# FALSE ALARM:
# THE WORLD HEALTH ORGANISATION'S FLAWED DATA ANALYSIS OF 'ATTACKS ON HEALTH CARE'

Report issued by
**THE HAGUE INITIATIVE FOR INTERNATIONAL COOPERATION** and
**THE HENRY JACKSON SOCIETY**

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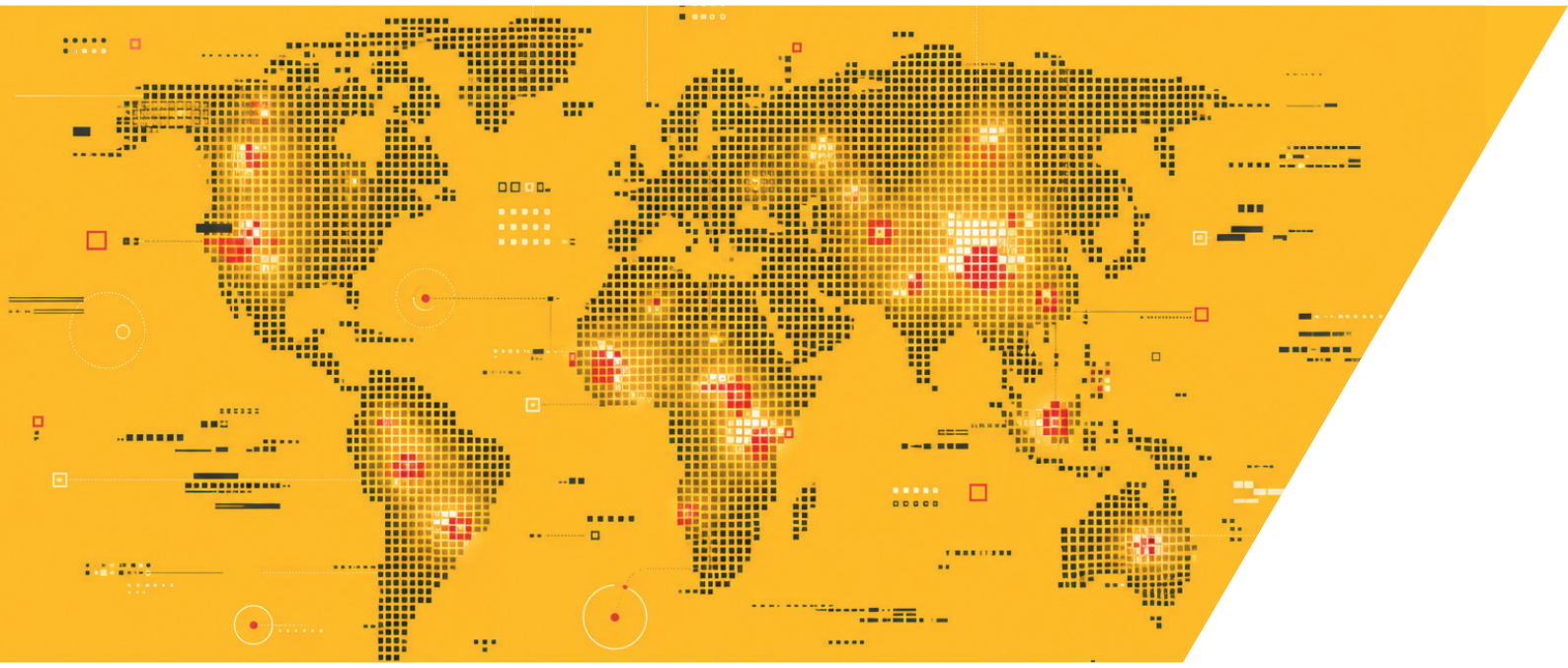

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# Figures and Tables

## Main Text



## Data Appendix

# 1. Executive Summary

This report is, to our knowledge, the first published independent critique analysing the dataset compiled by the World Health Organization on attacks on health care. It is novel research that illuminates a shadowy corner where data science and international policy intersect to form United Nations narratives about the conduct of armed conflict.

Health care is a vital service that should be protected during armed conflicts. States, international organisations, and non-governmental organisations have banded together to emphasise the importance of protecting health care facilities, patients, personnel, supplies, transport, and warehouses from violence. Both the United Nations and the World Health Organization (WHO) have made the protection of health care a key priority. (See Chapter 2.)

Since late 2017, the WHO has systematically collected information on this topic through its Surveillance System for Attacks on Health Care (SSA). The WHO relies on local country-offices and health care partners, including non-governmental organisations, to collect information on violence against health care. WHO staff centralise information into a data system that includes event classification (e.g. abductions, militarisation, obstruction, and heavy violence against health care) and the number of deaths and/or injuries. Some of this information is then made available to the public. (See Chapter 3.)

Information from the WHO on health care attacks is then used by diverse actors for advocacy. The UN and the WHO itself use SSA data to advocate for greater health care protection and to condemn groups and states who are alleged to have committed violence. Similarly, advocacy groups and scholars use WHO data to analyse broad trends and to contextualise specific attacks. Finally, WHO data is transmitted to the general public through press coverage of these different groups. (See Chapter 4.)

All of these actors are operating in an international law framework that creates complex legal obligations and protections for health care. Belligerents in armed conflict have an obligation to protect health care assets, patients, and personnel. However, health care assets, patients, and personnel can become legitimate targets during armed conflict if they are militarised. For example, a hospital building can be targeted if it is also being used to shield armed fighters. The protections offered to health care are not absolute—they depend upon the context of the armed conflict. (See Chapter 5.)

Our analysis of the WHO data reveals two major problems with the SSA data collection efforts and the resulting advocacy efforts (see Chapter 6). First, the WHO has adopted an overly expansive definition of the term "attack", which does not match legal and common understandings of the word. Our analysis shows that events in the WHO data are often unrelated to armed conflict, which is a necessary precondition for the use of the term "attack" under international law. Moreover, many events that the WHO describes as "attacks" do not involve violence, such as routine law enforcement activities. Additionally, events in the WHO data can be unrelated to actual health care provision, creating a mismatch between the SSA's stated objectives and its actual application. We show that militarisation of health care provides a compelling legal justification for many violent events in armed conflict in the WHO data, and that many of these events may even be necessary as precautions to protect civilians during armed conflict.

Second, the WHO data collection process is filled with opportunities for bias in reporting. We argue that data irregularities suggest that reporting parties are using different standards and

procedures in different places. Moreover, reporting parties can be and often are affiliated with armed groups that have incentives for inaccurate and/or selective reporting. We additionally argue that WHO reporting procedures can lead to inflated counts of injuries and deaths, as well as false attribution of responsibility for events.

We make several recommendations for reform to improve SSA reporting (see Chapter 7), including the following:

1. Adopt more neutral language to describe SSA events;
2. Explicitly and publicly identify limits on how SSA data should be used;
3. Perform additional verification of deaths and injuries;
4. Create a public feedback mechanism for belligerents;
5. Provide more incident data to the public and researchers; and
6. Indicate non-participation by states and territories.

# 2. Background: Protecting Health Care During Armed Conflicts

This chapter introduces the global Surveillance System for Attacks on Health Care and contextualises it within the functions of the World Health Organization and, more broadly, of the United Nations.

## 2.1: Shielding and targeting health care

For centuries, states have crafted rules to make armed conflict more humane and to protect civilians from the dangers of the battlefield. As part of this effort, they developed norms and wrote formal treaties to protect health care workers and resources. On the battlefield, states recognised that health care workers and transport must be protected from attack to ensure that wounded combatants are treated humanely, as described in Chapter 5.1. Off the battlefield, states acknowledged that health care is an essential public service that is necessary to the well-being of both combatants and civilians.

However, rules that have protected health care from attack also generated perverse outcomes that ensured health care resources became an effective shield for actors who were willing to violate the laws of armed conflict. If medical workers and ambulances can travel freely across territories in conflict, then armed groups have an incentive to disguise themselves as health care workers and use ambulances to move combatants. Similarly, if hospitals are protected from attack and searches by hostile forces, then armed groups have an incentive to use hospital infrastructure to assist their efforts. Such armed groups have located command-and-control centres within and near hospitals, stored weapons in hospitals, and used hospital resources—such as electricity and water—to support themselves. In short, rules that shield health care assets from attack also turn their facilities, personnel, supplies, transportation, and warehouses into opportunities for manipulation and abuse.

When health care is militarised and abused, health care resources can become legitimate targets for attack under the law of armed conflict, as explained in Chapter 5.2. For example, an armed rebel who adopts the disguise of a doctor to evade detection is nonetheless a fighter who can be targeted legitimately under international law. Similarly, a hospital that also functions as infrastructure for an armed group can be a legitimate target for destruction. States must still take precautions to protect civilians who use a health care facility. However, abuse of health care as a shield for military activities can destroy the protection provided to health care facilities, personnel, supplies, transportation, and warehouses, transforming health care into a legitimate target of war.

Most states acknowledge the paradoxical relationship between shields and targets by writing military manuals and rules of engagement that permit military action against health care in such circumstances. However, the advocacy and rhetoric of most international organisations, including the World Health Organization and the United Nations, largely ignores this paradox. Military action against health care resources is routinely condemned even when it is legitimate and legal.

This indiscriminate advocacy can ultimately undermine efforts to protect health care. When legitimate and legal actions are denounced, states have less reason to support the laws that international organisations are seeking to uphold. International organisations become the political equivalent of Chicken Little, the character from a children's fable, crying out "The

sky is falling!" when, in fact, nothing is amiss. It is not surprising that people begin to ignore repeated warnings of impending doom.

## 2.2: Priorities of the United Nations

Since its creation in 1945, the United Nations (UN) has developed activities that now rest on three core pillars. The first pillar of *promoting peace and security* involves the efforts of multiple UN actors. These actors seek to: prevent conflict, terrorism, and violence; mediate interstate and internal disputes; and assist in recovery after conflicts. Attacks on health care are common during interstate and internal disputes, and the development of new health care infrastructure is key to recovery after conflicts.

The second pillar of UN activities is *protecting human rights*. The UN has long sought to promote and protect the rights of people across societies, as articulated in the Universal Declaration of Human Rights, numerous multilateral treaties, and countless resolutions of the UN Security Council and General Assembly. The right to physical autonomy and well-being is perhaps the most fundamental human right, and health care is increasingly seen as central to securing this right.

Finally, the third pillar of the contemporary UN is *promoting sustainable development*. Different actors have different conceptions of how to achieve this goal. The UN has focused on reducing poverty, combatting inequity, and forestalling climate change. UN member states and staff have consistently argued that expanded provision of health care is key to achieving the former two goals. Indeed, attacks on health care destroy investments in public health and can worsen outcomes like natal deaths, disease epidemics, and general mortality rates.

No UN body has an exclusive focus on the issue of attacks on health care. Rather, a complex set of actors regularly engage with this issue. These actors include the UN Secretary-General, the UN Security Council, the Office of the High Commissioner for Human Rights, and various special rapporteurs. For example, the UN Security Council addressed the general issue of attacks on health care in 2016 using its resolution 2286. In this document, it urged states to prevent attacks on health care through "the collection of data on obstruction, threats and physical attacks on medical personnel and humanitarian personnel exclusively engaged in medical duties, their means of transport and medical facilities."[1] This resolution provided support and urgency for the ongoing efforts of the World Health Organization.

## 2.3: Priorities of the World Health Organization

The World Health Organization (WHO) is a specialised agency of the United Nations. As such, it operates independently but is closely linked to the UN by various legal agreements. The current work of the WHO is organised around three strategic priorities, known as the Triple Billion Targets. The first strategic priority is *universal health care*. Namely, the WHO seeks to expand health care coverage to an additional one billion people, including the provision of primary health care; essential medicines and vaccines; and financial protection for health care costs. The destruction of health care infrastructure and the killing of health care personnel inherently limit access to health care.

1 United Nations Security Council Resolution 2286 (2016), adopted at its 7685th meeting, May 3, para. 4. Available at https://digitallibrary.un.org/record/827916?ln=en&v=pdf, para. 4.

The second strategic priority is to prepare for *health emergencies*. The WHO aims to protect an additional one billion people by preparing for pandemics, natural disasters, and outbreaks; developing surveillance and risk management systems; and creating rapid response mechanisms. Attacks on health care resources weaken emergency response capabilities and can increase the spread of disease because of overcrowding and lack of adequate care.

Finally, the third WHO priority is to promote *general health and well-being*. The WHO wants to assist an additional billion people with the treatment of noncommunicable diseases, including cancer, heart disease, and diabetes; the provision of mental health services; and by enhancing nutrition and physical activity. Attacks on health care resources can break the continuity of care for chronic illnesses and lead to long-term degradation of the broader health system.

In 2012, the Assembly of WHO member states adopted a resolution that declared, "there is a need of systematic data collection on attacks or lack of respect for patients and/or health workers, facilities and transports in complex humanitarian emergencies."[2] The Assembly went on to direct the WHO Director-General to develop "methods for systematic collection and dissemination of data on attacks on health facilities, health workers, health transports, and patients in complex humanitarian emergencies, in coordination with other relevant United Nations bodies, other relevant actors, and intergovernmental and nongovernmental organizations, avoiding duplication of efforts."[3] These efforts led to the creation of the WHO Surveillance System for Attacks on Health Care (SSA), which became operational in late 2017.

2 World Health Assembly Resolution 65.20, adopted 26 May 2012, p. 3.

3 World Health Assembly Resolution 65.20, adopted 26 May 2012, p. 4.

# 3. Data Analysis: The WHO's SSA Programme

How is data on violence against health care from around the world reported by local partners, and how does the WHO assemble, analyse and interpret it? There are major and worrying gaps in the WHO's disclosure of its methodology for these processes, including its protocols on information verification.

## 3.1: Process

WHO staff initially assemble data for the Surveillance System for Attacks on Health Care (SSA) at the country level.[4] Partner organisations—which were pre-identified to participate in SSA reporting—can contact staff in their local WHO Country Office to report alleged attacks in a variety of ways. Staff in the WHO Headquarters also monitor international news media and contact the relevant Country Office if they discover information about a likely attack. Staff in the relevant WHO Country Office then research the alleged attack by reaching out to local contacts and collecting information. These local staff consolidate information from different reporting channels to ensure that each attack is summarised by one data record. Finally, local staff assign a score for their level of certainty about whether an attack occurred. They do not assess the reliability of specific information contained in their data record, such as the number of people injured and/or killed. After staff in a WHO Country Office have collected and summarised information about a reported attack, a single data record is then sent to the relevant WHO Representative for review.

Most data are reported and managed at the country level. These countries are WHO members that have opted to participate in the SSA programme. However, some data are reported and managed at the territory level because of local conflicts. For example, the WHO collects data for Nagorno-Karabakh, but not for Azerbaijan. Attacks that are reported in East Jerusalem, Gaza, or the West Bank are classified as occurring in Occupied Palestinian Territory (OPT).[5]

After the data record is created and approved by the relevant Country Office and Representative, it becomes public information. Some information about reported events can be accessed by the public via a searchable database on the WHO website.[6] However, the WHO withholds information from the public that might make victims or reporting sources vulnerable to retaliation. This private information includes the precise location of the event and a written description of events.

It is sometimes possible to identify a reported event based on the public entry in the SSA database. For example, a Russian missile strike on Okhmatdyt Children's Hospital in Ukraine on 8 July 2024 generated international news coverage and was discussed at length in a public meeting of the UN Security Council.[7] The SSA database contains four entries for that date for Ukraine. Two of these entries report deaths and injuries, although both entries dramatically underestimate the number of people injured and killed relative to information conveyed in the

4 This description of the data collection process is based on the procedures outlined in: WHO SSA, Methodology, pp. 7—11.

5 Palestine is not a full member of the World Health Organization, but it has permanent observer state status. Its specific rights within the WHO have changed over time.

6 https://extranet.who.int/ssa/index.aspx

7 See UN Document SC/15761.

UN Security Council.[8] When we attempted to cross-validate a sample of observations from the SSA data, we could not identify or verify most of the records in the sample.

Different countries and territories began participating in the SSA programme at different points in time. The earliest participants—which began collecting data in late 2017—were Afghanistan, Central African Republic, the Occupied Palestinian Territory, and Yemen. Other countries and territories have since joined the SSA programme, gradually expanding the coverage of the data, as shown in Table A1 in the Data Appendix. By the end of 2025, SSA participants included 26 countries and territories, showing a steady and impressive rollout of the SSA programme by WHO staff.

## 3.2: Outcomes

The central outcome measured by the SSA data is that an attack on health care occurred on a particular day in a specific country or territory. The WHO defines an *attack* very broadly as "any act of verbal or physical violence, threat of violence or other psychological violence, or obstruction that interferes with the availability, access and delivery of curative and/or preventive health services."[9] The WHO includes attacks on a variety of health resource types, including facilities, patients, personnel (including auxiliary staff without medical training), supplies/assets, transport, and warehouses/storage.[10]

Some countries and territories have many reported events in the SSA database, suggesting that health care is under serious threat. For example, the SSA data contain 3,229 entries for the Occupied Palestinian Territory from 2017 through 2025, and 2,806 entries for Ukraine, which began reporting data in 2018. Other countries with a high number of reported events include the Democratic Republic of the Congo (603), Myanmar (519), and Syria (452). In these countries and territories, the WHO has catalogued events over multiple years, suggesting that various local actors understand and use the SSA system and are regularly reporting events, as shown in Figure A1 in the Data Appendix.

In contrast, other countries and territories have very few reported events, despite experiencing serious armed conflicts. For example, Nagorno-Karabakh has only one event (from November 2020) despite suffering in recent years from a blockade, invasion, and the mass forced displacement of ethnic Armenians in the autumn of 2023. Similarly, Iraq reported 36 incidents in 2018 but has not reported a single incident in the subsequent seven years.

WHO staff also classify each event into one or more categories. Table 1 shows the event type classifications and definitions. The most frequently reported type of event is violence with heavy weapons, which was reported 4,367 times.[11] Violence with individual weapons is the second-most frequent type (2,381 events), and obstruction of health care is the third-most frequent type (2,319) of reported event. Reports of sexual violence and chemical agents are very rare in the data, making up only 17 and 36 events, respectively. Events are routinely classified into multiple categories.

8 Entry UKR011089 records 70 injuries and 2 deaths, while entry UKR011090 records 1 injury and 7 deaths. Discussion in the UN Security Council suggested 27 deaths and over 100 injuries (UN Document SC/15761).

9 WHO SSA, Methodology, p. 7.

10 WHO SSA, Methodology, p. 29.

11 See Table A2 in the Data Appendix.

## Table 1: How Does the WHO Classify and Define Event Types?

| Event Type | Definition* |
|---|---|
| Abduction/Arrest/ Detention (AAD) | Abduction: The unlawful removal, seizure, capture, apprehension, taking or enforced disappearance of a person either temporarily or permanently; Arrest: A seizure or forcible restraint, an exercise of the power to deprive a person of his or her liberty;<br>Detention: The condition of being held in confinement and deprived of personal liberty |
| Assault | Violence inflicted from one person to another person that does not involve individual weapons or heavy weapons. |
| Chemical | A hazardous chemical has been intentionally released and the release has the potential for harming people's health. |
| Fire | Arson; the act of malicious burning. |
| Militarisation | Diversion of or interference with the primary use of civilian (i.e. non-military) health care facilities or transport by state military or paramilitary forces or non-state armed groups. |
| Obstruction | Any act resulting in blocking or preventing access to health care (e.g. an ambulance is prevented from accessing patients, or patients are inhibited from accessing or receiving needed health services). |
| Psychological | Emotional abuse, such as insults, belittling, humiliation, intimidation, or threats of harm.<br>The explicit declaration of a plan, intention or determination to inflict harm, whether physical or psychological. |
| Removal of assets | This can include looting, robbery or theft of health care assets. Looting refers to stealing of goods, typically during a war or riot. Theft is defined as the unauthorised taking of property of another person, and robbery is the act of stealing property from a person through the offender's use of physical force or threat of physical force. |
| Search | Examination of a person's body or property, or of a health care facility or transport, through the use of physical violence, weapons, or other means of coercion. |
| Sexual assault | A sexual act committed against someone without that person's freely given consent. |
| Violence - heavy | Violence with a weapon that requires more than one person to use such as firearms, tanks, missiles, bombs, mortars. |
| Violence - individual | Violence with a weapon that does not require more than one person to use, such as knives, bricks, clubs, guns, grenades and improved explosive devices (IED). |

** Definitions are taken directly from WHO SSA, Methodology, pp. 29--30.*

WHO staff additionally indicate what types of health resources are affected by reported events. Table 2 shows the definitions for the six categories used by the WHO: facilities, patients, personnel, supplies/assets, transport, and warehouse/storage. About half of the reports in the SSA data involve health care facilities and/or personnel.[12] Health care patients and transport are involved in roughly one quarter of the events. Events involving supplies/assets and warehouse/storage are less common, making up about 19 and 5 percent of the data, respectively. Once again, events are classified into multiple categories if an event involves multiple types of health resources.

## Table 2: How Does the WHO Classify and Define Health Resources?

| Resource Type | Definition* |
|---|---|
| Facilities | Any facility, fixed, mobile or temporary, providing curative or preventive health care. |
| Patient | Any person seeking or in need of health care. |
| Personnel | Any person contributing to the delivery of curative or preventive health care, with or without medical or paramedical training. |
| Supplies/assets | Any material or equipment that is used for curative or preventive health care. |
| Transport | Any individual or collective means of transport, which function is to convey the wounded and sick, or to transport drugs, medical material, or health care personnel. |
| Warehouse/storage | A facility or storage space that stores health care supplies and assets. |

** Definitions are taken directly from WHO SSA, Methodology, p. 29.*

Finally, WHO staff attempt to collect data on injuries and deaths across events. This data is highly skewed. A small number of events in the data feature high numbers of injuries and deaths. For example, the most severe event in the data is an explosion at the Al-Ahli Hospital in Gaza on 17 October 2023 caused by a failed rocket launch by a Palestinian armed group, which caused an estimated 342 injuries and 471 deaths.[13] However, most events in the data have no injuries or deaths whatsoever.[14] South Sudan has the highest average injury rate, with 2.98 injuries per event, while Sudan has the highest death rate, with an average of 7.11 deaths per event. Not surprisingly, places that experience more alleged attacks on health care are more likely to have a higher total number of injuries and deaths over time.[15] However, the challenges of incident data surveillance at global scale render it a virtually insurmountable challenge, requiring vast information collection and extensive verification, teams of statisticians to model and analyse, and many millions of dollars, if it is to be attempted. The typical result of inevitably defective surveillance is the misuse of resultant scrappy data to make unsubstantiated claims, as the WHO data surveillance concerning attacks on health care does.

12 See Table A3 in the Data Appendix.

13 See incident OPT009242. Location identified based on data and severity of injuries/deaths. See Table A4 in the Data Appendix.

14 See Table A4 in the Data Appendix.

15 See Figures A2 and A3 in the Data Appendix.

# 4. Political Analysis: How WHO Data is Used

After the SSA data is collected, processed, and released, diverse actors use the data to achieve their objectives. The innermost circle of users are the WHO and United Nations agencies, particularly the UN Human Rights Council. Human rights and special interest advocacy groups are also principal users, followed by press and social media as secondary consumers. The SSA data then help to inform political narratives delivered through these circles of users.

## 4.1: World Health Organization

The WHO has a bureaucracy of professional civil servants to ensure that the decisions of member states are implemented. This bureaucracy is run by the WHO Director-General, who has oversight of communications officers and researchers. These civil servants craft public messages about the priorities and work of the WHO, including outcomes measured by the Surveillance System for Attacks on Health Care (SSA).

The WHO regularly issues reports based on data from the SSA. These reports highlight trends at the country and global level in the various outcomes measured by the SSA.[16] They also sometimes present recommendations on how to prevent attacks on health care.[17] These reports briefly describe definitions used by the SSA and provide references to the WHO's detailed methodology. They generally focus on documenting change over time in the various SSA outcomes. They do not assign responsibility for the outcomes to any actor or discuss the legal consequences of these outcomes.

Additionally, WHO communications officers regularly craft press releases that publicise attacks on health care. These press releases sometimes condemn and publicise incidents in specific locations, such as the killing of medical patients and the abduction of health personnel at the Saudi Maternity Hospital in El Fasher, Sudan in October 2025.[18] Press releases also often describe aggregate trends in "attacks on health care" at the country, regional, or global level.[19] These press releases rely on information that has presumably been obtained from the SSA, although they usually do not explicitly name the SSA. For example, in a press release that was issued for World Humanitarian Day in August 2024, the WHO Director-General wrote: "in 2023 alone, WHO recorded 1520 attacks on health care, resulting in the deaths of at least 750 patients and health workers, and 1250 injuries. So far this year, another 700-plus attacks have been verified."[20] The press release contained no explanation for how these figures were calculated.

Finally, the WHO Director-General often makes public remarks about attacks on health care.

16 For example, see WHO (2021) "Attacks on Health Care: Three-year analysis of SSA data (2018–2020)," Available at: https://www.who.int/data/stories/attacks-on-health-care-three-year-analysis-of-ssa-data-(2018-2020)

17 WHO (2023) "Prevention and protection against attacks on health care: good practices" December 21. Available at: https://iris.who.int/server/api/core/bitstreams/22beee2e-e40e-49f5-b301-5530ced28f53/content

18 WHO Media Team (2025) "WHO condemns killings of patients and civilians amid escalating violence in El Fasher, Sudan," October 29. Available at: https://www.who.int/news/item/29-10-2025-who-condemns-killings-of-patients-and-civilians-amid-escalating-violence-in-el-fasher--sudan

19 E.g. see WHO (2024) "Attacks on hospitals and health workers jeopardize provision of health in Lebanon," October 16. Available at: https://www.who.int/news/item/16-10-2024-attacks-on-hospitals-and-health-workers-jeopardize-provision-of-health-in-lebanon

20 Dr Tedros Adhanom Ghebreyesus (2024) "Attacks on health are becoming the new reality; we must stop this becoming the norm," August 19. Available at: https://www.who.int/news-room/commentaries/detail/attacks-on-health-are-becoming-the-new-reality--we-must-stop-this-becoming-the-norm.

The WHO Director-General regularly briefs the UN Security Council about specific conflict zones and general trends, such as cyberattacks on health care.[21] He also often gives interviews to reporters about alleged attacks.[22] Additionally, he sends comments directly to the public using social media. In a tweet from 2 December 2025 about Sudan, the Director-General wrote: "Since the start of the conflict in April 2023, WHO has verified 198 attacks on health care, that killed 1735 health care workers and patients, and wounded 438."[23] Once again, the WHO Director-General does not usually explain how facts and figures are compiled and the limits to SSA definitions of "attacks."

## 4.2: United Nations

Many different UN actors use SSA data in their work. First, the UN Office of the Special Representative of the Secretary-General for Children and Armed Conflict (SRSG-CAC) frequently weighs in on attacks on health care as part of its mandate to monitor grave violations of international law. This office has been regularly issuing annual reports since the late 1990s. Following the creation of the SSA in late 2017, the SRSG-CAC began using WHO data to describe conditions in monitored countries. In these reports, the SRSG-CAC moved beyond basic WHO data and began identifying the parties responsible for alleged attacks. For example, when discussing Afghanistan, the SRSG-CAC wrote:

> A total of 62 attacks on hospitals and protected personnel were verified, 74 per cent of which were attributed to armed groups, including the Taliban (30), ISIL-KP (11), self-proclaimed ISIL-KP (3) and unidentified armed groups (2). The remaining attacks were attributed to the Afghan National Defence and Security Forces (5), international forces (4), pro-government militias (2) and 1 to an undetermined pro-government force. Four attacks were jointly attributed to different parties.[24]

After SRSG-CAC issues these reports, UN officials often present their findings in the UN Security Council.[25] The SRSG-CAC provides no information about how it makes such determinations, which are not included in publicly available WHO data. Our research team contacted the SRSG-CAC office multiple times to request information about how staff determine attribution for alleged attacks. The UN public liaison refused to provide specific information about this process, instead directing us to their general information webpages.

UN Special Rapporteurs—who are independent experts appointed by the UN Human Rights Council—have also invoked WHO data in their public statements. For example, Tlaleng Mofokeng—the UN Special Rapporteur on the Right to Health—issued a press release in April

21 For example, see: WHO (2024) "WHO Director-General's remarks at Meeting of the United Nations Security Council on the situation of the health system in Gaza – 6 November 2024," November 6. Available at: https://www.who.int/news-room/speeches/item/who-director-general-s-remarks-at-meeting-of-the-united-nations-security-council-on-the-situation-of-the-health-system-in-gaza---6-november-2024; and WHO (2024) "WHO Director-General briefs the UN Security Council on ransomware attacks on healthcare," November 26. Available at: https://www.who.int/news/item/26-11-2024-who-director-general-briefs-the-un-security-council-on-ransomware-attacks-on-healthcare.

22 For example, see (2024) "WHO chief calls for end to hospital attacks in Gaza after strike", *Reuters*, December 30. Available at: https://www.reuters.com/world/middle-east/who-chief-calls-end-hospital-attacks-gaza-after-strike-2024-12-30/

23 Image of X post on file with authors. Available upon request.

24 UN document: S/2019/509, para. 24.

25 See (2021) "Despite Call for Global Ceasefire to Combat Pandemic, Deadly Conflicts Continue, Humanitarian Chief Tells Security Council Debate on Protecting Civilians" May 25. Available at: https://press.un.org/en/2021/sc14530.doc.htm

2025 in which she condemned a purported Israeli airstrike on Al-Ahli Hospital in Gaza.[26] In this press release, she cited aggregate WHO data on attacks across the OPT, suggesting that Israel was responsible for all attacks on health care. She also said that "health care facilities and health workers must be protected under international law," suggesting that Israel had violated international law hundreds of times.[27] Similarly, in a 2025 joint statement with Francesca Albanese—the UN Special Rapporteur for Palestinian Territories—Mofokeng used WHO data to accuse Israel of committing "medicide".[28] This novel term, never before used in a UN declaration, was invented to condemn alleged Israeli military conduct.

Additionally, a host of UN bodies regularly make statements and present statistics about alleged attacks on health care. The bodies include the Office of the High Commissioner for Human Rights (OHCHR), UN Women, and UNICEF. Sometimes these bodies issue statements jointly with the WHO, clarifying that the WHO is the source of statistical claims.[29] In contrast, sometimes these bodies use data from the WHO interchangeably with data from less credible sources, such as the Gaza Health Ministry, which is run by Hamas.[30] Finally, sometimes these bodies provide no information about the data sources for their claims.[31]

## 4.3: Advocacy groups and scholars

Numerous advocacy groups and scholars have also used the WHO's SSA data. Some NGOs use SSA data as the basis for constructing their own datasets. For example, the Safeguarding Health in Conflict Coalition is a group of non-governmental organisations that cooperate to promote the safety of health care, especially in conflict zones. As part of its advocacy efforts, the Coalition collects data and issues annual reports at the global and country level about violence against health care. While the Coalition creates the impression that they are an independent source of data, the Coalition relies on data collected by the WHO's SSA as one of its main sources.[32] The Coalition does not independently verify WHO data, but instead includes all data that the WHO classifies as "verified."[33] In at least one of its reports, the Coalition noted that an apparent increase in health care violence was likely caused by enhanced reporting by the WHO.[34] The Coalition then issues press releases to inform the general public about this issue.

26 See (2025) "UN expert condemns attack on Al-Ahli hospital in Gaza," April 17. Available at: https://www.ohchr.org/en/press-releases/2025/04/un-expert-condemns-attack-al-ahli-hospital-gaza

27 See (2025) "UN expert condemns attack on Al-Ahli hospital in Gaza," April 17. Available at: https://www.ohchr.org/en/press-releases/2025/04/un-expert-condemns-attack-al-ahli-hospital-gaza

28 See (2025) "UN experts appalled by relentless Israeli attacks on Gaza's healthcare system" August 13. Available at: https://www.ohchr.org/en/press-releases/2025/08/un-experts-appalled-relentless-israeli-attacks-gazas-healthcare-system

29 UNICEF (2024) "Ukraine witnessing increasing impact of attacks on health and education" February 7. Available at: https://www.unicef.org/ukraine/en/press-releases/ukraine-witnessing-increasing-impact-attacks-health-and-education

30 For example, see UN Women (2024) "Gender Alert: Gaza – A War on Women's Health" September. Available at: https://www.unwomen.org/sites/default/files/2024-09/gender-alert-gaza-a-war-on-womens-health-en.pdf

31 For example, see Office of the High Commissioner for Human Rights (2024) "Thematic Report: Attacks on hospitals during the escalation of hostilities in Gaza (7 October 2023 – 30 June 2024)", December 31. Available at: https://www.ohchr.org/sites/default/files/documents/countries/opt/20241231-attacks-hospitals-gaza-en.pdf

32 See SHCC (2023) "Critical Condition: Violence Against Health Care in Conflict, 2023," p. 130. Available at: https://safeguarding-health.com/archived-reports-2014-2021/

33 Ibid.

34 See SHCC (2019) "Impunity Remains: Attacks on Health Care in 23 Countries in Conflict," p. 8. Available at: https://www.medecinsdumonde.org/en/statement/attacks-on-health-care-in-23-countries-in-conflict

SSA data have also previously been studied and critiqued by NGOs. For example, the International Peace Institute is another NGO that has addressed violence against health care. In a research report from 2022, the Institute highlighted major shortcomings in SSA data and called upon the WHO to implement structural changes in how attacks on health care are documented. In particular, the Institute called upon the WHO to incorporate data from country-level domestic reporting systems and from various nongovernmental organisations, even if this data did not satisfy existing WHO procedures and standards.[35] We do not concur with the recommendations of this report because we believe that many aspects of the current SSA data are already problematic, as detailed below in section 6. We do not believe that adding new sources of information with their own biases will ameliorate the SSA's existing problems.

Finally, numerous NGOs use SSA data to lobby decision-makers. For example, the Safeguarding Health in Conflict Coalition has used SSA data to lobby the UN Security Council to take further actions to prevent violence against health care.[36] Human Rights Watch has also cited SSA data in an official 2025 submissions to the UN Special Rapporteur on the Right to Health.[37] Similarly, Al-Haq, a Palestinian NGO based in the West Bank, used SSA data to condemn Israel's war in Gaza and to label the war as a "genocide" in an official submission to the UN Special Rapporteur on the Right to Health.[38]

A small set of scholars of health and conflict have examined SSA data, but relatively little scholarly research has been performed using the data. One study of Ukraine attacks carefully documented the changing nature of attacks over time during the war with Russia.[39] A few additional studies have cited SSA data as evidence that attacks against health care are a common problem that may be growing in severity.[40] However, we were unable to find any other academic research in scholarly journals that uses SSA data to address questions in the study of health and conflict.

A small number of articles have attempted to introduce the data to scholars. For example, two scholarly articles have described SSA data without analysing it to draw any firm conclusions.[41] Additionally, one study carefully compared the SSA to other data sources and showed that there is minimal overlap for certain periods of time, suggesting that there is, on average, underreporting in SSA data.[42] The overall lack of scholarship using the data suggests that

35 Rohini Haar and Susannah Sirkin (2022) "Strengthening Data to Protect Healthcare in Conflict Zones," *International Peace Institute*, p. 14. Available at: https://www.ipinst.org/2022/11/strengthening-data-to-protect-healthcare-in-conflict-zones

36 See SHCC (2025) "Act on Security Council resolution" at: https://safeguarding-health.com.

37 Human Rights Watch (2025) "Call for Input: Health and Care Workers as Key Protectors of the Right to Health," p. 6. Available at: https://www.hrw.org/news/2025/01/03/submission-un-special-rapporteur-right-health

38 See Al-Haq (2025) "Israel's targeting of Palestinian healthcare workers: an act of genocide," May 30, pp. 4, 8, and 9. Available at: https://www.alhaq.org/cached_uploads/download/2025/07/31/attacks-on-healthcare-workers-sr-right-to-health-submission-30-may-1753955311.pdf

39 Hyo-Jeong Kim, et al. (2024) "Typology and Implications of Verified Attacks on Health Care in Ukraine in the First 18 Months of War" *PLOS Global Public Health* 4(5): 1—13.

40 Karl Blanchet, et al. (2023) "Have Attacks on Healthcare Become the New Normal? A Public Health Call to Action for Armed Conflicts Before it is Too Late" *Conflict and Health* 17(56): 1—3; Larissa Fast and Róisin Read (2022) "Using Data to Create Change? Interrogating the Role of Data in Ending Attacks on Healthcare" *International Studies Review* 24(3): 1—16; Nicola Perugini and Neve Gordon (2024) "Medical Lawfare: The Nakba and Israel's Attacks on Palestinian Healthcare" *Journal of Palestine Studies* 53(1): 68-91

41 Karl Blanchet, et al. (2023) "Have Attacks on Healthcare Become the New Normal? A Public Health Call to Action for Armed Conflicts Before it is Too Late" *Conflict and Health* 17(56): 1—3; and Meier, et al. (2021) "Monitoring Attacks on Health Care as a Basis to Facilitate Accountability for Human Rights Violations" *Health and Human Rights Journal* 23(1): 55—70.

42 Vanessa Parada, et al. (2023) "Underestimating Attacks: Comparing Two Sources of PubliclyAvailable Data about Attacks on Health Care in 2017" *Conflict and Health* 17(3): 1—13.

either scholars are unaware of the data or they do not have confidence in its quality. We return to this issue later in our report.

## 4.4: Press coverage and the general public

The international news media reports extensively on the activities of the World Health Organization, United Nations, and major NGOs. This reporting transmits information about attacks on health care to the general public. Major wire services—like Agence France-Presse, the Associated Press, Reuters, TASS, and United Press International—all regularly report on the activities and press releases of the WHO, UN, and major NGOs, like Human Rights Watch. These reports are in turn reprinted in national and local venues worldwide. Global television networks—like Al-Jazeera, the BBC, and CNN—also transmit this information to television audiences.

However, when reporters engage in such journalism, they rarely engage with information about attacks on health care in a critical manner. For example, reporters do not generally provide any independent source for information about attack statistics or discuss WHO and SSA definitions and data collection procedures. Instead, readers and viewers are left with the impression that statements made by the WHO, UN, and NGOs are accurate, neutral, and unbiased.

# 5. Legal Analysis: What Matters in Assessing Military Operations

Here we set out rules of international humanitarian law relevant to protection of health care facilities in armed conflict. The chapter defines the meaning of an attack in international law, outlines the international legal prohibition on attacks on medical facilities in armed conflict, and sets out the limits circumscribing those protections. The application of the rules differs for international and non-international armed conflicts, with rules for the latter being less developed despite the contemporary prevalence of non-international armed conflicts.

## 5.1: Definition of "attack"

"Attacks" are defined in article 49 of the *Protocol Additional to the Geneva Conventions of 12 August 1949 Relating to the Protection of Victims of International Armed Conflicts* 1977 (Protocol 1) as "*acts of violence* against the adversary, whether in offence or in defence"[43] (emphasis added). Protocol 1 relates to international armed conflicts. Controversy remains active concerning the elevation in Protocol 1 of national liberation movements to the status of states, thereby treating their attacks as part of international armed conflicts, which formed the main reason for several major states refusing to ratify Protocol 1. However, the defining of "attacks" is generic in Protocol 1 and applicable both to international and non-international armed conflicts. Therefore, it is not controversial to use the definition in article 49 of Protocol 1 as indicative of international practice in defining "attacks".

Acts that involve no element of violence are not "attacks" under international humanitarian law. The controlling body of law, or *lex specialis*, for legal conduct in armed conflict is international humanitarian law. Therefore, international organisations characterising conduct in armed conflict should conform with, rather than contradict, the norms of international humanitarian law. For example, security inspections, delays at roadblocks and other similar actions that affect medical and health personnel should not be characterised as "attacks", because the actions are not acts of violence.

Dinstein notes that "hostilities" comprise a broader class of actions than attacks. Nonviolent aspects of "hostilities" include psychological warfare, which comes under the broader umbrella.[44] These aspects of "hostilities" are not "attacks". The characterisation of non-violent activities as "attacks" is a misleading error. Unfortunately, it is systematically repeated by the World Health Organization in its data reports on *Protecting Health Care During Armed Conflicts*.

## 5.2: Prohibition of attacks on health care in international armed conflict

Geneva Convention I, Article 19, specifies that "fixed establishments and mobile medical units of the medical service may in no circumstances be attacked, but shall at all times be respected and protected by the parties to the conflict". "Fixed medical establishments" are mostly hospitals. Geneva Convention I, Article 35, extends protected objects status to medical transports or vehicles, such as ambulances. Similar protection is extended to convoys of vehicles transporting

43 *Protocol Additional to the Geneva Conventions of 12 August 1949 Relating to the Protection of Victims of International Armed Conflicts* 1977 (Protocol 1 1977).

44 Y. Dinstein, *The Conduct of Hostilities under the Law of International Armed Conflict* (2nd edn) Cambridge Uni Press, 2010, p. 2 para 4.

wounded and sick civilians, the infirm and maternity cases.[45]

The prohibition of attacks on health care in Geneva Convention I is echoed in Geneva Convention II, Article 23, which prohibits "bombardment or attack from the sea" directed at protected objects,[46] and in Geneva Convention IV, Article 18, which similarly forbids attacks against civilian hospitals giving care to the wounded and sick.[47]

### *(i) Medical units*

Additional Protocol 1 extends protection beyond that provided by Geneva Convention I and its reflected provisions in Geneva Conventions II and IV. Article 12(1) of Additional Protocol 1 protects all "medical units". Medical units are more widely defined in Article 8(e):

> "medical units" means establishments and other units, whether military or civilian, organised for medical purposes, namely the search for, collection, transportation, diagnosis or treatment -- including first-aid treatment -- of the wounded, sick and shipwrecked, or for the prevention of disease. The term includes, for example, hospitals and other similar units, blood transfusion centres, preventive medicine centres and institutes, medical depots and the medical and pharmaceutical stores of such units. Medical units may be fixed or mobile, permanent or temporary...

Thus, protection from attack is mandated for blood transfusion centres, preventive medicine centres and institutes, medical depots and medical and pharmaceutical stores. Facilities that store or warehouse medical supplies fall within the definition of protected medical units as set out under the Protocol. Accordingly, they may not be attacked if not engaged in hostilities.

### *(ii) Loss of protected status of medical facilities in IAC*

It must be understood that medical and health personnel and facilities are not immutably immune from attack in circumstances where they themselves engage in hostilities. Their misuse by militaries and armed groups undermines their protected status. Over a century ago, the likelihood of misuse of protections afforded to medical personnel and facilities in war conducted under international law, as set out in the 1907 Hague Convention,[48] was recognised. Therefore, medical personnel and facilities protections during World War I were negated when they engaged in hostilities, such as reconnaissance or smuggling.

45 *Geneva Convention I for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field* 1949 (Geneva Convention I).

46 *Geneva Convention II for the Amelioration of the Condition of Wounded Sick and Shipwrecked Members of Armed Forces at Sea* 1949 (Geneva Convention II).

47 *Geneva Convention IV Relative to the Protection of Civilian Persons in Time of War* 1949 (Geneva Convention IV).

48 *Convention (IV) respecting the Laws and Customs of War on Land and its annex: Regulations concerning the Laws and Customs of War on Land. The Hague, 18 October 1907*.

### *(iii) Harmful acts*

By 1949, Article 21 of Geneva Convention I expressly specified that protection of fixed establishments and mobile medical units shall cease if "they are used to commit, outside their humanitarian duties, acts harmful to the enemy".[49] In 1977, Additional Protocol 1, Article 13, similarly discontinued protection of civilian medical units when "they are used to commit, outside their humanitarian function, acts harmful to the enemy".[50]

In this context, the range of "acts harmful to the enemy" is a phrase encompassing broader circumstances than the formulation "attacks". Acts harmful to the enemy extend beyond acts of violence. The International Committee of the Red Cross Official Commentary to the Additional Protocols notes that the definition of "acts harmful to the enemy" is very broad.[51] "It refers not only to direct harm inflicted on the enemy, for example, by firing at him, but also to any attempts at deliberately hindering his military operations in any way whatsoever."[52]

For example, the use of a hospital as a military command, logistics, planning, storage reconnaissance, or intelligence centre is clearly engagement in acts harmful to the enemy. Similarly, the utilisation of ambulances or other medical transports for smuggling, surveillance, reconnaissance, messaging or obstruction is also engagement in acts harmful to the enemy. Whether those responsible for the administration of a hospital engage in such acts willingly or not is irrelevant to the fact of their use.

Concrete examples of Hamas's use of Al Shifa Hospital in Gaza as a command centre and of Nasser Hospital as an intelligence centre deprived those medical facilities of their protection under international humanitarian law. Similarly, Hezbollah's use of Lebanese ambulances for transporting its fighters and weapons in South Lebanon deprives those vehicles of their protection.

More broadly, Article 51(3) of Additional Protocol 1 provides that "Civilians shall enjoy the protection afforded by this section, unless and for such time as they take a direct part in hostilities." This provision presents interpretive challenges concerning the meaning of "direct part in hostilities' and also as to its duration.[53] As noted above,[54] "hostilities' is a broader concept than "attack". It is arguably broader than "acts harmful to the enemy" but it is not necessary to elaborate upon these challenges for our present purposes.

### *(iv) Allowed medical armament*

There are military arms that medical units might legitimately carry and the actions of carrying them are carved out from the loss of protection by medical units. As a strictly limited class of exceptions, non-harmful armed activities are listed explicitly in Geneva Convention I, Article 22, which allows:

49 Geneva Convention 1.

50 Additional Protocol 1.

51 Y. Sandoz et al, 'Article 13' *International Committee of the Red Cross Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949*, 173, 175.

52 *Ibid*.

53 LR Blank and GP Noone, *International Law and Armed Conflict - Fundamental Principles and Contemporary Challenges in the Law of War* 2013 Wolters Kluwer pp. 329-347.

54 Above, chapter 5.2.

1. That the personnel of the unit or establishment are armed, and that they use the arms in their own defence, or in that of the wounded and sick in their charge.
2. That in the absence of armed orderlies, the unit or establishment is protected by a picket or by sentries or by an escort.
3. That small arms and ammunition taken from the wounded and sick and not yet handed to the proper service, are found in the unit or establishment.
4. That personnel and material of the veterinary service are found in the unit or establishment, without forming an integral part thereof.
5. That the humanitarian activities of medical units and establishments or of their personnel extend to the care of civilian wounded or sick.

This list of allowances is repeated, in slightly revised form, in the Additional Protocol 1, Article 13(2), which characterises as non-harmful the following circumstances concerning medical and health personnel:

a) ...personnel of the unit are equipped with light individual weapons for their own defence or for that of the wounded and sick in their charge;
b) ...unit is guarded by a picket or by sentries or by an escort;
c) ...small arms and ammunition taken from the wounded and sick, and not yet handed to the proper service, are found in the units;
d) ...members of the armed forces or other combatants are in the unit for medical reasons.

Dinstein notes that the term "defence" in these listings for defence of personnel and wounded "must be construed restrictively".[55] Thus, it covers defence against marauders but "medical personnel cannot use force to try and prevent combatants from the adverse party from capturing the medical unit, without losing their right to protection".[56]

## 5.3: Loss of protected medical status in IAC

Geneva Convention I prescribes several parts of the process of loss of protected status by medical personnel and facilities. The first step is to give the benefit of the doubt to protected status. That is, in case of doubt whether an object which is normally dedicated to civilian purposes—such as a place of worship, house or other dwelling or a school—is being used to make an effective contribution to military action, it shall be presumed not to be so used.[57] This is, in effect, a presumption of innocence. Conversely, where there is evidence enough to persuade a reasonable military commander in the circumstances at the time that the personnel or facilities are making a contribution to military action, then the presumption is removed. Sufficient evidence to displace the presumption could include visual sightings or intercepted communications showing that the medical premises are used to store weapons or other military infrastructure, or for military uses such as shooting, reconnaissance, interrogation or command.[58]

55 Dinstein, above n 44, p. 169, para 420.

56 Sandoz, above n. 51, at 177; in Dinstein, above n 44, n.2.

57 Additional Protocol 1 Article 52(3).

58 NGO Monitor (2025) "In Their Own Words: Hamas Turns Hospitals into Military Assets with NGO Compliance" September 10. Available at: https://ngo-monitor.org/reports/hamas-misuse-hospitals-docs.

The next step in the loss of protected status for medical personnel and facilities, as set out under Geneva Convention I, Article 21, is the requirement that a warning be given before the medical unit loses its protected status: "Protection may, however, cease after a due warning has been given, naming, in all appropriate cases, a reasonable time limit and after such warning has remained unheeded." This provision is largely repeated in Additional Protocol 1, Article 13(1).

The International Committee of the Red Cross's official *Geneva Convention Commentaries* indicate that the requirement for a reasonable time warning and reasonable time limit is to give opportunity for the hospital to be evacuated prior to attack, or, if the enemy chooses, to enable it to cease misuse of the hospital, such as by the enemy leaving the premises. This reasonable time limit is required "in all appropriate cases", meaning that it is not required where it would be inappropriate, such as in the case of troops coming under fire from enemy forces at the hospital.[59]

A series of questions then arise as to reasonable and proper considerations to be undertaken by a military commander in the field, in targeting the previously protected medical facilities or personnel.[60] Dinstein notes that "the principal question is whether the injury/damage expected to the patients and medical personnel in the hospital - as well as to valuable medical instrumentation - is excessive compared to the military advantage anticipated from the elimination of the enemy tanks, combatants, etc".[61] Thus, "should tanks be stationed next to a hospital the enemy is not entitled to attack the hospital directly, but targeting the tanks may expose the hospital to lawful collateral damage".

## 5.4: Prohibition of civilian shields in IAC

Article 28 of Geneva Convention IV prohibits the use of human shields: "The presence of a protected person may not be used to render certain points or areas immune from military operations." This provision applies to international armed conflicts, as does Article 12 of Additional Protocol 1, which establishes that "[u]nder no circumstances shall medical units be used in an attempt to shield military objectives from attack."[62]

Consistent with Geneva Convention and customary international law obligations to protect civilians, to take precautions against unnecessary harm, and to ensure that damage is proportionate to military advantage, a belligerent party can issue evacuation orders. In circumstances where evacuation is possible, such orders protect civilians by requiring their removal from a theatre of battle where military targets are present and active hostilities are imminent. The theatre of battle may include areas where there are medical facilities or units, especially where they have lost protected medical status due to being used to make a contribution to hostilities.

59 JS Pictet (ed), *Commentary on Geneva Convention I*, ICRC 1952, p.202.

60 Blank and Noone, above n. 53, 414.

61 Dinstein, above n. 44, p. 191 para 472.

62 Additional Protocol 1, Article12(4).

## 5.5: Protection of medical units in non-international armed conflict

The legal boundary between international and non-international armed conflicts can be difficult to discern, especially in the contexts of transnational and national liberation conflicts, and this difficulty provides much material for academic discussion.[63] Here, however, we simply focus upon the legal protections available to medical personnel and facilities.

In relation to non-international armed conflicts, Common Article 3 of the Geneva Conventions sets out basic provisions on protection of the sick and wounded. These are less detailed than those applicable to international armed conflicts throughout the Geneva Conventions but are not inconsistent with them. Common Article 3 of the Geneva Conventions provides that:

In the case of armed conflict not of an international character occurring in the territory of one of the High Contracting Parties, each Party to the conflict shall be bound to apply, as a minimum, the following provisions:

1. Persons taking no active part in the hostilities, including members of armed forces who have laid down their arms and those placed "hors de combat" by sickness, wounds, detention, or any other cause, shall in all circumstances be treated humanely, without any adverse distinction founded on race, colour, religion or faith, sex, birth or wealth, or any other similar criteria...

2. The wounded and sick shall be collected and cared for ...

The *Protocol Additional to the Geneva Conventions of 12 August 1949 and relating to the Protection of Victims of Non-International Armed Conflicts* 1977 (Additional Protocol 2) is not extensively ratified by states but its provisions are consistent with those of the widely ratified four Geneva Conventions. In non-international armed conflict, Additional Protocol 2, Article 13, requires protection of the civilian population:

1. The civilian population and individual civilians shall enjoy general protection against the dangers arising from military operations...

2. The civilian population as such, as well as individual civilians, shall not be the object of attack...

### *(i) Medical personnel and facilities protected*

Additional Protocol 2 goes on to address specifically the protection of medical personnel and facilities. Part IV of Additional Protocol 2, like Common Article 3, is less expansive but consistent with those throughout the Geneva Conventions on protection of the civilian population and the protection of medical personnel and facilities. Article 9(1) provides that "Medical and religious personnel shall be respected and protected and shall be granted all available help for the performance of their duties". Medical units and transports are also to be protected and may not be subject to attack.[64]

63 Blank and Noone, above n. 53, 135-164.

64 Additional Protocol 2, Article 11(1).

### *(ii) Loss of protected medical status*

Pursuant to Article 11(2), Additional Protocol 2 specifies that protection of medical units ceases when:

> ...they are used to commit hostile acts, outside their humanitarian function. Protection may, however, cease only after a warning has been given setting, whenever appropriate, a reasonable time-limit, and after such warning has remained unheeded.

Similarly, Additional Protocol 2, Article 13(3), terminates protection of members of the civilian population who engage in hostilities: "Civilians shall enjoy the protection afforded by this Part, unless and for such time as they take a direct part in hostilities."

In these provisions, Additional Protocol 2 refers to "hostile acts" (Article 11) and a "direct part in hostilities" (Article 13), rather than adopting the language of "attacks" and "harmful acts" set out in the Geneva Conventions. According to the Official Commentary, there is no difference of substance between the terminologies of hostile acts and of harmful acts.[65] Although there is ongoing uncertainty as to the scope of a "direct part in hostilities", which generates controversy over the scope of actions that terminate protection, that discussion is not central to this report and can be circumvented here.

To determine whether hostile acts or a direct part in hostilities are occurring, or have taken place, a belligerent party can take steps of enquiry. These can entail searches of buildings or vehicles, including medical facilities or ambulances.

### *(iii) Evacuation of civilian shields*

The obligations in Additional Protocol 2 to protect the civilian population in non-international armed conflict are consistent with the prohibition in international armed conflicts on the use of civilians as shields for sheltering military objectives from attack, and might be taken to imply that prohibition. Consistent with obligations in the Geneva Conventions and in customary international law concerning international armed conflict to protect civilians, to take precautions against unnecessary harm and to ensure that damage is proportionate to military advantage, it is appropriate for a belligerent party in a non-international armed conflict to urge the evacuation of civilians from an area where military targets are present and active hostilities are imminent.

The theatre of battle may include areas where there are medical facilities or units, especially where these have lost protected medical status due to their being used by an enemy party to make a contribution to its hostilities. In circumstances where the enemy will not cease its use of those facilities, it is reasonable and appropriate for a belligerent party instead to take precautions ahead of battle by calling for the evacuation of civilians from the facility.

65 Y. Sandoz et al, 'Additional Protocol 2'*Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949*, ICRC 1987, para. 4720.

# 6. Policy Analysis: Why WHO Data is Problematic and Misleading

The most important insights produced in this report on the World Health Organization Surveillance System for Attacks on Health Care data lie in this chapter, where we analyse its severe shortcomings. Protecting health care is an important priority for policymakers. However, the WHO's SSA data is deeply problematic and misleading due to fundamental methodological failures. There are two main critical failures. These are the SSA's use of an overly expansive definition of what constitutes an attack, which is inconsistent with its meaning in international law and natural language, and the inherent vulnerability and intractable biases in SSA data, due to lack of objective reporting processes, lack of verification protocols and lack of consistent application across territories to generate comparable statistical data.

## 6.1: Overly Expansive Definition of "Attack"

The WHO uses the word "attack" in an overly expansive way. This practice creates a misleading narrative about armed conflict and health care for other international organisations, states, and the public. It is inconsistent with international law, includes large proportions of events that are unrelated to armed conflict or armed violence, and even events unrelated to actual health care provision. It is simply and readily weaponised for the purposes of disinformation and psychological operations in armed conflicts and can perversely report as attacks events that are taken to protect civilian or medical facilities.

### *(i) Events are often unrelated to armed conflict*

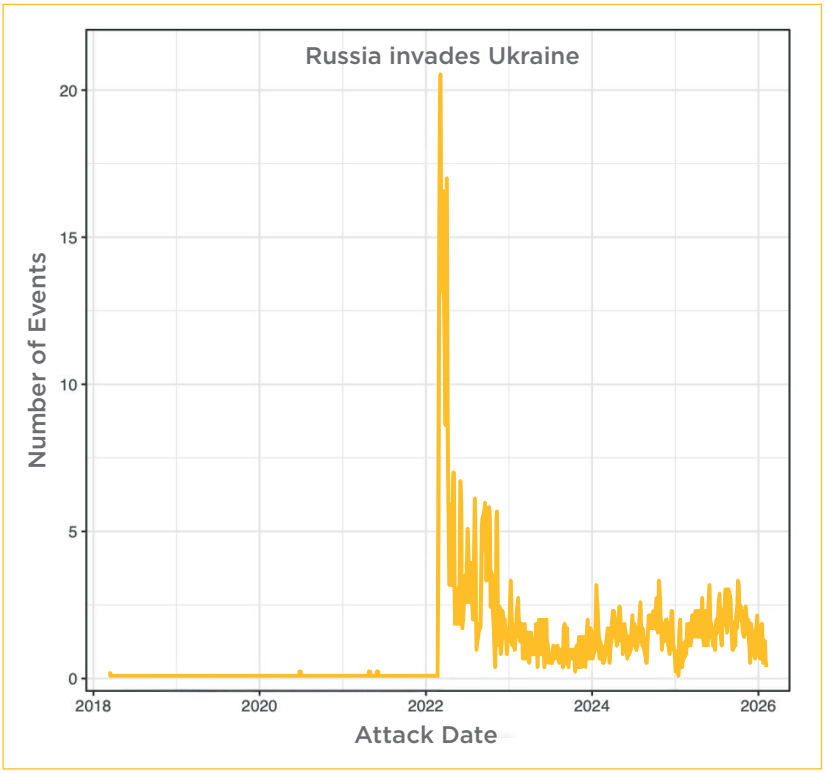
The word "attack" is a legal term that is associated with the existence of armed conflict. Even if an individual does not have legal training, the word "attack" is conventionally associated with heightened levels of physical violence, like armed conflict. There is no universally accepted and well-calibrated definition for when political violence rises to the level of armed conflict. Some experts identify armed conflict based on battle deaths and assume that at least 1,000 people have died per year to qualify as an armed conflict.[66] Other experts use a much lower threshold of 25 battle deaths per year.[67]

Sometimes the reported events in the WHO data occur during armed conflicts. For example, Figure 1 shows the moving average of the number of reported events in the SSA data for Ukraine. This way of displaying data allows us to precisely identify time-trends. As this figure shows, nearly all reported events occurred after 24 February 2022, when Russia invaded Ukraine. Before this date, Ukraine was not involved in a full-scale conflict. After this date, Ukraine was engaged in a full-scale armed conflict with Russia. The fact that 99.9 percent of reported events in the SSA data in Ukraine have occurred during Ukraine's war with Russia suggests that the WHO data is indeed capturing conventional understandings of "attacks."

66 See Correlates of War, https://correlatesofwar.org/data-sets/

67 See Uppsala Conflict Data Program, https://ucdp.uu.se

## Figure 1: Reported Events in Ukraine

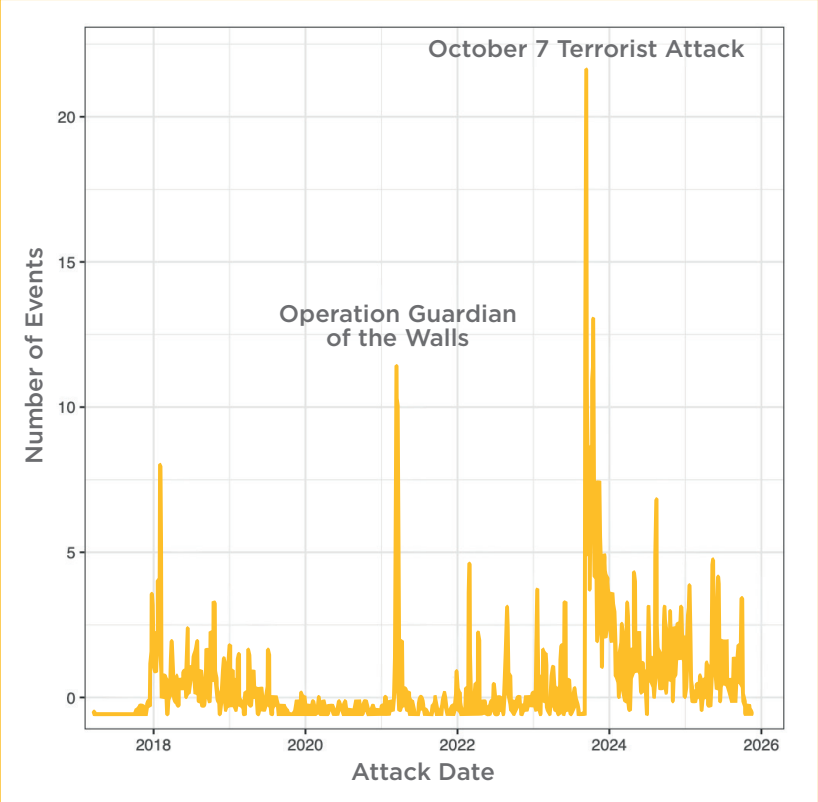



*Note: To ease interpretation, the data is smoothed to show the seven-day moving average of the number of reported events in the SSA data. SSA data downloaded on 5 January 2026.*

However, sometimes events in the WHO data do not occur during armed conflicts. Figure 2 shows reported events in the Occupied Palestinian Territory throughout the relevant reporting period. During this time, there was a serious armed conflict in Gaza—a region within the OPT—following a terrorist attack by Hamas on 7 October 2023. This conflict continued until a ceasefire began on 10 October 2025. Additionally, the OPT's reporting period includes Operation Guardian of the Walls (10-21 May 2021), an Israeli military operation in Gaza that was triggered by Hamas missile strikes into Israel. Throughout the rest of the observation period of late 2017 through 2025, both Gaza and the West Bank experienced prolonged low-level tensions that sometimes led to fatalities. However, the overall number of fatalities during these time periods was relatively small, suggesting that we should not categorise these periods as armed conflict.[68] The WHO data contain many reported events during Operation Guardian of the Walls and the Gaza War (1,983 events in total). However, 38.6 percent of reported events in the OPT occurred during other time periods, when the OPT was not experiencing armed conflict. This suggests that a large part of the OPT data are capturing events that may be associated with low-level violence, but probably are not part of an armed conflict, as defined by international law.

68 To make this determination, we consulted data from the Uppsala Conflict Data Program, available at: https://ucdp.uu.se

## Figure 2: Reported Events in the Occupied Palestinian Territory




*Note: To ease interpretation, the data is smoothed to show the seven-day moving average of the number of reported events in the SSA data. SSA data downloaded on 5 January 2026.*

### *(ii) Many event-types do not involve violence*

A second factor that makes the WHO definition of "attack" overly inclusive is that many events catalogued by the WHO do not necessarily involve physical violence, as implied by the word "attack." For example, the category "psychological" is based on emotional distress, including "insults, belittling, humiliation, intimidation, or threats of harm."[69] None of these behaviours involves actual physical violence. While such behaviours are unpleasant, they would not be considered an "attack" in the legal sense.

Additionally, the SSA data include arrests and detentions as a form of attack. However, arrests and detentions are routine law enforcement activities. These activities sometimes take place at a medical facility or involve medical patients or personnel, but they do not accord with a conventional definition of "attack." The WHO cautions that only "illegal" arrests may be included as a form of attack. (No such qualifier is placed on detentions.) But individuals who are reporting events to the WHO do not necessarily have the knowledge or expertise to know when an arrest is valid and when it is illegal.

Similarly, the SSA data include "searches" as an attack-type. Searches of medical facilities, patients, personnel, or transportation are routine law enforcement operations that may be necessary to protect public safety and the health care system itself. For example, it is common for the Israeli military and police to search ambulances in the OPT. These searches ensure that terrorist organisations do not use ambulances to move fighters and/or weapons under the cloak of health care. Some activists denounce these searches,

69 WHO SSA, Methodology, p. 30.

arguing that they violate humanitarian law.[70] However, other organisations, including the International Committee of the Red Cross, argue that searches of ambulances are legal, provided that a search does not "unduly delay medical evacuations."[71] These searches are a legitimate and logical response to the weaponisation of health care by terrorist organisations in the East Jerusalem, Gaza, and the West Bank.

Additionally, "obstruction" of medical care is called an "attack" in the SSA data. An obstruction need not involve any use of force and it is incorrect to use the term as a synonym for attack. In both peace and armed conflict, law enforcement sometimes must create checkpoints to reduce smuggling and illegal crossings between territories and to prevent violence. For example, Israel operates many checkpoints in East Jerusalem and the West Bank, where Arab and Jewish populations are often intermingled. Yet, the WHO methodology for the SSA data explicitly states that if a doctor is late for work because he/she does not leave adequate time to pass through a checkpoint, this incident can be classified as an "attack" because it is an obstruction of health care.[72] Presumably, delays in the delivery of patients and supplies could also be classified as "attacks" even if there is no violence involved in the delay and even if the delivery was found to have concealed weapons.

Given the limited information that is publicly released by the WHO, it is not possible to reclassify events based on a legal definition of "attack." However, one possible proxy is to ask: which events involve heavy violence ("Violence with a weapon that requires more than one person to use such as firearms, tanks, missiles, bombs, mortars") without any accompanying militarisation ("Diversion of or interference with the primary use of civilian (i.e., non-military) health care facilities or transport by state military or paramilitary forces or non-state armed groups"), which might justify the use of weapons? We call events that satisfy these two criteria by the label "Severe Events." A second proxy is to ask: which events in the WHO data resulted in at least one death? We call events that satisfy this criterion by the label "Deadly Events."

On average, across all states and territories, 45.5 percent of WHO events are severe, and 9.2 percent of events are deadly.[73] However, there is tremendous variation in these figures across states and territories. For example, 26.1 per cent of events in the OPT qualify as "severe" in contrast to the 45.5 percent average. By comparison, 60.2 percent of attacks in Syria and 88.6 percent of attacks in Ukraine qualify as "severe". In relation to events characterised as deadly, 6.3 percent of events in the OPT are deadly, while states like Somalia and South Sudan have 42.1 and 45.5 percent deadly attacks, respectively. These figures suggest that many of the events being measured by the WHO involve either no violence or relatively low-level incidents. Additionally, the variation suggests that reporting standards vary dramatically across states, with some actors regularly reporting relatively minor incidents (e.g. in the OPT), while other states are less likely to report such incidents (e.g. in Somalia and South Sudan).

70 For example, see UN Office for the Coordination of Humanitarian Affairs (2024) "Humanitarian Access Snapshot - Gaza Strip | End-February 2024" March 6. Available at: https://www.ochaopt.org/content/humanitarian-access-snapshot-gaza-strip-end-february-2024

71 For example, see ICRC (2002) "OPT: The ICRC calls for respect of the medical mission" Press release from 27 March. Available at: https://reliefweb.int/report/israel/opt-icrc-calls-respect-medical-mission

72 See WHO SSA, Methodology, p. 21.

73 See Table A5.

### *(iii) Events cover personnel not providing health care and include combatants*

A third factor that makes the WHO definition of "attack" overly inclusive is that SSA events do not necessarily relate to personnel involved in the direct provision of health care. The WHO uses an extremely expansive definition of "health care personnel." Support staff who work at a health facility—including accountants, janitors, and maintenance staff—all qualify as "health care personnel" within the SSA. The WHO appears to be asserting that anyone connected to a health facility is entitled to special protection, even if they do not personally provide medical care. This extension from carers to all health facility personnel is a further demonstration of over-extension of the SSA definition to circumstances that should not, in their natural language meaning, be considered attacks on health care.

More importantly, individuals who qualify as "health care personnel" as broadly defined above do not lose their status under WHO standards even if they are also members of armed groups engaged in a conflict, such as Hamas and Hezbollah combatants. Even though such individuals can be valid targets under the law of armed conflict, the WHO definition treats them as protected individuals. For example, on 17 September 2024, thousands of pagers that were distributed by Hezbollah, the terrorist group, simultaneously exploded in Lebanon, injuring thousands of people and killing several dozen others. Multiple sources suggest that two health workers were killed in the attack.[74] The WHO appears to include this incident in the SSA data as an example of "violence with individual weapons," even though members of a terrorist group would be valid targets during armed conflict.[75]

Similarly, Israeli forces killed Fadi al-Wadiya on 25 June 2024 while he was riding his bicycle to work in Gaza. *Médecins Sans Frontières* released a statement that condemned the killing and said that al-Wadiya was a physiotherapist who worked with the group.[76] However, Israel argued that al-Wadiya was also a prominent member of Palestinian Islamic Jihad (PIJ), a terrorist group. The Israeli Defense Forces even released a photograph of al-Wadiya in a PIJ uniform.[77] The SSA data appears to contain an event that corresponds to al-Wadiya's killing.[78] This entry lists six injuries and six deaths, even though al-Wadiya was the only victim who could arguably qualify as health care personnel.

Relatedly, the WHO explicitly instructs that an incident can count as an "attack" on health care if any personnel are wounded and/or killed, even if they are not engaged in providing health care during the incident. In a document that outlines the SSA system, the WHO provides the example of "A paediatrician is killed while in a market place, unrelated to their role as health personnel."[79] The WHO argues that such a situation qualifies as an

74 See Andrew Stroehlein (2024) "Paging the Laws of War," Human Rights Watch: Daily Brief, September 19. Available at: https://www.hrw.org/the-day-in-human-rights/2024/09/19; and Amnesty International (2024) "Lebanon: Establish international investigation into deadly attacks using exploding portable devices" September 20. Available at: https://www.amnesty.org/en/latest/news/2024/09/lebanon-establish-international-investigation-into-deadly-attacks-using-exploding-portable-devices

75 See incident LBN011365.

76 MSF (2024) "Statement on killing of MSF colleague & Israeli forces' allegations" June 26. Available at: https://prezly.msf.org.uk/statement-on-killing-of-msf-colleague--israeli-forces-allegations

77 Michael Bachner (2024) "IDF releases images showing Doctors Without Borders staffer in PIJ uniform" Times of Israel, June 26. Available at: https://www.timesofisrael.com/liveblog-june-26-2024

78 See incident oPt011178.

79 WHO SSA methodology, p. 21.

"attack" because "this loss of life has direct implications to the health system."[80] By this logic, any harm to personnel, even traffic accidents or a sports injury, would qualify as an "attack", particularly since the WHO does not require the existence of an armed conflict for an "attack" to occur.

### *(iv) Weaponisation of health care justifies events wrongly reported as attacks*

When a health facility is used by an armed group for military purposes, it can lose the legal protections that are usually given to health care. The WHO collects some information on "militarisation," which the WHO defines as the "[d]iversion of or interference with the primary use of civilian (i.e., non-military) health care facilities or transport by state military or paramilitary forces or non-state armed groups." It is unclear from information that is publicly released by the WHO whether such militarised facilities are nevertheless included in the SSA data as protected, although it seems likely. Indeed, it is unclear how the SSA would even measure such activities since they occurred over prolonged periods of time, rather being one-time events, like other events in the SSA data. For example, throughout the Gaza War, Israel and independent experts provided extensive evidence, including internal records from Hamas[81] and video[82] that armed groups were using hospitals and ambulances to conduct military activities.[83] Moreover, it is unclear whether a threshold of evidence, such as the presence of military personnel, war materiel or armed violence, is required in order to qualify a facility as militarised under the SSA.

In contrast, the SSA data appear to include events in which legitimate military actions were taken against health care facilities precisely because they had been militarised. For example, in November 2023, the Israeli Defense Forces (IDF) were fighting Hamas for control of Gaza City. Israel believed that Hamas was using Al-Shifa Hospital for military purposes in three ways.[84] First, Israel believed that Hamas had located a command-and-control centre underneath the hospital. Second, Israel believed that the hospital was connected to underground tunnels that formed part of a network under Gaza, allowing Hamas combatants to move covertly through the hospital while disguised as civilians. Third, Israel believed that Hamas was using the hospital to hold hostages that it had taken during its earlier 7 October attack on Israel.

Based on intelligence and evidence supporting these beliefs, Israel decided to conduct a military operation in Al-Shifa Hospital, even though it was a fully functioning hospital that was treating civilian patients. Extensive precautions were taken to minimise damage to the medical facility's functions. The IDF spent days fighting near the hospital, until the IDF controlled the perimeter around the building on 11 November. The IDF then tried

80 WHO SSA methodology, p. 21.

81 NGO Monitor (2025) "In Their Own Words: Hamas Turns Hospitals into Military Assets with NGO Compliance" September 10. Available at: https://ngo-monitor.org/reports/hamas-misuse-hospitals-docs

82 Israel Defence Forces (2026) "How Hamas Systematically Exploits the Emergency Systems and Ambulances in Gaza for Means of Terrorism" 2 April ; available at https://www.idf.il/en/mini-sites/israel-hamas-war-gaza/articles-israel-hamas-war-gaza/watch-how-hamas-systematically-exploits-the-emergency-systems-and-ambulances-in-gaza-for-means-of-terrorism/.

83 The Amit Terrorism and Intelligence Research Institute (2023) "Hamas Exploitation of Hospitals for Military-Terrorist Purposes Shifa Hospital as a test case" December 12. Available at https://www.terrorism-info.org.il/en/hamas-exploitation-of-hospitals-for-military-terrorist-purposes-shifa-hospital-as-a-test-case/

84 (2023), "Director Says Shifa Hospital in Gaza Has Run Out of Fuel," *Times of Israel*, November 11, available at https://www.timesofisrael.com/liveblog_entry/officials-say-shifa-hospital-in-gaza-has-run-out-of-fuel/

for three days to negotiate the evacuation of patients and medical personnel.[85] The IDF published evacuation routes, provided medical equipment, and implemented four-hour ceasefires each day to encourage an evacuation, but no one would leave the hospital.[86] The director of Al-Shifa Hospital, Dr. Mohammad Abu Salmiya, was subsequently arrested by Israeli forces for militarising the hospital to serve Hamas.[87] Finally, IDF soldiers entered Al-Shifa Hospital on 15 November and began slowly searching the building. IDF soldiers were accompanied by Arabic speakers and doctors to care for the patients.[88] The IDF withdrew from the hospital area on 24 November.

It is unclear from the public SSA data whether the military operation in Al-Shifa Hospital is included as one or more "attacks." The data include 112 events from 11 November, when the Al-Shifa Hospital stand-off began, through 24 November, when the IDF completely withdrew from the hospital complex. These events include dozens of instances of the hospital's "obstruction" and "militarisation." It would be deeply problematic to treat events like the Israeli search of Al-Shifa Hospital as an "attack" on health care because the facility was surrounded and searched, given it had previously been militarised by Hamas.

### *(v) Events label precautions taken to protect civilians as attacks*

States and armed groups have an obligation to take precautions to protect civilians during armed conflict and peace. Many of the event-types included in the SSA data can be understood as actions that fulfil these obligations. For example, the arrest and detention of criminals and/or terrorists may be necessary to protect civilians from danger. Under WHO guidelines, these arrests can be described as an "attack" if they are actions taken against an individual who happens to be medical personnel or a patient. Additionally, an arrest or detention initiated in a medical facility can be labelled as an "attack." Routine law enforcement operations that protect civilians from violence are an affirmative duty for states and should not be labelled as "attacks."

Similarly, searches of medical facilities, patients, personnel, or transportation are routine law enforcement operations that may be necessary to protect public safety and the health care system itself. As discussed above, ambulance searches in the OPT protect civilians and health care workers from armed activities, including the movement of terrorist fighters and/or weapons. [89] If the Israeli government were to refuse to search ambulances, it would arguably be violating its legal obligation to protect civilians in armed conflict.

85 (2023), "Netanyahu: Hamas Refused Israeli Fuel Offer for Gaza's Shifa Hospital," *Reuters*, November 12, available at https://www.reuters.com/world/middle-east/netanyahu-says-hamas-refused-israeli-fuel-offer-gazas-shifa-hospital-2023-11-12/

86 Yuliya Talmazan and Chantal Da Silva (2023) "As Outrage Grows Over Fate of Babies in Gaza Hospital, Israel Offers Incubators and Fuel," *NBC News*, November 14, available at https://www.nbcnews.com/news/world/israel-offers-incubators-fuel-gaza-hospital-outrage-grows-rcna125053

87 David Gritten (2024) "Israeli forces detain director of Gaza's al-Shifa Hospital" BBC News, 24 November 2023; available at https://www.bbc.com/news/world-middle-east-67507732. Among other hospital directors being alleged to be Hamas conspirators, Dr Husam Abu Safia is alleged to have sheltered Hamas and Palestinian Islamic Jihad weapons and combatants in Kamal Adwan Hospital, where he was director and a colonel in the Palestinian Military Medical Service. See: Lilia Sebouai and Paul Nuki "Held without charge or evidence: The questions over the detention of Gaza's most prominent doctor" The Telegraph, 10 July 2026; available at https://www.telegraph.co.uk/global-health/terror-and-security/gazas-most-prominent-doctor-held-without-charge-or-evidence/.

88 Ken Thomas, Vivian Salama, and William Mauldin (2023), "Israel Says Targeted Operation Conducted Inside Gaza's Largest Hospital," *Wall Street Journal*, November 14, available at https://www.wsj.com/world/middle-east/israel-hamas-gaza-hospital-al-shifa-bd5cde36

89 See above, Chapter 6.1.iv.

Even when conflict is not ongoing, some places face the ever-present threat of terrorism, making searches a necessary precaution.

Similar arguments can be applied to other responses to the weaponisation of health care, including so-called "obstruction" of health care caused by law enforcement activities and the use of limited violence if necessary and proportionate when diligence is exercised to protect civilians. Simply put, many of the events described by the WHO as "attacks" may not only be legally permitted, but also legally required.

## 6.2: Opportunities for Bias in Reporting

The World Health Organization's SSA data is also deeply problematic and misleading because of extensive opportunities for bias in data reporting. These opportunities for bias arise because: (i) irregularities are produced by the use of different standards and procedures across various reporting territories that generate non-comparable data; (ii) data reporting agencies affiliated with or subordinate to predominant armed groups have strong incentives to manipulate reporting; (iii) the lack of protocols for substantive verification results in inflated counts of alleged events; and (iv) SSA procedures allow misattribution of responsibility that distorts the data with false positives. This bias then gives rise to false or misleading narratives about armed conflict and health care.

### *(i) Data irregularities suggest that different standards and procedures in different places generate non-comparable datasets*

The SSA data contain extensive reports of events in some places, like the Democratic Republic of the Congo, Myanmar, the Occupied Palestinian Territories, Syria, and Ukraine. Other places have almost no reports of events, including Nagorno-Karabakh, Cambodia, and Iran. Yet some of these places have experienced armed conflict and other serious incidents during the reporting period.

For example, Nagorno-Karabakh experienced a recurring separatist armed conflict with Azerbaijan, which claimed authority over Nagorno-Karabakh territory. In December 2022, Azerbaijani individuals began blockading the Lachin Corridor, which provided the sole land access between Nagorno-Karabakh and the rest of the world. This blockade created a prolonged humanitarian crisis in which individuals in Nagorno-Karabakh lacked regular access to goods. Numerous sources reported severe shortages of medicines and other medical supplies.[90] Doctors from the region also reported an inability to perform common medical procedures, including cardiac care.[91] Some individuals required emergency evacuation to Armenia for medical treatment.[92] Then Azerbaijan began a major military offensive that a Freedom House-led investigation characterised as an ethnic cleansing of Nagorno-Karabakh.[93] Ethnic Armenians were forced to flee their homes into Armenia,

90 Amnesty International (2023) "Azerbaijan: Blockade of Lachin corridor putting thousands of lives in peril must be immediately lifted", February 9. Available at: https://www.amnesty.org/en/latest/news/2023/02/azerbaijan-blockade-of-lachin-corridor-putting-thousands-of-lives-in-peril-must-be-immediately-lifted

91 Amnesty International (2023) "Azerbaijan: Blockade of Lachin corridor putting thousands of lives in peril must be immediately lifted", February 9. Available at: https://www.amnesty.org/en/latest/news/2023/02/azerbaijan-blockade-of-lachin-corridor-putting-thousands-of-lives-in-peril-must-be-immediately-lifted

92 (2023) "Armenian health minister, WHO chief discuss situation in Artsakh" Panorama, January 31. Available at: https://www.panorama.am/en/news/2023/01/31/health-minister-WHO-Artsakh/2788422

93 Freedom House (2024) "NEW REPORT: Azerbaijani Regime Ethnically Cleansed Nagorno-Karabakh According to International Fact-Finding Mission" November 11. Available at: https://freedomhouse.org/article/new-report-azerbaijani-regime-ethnically-cleansed-nagorno-karabakh-according-international

resulting in hundreds of deaths and injuries. The WHO issued a press release on the medical assistance it was providing to Armenia for refugees arriving from Nagorno-Karabakh.[94] These events could easily have yielded hundreds of daily entries into the SSA data if information had been reported consistently and fully.[95] Yet the SSA data for Nagorno-Karabakh contains only one entry, which dates to 2020.

Similarly, Iraq entered SSA data in 2018, when WHO partners reported 36 events, spread over the calendar year. However, not a single event after 2018 is included for Iraq. During these years (2019—2025), Iraqi experienced chronic violence with Islamic State as well as general domestic instability. The WHO itself reported that a doctor was assaulted in a Kirkuk teaching hospital in February 2019.[96] Similarly, Human Rights Watch issued a 2019 report about Iraqi security forces "firing on medical workers, tents, and ambulances with teargas and live ammunition."[97] Yet no events linked to these incidents appears in the WHO data.

Such inconsistencies in data coverage suggest that authorities in some places are regularly reporting events using all the available SSA event-types. Meanwhile, authorities in other places are not using existing standards and procedures to provide information to the WHO in a regular and reliable manner. We thus receive an incomplete and biased perspective on violence against health care, in which places that follow WHO standards and procedures look vastly more dangerous and violent than places that simply ignore the WHO because of complacency or active obstruction by government authorities. The pervasive problem of that scrappy data is compounded by its misuse to make unsubstantiated claims that cannot be relied upon.

At a minimum, states, the WHO and international organisations should not be using SSA data to make comparative claims across territories about the likelihood of violence against health care because data are not collected in a comparable manner. Additionally, SSA data should not be used to make legal assessments about possible violations of international law because inconsistent reporting processes can generate false perceptions of state practice.

### *(ii) Reporting agencies affiliated with armed groups have incentives for inaccurate and/or selective reporting.*

In many states and territories, actors who are fighting in armed conflicts and/or repressing domestic populations are simultaneously running the health care system. These relationships shape the incentives of actors to misreport events to the WHO. For example, Iraqi health care workers have little reason to report violence committed by Iraqi security forces. Those Iraqis living in areas controlled by Islamic State had similar incentives to not report violence against health care workers.

94 WHO (2023) "Racing to meet the health needs of refugees entering Armenia" October 1. Available at: https://www.who.int/europe/news/item/01-10-2023-racing-to-meet-the-health-needs-of-refugees-entering-armenia

95 For example, an SSA reportable incidence in 2023 was covered in the international press: Gabriel Gavin (2023) "Medical convoys from Nagorno-Karabakh suspended after Armenian detained by Azerbaijan" *POLITICO* July 29. Available at https://www.politico.eu/article/medical-convoy-nagorno-karabakh-armenia-azerbaijan-conflict/

96 WHO—Eastern Mediterranean Region (2019) "WHO condemns violence against health workers in Iraq" February 26. Available at: https://www.emro.who.int/iraq/news/who-condemns-violence-on-health-workers-in-iraq.html

97 Human Rights Watch (2019) "Iraq: Security Forces Attack Medics Treating Protesters" November 14. Available at: https://www.hrw.org/news/2019/11/14/iraq-security-forces-attack-medics-treating-protesters

Similarly, health care workers in Gaza had little reason to report weaponisation of health care facilities by Hamas, an armed group committed to the destruction of Israel. Hamas controls the Gazan Health Ministry, meaning that any individuals who reported militarisation to the WHO could put their livelihoods, or lives, at risk. For example, Human Rights Watch has observed that Hamas authorities in Gaza arrest and abuse Palestinians who express criticism of the Hamas regime.[98]

Health care workers in Gaza do, however, have incentive to report events against Israel. Ample reports of Israeli violence against Palestinian health care reinforces the Hamas narrative that Israel is illegally occupying Palestinian land.

The routine use of SSA data by the World Health Organization, the United Nations, states, nongovernmental organisations and other actors for political advocacy reinforces incentives for inaccurate and/or selective reporting. When SSA data are used to "name and shame" states, opponents of that state have an incentive to report trivial matters, interpret WHO criteria in overly expansive ways, and perhaps even inflate injuries and death counts, which the WHO does not verify. Thus, SSA data therefore become a disinformation weapon with which to wage psychological and propaganda battles that are inevitable and pervasive in armed conflict.

Additionally, the refusal by the WHO to monitor and accurately verify militarisation of health care facilities and personnel means that SSA reporting can become a form of lawfare, in which legal claims are weaponised against adversaries for political purposes. Hamas and Palestinian Islamic Jihad proved themselves leading exemplars in this practice, when recently giving tribute to scores of fallen armed combatants, among whom at least 18 had previously been identified as doctors, nurses and hospital employees in Gaza, and who had been therefore recorded in the SSA data as victims of attacks against health care.[99]

### *(iii) Lack of verification procedures can lead to inflated counts of alleged attacks*

While WHO staff attempt to verify that a reported event has occurred, they make no effort to verify reported injuries and deaths, the causes thereof or attribution of responsibility. For example, WHO staff do not confirm injuries and deaths with victims and family members. They also do not require copies of death certificates or medical records to assess the underlying medical conditions that caused a patient to be in a health care facility in the first place. Thus, the SSA reporting system depends upon the integrity of the reporting agency, which is a significant problem when agencies have political biases that make their reports unreliable or when agencies face intimidation from or repression by the local armed authority.

Additionally, WHO reporting procedures are ambiguous in their methods for tracking injuries and deaths. Consider the killing of Fadi al-Wadiya on 25 June 2024. al-Wadiya was a *Médecins Sans Frontières* (MSF) medic who was also a member of Palestinian Islamic Jihad (PIJ). MSF reported that when al-Wadiya was killed, five other individuals

98 Human Rights Watch (2016) "Palestine: Crackdown on Journalists, Activists" August 30. Available at https://www.hrw.org/news/2016/08/30/palestine-crackdown-journalists-activists

99 Nurit Yochanan (2026) "Gaza death notices show some so-called health workers were operating for terror groups" *Times of Israel*, 27 July; available at https://www.timesofisrael.com/gaza-death-notices-show-some-so-called-health-workers-were-operating-for-terror-groups/.

were also killed.[100] There is no public evidence that any of these other five people were also health care personnel. Yet the SSA record that appears to account for Al-Wadiya's killing says that six people were killed and six others injured in a health care attack.[101] Thus, the presence of one health care worker at an event that occurs outside of medical facilities can lead to vastly inflated counts of injuries and deaths with no relationship to actual health care.

The challenge of accurate counts of injuries and deaths is complicated by the fact that patients who are present at health care facilities already suffer from disease and/or injuries. These patients hence are more likely to suffer death under the best of circumstances. Recall the search of Al-Shifa Hospital in November 2023. As described above, the IDF surrounded the hospital and then tried for three days to negotiate the evacuation of patients and medical personnel. During this period, the hospital suffered prolonged power outages that disrupted the functioning of some medical equipment.[102] Israeli troops attempted to ameliorate these outages by delivering 300 liters of fuel to the hospital. However, hospital staff were forbidden by Hamas from collecting the fuel.[103] No one knows how many people died at Al-Shifa Hospital during the three days that Israeli forces attempted to evacuate the hospital and patients were under the care of Gaza medical personnel. Additionally, no one can ever know how many patients would have died during those three days if there had been no war. However, news sources do not report any civilian deaths or injuries after Israel entered Al-Shifa Hospital on 15 November. Nor does the SSA reporting methodology *provide for systematic verification and correction* of data suspected or shown to be false, as illustrated by the failure to correct false data in the Al-Ahli Hospital case, discussed below in section 6.2(iv). Moreover, SSA protocols do not set out procedures or criteria for identifying and classifying a health care facility as militarised and therefore excluded from humanitarian protection against armed attack. We found no evidence that the WHO excludes such militarised facilities from the SSA data set.

### *(iv) Reporting procedures can lead to false attribution of responsibility*

As described above, the WHO provides little information to the public about the location or details of reported events. The natural inference drawn by most observers is that events during armed conflicts are caused by foreign troops and armed groups. Indeed, news reports routinely imply that these foreign troops and armed groups are solely responsible for all SSA events, injuries, and deaths.

Yet states and armed groups can be responsible for attacks against their own people that are committed on their own territory. The world was shocked when news broke on 17 October, 2023 that a missile had bombed Al-Ahli Arab Hospital in Gaza, killing and wounding hundreds of people. Israel was immediately blamed for a brazen attack on Palestinian health care. Days later, detailed forensic evidence proved that the bombing

100 MSF (2024) "MSF physiotherapist killed in Gaza while on his way to work" June 25. Available at: https://www.doctorswithoutborders.org/latest/msf-physiotherapist-killed-gaza-while-his-way-work

101 See incident oPt011178.

102 UN OCHA (2023) "Hostilities in the Gaza Strip and Israel--Flash Update #31" November 6. Available at: https://www.un.org/unispal/wp-content/uploads/2023/11/Hostilities-in-the-Gaza-Strip-and-Israel-_-Flash-Update-31.pdf

103 IDF (2023) "IDF Provide Shifa Hospital With 300 Liters of Fuel; Hamas Prevents Hospital From Receiving Fuel" Press release, November 12. Available at: https://www.idf.il/en/mini-sites/idf-press-releases-israel-at-war/november-23-pr/idf-provide-shifa-hospital-with-300-liters-of-fuel-hamas-prevents-hospital-from-receiving-fuel

was caused by a misfired Palestinian missile that was shot from within Gaza.[104] This bombing appears to be included in the SSA data.[105] It stands out as the event with the most injuries and deaths in the entire dataset. Numerous political actors rely on this incident when they use WHO data on fatalities and destruction in Gaza to condemn Israel. Yet Israel has definitively proven that it was not responsible for this incident. We are left to wonder: how many other events in the data set were caused by Hamas and other Palestinian armed groups?

The Office of the Special Representative of the Secretary-General for Children and Armed Conflict (SRSG-CAC) is notable in its annual reports for explicitly identifying which actors are responsible (in its view) for attacks on health care. We contacted this office multiple times seeking information on how this evidence is collected and assessed. The Office's staff refused to speak with us about this issue. However, the Office's annual reports suggest that the WHO does have detailed information that can be used to assess the responsibility of states and armed groups for individual attacks. However, such information is not provided to the public, and belligerent actors are not given the opportunity to publicly respond to alleged incidents.

104 See Steve Holland and Nidal Al-Mughrabi (2023) "Biden vows aid for Gaza, Israel as protests rock Middle East," *Reuters*, October 18, available at: https://www.reuters.com/world/biden-heads-middle-east-inflamed-by-gaza-hospital-blast-2023-10-18/

105 See incident oPt009242.

# 7. Recommendations for Reform

Our analysis of problematic and misleading aspects of the Surveillance System for Attacks on Health Care (SSA) data suggests that the World Health Organization (WHO) should implement multiple reforms.

## 7.1: Adopt more neutral language to describe SSA alleged events

The word "attack" has a legal and conventional meaning that that runs contrary to how SSA data is collected and summarised. The deleterious impacts of the WHO's misleading use of the word "attack" are exacerbated because SSA data is often used by international bureaucrats, states, journalists, and nongovernmental organisations to make broad claims about conditions in armed conflict zones. Additionally, some individuals use SSA data to make or support claims of legal violations.

To correct this misuse, the WHO should shift to language that more accurately describes the behaviour being monitored and does not imply legal responsibility. For example, the WHO could recalibrate its data descriptors as "Events", with more serious incidents described as "Disruptions to Health Care", reserving use of the word "Attack" to describe incidents involving armed violence directly resulting in injury or death.

## 7.2: Explicitly and publicly identify limits on how SSA data should be used

The WHO presents the SSA data as systematic and validated, describing most events as "verified." The WHO does not place any disclaimers on how SSA data should be used or interpreted. Yet our analysis suggests several key limits on the use of SSA data.

- *The SSA cannot be used as a basis for comparative analyses between states and conflicts:* Reporting of events depends much on the presence and effectiveness of a network of partner organisations that are both able and willing to provide the WHO with information on incidents. Reporting also depends on whether the local health authorities in the state/region have an interest in inflating or downplaying the events being measured. Variation across states/regions in these factors makes it inappropriate for users to make comparisons across states/regions and conflicts.

- *The SSA data cannot be used as a basis for legal analysis or assignment of responsibilities for the practices of warring parties:* The WHO data does not include or enable a legal assessment of which party is responsible for a particular event. Yet many users of the data—including the UN Office of the Special Representative of the Secretary-General for Children and Armed Conflict—incorrectly assume that events included in the SSA data are, by definition, violations of law. These assumptions must be corrected.

- *The WHO should develop and publish a methodology that sets out criteria for identifying and procedures for excluding reports of attacks that involve militarised health care facilities or personnel.* Many events described as attacks in the dataset may be legal from the perspective of international law. Additionally, the methodology should specify that the WHO does not assess the legitimacy or overall legality of actions of parties involved in each event.

- *The WHO is ambiguous about what "verification" means:* It is of central importance that the WHO recognise, disclose and declare that its SSA data is in its essence unverified. The SSA's statistics on damages caused by the incidents (including deaths and injuries) cannot be treated as verified information. Additionally, information about the type of events that have occurred (e.g. arrests, fires, psychological threats, etc.) cannot be treated as verified information. The only thing which is allegedly verified by the WHO is that an event has taken place. Users must consult detailed methodology documents to understand that the WHO only provides very limited verification of events. Limits on WHO verification should be stated more clearly and the WHO itself should not treat unverified information as accurate in its public statements.

To address each of these issues, SSA webpages should include text that explicitly identifies these limitations. The WHO should not assume that all users will download and read methodology documents and perform exploratory data analysis to understand the data's limitations.

## 7.3: Perform additional verification of deaths and injuries

Users of the SSA data frequently cite its statistics about deaths and injuries. As noted above, this information is not verified by the WHO. Indeed, reporting parties in many places have incentives to misrepresent the severity of events, by either inflating or downplaying deaths and injuries, depending on local political and security conditions.

The WHO has offices and employees working in all the states/regions under SSA monitoring. This means that the WHO has the capacity to verify many components of the data that are currently ignored, including deaths and injuries. For example, the WHO could ask for death certificates to verify deaths. Similarly, it could request photographs or other medical documentation of injuries or conduct interviews with victims or their families. Although we acknowledge that field conditions inevitably compromise the integrity of local agency reporting, this added WHO verification could increase confidence in the accuracy of appropriately caveated SSA data.

## 7.4: Create a public feedback mechanism for belligerents

Incentives to misrepresent events in the data can lead to contention between belligerents. For example, users of the SSA data for the Occupied Palestinian Territory frequently blame Israel as being responsible for all events that have occurred.[106] Yet Israel contends that Hamas, Palestinian Islamic Jihad, and other Palestinian armed groups have an important role in many incidents, for example by committing the violence themselves (as in the missile attack on Al-Ahli Arab Hospital in October 2023) or by weaponising health care facilities (as in the November 2023 search of Al-Shifa Hospital).

Belligerents should be able to contest events in the SSA data using a public feedback mechanism. This means that WHO members should be allowed to submit public comments if they wish to contest certain elements of SSA data, including the event-type, deaths, and injuries. Additionally, they should be permitted to make statements about their beliefs on who is responsible for given events. These comments should be posted publicly as documents that are linked to SSA data. Although competing narratives will complicate the SSA data set, they will elaborate the disputed circumstances around alleged events to illuminate competing ways to find the likely historical truth, the same way that quasi-judicial processes do.

106 For example, see Nicola Perugini and Neve Gordon (2024) "Medical Lawfare: The Nakba and Israel's Attacks on Palestinian Healthcare" *Journal of Palestine Studies* 53(1): 68-91.

## 7.5: Provide more incident data to the public and researchers

Verifiability is a key requirement of any valid data set. In our careful review and analysis, we were unable to verify the overwhelming majority (over 90 percent) of a random sample of SSA events. Simply put, the WHO provides too little information about events to the public for a user to be confident that given information is accurate. Additionally, most researchers cannot use the data for meaningful research because the WHO does not specify the precise location of events. The WHO does possess this additional information (about the location of events, what exactly occurred, etc.) but will not release it to the public.

The WHO should revisit its information-sharing policies, particularly for scholars with verified relationships with academic institutions. Providing information about the geographic locations at which events occurred is particularly important for scholarly analysis. If individuals who report events are concerned about retaliation, more detailed versions of the data could be released according to a delayed calendar.

## 7.6: Indicate non-participation by states and territories

As discussed above, some states enter the data set by reporting one or more events only to subsequently disappear from the data set by not reporting any events. This suggests that in some states/regions, partner organizations have tried reporting to the WHO but ultimately decided not to participate in the SSA data collection. However, the WHO does not provide any information about states/regions that fit in this category. Lack of information can cause incorrect inferences, as users of the data believe that a state/territory is actively reporting, when it in fact is not reporting.

The WHO can overcome this challenge by initiating regular contact with partner organisations to see whether they are still participating in the programme. The WHO should indicate on the SSA webpage when states/territories are being monitored and when they are not. This information will allow users to draw more accurate conclusions from the data.

# 8. Conclusions

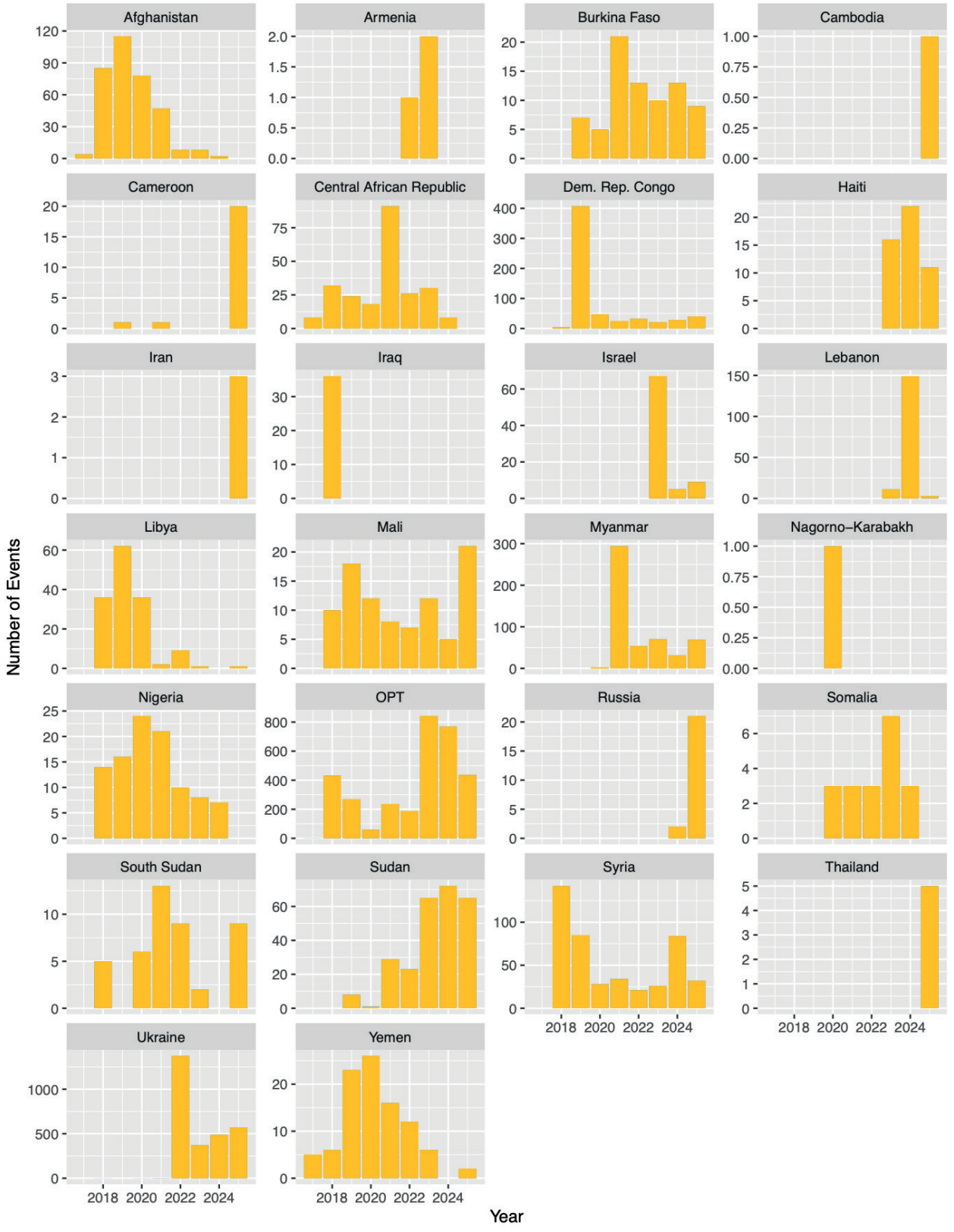
Protecting health care during armed conflict is an important objective. The World Health Organization's Surveillance System for Attacks on Health Care is an important initiative that has potential to improve international advocacy and research. However, in its current form, the SSA project suffers from major weaknesses that undermine its value.

First, the WHO uses an overly expansive definition of "attack," which does not match the understood meaning of the term under international law. Events in the WHO data are often unrelated to armed conflict, which is a necessary precondition for an "attack" under international law. Additionally, many events that the WHO describes as "attacks" do not involve violence, such as routine law enforcement activities. Events in the WHO data can also be unrelated to actual health care provision, creating further mismatch between the SSA's stated objectives and its actual implementation. The weaponisation of health care provides a compelling legal justification for many events recorded as illegal attacks in the WHO data, and many of the events in SSA data may even be necessary as precautions to protect civilians during armed conflict.

Second, there are significant opportunities for bias in SSA reporting. Data irregularities suggest that reporting parties are using different standards and procedures in different places. Reporting parties also can be affiliated with armed groups, which creates incentives for inaccurate and/or selective reporting. We find evidence that reporting procedures can lead to inflated counts of injuries and deaths, as well as false attribution of responsibility for events. Reform of this problem in the SSA system should be an important priority for the WHO, its member states, and its civil society partner organisations.

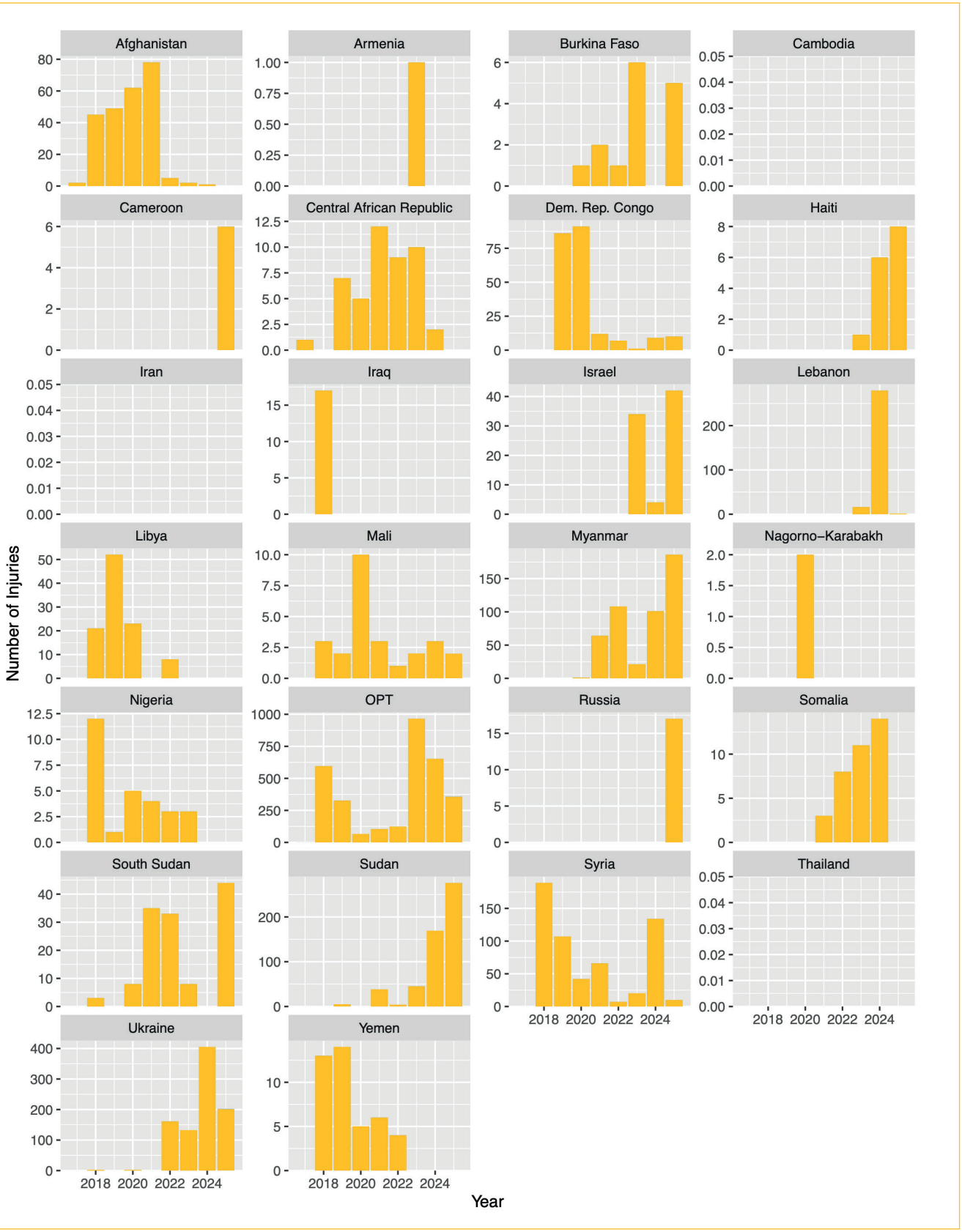
# Data Appendix

## Figure A1: Plots of Reported Events Over Time by Country-Territory



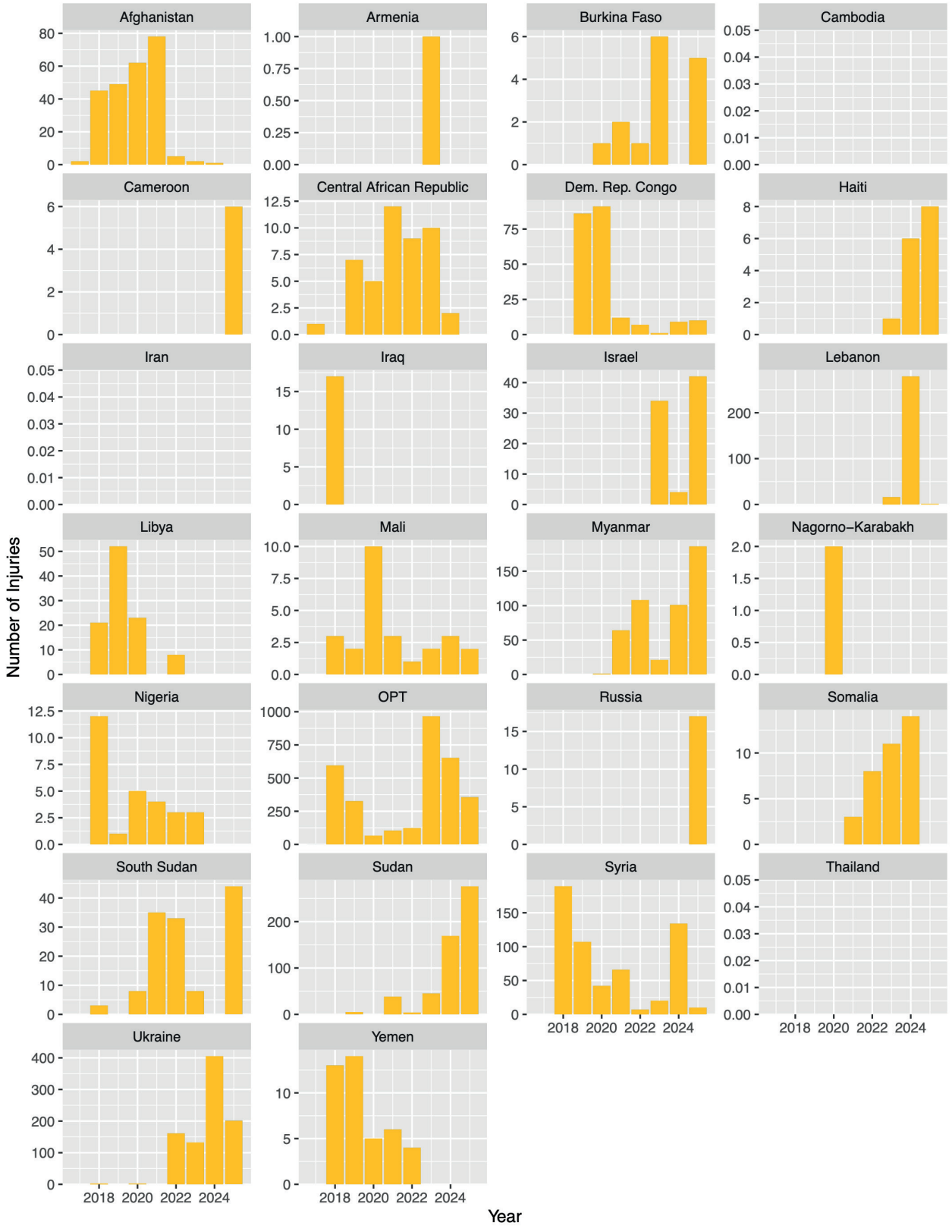

*Note for Figure A1: Each plot has its own y-axis scale ("Number of Events").*

## Figure A2: Plots of Total Injuries Over Time by Country-Territory




*Note for Figure A2: Each plot has its own y-axis scale ("Number of Injuries").*

## Figure A3: Plots of Total Deaths Over Time by Country-Territory




*Note for Figure A3: Each plot has its own y-axis scale ("Number of Deaths").*

## Table A1: Who Participates in the WHO's SSA Program?

| | First Reported | Total | Conditional Average* |
|---|---|---|---|
| **Territory** | **Event** | **Events** | **Events per Year** |
| Afghanistan | 2017 | 347 | 42.9 |
| Central African Republic | 2017 | 237 | 28.6 |
| **Occupied Palestinian Territory** | **2017** | **3,229** | **403.5** |
| Yemen | 2017 | 96 | 11.4 |
| **Dem. Rep. of the Congo** | **2018** | **603** | **85.6** |
| Iraq | 2018 | 36 | 0.0 |
| Libya | 2018 | 147 | 15.9 |
| Mali | 2018 | 93 | 11.9 |
| Nigeria | 2018 | 100 | 12.3 |
| South Sudan | 2018 | 44 | 5.6 |
| **Syria** | **2018** | **452** | **44.3** |
| **Ukraine** | **2018** | **2,806** | **400.7** |
| Burkina Faso | 2019 | 78 | 11.8 |
| Cameroon | 2019 | 22 | 3.5 |
| Sudan | 2019 | 263 | 42.5 |
| **Myanmar** | **2020** | **519** | **103.6** |
| Nagorno-Karabakh | 2020 | 1 | 0.0 |
| Somalia | 2020 | 19 | 3.2 |
| Armenia | 2022 | 3 | 0.7 |
| Haiti | 2023 | 49 | 16.5 |
| Israel | 2023 | 81 | 7.0 |
| Lebanon | 2023 | 163 | 76.0 |
| Russia | 2024 | 23 | 21.0 |
| Cambodia | 2025 | 1 | *n.a.* |
| Iran | 2025 | 3 | *n.a.* |
| Thailand | 2025 | 5 | *n.a.* |

*Top five territories in terms of conditional average of events shown in* **bold font**.

** Conditional Average is the average for full years after the first reported event (the total number of events in the first full year of data, divided by the total number of full years in the data). Data downloaded on 5 January 2026.*

## Table A2: What Attack Types Are Most Common, and Where?

| Territory | AAD | Assault | Chemical | Fire | Militarization | Obstruction | Psychological | Removal | Search | Sexual | Violence - Heavy | Violence - Individual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Afghanistan | 58 | 13 | 0 | 11 | 7 | 53 | 44 | 22 | 17 | 0 | 65 | 87 |
| Armenia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 |
| Burkina Faso | 20 | 2 | 0 | 17 | 6 | 5 | 34 | 33 | 26 | 0 | 10 | 30 |
| Cambodia | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Cameroon | 11 | 4 | 0 | 1 | 0 | 5 | 15 | 2 | 4 | 1 | 1 | 6 |
| Central African Republic | 34 | 6 | 0 | 3 | 21 | 42 | 128 | 132 | 81 | 2 | 2 | 94 |
| **Dem. Rep. Congo** | **45** | **152** | **1** | **75** | **67** | **232** | **431** | **154** | **107** | **7** | **60** | **265** |
| Haiti | 15 | 11 | 0 | 7 | 0 | 2 | 6 | 17 | 4 | 0 | 5 | 13 |
| Iran | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| Iraq | 0 | 9 | 1 | 1 | 1 | 2 | 8 | 2 | 0 | 0 | 2 | 9 |
| Israel | 3 | 1 | 0 | 3 | 0 | 51 | 4 | 2 | 1 | 0 | 57 | 38 |
| Lebanon | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 157 | 4 |
| Libya | 11 | 31 | 0 | 1 | 2 | 3 | 6 | 8 | 3 | 1 | 57 | 45 |
| Mali | 20 | 2 | 0 | 7 | 0 | 13 | 46 | 32 | 37 | 1 | 16 | 37 |
| **Myanmar** | **154** | **14** | **0** | **8** | **37** | **85** | **102** | **68** | **74** | **0** | **114** | **73** |
| Nagorno-Karabakh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Nigeria | 33 | 21 | 0 | 23 | 2 | 9 | 7 | 38 | 9 | 1 | 8 | 81 |
| **Occupied Palestinian Territory (OPT)** | **234** | **245** | **34** | **7** | **92** | **1,558** | **581** | **31** | **239** | **1** | **859** | **1,265** |
| Russia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 0 |
| Somalia | 3 | 0 | 0 | 2 | 1 | 0 | 2 | 2 | 1 | 0 | 10 | 5 |
| South Sudan | 11 | 4 | 0 | 3 | 1 | 3 | 0 | 9 | 5 | 1 | 4 | 28 |
| Sudan | 52 | 106 | 0 | 8 | 31 | 155 | 136 | 86 | 81 | 2 | 74 | 135 |
| **Syria** | **21** | **20** | **0** | **9** | **1** | **37** | **32** | **77** | **18** | **0** | **273** | **63** |
| Thailand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 |
| **Ukraine** | **19** | **4** | **0** | **3** | **102** | **54** | **60** | **223** | **19** | **0** | **2,511** | **71** |
| Yemen | 9 | 7 | 0 | 5 | 4 | 9 | 15 | 14 | 6 | 0 | 47 | 31 |
| Total: | 754 | 652 | 36 | 195 | 375 | 2,319 | 1,658 | 953 | 732 | 17 | 4,367 | 2,381 |

*Events can be classified into multiple categories. Top five territories in terms of total events shown in* ***bold font****. Data downloaded on 5 January 2026.*

## Table A3: What Health Care Resources Are Most Commonly Affected, and Where?

| Territory | Facilities | Patients | Personnel | Supplies and Assets | Transport | Warehouse and Storage |
|---|---|---|---|---|---|---|
| Afghanistan | 195 | 35 | 171 | 59 | 59 | 26 |
| Armenia | 0 | 0 | 3 | 0 | 3 | 0 |
| Burkina Faso | 42 | 17 | 50 | 38 | 26 | 28 |
| Cambodia | 1 | 0 | 0 | 0 | 0 | 0 |
| Cameroon | 17 | 4 | 19 | 2 | 0 | 0 |
| Central African Republic | 84 | 35 | 136 | 88 | 91 | 32 |
| **Dem. Rep. Congo** | **279** | **75** | **392** | **172** | **98** | **89** |
| Haiti | 26 | 8 | 27 | 17 | 7 | 11 |
| Iran | 1 | 1 | 1 | 2 | 1 | 0 |
| Iraq | 12 | 3 | 30 | 1 | 4 | 0 |
| Israel | 27 | 14 | 41 | 9 | 25 | 2 |
| Lebanon | 46 | 6 | 113 | 39 | 105 | 12 |
| Libya | 60 | 12 | 87 | 12 | 30 | 0 |
| Mali | 52 | 21 | 70 | 51 | 39 | 25 |
| **Myanmar** | **249** | **181** | **312** | **145** | **116** | **95** |
| Nagorno-Karabakh | 0 | 0 | 1 | 0 | 1 | 0 |
| Nigeria | 49 | 6 | 53 | 43 | 14 | 16 |
| **Occupied Palestinian Territory (OPT)** | **1,112** | **1,602** | **2,572** | **173** | **1,315** | **14** |
| Russia | 18 | 1 | 3 | 7 | 7 | 0 |
| Somalia | 11 | 5 | 11 | 11 | 4 | 0 |
| South Sudan | 21 | 10 | 33 | 17 | 12 | 8 |
| Sudan | 172 | 94 | 159 | 84 | 32 | 41 |
| **Syria** | **339** | **42** | **135** | **180** | **71** | **33** |
| Thailand | 5 | 5 | 5 | 1 | 0 | 1 |
| **Ukraine** | **2,314** | **133** | **351** | **601** | **522** | **60** |
| Yemen | 57 | 14 | 40 | 21 | 24 | 10 |
| Total: | 5,189 | 2,324 | 4,815 | 1,773 | 2,606 | 503 |

*Events can be classified into multiple categories. Top five territories in terms of total events shown in* ***bold font****. Data downloaded on 5 January 2026.*

## Table A4: What is the Distribution of Injuries and Deaths by Territory?

| | Injuries | | | | | | Deaths | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Territory** | **Min** | **Q1** | **Median** | **Mean** | **Q3** | **Max** | **Min** | **Q1** | **Median** | **Mean** | **Q3** | **Max** |
| Afghanistan | 0 | 0 | 0 | 0.70 | 0 | 50 | 0 | 0 | 0 | 0.47 | 0 | 30 |
| Armenia | 0 | 0 | 0 | 0.33 | 0.5 | 1 | 0 | 0 | 0 | 0.33 | 0.5 | 1 |
| Burkina Faso | 0 | 0 | 0 | 0.19 | 0 | 4 | 0 | 0 | 0 | 1.87 | 0 | 87 |
| Cambodia | 0 | 0 | 0 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0 | 0 |
| Cameroon | 0 | 0 | 0 | 0.27 | 0 | 3 | 0 | 0 | 0 | 0.00 | 0 | 0 |
| Central African Republic | 0 | 0 | 0 | 0.19 | 0 | 5 | 0 | 0 | 0 | 0.10 | 0 | 9 |
| Dem. Rep. Congo | 0 | 0 | 0 | 0.36 | 0 | 24 | 0 | 0 | 0 | 0.28 | 0 | 18 |
| Haiti | 0 | 0 | 0 | 0.31 | 0 | 8 | 0 | 0 | 0 | 0.22 | 0 | 2 |
| Iran | 0 | 0 | 0 | 0.00 | 0 | 0 | 0 | 1.5 | 3 | 2.00 | 3 | 3 |
| Iraq | 0 | 0 | 0 | 0.47 | 1 | 3 | 0 | 0 | 0 | 0.22 | 0 | 3 |
| Israel | 0 | 0 | 0 | 0.99 | 1 | 40 | 0 | 0 | 0 | 0.31 | 0 | 5 |
| Lebanon | 0 | 0 | 0 | 1.82 | 2 | 20 | 0 | 0 | 0 | 1.48 | 2 | 14 |
| Libya | 0 | 0 | 0 | 0.71 | 1 | 8 | 0 | 0 | 0 | 0.62 | 0 | 61 |
| Mali | 0 | 0 | 0 | 0.28 | 0 | 8 | 0 | 0 | 0 | 0.40 | 0 | 20 |
| Myanmar | 0 | 0 | 0 | 0.93 | 0 | 100 | 0 | 0 | 0 | 0.51 | 0 | 33 |
| Nagorno-Karabakh | 2 | 2 | 2 | 2.00 | 2 | 2 | 2 | 2 | 2 | 2.00 | 2 | 2 |
| Nigeria | 0 | 0 | 0 | 0.28 | 0 | 9 | 0 | 0 | 0 | 0.42 | 0 | 10 |
| Russia | 0 | 0 | 0 | 0.74 | 0 | 7 | 0 | 0 | 0 | 0.00 | 0 | 0 |
| Somalia | 0 | 0 | 0 | 1.89 | 2 | 14 | 0 | 0 | 0 | 3.74 | 1.5 | 48 |
| South Sudan | 0 | 0 | 0 | 2.98 | 2 | 39 | 0 | 0 | 0 | 1.50 | 1 | 15 |
| Sudan | 0 | 0 | 0 | 2.04 | 0 | 60 | 0 | 0 | 0 | 7.11 | 1 | 460 |
| Syria | 0 | 0 | 0 | 1.27 | 0 | 95 | 0 | 0 | 0 | 0.59 | 0 | 35 |
| Thailand | 0 | 0 | 0 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0.00 | 0 | 0 |
| Ukraine | 0 | 0 | 0 | 0.32 | 0 | 70 | 0 | 0 | 0 | 0.08 | 0 | 56 |
| Yemen | 0 | 0 | 0 | 0.44 | 0 | 8 | 0 | 0 | 0 | 0.35 | 0 | 8 |
| Occupied Palestinian Territory (OPT) | 0 | 0 | 0 | 0.99 | 1 | 342 | 0 | 0 | 0 | 0.33 | 0 | 471 |

*Data downloaded on 5 January 2026.*

## Table A5: Where Are Events Most Severe and Deadly?

| | Severe | | Deadly | | |
|---|---|---|---|---|---|
| **Territory** | Number | Percentage | Number | Percentage | **Total** |
| Afghanistan | 64 | 18.4% | 67 | 19.3% | 347 |
| Armenia | 2 | 66.7% | 1 | 33.3% | 3 |
| Burkina Faso | 10 | 12.8% | 17 | 21.8% | 78 |
| Cambodia | 1 | 100.0% | 0 | 0.0% | 1 |
| Cameroon | 1 | 4.5% | 0 | 0.0% | 22 |
| Central African Republic | 2 | 0.8% | 14 | 5.9% | 237 |
| **Dem. Rep. Congo** | **27** | **4.5%** | **46** | **7.6%** | **603** |
| Haiti | 5 | 10.2% | 9 | 18.4% | 49 |
| Iran | 3 | 100.0% | 2 | 66.7% | 3 |
| Iraq | 2 | 5.6% | 4 | 11.1% | 36 |
| Israel | 57 | 70.4% | 19 | 23.5% | 81 |
| Lebanon | 157 | 96.3% | 72 | 44.2% | 163 |
| Libya | 57 | 38.8% | 21 | 14.3% | 147 |
| Mali | 16 | 17.2% | 12 | 12.9% | 93 |
| **Myanmar** | **114** | **22.0%** | **79** | **15.2%** | **519** |
| Nagorno-Karabakh | 1 | 100.0% | 1 | 100.0% | 1 |
| Nigeria | 7 | 7.0% | 19 | 19.0% | 100 |
| **Occupied Palestinian Territory (OPT)** | **844** | **26.1%** | **205** | **6.3%** | **3,229** |
| Russia | 23 | 100.0% | 0 | 0.0% | 23 |
| Somalia | 10 | 52.6% | 8 | 42.1% | 19 |
| South Sudan | 4 | 9.1% | 20 | 45.5% | 44 |
| Sudan | 71 | 27.0% | 71 | 27.0% | 263 |
| **Syria** | **272** | **60.2%** | **70** | **15.5%** | **452** |
| Thailand | 5 | 100.0% | 0 | 0.0% | 5 |
| **Ukraine** | **2,485** | **88.6%** | **93** | **3.3%** | **2,806** |
| Yemen | 46 | 47.9% | 17 | 17.7% | 96 |
| **Total** | 4,286 | **45.5%** | 867 | **9.2%** | 9,420 |

*Top five territories in terms of total events shown in* ***bold font****. The terms "severe" and "deadly" are defined in the main report. Data downloaded on 5 January 2026.*

False Alarm: The World Health Organisation's Flawed Data Analysis of 'Attacks on Health Care'

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