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School Emergency Preparedness: Status Assessment at the State, District, and School Levels

Final Report

Prepared for

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Study Overview

In the last few decades, it has become increasingly critical that schools devise effective safety plans (also known as emergency operations plans or EOPs) that can guide the school community before, during, and after a violent incident (e.g., armed intruder, hostage situation). However, there is insufficient research to date on how schools develop their safety plans, what types of content these plans include, and to what extent plans incorporate protocols for violent events. There is also a lack of understanding regarding the variability in school safety plans and school emergency preparedness across schools and school districts, and whether guidelines for preparedness developed by state agencies (e.g., state departments of education) vary from one another or to what degree they resemble guidelines produced at the federal level. To better understand the state of knowledge concerning violent emergency preparedness in schools and the interrelationship between federal, state, district, and school perspectives on safety planning, RTI International conducted a two-year study in four phases. In Phase I, the project team reviewed federal and state guidelines and mandates for school safety planning. In Phases II and III, we administered a survey to district safety and security directors and superintendents, then reviewed guidelines and mandates for a subset of districts. In Phase IV, we conducted interviews with administrators from 37 schools and analyzed results from all four phases.

Research Questions

This study included research questions at state, district, and school levels:

State

- What are general observations about state materials for school emergency preparedness?
- To what extent do state guidelines for emergency preparedness resemble federal guidelines?
- What are characteristics of states with guidelines and mandates that are consistent with federal recommendations?

District

- How prevalent is serious school violence and what types of districts have experienced it?
- What resources do districts use to build guidelines for school emergency preparedness?
- To what extent do district guidelines resemble federal guidelines?
- What types of districts have guidelines that are consistent with federal guidelines?
- What types of training for violent events are offered or encouraged at the district level?

School

- What can we learn from school administrators about how schools prepare for violence, the challenges of preparing, and the types of support that schools need in their efforts?

Study Design and Methods

This study addressed the above research questions at the state, district, and school levels, by employing corresponding methodologies. We addressed questions about state guidelines and mandates through rigorous reviews of emergency planning materials posted by state agencies on their websites (Phase I). At the district level, we addressed questions about the comprehensiveness of district guidelines and alignment with federal recommendations through a national survey of school districts (Phases II and III). Finally, at the school level, we sought to better understand preparedness from the local school perspective by interviewing school officials (Phase IV). In this section, we describe the study's methodologies during each phase.

Phase I: Rubric Development and State Education Agency Document Review

Phase I involved a rigorous document review of emergency planning materials retrieved from state agency (e.g., departments of education, federal emergency management) websites and state-affiliated school safety resource centers (see Table 1 in Appendix A). Project staff developed a standardized rubric to assess the guidance that states provide to schools for emergency planning and to describe the degree to which the guidance offered by state governments aligns with core federal guidelines. The rubric was based on the *Guide for Developing High-Quality School Emergency Operations Plans*, developed in partnership by multiple federal agencies including the Department of Education, Department of Homeland Security, Federal Emergency Management Agency (FEMA), Department of Justice, Federal Bureau of Investigation, and the Department of Health and Human Services (2013). The *Guide* was chosen as the foundation for the rubric because of the breadth of topics covered, the insight provided for appropriate EOP content, and the collaborative nature of its authorship.

Creation of the rubric began with a document review of the *Guide* to identify core recommendations for emergency planning from the federal government. The initial review identified 91 guidelines. The rubric then underwent multiple revisions to reduce it to the most core items. After more rounds of revision, the rubric was finalized with 15 items across five domains: Planning, Content, Working with Community Partners, Training and Education, and External Resources. See Appendix B for the rubric. The next step was a scan of state agency websites to evaluate emergency planning materials. The review began with state education agencies (SEAs), and when appropriate, extended to other state agencies (e.g., emergency management agencies). The project team used an iterative process for locating state guidance. First, the team used a National Center for Education Statistics (NCES) web page that compiles URLs for each SEA.¹ The task leader then scanned each SEA to identify specific pages dedicated to school emergency planning, relying primarily on banners or drop-down menus. Guidance presented as free text was copied and stored in a project text file for each state. Downloadable materials (e.g., resource guides) produced by the SEA or another government agency within that state (i.e., “primary” state materials) were saved to a project folder. Materials not published by the SEA or an agency in that state (i.e., “secondary” materials) were put into a “secondary resources” file. Two analysts then conducted a deeper dive into each website, double-checking the first review to make sure no materials had been overlooked, while also attempting to uncover additional guidance by searching for terms such as “emergency planning” or “crisis response” in each agency’s search bar. After reviewing SEA materials, reviewers searched for information housed in other state agency websites. Reviews continued until the project team was confident that all publicly available materials had been located.²

Three analysts evaluated state resources using the standardized rubric. Evaluations included the following steps for each reviewer: (1) reviewing all materials; (2) assessing whether each of 15 items from the rubric were not satisfied, partially satisfied, or fully satisfied; and (3) documenting where information was found that partially or fully satisfied each item in the rubric. Reviewers categorized items as not satisfied if no information was found to suggest that this particular guidance or recommendation was made (a score of 0); partially satisfied if language used was lacking in detail, unclear, or difficult to locate (a score of 1); and fully satisfied if materials clearly and explicitly made the recommendation or provided guidance on the area of interest (a score of 2). Following assessments, the team convened to discuss how each item was scored for a given state. Discrepancies across reviewers were discussed, and the task leader made final decisions about scoring. Fourteen out of 15 rubric items could be scored with a 0, 1, or 2, and one item (providing links to secondary resources) could have a score of 0 or 1. Reviewers assigned states an overall score by summing scores for all items into a single state assessment index that ranges from 0 to 29 points.

¹ <https://www2.ed.gov/about/contacts/state/index.html>

² State agencies may provide guidance outside of their public facing websites (e.g., during state-led trainings). However, our review was focused only on publicly available materials. Thus, in scenarios in which guidance was not identified, our claim is not that this guidance does not exist but only that it was not located on public websites.

We analyzed state assessment indices and other measures representing state emergency planning requirements (see Table 2) across multiple state-level characteristics to identify qualities of states that offer high or low levels of guidance. State characteristics were gleaned from the U.S. Census (region), NCES (number of schools in the state; number of students; percentage of schools that are city, suburban, town, or rural), and the Federal Bureau of Investigation’s Law Enforcement Officers Killed and Assaulted Program. A description of these measures is provided in Table 2. Table 3 displays summary statistics for the state dataset.

Phase II: National Survey of School Districts

Sampling Frame, Sampling Procedure, Survey Administration, and Nonresponse Follow-up

In Phase II, RTI administered a web-based survey to school district safety and security directors and superintendents between January and June 2018. The sampling frame consisted of all public school districts with an e-mail address for either the safety and security director or the superintendent. Of the approximately 14,675 public school districts in the United States, 13,583 school districts had usable e-mail addresses and were eligible for the study. Demographic characteristics such as poverty status, urbanicity, and enrollment size were obtained from NCES Common Core of Data and added to the database. All targeted districts were initially contacted via hard-copy letter, then e-mail. District staff could obtain additional information about the study, including sample survey questions, through the study’s website. A toll-free number was also available to callers for any questions or concerns or for technical assistance with the survey. Nonresponding districts were reminded with repeated e-mails. In addition, trained telephone interviewers conducted telephone prompting and completed surveys by telephone with a subsample of nonrespondents. A total of 2,692 districts completed the survey (19.82% of eligible districts).

Weighting

RTI calculated statistical analysis weights such that responding districts would represent all eligible districts. We computed the weights as the product of two components—the base weight and an adjustment for nonresponse. Because all districts were included in the survey, the base weight for all districts was equal to 1. The nonresponse adjustment was calculated using the procedure WTADJUST in SUDAAN (RTI 2012). The WTADJUST procedure uses a logistic model to predict response and is designed so that the sum of the unadjusted weights for all eligible units equals the sum of the adjusted weights for the respondents. The predictor variables used in the nonresponse modeling included census division; district locale; and district size based on enrollment. RTI also created a 34-category “group” variable from a combination of census region, locale, and district size. These variables were defined for all respondents and nonrespondents. The β -parameters of the logistic model were used to determine the nonresponse adjustment factors. The formula for the weight adjustment factors calculated by the SUDAAN WTADJUST procedure is in the *SUDAAN User’s Manual* (RTI 2012).

Measurement, Sample, and Analytical Strategy

Table 4 describes variables used in the analysis of district survey data. The table is organized into five sections: (1) Respondent Characteristics (i.e., years of experience), (2) District Characteristics (i.e., region, urbanicity, students per district, expenditures per pupil), (3) State Measures (i.e., State Assessment Index, State Statutes/Regulations Index), (4) School Violence (i.e., incidents of violence), and (5) Emergency Planning Expectations (i.e., expectations for planning teams, planning assessments, functional annexes, etc.). For each item, the table describes where the information came from (i.e., the source), how the item was originally operationalized, and how the items were recoded for analysis (if applicable). The full instrument appears in Appendix C.

Table 5 displays summary statistics for basic survey and district characteristics. The plurality of respondents (39%) identified themselves as only the district superintendent, and 29% identified themselves as only the district’s safety and security director. Another 24% identified as some other title, and 8% identified themselves

as having multiple titles. A mean of nearly 3 on the years of experience measure indicates that respondents on average have about 6–10 years of experience with safety and security in their district. Moving on to district characteristics, the plurality of districts (38%) are in the Midwest and classified as rural (54%). The students-per-district measure was recoded into quartiles; as shown, the bottom quartile includes districts with fewer than 450 students, and the top quartile includes districts with more than 3,200 students. Likewise, the expenditures-per-pupil measure was recoded into quartiles; the bottom quartile spends less than \$10,350 per student, and the top quartile spends more than \$16,825 per student.

We answered research questions through the analysis of summary statistics and a series of regression models (i.e., ordinary least squares or logit models, depending on the nature of the dependent variable). All analyses were weighted. Regression models controlled for district characteristics as described in Table 4, with several also controlling for respondent experience level.

Phase III: District Document Review

Districts that completed the survey in Phase II were eligible for document review in Phase III if they (1) indicated on the survey that their guidelines were publicly available on district websites and (2) believed there to be schools in their district with comprehensive EOPs. Project analysts then organized these districts into 12 strata based on size, urbanicity/rurality, and region and were assigned “model” and “enhanced” scores. We calculated the model score index using responses to several survey items, including encourage/require schools to have an EOP, have an emergency planning team, conduct a needs and a threat-and-hazard-identification assessment, have courses of action for specific threats and hazards, review their EOP on a recurring basis, share their plan with local first responders, maintain technology with information about the school in a secured location, regularly conduct exercises and drills, and conduct a specific number of drills per year. The enhanced score index included six items measuring whether the district expected schools to have a diverse planning team, consider a variety of factors during risk assessments, have a threat assessment team, have specific courses of action for violent events, have plans to accommodate the total school population including those with disabilities, and use different criteria for measuring the quality and completeness of their EOPs. Model and enhanced scores were summed to create an overall score with a total of 16 possible points (10 points for the model index and 6 points for the enhanced index). Districts scoring at least 14 points were identified as “high-scoring” districts and subjected to document reviews. The team reviewed all materials retrieved from the district websites using procedures like those in the state-level document review in order to verify as many components of the model and enhanced indices as possible. Districts that maintained their high-scoring status after the document review were targeted for recruitment for school-level interviews in Phase IV.

Phase IV: School Interviews

The semistructured school-administrator interviews gathered more in-depth knowledge about school emergency preparedness plans, policies, and procedures from a sample of schools identified as having comprehensive EOPs in place by their district. High-scoring districts identified in Phase III were contacted and invited to provide the names and administrator contact information for three schools. Team staff recruited each of the schools. Ultimately, 37 schools from 15 districts participated in school-level interviews. Individuals interviewed were most often the school principal and assistant principal but could be other staff at the school or district level with responsibilities for school safety and security. Interviews lasted approximately 45 minutes and focused on the ways that specific plans and policies were selected and implemented in schools; the challenges associated with particular strategies or in developing high-quality EOPs; the importance of federal, state, and district resources for developing EOPs; innovative strategies in preparing for violent emergencies; and the perceived value or effectiveness of various plans and strategies for preventing, responding to, or recovering from violent emergencies. The full interview protocol appears in Appendix D. Team staff analyzed the interview data to identify themes among schools as well as variation across states, districts, and schools.

Results

State Analysis

What are general observations about state materials for school emergency preparedness? Federal and state agencies have developed an impressive amount of information for school emergency planning. Although much of this information appears to be well informed and useful for district and school officials who lead emergency planning efforts, several notable qualities may undermine efforts to keep schools informed. At the federal level, multiple agencies have produced resource guides or other materials that describe best practices in emergency planning; however, in many instances, the information presented across agencies is redundant, while in other instances, information conflicts or is predicated on different perspectives on emergency preparedness. A similar observation was made about state agency materials. In some states, information can be found on websites of multiple state agencies (e.g., department of education, school safety resource centers, emergency management agencies). With materials spread out across agencies, the user must locate and make sense of a sometimes-overwhelming amount of information. Additionally, emergency planning materials within individual state websites are often difficult to locate. Although some state websites use banners or drop-down menus with clearly marked headings (e.g., “emergency planning”), many do not have a central location where all materials are stored. In fact, in many instances, reviewers in Phase I had to search for materials within state websites using their built-in search bar. This setup is far from ideal, as the burden is on the user to try many different search terms until they perceive all materials have been found. Also, the materials were often separated into numerous different documents or webpages rather than combined into a single document. And, although some states are developing their own materials with state-specific guidance and recommendations (which, in many cases, are based on the state’s history with school violence, perspectives on emergency planning, and state-specific statutes and regulations), others have developed very little of their own information and instead link to a number of externally developed materials (e.g., resources developed by other states, outside organizations, or the federal government). This latter approach may present challenges because it does not present a clear picture of the state’s stance on emergency preparedness, nor does it connect guidance and recommendations to existing regulations for emergency planning. Finally, many state materials contain broken or erroneous hyperlinks that must be updated or removed. This may not only be counterproductive for users who have limited time to research emergency planning guidance, but it may be confusing because it is not clear whether this guidance has been discontinued or rather the website has not been updated. It may also send the message that emergency planning is not a priority of the agency.

To what extent do state guidelines for emergency preparedness resemble federal guidelines? Table 6 presents scores from the assessment of state agency materials. Of a total of 29 possible points, 36% of states scored at least 25 points, indicating that their materials echoed nearly all of the core federal guidelines. Five states received all 29 points. Of states that did not receive all 29 points but scored above 25, the most common areas for which points were not given related to guidance on accounting for all persons and encouraging or requiring schools to provide local first responders with a written or electronic copy of their EOP. On the other hand, 22% of states scored fewer than 10 points. These states were most likely to receive full points for areas related to clear expectations for schools to have an EOP, to have an emergency planning team, and to regularly conduct exercises or drills to prepare for emergencies. Most state agencies (88%) explicitly expect schools to have an EOP and provide guidance on emergency drills and training for students and staff. Seventy percent of state agencies encourage schools to have an emergency planning team, and at least 60% expect schools to comply with standards under the National Incident Management System and provide guidance on lockdown, shelter-in-place procedures, evacuation, and emergency communications. Sixty-eight percent explicitly encourage school EOPs to cover multiple hazards, and 62% encourage schools to conduct a threat-and-hazard-identification assessment.³ Less than half of states provided guidance on security or family reunification, and

³ A threat-and-hazard-identification assessment identifies various types of threats or hazards a school or district could experience. The assessment is typically informed by threats and hazards that schools or the surrounding community have faced in the past. Once an initial threat-and-hazard-identification assessment has been conducted, planning teams may

only 26% provided guidance on accounting for all persons. Less than half of states encouraged schools to provide local first responders with an electronic or paper version of their EOP.

What are characteristics of states with guidelines and mandates that are highly consistent with federal recommendations? Table 7 displays average state assessment scores and state statute/regulation scores by subgroups according to region, budget, police presence (number of full-time sworn police officers), size (number of students, schools), and urbanicity (percentage of city, suburban, town, rural schools). Highlights are described below.

- ***Guidance and requirements for emergency planning vary with the types of schools that make up the state and the size of the school community.*** State assessment scores increase as the percentage of city schools increase and decrease as the percentage of town schools increase. States in the lowest bracket for percentage of city schools have an average assessment index almost 3 points below the national average, whereas those in the highest bracket have an average score nearly 1.5 points higher than the national average. States with very low percentages of suburban schools or very high percentages of town schools tend to have very low assessment scores. Similarly, statute/regulation indices increase as the percentage of suburban or city schools increase but decrease as the percentage of town schools increase. It is also noteworthy that all states without EOP requirements for schools or districts have high percentages of rural schools. Higher numbers of students and schools also generally correspond with higher assessment scores and statute/regulation indices.
- ***States with larger budgets and greater police presence tend to produce more guidance.*** Average assessment scores increase as state budget and police presence increase, with states in the largest budget bracket scoring about 3 points above the national average and states with the largest police presence scoring about 5 points above the national average. States with larger budgets and greater police presence also tend to have more statutes and regulations related to emergency planning.
- ***The amount and types of guidance for school emergency planning vary across geographic regions.*** States in the Midwest are more likely to have no EOP requirements, and on average have lower assessment and statute/regulation indices than any other region. States in the Northeast have an average assessment index nearly 5 points higher than the national average, and an average statute/regulation index more than 1 point above the national average.

District Analysis

How prevalent is serious school violence, and what types of districts have experienced it? Serious violent incidents in districts in the past 10 years were rare; nearly 60% of districts reported no incidents (see Table 8). Conversely, more than 40% of districts experienced at least one violent emergency in the past 10 years. Only 4.5% of districts reported that one of their schools had experienced an active-shooter incident, and less than 1% had experienced an event involving a hostage. Only 1% of districts reported that a student or staff member had died as a result of a homicide at one of their schools. However, nearly one in six districts had experienced an event involving a weapon, and almost 1 in 3 had experienced a bomb threat or incident. Tables 9 through 12 show that the odds of any violent incident happening in the past 10 years are 50% higher in the Northeast than the Midwest and higher as the size of the district increases. The odds are also 28% lower in the largest expense-per-pupil bracket relative to the lowest. Active-shooter incidents were more likely in the Northeast than in the Midwest and more likely in larger districts. For instance, active-shooter incidents are 3.5 times more likely in districts serving more than 3,200 students than in those serving fewer than 450 students. The odds of a bomb threat or event are 60% higher in the Northeast than in the Midwest, and the odds increase considerably as the size of the district increases. Finally, the odds of a serious-weapon incident are 42% higher in the West than in the Midwest, two times higher in city than in rural districts, and higher as the size of the district increases.

then conduct a risk assessment by evaluating risks posed by the identified threats and hazards according to several criteria, including the probability that the event will occur and the extent of expected damage if the event were to occur.

What resources do districts use to build guidelines for school emergency preparedness? Most districts provide guidance on how to develop EOPs (82%), although it is noteworthy that 18% do not (see Table 8). Table 13 shows that larger districts and those with more experienced respondents are more likely to provide such guidance. For instance, the largest districts are 4.4 times more likely than the smallest districts to provide this guidance, and the odds are 95% higher when respondents have more than 20 years of experience compared to respondents with less than 1 year of experience. About 60% of districts reported that they had used state agency materials to develop their guidance and recommendations for schools, whereas 43% used FEMA materials. Less than one-third of districts reported using materials from the Readiness and Emergency Management for Schools (REMS) Technical Assistance (TA) Center or the U.S. Department of Education's *Guide*. Tables 14 through 17 show variation in the odds of districts using these materials by region, urbanicity, size, and respondent characteristics. The odds of districts using state materials are higher in the Northeast and South, whereas the odds of districts using materials from the REMS TA Center or FEMA are higher in the West. Additionally, the odds of districts using REMS or FEMA materials are also higher among large districts and in districts with very experienced respondents. City districts were also more likely to use REMS materials than rural districts. The size of the district is the only statistically significant predictor of the use of the *Guide*; specifically, the odds are 66% higher among the largest districts.

To what extent do district guidelines for emergency preparedness in schools resemble federal guidelines?

- Aligned with recommendations from the *Guide*, most (92%) districts encourage schools to have an emergency planning team; however, less than half recommend that planning teams have regularly scheduled meetings. Among districts that encourage schools to have a planning team, the majority recommend that teams include district administrators (63.5%), school administrators (86.5%), and teachers (76.7%). Slightly more than half encourage facilities managers to be included on teams, whereas less than half encourage participation from school psychologists, nurses, transportation managers, food personnel, student service representatives, students, or parents.
- Only 59% of districts encourage or require schools to conduct a threat-and-hazard-identification assessment, and of those, only 64% advocate for the evaluation of risks posed by identified threats in a formalized risk-assessment process. Likewise, about 56% of districts encourage or require schools to conduct a needs assessment to evaluate and improve school climate.
- About one in five districts encourage schools to have a threat assessment team (TAT), and another 22% indicate that TATs are at the district rather than school level. Among districts that encourage school-level TATs, one-fifth or less include specific recommendations regarding participation from principals, counselors, mental health professionals, or law enforcement personnel.
- Ninety-eight percent of districts expect schools to have an EOP, in most cases because it is a state and district mandate.
- Districts mostly encourage school EOPs to include annexes for evacuation and lockdown (80%), shelter-in-place procedures (76%), communications and warnings and accounting for all persons (75%), and security and family reunification (70%). Only around half encourage annexes on continuity of operations; recovery; and public, medical, and mental health.
- About 72% of districts expect school EOPs to have sections for responding to specific threats and hazards. More than 75% of districts expect school EOPs to have specific protocols for active shooters or bomb threats, while less than half expect protocols for hostage situations.
- Most districts recommend that school EOPs are customized at the building level (66%); however, less than half expect EOPs to address incidents outside of normal hours or during off-campus events.
- Most districts expect school EOPs to be reviewed on a recurring basis and to be circulated to stakeholders for feedback. Less than 53% ask schools to assess the quality or completeness of their EOP.
- Although most districts ask that school EOPs include building schematics, slightly more than half ask that they include information about door and window locations or information about locations of communication and alarm systems, utility controls, or medical supplies. Less than half ask that EOPs include photos of the school or include information about people with disabilities.

What types of districts disseminate information that is consistent with federal guidelines? Three core themes can be identified from regression models presented in Tables 18 through 41, as bulleted below:

- **District size is a major predictor of the types and amount of guidance provided to schools for emergency planning.** Larger districts are more likely to expect schools to have an EOP; conduct threat-and-hazard-identification and risk assessments; have a TAT; customize EOPs at the building level; establish protocols for violence (i.e., active shooters, hostages, and bomb threats); and have evacuation, shelter-in-place, lockdown, reunification, continuity of operations, security, recovery, and public health, medical, and mental health annexes in their EOP. Additionally, these effects persisted even when controlling for state recommendations (i.e., state assessment scores) or state statute/regulations.
- **Respondent experience is an important predictor of district expectations for school emergency planning.** Higher experience levels are linked to greater expectations for emergency-planning teams; threat-and-hazard-identification and risk assessments; established protocols for violence (i.e., hostage situations); and annexes related to communications and warnings, lockdown, family reunification, continuity of operations, security, recovery, and public health, medical, and mental health.
- **District expectations for school emergency planning are often lower in the Midwest and higher in the Northeast and South.** District expectations that schools implement threat-and-hazard-identification assessments are less likely in the Midwest compared to any other region. For many of the models, expectations were less likely in the Midwest than in the Northeast, such as for TATs and several annexes (e.g., accounting for all persons; continuity of operations; public, medical, and mental health). In other models, expectations were more likely in the South than in the Midwest, for example, for continuity of operations and security annexes. Expectations for TATs and reunification annexes were also more likely in the West than in the Midwest. However, important exceptions were identified: expectations for school-planning teams were more likely in the Midwest than in the Northeast or the South, and expectations for active-shooter and bomb-threat protocols were more likely in the Midwest than in the South and West.
- **Districts that have experienced violence or threats of violence in the past 10 years have higher expectations for school emergency planning.** Table 41 regresses the district model score on district characteristics, including an indicator variable for experiences with an active shooter, hostage situation, bomb threat or incident, or serious weapon incident in the past 10 years. On average, districts that have experienced such an event scored about .28 points higher on the district model score variable than those that have not.

What types of training (or funding for training) for violent events are being offered or encouraged at the district level? Table 8 shows that most (85%) districts provide training on emergency-safety procedures to teachers, and nearly two-thirds train teachers on crisis prevention and intervention. Only about half train teachers on how to recognize early warning signs of students likely to exhibit violent behavior. Nearly 90% of districts encourage schools to train school staff on what to expect during an active-shooter incident, whereas only 58% did the same for students. At least two-thirds of districts expect that schools train staff on how to react to active shooters, communicate dangers to the school, and use communication systems, but one in three districts do not expect schools to train staff on how to cooperate with first responders or how to recognize signs of danger. Likewise, about 73% of districts offer training on violent-emergency preparedness to school staff, but only about one in four did the same for students. Tables 42 through 52 show that larger districts and districts with more experienced respondents are often most likely to fund training, provide training, or recommend that schools train their students and staff on responding to violent emergencies. For instance, the odds of districts funding or providing training for violent-emergency preparedness to staff are 80% higher in the largest districts than the smallest districts. Larger districts were also more likely to encourage schools to train teachers and students on how to react to an active shooter generally and using the run, hide, and fight approach. It is also notable that, while 82% of districts expect schools to conduct drills for active shooters, less than half expect them to conduct tabletop exercises specifically for active-shooter events. Similarly, only about one in three districts expect schools to conduct functional exercises (e.g., drills involving multiple partners), and only about one in five expect full-scale exercises for active-shooter situations. The odds of districts

expecting functional or full-scale exercises are higher among larger districts. Rural districts were also less likely to encourage or require functional exercises than town or suburban schools.

School Analysis

Between May and August of 2018, the project team conducted interviews with school administrators from 37 schools to learn about how schools prepare for violent emergencies, what is perceived to be effective, and the challenges of planning. See Table 53 for summary statistics on the school sample. Several critical themes emerged from the data, as described below.

Mass violence in the United States has reshaped how school administrators think about emergency planning. Administrators alluded to incidents of serious violence that had occurred in their community in recent years or in schools elsewhere in the country, and they emphasized the impact these events had on the ways that school leaders thought about school safety. Incidents of mass violence struck a chord with administrators because they demonstrate that no school or other establishment is insulated from firearm violence. Likewise, administrators pointed to a variety of factors they believed made their schools more vulnerable to violence, and these factors shaped how they approached the subject of emergency preparedness. For example, they described how being in a rural location meant that they were far away from emergency responders, and others described being near prisons, low-income housing, or “rough” neighborhoods. In turn, many expressed a belief that they needed to “overprepare” for violence and to treat emergency planning as a “living breathing process” that is always evolving and constantly under scrutiny so that gaps can be identified.

Schools are investing in training and technology to ramp up their safety programs. Recent additions to safety programs included new and improved active-shooter drills, sometimes simulated with real gunshots, and scenario-based tabletop exercises in which students and staff are expected to provide rapid answers to how they would respond to a variety of violent situations. School administrators also valued surprise drills at unexpected times of the day (e.g., during assemblies, at lunch). Schools had also invested in several technologies, including mobile-phone applications for emergency warnings and communications, security cameras that can be accessed by law enforcement, automatic door-locking and badge systems, panic buttons, active-shooter radios, and anonymous tip lines. Although they believed in these tools’ ability to prevent or assist with an emergency, they wrestled with the task of maintaining a positive learning environment that does not “feel like a prison.”

Some schools are moving toward an “empowerment” model for active-shooter response. Whereas schools have traditionally embraced a standardized response to active shooters that involves all staff and students locking down until they are released by law enforcement, many now have moved to a model in which staff and sometimes students are empowered to make their own decisions that will give them the best chances of survival. Thus, rather than waiting for first responders, students and staff may be encouraged to evacuate when possible, regardless of whether instructions to do so have been given by school officials.

Expectations of students and staff have increased. More than ever, students and staff are expected to speak out when they think someone is capable of violence or to inform administrators about “hot spots” within the school, to learn emergency protocols while also understanding their own responsibility to be empowered during emergency response, to identify weak components of their school safety plan, and even to be prepared to fight off intruders (e.g., teachers were asked to keep heavy objects in their classrooms that they could strike intruders with if necessary). At the same time, and despite the pressure that administrators felt to be hyperprepared, breaking students and staff of a “it will never happen here” mentality remains a challenge. Administrators wished there were ways to get the school community more engaged in emergency plans without creating unnecessary fear or a sense of trauma for having gone through preparatory efforts. Additionally, administrators also described having to negotiate the need to inform students about the school’s EOP without providing them too much information. The concern is largely that too much information could create unnecessary fear of

violence among students and also that providing a lot of detail could give potentially dangerous students an advantage should they choose to carry out an attack on the school.

Of all emergency protocols, schools expressed the most concern about accounting for all persons and family reunification. Accounting for all persons and family-reunification protocols were commonly referred to as the school's "weak spot" when it comes to emergency preparedness. These protocols are challenging because of their numerous moving parts and because training can be difficult. Specifically, actual events require participation from multiple actors in the school community (students, parents, administrators and staff, emergency responders) and therefore can be difficult to simulate in a training environment. Additionally, administrators also described challenges in customizing their EOPs to specific buildings or tailoring them to different types of staff (e.g., teachers, custodial workers, administrators).

Other themes. Other important themes emerging from the analysis included the heavy role played by school districts in school-level emergency planning. Although in many cases district support was described favorably, in some instances school administrators could not answer basic questions about their emergency plan or why and how activities are carried out specifically because so much of these decisions are made at the district level. In these cases, EOPs may be too generic and not tailored to each school. Perhaps unsurprisingly, the project team also identified several discrepancies between what districts believed their schools were or should be doing (based on answers in the district survey) and what schools are actually doing (based on responses in school interviews). For instance, some schools reported having no emergency-planning, response, or assessment teams despite their district representative expecting that they do. There were also cases in which districts believed threat-and-hazard-identification assessments were being done at the school level, while the same schools believed it was done at the district level. Along those same lines, it also seems that some federal recommendations are not translating well at the school level, or at least additional guidance is needed. Numerous schools were confused about threat-and-hazard-identification assessments or did not recognize the term or its description at all despite this being a core federal recommendation. However, it is not clear from interviews with school administrators to what extent they are relying on federal or even state materials to inform their EOPs. Rather, many relied on local law enforcement to assist in the building and updating of plans, and very few described having used state or federal templates or other materials.

Strengths and Limitations

The goals of this study were to answer critical questions related to the status of school emergency planning at federal, state, district, and school levels. At the state level, our analyses included a comprehensive examination of every state in the U.S., including not only emergency preparedness materials from state education agencies but also other state or regional agencies and resource centers dedicated to school safety. However, one limitation was that our analysis was limited to only the materials that states make publicly available online. It is possible that in some states, agencies may disseminate guidance to schools via in-person trainings or other private channels, in which cases these materials would have been excluded from our analysis. At the district level, the study took a broad look at a national sample of U.S. school districts, uncovering essential information about emergency preparedness in districts with varying characteristics (e.g., locale, size, etc.). It is also a strength that the responding district sample had a very similar distribution across the sampling strata as the population of districts in the U.S. It should be noted however that despite rigorous efforts to increase the response rate of the survey, only about 20% of eligible districts completed the survey. Although we accounted for this limitation by calibrating the sample to approximate the population, it is possible that results may have differed had the response rate been higher. Finally, at the school level, we were able to reveal critical details about school-level safety plans through in-depth interviews with school personnel in addition to local experiences and idiosyncratic challenges of emergency planning. Our sampling approach ensured that the sample of schools were diverse across multiple characteristics including geography, urbanicity, and size. However, our study included only a small number of schools that are not representative of the thousands of schools in this country. The school-level findings may also contain some degree of selection bias, as we were only able to interview schools that

were interested and willing to participate in the study. Despite these limitations, the SEPS yielded several important findings, which we describe in the next section.

Conclusions and Implications

Below, we highlight key findings of the study and describe their implications for researchers, the U.S. government, and the school community.

Our assessment of federal and state school emergency planning websites showed that the U.S. government has produced a wealth of information that schools can use in their emergency planning efforts. At the federal level, numerous resources have been developed across multiple agencies that describe best practices in emergency planning. However, the information presented across agencies is often redundant and, in other cases, predicated on different assumptions or perspectives on emergency planning. An ideal scenario would be for federal agencies to work collaboratively to produce one set of emergency planning principles and guidelines that can be found in a single location. Although several federal agencies came together to develop the *Guide*, many other materials have been developed by single agencies before or since its publication. Federal agencies should continue to streamline their recommendations into a single product, removing redundancies and resolving conflicting points of view about the best ways for schools to prepare. Ultimately, users searching for federal guidance on school emergency preparedness should be linked to the same set of guidelines no matter which agency's website they are searching.

Similar observations were made about state agency websites and materials. In some states, information about emergency planning can be found on websites of multiple agencies. As at the federal level, this information often overlaps, but in other cases it is conflicting. A more streamlined approach would see state agencies and existing school-safety resource centers work together to place one set of planning materials in a single location, and all agency websites should link to that central storehouse when users search for emergency-planning resources. Planning materials within individual state websites are often challenging to locate. Although some agency websites have clearly marked locations on their websites where emergency-planning materials are located, many do not have a central or clearly marked location and instead have materials scattered throughout their website. Here, the onus is on the user to search in a variety of ways to locate relevant information. State agencies should evaluate the accessibility of their materials and, if necessary, implement strategies to make materials easy for users to find. Clearly marked banners or drop-down menus can ease the searching process for users, especially when all materials related to emergency planning live in a central location within the website. Along the same lines, the project team's reviewers found that emergency-planning materials were easier to manage when they were combined into a single downloadable resource guide rather than separated into multiple documents or disseminated as free text across one or more webpages. Synthesizing and combining information from multiple documents should also help state agencies to reduce redundancies and resolve any inconsistencies in the guidance that is presented. Ideally, state resource guides should not overload users with information but rather find ways of condensing information and making it more consumable for schools.

Alternatively, some states have chosen to link to outside resources rather than developing their own resource guides and materials for schools and districts in their state. This approach is less than ideal because these outside materials may not be consistent with state mandates or conditions, because it does not provide a clear picture of the state's unique stance on emergency preparedness, and because it can often overwhelm users with too much information. State agencies should develop a formal process of vetting existing resources, engaging with those materials, and then organizing and adapting them to the needs of schools in their state. This approach takes the burden off schools and enables them to approach the topic of school emergency preparedness more efficiently and effectively. An important component of all state resource guides should be the incorporation of an EOP template that is customized to the conditions and laws of the state and that can walk school administrators through the arduous process of developing a safety plan. Finally, it is critical that federal and state governments treat the process of guiding schools on emergency preparedness as a dynamic rather than a

static process. Our review turned up numerous broken or misleading hyperlinks, which undoubtedly create confusion and frustration for the user. Agencies must work to keep their websites and materials updated with operative links and resources that reflect the most state-of-the-art knowledge regarding emergency planning in schools.

Despite the shortcomings of some states when it comes to providing clear guidance on school emergency planning, we identified several model states that are effectively and efficiently disseminating information to their schools. Although a school safety resource center is not necessary, model states tended to have one, with dedicated sections of their website for emergency planning and host information that is not contradicted or duplicated across other agencies in the state (e.g., searching for emergency planning in the SEA’s website will redirect the user to the school safety resource center). In many instances, these resource centers are effectively collecting, organizing, condensing, and ultimately disseminating need-to-know information for schools, such as how to develop EOPs and submit those plans to the state when required. Either through the school safety resource center or the SEA, model states have emergency materials that are well organized and easy to find. For example, model states often listed “School Safety” or “Emergency Planning” as topics that users could navigate to using a drop-down menu or banner; additionally, all materials related to emergency planning were located here rather than spread out in different places in the website (so the user can be confident that all guidance has been located). Model states also use clear language to describe the content and components of an effective EOP and provide a downloadable template that can be customized by school administrators. Likewise, their resource guides provide useful information on topics that are relevant for administrators in their planning efforts, including how to assess the quality and comprehensiveness of their EOP (e.g., using a downloadable rubric); the types and frequencies of training schools should conduct to prepare for violent emergencies; how to conduct a threat-and-hazard-identification assessment to determine which threats and hazards should be prioritized in the EOP with customized courses of action; how to establish strong communication procedures before, during, and after emergencies; how to effectively carry out evacuation, shelter-in-place procedures, lockdown, accounting for all persons, and family reunification protocols; and how to secure themselves against criminal threats using target hardening or other security enhancing procedures (e.g., using a security self-assessment checklist).

Although our review of state materials suggested that schools in most states can go to their state’s agency websites to find emergency planning resources, 11 states had a score of less than 10 (out of 29 points) and in general provided little information to their schools. Our analysis suggested that states with more students and more city or suburban schools are typically providing more guidance to schools. On the flip side, states with many rural or town schools and those in the Midwest are often disseminating much less information. While these schools could seek out other resources at federal or out-of-state levels, they may be at a disadvantage if the message is being sent that emergency preparedness is not a priority or that there is not much to know. It is also noteworthy that not all core principles or recommendations from the federal government in the *Guide* are being echoed at the state level. For instance, our review found that more than one-third of states do not express clear expectations regarding threat-and-hazard-identification assessments. Likewise, many states are not providing guidance on several critical emergency protocols or concepts, including family reunification, school security, and accounting for all persons during or after an emergency. The finding that family reunification guidance is lacking at the state level is especially noteworthy given that this was far and away the most common emergency protocol that school administrators expressed anxiety about during school interviews.

Our analysis of district survey results suggested that, in many ways, school districts throughout the country have high expectations for schools’ efforts in violent-emergency planning. Nearly all districts encourage or require schools to have an EOP, and the majority expect these plans to incorporate protocols for active shooters and other violent events and to include sections on core emergency protocols (e.g., lockdown). However, our analysis identified several key gaps. Nearly one in three districts do not expect schools to include threat-specific annexes in their plan or to customize plans at building levels. This approach may be asking too much of school staff who, without these details, may have to infer what appropriate protocols are for a given

situation based on other information that is available in the plan. Likewise, only 59% of districts expect schools to conduct a threat-and-hazard-identification assessment, and of those who do encourage it, not all have expectations for the process that align with how the federal government advocates it (e.g., using assessments to prioritize threats to be included in the EOP). If the lack of guidance in this area means that schools are not conducting these assessments, this calls into question how schools are developing their plans and whether they are including protocols for all necessary threats and hazards to which their campus may be vulnerable.

Survey data also suggested that district size was a key predictor of what districts expect in terms of violent-emergency preparedness. In some ways, the fact that larger districts appear to feel more pressure to get their schools prepared for violence is warranted (regardless of state statutes and regulations related to emergency planning), given that the largest districts are also most likely to have experienced a serious violent event in recent years. Conversely, the smallest districts and those in the Midwest are in many cases the least likely to have experienced a violent event at one of their schools, perhaps explaining why in part they have lower expectations for emergency planning. However, the consequences of select schools being underprepared for violence have the potential to be catastrophic. Small and rural schools are often located several miles away from the first available law enforcement or other first responders (making the school community the true first responders), and without a solid plan in place for response during and after an attack, the school community might be in a uniquely vulnerable position. Although the results from the district survey analysis dovetail with what many school safety experts have been saying for years, that serious violence in schools remains rare and that schools are generally very safe institutions for children, schools must be prepared for violence regardless of their size or history of violence in their surrounding community. It is also important that our models found respondent experience level to be a strong predictor of district expectations for school emergency planning. This finding suggests that schools and districts need to think strategically about who they employ in the position of school safety and security. Like any job, emergency planning is likely to have a steep learning curve, and more time in the field appears to translate to more awareness about planning principles and critical activities.

School-level interviews suggested that school administrators have internalized immense pressure to overprepare their schools for violence and use modified drills and training programs for students and staff, while simultaneously investing in security technologies for surveillance, access control, and target hardening. Although their intentions are laudable, it seems that many schools are investing in new methods of emergency preparation and response without much evidence that these approaches are effective. In recent years, school security has flourished into a multibillion-dollar industry and one that is increasingly inundating school administrators with new safety technologies despite a dearth of scientific research demonstrating that these products protect students and staff from violence.⁴ In some cases, it is also an empirical question as to whether these efforts (e.g., surprise or simulation drills) can enhance the safety and security of the school without threatening school climate or the psychological well-being of the school community. More research is needed to help guide schools toward evidence-based approaches and to identify strategies that enhance actual and perceived safety but do not jeopardize a quality learning environment. Although many schools described having an open-door policy for students and staff to informally offer feedback about the school's approach to violence or emergency planning, it may be fruitful to establish more formal channels of communication on an ongoing basis so that these perceptions can be used to develop healthy modes of safety planning. However, as expressed by many school administrators, the role of students in the planning process is in many ways a gray area. While most agree that students need to be informed, it is also true that schools can run the risk of overinforming students. This could be detrimental not only because of the risk of traumatizing students about their vulnerability to violence but also because training students on the school's EOP could potentially provide dangerous students information that could be used to their advantage during a targeted attack. Our district-level findings suggested that most districts are not encouraging schools to include students on their planning committees; however, not doing so may mean that schools are

⁴ https://www.washingtonpost.com/graphics/2018/local/school-shootings-and-campus-safety-industry/?utm_term=.9992ba30fc49

missing out on important student insights about threats or effective ways of disseminating information. More research is needed to understand what the role of students should be in safety planning.

Another critical area of interest is the finding that some schools are moving toward an “empowerment” model in which students and staff are being encouraged to break with protocols, if necessary, to ensure their survival (e.g., discontinuing the lockdown protocol if evacuation becomes a viable option), despite an obvious lack of empirical research suggesting this model is appropriate. Although there are probably merits to this approach, it also runs the risk of creating a chaotic and uncoordinated school response to a crisis in which the whereabouts of all students and staff may be uncertain should they follow different protocols from one another. Such a strategy may also create challenges for first responders attempting to isolate threats away from students and staff who may have assumed various locations at or around the school campus. It may be especially problematic if schools invest in this approach at the expense of a clear and well-developed safety plan that has specific protocols for violent events. If schools do move toward the empowerment model, they must also develop clear protocols that help to coordinate this response (e.g., designating surrogate reunification or evacuation sites for those who break with lockdown protocols) and take into account the fact that not all students and staff may be able to act based on their own discretion in an equally productive manner.

More than any other component of emergency planning, school administrators were likely to describe accounting for all persons and family reunification protocols as weak spots in their school’s safety plan. The highly complex nature of these protocols presents a challenge for schools in developing clear procedures that translate well to drills and training efforts that prepare the school for these events. In a few cases, the challenges with reunification have been exacerbated as schools move toward the empowerment model because they are giving students and staff permission to make their own decisions during an emergency. Although valuable in some respects, providing students and staff with discretion may create challenges in developing a coordinated response in which they evacuate to the same location or making decisions that are not counterproductive to emergency responders or to the rest of the school. The fact that schools are struggling with these areas is especially noteworthy given that state agencies are especially unlikely to provide guidance on these processes. And, although districts generally expect schools to have these protocols written into their EOPs, it is not clear to what extent they are supporting schools in setting up and implementing these procedures. Whether it be at local, state, or federal levels, schools clearly need more support and technical assistance in these areas. Developing a national gold-standard model of protocols for family reunification and accounting for all persons and designing effective training curriculums for these protocols should be a core priority of the school safety community in years to come. Although the federal government has produced valuable information on these topics, some aspects are not translating well at the school level. The same could be said for the topic of threat and hazard identification assessments, about which school administrators expressed considerable confusion. Many administrators were unclear about what this assessment is, how it is done, and whether it is executed at the school or district level. If this assessment is the bedrock of a solid EOP, more resources need to be developed at state and federal levels to articulate what this process entails and how to do it. Schools need real, concrete examples and technical training and assistance they can apply to their own planning process.

Taken together, the results of the School Emergency Preparedness Study have significantly advanced our understanding of how schools and districts prepare for violence and the challenges of doing so, in addition to the efforts that are being made at district, state, and federal levels to assist schools as they prepare. The study has identified strengths and weakness of states’ current approaches to emergency management and offered recommendations for how their platforms can be improved. It has identified core areas of planning that schools need more assistance with, while also documenting the pressures that administrators feel to be hypersensitive to the prospect of violence. Although more research is needed on the efficacy of various approaches to emergency planning and response, our findings have helped to establish a foundation for forthcoming research.