

Primary Care as Primary Target: A Review of Terrorist Attacks Against Primary Care Providers and Their Offices

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Abbreviations:

GTD: Global Terrorism Database
PCP: Primary Care Provider

Abstract

Background: Violence against primary care providers (PCPs) has increased during the current pandemic. While some of these violent acts are not defined as terrorist events, they are intentional events with an aim to disrupt, kill, or injure. Despite their pivotal role in health care, little is known about the risk for PCPs as targets of terrorism.

Methods: Data collection was performed using a retrospective database search through the Global Terrorism Database (GTD). The GTD was searched using the internal database search functions for all terrorist attacks against PCPs and their offices from January 1, 1970 - December 31, 2019. Years 2020 and 2021 were not yet available at the time of the study. Primary attack and weapon type, location (country, world region), and number of deaths and injuries were collated. Results were exported into an Excel spreadsheet (Microsoft Corp.; Redmond, Washington USA) for analysis.

Results: There were 29 terrorist attacks against PCPs and their offices from 1970–2019. The majority of attacks occurred during or after 2010. There were 58 fatalities, 52 injured, and 13 hostages. Most documented attacks took place in Pakistan, the United States, and Sri Lanka. Bombings concerned 55% of cases and 21% were hostage-takings.

Conclusion: Although less common than attacks on other health care related targets, terrorist attacks against PCPs have occurred. The majority of attacks occurred during the last decade. Future studies are warranted to further assess the risk of terrorist attacks against PCPs: before, during, and beyond the current pandemic.

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Introduction

Health care facilities are targets of interest for terrorist organizations globally. From 1970 through 2019, there were 454 terrorist attacks against hospitals and 148 terrorist attacks against Emergency Medical Services causing 2,381 fatalities and 4,016 injured.^{1,2} In the same period, vaccinators have been targeted 133 times, most of which have occurred since 2010.³ Despite their pivotal role in health care, little is known about the risk for primary care providers (PCPs) and their offices as targets of terrorism.

Primary care providers are the health care professionals who act as the first contact for a person with an undiagnosed health concern and as principal point of continuing care for patients within a health care system, as well as coordinate other specialist care that the patient may need. Violence towards PCPs is not a novel phenomenon, but it appears to have increased during the current pandemic. World-wide, PCPs faced intimidation, harassment, and attacks.^{4–7} A survey among British physicians in 2021 showed that 51% of general practitioners had experienced verbal abuse in the past month. One in five reported being

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Primary care	Family medicine	Family practice	General practice
General practitioner	Physician	Doctor	Dr.
Nurse	First contact care	Health care	Healthcare
Health-care	Medical center	Medical centre	Medical facility
Medical facilities	Clinic	Basic health unit	

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Figure 1. Search Terms.

threatened and 67% experienced worse abuse, threatening behavior, or violence.⁵ While some of these violent acts are not defined as terrorist events, they are intentional events with an aim to disrupt, kill, or injure. The field of Counter-Terrorism Medicine discusses health care mitigation and preparedness strategies against intentional events, and more focused research in this field is needed to protect health care workers from such attacks.^{8,9} Understanding how and why PCPs have been attacked in the past will help to improve the future safety of these crucial health care workers.

Therefore, this study aimed to review all documented terrorist attacks against PCPs and their offices from 1970 through 2019 as reported in the Global Terrorism Database (GTD).¹⁰

Materials and Methods

A retrospective database search of the GTD was performed by using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) standard.¹¹ The GTD is an open-source database containing over 200,000 global terrorism incidents from January 1970 through December 2019.¹⁰ It is maintained by the National Consortium for the Study of Terrorism and Responses to Terrorism (START) at the University of Maryland (College Park, Maryland USA) and is part of the US Department of Homeland Security's Centers of Excellence (Washington, DC USA). The GTD defines a terrorist attack as "the threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation."

The full GTD dataset was downloaded and searched for terrorist attacks against PCPs and their offices. The GTD does not contain a separate category for attacks against primary care targets. To be able to extract the relevant incidents from the GTD, a PCP was defined as: a health care professional who acts as the first contact for a person with an undiagnosed health concern and as principal point of continuing care for patients within a health care system, and who coordinates other specialist care that the patient may need. The definition of PCP is not limited to physicians, but also includes nurses, physician assistants, and nurse practitioners as well as their offices (medical facilities).

The search terms are provided in Figure 1. Data collected per incident included temporal factors, location, target type, attack and weapon type, and death and injury rates. Each entry was reviewed manually by the main researcher (BW) for inclusion or exclusion based on the incident description. Attacks coded by the GTD as "Doubt Terrorism Proper" (doubt if incidents qualify as pure acts of terrorism) were excluded. Cases with insufficient information (on inclusion or exclusion criteria) in the original database were further explored by reviewing gray literature and excluded if information remained insufficient. No data from the gray literature searches were added to the database; gray literature was only used to decide on inclusion or exclusion. The second author (DB) reviewed each inclusion and exclusion after the removal of

duplicates. In case of doubt or discrepancies, the other four authors advised on the final decision. All collected data were exported into Excel spreadsheets (Microsoft Corporation; Redmond, Washington USA) and analyzed descriptively.

Results

The search yielded 3,968 hits. There were 2,370 duplicates, 1,333 incidents not targeting primary health care, and 236 incidents in which the target remained unclear. In total, 29 terrorist attacks against PCPs and their offices were identified (Table 1).

The attacks occurred in 12 different years, with the highest number of attacks in 2014 ($n = 6$). Most incidents took place since 2010. Most documented attacks took place in Pakistan ($n = 19$), the United States ($n = 3$), and Sri Lanka ($n = 2$). In 19 incidents, a medical facility was targeted; 10 attacks specifically targeted individual medical practitioners. Four incidents were part of a multi-target incident. Bombings concerned 55% of cases and 21% were hostage-takings. There were no suicide attacks. The most common weapon types used were explosives (55%) and firearms (31%). There was insufficient information on perpetrators, motives, and the distribution of domestic versus international attacks.

In one incident, the explosive device was safely defused. The remaining 28 incidents resulted in 58 fatalities, 52 injured, and 13 hostages. One single mortar attack (Sri Lanka, 2009) caused 49 fatalities and 50 injuries.

Discussion

This analysis of the GTD identified 29 terrorist attacks against PCPs and their offices from 1970-2019. This is relatively low compared to hospitals and other health care facilities in the same period.^{2,12} The majority of attacks occurred in the last decade, which coincided with the global peak in terrorism.

The COVID-19 pandemic has created new challenges with regards to violence towards health care workers. Press releases, news reports, and surveys have warned about increased violence and intimidation. This appears to be associated with mistrust of the medical community, which is fueled by anti-government sentiments and anti-vaccine and anti-medical information.⁷ While the COVID-19 pandemic is a breeding ground for extremism, (local) governments have been weakened, allowing violent extremism and terrorism to regain influence.¹³ The risk of a terrorist attack on primary health care may therefore be significantly higher today.

In the past, hospitals and other "brick" health care facilities may have been more attractive targets than PCPs for several reasons, including the expected psychosocial impact and the potential number of casualties. However, PCPs have played a crucial role in the vaccination campaigns for COVID-19 in many countries, and their high visibility simultaneously makes them vulnerable to those who wish to inflict harm on PCPs and the communities they serve. Finally, PCPs may be qualified as typical soft targets because their offices usually lack advanced security measures.

Year	Country	Attack type	Target Type	Number of:		
				Deaths	Injured	Hostages
1984	United States	Facility/ Infrastructure Attack	Family Practice Clinic	0	0	0
1995	United States	Facility/ Infrastructure Attack	Emerg-a-Care Clinic	0	0	0
2000	United States	Hostage Taking	Metro Family Practice	0	0	4
2008	Sri Lanka	Armed Assault	General Practitioner	2	0	0
2009	Pakistan	Bombing/ Explosion	BHU	0	0	0
2009	Colombia	Hostage Taking	Primary Care Worker	0	0	1
2009	Sri Lanka	Mortar Attack	Primary Care Facility	49	50	0
2010	Pakistan	Bombing/ Explosion	BHU	3	0	0
2010	Pakistan	Bombing/ Explosion	Primary Health Clinic	0	0	0
2010	Pakistan	Bombing/ Explosion	BHU	0	0	0
2010	India	Hostage Taking	Mekola Primary Health Center	0	0	2
2011	Pakistan	Bombing/ Explosion	BHU	0	1	0
2011	Pakistan	Bombing/ Explosion	BHU	0	0	0
2011	Pakistan	Bombing/ Explosion	BHU	0	0	0
2011	Pakistan	Bombing/ Explosion	BHU	0	0	0
2012	Pakistan	Armed Assault	BHU	0	0	0
2013	Pakistan	Bombing/ Explosion	BHU	0	0	0
2013	Pakistan	Bombing/ Explosion	Primary Health Clinic	0	0	0
2013	Pakistan	Armed Assault	General Practitioner	1	0	0
2014	Pakistan	Armed Assault	General Practitioner	1	0	0
2014	Pakistan	Bombing/ Explosion	BHU	0	0	0
2014	Pakistan	Bombing/ Explosion	BHU	0	0	0
2014	Pakistan	Armed Assault	General Practitioner	1	0	0
2014	Pakistan	Bombing/ Explosion	BHU	0	0	0
2014	Pakistan	Bombing/ Explosion	BHU	0	0	0
2015	Pakistan	Bombing/ Explosion	BHU	0	0	0
2015	Libya	Hostage Taking	Two General Practitioners	0	1	2

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Table 1. Overview of Attacks (*continued*)

Year	Country	Attack type	Target Type	Number of:		
				Deaths	Injured	Hostages
2019	Kenya	Hostage Taking	Two General Practitioners	1	0	2
2019	Cameroon	Hostage Taking	General Practitioner	0	0	2

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Table 1. (continued). Overview of Attacks
Abbreviation: BHU, basic health unit.

Limitations

The GTD, which was used to perform this study, is subject to some limitations. The completeness of the data, especially in the earlier decades, may be questioned. According to the GTD, the number of terrorist events may be under-estimated during the first-half of the dataset, particularly in the period between 1970–1989. This could be explained by changing availability and access to data, as well as changes in media reporting. Trends over time should therefore be interpreted with caution.^{2,10} Conversely, the GTD is a key source for global data on terrorism incidents and is the best available database of its kind. It is evaluated as the most complete record of terrorist attacks in recent decades.¹⁴ Furthermore, under-reporting of PCP targets in this study is likely, due to the heterogeneous organization of primary care between world regions. Incident selection may have been lenient towards a western interpretation of primary health care. The use of pre-existing databases such as the

GTD inherently introduces potential challenges such as miscoding or data entry errors within the source. Detailed documentation of terrorist events may be further hindered by restrictions on reporting, the lack of independent corroboration, the lack of infrastructure to report and investigate events and in some cases, and the lack of transparency within government sources. The year 2020 was not yet available at the time of the study, so the presumed increase in attacks against PCPs could not be assessed.

Conclusions

This analysis of the GTD identified 29 terrorist attacks against PCPs and their offices from 1970–2019. The majority of attacks occurred during the last decade. Future studies are warranted to further assess the risk of terrorist attacks against PCPs: before, during, and beyond the current pandemic.

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