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## How are medical ethics practices impacted by terror attacks on the healthcare system in Turkey?

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#### Abstract

The objective of this article is to shed light on some challenging questions regarding public health and medical ethics that the Turkish healthcare system has recently been forced to confront. In recent years, terrorists in eastern Turkey have launched increasingly destructive attacks, including numerous attempts to undermine the social order by targeting not only government agencies but also the healthcare system. In this study, 54 terrorist incidents specifically targeting the Turkish healthcare system and healthcare professionals were analyzed and divided into 6 categories according to the type of attack. Each category was evaluated in terms of the relevant ethical issues, with regard to both public health and medical ethics. This study shows that terrorist activity may lead to numerous breaches of public health and clinical ethics rules. Therefore, healthcare policy must involve special precautions to minimize breaches of public health and medical ethics in the face of terrorist attacks.

**Key words**: Terrorism, public health ethics, health professionals, health facilities, health vehicles, infrastructure.

#### Introduction

The terrorist attacks that led to the redefinition of state security began in the 1970s and have continued to the present day. Although the late 1970s and early to mid-1980s witnessed the first modern-day terrorist attacks in much of the Middle East (see H. Cordesman), it was not until the attack on September 11, 2001 in the United States, which resulted in the loss of over 3,000 lives, that terrorism came to be discussed more seriously (Bosch, 2012). According to new research from the University of Alabama (2018), "terrorist attacks committed by Muslim extremists receive 357% more US press coverage than those committed by non-Muslims." The aim of terrorist attacks is to intentionally cause harm, unlike natural disasters or accidents, behind which there is no such intent. In contrast to terrorism, for which there are no regulations in place to restrict terrorist activity, conventional warfare is bound by international humanitarian laws (e.g., the four Geneva Conventions of 1949 and their two Additional Protocols of 1977) ((ICRC), 2010).

In recent years, terrorist groups in Turkey have aimed to maximize the probability of achieving their goals by launching increasingly destructive attacks, which have included attacks on the Turkish healthcare system and healthcare professionals. Due to the damage to the healthcare facilities caused by terrorist attacks, terror medicine should be treated as a separate field which overlaps with disaster medicine, emergency medicine (Gofin, 2005), and military medical ethics. In order to standardize patient care, terror medicine should follow the standard operating procedures of triage, medical ethics, public health ethics, and patient rights regulations of 1998 (Health-Turkey, 1998). Healthcare professionals are required to provide healthcare services in accordance with their responsibilities and according to the values of human rights and dignity (Gostin, 2008; Mann, 1997; Mann et al., 1994), as practiced in military and disaster medicine, as per the Turkish constitution. Public health

ethics involves all three of these, each of which in turn affects and is affected by the others (Mann et al., 1994).

For nearly forty years, Turkey has been struggling with domestic and international terrorism. These terrorist groups include Islamist terrorist organizations (The Islamic State of Iraq and the Levant (ISIL), Hezbollah, etc.), separatist terrorist groups, and communistinfluenced terrorist organizations (e.g., Workers Party of Kurdistan (PKK), the Kurdistan Freedom Hawks (TAK), the outlawed Revolutionary People's Liberation Party-Front (DHKP-C), Marxist-Leninist Communist Party (MLKP)) (Bal, 2006; State, 2017). The PKK is a terrorist organization that incorporates both separatist and communist rhetoric. Over the last 35 years, the violence generated by it towards the civilian population of Turkey (Sardan, 2012; Şen, 2013; Yilmaz, 2011) has been responsible for more than 40,000 deaths (Ministry of Internal Affairs, Republic of Turkey). The upsurge in terrorist attacks targeting the healthcare system is not limited to Turkey, however; one study found that 100 terrorist attacks in 43 countries were perpetrated against hospitals between the years 1981-2013 [International Institute for Counter-Terrorism (ICT)](Counter-Terrorism, 2018). In recent years, the targets of terrorist attacks by the PKK and ISIL in Turkey have been changing, focusing more on healthcare facilities and healthcare professionals, thus preventing people from receiving necessary treatment and disrupting the functioning of the healthcare system (Table 1). Unlike terrorism, conventional warfare is bound by international humanitarian laws (e.g., the four Geneva Conventions of 1949 and their two Additional Protocols of 1977) ((ICRC), 2010).

In this study, ethical issues arising from terrorist activity are evaluated in terms of public health and individual human rights, two complementary approaches for defining and advancing individual well-being. Terrorist activity has brought up a number of public health ethics issues related to human rights, trust and dignity (McKee & Coker, 2009). Public health

is defined by the World Health Organization (WHO) as the physical, mental, and social wellbeing of individuals (Mann, 1997). Public health ethics is concerned with the right of all individuals to receive safe and high quality health care; be treated with respect, dignity and consideration; be informed regarding treatment and treatment options; the right to decide regarding treatment; and the ability to have their concerns addressed. The principles of medical ethics are the patient's right to be treated ethically (beneficence, nonmaleficence, informed consent, privacy, and justice) during diagnosis, treatment, relief of suffering, and rehabilitation (Beauchamp & Childress, 2009). In general, public health ethics is concerned with the good of the community at large while the focus of medical ethics is on the rights of the individual; therefore, the goals of each may sometimes be at odds. The fundamental question is then, in what ways do terrorist incidents undermine or compromise the proper implementation of medical and public health ethics, and what sorts of ethical issues arise as a result of these incidents.

#### **Material and Methods**

This is a retrospective study analyzing the ethical and legal issues relating to incidents of terror attacks as reported in Turkish newspapers from 1975-2018. Data reported in Turkish newspapers were obtained from a database of searchable news articles using the Google search engine. The newspaper articles were identified using the keywords 'terrorism, public health ethics, health professionals, health facilities, health vehicles, infrastructure", resulting in approximately 168,000 news items. However, most of these findings proved not to be directly related to the keywords used in this study. Only articles focusing on health professionals and health facilities were chosen, in accordance with the purpose of the present study. Articles were identified under the source category 'National Newspapers' and duplicate news items were eliminated. Data from 54 incidents were collected from both domestic and foreign news sources on terrorist attacks in Turkey between 1996-2018 that

affected healthcare facilities, infrastructure, patient data, and/or healthcare professionals, carried out by either domestic or foreign terrorist groups. These articles were categorized, evaluated for content, and then analyzed in terms of the ethical issues presented. The basis for the five categories was the target/goal of the attack: terrorist attacks specifically targeting healthcare facilities and healthcare workers (Appendix 1); effects of terrorist activity on infrastructure (Appendix 2); attacks on off-duty healthcare workers (Appendix 3); incidents involving terrorist sympathizers who work in healthcare (Appendix 4); and theft of data and medicines by terrorists (Appendix 5); the reactions of healthcare professionals and civilians living in regions which experience frequent terrorist activities (Appendix 6). Each category was analyzed in terms of the concepts and principles of medical and public health ethics issues that arise as a consequence of the incidents themselves. However, it should be noted that this study focuses on potential public health and medical ethical issues rather than on actual incidences of violation or compromise of public health and medical ethical procedures. The scope of this study is limited to ethical issues that may arise, and does not and cannot comment on actual compromises or violations of ethical procedures.

## **Results and discussion**

This is the first study focusing on terrorist attacks targeting the healthcare delivery system, attacks which not only compromise public safety but also give rise to a number of public health and medical ethics dilemmas. Such attacks have occurred not only in Turkey, the focus of the present study, but also internationally, in such countries as Israel and Afghanistan (Hilsenrath, 2005). Terrorist activity affects health security in terms of biological and psychosocial effects both directly and indirectly (Terrorism Act of 2006)(2006, 2006). Terrorist attacks targeting health facilities and health care workers cause disruptions to the social order whose effects are felt much more widely and deeply than

terrorist attacks which do not target the health care system. These attacks are not solely a security issue, as attacks on healthcare facilities affect the ethical dimension of clinical and public health practices in the treatment of those injured as well as healthy individuals living in the area. The potential ethical issues arising as a result of terrorist attacks within the scope of this work (i.e., incidents involving the healthcare system) will be evaluated. Analyses of the ethical issues involved in the five categories of incidents (a total of 54 incidents) are presented below.

1. Terrorist attacks on hospitals, ambulances and healthcare workers, which undermine the security and functioning of healthcare delivery systems: This study has revealed that terrorist attacks have begun targeting overall health security, healthcare facilities, and healthcare workers (Appendix 1). Incidents collected in Appendix 1 of this study include attacks targeting both military and civilian hospitals, attacks on ambulances, kidnapping, and direct attacks on healthcare workers, including hospital police/security officers. The weapons most commonly utilized by terrorists are listed in Table 1. Security issues arising from such attacks can impede access to hospitals and clinics, thus violating an individual's right to healthcare, which is a principle of public health and medical ethics and a fundamental human right. The Universal Declaration of Human Rights (UDHR), adopted in 1948 and revised in 1993 at the Vienna World Conference on Human Rights, is predicated on the concept that it is the duty of states to promote and protect human rights (UDHR 1948 and 1993). As Jonathan M. Mann has noted, the core values of medical ethics are related to human rights and dignity; therefore, infringement of human rights upsets the balance between public health ethics, human rights, and medical ethics (Mann, 1997; Mann et al., 1994). These inextricably intertwined connections not only help coordinate the relationship between patients/public and healthcare workers but also are also necessary to preserve the social order, particularly regarding human rights laws and the responsibilities of healthcare workers. The medical ethics principles of nonmaleficence, beneficence, informed consent, privacy, honesty, autonomy, and justice concern the care of individuals, whereas the primary concern of public health ethics is the public interest; nonetheless, both are concerned with human rights. The principle of nonmaleficence pertains to misdiagnosis, incorrect treatment and mistreatment; beneficence is making the correct diagnosis and treatment in a timely manner; informed consent is the right of the patient to make their own decisions regarding treatment based on full disclosure of their condition and treatment options; privacy concerns the patient's right not have their personal and/or medical information disclosed to others without their consent; autonomy is the right of a patient to reject or accept treatment; and justice in medical ethics is defined as equal access to and nondiscrimination in healthcare services. All of these ethical principles provide support for basic human rights as defined by UDHR.

Terrorist attacks negatively affect the proper implementation of public health and medical ethics in two ways. Firstly, the kinds of terrorist attacks described in (Appendix 1) prevent to access healthcare facilities by patients and also prevent healthcare workers from performing their jobs (Foghammar et al., 2016; Stene, Wentzel-Larsen, & Dyb, 2016). When attacks on hospitals, ambulances, and healthcare workers take place, patients may fear going to hospitals and/or clinics, and not without reason, as weapons used in terrorist attacks often cause indiscriminant harm (Table1; Appendix 1, 1-29). Moreover, when healthcare professionals do not feel safe on the job, they experience constant stress, and as a result many prefer to resign their positions in at-risk regions (Appendix 6). Attacks on the healthcare system may destroy trust between healthcare professionals, the public, and security officers, as it is often not possible to immediately ascertain who is an innocent patient and who is a

terrorist<sup>1</sup>. For example, healthcare workers may face follow-up attacks in the hospital perpetrated by a suicide bomber who claims to be sick. Due to safety concerns, healthcare workers may not want or be able to implement public health programs and/or perform home healthcare services, which may then suffer as a result.

The second way that the proper implementation of public health and medical ethics is compromised by terrorist attacks targeting the healthcare system is related to precautions taken by the government which may result in human rights and/or public health ethics violations. Such precautions include restrictions on movement such as curfews and security checks and restrictions on communication between people, which may include patients, in order to prevent terrorists from communicating via telephone or internet. These precautions may have negative effects on public health programs and medical care services. Extraordinary measures taken by the state may create an atmosphere of fear and anxiety in the general public (Vandentorren et al., 2018) and as a result people may avoid expressing themselves openly to healthcare workers, thus undermining the medical ethics principles of autonomy, informed consent, and honesty.

Consequently, terrorism impedes and/or prevents the delivery of routine basic health services, thus opening the way for new, possibly serious, macro-level health issues, and destroys the balance between public health ethics, medical ethics, human rights, and dignity.

2. Terrorist activity affecting infrastructure: Terrorists have targeted infrastructure to prevent access to healthcare and to create an unsafe environment (Appendix 2), destroying not only roads, pipelines, and public transport vehicles, but also the routines of everyday life. Damage to infrastructure causes sanitation and hygiene issues because of disruptions to supplies of clean water, wastewater treatment, electricity, transport, communication, and

<sup>&</sup>lt;sup>1</sup> The vast majority of terrorists in Turkey are Turkish-born, not foreign-born, especially those in the PKK (https://fas.org/irp/world/para/docs/mfa-t-pkk2.htm).

health care, similar in extent to the damage caused by natural disasters such as earthquakes. Disruptions in the infrastructure may lead to economic standstill (which may even be more costly than the effects of a natural disaster due to its multifaceted aspects) and cuts to social and healthcare services, while many may be forced to or choose to relocate as a result (Appendices 2 and 6). The goal of human security is 'to protect the vital core of all human lives in ways that enhance human freedoms and human fulfillment' (AHDR, 1994). The basis upon which all other human rights, including basic medical ethical principles (e.g., informed consent, beneficence, nonmaleficence, autonomy, privacy, and justice) are secured is security. The first casualty of terrorist activity, after its human victims, is the public's sense of security. It is unlikely that ethics violations arising as a result of terrorist activity will be resolved without security problems (foreign and domestic) first being resolved (Perl, 2001; Rees, 2007).

**3.** *Attacks on off-duty healthcare workers:* Recently, terrorist attacks have targeted not only soldiers and security personnel but also healthcare professionals and civil servants. In Turkey, terrorists have thus far killed four off-duty healthcare professionals (Appendix 3). While the incidents in Appendix 1 demonstrated the goal of terrorists to disrupt the functioning of the healthcare system as a whole, targeting healthcare workers when they are off duty is a much more personal attack on the individuals targeted. The psychological effects of such incidents are deeper as well, since whereas healthcare workers previously may have only felt at risk when on duty (Foghammar et al., 2016; Koenig et al., 2007), now they have reason to feel threatened at all times, even or especially when at home with their families (Appendix 6). The rise in the number of such incidents may also contribute to healthcare personnel

requesting transfer to other, safer regions<sup>2</sup>. Therefore, not only are healthcare professionals themselves targeted, but their ability to fulfill their duties is also undermined. Although healthcare professionals (HCPs) are tasked with protecting both individuals and healthcare facilities, unfortunately not enough universal standards exist to delineate these responsibilities (Koenig et al., 2007). These negative effects may inhibit communication between patient and doctors, and breach values of medical and public health ethics (Public Health Leadership Institute, 2002)(Umble et al., 2005). For this reason, health security strategies must incorporate equality, trust, solidarity, reciprocity, the free flow of information between community and health professionals, and multi-level stakeholder cooperation (e.g., national and international institutions, individuals, families, etc.), and must work to ensure political security. Such strategies must also emphasize that human rights and ethical codes apply to all citizens, including healthcare professionals and security personnel.

**4.** *Incidents involving healthcare workers who are terrorist sympathizers:* The goals of terrorism are more easily achieved with the help of terrorist sympathizers<sup>3</sup> (Appendix 4.). Sympathizers working in healthcare<sup>4</sup> may cause disruptions in the quality and safety of healthcare services/delivery by failing to give proper treatments to those they consider enemies [such as police or security personnel; (Gostin, 2008)] and/or not following triage rules (for example, by prioritizing treatment of a terrorist over that of his victims; see Incident 2 in Appendix 5). Such actions may result in incorrect or incomplete health assessment and/or treatment, contrary to the very foundations of public health and medical ethics.

Healthcare workers who were originally impartial concerning terrorism, neither blaming nor supporting either side, may also be affected by terrorist incidents and the response they

<sup>&</sup>lt;sup>2</sup> In Israel, Herzenstein et al. (2015) reported that a number of civilians had closed their businesses and moved away from areas plagued by terrorist activity out of fear.

<sup>&</sup>lt;sup>3</sup> Although studies have been published concerning the rights of terrorists to medical treatment, as no such issues were reported in the incidents reviewed herein, this topic is not explored in this study.

<sup>&</sup>lt;sup>4</sup> Authorities have described hospitals employing significant numbers of terrorist sympathizers as being 'like PKK headquarters.'

generate by the government, and develop sympathies for one or the other side. Therefore, healthcare professionals who are terrorist sympathizers may experience serious ethical-legalmoral conflicts in the performance of their professional duties. However, healthcare professionals have to consider the ethical framework of their responsibility not only to respect and protect human rights and dignity in each society, but to contribute actively to improving societal realization of such rights within their profession. In summary, healthcare workers are responsible for acting within the confines of the codes of public health and medical ethics principles, both of which are incorporated into international human rights (1966).

5. Theft of patient data and medicines by terrorists: Technology has greatly accelerated the storage and transfer of data; however, the electronic storage of health data has led to new challenges (Moslemzadeh Tehrani, Abdul Manap, & Taji, 2013). These encompass the minimal standards of ethical principles, which safeguard the patient's individual, social, and/or economic concerns (Appendix 5). Legally and ethically, patients have a fundamental human right to full access to every aspect of data regarding their health situations (Sher, Talley, Cheng, & Kuo, 2017). Healthcare professionals and various institutions must obtain informed consent for the collection of patient data, processing, and/or further disclosure. As per the 20th article of the Turkish Constitution of 1982, the security of personal data is considered a basic right of the individual. Privacy rights have also been incorporated into the EU Charter of Fundamental Rights and Freedoms (Hervey & McHale 2004). Protections for patient data are ensured by international ethical codes and regulations both in Turkey and abroad [Belmont Report 1979; Turkish Regulation on Patient Rights, 1998; The Health Insurance Portability and Accountability Act (HIPAA) of the U.S.A.].

In Turkey, terrorists have stolen hospital computers to obtain patient data (Appendix 5). In one case, theft of patient data related to immunizations meant that vaccinations could not be carried out as per the vaccination schedules. Thus, the theft of medical records not only violates patient privacy, but also hinders proper functioning of the healthcare system. Terrorists may also abuse their access to patient records by using the data to embarrass or threaten patients. Economic damage may be incurred if hackers/thieves use patient data to prepare fake prescriptions for profit (Filkins et al., 2016). Terrorists can prescribe medicines, block access to medications, or sell data to other organizations for profit. In doing so, they violate fundamental human rights (e.g., autonomy, privacy, information, the right to health and treatment) and health security. Finally, when medical records are lost or stolen, patients' right to privacy and confidentiality are violated, and treatment may be delayed or compromised with the loss of patients' medical histories (Simon, Goldberg, & Adini, 2016), destroying the trust between the healthcare delivery system and society.

#### Conclusion

Terrorist attacks on the health care system and its representatives have a greater impact on society and cause more disruption than attacks on most other institutions. This study has shown that terrorist acts directly affect the delivery of health care services. Therefore, terror medicine requires the protection of both the individual interests of patients and the public's collective interests in accordance with national and international medical ethical standards (e.g., respect for autonomy, privacy, justice, etc.). Unlike natural disasters, in which extraordinary and traumatic events occur but without specific targets consciously being selected, terrorist activity involves the conscious choice to harm people; thus, victims may include civilians and even children. Moreover, the time, location, and weapons used in terrorist incidents are unpredictable, as evidenced by the Turkish examples. Multiple attacks occurring simultaneously in different places are particularly salient, and are another feature distinguishing terrorist activity from natural disasters or accidents<sup>5</sup>. As indicated by the data in the appendices, terrorists have targeted the healthcare system (which includes not only hospitals, clinics, ambulances, etc. but also healthcare workers themselves) with the aim of undermining the social order itself. As such, terror medicine involves unique facets which necessitate that it be considered a separate field, in contradistinction to disaster medicine.

Terrorist attacks on the healthcare system have resulted in the following public health ethics issues, human rights violations, and ethical dilemmas or abuses: 1. Attacks targeting the healthcare system disrupt patient access to healthcare, thus violating or compromising the basic human right to health. 2. The ensuing chaotic situations exacerbate communication problems, including fear of attacks, which may negatively affect the relationship between healthcare workers and patients. Because of this, informed consent, ethical decision making, and confidentiality may be undermined, resulting in ethical abuses. Therefore, a safe environment in which trust between healthcare professionals and their patients can flourish is necessary for the proper implementation of public health and medical ethics principles. Terrorism not only presents a threat to physical security, but also represents a threat to the values necessary for a fully functioning healthcare system.

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<sup>&</sup>lt;sup>5</sup> For example, in Istanbul on 20 November 2003, terrorists bombed a synagogue, a consulate, and a bank simultaneously, all in different neighborhoods (http://news.bbc.co.uk/2/hi/europe/3222608.stm).

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### Appendix 1. Terrorist attacks on hospitals, ambulances, and healthcare workers.

**Incident 1.** During Newroz New Year 1992, journalists went to a hospital to research a story and were under fire because the hospital had been identified as a target by terrorists. (https://www.tbmm.gov.tr/sirasayi/donem19)

**Incident 2.** Terrorists attacked an ambulance and security guard cottage with Molotov cocktails behind a hospital on 11 April 2009. (http://www.hurriyet.com.tr)

**Incident 3.** Terrorists planted a mine which exploded in front of a hospital in Derik, Mardin province, on 24 June 2012. (http://beyazgazete.com/yerel/mardin)

**Incident 4.** The PKK detonated mines planted in front of a hospital; one police officer Tuncay Akyüz was killed at Van and two police officers were wounded on 24 July 2012. (http://www.21yyte.org/tr/arastirma)

**Incident 5.** Terrorists abducted a woman in labor, 2 paramedics and an ambulance driver in Tekman, Erzurum province on 24 July 2015. No news has since been received of their whereabouts. (http://www.aksam.com.tr/guncel//erzurumda)

**Incident 6.** The state hospital in the town of Cizre was attacked by terrorists. The bullets hit the glass in the clinic entrance on 9 November 2015 (http://www.gazetevatan.com/cizre-de-pkk)

**Incident 7.** In the Nusaybin district of Mardin, 3 ambulances were attacked and stolen by armed terrorists on 27 July 2015. (http://www.haberler.com/nusaybin-de-teroristler)

**Incident 8.** Terrorists attacked the Tatvan Military Hospital on 03 August 2015.(http://www.hurriyet.com.tr/tatvan-asker)

Incident 9. YDG-H members in Mardin's Nusaybin district attacked in the parked

emergency ambulance with 112 Molotov cocktails on 9 August 2015.

(http://www.hurriyet.com.tr)

**Incident 10.** An ambulance carrying a 7-year-old patient was attacked by terrorists using stones and Molotov cocktails during transport to a hospital in Van on 18 August 2015.(http://www.aksam.com.tr/guncel/hasta-cocugu-almaya-giden)

**Incident 11.** Terrorists staged a bomb attack on Şemdinli Hakkari State Hospital on 2 September 2015. (http://www.haberler.com/semdinli)

**Incident 12.** PKK opened fire on an emergency service ambulance which was driving along a road in Dargeçit-Mardin on 7 September 2015. Although the ambulance was struck with bullets, fortunately no one was wounded in the incident. (http://sondakika.beyazgazete.com)

**Incident 13.** PKK terrorists had opened fire targeting civilians in six ambulances in Mardin within the previous twenty days, as reported on 10 September 2015. (http://www.gazetevatan.com/pkk-dan-20-gunde-6-ambulansa-saldiri)

**Incidents 14.** On 11 September 2015, terrorists reported a fake emergency in order to steal from the ambulance. Not only did they steal all the medications in the ambulance, they also cut off the electricity to the regional health center, preventing the public from receiving health services and causing approximately \$4,100 worth of vaccines that needed to be refrigerated to deteriorate. In addition, they also threatened to kill healthcare workers.(http://www.sabah.com.tr/gundem/2015/09/11)

**Incident 15.** A terrorist group staged an attack on the night of 22 October 2015, targeting a public hospital and a government building in southeastern Turkey. The three-floor district state hospital was reportedly out of service as the emergency room, baby delivery room, surgery compound and hemodialysis unit were all heavily damaged. (http://www.hurriyet.com.tr/pkkdan-yeni-dogan-unitesine.)

**Incident 16.** The Ministry of Health released a written statement about the PKK launching rocket-propelled grenades and using a car bomb to attack police vehicles on 09 November 2015; however, these rockets hit Cizre hospital instead. As a result, the entrance, morgue, and neonatal and dialysis units of the hospital were severely damaged.

(http://www.milliyet.com.tr/pkk-roketi-hastaneyi-vurdu--gundem)

**Incident 17.** The terrorist organization PKK attacked the Cizre State Hospital with rocket launchers and patients were evacuated from the damaged building on the 17 December 2015. (http://www.internethaber.com/cizrede-hastaneye-roketatarli-saldiri)

**Incident 18.** Terrorists assaulted two schools and a hospital in the southeastern province of Şırnak using rocket launchers on the 18 December 2015. (http://www.internethaber.com)

**Incident 19.** Terrorists (YDG-H) had stolen one ambulance and kidnapped two health officials from Idil State Hospital on 18 December 2015. (http://www.iha.com.tr/haber)

**Incident 20.** Terrorists in the Cizre district of southeastern Şırnak province were ordered to kill civilians being taken to hospitals according to intercepted radio conversations as revealed on 24 January 2016. (http://www.gunes.com/gundem/kan)

**Incident 21.** Injured 15 civilians who were taking shelter in basement waiting for ambulances for days in Cizre. Because 3 ambulances attempting evacuation of casualties were fired upon and could not enter the street because of explosive traps and potholes set by terrorists on **4 February 2016**. (http://www.internethaber.com/sirnak-cizredeki-o-bodrum-)

**Incident 22.** Terrorists destroyed Provincial Directorate of Health building, Public Hospital General Secretariat building, and thee D. T. Nurullah Kadirhan Oral and Dental Health Hospital, and terrorists burned the houses where they had been hiding in Şırnak on **29 April 2016**. (http://www.hurriyet.com.tr/pkk))

**Incident 23**. A bomb was detonated by terrorists in front of Mardin State Hospital in Kiziltepe injured on 10 August 2016. Four people were killed and several police officers and soldiers were injured in the explosion. (http://www.aksam.com.tr/guncel/mardin)

**Incident 24.** Terrorists opened fire on an ambulance, killing the driver Şeyhmus Dursun, in Beytüşşebap on 25 September 2015. (<u>http://www.imctv.com.tr</u>.)

**Incident 25.** Terrorists called the emergency call center to request an ambulance, giving a fake story, then forced the medical personnel to treat a wounded terrorist on 29 September 2015. (http://www.sabah.com.tr/gundem/2015/09/29/saglik-personeli).

**Incident 26.** The Ministry of Health has announced the blueprint of terrorist incidents in the East and Southeast since June 7, 2015. 21 health personnel were detained by terrorists while 4 health personnel who were subjected to terrorist attack lost their lives on 29 September 2015. (http://www.sabah.com.tr/gundem/2015/09/29/saglik-personeli-hedefte)

**Incident 27**. PKK opened fire with automatic weapons on an ambulance belonging to emergency services at a gas station in Şırnak-İdil on 12 February 2016. Abdullah Dim, a

civilian, was injured. (http://www.ensonhaber.com/idilde-teroristler).

**Incident 28.** An ambulance attempting evacuation of casualties was fired upon in Ipekyolu, Van on 22 June 2016. In the attack, one person, a relative of the patient, was injured in the ambulance. The man's skull was grazed by the terrorist's bullet above the left eyebrow, but his condition is now good. After the attack, the wounded were evacuated from Van Regional Training and Research Hospital at 10.30 pm. (http://www.ntv.com.tr/turkiye/vanda).

**Incident 29.** The PKK burned two ambulances and cars parked in front of a healthcare facility in Tunceli on 22 August 2016. (http://www.takvim.com.tr/guncel/2016/08/22/pkkli)

**Incident 30.** In the terrorist attacks Şırnak Provincial Health Directorate, Oral and Dental Health, Family Support Center, Public Health Center and 112 Command Center buildings were damaged and some of them were destroyed in 2015-2016. In this context, the Ministry of Health, to meet the city's 50 years of need, approximately 485 million pounds of projects were implemented in Şırnak. June 11, 2018

https://www.medimagazin.com.tr/guncel/genel/tr-saglik-bakanligi-sirnakta-yaralari-sariyor-485-milyon-liralik-saglik-yatirimi-11-681-77418.html

## Appendix 2. Terrorist activity affecting infrastructure

**Incident 1**. In the Silopi district of Sirnak, PKK terrorists detonated a bomb that destroyed the main road leading to the State Hospital, on 2 October 2015. Terrorists dug trenches/ditches and set up barricades on the other narrow streets leading to the hospital, so that vehicles and civilians could not reach the hospital. (http://www.gazetevatan.com/silopi)

**Incident 2.** In Van, store owners were ordered to shutter their stores as a result of BDP activity, adversely impacting the local population. Villagers could not bring emergency patients to the hospital because public transport was disabled as a result of Kurdish party activity, and private vehicles were set on fire on 2 October 2015. (<u>http://hurseda.net</u> M. Aytekin-İLKHA)

## Appendix 3. Attacks on off-duty healthcare workers

**Incident 1.** Nurse Eyüp Ergen, who worked in Cizre State Hospital, was shot in the head on the way to home from work on 27 August 2015. (http://www.ttb.org.tr/index.php).

Incident 2. Two healthcare workers lost their lives while off duty in the province of

Hakkari: family physician Dr. Abdullah Birogul and ambulance driver Şeyhmus Dursun (http://www.bbc.com/turkce/haberler/2015/09/150902\_diyarbakir\_doktor).

**Incident 3.** Sergeant Murat Eker of Mersin, a medical officer of the gendarmerie who had been temporarily stationed in Şırnak during the ongoing operations there, was killed by terrorists on 22 July 2016. He was married to a nurse and had a 4-month-old daughter.

(http://www.sozcu.com.tr/2016/gundem/sehit)

## Appendix 4. Incidents involving healthcare workers who are terrorist sympathizers

**Incident 1.** On 04 January 2016, some terrorist sympathizers who work in health care attempted to undermine the treatment of wounded security professionals, because the healthcare workers' relatives were members of PKK. Authorities explained that these hospitals were 'like PKK headquarters' (Star http://haber.star.com.tr).

**Incident 2.** In Diyarbakır, healthcare workers at Gazi Yaşargil Training and Research Hospital and Selahaddin Eyyübi State Hospital treated approximately 1500 terrorists from Syria and rural areas in Turkey. According to the investigation, the healthcare workers made fake medical records for the terrorists using the names and insurance numbers of innocent civilians. (http://bultensaglik.com/teroristler-tedavi-edildi-parasi)

**Incident 3.** Police took 18 doctors and 30 pharmacists, all of whom were PKK members, into custody. The doctors, who had written illegal prescriptions for cancer, hematology, epilepsy and psychotropic drugs for PKK members and other terrorists, were caught by the police. Police acquired this information on 04 May 2016. (http://tgb.gen.tr/turkiye/pkk)

**Incident 4.** On 18 September 2016, the Van Police Department found a large number of medicines and medical supplies (valued at approximately \$100,000) buried in the ground, which were determined to have been obtained from the university research hospital for PKK terrorists. A nurse and a medical student intern were arrested on 7 October 2016. The investigation is still ongoing. (http://www.hurriyet.com.tr/hastaneden-pkklilar)

## Appendix 5. Theft of patient data and medicines by terrorists.

**Incident 1.** After doctors' computers were stolen twice (the second time on 22 December 2015) in the Silvan district of Diyarbakır, health services were stopped. Dr. Metin Köseoğlu said, 'Our computers were stolen twice by terrorists as a result of terrorist events that took place at that time; after the thefts, we lost data for 40,000 patients, and doctors cannot access

patient data to treat their patients.' (http://www.sabah.com.tr/gundem/2015/12/22)

**Incident 2.** In the Yüksekova district of Hakkari, family physician Dr. Hasan Yavuz said that the terrorists entered a family health center and stole two computers containing information on 10,000 patients on 9 March 2016 (http://www.memurlar.net/haber/569893)

**Incident 3.** The Anonymous Hacker Group attacked the Ministry of Health and stole information on Turkish patients on 18 May 2016. (http://www.tamindir.com/anonymous)

# Appendix 6. The reactions of healthcare professionals and civilians living in regions which experience frequent terrorist activities

**Incident 1.** '65 health workers resigned due to terrorism!' Numerous physicians and healthcare personnel resigned due to increasing terrorist incidents in eastern Turkey and the targeting of health care workers by the PKK, as reported on 16.10.2015. (http://www.trturkhaber.com/teror-nedeniyle-65-saglik-calisani-istifa-etti/9338/).

**Incident 2.** A number of healthcare professionals resigned to distance themselves from terrorist activity in Varto, while another 18 healthcare professionals requested to be transferred from Muş-Varto because of terrorist activity, according to a 22 August 2015 report. (http://www.medimagazin.com.tr/ozel-saglik//tr-vartodan-kacis-18-personel-istifa-etti-veya-tayin-istedi-9-23-66787.html)

**Incident 3.** There has been a great increase in the number of healthcare personnel who have requested not to continue working in eastern and southeastern Turkey, as reported on 24 August 2015. According to the results of a report by the Turkish National Union, Health and Social Work Labor Union, Human Rights Foundation of Turkey, the Psychiatric Association of Turkey and various regional medical centers, in the county of Nusaybin, 15 of the 30 specialist physicians and 6 of the 8 emergency doctors resigned due to terrorist activity in the region. In the province of Van, there has been a sharp decline in the number of patients seeking emergency services at night due to terrorist activity, and healthcare workers prefer to leave the area. Meanwhile, there has been a decrease in blood donations at the Red Crescent. In Bitlis, the military hospital was attacked with hand-held rocket launchers, negatively affecting the psychology of the hospital workers. As a result, health services were compromised due to the departure of health workers in the region.

(http://www.haberturk.com/gundem/haber/1119479-teror-olaylari-saglikcilari-kaciriyor)

Incident 4. Due to increasing terrorist incidents in eastern and southeastern Turkey, many

healthcare workers have resigned from their positions. Bitlis State Hospital Chief Physician Dr. Erdal Dilekçi, in a statement to the Anatolian News Agency (Anadolu Ajansı) on 16 October 2015, reported that 30 physicians and 35 medical workers had resigned. (http://www.haberler.com/saglik-calisanlarindan-teror-istifalari-7783368-haberi)

**Incident 5**. Terrorists killed 4 healthcare workers in the 3 months prior to October 2015. In the aftermath, 13 doctors resigned due to security reasons. According to a statement made by Van-Hakkari Chairman of the Chamber Ahmet Koç, health workers were experiencing low morale. 08 Ekim 2015 Perşembe (http://www.aksam.com.tr/guncel/hakkaride-13-doktor-istifa-etti/haber-450484)

**Incident 6.** On 2 September 2015, Diyarbakir Chamber President Dr. Cengiz Günay explained that doctors and other healthcare workers could not go to health care facilities due to attacks by terrorists, and were trying to avoid the area, requesting transfer to different regions. Electricity was cut a number of times due to terrorist activities in hospitals, and access to vaccines and drugs was blocked. (http://www.hurriyet.com.tr/guneydoguda-teror).

**Incident 7.** There has been a great increase in the number of healthcare personnel who have requested not to continue working in eastern and southeastern Turkey, as reported on 24 August 2015. According to the results of a report by the Turkish National Union, Health and Social Work Labor Union, Human Rights Foundation of Turkey, the Psychiatric Association of Turkey and various regional medical centers, in the county of Nusaybin, 15 of the 30 specialist physicians and 6 of the 8 emergency doctors resigned due to terrorist activity in the region. In the province of Van, there has been a sharp decline in the number of patients seeking emergency services at night due to terrorism, and healthcare workers are prefer to leave the area. Meanwhile, there has been a decrease in blood donations at the Red Crescent. In Bitlis, the military hospital was attacked with hand-held rocket launchers, negatively affecting the psychology of the hospital workers. As a result, health services were compromised due to the departure of health workers in the region.

(http://www.haberturk.com/gundem/haber/1119479-teror-olaylari-saglikcilari-kaciriyor)

**Incident 8.** On numerous occasions between 2015–2017, the state imposed a curfew of varying durations in eastern and southeastern Turkey because of increasing terrorist attacks. (http://www.cnnturk.com/sokaga-cikma-yasagi)

**Incident 9.** News of terror operations in the province of Hakkari resulted in the migration of hundreds of families to neighboring areas. Similar situations have also occurred in other provinces.(http://www.diyarbakirsoz.com/gundem/operasyon-soylentisi-yuksekova-halkinda-

goce-sebep-oldu-operasyonlar-baslayacak-mi-148073)

**Incident 10.** In the province of Diyarbakır, offices of the police department, special forces, and anti-terrorism were targeted by a car bomb left by the PKK in front of the buildings. Two policemen and 8 civilians were killed. Following this incident, a number of civilians left the region. (http://www.hakkarihabertv.com/diyarbakir-baglarda-goc-basladi-30901h.htm)

**Incident 11.** A survey conducted to determine the economic impact of street clashes in Diyarbakir in 2016 found that the events had affected the whole city negatively, not only the central Sur district. Due to security issues, businesses could not be opened for 4-5 months, and intensive security measures taken following earlier incidents had prevented the city from returning to normal.

(http://www.amerikaninsesi.com/a/hendekler-diyarbakir-ekonomisinivurdu/3747079.html)