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Introduction to the Tagging Guide

This *Tagging Guide* was created by Syrian Archive to facilitate creation of a database of visual documentation of Attacks Against Medical Facilities since the start of the conflict. The drafting and implementation of this detailed tagging guide was done to employ open source research and investigative techniques to expand the potential uses for and analytical value of this dataset of verified visual documentation.

This was achieved through a ‘tagging’ process by which each Incident (alleged attack) and corresponding Observation (related, individual video documentation) was evaluated for certain characteristics of legal or otherwise contextually important significance. These characteristics were identified through consultation with experts, researchers, and legal professionals as well as in-depth desk research on the Syrian conflict and other conflicts characterized by widespread attacks against medical facilities and humanitarian workers. Each individual ‘tag’ is meticulously defined to help illuminate these identified, significant characteristics. This tagging was done to provide database users with reasonably reliable indicators of legally significant information about certain Incidents or otherwise add an additional layer to pattern and trend analysis. Ultimately, we hope to increase the database’s potential to support and further efforts to end the clear and heinous pattern of targeted attacks on medical facilities in Syria.

The original *Tagging Guide*—which was distributed to all researchers and investigators working on this project—included a section on each of the following: Key Principles & General Methodology, General Instructions, Workflow Step-by-Steps and Checklists, Tag Definitions & Methodology, and Tag Examples. The original guide has been revised to this version, for public review: all tag definitions are unchanged or slightly edited for clarity (as identified by need during the year-long video review, investigation, and implementation process), and the methodology, instructions, and workflows have been updated to reflect adjustments made by the video review and investigations teams. This version also excludes any confidential information as well as step-by-step instructions on navigating our worksheets and other, similarly administrative details. In making these revisions to the original document, our hope is to present to the public a *Tagging Guide* that is both plainly informative for database users and useful for other researchers pursuing similar analysis.
Methodology

Evaluating Information

Credibility and Corroborating Information

Here, “Credibility refers to believability or trustworthiness.”¹ The tagging process for this database was done based only on open source information. In the Syrian conflict context, information is sourced from a wide spectrum of actors.² Given the highly political nature of the conflict, among these actors—including news media, human rights organizations, citizen journalists, and eyewitnesses³—it is possible to identify a wide variety of potential biases. Further, given the very real dangers of the frontline documentation and reporting work done by citizen journalists in Syria, it may be that available online reporting is more prone to anonymisation than in many other contexts.

However, while these factors present challenges for evaluating with complete certainty the credibility of every source Syrian Archive researchers encountered in the course of their work, these factors do not automatically and wholly undermine the relevant⁴ information made available by these sources.

Assessing for corroborative information was key to Syrian Archive’s evaluation of the credibility of sources and the information they provided. It is essential to the integrity of the database that Syrian Archive researchers deliberately employed strategies to counter bias and correct any misinformation being published online or existing in its archived materials. To this end, evaluating for agreement among sources was integral to the methodology.

² For a description of how sources for an events-based database were evaluated by the Armed Conflict Location & Event Data Project (ACLED) in a context with similar factors at play, see ACLED, Methodology and Coding Decisions around the Yemen Civil War, https://acleddata.com/acleddatanew/wp-content/uploads/dlm uploads/2019/01/YemenMethodology_2020_ACLED.pdf.
³ This list is not exhaustive.
⁴ “…while some of the information [from such sources] may indeed be biased (e.g. providing higher casualty numbers), not all information is.” For example, whether casualties were recorded, full stop. ACLED, Methodology and Coding Decisions around the Yemen Civil War, https://acleddata.com/acleddatanew/wp-content/uploads/dlm uploads/2019/01/YemenMethodology_2020_ACLED.pdf.
Standard of Information

Where judgment was required in the tagging process for this project, Syrian Archive only assigned tags that met a ‘reasonable grounds to suspect’ standard of information. In other words, each individual tag was assigned only if the researcher was convinced by the available information that there are reasonable grounds to suspect the tag is applicable or accurate. The methodology descriptions and examples provided in the tag definitions below illustrate how this discretion was exercised and this standard of information met, in practice. Researchers also maintained open lines of communication or otherwise flagged and revisited after consultation the more challenging discretionary decisions encountered. Further, each tag for each Incident was reviewed multiple times, at multiple stages of the workflow, by multiple Syrian Archive researchers. This helped to ensure that all tags were assigned as consistently as possible across the entire database.

Phrased differently: tagging decisions were an application of the standard of information to an open source verification process. This may mean, for example, that we have seen unverifiable claims in the source materials about certain alleged perpetrators, delivery methods, munitions, or other types of information. However, simply because we have not affirmatively tagged these claims does not mean that they are necessarily false. We simply could not verify them to the chosen standard. For this reason, the default tag identified in our methodology is often ‘unknown,’ and the final database includes numerous ‘unknowns.’

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5 We have chosen to point to and aim for this standard of information with the end goal of being as accurate as possible while also erring on the side of inclusion when assigning tags. For almost all subsequent uses, the facts established in the published dataset will require additional investigation and corroboration. Since Syrian Archive does not have the resources or mandate to research and evaluate each Incident to the highest possible evidentiary standard, use of the “reasonable grounds to suspect” standard for the information available to us enables us to assign tags to Incidents both in instances where we are very confident in the tag based on available open source information as well in instances where we reasonably suspect that subsequent investigation and analysis will confirm the tag.

6 For example: for “Alleged Perpetrator,” confirmed use of barrel bombs resulted in a “Syrian Armed Forces” tag because use of this type of munition in the Syrian conflict context constitutes reasonable grounds to suspect this link given well-established information and observed activities of the major actors in the conflict.

7 Please see the section on Tagging Workflow for more detail.
Confidence Rating

An overall Confidence Rating is assigned to each Incident in the database. This ratings system was created to give database users an evaluation of the discovered open source information for each Incident, as a whole. The ratings themselves are assigned based on the robustness and quality of information available for each given Incident included in the database, relative to the other Incidents that have been visually documented, archived, and included in this thematic database.

Specifically, Confidence Ratings are assigned as follows:

0: Any claims or documentation about this Incident have been identified as false reporting, or it has been confirmed in some other way that the Incident did not occur.

1: Limited visual documentation is available for this Incident, and limited corroborating information is discoverable (if at all). Generally, available information is restricted to few videos with associated claims of fact and no apparent means for additional investigative steps or discovery.

2: While only limited visual documentation exists, this Incident has been verified either by the known credibility of the source documenter or affiliated civil society organization, or by discovery of highly credible corroborating information such as clear depictions in satellite imagery for the corresponding timeframe or reporting from a known, trustworthy source.

3: This Incident has been verified and documented by multiple Observations (related, individual videos) from multiple sources. Highly credible corroborating information is discoverable, from multiple sources.
Tagging Workflow

Research, tagging, and tagging review proceeded in the following phases of work. First, researchers identified and pulled from the archive all visual documentation relevant to the ‘attacks against medical facilities’ theme. Then, the individual video Observations and accompanying basic data were cleaned and organized by Incident. Next, researchers reviewed the Observation videos and completed the tagging, in stages. Researchers worked in batches of 10 Incidents. Batch-by-batch review of the research done and tags assigned was completed with every stage of tagging: after a researcher finished a batch of 10 Incidents, another researcher who had not seen that batch before then reviewed those Incidents. Breaking up the workflow in this manner helped to ensure ongoing review and a consistent feedback loop.

The stages of tagging were organized into three categories of tags: Preliminary Information, Additional Research, and Location-Based Information. The tags were organized into categories to incorporate the initial data cleaning and testing phase as well as to ensure multiple stages of review, adherence to security protocols, and division of labor by researcher skillset.

The **Preliminary Information** category consisted of only those tags that did not yet involve or require additional discovery and desk research. These ‘preliminary tags’ could generally be completed solely based on information that is discernible from the Observations (videos). In other words, as part of the initial tagging testing phase, they were completed based only on what researchers could observe in the visual documentation. Researchers with the requisite experience and additional training then reviewed, confirming or revising the preliminary tags as necessary, while also completing the tags that required **Additional Research** or **Location-Based Information**.

Many of the tags were assigned after additional research, including geolocation for location-based information. This research and the sourcing have been tracked internally, to ensure that the open source research done is replicable and verifiable. This extensive research into secondary sources was done to support a more robust evaluation and understanding of the primary sources: the thematically linked visual documentation Syrian Archive had preserved, or the videos on which this dataset is based.

As a final step before database analysis and publication, researchers consulted with each other on the tagging process, cleaned the dataset, and reviewed key categories of tags to ensure consistency and accuracy. Researchers then assigned a Confidence Rating to each Incident.

For quick reference, the tags were designated to each category of work as follows:
<table>
<thead>
<tr>
<th>CATEGORY 1: Preliminary Information</th>
<th>Location [Governorate Only]; Weapons Used; Crater Visible in Observation Video; Direct Hit; Double Tap; Multiple Targeted Strikes; Collections Tags: Protected Persons, Objects &amp; Sites; and Time of Day.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CATEGORY 2: Additional Research</td>
<td>Name of the Medical Facility [English &amp; Arabic]; Weapons Used [Review]; Double Tap [Review]; Collections Tags: Protected Persons, Objects &amp; Sites [Review]; Time of Day [Review]; Alleged Perpetrator (General); Alleged Perpetrator (Specific); Conflicting Narrative; Established Pre-conflict; Assoc. Medical Org; Multiple Facilities; and Casualties.</td>
</tr>
<tr>
<td>CATEGORY 3: Location-Based Information</td>
<td>Coordinates; Area of Control; Proximity to Frontline; Remote Location; Direct Hit [Review] and Direct Hit Video; Collections Tags: Protected Persons, Objects &amp; Sites [Review]; Multiple Targeted Strikes [Review]; Damage Visible on Satellite Imagery; First Date Damage Visible on Satellite Imagery; Crater Visible on Satellite Imagery; Furthest Point of Damage; and Satellite Imagery Source.</td>
</tr>
</tbody>
</table>
Security & Minimizing Harm

In all facets of this work, Syrian Archive strives to minimize harm. As a key principle in human rights-based work, this means planning, designing, and conducting work in such a way that strives to avoid causing inadvertent harms. In practice for this database, this meant anticipating, planning for, and minimizing potential harms resulting from this work to: content originators, those depicted in the video content, persons currently in the areas depicted in the video content, persons who may otherwise be impacted by the compilation of this type and scale of data, and all researchers made potentially susceptible to vicarious trauma in review of the materials.  

In designing this particular database tagging project, Syrian Archive will not publish specific location information, as medical facilities continue to be deliberately targeted and attacked. Some of the hospitals included in the database may still be in operation and are therefore potentially subject to future attacks.

Wellbeing

Understanding secondary and vicarious trauma is critical to both the wellbeing of digital investigators and the success of this work. In-depth research into overwhelming amounts of information and visuals about violent incidents can be extremely draining and even harmful to researchers. Well aware of this, Syrian Archive strives to ensure that its researchers are trained in and practicing techniques to mitigate the risks and potential harms inherent to this work. Moreover, implementing a batches-based workflow was another way in which Syrian Archive aimed to build wellbeing practices into the overall structure of the research project. Researchers were encouraged to take breaks frequently and working in batches created convenient break times at regular intervals. Reviewers were encouraged to check in with each researcher purposefully and regularly as batches were completed.

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8 This list is not exhaustive.
Tags & Definitions

Alleged Perpetrator (general)

Definition

If the Observations materials or additional research indicate a credible perpetrator allegation, tag the Incident with this information.

Methodology

Fill in with the most credible information available, so long as it meets our chosen standard of information. This will most likely include official statements by government entities, soldiers’ own social media posts (and any necessary geolocation work), as well as citizen journalists on the ground in the area of the attack. Ensure that you review all sources for bias.

Remember the importance of corroborating information. Liveuamap’s tracking of frontline movements over time may also be a useful place to seek additional, corroborating information. To meet our standard of information, any testimonial evidence or claims should likely be corroborated by other sources as well as by other types of information such as any available flight data or known munitions and delivery methods tactics.

If there is limited or no information available on alleged perpetrator, select “Perpetrator Unknown.” If multiple perpetrators are credibly alleged in desk research and you are unable to confirm a most reliable allegation, select “Perpetrator Contested.”

As discussed above with respect to corroborating information, you should be aware of how this category interacts with type of munition and delivery method. Given our knowledge of this conflict and absent strong information to the contrary, the following tagging rules are sound.

- Barrel bombs or other free-fall bombs (munition) → helicopters (delivery method) → Syrian Forces
- Airstrikes that can be traced to Hmeymim/Khmeimim/Hmeimim/Latakia Air Base → Russian Forces
Because of their observed cooperation and other similarities such as chosen targets and airstrike characteristics, it is possible that you will determine—to the appropriate standard of information—that the alleged perpetrator was either Syrian government or Russian forces, but you are unable to differentiate between the two. In these instances, tag as “Syrian or Russian Forces.”

Tag Options

- Opposition Groups
- Syrian Armed Forces
- Pro-Government Militias
- Russian Forces
- Combined Syrian and Russian Forces
- Syrian or Russian Forces
- Turkish Forces
- Coalition Forces
- The YPG/ PYD -SDF
- ISIS
- Unaffiliated
- Perpetrator Unknown
- Perpetrator Contested

Alleged Perpetrator (specific)

Definition
Within the general category marked in the previous tag, add specific labeling on alleged perpetrator as available.

Methodology
If more specific information is available on alleged perpetrator (for example: Tiger Forces), fill this in. If unavailable, simply leave the column blank.

Be sure to search for other Incidents with this same, specific tag. Since the tag is text-filled, it is important that each matching entry matches exactly. This enables subsequent software analysis to identify all Incidents with allegations linking a specific unit or brigade (to the extent that this information is available via research).

Tag Options
Will be unique to each Incident entry.
Area of Control

Definition
An evaluation of the geographic area surrounding the medical facility based on which faction of the conflict was effectively in control at the time of the Incident in question.

Methodology
Our methodology and definition for this tag are both closely linked to Liveuamap. Once you have located your Incident’s coordinates on the map, the ‘Time’ panel on the right-hand side of the page will help you search to the Incident date and the ‘Key’ panel will explain the color shading for area of control information. To access much of the historical data, however, you will need access to a paid account.

As Liveuamap only lists area of control information after 2015, researchers should look to data from the Carter Center’s Syria Conflict Mapping project for Incidents that occurred before then.

If you are unable to find Area of Control information for your Incident or the Coordinates to your medical facility, you should tag as “Unknown.” Your default tag is “Unknown.”

Tag Options
ISIS-controlled area, Opposition-controlled area, SDF/PYD/YPG-controlled area, Syrian government-controlled area, Unknown

11 However, it is unclear at this time exactly how Liveuamap defines ‘control’ and how it does (or does not) verify the open source information that serves as the basis for their map.
Associated Medical Organization

Definition

Some medical facilities in Syria are associated with certain international or national medical organizations. These may be formal partnerships or informal arrangements whereby an organization’s personnel work out of the facility.

Methodology

This information should be discoverable by desk research or direct contact with known organizations themselves. Any degree of affiliation with a professional medical organization should be tagged.

It is possible to add tag options to the spreadsheet as needed. It is very possible that you will come across additional organizations affiliated with certain medical facilities.

Only tag with “None” if you find information explicitly stating that there is no organizational affiliation at all.

Tag Options

- Syrian American Medical Society (SAMS)
- Union of Medical Care and Relief Organizations (UOSSM)
- Médecins sans frontiers (MSF)
- Physicians for Human Rights (PHR)
- International Committee of the Red Cross (ICRC)
- Syrian Relief and Development (SRD)
- OrientHR
- Unified Medical Office of Duma
- Syria Charity
- Health Care Organization (HCO)
- Hand in Hand for Syria
- Syrian Expatriates Medical Association (SEMA)
- Unified Revolutionary Medical Bureau in East Ghouta (URMBEG)
- Kriegskindernothilfe Roth (KKNH), VIOLET
- Independent Doctors Association (IDA)
- Social Development International (SDI)
- Sustainable International Medical Relief Organization (SIRMO)
Casualties

Definition

Whether casualties were documented in relation to this Incident.

Methodology

Tag as “TRUE” if either: 1) the Observations videos depict injured or deceased persons, who were clearly injured or killed due to the Incident under investigation; 2) strong visual indications in the Observations of injured or deceased persons, such as significant blood; and 3) at least one credible source reports that casualties—of any number—resulted from the Incident under investigation.

Tag Options

True, False, Unknown
Collections Tags: Protected Persons, Objects & Sites

Definition
People, objects, and sites protected by international humanitarian law, especially those of particular note or relevance in the Syrian conflict context.

Methodology
International humanitarian law protects a wide range of people, objects, and sites during armed conflict. Each of the below tag options has been selected as a protected person, object, or site that is of particular note or relevance in the Syrian conflict context.

On the Incident and Observation sheets, the first collections column is already default tagged as “Attacks against medical facilities” and the second as “Attacks against medical personnel.” Should you observe any of the other, additional protected persons, objects, or sites being impacted in the Observation or Incident, you should tag them:

- Tag with as many protected categories as applicable using the multiple collections columns included in the spreadsheet.
- If no additional collections tags, simply leave these additional columns blank.
- Should you be unsure or have a question on this, add your comments to the Notes cell for reviewers and subsequent researchers to see.

Tag Options

- **Attacks against bakeries** – protected as an object indispensable to the survival of the civilian population\(^\text{12}\)
- **Attacks against cultural property** – protected as property important to cultural heritage, which includes buildings dedicated to religion, art, science, education or charitable purposes and historic monuments\(^\text{13}\)
- **Attacks against humanitarian relief personnel and objects** – for database tagging, this should be considered distinct from medical facilities and focused instead on objects and personnel providing relief from starvation;\(^\text{14}\) protected as personnel working to provide

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\(\text{\footnotesize \(^{12}\) International Committee of the Red Cross [ICRC], IHL DATABASE: CUSTOMARY IHL, Rule 54. Attacks against Objects Indispensable to the Survival of the Civilian Population, https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_cha_chapter17_rule54.}\)

\(\text{\footnotesize \(^{13}\) International Committee of the Red Cross [ICRC], IHL DATABASE: CUSTOMARY IHL, Rule 38. Attacks Against Cultural Property, https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule38.}\)

\(\text{\footnotesize \(^{14}\) International Committee of the Red Cross [ICRC], IHL DATABASE: CUSTOMARY IHL, Rule 53. Starvation as a Method of Warfare, https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule53.}\)
humanitarian relief to civilian populations in need\textsuperscript{15} and objects used for humanitarian relief operations\textsuperscript{16}

- **Attacks against journalists** – protected as civilians\textsuperscript{17}
- **Attacks against markets** – protected as a protected civilian object because it is a place of civilian concentration\textsuperscript{18}
- **Attacks against religious structures or personnel** – religious structures are those dedicated to religion;\textsuperscript{19} religious personnel are those exclusively assigned to religious duties, though this protection is lost if they commit, outside their humanitarian function, acts harmful to the enemy\textsuperscript{20}
- **Attacks against water sources** – protected as an object indispensable to the survival of the civilian population\textsuperscript{21}
- **Attacks against schools** – protected as civilian objects\textsuperscript{22}
- **Attacks against medical personnel** – protected as persons exclusively assigned to medical duties. They lose their protection if they commit, outside their humanitarian function, acts harmful to the enemy.\textsuperscript{23}
- **Attacks against medical facilities** – protected as medical units\textsuperscript{24}


\textsuperscript{18} International Committee of the Red Cross [ICRC], IHL DATABASE: CUSTOMARY IHL, Practice Relating to Rule 7. The Principle of Distinction between Civilian Objects and Military Objectives, https://ihl-databases.icrc.org/customary-ihl/eng/docs/v2_rul_rule7_sectiond


Conflicting Narrative

Definition
Some authority has published a narrative that strongly conflicts with the existing visual evidence and most reporting.

Methodology
If there is a conflicting narrative published, you should copy the URL to this report into the spreadsheet cell, and archive the report itself. For example: the Russian government published two satellite images about two attacks in 2017 saying that the hospital is intact and that it wasn't hit. This would be a conflicting narrative.

Tag Options
Will be unique to each Incident entry.

Coordinates

Definition
The identified latitude and longitude of the impacted medical facility, to the seventh decimal point.

Methodology
The coordinates for the impacted medical facility for each Incident should be geolocated or otherwise identified by partners. Any issues in locating the impact site(s) and/or the associated medical facility as well as determining coordinates should be described in the Notes cell.

Tag Options
Will be unique to each Incident entry.
Crater Visible in Observation Video

Definition

A distinct crater in the ground at point of impact resulting from the type of munition or delivery method used in the attack is visible in satellite imagery.

Methodology

If a distinct crater is visible in one or more Observation videos for your Incident, tag this as “TRUE” and update the Notes cell to identify the v-value and timestamp for any times where crater(s) are visible. If you cannot see or find a distinct crater in the Observation videos, tag this as “FALSE.” If you see multiple craters or are unsure of your tag, use your judgment to tag as accurately as possible and note these observations in the Notes cell. Do not leave this tag blank or unanswered. Unless a crater is visible, the default tag here is “FALSE.”

A crater is a point of impact defined by specific characteristics, namely: it is distinct from other destruction and is an identifiable hole, cavity or depression in the ground. A hole in the roof of a building, a cut out in a wall, an exploded car, or general destruction indicating a point of explosion are not examples of craters.

Identification of a distinct crater excludes points of impact from small arms such as bullet holes.

An explosion is not necessary for a crater to be made. A cannister dropped from a helicopter may still create a visible crater even if the cannister only breaks open on impact and doesn’t explode.

See the Tag Examples section of this guide for a satellite image example of a crater.

Tag Options

True, False
Crater Visible in Satellite Imagery

Definition
A distinct crater in the ground at point of impact resulting from the type of munition or delivery method used in the attack is visible in satellite imagery.

Methodology
If a distinct crater is visible in post-attack satellite imagery pulled for the previous satellite imagery tags, tag this as “TRUE.” If you cannot see or find a distinct crater in the satellite imagery, tag this as “FALSE.” If you see multiple craters or are unsure of your tag, use your judgment to tag as accurately as possible and note these observations in the Notes cell. **Do not leave this tag unanswered and the cell blank.** Unless a crater is visible, the default tag here is “FALSE.”

A crater is a point of impact defined by specific characteristics, namely: it is **distinct from other destruction** and is an identifiable **hole, cavity or depression in the ground.** A hole in the roof, a cut out in a wall, an exploded car, or general destruction indicating a point of explosion are **not** examples of craters.

Identification of a distinct crater **excludes points of impact from small arms** such as bullet holes.

**An explosion is not necessary** for a crater to be made. A cannister dropped from a helicopter may still create a visible crater even if the cannister only breaks open on impact and doesn’t explode.

Tag Options
True, False
Damage Visible on Satellite Imagery

Definition
Damage resulting from this Incident is visible on satellite imagery.

Methodology
Confirm whether you can identify damage in satellite imagery from after the date of the attack that was not present before, and which matches up with what happened during the attack (as shown in the Observations videos). If this Incident-specific damage is visible, respond “TRUE” and proceed through the remaining tags in this section.

If no Incident-specific damage is visible in satellite imagery, respond “FALSE.” This is your default tag. **Do not leave this tag blank or unanswered.** If you respond FALSE, you can skip the remaining location-based tags (including the Satellite Imagery Source tag) as these only pertain to Incidents for which satellite imagery shows Incident-specific damage.

Tag Options
True, False
Direct Hit

Definition
The munition(s) or missile(s) hit the medical facility, resulting in direct, physical impact on the structure/building being used for medical purposes.

When reading and learning our tagging definitions and methodology for Direct Hit, Double Tap, and Multiple Targeted Strikes, be sure to take a look at ANNEX for some diagrams to help clarify the key similarities and differences between these tags.

Methodology
To tag a Direct Hit you should see the specific **point(s) of impact** by any munition (bullet to bunker buster) or **extensive structural damage** such that there is no question that the medical facility building itself was directly hit.

Be sure to **determine which structure is the medical facility** before adding this tag – other buildings shown in the video that are unrelated to the medical facility may also be impacted/damaged.

If the missile(s) struck nearby buildings and the resulting explosion caused some damage to the medical facility but not enough for critical structural harm, this would not be a direct hit.

To meet the above definition and to qualify as a Direct Hit for our tagging purposes, the attack must include all of the following elements:

- Medical facility building has been positively identified
- One of the following is also observed or confirmed by additional research:
  - Point(s) of impact on the medical facility building; OR
  - Sufficiently extensive structural damage to the medical facility building.

You should only tag a direct hit as **"TRUE"** if you SEE some visual confirmation that the medical facility was directly struck and damaged or otherwise directly attacked (such as on foot in a Ground Attack).

You should tag a direct hit as **"FALSE"** if you SEE some visual confirmation that the impact site for the munition or attack was somewhere other than the medical facility (such as an impact crater in the street in front of a hospital).
If there is not enough information to know where the missile(s) struck in relation to the facility structure, select “UNKNOWN.” “Unknown” is your default tag.

– You should, for example, select “Unknown” if you see a video of the explosion in the distance but no other indication of where the missile landed in relation to the hospital.
– You should also select “Unknown” if you do not have enough information to determine which structure is the medical facility.
– You should select “Unknown” if you do not see any point(s) of impact and low levels of structural damage to the medical facility building.

The researcher working on Additional Research tags will then double-check your tag for accuracy, based on Incident research. The researcher working with the offline geolocation information will geolocate the video and complete the Direct Hit Video tag if applicable (see below).

If you are unsure about your tag, explain why in the Notes cell.

Considering Direct Hit, Double Tap, and Multiple Targeted Strikes together can sometimes create confusion. Please see ANNEX for diagrams and further clarification.

Tag Options
True, False, Unknown
Double Tap

Definition
An attack tactic used to target first responders in that there are multiple, distinct strikes at strategically relevant locations and at time intervals that indicate the subsequent strikes are intended to cause harm to responding humanitarian personnel.

Purpose of the Tag
Identifying the use of an attack tactic that may illustrate perpetrator intent to target first responders.

- In the context of the Syrian conflict, Syrian Archive has observed trends indicating that the double tap method is used most pervasively with the intent of targeting first responders and humanitarian aid personnel who arrive after an initial strike to help the injured. This is not an uncommon observation among armed conflicts: “In the ‘double tap’ method, missiles strike the initial target, and then strike rescuers and medical personnel who arrive at the scene to offer assistance.”

- Broadly speaking, impacts on first responders and humanitarian personnel may not necessarily be the central or only purpose of the double tap as a military tactic, but is instead an unintended consequence. However, in an effort to hone in on the observed targeting trend in Syria, we are limiting our Double Tap definition and tagging to only those instances that most closely indicate intent to target first responders.

Assumption
Intent to target first responders can be shown using a sufficient time interval between strikes as a proxy because this intent exists even if no first responders actually arrive on the scene or first responders are wholly unaffected by the subsequent strikes.

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26 Matthew Nasuti, Hellfire Missile Accuracy Problems Uncovered in Pentagon Data, KABUL PRESS (27 Nov. 2011), http://kabulpress.org/my/spip.php?article89242 (speculating that the “double tap” strike pattern is actually less the result of strategy than it is a cover for the less-than-pinpoint-accurate technological capacity of the missiles used in most drone strikes and noting that “[d]ouble tap means that the military fires two Hellfire missiles at each target in order to ensure that at least one hits the target”).
When reading and learning our tagging definitions and methodology for Direct Hit, Double Tap, and Multiple Targeted Strikes, be sure to take a look at ANNEX for some diagrams to help clarify the key similarities and differences between these tags.

Methodology

In practice, a Double Tap in this medical facilities database will most often look like instances where the same location (either a medical facility or a structure very close to a medical facility) is struck twice in qualifying intervals or instances where a location is hit and then the nearby medical facility where casualties were taken (or were most likely to be) is attacked shortly thereafter.

- You should only tag a double tap as “TRUE” if you can affirmatively identify the tactic was used, as defined above.
- You should tag double tap as “FALSE” if you can affirmatively determine that the tactic was NOT used, as defined above.
- If it is not clear that there was a double tap or there simply isn’t enough information, you should tag “UNKNOWN.” “Unknown” is your default tag.

If you strongly suspect either TRUE or FALSE may be correct but simply do not have enough information, mark as “Unknown” and add your thoughts to the Notes cell. Very likely your tagging will come down to whether you have sufficient information on timing between strikes. For this reason, you may frequently tag “Unknown” at the preliminary stage and then flag this question in the Notes cell so that the next-stage researcher can look into flight timing and other reports to make a final tagging judgment that is based on all the available information.

To meet the above definition and to qualify as a Double Tap for our tagging purposes, the attack must include all of the following elements (please see below for expanded descriptions of each element):

- More than one strike
- Meets minimum time interval (7min.)
- Meets maximum time interval (3hrs.)
- Subsequent strikes targeted either: A) same site or B) strategically linked site(s)
- Each strike is distinct (not sustained fire)
- Small arms or light weapons not used in strike(s)
A qualifying Double Tap will have a **minimum interval of 7 minutes and a maximum interval of 3 hours** between the first strike and any subsequent strikes. This definition **excludes** drops of munitions made at the same time.

- The minimum time interval is essential to the intent aspect of this tag: it helps demonstrates that the perpetrator using this tactic allowed sufficient time for humanitarian personnel to arrive on the scene before launching subsequent strikes. If there was little-to-no time between strikes, this may instead qualify as a Multiple Targeted Strike.
- The maximum time interval helps to ensure that the multiple strikes are linked in purpose.

The multiple, distinct strikes in a Double Tap need not be targeted at the same site so long as the **site of subsequent strikes are strategically relevant to the first** insofar as they further the purpose of harming first responders and humanitarian personnel. For example, an Incident may show the Double Tap tactic if the first strike hits an apartment building and then 30 minutes later the second and third strikes hit the medical facility to which first responders evacuated injured persons and casualties.

Double Taps are not limited to two strikes but could be **multiple or many strikes** – so long as the targeting strikes are distinct, fit with the qualifying time intervals, and cannot be described as sustained fire.

The same Double Tap attack could also use **multiple or varying delivery methods and munitions**. For example, if the targeted site is first bombed from helicopter and then struck by rocket artillery at least 7 minutes later, this is a qualifying use of the Double Tap tactic.

However, attacks that include **small arms or light weapons are not Double Taps**. Delivery methods that may be used in a qualifying Double Tap strike include:

- Airstrike
- Ground-to-Ground if: Mortar, Artillery, or Rocket artillery
- Ground attack (only if): Placed explosive

Remember that use of the Double Tap tactic is **distinct from a Direct Hit**. A direct hit on a medical facility is not a requisite for the double tap tactic to have been used in the attacks included in this database. You can tag a double tap for an Incident that is not tagged as a direct hit. Please see **ANNEX** for diagrams and further clarification.

Please also be aware that this tag and its definition are **closely related to the Multiple Targeted Strikes** tag, but Double Tap most importantly differs, since both timing of ‘quick succession’ and
qualifying geographical area are needed for a ‘targeted strike site.’ Please see ANNEX for diagrams and further clarification.

Example

The following would be tagged as “Unknown” without more information on timing between the two airstrikes. While you may be able to determine from the visual evidence that two strikes occurred nearby each other in fairly quick succession, you do not yet have information here whether the minimum amount of time requirement for the interval between strikes was met. This would require additional research. Make this comment in the Notes cell.

![Locations of Impact Diagram]

Tag Options

True, False, Unknown
Established Pre-conflict

Definition
This medical facility was established prior to 2011.

Methodology
Conduct research to help identify whether the medical facility in question was established and would have been registered with the Syrian government prior to the outbreak of the conflict in 2011 but was nevertheless targeted or implicated in an attack.

This additional research may involve: searching the facility’s own website or social media information; contacting a representative of the facility directly; checking public records; or some other method.

Tag Options
True, False
First Date Damage Visible on Satellite Imagery

Definition
The date of the earliest satellite imagery available from after the attack that depicts resulting damage.

Methodology
The purpose of this tag is to help ensure that the damage observed is linked to this specific Incident. If Incident-specific damage is visible on satellite imagery, use the historical imagery function of Google Earth (or another platform) to find and note the first date after the Incident date of imagery with this visible damage.

If you responded “FALSE” to the Damage Visible tag, you should simply leave this cell blank.

Tag Options
Date format dd/mm/yyyy; will be unique for each Incident entry.
**Furthest Point of Damage**

**Definition**

The approximate distance in meters from the center point of the visible impact to the furthest point of damage visible in satellite imagery.

**Methodology**

When damage is visible in satellite imagery, use the ruler tool to measure the distance from the center point of impact to the furthest visible damage. Using the circle method of measurement in your Google Earth ruler tool will help you to find the furthest point of damage most easily. You should then exactly copy the radial measurement in meters into the relevant cell in the Incidents Sheet.

If you responded “FALSE” to the Damage Visible tag, you should simply leave this cell blank.

**Tag Options**

Number format to the first decimal place, measured in **meters**; will be unique for each Incident entry. Do **not** include unit of measurement in tag.
Location (governorate only)

Definition
The Syrian province (also called governorate) in which the attack took place.

Tag Options
Damascus, Aleppo, Rural Damascus, Homs, Hama, Lattakia, Idleb, Al-Hasakeh, Deir-ez-Zor, Tartous, Ar-Raqqam, Dar’a, As-Sweida, Quneitra

Al-Hasakeh, Aleppo, Ar-Raqq, As-Sweida, Damascus, Dar’a, Deir-ez-Zor, Hama, Homs, Idlib, Lattakia, Quneitra, Rural Damascus, Tartous

Multiple Facilities

Definition
More than one medical facility was either targeted or otherwise impacted in the same attack.

Methodology
This tag is for cases where one attack has impacted more than one medical facility such that it cannot be considered two separate attacks or Incidents. This will most often occur where the medical facilities are located near to each other.

If you identify an Incident for which more than one medical facility was struck or otherwise impacted by the same attack, you should tag as “TRUE.” If not, tag as “FALSE.” The default tag here is “FALSE.”

Tag Options
True, False
Multiple Targeted Strikes

Definition

An attack tactic used to ensure successful targeting and maximum damage to the targeted site in that there are multiple strikes on the same site in quick succession.

Purpose of the Tag

Identifying the use of a tactic that may illustrate perpetrator intent to target protected persons, objects, or sites.

- When considered in combination with the Direct Hit, Remote Location, and protected category tags (see Collections Tags below), use of the Multiple Targeted Strikes tactic might demonstrate to a greater degree of confidence that the protected person, object or site that was hit in the attack was indeed the intended target of the alleged perpetrator.
- For medical facilities, this confidence in the perpetrator’s targeting intent might be even higher depending upon whether the facility was known to parties to the conflict at the time that it was attacked (see Established Pre-Conflict and Associated Medical Organization).

Assumption

Multiple, successive strikes that hit within a certain spatial margin of error (approx. 50-meter radius) and within a certain timeframe (approx. 3 hours) can demonstrate an intent to hit and ensure significant damage to the protected persons, objects, or sites that exist within that targeted strike site.

When reading and learning our tagging definitions and methodology for Direct Hit, Double Tap, and Multiple Targeted Strikes, be sure to take a look at ANNEX for some diagrams to help clarify the key similarities and differences between these tags.
Methodology

In practice, multiple targeted strikes in this medical facilities database will most often look like instances of multiple strikes on the same location at the same time or instances of multiple strikes within a 50-meter radius in a 3-hour period. They will not look like indiscriminate shelling or bombing.

- You should only tag multiple targeted strikes as “TRUE” if you can affirmatively identify the tactic was used, as defined above.
- You should tag multiple targeted strikes as “FALSE” if you can affirmatively determine that the tactic was NOT used, as defined above.
- If it is not clear that there were multiple targeted strikes or there simply isn’t enough information, you should tag “UNKNOWN.” “Unknown” is your default tag.

If you suspect either TRUE or FALSE may be correct but simply do not have enough information, mark as “Unknown” and add your thoughts to the Notes cell. Very likely your tagging will come down to whether you have sufficient information on spatial relationship. For this reason, you may frequently tag “Unknown” at this preliminary stage and then flag this this question in the Notes cell so that the geolocation researcher can look into distances between points of impact and other reports on location and timing to make a final tagging judgment that is based on all available information.

To meet the above definition and to qualify as Multiple Targeted Strikes for our tagging purposes, the attack must include all of the following elements (please see below for expanded descriptions of each element):

- More than one strike
- All strikes within ‘targeted strike site’ (50-meter radius)
- All strikes within ‘quick succession’ timeframe (3 hours)
- Each strike is distinct (not sustained fire)
- Small arms or light weapons not used in strike(s)

Qualifying Multiple Targeted Strikes will all hit within a targeted strike site, which is defined by an approximately 50-meter radius to account for margin of error. For reference, an Olympic-size swimming pool is 50 meters long. An allegedly targeted protected person, object, or site would be within this area. Note that for a medical facility, this includes the entire facility campus, not exclusively structures or buildings.

Qualifying Multiple Targeted Strikes will also happen in quick succession, meaning the timeframe within which all strikes occur is 3 hours with no set minimum so long as the tactic could not be described as sustained fire instead of distinct, targeted strikes. For example, sustained artillery shelling on an area would not constitute multiple targeted strikes.
Multiple Targeted Strikes could include many strikes – so long as the targeting strikes are distinct, all fit with the qualifying targeted strike site as delineated by a 50-meter radius and cannot be described as sustained fire.

Multiple Targeted Strikes could use multiple or varying delivery methods and munitions. For example, if the targeted site is first bombed from helicopter and then struck by rocket artillery in quick succession, these are qualifying Multiple Targeted Strikes.

However, attacks that include small arms or light weapons are not Multiple Targeted Strikes. Delivery methods that may be used in qualifying Multiple Targeted Strikes include:
- Airstrike
- Ground-to-Ground if: Mortar, Artillery, or Rocket artillery
- Ground attack (only if): Placed explosive

Remember that use of the Multiple Targeted Strikes tactic is distinct from a Direct Hit. There need not have been a direct hit on a medical facility for multiple targeted strikes to have occurred in the attacks included in this database. You can tag multiple targeted strikes for an Incident that is not tagged as a direct hit. Please see ANNEX for diagrams and further clarification.

Please also be aware that this tag and its definition are closely related to the Double Tap tag, but Multiple Targeted Strikes importantly differs for both timing of ‘quick succession’ and qualifying geographical area for a ‘targeted strike site.’ Despite these key differences, in some instances Multiple Targeted Strikes may also include a Double Tap. Please see ANNEX for diagrams and further clarification.

Example

With the knowledge that these strikes happened within 3 hours of each other, the following shows multiple targeted strikes even though the Incident does not include a direct hit. You should tag as “TRUE” under Multiple Targeted Strikes.
Tag Options

True, False, Unknown
Name of the Medical Facility

Definition

Full name of the medical facility in both English and Arabic.

Methodology

This section to be completed by one, designated, Arabic-speaking researcher. Keep in mind the possibility that there may be multiple spellings for the same facility. A key goal for this category is to track number of attacks on each medical facility, so it’s important to have exact consistency in spelling to be able to match these up easily and confidently. Taking the following steps will help to ensure this consistency:

- Open all related links and note any alternative spellings.
- Ctrl+f search both the Observations and Incidents sheets for all possible spellings of the same facility.
- Add any alternative spellings to the Notes cell for future reviewers. If you aren’t sure if one hospital is the same as the others, note this as well.

You should also cross reference any Arabic spellings with publicly posted lists of hospitals. Not all medical facilities are included in these lists, so if the one you are searching doesn’t appear, this is fine. This is simply to help confirm spelling where possible (i.e. for those that are listed).

Tag Options

Will be unique to each medical facility.
Proximity to Frontline

Definition
Distance in kilometers from the nearest frontline.

Methodology
Looking to your area of control work, the division lines where area of control changes from one faction of the conflict to another is the frontline. For this tag, identify the coordinates for the point of the frontline that is nearest to the medical facility. You should then map both the frontline coordinates and the medical facility coordinates in Google Earth and – using the ruler tool – determine the distance between these two points in kilometers.

It doesn’t matter which parties to the conflict are implicated in the nearest frontline. The purpose of this tag is simply to establish whether the medical facility could possibly be considered near to the available historical record for point of active fighting or in the line of fire.

If you are having difficulty determining which point of the frontline is nearest to the medical facility, you can map all potential frontline points and then use the circle measurement in your Google Earth ruler tool to easily determine and measure which is closest in proximity.

If you are unable to find Area of Control information for your Incident or the Coordinates to your medical facility, simply leave this tag blank. **Without more information, your default action should be leaving the tag unanswered.**

Tag Options
Number format to the first decimal place, measured in kilometers; will be unique for each Incident entry. Do not include unit of measurement in tag.
Remote Location

Definition
The medical facility is situated distinctly separate from the main centers of population; it is not near to or surrounded by many other, unrelated (non-medical) structures.

Methodology
Based on the Observations, descriptions, and coordinates in Google Maps (as these are available), determine whether this facility is remotely located, meaning not in close proximity to other buildings or potential targets. Usually, remote medical facilities are located outside of town—well away from other buildings—and are easily identifiable as such. If you think a facility might be remote but are unsure, tag with your best judgment and describe your thought process in Notes for reviewers. If there simply isn’t enough information available to determine an answer, tag “Unknown.”

Tag Options
True, False, Unknown
Satellite Imagery Source

Definition
The source platform of the satellite images for the first date damage visible was identified.

Methodology
The purpose of this tag is to help track the source material for visible damage. If damage is visible on satellite imagery, add in this column the name of the satellite imagery platform used for that tag. For example, this might be Google Earth, TerraServer, or another platform you have searched.

If you responded “FALSE” to the Damage Visible tag, you should simply leave this cell blank.

Tag Options
Will be unique for each Incident entry.
Time of Day

Definition
The time of the attack.

Methodology
You should only tag time of day as "DAY" if you see or confirm through research that the strike itself or its immediate aftermath (keeping in mind the reasonable suspicion standard) happened in the daytime.

You should only tag time of day as "NIGHT" if you see or confirm through research that the strike itself or its immediate aftermath (keeping in mind the reasonable suspicion standard) happened in the nighttime.

If it is not clear what time of day the strike happened or there simply isn’t enough information you should tag "UNKNOWN." "Unknown" is your default tag. For example, if you only see the inside of a building or the aftermath of a strike that is not clearly immediate aftermath, you should tag “Unknown.”

You should also evaluate how Time of Day interacts with Weapons Used and Alleged Perpetrator. Only Russian Forces are known to attack by airstrike at night, for example.

Tag Options
Day, Night, Unknown
Weapons Used

Definition
The type of missile or munition (e.g. chlorine gas cylinder) and the delivery method (e.g. air strike & helicopter).

Methodology
If type of weapon is unknown, select “Unknown Munition.” If method of delivery is unknown, select “Unknown Delivery Method.” If both are unknown, be sure to tag with both unknowns.

If there are multiple types of weapons associated with the Incident, add as many tags as necessary.

If the video shows distinctive characteristics from the aftermath of a known type of chemical weapon (such as symptoms among casualties or specific patterns of destruction, but doesn’t necessarily show the weapon itself) or if a doctor testifies that the patients in a video are being treated for symptoms of exposure to a specific chemical, you should also add this tag and note these characteristics in the Notes cell. Possible, easily observable aftereffects that indicate specific weapons types or delivery methods to a relatively high level of certainty—and which should be further corroborated and confirmed by additional research before being tagged—include:

- Foam at the mouth with suffocation (coughing) → Chemical Weapons
- Many dead animals → Chemical Weapons
- Blistering burns → Chemical Weapons (likely Mustard Gas, see image examples in the Chemical Weapons database for visual comparisons)
- Small, pinpoint pupils and a cough from chest tightness → Chemical Weapons (likely Sarin, see examples in the Chemical Weapons database for visual comparisons)

If the videos show a type of weapon but you are unable to determine what it is based purely on visual cues, explain this in the Notes cell and be sure to add the video v-value and appropriate timestamp information.

Please note that “Ground-to-Ground” is different from “Ground attack.” “Ground-to-Ground” implies firing of some weaponry at a distance, such as a mortar. “Ground attack” would involve boots on the ground and small arms, light weapons, or placed explosives.

You should also evaluate how Type of Munition interacts with and may corroborate information on Alleged Perpetrator and Delivery Method, especially in the Syrian context. Please see the following
list for some potentially helpful indicators, which should be further corroborated and confirmed by additional research before being tagged.

- Barrel bombs → helicopter (possibly Mi8, but only tag if you have information that confirms this level of specificity) → Syrian Forces
- Chlorine gas cylinder → helicopter → Syrian Forces
- Sarin → Airplane
- Mortar → Ground-to-Ground
- Artillery → Ground-to-Ground
- (BM-21 Grad = Rocket Artillery) → Ground-to-Ground
- Cluster Munitions → Airstrike
- Car Bomb → Ground Attack
- Placed Explosive → Ground Attack
- Tank → Ground-to-Ground
- Cluster Munition → Airplane
- Small arms ammunition → Ground Attack
- Thermobaric Weapon → Airplane

Examples

- If the video shows a chlorine gas cylinder delivered by helicopter, you would tag all of the following: Air Strike, Helicopter, Chemical Weapons, Chlorine Gas Cylinder. If you are unable to determine any information on weapon or delivery method, you should tag all of the following: Unknown Delivery Method, Unknown Munition. If you’re unable to determine specific munition or delivery method but also see close ups of shrapnel (shown by filmer), you should add a third tag for “Unknown shrapnel.”
- If you see what looks like bullet casings, you should tag all of the following: Ground attack, Small arms, Small arms ammunition. If an expert is able to then identify the specific type of bullet, we would also add this to the list as a ‘specific type of munition’ and tag.
- If the video shows BM-21 Grad without any information on specific ammunition, you would tag all of the following: Ground-to-Ground, Rocket Artillery, BM-21 Grad, Unknown Munition.
Tag Options

Delivery method categories: Air Strike, Ground-to-Ground, Ground attack

Specific types of delivery method: Helicopter, Mi-8, MiG, Sukhoi, Mortar, Rocket Launcher, Artillery, Rocket Artillery, Drone, Tank, Small arms, BM-21 Grad

Munition categories: Chemical Weapons, Incendiary Weapons, Barrel Bomb, Bunker-buster bomb, Thermobaric weapon, Cluster Munition, Car Bomb, Small arms ammunition

Types of munition: Chlorine Gas Cylinder, Mustard Gas, Sarin, ZAB-2.5S, ShOAB-0.5, AO-2.5RT/RTM, SPBE, ZAB-2.5SM, PTAB-1M, RBK-500, 9M79M Tochka, FAB-500 SHN, OFAB 250-270, IRAM – 107mm rockets, Unknown shrapnel

Unknown Delivery Method, Unknown Munition
ANNEX: Diagrams for Direct Hit, Double Tap, and Multiple Targeted Strikes

The following diagrams are provided to illustrate differences in definition among the Direct Hit, Double Tap, and Multiple Targeted Strikes tags.
Targeting Health: Attacks Against Medical Facilities in Syria (SYRIAN ARCHIVE)