



PROTECTING MEDICAL CARE IN CONFLICT: A SOLVABLE PROBLEM

Hospitals and medical care workers have suffered an alarming number of tragic attacks over the past few years. These attacks strike at a core imperative of international humanitarian law: the protection of health care in armed conflict. Reflecting the global concern about such attacks, the UN Security Council universally approved United Nations Security Council Resolution 2286 (UNSCR 2286), Healthcare in Armed Conflict, which calls for steps States should take to better protect health care.¹ The first step is compliance with international humanitarian law (IHL). IHL is clear about the protected status of medical facilities, the wounded and sick, and medical transports in armed conflict. Some cases of attacks on medical facilities appear to be either deliberate or reckless, which can amount to war crimes. For example, dozens of airstrikes on medical facilities in Syria by the Syrian regime and by Russia appear to be in this category.² This raises a question that has yet to be solved: How do we confront regimes that repeatedly engage in this unlawful practice?

But recent operations show that these tragic attacks can also happen with the US and other countries committed to compliance with IHL, seen, for example, in multiple airstrikes on medical facilities by the Saudi-led coalition in Yemen as well as a U.S. strike on a Médecins Sans Frontières (MSF) hospital in Afghanistan. Hence, another recommendation of UNSCR 2286 is for States to develop effective measures to promote the protection of medical facilities and services and to share challenges and good practices. Despite universal agreement that these attacks are tragic and should be avoided, this 2016 UNSCR recommendation for additional practical steps has thus far gone unheeded, as have the Secretary General's recommendations in response to UNSCR 2286.³ The international community can and needs to do a better job at protecting health care in conflict. This is a problem with an available solution.

CNA analysis of military operations over the past two decades (including in Iraq, Afghanistan, and Syria, as well as with the Saudi-led coalition and their Joint Incident Assessment Team regarding operations in Yemen) has identified practical steps for military forces to reduce risks to civilians generally. The basic idea behind the approach is this: If we better understand the root causes of these tragic events through analysis of actual incidents, we can come up with more effective ways to avoid them. With that goal, CNA has examined over 1,000 real-world incidents where civilians were harmed in conflict. This data-based approach is proven: When we worked with General McChrystal in Afghanistan, we analyzed incidents and identified common patterns of harm. When US and international forces took on preventative measures to address those patterns, the civilian casualty numbers went down.

We can take this same approach to the protection of medical care. From studies of past attacks on civilian objects, including medical facilities, our analysis identifies practical ways that militaries can better protect medical facilities in particular from inadvertent attacks. We also discuss other considerations for militaries to avoid disruption of medical care in conflict. This work can serve as a foundation for States and the international community to take concrete action.⁴

¹ UN Security Council Resolution 2286, May 3, 2016 <<http://unscr.com/en/resolutions/2286>>.

² Christiaan Triebert, Evan Hill, Malachy Browne, Whitney Hurst and Dmitriy Khavin, How Times Reporters Proved Russia Bombed Syrian Hospitals, New York Times, October 13 2019.

³ UN Secretary General, Recommendations of the UN SG, submitted pursuant to para 13 of SC resolution 2286 (2016), on measures to prevent acts of violence, attacks and threats against the wounded and sick, medical personnel and humanitarian personnel, letter to the President of the Security Council, S/2016/722, August 18 2016 <<https://reliefweb.int/report/world/recommendations-un-sg-submitted-pursuant-para-13-sc-resolution-2286-2016-measures>>.

⁴ We note that this approach is consistent with two of the Secretary General's recommendations: adopting, reviewing, revising and implementing operational precautionary measures; and contributing to regular data collection, analysis and reporting on

PRACTICAL MEASURES FOR AVOIDING ACCIDENTAL ATTACKS

Over the past few decades, the U.S. military has developed formal processes for better estimating civilian casualties and avoiding strikes on protected entities such as medical facilities. Such practices have also been shared with allies, such as the counter-ISIS coalition in Iraq and Syria, international forces operating in Afghanistan, and the Saudi-led coalition in Yemen. These processes are important developments that enable better informed decisions regarding the use of force. Yet recent attacks on medical facilities in these conflicts, with those processes in place, suggest room for improvement.

Based on our previous examinations of real-world operations, we have identified existing gaps and opportunities for improved protection. From analysis of historical cases of attacks on medical facilities, we discuss practical measures militaries can pursue to better avoid accidental attacks on medical facilities: improving deconfliction measures; finding additional options for identification of medical facilities; and taking a comprehensive, life-cycle approach to protecting civilians in conflict. We also discuss the need for continuing to address the broader challenge of developing awareness of the location of medical facilities in conflict.

IMPROVING DECONFLICTION PROCESSES

Medical facilities are afforded legally protected status under IHL. As such, they are generally included in a No Strike List (NSL), defined as “a list of objects or entities characterized as protected from the effects of military operations under international law and/or rules of engagement.”⁵ Active deconfliction of targeting decisions using this list is a vital part of the responsible use of force. Although host governments or non-governmental organizations can play a role in alerting militaries of protected sites, it is ultimately the responsibility of militaries to determine what is and what is not a lawful target. From a legal perspective, protected entities on the NSL can, under certain circumstances, become lawful military targets. Even then, they are still subject to the IHL principle of proportionality, where the military advantage must outweigh the expected harm to civilians.⁶ Additionally, militaries would need to take all feasible precautions to minimize harm in the case of a hospital that has lost its protection, such as giving advance warning.⁷

These targets carry strategic considerations as well. The legal question answers, “Can I shoot?” Targeting decisions should also carry a policy component that aims to answer, “Should I shoot?” The latter question is critical as the benefit of engaging a particular target may not be as significant as the potential negative second-order effects of that engagement. Single tactical actions can have strategic consequences for states using force, including a tarnished reputation and reduced international support. There are also humanitarian considerations: Is this the only hospital in the area? Or is it a facility that provides critical kinds of care not available otherwise? These are all points to be weighed, with consideration of legal responsibilities and tactical alternatives, but they depend on an effective deconfliction process.

Real world cases show that this process is not always effective. For example, the deconfliction process did not stop the US strike on the MSF hospital in the 2015 Kunduz incident, nor in numerous Saudi-led coalition airstrikes on hospitals in Yemen. Military forces can help protect medical facilities by improving deconfliction processes so that the protected

incidents.

⁵ Department of Defense, DOD Dictionary of Military and Associated Terms, July 2019.

⁶ We note that per IHL, wounded combatants are also entitled to protection. For simplicity, in this paper we specifically address the topics of civilian casualties and the protection of hospitals, but the protection of wounded combatants is another key consideration in a decision to attack.

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status is fully understood by all elements in the approval process for deciding to use force. So, what more can be done? When a proposed military target is found to be on the NSL or is found to be in proximity to an entity on the NSL, there are a number of best practices that can guide targeting decisions and guard against inadvertently attacking these entities. These include:

- Provide effective advance warning. Advance warning is required by law when feasible. Such warning can include evidence of military use of protected sites, including photographs or video when available, and call for enemy force use of that site to be discontinued or to allow evacuations before the facility is attacked. Advance warning can also include expressing concern about following international law and promoting humanitarian needs of civilians, calling for opposing combatants to do the same.⁸
 - Where are the warnings? Per IHL, advance warnings are to be used “unless circumstances do not permit,” but warnings are often not used in practice because they are judged by militaries to not be feasible.⁹ Analysis shows that the lack of warnings, or ineffective forms of warning, increases risk to civilians who may be misidentified as valid military targets. Militaries can take steps to make warnings feasible more often. For example, deliberate experimentation with warning approaches and development of new technology for warning methods can help give options for delivering advance warnings in more scenarios, reducing risk to civilian objects such as hospitals and to patients and medical staff by being given the chance to evacuate.
- Show tactical patience. Instead of engaging enemy forces in proximity to protected sites, wait until they move to another location that is free of collateral concerns.
- Consider tactical alternatives. Instead of an airstrike, are there ground forces that could investigate the military target and use lethal force? Ground forces allow consideration of alternate weapons (e.g., sniper); also, ground forces can sometimes better determine if there are noncombatants along with combatants. Though self-defense considerations for ground forces are a factor, if the target is critical to the campaign, history shows that a ground operation can result in fewer civilian casualties.
- Coordinate. Two-way communication is important. This includes:
 - Proactively communicate with others. For local medical facilities, as well as those operated by NGOs and international organizations (IOs), contact them proactively if they are in the area being targeted and make sure their activity has not been mistaken for that of enemy combatants.
 - Maintain an effective coordination process with medical organizations. Medical organizations operating in an area of armed conflict have concerns about being inadvertently targeted or incidentally harmed, and even highly sophisticated militaries do not have perfect knowledge of all aspects of the operating environment, thus a timely sharing of information is critical to both. Notably, some organizations state they attempted to communicate with combatants but could not reach anyone to discuss their status or make an appeal about losing their protected status. Militaries should establish an effective coordination process, with clear processes for organizations to follow, that can help ensure military actions are based on the best available information.
 - Provide a coalition hotline as a best practice to handle such coordination effectively. It should be manned 24 hours a day by military personnel connected to the operational chain of command and empowered to rapidly validate information and intervene in targeting decisions as needed.

⁸ Ibid.

⁹ Ibid.

These options can be more challenging to exercise both in situations of self-defense and for dynamic and time-sensitive targets. However, such measures can be even more critical for those targets as short timelines can reduce situational awareness of the actual conditions on the ground. In Yemen, the majority of attacks affecting health care were situations using dynamic targeting. The U.S. strike on an MSF hospital in 2015 was also an example of dynamic targeting. Notably, that incident shared many characteristics with other civilian casualty incidents resulting from dynamic targeting, where engagements were conducted without extended planning and intelligence preparation of the battlefield. Compressed timelines can also reduce the time for recognizing the possibility of unintended negative strategic effects. One solution to this is rapid coordination regarding these time-sensitive targets by using predetermined battle drills, with pre-established procedures, tools, and points of contact for coordination and warning. Tactical alternatives should also be carefully considered, weighing several different courses of action and their impacts on both the military objective and the larger humanitarian situation.

Collectively, these steps can help inform critical policy decisions when militaries are considering attacks on entities that are afforded protected status. Properly managed, this process can help avoid humanitarian impacts while also managing negative strategic effects, promoting international support, and exposing unlawful opposition tactics.

Seeking additional options for identification of medical facilities

It can be difficult for tactical forces to identify medical facilities. In areas of armed conflict, they are not always in easily distinguished structures such as established hospitals. And while IHL is clear about the protected status of medical facilities, the only practical identification measure it provides is the original Geneva Conventions of 1949 statement that medical facilities may display a red cross or red crescent emblem to show they are protected.¹⁰ Unfortunately, advancing technological developments in sensors and networking can make this measure less effective. For example, a colored marking will not necessarily be a discriminating feature for a pilot conducting an air strike using an infrared sensor, a type of sensor used by many modern militaries. Meanwhile, the increased military use of networks and distributed targeting decisions stresses the importance of information being at multiple locations and echelons. It is not enough, nor should we settle for, information being at the higher headquarters. This information can often be shared to tactical forces to inform and improve their decision making. The frequent strikes on medical facilities in the last few years suggest that additional practical measures for improving awareness regarding medical facility locations would be useful.

So, what could be done? We provide a few examples. Reflecting the increasing use of data links and systems for situational awareness, militaries could make it a requirement that systems display and exchange information regarding protected entities such as hospitals (e.g., having such information in an aircraft cockpit or exchanging No Strike List information over secure, digital datalinks). Such capabilities are already in use by many militaries for the protection of friendly forces and the exchange of threat information. However, such investments have generally not included the requirement to identify and help protect civilian entities such as hospitals.

Another possibility: While many worry about military applications of Artificial Intelligence, CNA has documented ways to use AI for good in war. Better identifying and protecting medical care is one such opportunity. For example, militaries could use AI to improve the identification of hospitals using machine learning techniques. There is a lot of room for creativity if the will exists to do something.

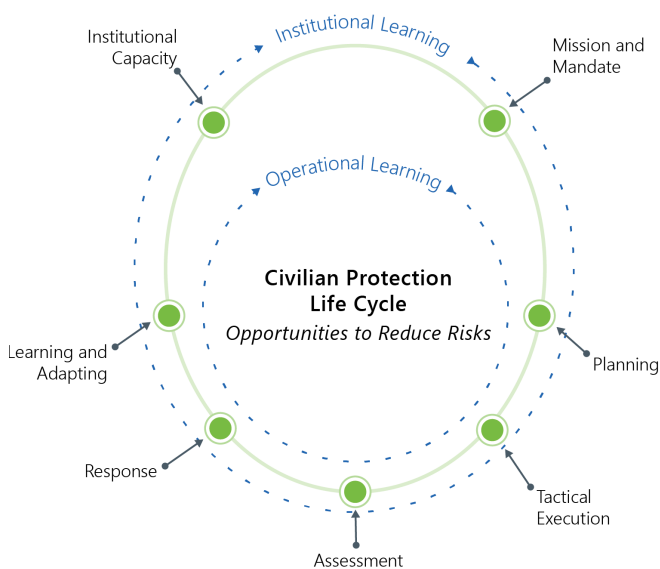
¹⁰ The ICRC has commented on these markings: "failure to wear or display the distinctive emblems does not of itself justify an attack on medical or religious personnel and objects when they are recognized as such. This is an application of the general principle that the distinctive emblems are intended to facilitate identification and do not, of themselves, confer protected status. In other words, medical and religious personnel and objects are protected because of their function. The display of the emblems is merely the visible manifestation of that function but does not confer protection as such." https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule30

These are new military capabilities, which take time to develop, so are there triage-type measures that can decrease risk in the meantime? The problem with infrared sensors not showing colored symbols was also a factor in friendly fire incidents involving US forces. An easy, cheap solution was to field identification panels compatible with multiple kinds of military sensors. As militaries take time to develop and field new capabilities to better identify hospitals, perhaps in the short term they could distribute such measures to humanitarian groups – not as a requirement to avoid attacks, but as a part of a larger safety net to aid their protection efforts. And perhaps the international community needs a discussion about the adequacy of the red symbol, agreed to in the original 1949 Geneva Conventions, in light of how military technology has changed in the last 70 years. Something better may be found.

Taking a comprehensive, life-cycle approach to protecting civilians

Another way to help improve the protection of medical and other protected facilities is to follow best practices for reducing risk to civilians overall. Risks to civilians are best reduced through a comprehensive approach we refer to as a civilian harm mitigation “life cycle.” This life cycle reflects care in civilian protection being taken at all points in the planning and use of military force and includes learning loops so that militaries can adapt and improve to overcome challenges. This life cycle is illustrated below:

The life cycle consists of:



- **Mission and Mandate.** Designing and gaining needed capabilities and authorities to conduct operations that consider the protection of civilians from the beginning.
- **Planning.** At strategic down to tactical levels, conducting planning that factors in risks to civilians and includes guidance, feasible steps, and alternatives to help mitigate them.
- **Tactical Execution.** Performing targeting processes that promote accurate identification and delivery of lethal effects while seeking ways to minimize civilian harm and reverberating effects.
- **Assessment.** Considering all available information to determine the best estimate of civilian harm caused by the use of force. Also identifying trends and patterns of harm.

- **Response.** Working to mitigate the tragic consequences of civilian harm to affected individuals and populations, in ways including the provision of urgent medical care, making amends to victims, and acknowledgment and apology.
- **Learning and Adapting.** Using assessments, including patterns of harm and trend data, to identify operational refinements to better protect civilians. These assessments also identify institutional requirements that can help address observed challenges.
- **Institutional Capacity.** Addressing observed challenges and requirements across the military and government institution (e.g., doctrine, training, material solutions, policy, legislation) in order to strengthen the ability to protect civilians over time.

This life cycle includes two learning loops: operational learning, where assessments of causes and trends directly informs the improvement of operational practices and policies within the context of an ongoing operation, and institutional learning, where assessments of challenges and requirements inform needed changes to military capabilities, including doctrine, policy, organization, training, and leadership, together with equipment and facilities. By committing to these general best practices and seeking a comprehensive approach to civilian protection, the aggregate risk to medical facilities will decrease.

Developing a comprehensive No Strike List

In historical cases of attacks on medical facilities in Yemen and Afghanistan considered here, the medical facilities were on the relevant No Strike List, and thus known within the military system to be a protected site. Unfortunately, that available information did not inform the decision to use lethal force. Even so, there is no guarantee that militaries will have perfect information regarding protected sites. As militaries revisit other aspects of better protecting medical facilities described above, this process of developing and adjudicating a No Strike List should also be examined to make it as comprehensive as possible. For example, are there ways to more effectively or rapidly gather candidates for a No Strike List? Are there ways to automatically update the status or the location (for the case of a mobile clinic, for example)? Are there ways to better gather information from a broader set of sources? Many States have fewer resources than the U.S. and lack appropriate processes and doctrine for developing a No Strike List, so how can processes and policies be put in place so they can create and use one that is as comprehensive as possible?

One of the lessons from the 2018 Joint Staff CIVCAS study was that military information was not perfect, and including external sources improved the accuracy of civilian casualty estimates. In the case of No Strike Lists, a clear and standardized process for receiving and validating information from IOs and NGOs to include and adjudicate possible candidates could improve protection of medical facilities.

UNDERSTANDING IHL OBLIGATIONS OF COMBATANTS REGARDING MEDICAL CARE

In addition to avoiding attacks on medical facilities, militaries should consider other factors to avoid disruption of medical care in conflict. In some cases combatants do not appear to understand their obligations in IHL regarding wounded or sick combatants or are unaware of how their activities or presence can endanger or disrupt the provision of medical care. We discuss two such cases in the context of recent U.S. operations.

Interference with provision of medical services

Military forces sometimes interfere with timely provision of medical services to combatants, in contradiction to IHL obligations. This topic is consistent with ICRC's origins, which stemmed from Henry Dunant's observations of inadequate medical care during conflict in Solferino, Italy, where combatants on both sides were left on the battlefield suffering from untreated wounds. Dunant organized an effort to treat the wounded, emphasizing that medical care should not be withheld from enemy wounded since "tutti fratelli" (all are brothers). Following this, the organization that became the ICRC was first known as the "International Committee for Relief to the Wounded," established in 1863, with an initial focus on ensuring that combatants receive adequate medical care during armed conflict, without distinction to their affiliation.

This is still a challenge in war today. For example, in Afghanistan, ICRC operated the War Wounded Assistance Program, providing medical evacuations for wounded Afghans – including combatants – and described by some U.S. forces as "Taliban Taxis." U.S. forces sometimes stopped these vehicles and detained wounded fighters. Although the

detentions were lawful, the wounded were not consistently given immediate medical care. Part of this may have been a training issue: While participating taxi drivers had identification issued by ICRC, that identification and the overall program may not have been recognized by U.S. forces. Per IHL, U.S. forces had the right to detain wounded fighters but also had the responsibility to provide or facilitate needed medical care as appropriate. Despite ISAF leadership efforts, U.S. forces continued to interfere with these medical services for several years, reinforcing the need for educating tactical security forces regarding their responsibilities for treating wounded combatants. We note that this challenge is by no means limited to the U.S., as ICRC also observed interference in emergency medical evacuations as a common issue.¹¹ As in the discussion above about using technology to augment the identification of medical facilities, it is not hard to imagine how technology could improve situational awareness and communications to facilitate safe passage for medical evacuations, or alternately to facilitate time-sensitive transfers of patients to U.S. medical care in the context of detention.

Co-location of military forces with medical facilities

There have also been a few cases where U.S. forces collocated themselves with medical facilities, either to protect them from enemy attacks or to provide medical supplies and/or services. This approach has both legal and practical effects. Starting with legal considerations, being collocated with a medical facility can make that medical facility a valid military target or increase the risk of incidental harm to it, a concern since parties to the conflict are supposed to protect civilian objects from dangers resulting from military operations, to the maximum extent feasible.¹² On the other hand, that same responsibility suggests there can be value in militaries working to protect the population, including humanitarian structures, against armed groups that have no scruples about attacking civilians and civilian targets. In decisions regarding where forces are stationed, legal responsibilities for protection, including risks introduced by force presence as well as opportunities for protecting endangered medical facilities, should be deliberately considered.

On the practical side, military collocation can negatively affect the ability to provide medical care. For example, in Afghanistan, local populations indicated they were less willing to go to medical facilities where there were foreign troops. Patients and local medical staff also felt endangered by the presence of armed military forces, which can include military doctors who are armed and in uniform. This shows that militaries need to carefully balance protection of these humanitarian sites – which is sometimes necessary – with the possible negative effects of their presence.

These instances also show a difference in perception. Interviewed U.S. forces believed their intervention was welcomed because they were providing security and medical supplies. But the local population felt differently. It may be that intimidation from armed military personnel prevented locals from being forthright with U.S. forces about their perceptions and the overall effects of military medical interventions. But in general, a community's perception of U.S. forces can influence the effectiveness of local efforts. When militaries interact with medical facilities, they should take steps to understand the effects of their presence on the community and the safety and integrity of medical services, managing their interactions and stationing accordingly.

¹¹ ICRC, Promoting Military Operational Practice That Ensures Safe Access to and Delivery of Health Care, September 2015 <<http://healthcareindanger.org/wp-content/uploads/2015/09/icrc-002-4208-promoting-military-op-practice-ensures-safe-access-health-care.pdf>>.

¹² Article 58, Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), 8 June 1977.

CONCLUSION

Medical care in conflict needs and deserves protection. Attacks on medical facilities in armed conflicts cause immediate victims, damage or destroy invaluable medical facilities, and harm the civilian population in longer-lasting ways by depriving them of vital medical services, exacerbating the humanitarian conditions on the ground. These attacks can disproportionately harm women and children, with higher fatality rates for that portion of the population seen in attacks on structures. How can this situation be remedied?

Some of this involves improving compliance with IHL through better training, education, and doctrinal development. But as we discuss here, much more can be done through practical measures that States can take, often in cooperation with the UN and humanitarian organizations. Starting with identifying specific ways that militaries can do better – which we have illustrated here, based on real-world observations – this requires that countries make such practical steps a priority. The goal should be to develop capabilities and refine processes and policies to better protect medical care where it is most critical: in the heart of conflict.

The US has already demonstrated global leadership in its commitment to international law, and again in its concrete steps to better protect civilians in conflict over the last decade. This effort is another opportunity for the US to show leadership, by promoting practical steps to better protect medical facilities, as called for in UNSCR 2286; by including applicable training in its many security assistance programs; and by integrating medical care protection capabilities into its sales and transfers of military equipment.

This tragic problem is a solvable one. The law regarding conflict has evolved since the first steps were taken to safeguard medical care after Solferino; to take the next steps forward, military practice must evolve as well.

ABOUT CNA

CNA is a nonprofit research and analysis organization dedicated to the safety and security of the nation. It operates the Institute for Public Research — which serves civilian government agencies — and the Center for Naval Analyses, the Department of the Navy's federally funded research and development center (FFRDC). CNA is dedicated to developing actionable solutions to complex problems of national importance. With nearly 700 scientists, analysts and professional staff, CNA takes a real-world approach to gathering data, working side-by-side with operators and decision-makers around the world. CNA's research portfolio includes global security and great power competition, homeland security, emergency management, criminal justice, public health, data management, systems analysis, naval operations and fleet and operational readiness.

For more information please contact:

Dr. Larry Lewis,
Research Director
703-725-3633
Lewisl@cna.org

Ms. Cheryl B. Rosenblum,
Sr. Dir. Strategic Development
703-824-2526
rosenblc@cna.org