

Care for Ukrainian Conflict Amputees

Gap Analysis and Recommendations

August 2025



Executive Summary

Since the full-scale Russian invasion of Ukraine in February 2022, the country has faced unprecedented medical and humanitarian crises. Estimates suggest that tens of thousands (potentially as many as 100,000 Ukrainians) have suffered war-related amputations, with thousands more requiring complex trauma care and long-term rehabilitation. By comparison, there are an estimated 1,705 war-related amputees in the U.S. from the Global War on Terror, which ran from 2001 to 2017. The scale of limb loss and disability is without precedent in Europe since WWII.

In response, Project HOPE, in collaboration with Ukrainian counterparts and a volunteer team of international medical and rehabilitation experts, conducted a comprehensive gap analysis of amputee care, with a particular focus on military patients. The assessment draws on site visits and facility assessments across Ukraine; extensive English- and Ukrainian-language literature reviews; first-person interviews with clinicians, patients and caregivers; and collaboration with humanitarian, rehabilitation, and military medicine specialists.

The findings reveal severe systemic strain across the full continuum of care, from acute trauma response to long-term rehabilitation and reintegration. Key gaps include:

- Health system overload under mass casualty conditions
- Insufficient early and integrated rehabilitation capacity and expertise beyond specialty centers
- Under-resourced mental health integration
- Geographic inequities in access to care
- Gaps in chronic care and long-term follow-up
- Lack of registries, data coordination, and standardized training

Background and Context

The February 2022 invasion and ensuing conflict have driven unprecedented levels of traumatic injury and limb loss in Ukraine. Estimates from Ukraine's Ministry of Health indicate that 30,000 to 100,000 individuals have undergone amputation since the war began, while countless others require complex trauma care and rehabilitation.

Ukraine's health care system, already strained by infrastructure damage, workforce shortages, and population displacement is overwhelmed by the surge in demand for surgical, rehabilitation, and psychosocial services. The result is unequal access, long delays, and widening inequities — especially for rural, frontline, and internally displaced patients.



Major Gaps in Care

1. Acute to Subacute Trauma System Overload

Problem: Under mass-casualty conditions, forward evacuation and Role-2/Role-3 surgical care degrade rapidly delaying definitive treatment.

Consequence: Higher rates of complex limb loss, infections, and secondary amputations with more difficult residual limb management for prosthetic fitting.

2. Insufficient Early, Integrated Rehabilitation

Problem: Large numbers of amputees overwhelm existing rehabilitation capacity; lack of access to standardized early rehabilitation pathways across regions.

Consequence: Delayed and possibly incomplete recovery, prolonged dependency, and reduced return-to-duty or civilian function.

3. Prosthetic Rehabilitation Capacity

Problem: Local fabrication and trained prosthetist capacity cannot meet current demand; heavy reliance on NGOs and sourced componentry.

Consequence: Long waits, limited access to advanced prostheses, and limited prosthetic training experience among clinicians.

4. Under-Resourced Mental Health Integration

Problem: PTSD, depression, and adjustment disorders are common but inconsistently addressed in rehabilitation programs outside specialty centers.

Consequence: Poorer functional outcomes, reduced prosthetic use, chronic pain, social isolation, and increased suicide risk.

5. Geographic and Population Inequities

Problem: Services are concentrated in larger cities and a few urban “centers of excellence;” rural, frontline, and internally displaced patients have poor access to care.

Consequence: Delayed or absent follow-up, diminished mobility, and greater long-term dependence.

6. Long-Term Follow-Up and Chronic Care Gaps

Problem: Limited capacity for ongoing residual limb care, chronic pain management, and longitudinal prosthesis management.

Consequence: Decreased wearing times, higher rates of ulceration and pain, and continued high rates of prosthetic abandonment.

7. Data, Coordination, and Training Shortfalls

Problem: Lack of centralized registries for amputees, inconsistent tracking of functional outcomes, insufficient standardized training and mentoring for rehabilitation specialists.

Consequence: Inefficient resource allocation, poor capacity planning, difficulty scaling best practices, and inefficient use of international support.

8. Near-Universal Infection Rate in Residual Limb

Problem: Nearly 100% of amputations are infected when they reach specialty hospitals and centers of excellence. The cause is multifactorial but includes problems in point of wounding and Role 2 care, as well as subsequent practices along the higher echelons of care.

Consequence: Creates a throughput bottleneck since infection must be eliminated prior to definitive treatment, and causes significant pain and anxiety to the patient; increases wait times in the treatment queue.



High-Priority Recommendations

- Integrate early rehabilitation consultation and treatment in acute trauma care to improve recovery outcomes and reduce disability.
- Expand prosthetic capacity and expertise through certified training and mentoring, including veteran outreach programs to integrate lived experiences into rehabilitation pathways.
- Integrate mental health screening, Cognitive Behavioral Therapy (CBT), and peer mentoring into all stages of rehabilitation.
- Expand and decentralize rehabilitation services with mobile outreach, telerehabilitation, and repair/resupply units to reach underserved populations.
- Establish a national limb loss registry to track outcomes, guide resource allocation, and improve standards of amputee care.
- Fund targeted research on residual limb phantom pain management, integrated mental health models, and adaptive prosthetic technologies tailored to Ukraine's context.

Project Concepts to Address Gaps

- **Advanced Military Medical Training and Research Center:** Specialized postgraduate military medical education and international collaboration to improve trauma and rehab care.
- **Caring for the Caretaker Center:** Psychological and respite care for overworked medical personnel and family members assuming increased care roles.
- **Infection Control Initiative:** Reduce high infection rates through targeted education and provision of appropriate equipment.
- **Fabrication and Vocational Rehabilitation Center:** Local prosthetic/orthotic production coupled with employment training and job opportunities for amputees.

- **Mobile Specialty Care Units:** Deploy advanced surgical and rehabilitation teams closer to the front lines.
- **National Tele-Rehabilitation Network:** A secure, scalable telemedicine platform connecting amputees in remote or conflict-affected regions with rehabilitation specialists, prosthetists, and mental health professionals. Includes remote gait analysis, therapy supervision, and family caregiver training.
- **Veteran Peer Navigator Program:** Train experienced veteran amputees to serve as peer mentors and regional liaisons, providing mentorship, system navigation, and advocacy for new amputees, with a focus on rural and underserved populations.
- **Prosthetic Innovation & Testing Lab:** A collaborative R&D facility in Ukraine for rapid prototyping, field testing, and adaptation of prosthetics to local needs and environmental conditions, in partnership with international engineering schools and NGOs.
- **Multidisciplinary Care Units:** Develop programs dedicated to acute and longitudinal amputee care management, rehabilitation, and advocacy.
- **Amputee Sports & Adaptive Recreation Program:** Establish local and regional hubs for adaptive sports, outdoor recreation, and competitive athletics to improve physical function, mental health, and social reintegration.
- **Back Home Program:** A comprehensive, multidisciplinary, community-based outpatient program that provides coordinated amputee care, mental health services, and treatment for PTSD and traumatic brain injury (TBI). Each regional center would host a Back Home unit to ensure holistic support and reintegration for amputees returning to civilian life.
- **Connected National Integration Program:** A nationwide, Ministry of Health-led System of Care designed to provide long-term rehabilitation and integration services for Ukrainian amputees, modeled after the U.S. VA's Polytrauma/Amputation System of Care and the DoD's National Intrepid Centers of Excellence (NICoE) for TBI care. Infrastructure could be funded by philanthropic partners, while the Ministry of Health provides personnel and administrative support, reducing NGO burden.
- **Metrics and Research Team:** Establish a Baseline Metrics and Targets Team to inform governmental, partner nation, and donor strategies. Given the lack of data on the physical and psychological profiles of amputees and their families, a collaborative research program with the Ukrainian government and other relevant organizations is recommended.



Conclusion

Ukraine's amputee care system faces systemic strain at every stage — from acute trauma response to lifelong rehabilitation. Without coordinated, well-resourced, and timely interventions, thousands risk incomplete recovery, reduced independence, and long-term exclusion from social and economic participation. Project HOPE is uniquely positioned to drive solutions by leveraging its deep local partnerships and an on-the-ground presence, mobilizing global expertise and donor resources, and scaling innovative, patient-centered rehabilitation models. With urgent, collaborative action we can transform amputee care in Ukraine, reduce suffering, and enable survivors to rebuild their lives.

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Hospitals & Facilities Visited

- Unbroken – Mariana Svirchuk, Executive Director of Lviv TMO
- Superhumans – CEO: Otha Rudnieva; Medical Director: Andrii Vilenski
- Dnipro Clinical Hospital #4 – Director (CEO): Nataliia But
- Dnipro Clinical Hospital named after Mechnykova – Director (CEO): Sergii Ryzhenko
- Superhumans Dnipro