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Improving the Understanding of Mass Shooting Plots

Final Progress Report for Award 2019-R2-CX-0003, July 1, 2020 – December 31, 2021

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1. Summary of the Project

Overview

This project expanded on the earlier U.S. Terrorist Incidents and Plots (TIPS) database to include attempted and completed mass shooting plots. Specifically, the research team collected data on mass shootings plots, including plots foiled in advance or on-scene of the attack, from both open sources and from previously unreleased, official records from law enforcement agencies to identify promising indicators of potential mass shootings plots, models for prioritizing investigations, process and policy barriers to foiling plots along with solutions, and factors contributing to plot lethality along with ways to defend against them. By employing analytical methods used in terrorism research, the team identified false positive cases for use as a control group enabling a comparison of credible vs. suspected mass shooting plotters. To identify characteristics associated with plot lethality, the research team collected data on perpetrator, bystander, and first responder behaviors and tactics to identify ways to strengthen security in public soft target locations. Data on threat prioritization was collected to enable advanced statistical and machine learning analyses comparing the four types of threat assessment outcomes: true negatives, true positives, false positives, and false negatives, as well as using mathematical computations to enable police agencies to prioritize incoming tips based on the findings.

This project sought to help answer three primary research questions:

1. What are the threat indicators and investigative procedures that better identify potential active shooters while also reducing the burden on police agencies and those identified incorrectly?

2. What are the barriers to discovering and halting active shooting plots, and how are those barriers mitigated?
3. What are the key factors impacting the likely casualties of attempted mass shootings?

The team also developed an online toolkit for use by law enforcement officers, other government agencies involved in prevention and response, policymakers, funders, and the public. This, the core deliverable of the project, is the Mass Attacks Defense Toolkit.

The Mass Attacks Defense Toolkit advances efforts to prevent and reduce intentional, interpersonal firearm violence and public mass attacks in the United States. The goal of this toolkit is to provide practical strategies and guidance on deterring, mitigating, and responding to mass attacks for a variety of audiences, including public safety experts, practitioners, policymakers, community groups, and the general public.

The toolkit is organized by the three phases of the Mass Attacks Defense Chain. Each phase contains findings that are relevant for both the whole-of-community perspective and individual community partners, including public safety, education, infrastructure, and government professionals.

Methodology

Toolkit findings were synthesized from three primary categories of information:

1. data on previous mass attacks or foiled mass attack plots
2. reviews of prior scholarly articles and guidance on mass attacks
3. responses from subject-matter expert interviews.

Research Partners

RAND Corporation researchers collaborated with RTI International to define, identify, and collect data on cases of mass violence or failed or foiled mass violence plots. Separately, interviewers from the Lafayette Group, Karchmer Associates, and RAND conducted a series of

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interviews with law enforcement, public safety, and security representatives. Analysis from each effort was used to identify and contextualize recommendations. Following the completion of an earlier version of this toolkit, an expert panel reviewed the findings and materials for operational validity and utility.

Plot Data Collection and Analysis

We began by defining mass attacks and mass attack plots and identifying key details for plots and incidents, then compiling cases into a database for analysis. Of interest were mass attacks, mass attack plots, and mass attack no-incidents or false positives in the United States from 1995 to 2020. We define each as follows:

- **Mass attacks** and **mass attack plots** are defined as any violent attack or plot (conspiracy) to engage in an attack in a public space (including schools and workplaces) in the United States that endangered, or was intended to endanger, the lives of four or more people. In this definition, we exclude attacks specifically related to gangs, organized crime violence, terrorism plots prior to 2002 (to avoid statistical and operational complications from including the September 11, 2001 [9/11] and Oklahoma City attacks), and domestic violence incidents in which the unaffiliated public is not deliberately targeted.

- **No-incident** or **false-positive cases** are defined as those involving a non-preliminary investigation or arrest of an individual suspected of preparing to commit a mass attack (as defined above) in the United States, where it turned out that the individual was, in fact, not likely planning or preparing for such an attack. Although such cases might include an individual being acquitted of charges or a prosecutor dropping charges against an individual, they do not include cases in which an individual has agreed to a plea bargain.

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We drew on 27 existing databases of mass attacks in the United States, along with customized Google searches, to identify all three types of cases during this period that met the definitional criteria. The case identification process consisted of three steps. First, we mined the following databases and sources for mass attacks and mass attack plots that matched the definitional criteria.

Databases and Sources

Public Mass Shootings

- Violence Policy Center's "Concealed Carry Killers" (Violence Policy Center, 2021a)

- Violence Policy Center's mass shootings involving *Large Capacity Ammunition Magazines* (Violence Policy Center, 2021b)

- *Mother Jones'* "U.S. Mass Shootings, 1982–2021" (Follman, Aronsen, and Pan, 2021)

- Advanced Law Enforcement Rapid Response Training's (ALERRT's) Active Attack Events data (ALERRT, undated)

- Federal Bureau of Investigation's (FBI's) "Active Shooter Incidents" (Blair and Schweit, 2014; FBI, 2021) and FBI's "Active Shooter Resources" webpage (FBI, undated)

- The Violence Project's "Mass Shooter Database," version 2 (The Violence Project, undated)

- Everytown for Gun Safety's "Ten Years of Mass Shootings in the United States" (Everytown for Gun Safety Support Fund, 2019)

- Grant Duwe's Mass Shooting Database (Duwe, 2020)

- Crime Prevention Research Center's Mass Public Shootings Cases spreadsheet (Crime Prevention Research Center, undated)

- John Lott and Carlisle Moody's Mass Public Shootings in the U.S. (Lott and Moody, 2019)

- Lankford and Silver's Public Mass Shootings in the U.S. (Lankford and Silver, 2020)

- Mayors Against Illegal Guns' *Analysis of Recent Mass Shootings* (Mayors Against Illegal Guns, 2013)

- U.S. Secret Service's *Mass Attacks in Public Spaces* reports (National Threat Assessment Center, 2018; National Threat Assessment Center, 2019; National Threat Assessment Center, 2020)

- Stanford's "Mass Shootings in America" (Stanford Geospatial Center, undated)

- New York Police Department's active shooter report (O'Neill, Miller, and Waters, 2016)

- Citizens Crime Commission of New York City's "Mass Shooting Incidents in America" (Citizens Crime Commission of New York City, undated)

Terror- or Hate-Related Mass Attacks

- National Consortium for the Study of Terrorism and Responses to Terrorism's (START's) Global Terrorism Database (START, undated)

- Institute for Homeland Security Solutions TIPS Database

- Sweeney and Perliger's Hate Crime Incident Database (Sweeney and Perliger, 2018)

- Germain Difo's *Assessment of Foiled Plots Since 9/11* (Difo, 2010)

- Crenshaw, Dahl, and Wilson's Unsuccessful Terrorist Attacks Against the U.S. report (Crenshaw, Dahl, and Wilson, 2017)

- Heritage Foundation's Foiled Terror Plots Since 9/11 database (Bucci, Carafano, and Zuckerman, 2012)

- Anti-Defamation League's Terrorist Conspiracies by Right-Wing Extremists database (Anti-Defamation League, 2015)

- Southern Poverty Law Center's Terror from the Right database (Southern Poverty Law Center, undated)

- Wikipedia's List of Unsuccessful Terrorist Plots (Wikipedia, 2022a)

School-Based Mass Attacks

- National Police Foundation's Averted School Violence Database (National Police Foundation, undated)

- Naval Postgraduate School's Center for Homeland Defense and Security's K–12 School Shooting Database (Center for Homeland Defense and Security, undated)

- Wikipedia's List of Unsuccessful Attacks Related to Schools (Wikipedia, 2022b)

Because of an inability to assess whether cases met the inclusion criteria, we did not include data from the FBI's Uniform Crime Reporting Program, the Centers for Disease Control and Prevention's National Violent Death Reporting System, or the Gun Violence Archive. We conducted additional data set and case identification for foiled plots occurring between 2016 and 2020.

Data Processing

After extracting all unique cases that met the definitional criteria from the data sets, we created custom search strings to conduct Google searches for any mass attacks or mass attack plots that existing databases might have missed. This process was useful in identifying cases of unsuccessful mass attacks (i.e., those in which a subject did not kill or injure at least four bystanders before the attack was thwarted), as well as failed or foiled plots that were never initiated. The search strings contained the following terms: "'at random' attack," "foiled attack," "prevented mass shooting," "mass attack prevented," "bombing prevented," "bombing plot," "mass attack," and "shooting plot." For 2020 specifically, we added the following search strings: "knife attack," "car attack," and "truck attack."

Finally, to further ensure that searches captured events that occurred in 2020 (the most recent year considered), we consulted the Gun Violence Archive and FBI press releases for that year.

Because the case-sampling strategy oversamples 2016–2020 (and especially 2020) to focus on recent developments in mass attacks and defenses, this data set should not be used to assess trends in the numbers of cases per year. RAND's Gun Policy in America website addresses trends in mass shootings on its research review page **Mass Shootings in the United States** (Smart and Schell, 2021).

To identify cases that met the definitions of *mass attack* and a *completed attack*, a *failed attack*, or a *foiled plot*, we conducted a brief review of each case in each of the 27 data sets and applied the inclusion criteria to filter cases into a new data set for further review and case coding. Within the first two groups of data sources—public mass shootings and terrorism-related mass attacks—we reached saturation well before reviewing every data set, which provided confidence in the number and representativeness of included cases. Given the large volume of school-based threats that are deemed credible by law enforcement and thus meet the project definition of a foiled plot, we did not reach saturation but obtained a large enough sample for analysis of our third group of data sources.

To code specific details about each identified case, we first collected sets of variables coded in previous studies and data sets that address mass attacks. We then collected input from team members to identify which variables to collect data on for each mass shooting event included in the database. We originally identified 93 variables across the following four categories:

- subject (demographics, history, prior activities, planning and preparation)—44 total variables

- attack (weapon characteristics, site characteristics)—13 variables

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- event (action characteristics, outcome characteristics)—ten variables

- response (law enforcement and government response, bystander response, medical and other response, investigation)—26 variables.

To narrow down the list into a set of variables within the subject category and prioritize data collection, we rated each variable on a scale of 1 to 3 on the basis of observability, actionability, and predictability. We undertook a similar exercise to identify a short list of variables within the attack, event, and response categories, rating each variable on the basis of ease of data collection and impact on lethality (again on a 1–3 scale). We selected variables that consistently scored above the mean and median rating scores in each category, as well as above the mean and median scores of all 93 original variables. We collected information on a total of 33 variables included in the short list:

- 17 subject variables

- four attack variables

- nine event variables

- three response variables.

The project team created a data set and associated codebook (which are available upon request) that list all the aforementioned variables, definitions, variable types (e.g., categorical, integer, text), and the possible values for categorical variables. After identifying potential cases that appeared to meet the inclusion criteria, we spent an average of 20–25 minutes reviewing online news articles, reports, and data sets to collect information on each case. This step also involved further screening of cases based on the inclusion criteria. A program director with experience collecting data on mass attacks supervised four case coders and reviewed cases on a regular basis to ensure accuracy and consistency in case coding. In addition to conducting

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periodic case review, the program director assigned 15 test cases to each coder, and we met in a group to identify and discuss differences in coding decisions at the beginning of the project. Additionally, the coding team met regularly to discuss coding questions related to specific cases, the codebook, or inclusion criteria. In total, we coded 640 mass attack events.

After the case coding stage concluded, both RAND and RTI researchers selected a random sample of 50 coded cases and did an in-depth review of each case to identify incorrect values in each of the variables. RAND and RTI team members identified common data entry errors that were manually and programmatically corrected for the remaining cases. The initial clue and triggering clue variables for foiled plots were specifically examined to correct any coding errors.

Subsequent to this review, RAND analysts reviewed the set of cases and performed additional data-cleaning steps, including converting numeric variable values to plain text and updating a small number of incorrectly coded values. RAND analysts then used a series of analytic methods, primarily using the statistical software R, to create numeric and graphical summaries of key variables. Tables, along with such graphics as bar charts, histograms, and word clouds, were generated for researchers to incorporate into literature review and interview findings. We performed basic statistical tests, including analysis of variance and Chi-squared tests, to assess relationships between key variables.

RAND analysts also used artificial intelligence/machine learning (AI/ML) models on text descriptions within the case data to see whether it was possible to build meaningful models matching text content with an increased likelihood of casualties. To do this, we employed the [AutoML system](#) from H2O (H2O.ai, undated). This system generates testing and training data splits and searches through hundreds of algorithms to seek those with the best predictive accuracy, including deep learning, random forest, and linear models. The system also evaluates

stacked ensemble combinations of the models that work best. In this analysis, deep learning and stacked ensemble models worked best, with a simple linear model also having top-ranked performance. However, we were not able to generate actionable findings from the models; our best interpretation of the models' results is that there were more data and longer descriptions on higher-casualty incidents. Thus, the results shown in the toolkit reflect much simpler analyses.

Literature Review

We reviewed more than 200 scholarly articles, guidance and training materials, and supporting tools related to preventing and defending against mass attacks. The literature search had the following two purposes:

- to identify conclusions in prior literature that could directly inform findings and recommendations for this toolkit

- to identify external resources that provide detailed, specialized information and guidance on specific steps of the Mass Attacks Defense Chain. The intent is that any individual or organization in need of more detail on a particular issue could access that information through resources linked from the toolkit. This category also included finding tools that help implement specific steps of the Mass Attacks Defense Chain (e.g., fillable forms to support threat assessment and follow-up actions).

Identifying Findings

For the first purpose (i.e., identifying conclusions in prior literature), we searched for journal articles and government and think tank reports that had findings that are directly relevant to one of the following core topics:

- the most-relevant warning signs of a potential mass attack plot and how to assess them (e.g., findings on what should be reported to authorities)

- the most-relevant factors that should be used in threat assessments and how to use them

- factors associated with successful assessments and follow-up actions leading to stopped plots

- factors associated with reduced casualties during attacks, including site security characteristics and measures, bystander actions, police response actions, medical treatment, and command and control actions.

Searching was carried out through a combination of (1) nominations by team members who follow mass shootings and counterterrorism literature and (2) internet literature. We prioritized peer-reviewed journal articles that included comparisons to control groups of nonshooters and nonattackers and then articles that at least noted the major false-positive challenges in this field. Thus, we placed less emphasis on articles that considered only a handful of exemplar cases and/or presented findings about indicators that apply to large percentages of the population (e.g., demographics, common mental health conditions, common personality traits). Key types of evidence include the following:

- Factors linked with actual plots: Did the presence of the factor significantly change the probability that the subject was planning an attack, as opposed to being in a control group? (Use of this factor requires a control group in the source article.)

  – We also experimented with using information-gain calculations to assess, in an information-theoretic sense, the value of knowing that a given factor was present in determining whether a subject was in the attacker group, or the control group.

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- Factors linked with plots being foiled: Did the presence of the factor significantly change the relative probability that the plot was foiled successfully, as opposed to reaching execution?

- Factors linked with increasing or decreasing casualties: Did the presence of the factor significantly increase or decrease the average casualties during a mass attack? This category included both simple statistical comparisons and regression models. It also included both empirical reviews of past mass attacks and laboratory experiments testing simulated shooters under varying conditions.

We also included some articles and guidance documents presenting findings based on the agency's (or authors') extensive case experience, with source data not provided for sensitivity reasons. These include major federal guidance documents, such as the interagency booklet *Homegrown Violent Extremist Mobilization Indicators* and the FBI Behavioral Analysis Unit's *Making Prevention a Reality: Identifying, Assessing, and Managing the Threat of Targeted Attacks* (FBI, National Counterterrorism Center, and U.S. Department of Homeland Security, 2019; Amman et al., 2016).

For each article or report, we captured specific findings on warning signs, indicators, or casualty-mitigating measures. We noted the specific step in the Mass Attacks Defense Chain to which they applied (e.g., initial detection, threat assessment) and captured the type and strength of evidence.

We further reviewed all potential indicators and factors in terms of their operational feasibility and suitability (e.g., for warning signs and indicators, they were behaviors that could be observed, were operationally meaningful and actionable, and had a direct nexus to mass attack

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preparation; for attack mitigators, they were security measures or procedures that were likely to be operationally feasible and suitable).

We did not observe directly conflicting findings between our own case analysis and the key findings we captured from the literature; our findings were largely consistent with those of the prior analyses.

Identifying External Resources

We found candidate external resources through a combination of nominations by research team members, nominations by our expert interviewees, nominations by our advisory panelists, and online searches. Resources were reviewed for

- operational relevance at specific steps in the Mass Attacks Defense Chain

- how operationally actionable the information contained in the resource was to support the implementation of a specific step

- how widely applicable the resource was (e.g., guidance from federal agencies or professional associations intended for nationwide use was prioritized over guidance that was highly localized to a specific jurisdiction)

- credibility, as assessed by expert review, evidence (e.g., citation) included in the resource, and consistency with findings from the scholarly literature and our case analysis.

We selected specific resources for the toolkit based on how operationally relevant they were in providing detailed information or tools in support of specific steps in the Mass Attacks Defense Chain. Our objective was to provide a core assortment of resources for each step that is operationally useful and comprehensive but not overwhelming.

Subject-Matter Expert Interviews and Analysis

Interviews were conducted with subject-matter experts across all levels of government and communities (e.g., law enforcement, private sector, religious institutions) who might have worked to prevent or respond to mass violence attacks to garner insight on prevention. Each initial interview was scheduled for one hour and included at least a primary interviewer and a primary notetaker. Follow-up interviews were scheduled in a few instances where there were specific programs to discuss in greater depth. We drafted an interview protocol for use across all interviews that focused on the following categories: indicators, identification, mobilizers, prevention, response, and false positives. The interview questions were developed by soliciting potential questions from the research team and compiling them into a structured approach that would lend the discussion notes to comparative analysis while allowing the flexibility for interviewees to share additional details on elements that were important to their mass violence preparedness, prevention, and response. The research team was made up of law enforcement and public safety practitioners and consultants, law enforcement criminal intelligence analysts, and researchers in mass violence and policing.

For the purposes of data collection and analysis, a dedicated notetaker took verbatim notes during each interview; team members who participated in the interviews then reviewed these notes to add any information that was not originally captured in the notes. Members of the team then coded each set of interview notes using an a priori coding structure aligned to research questions and the interview protocol. Working collaboratively, two team members developed a thematic synthesis using major codes and identified detailed codes. The interview materials were then recoded using these detailed codes, and team members drafted a synthesis of major themes for each interview using the detailed codes. The team organized data pertaining to each

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interviewee by major and detailed codes in a Microsoft Excel workbook to provide counts of responses on various topics, along with illustrative quotations, and to track relevant quotes that were specific to various topics.

Advisory Panel Review

Following the drafting of the toolkit, we assembled a panel of subject-matter experts and had members review pages from the toolkit using their expertise. We then met with panelists in subgroups by area of expertise (detection and threat assessment; civil, privacy, and legal considerations; schools and state and local governments; tactical and first responders; academia and business; and faith, community, and social services). The members of the advisory panel provided significant feedback on the structure, framing, and specific content. They also suggested external resources to include, which we incorporated in revisions to this toolkit.

Note on Post-Attack Findings

The Post-Attack phase (Phase III: Follow Up After the Attack) was not part of the original terms of the study; it was added as a result of expert interviews, when it became clear that post-attack actions needed to be added to the Mass Attacks Defense Chain to support community resilience to—and learning from—mass shootings and other mass attacks. Thus, the Post-Attack findings are based on the expert interviews and literature searches; the case data and analysis do not provide material on the Post-Attack phase.

2. Findings and Outcomes

The toolkit includes over 50 pages of detailed guidance, tips, supporting analyses, and references for those in a wide range of roles related to preventing or responding to mass attacks. Thus, we summarize only the top-level findings and recommendations here.

There are three overarching findings: the needs for proactive prevention, relentless follow-up, and diligent training.

Proactive Prevention

Stopping shooting plots in advance depends on the public knowing what to report and how to report it. Almost two-thirds of foiled plots, in our data, came from public reporting.

- The principal types of clues are straightforward – signs of intent or action. This means signs of someone seriously *intending* to attack and *preparing* to attack.

- For *intent*, key examples are claims of being inspired by past attacks, claims, that they, personally, will fulfill an extremist cause, and claims that someone or some group is so threatening that they have *no choice* but to attack.

- For *preparation*, key examples are work to learn how to kill as many as possible, developing written plans for an attack, attempting to recruit others, coordinating with known violent extremists, seeking arsenals of weapons and ammunition without a benign reason like hunting, travel for paramilitary training or to get to the target, or site probing or breaching

- Actions related to gaining capabilities to kill—such as trying to learn to kill more effectively or amassing the arsenal to do so—are of special concern because bringing more-lethal skills and weapons to attacks is unsurprisingly related to causing higher casualties.

Relentless Follow-Up

There need to be interagency teams assessing the reports and following up with the parties involved. To provide assurance, there needs to be a single lead point of contact for each case ensure the follow-up actions get done, with no information collection or action drop-offs. Successful higher-casualty attacks tended to be associated with "dropped balls". Key elements include:

- Team members representing different communities and types of expertise within the organization, and, ideally, representatives from other agencies who directly support the organization regularly

- An assessment model that includes a set of core indicators and risk factors, information collection forms, and documented next steps in a mitigation plan. The plan needs to identify one overall responsible partner and POC for monitoring the subject and ensuring that actions are carried out.

- A threat assessment process, which includes a specific schedule for when evaluations and reevaluations will occur and what major events or discoveries will trigger reevaluations or emergency interdictions (for extreme-threat discoveries). The process also needs to include procedures for changing the responsible partner as circumstances dictate (e.g., a

need to move from law enforcement investigations to providing health services, or vice versa).

- In general, discoveries indicating a person is motivated to, or is preparing, to carry out violent acts should raise their risk significantly.

- Suicidality, domestic violence, other threats of violence, and seeking weapons illegally also need to be addressed.

  - *A special note on suicidality.* Caution should be taken with indicators of suicidality and serious mental health indicators. The vast majority of those who are suicidal are not would-be mass attackers. However, suicidality is a significant risk factor and warrants special attention, because preventing suicide is critical in its own right.

- Lack of a prior history of violence or serious crime, as well as a lack of skill, access, and intent for firearms, should usually lower risk.

- Relationships with a higher-level multiagency threat assessment team at the metropolitan, regional, and/or state level, which includes the relevant local law enforcement, schools, mental health providers, social services, and community organizations. This higher-level team will also include links to federal partners and resources.

Diligent Training

To reduce casualties, there needs to be advance planning and preparation of all partners who will jointly respond to mass attacks. This needs to include on-site security managers and location owners, as well. As one of our practitioner experts noted, "Heroes are made because they prepare for an incident. People never rise to the occasion; they fall back on their training."

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- **On securing venues**: Venue staff should put distance, movement, and physical barriers in place to separate shooters from bystanders. The goal is to keep shooters from surprising a crowd at close range with few opportunities to escape.

- **What the public should know**: Bystanders should understand the basic strategy of "Run, Hide, and Fight," as well as the value and risks of intervening to try to stop a mass shooting. If faced directly with a shooter, multiple bystanders tackling the shooter at once from multiple directions worked very well.

- **For multi-agency training**: Training is critical for law enforcement agencies but should be done in partnership with fire departments, emergency medical services (EMS), and public and private entities (e.g., entertainment venues); it also should include other potential actors, such as hospitals and private security.

- **For command and control**:

  – Using the Incident Command System (ICS) is a critical feature of command and communications.

  – There needs to be rehearsed procedures in place for maintaining communications and traffic control disciplines.

  – The initial officer on scene should not be the one to set up full incident command – while the initial officer is the initial incident commander, command should transfer as quickly as possible to an outside-the-scene officer who seeks the fire and EMS leaders to create an integrated command. Initial officers on scene must focus on incapacitating the shooter as quickly as possible.

- **Providing for the community after the attack**: Training needs to cover actions in the immediate aftermath of the attack response and in the longer-term, as well. Agencies and

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policymakers need to plan to establish mental health and emotional support, family assistance (and notification centers), and public communications services; longer-term they need to plan for recognizing heroes and ceremonies, as well as writing after-action reports to learn from the event.

Insights and Recommendations for Policymakers and Executives

Institutional Support for Interagency Teams

There needs to be institutional support for the interagency teams doing the report collection, assessments, and relentless follow-up. Leaders can leverage a variety of internal authorities, external tools, and funding sources to do so. Leaders can also take advantage of some economies of scale, by having, say, the assessment teams handle multiple types of concerns about risks to harming oneself or others. We anticipate that assessment teams are largely going to handle risks of violence outside of terrorism-like mass attacks, given the rarity of mass attacks (on the order of dozens per year out of a population of over 330 million).

Similarly, there needs to be institutional support for interagency response teams to do the ongoing planning, coordination, collaboration, and training required to respond to mass attack events. As with assessments, leaders can take advantage of various tools, resources, and funding streams. They can also leverage some economies of scale, especially if the interagency teams will be responding to multiple types of large-scale emergency incidents (natural and manmade) and events.

Recommendations for More and Better Policies, Procedures, and Training

- **Public education**. There is a need for more detailed public education on reporting that provides more information on what the most concerning signs are, how to report them, and why members of the public should report.

- **Preventing and detecting gun diversion**. Amassing arsenals is an inherent part of mass shootings plots. However, we found little out there on how to sell or transfer a gun safely outside of legal compliance. There is a need for public education on what suspicious seekers look like (especially those outside of conventional straw purchasers – we did find some training for them), or what to do, and how to report, suspicious activity around trying to acquire guns, ammunition, and tactical gear.

- **Wellness checks**. There was consensus among our experts that wellness checks for people reported as potentially a danger to themselves or others are key. However, we found very little guidance or training on how to do them.

- **Threat assessment rubrics**. A number of risk assessment tools identified in the toolkit provide substantial assistance in running the processes and maintaining the records needed for relentless follow-up. However, when it came to the assessment, the tools tended to list dozens of risk factors and leave it up to the assessors to determine what they meant in specific cases. We should be able to be more systematic and prescriptive in threat assessment rubrics.

- **Coordinated response**. We observed a great deal of progress, but there is an ongoing need to sponsor more coordinated response planning and training, especially across multiple responding partners.

- **Coordinated post-attack actions**. Much needs to happen to help survivors, first responders, and communities recover. As noted above,

3. Artifacts and Dissemination

Artifacts

The principal artifact is the toolkit itself:

Hollywood, John S., Dic Donohue, Tara Richardson, Cliff Karchmer, Jordan R. Reimer, Thomas
Edward Goode, Dulani Woods, Pauline Moore, Patricia A. Stapleton, Erik E. Mueller, Mark
Pope, and Tom Scott, *Mass Attacks Defense Toolkit*, Santa Monica, Calif.: RAND
Corporation, TL-A1613-1, 2022. As of June 01, 2022:
https://www.rand.org/pubs/tools/TLA1613-1.html.

The attacks plot case dataset and codebook are available upon request to RAND. While all
drawn from public information (mostly news articles), it contains a great deal of information
about specific shooters and tactics used by shooters; we therefore would prefer not to make the
descriptive text fields publicly available. A version without descriptive text will be posted to
NACJD.

Prior to its release, we made several presentations regarding the toolkit:

Hollywood, John S., "Improving the Understanding of Mass Shooting and Other Mass Attack
Plots", Presentation to the NIJ-funded Research on Mass Shootings to Advance Evidence-
based Policy and Practice Webinar, November 30, 2021.

Pope, Mark, and Hollywood, John S., "Just Mass Shooting Attacks", *Just Science* (podcast),

December 15, 2021. As of June 7, 2022: https://soundcloud.com/just_science/just-mass-

attacks.

Hollywood, John S., and Tara Richardson, "Improving the Understanding of Mass Shooting

Plots", Presentation to the American Society of Evidence Based Policing, August 27, 2021.

Outside of formal presentations, the toolkit was informally presented and discussed at
committee meetings of the International Association of Chiefs of Police and Major City Chiefs.

Dissemination Plan

- RAND's initial dissemination of the toolkit consisted of e-mailing an announcement to a list of close to 2,500 names, sending out press releases, and featuring the toolkit on RAND's web page and weekly news bulletin. In the first week, the toolkit was the third most visited page on RAND's web site, with over 5,000 visits and over 20,000 page views, according to statistics from RAND's Office of External Affairs.

- Karchmer Associates is distributing customized letters about the toolkit to over 100 agencies, leaders, and subject matter experts.

- We are creating a 90-minute online training class for InfraGard, likely to be held in July. InfraGard estimates around 1000 of their over 75,000 members, representing critical infrastructure industries, will participate.

- We are working on creating a podcast with *Police1*.

- The National Academy of Emergency Management Technicians (NAEMT) is posting the toolkit in its monthly newsletter (which has a distribution of 75,000), social media accounts, web home page, and disaster preparedness resources page.

- Future conference presentations: (1) We submitted a proposal for the 2022 IACP National Convention, although we have yet to hear whether the proposal has been accepted. (2) We will be presenting the toolkit and supporting research at the 2022 Institute of Operations Research and Management Science's National Meeting and have submitted a proposal for the 2022 INFORMS Conference on Security, to be held in Arlington, VA.

- We have been asked to brief Department of Homeland Security executives about the toolkit.

- We have been asked to brief the Pardee RAND Graduate School Board of Directors about the toolkit.

- The above are just the start; media interviews and additional presentations are being arranged.

4. Acknowledgments

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