

# Assault on healthcare in conflict: A critical examination of attacks on medical facilities and personnel in occupied Palestinian territories and Gaza post-October 7 under the lens of international law

*Çatışma halinde sağlık hizmetlerine saldırı: İşgal altındaki Filistin toprakları ve Gazze'de 7 Ekim sonrası tıbbi tesislere ve personele yönelik saldırıların uluslararası hukuk merceğinden eleştirel bir incelemesi*

## Abstract

**Aim:** This study aims to analyze the medical outcomes of attacks on healthcare systems in the Occupied Palestinian Territories, including Gaza, between October 7th, 2023, and December 30th, 2023, within the framework of violations of international humanitarian law.

**Methods:** This study is a cross-sectional epidemiological research. The universe of the research consists of attacks on the Occupied Palestinian Territories (OPT) between 7 October 2023 and 30 December 2023, which were obtained from the Surveillance System for Attacks on Health Care (SSA) database provided by the World Health Organization (WHO). A frequency analysis of the attacks on healthcare services in the occupied Palestinian region was conducted, focusing on the distribution of attacks by year, type of attack, type of impact, and medical outcomes.

**Results:** The study reveals that, between October 7th, 2023, and December 30th, 2023, in the Occupied Palestinian Territories, 570 attacks on healthcare services led to 1,419 individuals being medically affected. Healthcare personnel (456), patients (387), and facilities (295) were the most impacted by these incidents. Analysis of these incidents indicates a higher frequency and impact in early October, with healthcare personnel being the most targeted group. Various types of attacks were identified, with obstruction to healthcare delivery being the most common. The findings highlight the significant adverse effects of these attacks on healthcare infrastructure and personnel in the region.

**Conclusions:** This study reveals significant challenges in safeguarding healthcare in conflict zones, particularly in the Occupied Palestinian Territories. It underscores the necessity of a comprehensive approach to address international law violations, focusing on understanding, implementing, and enforcing legal and ethical frameworks. The systematic targeting of healthcare since October 7th, 2023, highlights the urgency for a global commitment to protect healthcare services and personnel. Collaborative efforts aligned with international humanitarian law and medical ethics are crucial for ensuring the resilience, security, and sustainability of healthcare systems in conflict-affected areas.

**Keywords:** Attack; conflict; health care systems; international law; Palestinian

## Öz

**Amaç:** Bu çalışmada, 7 Ekim 2023 ile 30 Aralık 2023 tarihleri arasında Gazze dâhil İşgal Altındaki Filistin Topraklarındaki sağlık sistemlerine yönelik saldırıların tıbbi sonuçlarını uluslararası insancıl hukuk ihlalleri çerçevesinde analiz etmek amaçlanmıştır.

**Yöntem:** Bu çalışma, kesitsel bir epidemiyolojik araştırmadır. Araştırmanın evrenini, Dünya Sağlık Örgütü (DSÖ) tarafından sağlanan Sağlık Hizmetlerine Yönelik Saldırı Gözetim Sistemi (SSA) veritabanından elde edilen 7 Ekim 2023 ile 30 Aralık 2023 tarihleri arasındaki İşgal Altındaki Filistin Topraklarındaki saldırılar oluşturmaktadır. İşgal altındaki Filistin bölgesindeki sağlık hizmetlerine yönelik saldırıların yıla, saldırı türüne, etki türüne ve tıbbi sonuçlara göre dağılımına odaklanan bir frekans analizi yapılmıştır.

**Bulgular:** Çalışma, 7 Ekim 2023 ile 30 Aralık 2023 tarihleri arasında İşgal Altındaki Filistin Toprakları'nda 570 sağlık hizmetlerine yönelik saldırının 1,419 bireyin tıbbi etkilenmesine neden olduğunu ortaya koymaktadır. Bu olaylardan en çok etkilenen gruplar sağlık personeli (456), hastalar (387) ve tesisler (295) olmuştur. Bu olayların analizi, ekim ayının başlarında daha yüksek bir frekans ve etki gösterdiğini, sağlık personelinin en çok hedef alınan grup olduğunu göstermektedir. Farklı türde saldırılar tespit edilmiş olup, sağlık hizmetlerinin engellenmesinin en yaygın olduğu belirlenmiştir. Bulgular, bu saldırıların bölgedeki sağlık altyapısı ve personeli üzerindeki önemli olumsuz etkilerini vurgulamaktadır.

**Sonuçlar:** Bu çalışma, sağlık hizmetlerinin özellikle İşgal Altındaki Filistin Toprakları'ndaki çatışma bölgelerinde korunmasında önemli zorlukları ortaya koymaktadır. Bu, uluslararası hukuk ihlalleriyle ilgili kapsamlı bir yaklaşımın, hukuki ve etik çerçeveleri anlama, uygulama ve uygulama konusuna odaklanmasının gerekliliğini vurgulamaktadır. 7 Ekim 2023'ten itibaren sağlık hizmetlerine yönelik sistematik hedefleme, sağlık hizmetleri ve personelinin korumaya yönelik küresel bir taahhüdün aciliyetini ortaya koymaktadır. Uluslararası insancıl hukuk ve tıbbi etikle uyumlu işbirliği çabaları, çatışma etkilenen bölgelerdeki sağlık sistemlerinin dayanıklılığını, güvenliğini ve sürdürülebilirliğini sağlamak için kritik öneme sahiptir.

**Anahtar Sözcükler:** Çatışma; Filistin; saldırı; sağlık sistemleri; uluslararası hukuk

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## INTRODUCTION

In contemporary conflict zones, particularly the Occupied Palestinian Territories (OPT), healthcare systems and personnel endure escalating challenges due to frequent violations of international laws intended to safeguard medical services. This research critically examines the attacks on healthcare in the OPT and the extent to which these actions contravene international rules and laws that protect such services. Our investigation delves into the broader ramifications of these attacks on healthcare delivery, evaluating the intricacies of legal frameworks and protection mechanisms for healthcare workers and systems in regions of conflict.

The ramifications of armed conflict on healthcare in the OPT transcend the immediate perils of violence. These conflicts disrupt essential medical services, exacerbate public health crises, and hinder access to vital care. Healthcare professionals in such environments confront an increased risk of violence, imperiling their safety and the continuity of healthcare provision. Safeguarding these individuals and their work environments is not only an ethical obligation but also critical for the resilience and stability of healthcare systems in volatile settings.

Our analysis will explore the role of International Humanitarian Law (IHL), specifically the Geneva Conventions and their Additional Protocols, in the context of protecting healthcare during conflict (1). Despite the existence of these legal frameworks, their enforcement and adherence, particularly in areas like the OPT, remain substantial challenges. Additionally, the study underscores the significance of the Health Care in Danger (HCiD) initiative by the International Committee of the Red Cross (ICRC), which seeks to enhance healthcare delivery in conflict and emergency situations by addressing violence against healthcare entities (2).

This study aims to emphasize the urgent need for robust implementation and accountability mechanisms in international law to safeguard healthcare services and personnel in conflict zones. It is crucial to highlight the gravity of these violations and advocate for adherence to international legal standards for the protection of healthcare in areas of conflict.

## METHODS

### **Data Collection and Analysis**

This cross-sectional epidemiological study utilized data from the World Health Organization's Surveillance System for Attacks on Health Care (SSA), focusing on incidents reported in the Occupied Palestinian Territories (OPT) from October 7th to December 30th, 2023. (3).

### **Primary and Secondary Outcomes:**

**Primary Outcome:** The primary outcome was the number of attacks on healthcare facilities and personnel, quantifying the extent of these incidents.

**Secondary Outcome:** These included the nature of the attacks (e.g., physical assault, obstruction), the number of healthcare workers and patients affected, and the impact on healthcare infrastructure.

### **Statistical Evaluation Methods**

**Data Preparation:** Data from the SSA database was rigorously filtered for relevance and accuracy. The selected data was then organized for analysis using IBM SPSS Statistics Version 19.

**Frequency Analysis:** We conducted a frequency analysis to assess the distribution and characteristics of the attacks, including the type of attack, the impact on healthcare services, and the medical outcomes. (Table 1)

**Impact Assessment:** The study also evaluated the broader impact of these attacks on the healthcare system, focusing on disruptions to services and access to care.

### **Ethical Considerations**

In handling the data, we adhered to strict ethical guidelines. Personal identifiers were removed to ensure privacy, and the data was used solely for research purposes. Given that the study is based on an open-access dataset designed for retrospective analysis, an ethical board review was not sought. The research methodology was designed to comply with international standards for research ethics, particularly in contexts involving conflict and vulnerable populations.

SSA Variables and Subcategories in the Study	
Variables	Subcategories
Date	October 7th to December 30nd 2023
Country	Occupied Palestinian Territories
Attack type	Facilities, transport, personnel, patients, supplies, warehouse
Casualties and consequences	Abduction/arrest/detention, removal of health care assets, violence with heavy weapons, chemical agent, violence with individual weapons, militarization of a health care asset, armed or violent search of health care, obstruction to health care delivery, assault without weapons, psychological violence, criminalization of health care, unknown
	Total number of fatalities
	Total number of injured

**Table 1.** Inclusion criteria of the study  
SSA = Surveillance system for attacks on health care

## RESULTS

### Overview of Attacks on Healthcare Services

(Table 2 - Distribution and Medical Impact of Attacks)  
From October 7th to December 30th, 2023, the Occupied Palestinian Territories (OPT) experienced 570 attacks on healthcare services. These incidents resulted in 1,419 individuals being medically affected. This alarming frequency underscores the severity of the situation in the OPT.

### Distribution and Impact of Attacks

(Figure 1 - Comparative Impact Analysis)

**Healthcare Personnel:** A total of 456 healthcare personnel were impacted by these incidents, making them the most targeted group.

**Patients:** The attacks affected 387 patients, highlighting the vulnerability of those seeking medical care.

**Facilities:** Healthcare facilities sustained substantial impacts with 295 incidents, indicating a significant disruption to healthcare infrastructure.

### Nature of Attacks

(Table 3 - Incident Types and Their Consequences)

The study identified various types of attacks, with obstruction to healthcare delivery being the most common. This included physical barriers, administrative hurdles, and legal obstructions, significantly hampering the delivery of healthcare services.

### Temporal Distribution

The analysis revealed a higher frequency and impact of attacks in early October 2023. A detailed examination

of this period shows a worrying trend of increasing attacks on healthcare personnel and facilities.

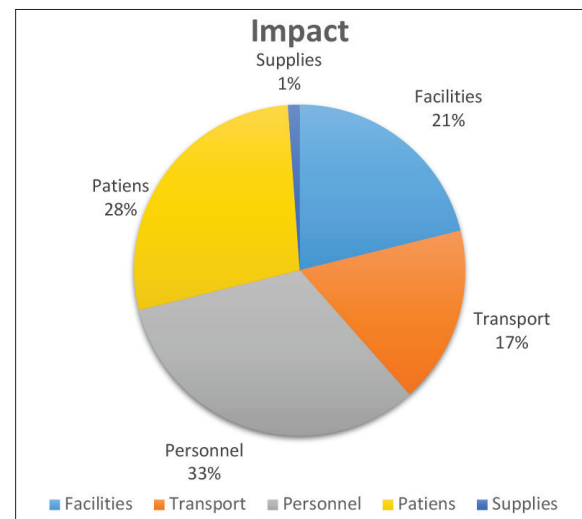
### Severity and Outcomes

**Violence with Heavy Weapons:** This type of attack had the most severe medical outcomes, with numerous deaths and injuries reported.

**Psychological Impact:** Psychological violence and intimidation were also noted, which, while not always resulting in physical harm, had a profound effect on the mental health and well-being of healthcare workers and patients.

### Assessment of Healthcare System Resilience

The findings suggest that the healthcare system in the OPT, especially in Gaza, is nearing collapse due to systematic targeting. This situation is exacerbated by the destruction of critical infrastructure and the lack of adequate medical supplies.



**Figure 1.** The impact of the attacks on healthcare

**Table 2.** Analysis of incidents, deaths and injuries according to months distribution of attacks against healthcare services

Months	Event	Deaths	Injuries
7 October – 6 November	294	517	671
7 November – 6 December	208	54	104
7 December – 22 December	68	36	37
<b>Total</b>	<b>570</b>	<b>607</b>	<b>812</b>

**Table 3.** Incidents, deaths and injuries by attack type of terrorist incidents against healthcare services

Attacks type	Event	Deaths	Injuries
Abduction/arrest/detention	54	3	17
Removal of health care assets	3	-	-
Assault without weapons	34	-	42
Violence with individual weapons	146	16	77
Violence with heavy weapons	187	576	714
Militarization of a health care asset	21	9	26
Armed or violent search of health care	47	2	31
Obstruction to health care delivery	290	28	45
Psychological violence	108	14	20

In summary, the data from the Occupied Palestinian Territories between October 7 and December 30, 2023, reveal a concerning trend of increased attacks on healthcare, with the most significant impacts on healthcare personnel, patients, and facilities. These findings underscore the severity and widespread nature of these attacks, highlighting the critical need for focused interventions to protect healthcare systems in conflict zones.

## DISCUSSION AND CONCLUSION

Based on the types of attacks identified in the dataset, several potential violations of international humanitarian law, war law, medical ethics, and human rights can be identified, particularly in the context of the “Healthcare in Danger” initiative by the International Committee of the Red Cross (ICRC) and the United Nations’ emphasis on the protection of healthcare in conflict zones.

The findings from the Occupied Palestinian Territory (OPT) present a stark violation of international humanitarian law (IHL), medical neutrality, and human rights, significantly impacting the healthcare system’s functionality and resilience. The data indicates numerous instances of abduction, arrest, and

detention of health personnel and patients. This is a direct affront to the Geneva Conventions, which protect medical personnel and patients in armed conflicts. Such actions not only violate legal norms but also erode the foundation of medical neutrality. With 290 recorded instances, obstruction to healthcare delivery emerges as a predominant issue. Psychological violence and intimidation (108 records) violate fundamental medical ethics and human rights principles. These practices create a pervasive environment of fear, significantly hindering healthcare provision and negatively impacting providers and recipients of care. The use of heavy weapons against healthcare facilities or personnel (187 records) is a blatant disregard for the principle of distinction in IHL. The militarization of healthcare facilities (21 records) undermines the principle of healthcare neutrality and violates the Geneva Conventions. Assaults and violent searches of healthcare personnel and facilities disrupt the safety and neutrality of healthcare services. The inadequate provision of medical supplies, hospital facilities, and services (noted through the reduced number of trucks allowed into Gaza) signifies a failure of the occupying power to fulfill its obligations under the Fourth Geneva Convention. This neglect exacerbates the healthcare crisis and endangers civilian lives. The destruction of

essential infrastructure, such as electricity supply, critically impairs healthcare provision.

Violation, directly violates the principles of medical neutrality and the protection of medical personnel and patients during armed conflicts, as outlined in the Geneva Conventions and Additional Protocols (Geneva Conventions, particularly Articles 24 and 25 of the First Geneva Convention, which protect medical personnel). Obstructing access to healthcare, including physical, administrative, or legal barriers, violates international humanitarian law that mandates unhindered access to medical care and facilities (Article 18 of the Fourth Geneva Convention and customary international humanitarian law, which emphasize the protection of civilian hospitals and the right to medical services) (4,5). Psychological violence/threat of violence/intimidation is a violation of medical ethics and human rights, as it hinders the provision of care and creates an environment of fear, impacting both healthcare providers and recipients (6-8). The use of heavy weapons against healthcare facilities or personnel is a clear violation of the principle of distinction in international humanitarian law, which requires parties to a conflict to distinguish between combatants and non-combatants. Using healthcare facilities for military purposes violates the principle of neutrality of medical facilities and personnel.

Assault (without weapons) and armed or violent search of healthcare personnel/facilities actions violate the safety and neutrality of healthcare services, as well as the human rights of healthcare workers and patients (9,10). Occupying power in the OPT fails to meet the requirements for medical supplies, hospital infrastructure, services, and hygiene, thus neglecting its obligation to ensure the provision of essential healthcare needs. The number of trucks allowed in Gaza is far below the figure before 7 October 2023 which was 500 trucks daily (11). Articles 55, 56, and 59 of the Fourth Geneva Convention and customary international humanitarian law prescribe the duty of occupying power to ensure medical supplies or consent thereof (12).

Cutting off electricity has rendered the provision of medical services impossible and made electricity-powered medical equipment dysfunctional. Since October 11th, there has been no availability of electric-

ity after the cutting off of the electricity supply (13). Attacking, destroying, removing, or rendering useless objects indispensable to the civilian population's survival is prohibited under Rule 54 of Customary Law (14).

Overall, these findings paint a concerning picture of the healthcare situation in the OPT. They highlight the urgent need for adherence to international legal standards and the protection of healthcare in conflict zones. The Health Care in Danger (HCiD) initiative's role becomes increasingly crucial in advocating for these protections and addressing the widespread violations observed in this context.

### **Limitations**

**Data Completeness:** We acknowledge the challenges in data collection in conflict zones. While the SSA database is comprehensive, it may not capture every incident.

**Interpretation Bias:** The complex nature of conflict situations and the varying reliability of sources were considered to minimize interpretation bias.

### **Implications and Future Directions**

The findings of this study underscore the profound challenges faced by healthcare systems in conflict zones, especially in the Occupied Palestinian Territories. While immediate and decisive action is necessary to address the breaches of international laws observed, our results suggest a more nuanced approach may be beneficial. This involves a careful evaluation of the current legal frameworks and their effectiveness in protecting healthcare services and personnel in such volatile environments.

### **Role of Initiatives and Global Commitment**

Projects like the Health Care in Danger (HCiD) initiative are crucial in advocating for the safety of healthcare workers and facilities. However, our study indicates that beyond advocacy, there is a need for strengthening implementation and accountability mechanisms. This enhancement is not just about adhering to the laws but also about understanding and mitigating the unique challenges faced by healthcare systems in conflict settings.



### **Building Resilience in Healthcare Systems**

The resilience of healthcare systems in conflict-prone regions is vital for maintaining healthcare delivery. Our findings highlight the need for a comprehensive approach that includes supporting states in legal safeguards, influencing the conduct of armed groups, and ensuring a robust support system for healthcare workers and facilities. These efforts should align with the principles of international humanitarian law and medical ethics, recognizing the complex interplay of legal, ethical, and practical challenges in such settings.

### **A Call for Collective Action**

Finally, this study calls for a global commitment to safeguard healthcare in conflict zones. The collective efforts of various organizations and states are imperative in creating an environment where healthcare services can be delivered safely and effectively, even in the face of adversity. Such a commitment, while challenging, is essential for the sanctity and security of healthcare globally, and aligns with the broader goals of upholding human rights and dignity in times of conflict.

## **REFERENCE**

1. International Committee of the Red Cross. Customary IHL Database. [cited 2023 Dec 30]. Available from: <https://ihl-databases.icrc.org/customary-ihl/eng/docs/home>
2. International Committee of the Red Cross. Health Care in Danger. [cited 2023 Dec 28]. Available from: <https://www.icrc.org/en/what-we-do/health-care-danger>
3. World Health Organization. Surveillance System for Attacks on Health Care. [cited 2023 Dec 30]. Available from: <https://extranet.who.int/ssa/Index.aspx>
4. International Committee of the Red Cross. (1949). Geneva Convention IV: Convention relative to the Protection of Civilian Persons in Time of War, Article 18. [cited 2023 Dec 25]. Available from: <https://www.icrc.org/eng/assets/files/publications/icrc-002-0173.pdf>
5. International Committee of the Red Cross. Customary IHL Database. [cited 2023 Dec 30]. Available from: <https://ihl-databases.icrc.org/customary-ihl/eng/docs/home>
6. Beauchamp TL Childress JF Oxford University Press. Principles of Biomedical Ethics. 7th ed. New York: Oxford University Press; 2013.
7. United Nations. Universal Declaration of Human Rights. [cited 2023 Dec 30]. Available from: <https://www.un.org/en/universal-declaration-human-rights/>
8. International Committee of the Red Cross. Geneva Convention IV: Convention relative to the Protection of Civilian Persons in Time of War, Article 19. [cited 2023 Dec 30]. Available from: <https://www.icrc.org/eng/assets/files/publications/icrc-002-0173.pdf>
9. Fisher, D. The Legal Protection of Health Care in Armed Conflicts. Cambridge University Press; 2015
10. United Nations. Universal Declaration of Human Rights. [cited 2023 Dec 29]. Available from: <https://www.un.org/en/universal-declaration-human-rights/>
11. Anadolu Agency. 53 additional aid trucks cross into Gaza: Palestinian Red Crescent. 2023, November 12. [cited 2023 Dec 30]. Available from: <https://www.aa.com.tr/en/middle-east/53-additional-aid-trucks-cross-into-gaza-palestinian-red-crescent/3051287>
12. International Committee of the Red Cross. Geneva Convention IV: Convention relative to the Protection of Civilian Persons in Time of War, Articles 55, 56, and 59. [cited 2023 Dec 30]. Available from: <https://www.icrc.org/eng/assets/files/publications/icrc-002-0173.pdf>
13. United Nations Office for the Coordination of Humanitarian Affairs (OCHA). Gaza Situation Report. 2023, December 15. [cited 2023 Dec 30]. Available from: <https://unric.org/it/gaza-aggiornamento-ocha-15-dicembre-2023/>
14. International Committee of the Red Cross. Customary IHL Database: Rule 54. Protection of Objects Indispensable to the Survival of the Civilian Population. [cited 2023 Dec 30]. Available from: [https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1\\_rul\\_rule54](https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule54)