Acts of terrorism and mass violence targeting schools: Analysis and implications for preparedness in the USA

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ABSTRACT

To enhance the preparedness of US schools to acts of terrorism and mass violence, the landscape of threats against schools must first be understood. This includes exploring the global trends of acts of terrorism against schools, as well as looking specifically at the history of terrorism and acts of mass violence against schools domestically. This paper conducts a review of two databases in order to look at the trends in acts of terrorism and mass violence carried out against schools, and provides recommendations for domestic school preparedness based on this information.

INTRODUCTION

For terrorists, public spaces that carry symbolic value can make attractive targets. Schools are a prime example of such spaces. Some scholars suggest that educational institutions are ideal 'soft targets', as they are typically unguarded and provide an optimal setting for casualties.[1] This characteristic can be especially appealing to the architects of terror attacks, who may seek targets that will evoke a particularly strong public emotional response and garner high media visibility. Terrorist organisations feed on media attention and may seek news and other coverage to bring attention to their cause.[2–4] When the media cultivates a (possibly exaggerated) public image of danger, the public's faith in the government's ability to protect is shaken.[5] In the case of a large-scale terrorist attack against children in schools, this sense of fear would only be amplified. Indeed, there have been numerous high-profile attacks against schools, such as the Beslan School siege in Russia in 2004, the Taliban attack on the school of future Nobel laureate Malala Yousafzai in 2012, the Boko Haram kidnapping of over 275 girls in 2014, and mass shootings at schools in the USA including the Columbine High School shooting in 1999, the Sandy Hook tragedy in 2012, among many others. Each attack evokes an outpouring of sympathy and demands for action.

When discussing the difficult topic of children and terrorism, it is also critical to understand that terrorism perpetrated against the young carries with it consequences that persist long after the act itself. Children are an especially vulnerable population and require special attention during and after disaster and emergency situations.[6] The psychological impacts among children following terror attacks and other traumatic events are well documented in the USA. Direct experience, geographic distance and media exposure have serious and complex impacts on children. Children's responses to these traumatic events may present through the development of acute stress disorders, depression, anxiety, behavioural problems and post-traumatic stress disorder (PTSD). Nearly a year after the 1995 Oklahoma City bombing in the USA, 50 per cent of local elementary school students reported clinical levels of PTSD.[7] Similarly, a half-year following the attacks of 9/11, approximately 75,000 public school children in grades 4 through 12 in New York City, including those not directly affected by the attacks, also presented with symptoms of the stress disorder.[8]

Despite the severe impacts of terrorist acts on children, parents and communities, the risk and potential implications of incidences of terrorism and mass violence in schools have not received systematic attention to date. To enhance the preparedness of schools in the USA to acts of terrorism and mass violence, the landscape of threats against schools must first be understood. This includes exploring the global trends of acts of terrorism against schools, as well as looking specifically at the history of terrorism and acts of mass violence against schools domestically. This will provide important insights into the current threats to schools, as well as the potential threats that could be imported or inspired by similar acts outside of the USA.

To accomplish this, one must look beyond the literature on 'acts of terrorism' alone. Many mass shootings and other forms of violence directed at children in

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schools have the same impact as formal acts of terrorism but simply lack an overt political or ideological agenda. Because of this, they are often not included within terrorism statistics and datasets. These events should not be discounted due to the limitations of academic definitions, but should be part of our understanding of the threats to schools.

To provide a robust understanding of the threats of terrorism and mass violence to US schools, the present review starts by analysing historical trends in the frequency and characteristics of terrorist attacks in child-serving educational institutions around the world and in the USA, examining the factors that make this pre-school to secondary school-aged demographic particularly at risk. The review then examines trends in mass shootings targeting US schools. Finally, the paper extracts lessons and questions that can be applied domestically to minimise the risk of acts of terrorism and mass violence against schools in the USA.

METHODOLOGY

For the purposes of analysing acts of terrorism and mass violence against schools, significant crossover was identified between the definition of these terms and their respective data sources. In some instances, the definition of terrorism does not include major acts of mass, indiscriminate violence against schools because of the lack of an overt ideological motivation (eg the Sandy Hook Elementary School attack). However, other acts are included under both definitions and multiple databases related to terrorism and mass violence against schools (eg the Columbine High School attack). As a result, two separate analyses were conducted. One focuses on the term 'terrorism' and the other focuses on the term 'mass violence'.

To allow for a robust understanding of the potential threats from terrorism and mass violence, the analyses are conducted distinct from one another, and from the lens of their respective datasets and definitions (defined below). This retains the integrity of the term definitions and datasets, without omitting critical incidents necessary to understand the full threat landscape. However, it precludes the ability to analyse the datasets against each other, as the full extent of overlap is beyond the scope of the present paper.

Additionally, for the purposes of this analysis, the terms 'schools' and 'education institutions' refer to those providing education to children typically aged 18 or younger, although it is acknowledged there are some variations in developing settings. Universities and other educational institutions that primarily serve adult populations are not included in this analysis and were removed from the datasets described below.

Terrorism targeting schools: internationally and in the USA

For the purpose of this paper, the study adopts the definition of terrorism utilised by the National Consortium for the Study of Terrorism and Responses to Terrorism (START) at the University of Maryland. Data used in the paper were drawn from the database developed by START, which includes publicly available data from open sources, including news archives, other data sets, and secondary source materials. According to START, the terrorist attacks included in their database needed to meet two of three possible criteria: (1) the act was aimed at accomplishing a political, social, economic or religious objective; (2) there was evidence of an intention to intimidate, coerce or convey a message to a larger audience beyond the immediately affected; and (3) the act did not fall within the precepts of International Humanitarian

Law. The dataset spans attacks from 1970 to 2014, and documents attacks against any educational institution.[9] As the questions at hand pertain to terrorism against child-serving institutions, the data were coded to indicate grade level (eg primary, secondary). Data were also included if school grade was not identified but there was information about the gender of victims. However, data entries about attacks against non-child serving institutions, or in which it was not clear whether children were the primary student body, were not included. The analysis is limited to publicly available documentation and is meant to characterise general patterns in terrorism against schools rather than report on the absolute number of such attacks. That said, this database was chosen as the basis of part of the following analysis because of the consortium's designation as a US Department of Homeland Security Center of Excellence, and for its level of detail.

Mass violence targeting schools in the USA

In addition to START's dataset, this paper seeks to capture the full range of school vulnerability by also reviewing mass violence attacks against US schools. This was possible through the use of data collected by the Stanford Geospatial Center (SGC).[10] The SGC dataset, which begins in 1966, originally contained 216 recorded mass shooting events in the USA, defined as incidents involving an active shooter who shot three or more people in a single event. Thirty-nine incidents remained after the data were filtered to include only shootings against children in schools in the USA (primary and secondary). It should be noted that while this dataset is a robust collection of mass shooting events, it does limit our understanding of mass violence events to those involving firearms.

RESULTS

The following sections outline the results from the analysis of each dataset, based on the definition utilised for its analysis.

Terrorism targeting schools: Global trends

Attacks against schools, or specifically targeting school-related activities or infrastructure, have been rising globally since 1970. The data show a dramatic increase over time in incidents of school and child-related violence in the first decade of the 21st century.

Figure 1 shows that from 1970 to 1999, the quantity of attacks against educational institutions fluctuated but remained consistent. The initial half of both the 1970s and 1990s saw the most violence during each respective five-year period, with 26 and 29 incidents, respectively. However, the overall number of attacks before the year 2004 remained relatively low compared with later periods. The following five years, from 2000 to 2004, show a modest increase, and then from 2005 to 2009, show a significant surge in attacks against educational institutions for children. The total number of attacks from 2005 to 2009 outnumbers the total number of attacks that occurred during all of the preceding years combined. During the last period, between 2010 and 2014, the number of attacks exceeded the number reported during the previous five years three-fold (see Figure 1).

Another important pattern to consider is the type of school being targeted globally. Of the 1,031 attacks, primary and secondary schools experienced the greatest burden of attacks, with 451 and 253 incidents, respectively. These were followed by 93 attacks on middle schools, 12 on kindergartens, five on nurseries, and four on daycare centres. There were also 18 attacks on school vehicles, five on playgrounds, 15 on multiple schools at once

Figure 1: Terrorist attacks against child-serving educational institutions globally, 1970–2014
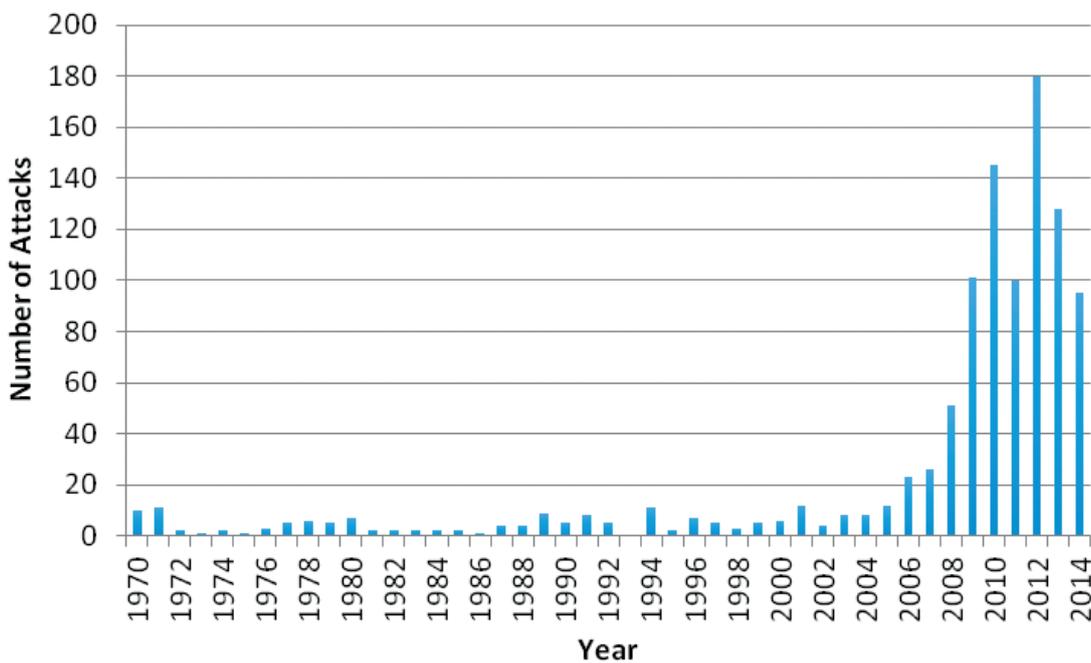
or schools of mixed grade levels, and 175 on child-serving schools where the exact grade levels could not be determined.

Figures 2 and 3 illustrate the distribution of events by primary attack type and weapons used. Bombings/explosions were predominantly the attack method of choice. Almost 70 per cent of the terrorist acts were carried out using explosives, bombs and dynamite. Following attacks by bombing and explosions are facility and infrastructure attacks. These were the kinds of events where the primary objective was to cause damage to non-human targets, although incidental human harm could occur.

Terrorism targeting schools: The USA

While North America accounts for only 4 per cent of the total global terrorist attacks against children in schools, extensive documentation in the USA provides an illuminating view on the trends seen in attacks against children in schools. In terms of terrorist activity, the rate of

incidence has been on the decline. While the period between 1970 and 1974 saw 21 terrorist attacks against educational institutions, the proceeding years through to 2014 saw a total of five. Two attacks occurred between 1975 and 1984, one between 1985 and 2004, and two between 2005 and 2009.

Many of the assaults in the first half of the 1970s were racially-charged. Among the 22 attacks that occurred between 1970 and 1976, 19 were perpetrated by groups with declared race-based intentions. The remaining attacks between 1977 and 2014 appear to have no explicitly racially-charged motives.

Mass violence targeting schools: The USA

The analysis discovered 39 mass shooting events at schools since 1966. These 39 events against schools with children in the USA do not reveal clear patterns in the rate, number of fatalities or geographic distribution of school-targeted mass attacks.
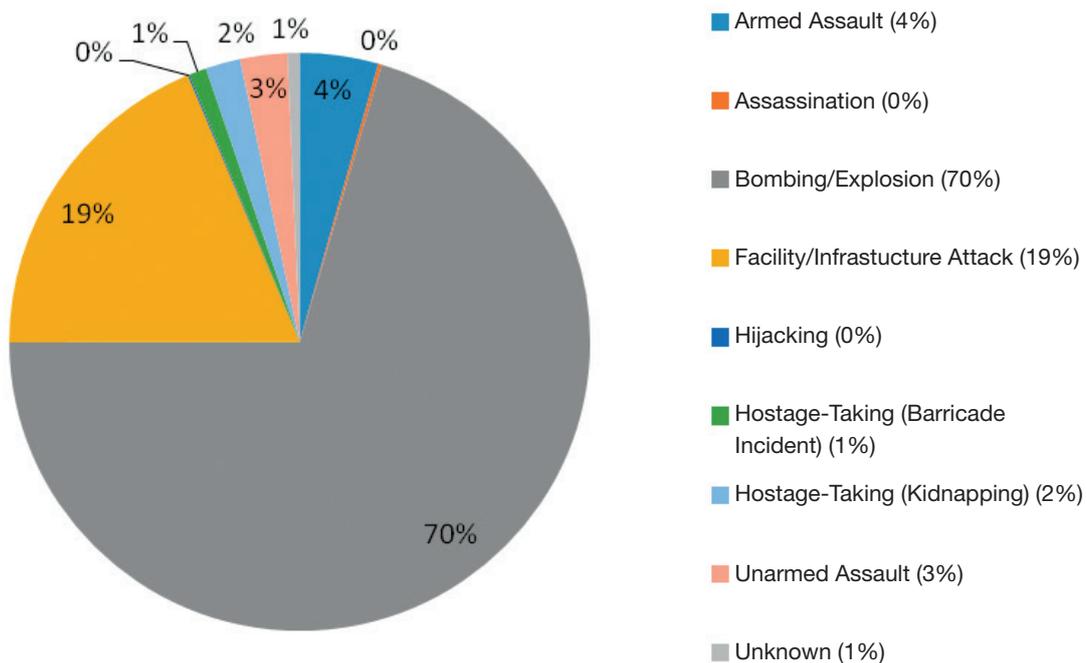
Armed Assault (4%)

Assassination (0%)

Bombing/Explosion (70%)

Facility/Infrastucture Attack (19%)

Hijacking (0%)

Hostage-Taking (Barricade Incident) (1%)

Hostage-Taking (Kidnapping) (2%)

Unarmed Assault (3%)

Unknown (1%)

Figure 2: Terrorist attacks against child-serving educational institutions globally, 1970–2014, by attack type

Chemical (3%)

Explosives/Bombs/Dynamite (68%)

Firearms (7%)

Incendiary (18%)

Melee (1%)

Sabotage Equipment (0%)
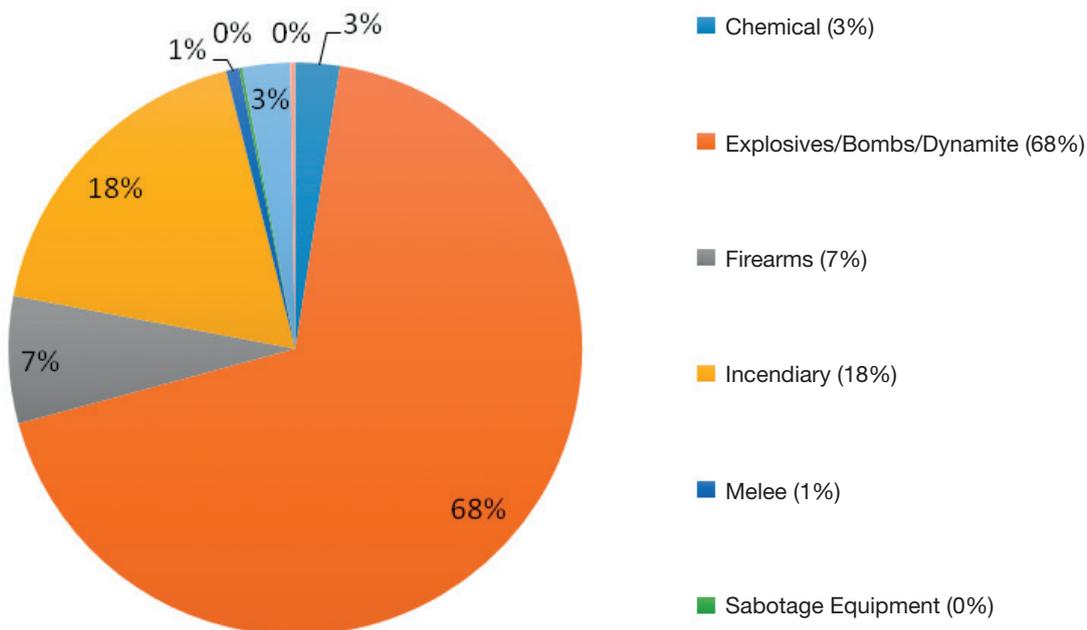
Figure 3: Terrorist attacks against child-serving educational institutions globally, 1970–2014, by primary weapon type

However, the data point towards areas of further study, such as understanding mental illness as a contributing factor in assailant motivation and the vulnerabilities of secondary versus primary schools.

Figure 4 shows an erratic pattern in the total number of incidents of mass shoot–ings since 1966 (the first data point with the school filter occurring in 1974). While there seems to have been a spike in mass

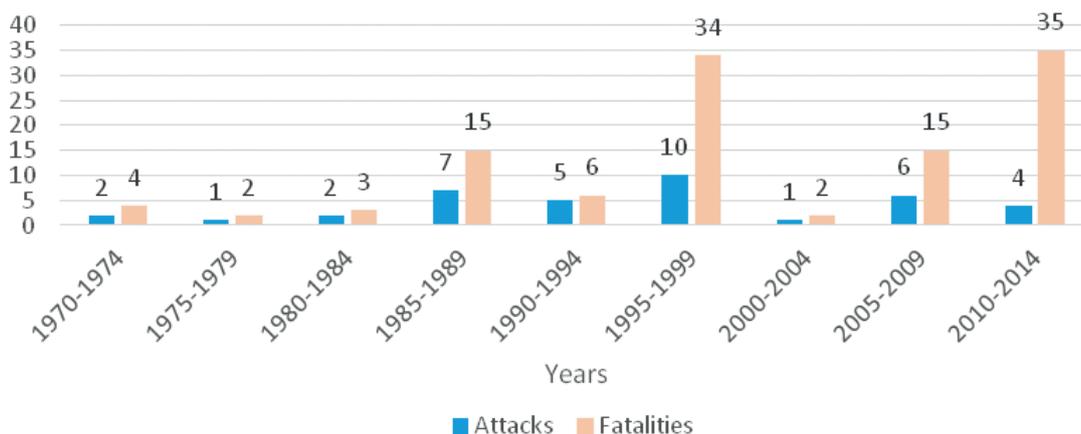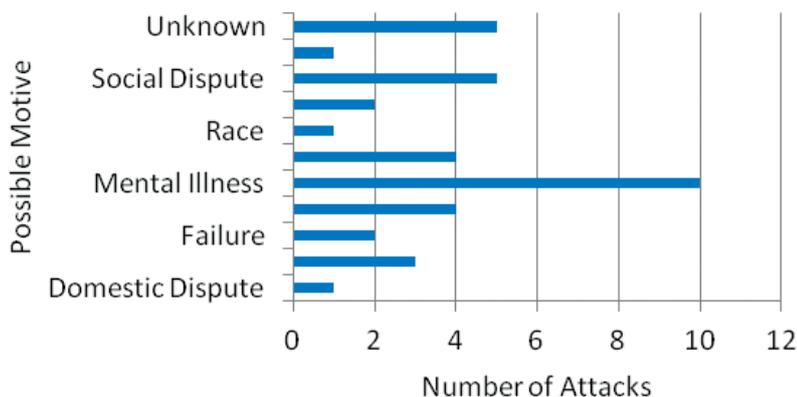*Figure 4: Number of attacks and fatalities in mass shootings against US schools, 1974–2014*

Figure 5: Mass shootings against US schools 1974–2014, by possible motive

shootings between 1985 and 1999, the following 15 years show an immediate sharp decrease and then a gradual incident increase. Figure 4 also shows the number of victim fatalities over time for these same events. Again, the pattern is erratic, although there does seem to be a general increasing trend in the number of victims. The period between 1995 and 1999 has the most fatalities at 34. An interesting note is that while the period from 2010 to 2014 has seen only four incidents, it already has the highest number of fatalities to date.

Figure 5 shows the breakdown of possible motives as identified by the SGC. The incidence of mental illness as a motivation for the attacks far outweighs the other 11 categories.

Figure 6 disaggregates the attacks on primary and secondary schools in the USA over time. Generally, there have been more attacks on secondary schools than primary schools.

DISCUSSION

Acts of terrorism against schools remain primarily an overseas phenomenon, whereas acts of mass violence, and specifically school shootings are less rare, and exceptionally deadly events in the USA. With this in mind, mass violence represents what is happening in the USA and acts of terrorism represent what is possible. Therefore, considerations of both of these kinds of threats must be integrated into preparedness planning.

Acts of terrorism in the USA, like other rare events, are difficult to anticipate fully. As such, there is a paucity of data available to understand the optimal balance between protection, response and preserving day–to–day freedoms. It is important to recall that nearly three-quarters of the acts of terrorism against schools were perpetuated as bombings with explosives or incendiary devices utilised. Firearms as the primary weapon accounts for only 7 per cent of acts of terrorism against schools globally. While there may be some bias in the definition of terrorism that under-reports mass shootings, it is reasonable to assume that bombing is a major tactic of attacks against schools overseas and should be better understood for domestic pre-paredness. Additionally, although mental health is a commonly identified factor in school shootings, it is not clear how rel-evant it is for acts of terrorism. The major planning assumptions for a mass shooting incident based on the current data may not be useful in preparing for an act of more organised terrorism. Therefore, more strategic planning should be con-ducted, opening up to a wider range of uncertainty regarding the kind of response that could be needed. It should also be noted that the impact of even a single act cannot be overstated, and no life should be lost due to complacency in planning assumptions.

Although many tools exist for all hazards preparedness for schools, they generally provide little guidance on preparing schools for the unique protective actions required for protecting against acts of terrorism. Specific to the USA, some guidance and tools for preparing schools for mass shoot-ings have been made available. Several active shooter programmes with a focus on school preparedness have been devel-oped by the US Department of Justice, the Department of Homeland Security and others.[11–13] Private foundations and other
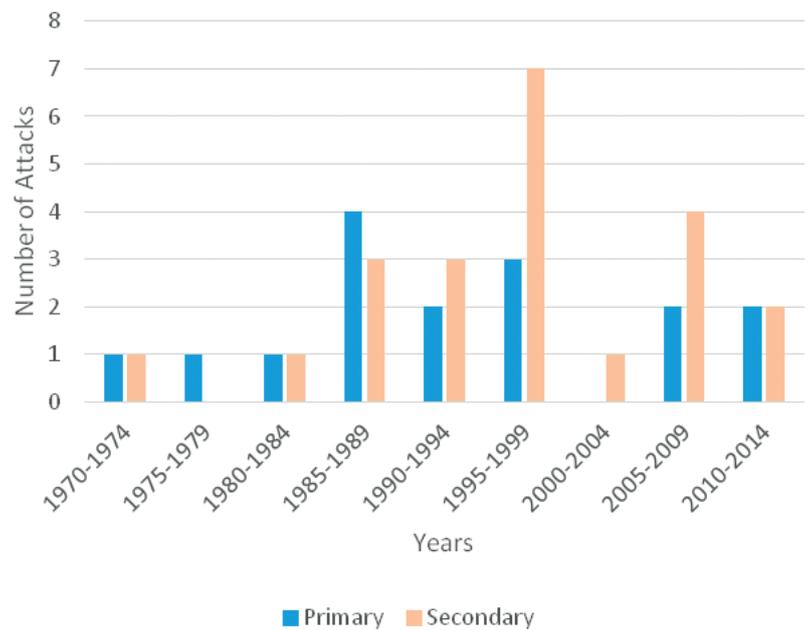

Figure 6: Mass shootings against primary and secondary US schools, 1974–2014

private sector organisations, such as the iloveuguys Foundation (http://iloveuguys.org/) and the ALICE Training Institute (http://www.alicetraining.com/) have also developed programmes and resources to prevent and respond to such incidents. These programmes provide a good start to establishing guidelines and processes that schools can adopt to protect children. What is less clear, however, is the extent to which this is being adopted by schools, as part of their normal operations. The availability of programmes does not neces-sarily signal their adoption and ability to implement them. Schools should seek to implement these programmes into their operations through trainings, drills and exercises. To the extent possible, fami-lies and students should also be involved in preparedness efforts. First responder organisations should also be included as they will be the first to respond and will manage most of the tactical opera-tions as emergency management and other regional coordinators are activated to respond to these.

The absence of strategic national leadership on school preparedness was recently noted by the US Government Accountability Office.[14] Building on these findings, more should be done to provide dedicated programmes on understanding the full threat landscape and how to prevent future acts. The development of programmes by the Departments of Justice and Homeland Security address tactical considerations for preparedness; however, issues related to mental health factors that lead to terrorism fall more under the purview of the Department of Health and Human Services, while oversight of educational institutions in the USA falls under the Department of Education. For real preparedness to be adopted, evaluated and improved upon, a unified strategy should be developed that is inclusive of all of the relevant national partners.

Finally, any preparedness requires extensive work to be conducted at the facility level. This must occur in an already resource-constrained environment where teachers and school administrators struggle to stretch limited budgets to meet the educational needs of the children they serve. It is not realistic to expect meaningful preparedness activities to be conducted without dedicated resources to conduct preparedness programmes, nor is it fair to ask schools to choose between protecting and educating the children they serve.

CONCLUSION

The threats for which schools must be prepared are increasingly varied and complex. Mass shootings, as an act of indiscriminate violence, although rare, are more likely to be encountered in the US educational landscape than coordinated acts of terrorism. In addition to this, the threat of organised terrorism against US schools can be said to be increasing, as demonstrated by the scale and scope of attacks happening overseas. As terrorism against schools is increasingly adopted as a tactic of foreign terrorists, schools in the USA should be prepared for the importation of these ideologies and tactics.

Preparedness for domestic instances of mass violence, particularly mass shootings, should continue to be expanded. This should include national leadership and resources for the dissemination, adoption, evaluation and refinement of comprehensive programmes to prevent and respond to mass shootings at schools. This should be done in a way that is additive to the current educational resources, and developed in concert with the schools that are doing the work of preparing for these events.

Preparation for acts of terrorism should involve taking a deeper look at the tactics being employed overseas, particularly by groups with the ability to conduct operations in the USA and/or that have expressed a desire to do so. These tactics should be tested against current school preparedness planning to determine what additional components are necessary to prepare for these acts. Additionally, as the threat landscape keeps changing, contemporary data and analysis will be a necessary input to effective preparedness. Academic centres and policy institutes should consider establishing programmes and initiatives that place a greater emphasis on researching acts of terrorism and mass violence against schools.

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