

Health Care in Conflict Global Health Map

Data Explainer

1. Interactive Maps

This document provides information on the data displayed on the interactive Violence affecting Health Care Map on violence against health care globally.

Insecurity Insight's interactive map visualises violence affecting health care data and enables understanding where conflict and violence impacts the delivery of health care. Filters can be applied to identify locations of incidents of violence against or obstructions of access to health care in conflict, during political instability as well as threats or incidents in relation to public health emergencies (called 'Outbreaks'), vaccination programmes, and information on incidents affecting maternal care and drone strikes impacting health care. Incidents can also be filtered by country or territory and across time periods.

2. Data on the Violence affecting health care map

The data displayed on the global map has been collated by Insecurity Insight from a range of different sources, including incidents collected through our open-source monitoring and incidents shared through our partner agencies.¹ It includes any reported act of verbal or physical violence, obstruction, threat of violence that interferes with the availability of, access to, and delivery of curative and/or preventative health services perpetrated by state and non-state actors, patients or relatives of patients, private individuals, and criminals. Data starts from 2016, coinciding with the UN Security Council resolution 2286 to protect health care in conflict.

It displays the total number of reported incidents involving an attack on a health care system, the total number of incidents involving an attack on a health facility resulting in damage or destruction to the facility, and the total number of health care workers killed, arrested or kidnapped since 01 January 2016.

2.1 Use and Citation

Any use of Insecurity Insight's data, including in reports, documents, and visuals, should cite the source, the data selection and the data period.

Suggested citation formats:

Citation: Insecurity Insight. 10 Years of Attacks on Health Care: Interactive Map. Available at <https://mapaction-maps.herokuapp.com>. Data retrieved on DD MM YYYY.

Insecurity Insight is continuously updating and backdating the Attacks on Health dataset and numbers continuously change, therefore the date when the dataset was downloaded must be included.

¹ Some partners only allow use of the incident information for inclusion in aggregate data and do not allow further sharing of details about specific incidents with external users. As a consequence, there can be discrepancies between the aggregate data (i.e. the total number of reported incidents) displayed on the global health map compared to data found on Insecurity Insight's line-by-line detailed incident datasets found on HDX.

3. About Insecurity Insight

Insecurity Insight aims to enable a world in which civilians are protected from violence in armed conflict, and in which local, national, and international civilian organisations are empowered to mitigate the consequences of violence by effectively delivering assistance, healthcare, educational opportunities, and protection to people affected by armed conflict.

As an H2H (humanitarian to humanitarian) association, Insecurity Insight supports the work of aid agencies, providers of healthcare, education, and protection services, and other civil society organisations by providing publicly available information for evidence-based policies. It collects and analyses data about violence against civilians and damage and destruction of vital civilian infrastructure in order to strengthen civilian protection, the delivery of aid in armed conflict and the protection of international humanitarian law. Insecurity Insight tracks social media sentiment to reveal how the aid sector is perceived and to detect early shifts in public opinion and emerging trends.

Insecurity Insight develops and implements new standards in event-based data collection and analysis to provide actionable and publicly-accessible information about the underlying patterns of violence to support policy responses. Insecurity Insight provides support to entities whose primary activity is the delivery of aid, provision of healthcare, education or civilian protection in conflict.

3.1 Data collection methodologies

Insecurity Insight uses an event-based approach to document incidents affecting humanitarian operations, health care, education, food and water systems, and civilian protection. Open-source information (publicly available material from edited media, organisations, and private sources) is collected using tailored, AI-supported search functions. These tools continuously scan open-source content using advanced deep-learning techniques to identify potential events. Retrieved information is then processed through natural language processing classifiers and categorisation tools in English, French, and Arabic, trained on more than 15 years of event data on attacks affecting humanitarian access and essential civilian services in conflict settings. The resulting data is automatically fed into a central platform and tagged with suggested relevance levels and thematic categories to support the efficiency of human data processing. This system was short-listed for an award at the AI for Good Global Summit in 2025.

Our team of human researchers reviews the suggested content and selects the information that meets the inclusion criteria and that contains sufficient information to ensure that events are verifiable. Key criteria include information on when and where an incident occurred, what or who was affected, and how they were affected as well as information on the conflict actor an incident was attributed to, the type of weapon used and how it was launched or delivered.

Insecurity Insight has data sharing agreements with civil society organisations and humanitarian and research networks. Data shared through these collaboration mechanisms is cross-checked, anonymised and integrated with the open-source data.

Insecurity Insight's data responsibility policy supports safe, ethical and effective data management through a comprehensive data quality assurance process developed to maintain the accuracy, credibility, reliability and ethical integrity of its datasets. Quality assurance is

embedded throughout all stages of the six-step data processing procedure, with additional checks conducted whenever information on incidents is updated or backdated. The process covers three steps of credibility and data purpose checks designed to protect privacy and security to prevent harm, and ensure transparency, accountability and understandability. These steps are applied through three interconnected components: internal mechanisms, collaboration efforts and source verification.

Incident data is published and made available through Insecurity Insight's Attacks on Health Care News Brief, issued every two weeks, and updated weekly on the global map on Violence affecting health care. Insecurity Insight's datasets attacks on health care data are also available on Insecurity Insight's Humanitarian Data Exchange (HDX) page. The data is available on the following thematic pages: Attacks on Health Care Data, Attacks on Public Health-Related Programmes Data, as well as numerous country datasets. Data is updated every Monday.

Subscribe to our Attacks on Health Care mailing list for updates.

4. Categories and definitions displayed in the Violence affecting health care map

United Nations Security Council Resolution 2286 (UNSCR 2286)²: Adopted unanimously on May 3 2016 and called for an end to violence and deliberate attacks against medical personnel, humanitarian workers, and health care facilities in conflict zones.

Total attacks on health care systems: This refers to the total number of incidents where a reported act of verbal or physical violence, obstruction or threat of violence interfered with the availability of, access to, and delivery of curative and/or preventative health services. It includes incidents affecting health facilities, health workers, ambulances and other medical vehicles or medical supplies.

Attacks damaged or destroyed hospitals and clinics: This refers to the total number of incidents where a health facility was reportedly damaged or destroyed. A health facility refers to any facility that provides direct support to patients, including clinics, hospitals, health centres, laboratories, makeshift hospitals, medical education facilities, mobile clinics, pharmacies, quarantine centres, warehouses, or any other health facility not named here. It also includes building and offices associated with aid organisations (NGO)³ working on health programmes.

Health Workers Killed: This refers to the total number of health workers reportedly killed. A health worker refers to any person working in a professional, aid organisations (NGOs), volunteer organisation, or in their private capacity in the provision of health services or who provides direct support to patients. This includes administrators, ambulance personnel, community health workers, dentists, doctors, government health officials, hospital staff, medical education staff, nurses, midwives, paramedics, physiotherapists, surgeons, vaccination workers, volunteers, or any other health personnel or medics not named here.

² United Nations Security Council Resolution 2286. 2016. *Protection of civilians in armed conflict*. Retrieved from: <https://unscr.com/en/resolutions/2286/>

³ An aid organisation or aid agency refers to an entity, often a non-governmental organisation (NGO), that provides humanitarian assistance and resources such as medical supplies, food, or financial assistance to people, communities or countries in need. They can operate globally (international NGOs) or locally (local NGOs).

Date Range: The map automatically is set to show the total data from 1 January 2016 to the present day. The data period can be changed by using “From: DATE, To: DATE”.⁴

Country Data: The map displays global figures for the total number of attacks on health facilities, the total number of health workers killed, kidnapped and arrested since 2016. The map can also be viewed by specific countries which can be accessed by clicking on a country in the map.

Categories

Most incidents are classified in one or multiple categories.

- **Conflict:** Refers to any reported act of verbal or physical violence, obstruction, or threat of violence against health care providers perpetrated by conflict actors. It includes incidents that took place in contexts of political violence when state forces that perpetrated the violence are listed on UCDP's list of “One-side violence’ conflict. It also includes COVID, Ebola, measles, cholera, and vaccination-related incidents when they were perpetrated by conflict actors or that occurred in countries in the context of armed conflict.⁵
- **Outbreak:** Refers to any reported act of verbal or physical violence, obstruction, or threat of violence directly linked to a public health emergency, including COVID-19, measles, cholera, and vaccination programmes. This includes conflict-related incidents when the perpetrator is a conflict party or political incidents when the perpetrator was a state force or non-state actor harming health worker(s) when carrying out public health measures.
- **Ebola:** Refers to any reported act of verbal or physical violence, obstruction, or threat of violence directly linked to an Ebola outbreak. This includes conflict-related incidents when the perpetrator is a conflict party or political incidents when the perpetrator was a state force or non-state actor harming health worker(s) when carrying out public health measures.
- **Political:** Refers to any reported act of verbal or physical violence, obstruction, or threat of violence committed during situations of political protests and civil unrest. When such violence is committed by state forces including on UCDP's list of ‘One-sided violence conflicts’ the incidents are also included under conflict.
- **Vaccination:** Any reported act of verbal or physical violence, obstruction, or threat of violence committed against vaccination infrastructure, personnel and programmes. This would include vaccinators, community health workers supporting vaccinators or other health officials engaged in vaccination roll outs. Vaccination infrastructure can include health facilities, supplies (e.g. stored vaccinations) and medical transport. When the vaccination covers an outbreak, such as COVID-19 or Ebola, these will also include outbreak related incidents.

⁴ Due to the time required for data processing, the latest entries are usually about a month behind.

⁵ This dataset applies the [Uppsala Conflict Data Program](#) (UCDP) definitions of conflict and uses the information compiled by UCDP to determine if the perpetrator/s of an incident of violence against health care are listed as a conflict party in either ‘state-based’, ‘non-state’, or ‘one-sided violence’. UCDP uses the threshold of 25 fatalities per calendar year attributable to a single perpetrator or during confrontations between two perpetrator groups before a perpetrator is added to the list.

- **Maternal Care:** Any reported act of verbal or physical violence, obstruction, or threat of violence affecting the delivery of maternal health which covers health services for women during pregnancy, childbirth and the postnatal period as well as other women's health services such as gynaecologists. This includes attacks on maternity or obstetric wards, attacks on outpatient services, attacks on midwives, gynaecologists and obstetricians or incidents where maternity programmes are obstructed.
- **Drone Impact:** Refers to any incidents against health care providers, health facilities and transportation involving a drone (UAVs). It includes incidents where explosives were dropped from a drone impacting health infrastructure, incidents where drones were conducting surveillance operations in the close vicinity of a health services, incidents where drones fired on health workers and health infrastructure and incidents where health services were suspended because of a perceived or direct threat from a drone.

All countries: This refers to all countries covered by Insecurity Insight where incidents affecting health care were reported. The countries affected and the number of total incidents vary depending on the category selected.

Incidents affecting healthcare – This refers to the total number of incidents in the selected category where a reported act of verbal or physical violence, obstruction or threat of violence interfered with the availability of, access to, and delivery of curative and/or preventative health services. It includes incidents affecting health facilities, health workers, ambulances and other medical vehicles or medical supplies.

Facilities – Any health facility that provides direct support to patients, including clinics, hospitals, health centres, laboratories, makeshift hospitals, medical education facilities, mobile clinics, pharmacies, quarantine centres, warehouses, or any other health facility not named here. It also includes buildings and offices associated with organisations working in a health programme.

Attacks - This count refers to the number of incidents where a health facility was damaged or destroyed. It does not refer to the number of individual health facilities damaged or destroyed. In some incidents the same facility may be damaged or destroyed more than once during the chosen time period. Attacks can be intentional or accidental. They can be a direct hit or from wide area effects from explosive weapons.

Workers: Any person working in a professional, aid organisations (NGOs), volunteer organisation, or in their private capacity in the provision of health services or who provides direct support to patients. This includes administrators, ambulance personnel, community health workers, dentists, doctors, government health officials, hospital staff, medical education staff, nurses, midwives, paramedics, physiotherapists, surgeons, vaccination workers, volunteers, or any other health personnel or medics not named here.

Killed: The number of health workers reportedly killed.

Note: Health workers who are killed while in captivity following a kidnapping are counted as 'kidnapped' and not 'killed'.

Kidnapped: The number of health workers reportedly kidnapped by a non-state armed group, armed gangs or criminals. It also includes incidents where the perpetrator is not named but context and available information suggest they are part of the list above.⁶

Arrested: The number of health workers reportedly arrested, detained, or forcibly held by a state or de-facto state force, including by armed forces, security forces, government agents or police forces.⁷

Event descriptions: Some incident descriptions are available for selected events and can be viewed by clicking the corresponding dot on the map. While not all incidents are displayed on the map, all documented incidents are included in the total counts. Incident descriptions do not include any identifying features, including names of affected facilities, names of individual towns

HDX Data: Data displayed on the Global Health Map can be downloaded through Insecurity Insight's Humanitarian Data Exchange (HDX) platform. Data on HDX is updated weekly and incident data is available from 01 January 2016 until the last available Monday. Data available on these datasets may vary to figures found in the global health map since the former is updated weekly every Monday whilst the Global Health map is updated continuously throughout the week.⁸

Reported Perpetrator

These categories describe the type of perpetrator(s) named in an incident. Perpetrator categories are presented in descending order of magnitude. On the map, only the applicable perpetrator for the chosen data category, period, and selected country are displayed.

Civilian: A perpetrator of violence against health care not associated with armed entities involved in violence affecting health staff or health services, including current or former employees of an aid agency or health provider, patients, or relatives of a patient receiving health care, and protesters, demonstrators, or other civilians.

Criminal: An armed perpetrator involved in robbery, burglaries, theft or fraud affecting health care.

Multiple: This refers to multiple perpetrators from different categories involved in the incident.

NSA (non-state actor): A perpetrator who is part of a named or unnamed armed group that is not part of the state's law enforcement, military, or security apparatus and who is either involved in a state-based armed conflict with a government or is engaged with an NSA in a non-state conflict, or engages in one-sided violence, based on UCDP definitions. This includes all organised armed groups such as private armies, rebel or guerrilla groups, and terrorist groups.

⁶ If a health worker is killed in captivity the same person is included in both the 'kidnapped' and 'killed' counts.

⁷ If a health worker is killed in detention or whilst in police custody the same person is included in both the 'arrested' and 'killed' counts.

⁸ Due to privacy concerns some partners only allow use of the incident information for inclusion in aggregate data and do not allow further sharing of details about specific incidents with external users. As a consequence, there can be discrepancies between the aggregate data (i.e. the total number of reported incidents) displayed on the global health map compared to data found on Insecurity Insight's line-by-line detailed incident datasets found on HDX.

It includes unidentified or unnamed groups of armed individuals (e.g. a group of unidentified 'armed men') if the incident description refers in a generic sense to rebels or extremists or group in some affiliated with the military or using military-type structures or equipment (e.g. wearing army fatigues, etc..), without indicating a linkage to any state army. This does not include private security actors or unidentified or unnamed groups of armed individuals (e.g. a group of unidentified 'armed men') who committed robberies, burglaries, theft or fraud.

No Information: No information on the perpetrator is available.

Other: Includes other groups of perpetrators not otherwise categorised.

Police: A perpetrator who is part of the state law enforcement apparatus (e.g. police or 'security forces'), but not military forces or private security actors.

Political party: A perpetrator who is part of a government agency but not part of state law enforcement apparatus, military forces or private security actors.

State military: A perpetrator who is a military actor involved in active combat or in a non-combat function (e.g. manning a checkpoint). This (a) could occur in a country classified as experiencing an international armed conflict, military occupation, or non-international armed conflict based on War Watch classifications; or (b) could involve a government and/or the armed forces of a controlling authority in a territory in a territory engaged in conflict with another party (armed conflict) based on UCDP definitions; or (c) could be considered to be one-sided violence, based on UCDP definitions. State actors must be soldiers of a state army who at the time of the incident may act under orders and within the context of a specific military objective that involves combat, the use of force in some form, as well as other military outside of IHL. Also included are state soldiers' non-combat activities such as manning a checkpoint, carrying out a search, or issuing general evacuation orders. Also included are activities that are not part of their formal duties (such crime, extortion, sexual violence, etc..) as well as one-sided violence against civilians. Where the distinction between state and non-state armed forces is unclear (such as in a contested political context), the party controlling the country's capital is defined as the state actor.

Vigilante: A member of a paramilitary or vigilante group not under direct or official command of the state security forces. The individual may act in support of the state security forces or on behalf of communities or individual community members.⁹

Weapon category, delivery platform or means of attack

These categories describe the type of weapon used in an incident. For explosive weapons, the delivery platform (i.e. how the explosive is delivered) is also recorded where available.

Weapon categories are presented in descending order of magnitude. On the map, only the applicable weapon category for the chosen data category, period, and selected country are displayed.

Aircraft strikes: An air-launched explosive delivered by plane, helicopter or paramotor.

⁹ In Sudan, the Rapid Support Forces have been classified as a 'vigilante' group since the start of the conflict in April 2023.

Arson: Any instrument or material associated with fire-making (e.g. matches, kerosene, propellant).

Drone strikes: An explosive delivered by a drone (unmanned aerial vehicle (UAV)).

Firearms: Any weapon that expels one or more projectiles through a barrel, including assault rifles (such as Kalashnikov, AK47, or variant, M16 etc..), machine gun, sub-machine gun, pistol, revolver or sniper. It also includes mountable firearms and covers individual ground vehicle, aircraft, naval vessel, UAV or fixed emplacement use.

IEDs and mines: Includes any type of IEDs (improvised explosive devices) such as car, suicide bomb, or roadside bomb improvised from material not specifically designed for the purpose, anti-personnel landmines and hand grenades.

No information: No information about the weapon available

Other: Includes other weapon types such as knives, liquids (e.g. anti-bacterial gel, bleach, hot beverage), chemicals, stones, technology, fists or any police weapon such as tasers, live or rubber bullets, tear gas, sound bombs or water cannons.

Shelling: A ground-launched explosive delivered by a surface-level platform such as tanks, vehicles, trucks, ships, or fixed installation.

Unspecified explosives: An explosive where the delivery method is not specified.

Motive for outbreak related violence

These categorisations are available for outbreak-motivated violence and are only displayed when this category is selected. Motive for the violence refers to an incident that affected outbreak-related health measures including (a) the activity performed by health professionals when the attack occurred; (b) specific outbreak health measures people objected to; or (c) the specific outbreak related activity affected by the incident. On the map, only the applicable outbreak related motive for the chosen data category, period, and selected country are displayed.

These include:

Objection to hospitals or buildings being used to treat outbreak patients: Resistance to hospitalisation to treat outbreak patients in a hospital wards; opposition to the use of hospitals to treat outbreak patients; damage to and destruction of hospitals treating outbreak patients; resistance to quarantine measures or opposition to the presence of quarantine centres; and damage to or destruction of quarantine centres.

Objection to medical health measures: Resistance to medical tests to check for an infection or anti-bodies related to an infection; opposition to changes in local burial or cremation customs and practices, such as prohibiting relatives from attending funeral ceremonies, or from seeing the deceased before burial/cremation; and protests against the use of specific burial locations for outbreak victims.

Objection to public health measures: Resistance to disinfection; attacks on workers carrying out disinfection activities; resistance to outbreak sensitisation campaigns; attacks on individuals

engaged in sensitisation campaigns; opposition to social distancing measures that take the form of protests or violence against health providers; or resistance to contact-tracing activities.

Speaking out against health management: Health workers speaking out against difficulties in their work, such as the lack of personal protective equipment or being criticised/disciplined for reporting higher infection rates than those of the government.

Vaccinations: Resistance or opposition to vaccinations or other vaccinations campaigns related to the outbreak; or protests related to the mismanagement of vaccination supplies.

Way to and from work: The health worker was en route to/from work when the incident happened.

Areas of concern: Refers to specific situations on the map. It combines a country and thematic areas and may change over time.