning on both sides and validating the UK's decision to stand with Ukraine for the next 100 years.³

The greatest change to how modern military medicine can be performed in the 21st century on the battlefield is from the rapid technological advances and utilisation of uncrewed aerial vehicles (UAVs).⁴ They have been used for reconnaissance of isolated casualties from infiltration operations, medical resupply, telemedicine via a speaker on a UAV to talk the casualty through life-saving procedures and finally, evacuation by uncrewed ground vehicles (UGV). UKR has successfully used UGVs to undertake casualty evacuation across distances of over 60 km, and this will increase as it moves from *repurposed* systems to *fit-for-purpose* systems. One such Ukrainian UGV (figure 1) costs considerably less than an average



Figure 1 Example of an uncrewed ground vehicle (UGV) piloted by fibre-optic cable used for casualty evacuation.

second-hand car and has already undertaken lengthy casualty evacuation missions in a 'kill zone' that extends tens of kilometres behind the front line. The helicopter Medical Evacuation Response Team and the gunship pair that synonymised Operation HERRICK in Afghanistan has evolved in Ukraine to uncrewed air–land integration—with UGVs overwatched by UAVs.

Similarly, the Ukrainian mantra for crewed medical evacuation vehicles—and indeed, the entire evacuation network—has been oft-repeated to drive the point home: *“Speed, stealth and invisibility is better than armour; speed, simplicity and robustness saves lives; evacuation is more dangerous than battle”*. Of all the examples of Ukrainian crewed ambulance platforms shared by Ukraine, few were without anti-drone cages, internal ballistic blanket protection, oxygen concentrators—rather than flammable cylinders—and the ability to self-defend both physically and in the electromagnetic spectrum.

Medical resupply has changed to reflect the increasing length of time that casualties cannot be reached. Dispersion between medics at sub-unit level within the 'kill zone' could be between 500 and 1000 m, with survival, let alone movement, being a challenge. Our Ukrainian colleagues describe harrowing accounts of the life expectancy of a frontline medic because of direct targeting by the enemy. As a result, Ukraine has developed UAV-deliverable seven-day Prolonged Casualty Care resupply packs that address many of the same issues as the Trauma Combat Casualty Care (TCCC) Individual First Aid Kit and 'Pill Pack' being issued to UK

service personnel. Ukraine's addition of items to enable basic voice communications for telemedicine and prevent environmental injuries, such as hypothermia, reflects the reality of prolonged casualty care where the self-aid phase is sometimes measured in days or even weeks.

Since the start of the full-scale invasion, more than 52 000 Ukrainians have been trained in the UK in basic battlefield first aid and over 450 in combat medic skills via Operation INTERBOW.⁵ Ukrainian feedback has driven the adoption of the TCCC course by the UK, in a shift away from previous medical training. There will be some wariness at the demise of well-known courses such as Team Medic and Battlefield Advanced Trauma Life Support; however, with TCCC being successfully delivered to Ukrainian combat medics in the UK since February 2023, the lived experience of LSCO has been invaluable in shaping the pilot course and wider considerations. A formal Technical Arrangement has been signed between the Ukrainian Military Medical Academy and the Defence Medical Academy (DMA) of the UK in May 2025. Credibility was established early through rapid delivery of a bespoke MOSTT/REBOA course for Ukrainian clinicians 6 months ahead of schedule. Scientific research has been exchanged, and academic collaboration is taking place on topics such as antimicrobial resistance,⁶ non-freezing cold injury, maximising sleep in high-intensity combat operations, post-traumatic stress disorder and brain health and the public health implications of large-scale demobilisation. In some cases, open-source publication and co-authorship for UK MoD personnel may still be some way off given the security implications, but every other opportunity to engage with counterparts, build relationships and exchange good practice has been seized.

In an environment with multiple national and supranational stakeholders, there are inevitable challenges. Initiatives are often stove-piped and inadvertently found to be being pursued in parallel working groups. Lack of coherence and transparency in governance processes, coupled with a lack of financial agility, are constant sources of frustration. Perhaps the most damaging is the seemingly persistent belief that well-intentioned actions cannot cause harm: they frequently do, especially when it comes to navigating procurement regulations or delicate negotiations in a health-care system very different from our own. However, despite this, successful international collaboration efforts are gathering pace in the fields of antimicrobial

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resistance, damage control surgery and delivery of TCCC training. Perhaps the best-known example of success is NATO's RENOVATOR programme,⁷ delivering improvements in Ukraine's military medical rehabilitation capability through the delivery of infrastructure projects, equipment and training. The UK was the first nation to partner with Ukraine and subsequently brought on board four other nations as executive agents. In return, Ukrainian clinicians have willingly shared their knowledge on both complex trauma and wounding mechanisms. This may range from changes such as refining personal armour, which is essential to prevent such injuries in the first place.⁸ One such example is the Defence Medical Services (DMS) providing the medical evidence and in-country assessment for defence equipment and support to work with industry⁹ to develop complex-geometry hard armour plates to better protect Ukrainian females using a cross-defence model successfully applied in RENOVATOR (figure 2). In this example, sizing was based upon DMS research into survivability,¹⁰ and recommended landmarks were incorporated into the latest

UK military anthropometric survey. The other end of the spectrum is to recognise that in any future conflict, the UK is likely to be the same as Ukraine in that their main limitation in the war effort is personnel; lessons learned from rehabilitation at scale mean that potentially 30% of wounded personnel could return to the fight if adequately supported within a comprehensive rehabilitation pathway.

Of all of the components of the special relationship between Ukraine and the UK, it is in medicine that the greatest sharing of knowledge and interdependence is currently occurring; what started off with predominantly the UK teaching Ukraine has now reached a point where arguably they have more to teach us. We must listen to their experiences of fighting in the drone age and adapt the DMS, the wider NHS and the whole of UK society for conflict that may be only a few years away.¹¹

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REFERENCES

- 1 UK Parliament. Ukraine: drugs and medical equipment. 2026. Available: <https://questions-statements.parliament.uk/written-questions/detail/2025-07-08/66078/> [Accessed 4 May 2026].
- 2 Arnold E, Horne S. How Would the UK's Healthcare System Cope with War? Available: <https://www.rusi.org/explore-our-research/publications/commentary/how-would-uks-healthcare-system-cope-war> [Accessed 4 May 2026].
- 3 Prime Minister's Office. UK-ukraine 100 year partnership declaration. 2025. Available: <https://www.gov.uk/government/publications/uk-ukraine-100-year-partnership-declaration/uk-ukraine-100-year-partnership-declaration> [Accessed 4 May 2026].
- 4 Spillsbury C, Miles J, Hamer A, *et al*. Medicine in the drone age: prehospital emergency care under the threat of enemy UAS. *BMJ Mil Health* 2026;**172**:292–5.
- 5 BFBS. Forces News. Op INTERBOW: Specialised medical training being given to Ukrainian armed forces' medics. Available: <https://www.forcesnews.com/ukraine/operation-interbow-specialised-medical-training-being-given-ukrainian-armed-forces-medics> [Accessed 4 May 2026].
- 6 Pallett SJC, Morkowska A, Woolley SD, *et al*. Evolving antimicrobial resistance of extensively drug-resistant Gram-negative severe infections associated with conflict wounds in Ukraine: an observational study. *The Lancet Regional Health - Europe* 2025;**52**:101274.
- 7 Ministry of Defence. UK steps up life-saving medical support for Ukraine's Armed Forces, 2026. Available: <https://www.gov.uk/government/news/uk-steps-up-life-saving-medical-support-for-ukraines-armed-forces> [Accessed 4 May 2026].
- 8 Breeze J, Bowley D, Russell J, *et al*. What is the medical requirement for a quick release system in a body armour vest? *BMJ Mil Health* 2025;**171**:193–7.
- 9 Fixing female body armour - the science behind boosting safety on the battlefield, 2026. Available: <https://www.youtube.com/watch?v=Xab-Uu3k3tg> [Accessed 4 May 2026].
- 10 Breeze J, Fryer RN, Bowley D, *et al*. Using CT scans to determine the optimal sizes of hard armour plates to protect the torso for UK female Armed Forces personnel. *BMJ Mil Health* 2023;**169**:69–74.
- 11 UK Parliament. House of Lords Library. UK civil preparedness for war: Government strategy. 2026. Available: <https://lordslibrary.parliament.uk/uk-civil-preparedness-for-war-government-strategy/> [Accessed 4 May 2026].

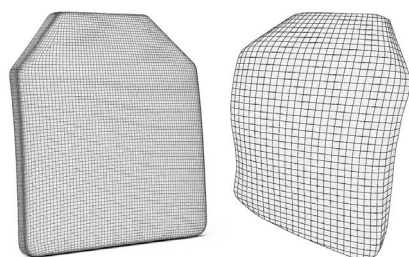


Figure 2 Incorporating curvature to a standard plate shape (left) to better reflect female anatomy (right) increases comfort and medical coverage.