USING TELEMEDICINE TO RESTORE CRITICAL HEALTH SERVICES DURING CONFLICT: A REVIEW

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TECHNICAL BRIEF

The Russian invasion of Ukraine has caused many doctors to leave the country, compromised patients' safety when seeking care, and displaced large portions of the population away from their primary health care providers. A strong national telemedicine system will be key to assuring access to health services for Ukrainians, now and in the future. Experiences from other conflict/disaster areas may provide insights, helping Ukraine assess and implement its own telemedicine response.

Overview

Before the invasion, Ukraine had been pursuing its most comprehensive health reform since independence. Central to this reform was the development of a national telemedicine platform, which would reduce corruption, expand access to quality health services, and enhance efficiencies in the sector.

To inform key decisions related to the introduction, expansion, and strengthening of Ukrainian telemedicine during and after the war, the Local Health System Sustainability Project (LHSS) conducted a rapid literature review on the use of telemedicine interventions in conflict/disaster areas and in post-conflict contexts. Although these cases come from a variety of countries with unique contexts, they may yield insights that Ukraine can use in assessing and implementing different telemedicine systems in the short term as well as when considering prospects for later integration into the country's health system.

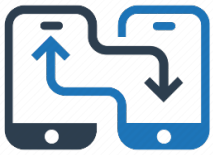
Methods

LHSS surveyed 58 sources in-depth, including journal articles, white papers, and relevant web pages. The sources covered 10 countries and seven cross-country interventions. This was not an exhaustive review, but provided timely information to help Ukraine rapidly restore critical health services in response to the war.

Key Findings and Recommendations

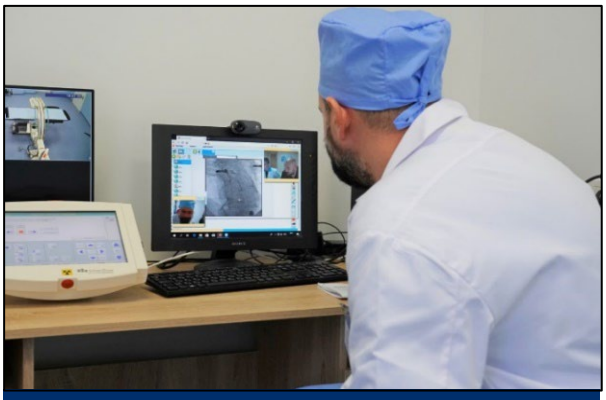
Different data-sharing mechanisms are advantageous in different scenarios

- Internet connectivity is a limiting factor in conflict/post-conflict settings. Ukraine might consider interventions that combine synchronous and asynchronous[1] data-sharing, tapping into the advantages of each format.
- Given the connectivity issues and its high mobile penetration rate, Ukraine may benefit from using mobile health solutions, especially those that can securely transfer personal/personalized data.



[1] Synchronous refers to a live telemedicine system that facilitates consultations between users in real time; asynchronous refers to a data-sharing mechanism that acquires and stores data at one point in time, then transmits the information at a later point.

- Mobile diagnostic laboratories with tele-diagnostic systems are used to combat emerging infectious diseases and could be considered given Ukraine's concern with infection control.



A Ukrainian physician examines imaging with a remote specialist through a telemedicine platform.

Ensuring uptake of telemedicine is key to an intervention's efficacy

- Training is one of the most important factors in ensuring uptake of telemedicine. Ukraine could train health care providers and other relevant staff to use the telemedicine technology and identify patients who may benefit from the intervention.

Coordination among partners is necessary to enable effective management

- Several telemedicine interventions are frequently introduced simultaneously or in rapid succession during a conflict/disaster scenario, resulting in confusion and a lack of coordination among key stakeholders. Establishing a central coordination framework will facilitate the effective management of simultaneous interventions.

- Interventions that connect Ukrainian health professionals with providers in other countries may be delayed due to language barriers. Ukraine will need to consider the language capabilities of potential interventions as a key factor impacting access.

The long-term impact of telemedicine interventions must be considered

- Ukraine could reference the "initiate-build-operate-transfer" strategy that has been used successfully in multiple post-conflict settings to integrate telemedicine into health systems (Table 1).

Table 1: Initiate-Build-Operate-Transfer Strategy

Phase	Tasks
Initiate	Assess needs and establish partnerships
Build	Create telemedicine network and build infrastructure
Operate	Ensure system functionality and leadership and improve using continuous feedback
Transfer	Ensure that the telemedicine program has sustainable financial support and local ownership

- Although telemedicine interventions established during conflict are not typically integrated into the health system post-conflict, some countries have leveraged improved telemedicine capacity from conflict interventions to shape their post-conflict systems. Ukraine might consider interventions that facilitate knowledge-sharing between in-country and international providers to build local understanding of telemedicine. This will better position the health system to develop post-conflict.

Conclusion

The body of literature that speaks to the use of telemedicine in conflict/disaster and post-conflict settings is limited. Although none of the findings were derived from settings that directly mirror Ukraine's context today, useful lessons can still be distilled from the commonalities that are present. As Ukraine attempts to expand and strengthen telemedicine in a systematic manner, it must focus on the four core components of data sharing mechanisms, uptake, coordination, and sustainability. This brief has highlighted some of the key lessons related to these four components present in the existing literature.

Ukrainian physicians use telemedicine to consult with specialists on cases.

Local Health System Sustainability Project
The Local Health System Sustainability Project (LHSS) under the United States Agency for International Development (USAID) Integrated Health Systems IDIQ helps low- and middle-income countries transition to sustainable, self-financed health systems as a means to support access to universal health coverage. The project works with partner countries and local stakeholders to reduce financial barriers to care and treatment, ensure equitable access to essential health services for all people, and improve the quality of health services. Led by Abt Associates, the five-year project will build local capacity to sustain strong health system performance, supporting countries on their journey to self-reliance and prosperity.

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