

Enhancing Cancer Care Amid Conflict: A Proposal for Optimizing Oncology Services During Wartime

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ABSTRACT

The landscape of cancer care within armed conflict zones is characterized by intricate challenges arising from disrupted health care systems, scarcity of resources, and population displacement. During times of war, the provision of cancer services is often disrupted, leading to significant challenges for oncologists and other health care providers. To optimize cancer services during wartime, several key priorities must be addressed. Focusing on needs assessment, treatment prioritization, drug supply chain, telemedicine, mobile clinics, cross-border collaborations, health care staff support, and continuity of care will enable health care systems to provide essential cancer services and mitigate the adverse impact of conflict on patients with cancer. This article delineates the pivotal key priorities for optimizing cancer services during wartime. It calls for collaborative action, the integration of technology, and holistic care approaches to safeguard the rights, well-being, and dignity of individuals confronting the dual challenges of cancer and conflict. By addressing these priorities, health care providers, policymakers, and stakeholders can collectively ensure that cancer services remain steadfast and compassionate even amid the turmoil of war. Thus, it may be possible to optimize cancer services during wartime, ensuring that patients with cancer continue to receive the care they need.

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INTRODUCTION

Cancer is a global health challenge, affecting millions of individuals worldwide.

According to the WHO, cancer is one of the leading causes of death globally, accounting for nearly 10 million deaths in 2020 alone. Moreover, cancer is a complex and challenging disease that requires specialized and comprehensive care. However, providing optimal cancer services becomes even more difficult in the midst of wartime or conflict situations.

The main objective of oncology and cancer services during war is to ensure the provision of adequate and effective care for individuals diagnosed with cancer in the midst of conflict or armed hostilities. This involves addressing the unique challenges posed by wartime conditions and striving to maintain or adapt cancer treatment and supportive services to meet the medical, psychological, and emotional needs of affected individuals.

Cancer services during times of war face unique challenges because of limited resources, inadequate surgical facilities, and high patient volumes. Health care providers and patients alike are confronted with psychological stress that can profoundly affect the quality of care delivered. Delays in diagnosis further compound the difficulties faced by cancer service providers.^{1,2}

However, the impact of armed conflict on cancer services and patients with cancer remains an area that requires attention and exploration. This article aims to shed light on how armed conflict disrupts health care systems, explore the consequences for patients with cancer during times of war, and the unique challenges faced by oncologists during wartime.

CHALLENGES FACED BY ONCOLOGISTS DURING WARTIME

During times of war or conflict, oncologists face numerous challenges that hinder their ability to provide effective cancer care.

Limited resources become even scarcer during times of war as funding is diverted toward military efforts instead. Limited resources such as medical supplies, chemotherapies, supportive medications equipment, and personnel create obstacles for effective treatment provision.^{3,4}

Disrupted health care infrastructure damage resulting from bombings or attacks can lead to the destruction or closure of medical facilities where cancer diagnosis and treatment take place.

The absence of a cancer care infrastructure has meant that many patients seek cancer care in neighboring countries.⁴ Conflict generates immediate and long-term shifts in

political and economic conditions that shape the rebuilding of oncology infrastructure.⁵ Follow-ups are rare because of limited resources and no system for keeping medical records in the clinic.⁶

Furthermore, there is evidence that delaying cancer treatment can have a negative impact on survival rates. A systematic review published by Hanna et al⁷ estimated the effect of the delay in cancer treatment on the basis of the Ukrainian reported population and cancer rates by Globocan. The study found that delaying the application of interventions for cancer treatment can have a significant impact on survival rates. Moreover, armed conflicts often result in the displacement or migration of health care professionals who are essential for delivering quality care to patients with cancer.

Delays in diagnosis during armed conflicts reduced access to screening programs, and disruptions in health care services significantly contribute to delays in cancer diagnosis during times of war.⁸ Cancer screenings are often deprioritized as resources are redirected toward immediate wartime medical needs.¹

Furthermore, the displacement of populations and destruction of health infrastructure disrupt regular health care delivery systems. Delays in cancer diagnosis and care increase mortality, and even a modest delay in care of only 4 months for five prevalent types of cancers will lead to an excess of over 3,600 cancer deaths in the subsequent years.⁹

Treatment interruptions become common as patients are forced to flee their homes or seek refuge in safer areas away from their regular treatment centers. In addition, limited availability or scarcity of essential medications exacerbates their already compromised health conditions.^{9,10} Patients with cancer who have fled or who remain in Ukraine will see their care interrupted, and this will cost countless lives in the coming years.⁹

Cancer care providers and patients experience profound psychological stress during times of war that affects their ability to deliver or receive quality care, respectively. Providers may suffer from burnout because of challenging work conditions amid conflict zones. This stress can lead to reduced attention to patient needs and decreased quality of care.

It is crucial to address these challenges to ensure that individuals with cancer continue to receive appropriate care despite the circumstances.

KEY PRIORITIES FOR OPTIMIZING CANCER SERVICES DURING WARTIME

To optimize cancer services during wartime or conflict situations, several key priorities must be established.

Needs Assessment and Planning

Conduct an in-depth needs assessment of the oncology services in the conflict area. This involves evaluating the available resources, including systemic anticancer medications, medical equipment, human resources, trained personnel, infrastructure, and patient needs.^{5,6,9}

Collaborate with international organizations, local health authorities, and nongovernmental organization to create a comprehensive plan that addresses short-term and long-term goals for oncology services.

Prioritization of Treatments: Treatment Guidelines and Protocols

Develop evidence-based treatment guidelines tailored to the conflict context focusing on essential treatments that maximize patient benefit with available resources. The aim of these guidelines is to prioritize chemotherapy treatments on the basis of the type of cancer, stage, prognosis, and available resources with an emphasis on accepting those most likely to be curable.¹¹

Moreover, consider treatments that offer the greatest benefit with the least resource-intensive approach and consider alternative regimens that require fewer visits or resources without compromising efficacy.¹² It is also important to ensure that WHO essential medicines, including cancer treatments for adults and children, remain available for the people who cannot or will not leave the country.

Drug Supply Chain

Wartime can disrupt supply chains and make it difficult to transport patients, medical supplies, and equipment. Addressing these logistical challenges is essential for ensuring that cancer services can continue to be provided.^{9,13}

Establish a reliable drug supply chain that ensures a consistent availability of chemotherapy medications, medical equipment, and essential supplies even in conflict situations. Collaborate with international organizations and NGOs to secure medication donations and deliveries. The needs assessment helps in understand the current capacity for delivering systemic anticancer therapy.

Telemedicine and Teleoncology

Deploy telemedicine platforms to enable remote consultations, diagnostics, and treatment planning. Telemedicine platforms could also be used for educational purposes, fostering the capacity building of local health care workers in cancer management. Telemedicine services offer a viable solution for remote consultations and monitoring, reducing the need for physical visits to health care facilities.⁶

Health authorities can collaborate with international partners to establish teleoncology networks. In Syria, organizations like the Syrian American Medical Society (SAMS) have implemented telemedicine to provide oncology consultations to patients in conflict-affected areas.^{4,14}

Mobile Oncology Clinics

Addressing the challenges faced by patients with cancer during armed conflict requires innovative strategies. Establish mobile clinics equipped with essential diagnostic and treatment tools to reach remote and underserved areas, ensuring continuity of care and treatment delivery.⁶ Central to this proposal is the formation of specialized mobile cancer care units. These clinics can provide basic oncology care, conduct screenings, and offer chemotherapy. These units, staffed by oncology specialists, would traverse conflict-affected areas, offering diagnosis, treatment, and palliative care.^{15,16} Their adaptability and mobility would counteract the restrictions posed by damaged health care facilities and volatile security situations.⁴ Collaborative partnerships with humanitarian organizations would be integral to this endeavor, ensuring sustained access to medical personnel and supplies. In Afghanistan, the Comprehensive Cancer Care Center operates mobile cancer screening units to reach rural communities.³

Cross-Border Collaborations

Facilitate cross-border partnerships to ensure the continuity of care for patients who need to seek treatment outside conflict zones. Collaborations with neighboring countries' health care systems can provide access to specialized treatments and facilities.^{3,5} Syrian patients have sought cancer treatment in neighboring countries like Jordan and Lebanon.

Using Available Resources Effectively

Given the limited resources during wartime, it is essential that all available resources are used efficiently to maximize the quality of care provided to patients with cancer. This includes optimizing the allocation of medical supplies, medications, and human resources.^{12,17} Efficient resource utilization is crucial during wartime when resources may be scarce or limited. Strategies such as centralizing procurement processes, collaborating with international organizations for aid and supplies, and implementing strict inventory management systems can help optimize resource allocation.¹

Supporting Health Care Staff

Oncologists and other health care professionals play a critical role in delivering cancer care during wartime. It is essential to equip them with the necessary training, support, and resources to ensure that they can deliver high-quality care despite challenging conditions.^{1,16}

Foster partnerships with international medical experts to offer remote consultations and training.

Supporting health care staff plays a pivotal role in ensuring continuous provision of high-quality cancer care during wartime or conflict situations.⁶

This includes providing specialized training to health care providers on administering chemotherapy safely and efficiently, considering limited resources.

Implement mentorship programs that pair experienced professionals with less-experienced ones.

Offer psychological support programs for coping with stressors unique to war zones and establishing mechanisms for ensuring their safety.¹⁸

Importance of International Cooperation and Support

International cooperation is vital for improving cancer services during times of war. Collaborations between countries or international organizations facilitate assistance through financial aid, provision of medical supplies, and knowledge-sharing platforms.^{9,19} These partnerships can foster sustainable solutions that address the unique challenges faced by cancer service providers.

The global oncologic community, including societies, associations, private cancer institutions, networks, public health systems, universities, medical schools with oncologic education and cancer-related programs, and nongovernmental organizations (such as International Red Cross, Doctors Without Borders, and the WHO), must work together to help these patients and provide the care they deserve and that is urgently required.

Ensuring Continuity of Care

During wartime, it is important to ensure that patients with cancer continue to receive the care they need. This may involve establishing alternative care pathways or relocating services to safer areas.⁹ If an internationally protected zone is established, a specialized cancer center that can receive referrals from other parts of the country should be considered. These centers can provide basic diagnostics, treatment options, radiation therapy, diagnostic pathology laboratories, and access to chemotherapeutic agents.¹²

CASE STUDIES: SUCCESSFUL CANCER SERVICE DELIVERY DURING ARMED CONFLICTS

Several real-life case studies illustrate effective cancer service delivery despite challenging circumstances during armed conflicts. The SAMS's efforts to establish mobile clinics provide essential oncology services within conflict zones.⁶ Similarly, Médecins Sans Frontières has

successfully implemented innovative strategies such as using inflatable hospitals equipped with comprehensive cancer care facilities in conflict-affected areas.²⁰

In conclusion, optimizing cancer services during wartime is a challenging task that requires careful planning, resource allocation, and support for health care providers. It is

imperative that governments, international organizations, health care institutions, and communities work together to address these challenges and minimize the impact of armed conflicts on well-being of patients with cancer. By doing so, we can reduce mortality rates related to cancer during wartime while maintaining humane care for those affected by this devastating disease.

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Open Payments is a public database containing information reported by companies about payments made to US-licensed physicians ([Open Payments](http://OpenPayments)).

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