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## Anatomy of a Crisis A Map of Attacks on Health Care in Syria

Findings as of December 2017

### Attacks on Medical Facilities

- 492 attacks on 330 separate facilities between March 2011 and the end of December 2017.
- 446 attacks were committed by Syrian government and allied forces (312 by Syrian government forces, 16 by Russian forces, 118 by either Russian or Syrian government forces), 30 by non-state armed groups (20 by opposition forces, eight by IS forces, and two by IS and opposition forces together), one by international coalition forces, 15 by unknown forces.
- Indiscriminate barrel bombs, which were banned under UN Resolution 2139, were used on at least 83 occasions to attack hospitals.
- In November 2017, PHR documented four attacks on medical facilities: two in Eastern Ghouta, one in Hama and one in Aleppo. In all cases, the facilities were hit by airstrikes conducted by Russian or Syrian government forces.
- In December 2017, PHR documented three attacks: two in Hama and one in Aleppo. In all cases, the facilities were hit by airstrikes conducted by Russian or Syrian government forces.

### Attacks on Medical Personnel

- 847 medical personnel were killed between March 2011 and the end of December 2017.
- 767 of the killings were committed by Syrian government and allied forces (686 by Syrian government forces, one by Russian forces, and 80 by either Russian or Syrian government forces), 48 by non-state armed groups (28 by IS, 20 by opposition groups), seven by international coalition forces, three by Kurdish forces, and 22 by unknown forces.
- 57 percent of deaths were caused by shelling and bombing, 21 percent by shooting, 12 percent by torture, and 7 percent by execution.
- In November 2017, PHR documented the deaths of two medical personnel: a laboratory technician in Aleppo and a doctor in Deir Ezzor. Both were killed by airstrikes conducted by Syrian government or Russian forces.
- In December 2017, PHR documented the deaths of four medical personnel:
  - A nurse and medic were killed by airstrikes conducted by Syrian government forces in Eastern Ghouta.
  - A medic was killed by an artillery shell fired by Syrian government forces in Homs.
  - A veterinarian was detained and tortured to death by Syrian government forces in Deir Ezzor.

## Analysis

PHR has mapped 489 attacks against 330 separate medical facilities in Syria since March 22, 2011. Each incident entry represents a single discrete attack upon a medical facility. Of the 489 attacks, PHR has documented that 446 attacks – 91 percent – were conducted by the Syrian government and allied forces (312 by Syrian government forces, 16 by Russian forces, 118 by either Russian or Syrian government forces); 30 attacks were carried out by non-state armed groups (eight by the self-declared Islamic State [IS; also known as ISIS and ISIL], three by the Free Syrian Army [FSA], two by IS working with Jabhat al Nusra, two by the Syrian Islamic Liberation Front, two by Jaish al Islam, one by the Afnar al Sham Islamic Union, and 12 by unidentified anti-government forces); one by international coalition forces; and PHR was unable to attribute responsibility in 15 cases. PHR documented 18 attacks in July 2016 - the highest number of attacks in any month throughout the conflict. The second greatest number of attacks occurred in October 2015 and August 2016, with 16 attacks. 2015 is the worst year throughout the conflict for attacks on medical facilities, with 122 attacks documented. The second worst year was 2016 with 108 attacks.

The majority of attacks on medical facilities were targeted attacks, meaning that these locations were deliberately chosen for destruction, in violation of international humanitarian law (IHL). On 280 occasions, weapons that can be used discriminately to target a specific location – such as mortars, missiles, rockets, car bombs, guns, and arson – were used to attack hospitals. Seventy-nine hospitals were hit multiple times, including Dar al-Shifa Hospital and Azaz National Hospital in Aleppo and Kafr Zita Specialty Hospital in Hama, which were repeatedly targeted until they were completely destroyed or forced to close. At least 59 of the different medical facilities that were attacked are located in isolated or sparsely populated areas, far from any other buildings, providing additional evidence of the intentional nature of these attacks. On one occasion, the Syrian government announced on the news that they had targeted a field hospital and killed a number of “terrorists,” including a physician.<sup>1</sup>

One hundred other attacks on 45 separate facilities were made in densely populated areas without taking the necessary precautions to protect and respect medical facilities, personnel, patients, or civilian life, as IHL mandates. At least 57 hospitals were destroyed or damaged by government forces in 84 separate attacks when indiscriminate weapons – such as barrel<sup>2</sup> and cluster bombs<sup>3</sup> dropped from planes or helicopters – were used in civilian areas, in violation of the principle of distinction.<sup>4</sup>

Indiscriminate weapons typically cannot be aimed at specific targets and therefore do not distinguish between civilian or military targets. On at least three occasions where hospitals were attacked, schools, bakeries, and mosques were also destroyed in the immediate vicinity. The Syrian military is the sole user of barrel bombs in the conflict. PHR has no evidence that any effort was made to protect hospitals or medical facilities, and no advance warning of attacks was given to patients and medical personnel inside the hospitals, as IHL requires.

The Syrian government’s attack on the country’s health system has been as focused upon medical personnel as on facilities, supporting the argument that this tactic represents a widespread and systematic governmental policy. Since March 2011, at least 847 civilian medical personnel have reportedly been killed. Medical personnel killed while providing care have predominantly lost their lives during attacks upon medical facilities or while providing first aid in the field. For example, on February 15, 2016, either Syrian government or Russian forces launched airstrikes on an MSF-supported medical facility in Hamadiya, a small town south of Maarat al Numan in Idlib governorate. These airstrikes killed eight medical staff. Shortly after that attack, warplanes struck a hospital supported by the Syrian American Medical Society (SAMS) about three miles north - where casualties from the attack on the MSF-supported facility were taken. This attack killed a nurse.

Medical personnel have also been arrested, disappeared, imprisoned, tortured, or executed. In one case, Hasan Ahmad Azhari Mawalid, a fifth-year pharmacy student, died in his second month of detention on May 17, 2012. His family was only notified of his death a month later on June 11, 2012.<sup>6</sup> Medical personnel are often arrested and sentenced to years in prison for carrying out their professional and ethical duties – equipping hospitals, treating patients, and conducting first-aid training in besieged areas.<sup>7</sup> These arrested medical personnel have been tried in military field courts, secret courts that do not announce a ruling or allow defendants to have an attorney.<sup>8</sup> It is a violation of international norms to try civilians in military courts. In addition, in most cases, many due process and fair trial protections are violated in these cases.

Among doctors, nurses, medics, pharmacists, ambulance workers, veterinarians, dentists, laboratory technicians, dentistry students, medical students, pharmacy students, and veterinary students, the highest percentage killed were doctors (31 percent), followed by nurses (23 percent) and medics (19 percent). Fifty-seven percent of medical workers were killed by shelling and bombing and 21 percent by shooting. At least 167 health professionals have been executed or tortured to death by government forces since the start of the conflict. Rif Dimashq Governorate has been most affected, with 157 reported medical personnel deaths. Between 2012 and 2014, the total number of medical personnel killed each year has varied little, with 190, 180, and 177 deaths in 2012, 2013, 2014 respectively. In 2015 and 2016, PHR documented 107 and 91 deaths respectively, a significant decrease from previous years. This change may be due to a decrease in the overall number of medical personnel remaining in Syria and development of techniques to better protect medical personnel during attacks.

PHR has found that government forces are overwhelmingly responsible for the deaths of medical personnel. Of the 847 deaths recorded, 767 - 90 percent - were committed by Syrian government and allied forces (688 by Syrian government forces, one by Russian forces, and 80 by either Russian or Syrian government forces), 48 by non-state armed groups (28 by IS, 20 by opposition groups), seven by international coalition forces, three by Kurdish forces, and 22 by unidentified forces. Despite the disproportionate number of violations committed by government forces, PHR remains vigilant in monitoring attacks on facilities and personnel by all parties to the conflict.

PHR will continue to update and map its findings each month.

### **Appendix: AAAS Satellite Imagery Analysis**

The Geospatial Technologies and Human Rights Project of the American Association for the Advancement of Science (AAAS) analyzed high resolution satellite imagery to verify damage or destruction to medical facilities in cities across Syria: Aleppo, Douma, Homs, Idlib, and Tafas. Their analysis is included in the following report, ["Assessing the Status of Medical Facilities in Syria."](#)

AAAS provided imagery analysis of 10 additional attack sites, which PHR had little information on or no corroboration for in: Aleppo, Douma, Homs, Daraa, and al-Hassakeh. Their analysis is included in the following report, ["Assessing the Status of Medical Facilities in Syria: Addenda, 23 July, 2014."](#)

AAAS provided imagery analysis of 19 additional hospitals, which PHR had little information on or no corroboration for in: Aleppo, Daraa, Damascus, Hama, al Hassakeh, Idlib, and Rif Dimashq. Their analysis is included in the following report, ["Assessing the Status of Medical Facilities in Syria: Addenda 2, 5 December, 2014."](#)

<sup>1</sup> <http://sana.sy/ara/389/2014/01/26/ara/336/2014/01/31/525394.htm>

<sup>2</sup> A “barrel bomb” is a crude weapon made from a low-cost cylinder filled with explosives, shrapnel, or oil (which is then ignited) that is dropped from a helicopter or plane. Reports indicate that they vary in weight between 200 and 2,000 pounds, potentially even heavier. Barrel bombs are most commonly dropped from high altitudes, restricting the user’s ability to target with discrimination. In Syria, barrel bombs have proven very destructive, breaking into thousands of small fragments upon impact. <http://bro-wn-moses.blogspot.co.uk/2013/12/syrias-barrelbombtechnology-relative.html>

<sup>3</sup> A “cluster bomb” is an illegal munition that is designed to disperse or release explosive munitions each weighing less than 20 kilograms. <http://www.clusterconvention.org/files/2011/01/Convention-ENG.pdf>

<sup>4</sup> The principle of distinction in IHL requires military and armed groups to distinguish between civilians/civilian objects and military personnel/objects. It is never lawful to target civilians or civilian objects such as hospitals, schools, mosques. See Methodology section: [Legal Framework: A detailed summary of International Humanitarian Law \(IHL\) as applied to medical facilities and personnel.](#)

<sup>5</sup> Union of Syrian Medical Relief Organizations (UOSSM), *Two Medical Volunteers Killed During Round Two of Polio Vaccination Campaign*, <http://www.uossm.org/index.php/two-medicalvolunteers-killed-during-round-twoofpolio-vaccination-campaign/> (last visited July 22, 2014); Human Rights Council, Oral Update of the independent international commission of inquiry on the Syrian Arab Republic, Mar. 18 2014,

<http://www.ohchr.org/Documents/HRBodies/HRCouncil/CoISyria/OralUpdate18March2014.pdf>; National Coalition of Syrian Revolution and Opposition Forces, *Local News: Assad Forces Kill Volunteers in Anti-Polio Campaign*, Syrian Coalition, Jan. 31, 2014, [http://en.etilaf.org/dailynewsletter/daily\\_newsletter-31-01-2014.html](http://en.etilaf.org/dailynewsletter/daily_newsletter-31-01-2014.html)

<sup>6</sup> PHR local source, information received Apr. 20, 2014, translated by PHR from Arabic into English, on file with PHR.

<sup>7</sup> Ibid.

<sup>8</sup> *Ibid*; see also International Commission of Jurists, *Syrian human rights lawyer Mazen Darwish may face prosecution, death sentence before a military court*, Aug. 9 2012,

<http://www.icj.org/syrian-human-rights-lawyer-mazen-darwish-may-face-prosecution-death-sentence-before-military-court/> (confirming persons brought before Military Field Courts have no right to defense).