Methodology

This ninth report of the Safeguarding Health in Conflict Coalition (SHCC) covers 49 countries and territories and provides details on incidents of threats and violence against health care in 14 countries and territories experiencing conflict in 2021. We referred to the Uppsala Conflict Data Program (UCDP)[1] to determine if a country is considered to have experienced conflict in 2021, and, of these countries, we included those that had experienced at least one incident of violence against or obstruction of health care in 2021. We discuss the 14 countries with more than 15 reported incidents in separate country factsheets/chapters. Thirty-five other countries are included in the total counts, but are not discussed in detail. Eleven of the countries and territories covered in country chapters in 2021 were included as country chapters in 2020. For the 2021 report Ethiopia, Haiti, and Sudan were added, while Cameroon, Libya, Mexico, Mozambique, and Nagorno-Karabakh do not have country chapters in 2021.

The report uses an event-based approach to documenting attacks on health care, referred to as 'incidents' throughout the report. To prepare this report, event-based information from multiple sources was cross-checked and consolidated into a single dataset of recorded incidents that were coded using standard definitions. The full 2021 data cited in this report can be accessed via Attacks on Health Care in Countries in Conflict[2] on Insecurity Insight's page on the Humanitarian Data Exchange (HDX).[3] The data for the 17 countries is made available as individual datasets. The links are provided in the individual country profiles.

DEFINITION OF ATTACKS ON HEALTH CARE

The report follows the WHO's definition of an attack on health care: '*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*.' In this report, however, we do not use the word 'attack', but rather 'incident' or 'incident of violence', because the word 'attack' is often interpreted to convey intent, whereas many reported incidents result from indiscriminate or reckless behavior/actions, but otherwise meet the WHO definition.

This report focuses on incidents of violence against health care in the context of armed conflict, non-state conflict, or one-sided violence, as defined by the UCDP, while the WHO focuses on attacks during emergencies.

> In accordance with the WHO's definition, incidents of violence against health care can include bombings, explosions, looting, robberies, hijackings, shootings, gunfire, the forced closure of health facilities, the violent searching of health facilities, fire, arson, the military use of health facilities, the military takeover of health facilities, chemical attacks, cyber attacks, the abduction of health workers, the denial or delay of health services, assaults, forcing staff to act against their ethical principles, executions, torture, violent demonstrations, administrative harassment, obstruction, sexual violence, psychological violence, and threats of violence.

These categories have been included insofar as they were reported in sources. However, some forms of violence, such as psychological violence, blockages of access or threats of violence, are rarely reported. We also record incidents of violence against patients in health facilities when references to the effects of violence on patients are included in descriptions of incidents. However, the impact of incidents of violence against patients is much broader and more complex than individual incidents and cannot be accurately documented through incident-based monitoring. The 2021 report includes for the first time a summary description of the impact of violence on health care, health workers, health systems, and access to health care based on multiple secondary sources.

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DEFINITION OF CONFLICT

The SHCC report covers three types of conflict as defined by the UCDP:[4]

- **State-based armed conflict** is defined as *'a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths in one calendar year.'*
- **Non-state conflict** is defined as *'[t]he use of armed force between two organized armed groups, neither of which is the government of a state, which results in at least 25 battle-related deaths in a year.'*
- **One-sided violence** is defined as *'[t]he deliberate use of armed force by the government of a state or by a formally organized group against civilians which results in at least 25 deaths in a year.'*

A country is included in the SHCC report if it is included on the UCDP list of one of the three types of conflict[5] and if we identified at least one attack on health care perpetrated by a conflict actor, which for the purposes of this report is defined as a person affiliated with organized actors in conflict, which can be armed conflict, non-state conflict, or one-sided violence as defined by the UCDP.

Interpersonal violence and violence by patients against health care providers are not included in this report, even when they occurred in conflict-affected countries. Incidents are only included when (a) the perpetrator was a member of a party to a conflict, and (b) available evidence suggested that the incident occurred either in the context of a contested incompatibility of territory or as one-sided act of violence by security forces included on the UCDP list of countries with more than 25 reported deaths from one-sided violence attributed to security forces or non-state armed actors.

INCLUSION OF INCIDENTS

We included only the incidents that met the inclusion criteria for types of conflicts and perpetrators, and for these we included the following types of incidents and details in the report dataset:

- incidents affecting health facilities, recording whether they were destroyed, damaged, looted, or occupied by armed individuals/groups;
- incidents affecting health workers, recording whether they were killed, kidnapped, injured, assaulted, arrested, threatened, or experienced sexual violence (when available, we recorded the number of affected patients, although we acknowledge the likely serious underreporting of these figures);
- incidents affecting health care transport/vehicles, recording whether ambulances or other official health care vehicles were destroyed, damaged, hijacked/stolen, or stopped/delayed; and
- incidents recorded by the WHO Surveillance System for Attacks on Health Care (SSA) for the ten countries included in the system if the WHO confirmed the incidents.

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Key definitions

Health worker: Refers to any person working in a professional or voluntary capacity in the provision of health services or who provides direct support to patients, including 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 not named here.

Health worker affected: Refers to incidents in which at least one health worker was killed, injured, kidnapped, or arrested, or experienced sexual violence, threats, or harassment.

Health facility: Refers to any facility that provides direct health-related support to patients, including clinics, hospitals, laboratories, makeshift hospitals, medical education facilities, mobile clinics, pharmacies, warehouses, or any other health facility not named here.

Health facility affected: Refers to incidents in which at least one health facility was damaged, destroyed, or subjected to armed entry, military occupation, or looting.

Health transport/vehicle: Refers to any vehicle used to transport any injured or ill person or woman in labor to a health facility to receive medical care.

Health transport/vehicle affected: Refers to incidents in which at least one ambulance or other health transport/vehicle was damaged, destroyed, hijacked, or delayed with or without a person requiring medical assistance on board.

SOURCES

The aim of this report is to bring together known information on attacks on health care from multiple sources. Access to sources differs among countries, and each source has its own strengths and weaknesses. There are some differences in the definitions of what constitutes attacks on health care used by the different sources that were drawn on to compile the SHCC dataset. Each source introduces unique reporting and selection biases, which are discussed below.

To identify incidents that meet the inclusion criteria, we used six distinct sources that provide a combination of media-reported incidents and incidents reported by partners and network organizations:

1. information included in Insecurity Insight's Attacks on Health Care Monthly News Briefs,[6] which provide a combination of media sources and publicly shared information from partner networks, such as the Aid Worker Security Database (AWSD)[7] for global data from international aid agencies coordinating health programmes; Airwars[8] and the Syrian Network for Human Rights (SNHR)[9] for data on Syria; the Civilian Impact Monitoring Project (CIMP)[10] for data on Yemen; and databases such as that of the Armed Conflict Location & Event Data Project (ACLED);[11]
2. research conducted by a small team of SHCC members to identify additional incidents reported by UN agencies, the media, and other sources;

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3. information from the WHO SSA on nine countries or territories: Afghanistan, Burkina Faso, the CAR, the DRC, Mali, Nigeria, the occupied Palestinian territories (oPt), Sudan, and Syria (information from the SSA represents approximately one-sixth of the data gathered for this report); and
4. incidents affecting health care shared by the Conflict and Humanitarian Data Centre (CHDC) of the International NGO Safety Organisation (INSO) for six countries: Afghanistan, the CAR, the DRC, Nigeria, South Sudan, and Syria. Information from the CHCD represents approximately one-sixth of the data gathered for this report.

CODING PRINCIPLES

The general theory and principles of event-based coding were followed, and care was taken not to enter the same incident more than once. The standard coding principles are set out in the SHCC's *Overview Data Codebook*. Please see http://www.insecurityinsight.org/projects/healthcare/shcc for full details of SHCC coding and annexes.

Coding the perpetrator and context of attacks on health care can inform the development of preventive strategies and mitigation measures that reduce the incidence and impact of attacks and support accountability processes. Because it is rarely possible to know a perpetrator's motive(s), we relied on the context identified in the incident descriptions and coded the intentionality of the attacks from these descriptions to the extent possible.

INCLUSION AND CODING OF SSA-REPORTED INCIDENTS

Information from the WHO SSA was included for nine countries and territories: Afghanistan, Burkina Faso, the CAR, the DRC, Mali, Nigeria, the oPt, Sudan, and Syria. We accessed the SSA on February 1, 2022 and included the information for incidents in these countries reported in 2021 that were available on this date. Any changes to the SSA system after that date are not reflected in the SHCC dataset, but may be noted in the country profiles.

We coded 277 SSA-reported incidents from the nine countries and territories based on the information included on the online SSA dashboard. Since the SSA does not provide information on perpetrators, we assumed that all of the SSA incidents we included involved conflict actors (rather than private individuals) and therefore fulfilled the SHCC inclusion criteria. The SSA also does not provide any information on location, except for the country where the incident occurred. The SSA-reported incidents could therefore not be included in the maps showing the affected regions or provinces in the individual country profiles.

The lack of detail in the 292 SSA-reported incidents from Myanmar made it too difficult to determine which of these incidents overlapped with the 411 Syrian incidents collected by SHCC members. Thus, the 292 SSA-reported incidents from Myanmar were not incorporated into the report.

The SSA includes the fields of 'Affected Health Resource,' 'Type of Attack,' and 'Affected Personnel,' with standard categories for each incident. However, these fields were not consistently filled in, and for 21 of the 277 incidents only one or two of the fields provided information. When one or more fields were left empty, it was usually not possible to fully understand the nature of the incident from the information reported. Therefore, 21 SSA-reported incidents appear in the SHCC dataset as recorded incidents without much further detail, and 256 incidents reported by the SSA are included with more details.[12]

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INCLUSION AND CODING OF INCIDENTS REPORTED BY INSO'S CHDC

Information on incidents adversely affecting health care obtained from INSO's CHDC was included for six countries: Afghanistan, the CAR, the DRC, Nigeria, South Sudan, and Syria. The report includes the incidents from the dataset provided by the CHDC on February 16, 2022 that fulfilled the SHCC inclusion criteria. SHCC inclusion criteria were applied by selecting incidents for which the numerical fields P-AC indicated a value above 0 – indicating that a health worker or a health facility was directly affected and where the perpetrator was a UCDP-listed conflict actor.

LIMITATIONS OF THE RESEARCH

This report is based on a dataset of incidents of violence against health care that has been systematically compiled from a range of trusted sources and carefully coded. The figures presented in the report can be cited as the total number of incidents of attacks on health care in 2021 reported or identified by the SHCC. These numbers provide a minimum estimate of the damage to health care from violence and threats of violence that occurred in 2021. However, the severity of the problem is likely much greater, because many incidents probably go unreported and are thus not counted here. Moreover, differences in definitions and biases within individual sources suggest that the contexts that are identified are also not representative of the contexts of all incidents.

The SHCC dataset aims to bring together available information from different sources on violence and threats of violence against health care. As a consequence, it suffers from limitations inherent in the information provided by contributors to the SHCC. For some countries, combining available information is challenging when various data collection efforts do not share data in a way that allows information to be cross-checked. Moreover, not all contributors provided access to their original sources and many details were lost in the process, affecting our ability to provide more accurate and consistent classification. This results in two important warnings:

1. **The reported numbers of incidents by country should not be compared to those of other countries without considering the factors that affect the flows of information.** For example, activities in Myanmar shared information widely in 2021 using social media platforms, while information flows from Ethiopia remained problematic due to disrupted internet connectivity and censorship. As a result, many events are reported from Myanmar, while the reported numbers remain low from Ethiopia despite various indications that threats and violence against health care was very widespread.
2. **The reported categories of the contexts in which incidents took place should not be read as describing the full range of particular incidents or how frequently they occur.** For example, the killings and kidnappings of doctors or bombings of hospitals are more likely to be captured by reporting systems than the harassment of health workers or looting of medical supplies. These incidents are likely to occur more frequently than reports indicate.

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REPORTING AND SELECTION BIAS

The SHCC dataset suffers from 'reporting bias', which is the technical term for selective reporting. While the process of data cleaning carried out by the SHCC focuses exclusively on selecting incidents based on the inclusion criteria, the pool of information accessible for this process depends on the work done by those who first reported the incidents. Events may be selected or ignored for a range of reasons, including editorial choices, when the source is a media outlet; lack of knowledge, because the affected communities had no connection to the body compiling the information in the first place; because of deliberate censorship of disruption of internet connection; or simple errors of omission. These biases mean that the SHCC's collection of incidents may not be complete or representative, and that only a selection of incidents is included in the first lists that are used to compile the final SHCC dataset. This dataset therefore only covers a fraction of the relevant evidence and covers incidents in certain countries and certain types of incidents more widely than others.

Known reporting and selection biases in SHCC sources

The dataset on which this report is based suffers from the limitations inherent in the contributors' data sources used to compile the dataset. Some data sources use media reports, while others collect and collate reports through a network of partners, direct observation, or the triangulation of sources. Many information providers use a combination of these methods. Seven possible reporting biases affect the flow of information:

1. In some countries the media frequently report a wide range of attacks on health care, while in others formal media outlets report hardly any incidents.
2. In some countries citizen journalists who carry out their own documentation and investigations are key sources of information. Government-imposed shutdowns of the internet can disrupt such information flows during specific time periods.
3. In some countries there are very active networks of SHCC partner organizations that contribute information, while in others no such networks exist. Building up networks takes time and these networks are better developed in countries experiencing long-standing conflicts. Changes in personnel or funding shortfalls can disrupt information flows.
4. In some countries numerous parallel data-collection processes exist that publish different numbers because of differences in geographic coverage or the ability to reach information providers. Where the original data is not shared, it is impossible to cross-check for double reporting of the same events.
5. In some countries data collection initiatives may publish data in one year that leads to a sudden rise in reported incidents. If they do not continue this work in subsequent years, the numbers of reported incidents then drop.
6. Incidents occurring in the early stages of conflicts need to be found in a variety of sources until data-collection networks are established.
7. Some organizations do not share incidents in order to protect their independence and neutrality. In countries where such organizations are key health care providers, information flows can remain very limited.

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ACCURACY OF INFORMATION AND DIFFERING DEFINITIONS

Some organizations record only certain types of incidents, e.g. those involving health facilities or those affecting international aid agencies, while the incident descriptions that are available may also contain errors. In addition, not all organizations that compile information on relevant incidents include all the details that would be necessary to systematically code all aspects of these incidents. In particular, information related to the perpetrator(s) and context of a particular incident is often missing or may be biased in the original source. Also, in some cases, especially those involving robberies and abductions, it is often difficult to ascertain from available information whether the act was committed by a party to the conflict or by criminals. We based our inclusion decisions on judgements about the most likely motivations.

The nature of the WHO SSA dataset and the extent to which the SHCC relies on contributions from this dataset for specific countries influence the overall SHCC dataset. For example, the WHO SSA reported zero incidents in Ethiopia, but 235 in the oPt for 2021. Because the SSA does not report information on perpetrators, the SHCC dataset could not provide information on the perpetrators in 277 incidents. As a consequence the coding is much more limited for those countries for which a significant proportion of incidents came from the SSA.

The SHCC dataset therefore contains limitations associated with using pre-processed data without access to the original sources or additional detail, which would have allowed for potentially more comprehensive and consistent classification.

Methodology reference on the country profiles could be something like:
The standard coding principles are set out in the SHCC's Overview Data Codebook. Please see www.insecurityinsight.org/projects/healthcare/shcc for full details regarding SHCC coding and annexes.

1 Department of Peace and Conflict Research, Uppsala University. Uppsala Conflict Data Program. *https://ucdp.uu.se/*, accessed March 11, 2022.
2 *https://data.humdata.org/dataset/shcchealth care-dataset*.
3 *https://data.humdata.org/organization/insecurity-insight*.
4 Department of Peace and Conflict Research, Uppsala University. UCDP Definitions. *https://www.pcr.uu.se/research/ucdp/definitions/*.
5 *https://ucdp.uu.se/*. Because the 2021 UCDP country conflict list was not publicly available when this report was being written, we consulted UCDP staff via email to obtain information on the changes related to countries included in the UCDP list for 2022.
6 *http://insecurityinsight.org/projects/health care/monthlynewsbrief*.
7 *https://aidworkersecurity.org/*.
8 *https://airwars.org/*.
9 *http://sn4hr.org/*.
10 *https://civilianimpactmonitoring.org/*.
11 *https://www.acleddata.com/*.
12 Please contact Insecurity Insight if you would like more details on the process of including SSA-reported incidents in the SHCC dataset.