

## INTERNET PUTS EMERGENCY PREPAREDNESS WITHIN REACH OF SCHOOLS

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### Abstract

There are over 90,000 public schools in the United States. Together, they are responsible for the education and safety of over 47 million students. In a time when natural and man-made catastrophes as well as life threatening emergencies can occur at any time, School districts and administrators of individual schools are obligated to take meaningful emergency planning. As is often the case with emergency preparedness measures, the need for resources is not always well appreciated until after an emergency or catastrophic event has occurred. Particularly with respect to schools, many other priorities seem to take precedence over sound emergency planning. Aggravating the matter is the apparent reluctance of education officials to bring local school natural disaster or terror attack response issues to the forefront of discussion with parents and the community. Consequently, many schools either do not have any viable emergency response plan; their plan is out of date; or the existence of the plan and its use not well understood by those charged with its implementation.

The U.S. Department of Homeland Security and the U.S. Department of Education have worked together to provide basic emergency planning guidelines to the education community. The private sector has also developed some Internet-based tools that employ technology in order to define and communicate emergency response information, and to educate stakeholders in emergency plan implementation.

This paper will analyze the U.S. government and private sector solutions to the emergency planning void affecting schools. It will examine the common ground existing between the two approaches and set forth ways that they can be employed together in order to enhance the safety of children in the United States and globally.

### Introduction

The United States has over 90,000 public schools that are responsible for the education and safety of over 47 million students (NCES Common Core of Data, 2002). School administrators are obligated to take meaningful emergency planning steps in a time when natural and man-made catastrophes as well as life threatening emergencies can occur at any time, without warning. The need for emergency planning is not always well-appreciated until after an emergency or catastrophic event has occurred. Particularly with respect to schools, many other priorities seem to take precedence over sound emergency planning. Education officials are sometimes complacent or otherwise reluctant to bring local school natural

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disaster or terror attack response issues to the forefront of discussion with parents and the community. There is concern over appearing alarmist, or political, or being the bearer of “bad news”. Consequently, many schools either do not have any viable emergency response plan; their plan is out of date; or the existence of the plan and its use not well understood by those charged with its implementation.

The U.S. Department of Homeland Security and the U.S. Department of Education have worked together to provide basic emergency planning guidelines to the education community. Internet and software-based tools, developed by the private sector assist in the development, communication, maintenance and evaluation of emergency response information and plans. Some of the tools go far to educate stakeholders in the implementation of the emergency plan.

This paper will analyze the U.S. government and private sector solutions to the emergency planning void affecting schools. It will examine the common ground existing between the two approaches and set forth ways that they can be employed together in order to enhance the safety of children in the United States and globally.

## **Sources of Information**

### Joint DHS-DoEd Emergency Planning Handbook for Schools

The joint DHS- Department of Education initiative is intended to provide school officials with a “one-stop-shop to help officials plan for any emergency, including natural disasters, violent incidents and acts”. A handbook that provides general guidance for developing a comprehensive emergency response plan for schools is available online at URL: <http://www.ed.gov/admins/lead/safety/emergencyplan/index.html>. Although by its own assessment the handbook acknowledges that little evidence exists to form a basis for quantification of best practices for crisis planning for schools, it would appear that the handbook goes far to meet that need. Also, no cost "Crisis Planning for Schools Training" seminars are currently being offered in select cities as part of the initiative.

### US Life Safety, Inc. Emergency Preparedness for Commercial Buildings (website)

The primary source for information on software and internet solutions that address emergency preparedness, planning and response for schools was the website of US Life Safety, Inc., of Pittsburgh, PA.

## **Findings**

### DHS-DoEd Handbook Recommendations

The handbook provides guidelines for developing and understanding an emergency and crisis plan that reflects the needs, resources and culture of the school and local community. What constitutes a crisis and the types of crises that schools may experience from weather related phenomena to acts of terror are introduced in the first chapter of the handbook and are discussed in greater detail in the last chapter of the handbook. The handbook comprises five sections and addresses the principles of crisis planning; mitigation/prevention, preparedness, response, and recovery. Action checklists providing specific proactive and reactive measures are provided in each chapter in the handbook. Case studies describing successful initiatives from other schools are presented and detailed aspects of crisis management are elaborated on in the final chapter.

An appendix is provided to assist school crisis planners in getting started on their emergency response plan, including resources for information. It is suggested that crisis plans for other



agencies in the community be investigated for ideas and information that might be useful for the school's plan. However, the reader is also warned against formulating an emergency response plan solely by cutting and pasting from other plans. The emergency and crisis response plans from the local or neighboring school district's are identified as potential resources to be drawn upon for developing plans for individual schools. Information about how other agencies interface with responder agencies can be useful for developing the schools approach.

The handbooks treatment of preparedness emphasizes the importance of assessing and addressing the safety and integrity of building facilities (window seals, HVAC system, and structure) and school physical security. The handbook indicates that;

“mitigating emergencies is also important from a legal standpoint. If a school, district, or state does not take all necessary actions in good faith to create safe schools, it could be vulnerable to a suit for negligence. It is important to make certain that the physical plant is up to local as well as federal and state laws.”

The statement underscores the importance of faithfully engaging in the emergency planning process and maintaining a continual awareness and commitment to sound mitigation and preparedness principles. How administrators can use policy and curricula to influence changes in school culture that are conducive to a climate of emergency preparedness and the importance of identifying and involving stakeholders are discussed.

The importance of defining roles and assigning responsibilities before a crisis is addressed and the reader is provided with a list of several key roles that must be filled. The roles of school commander, liaison to emergency responders, student caregivers, security officers, medical staff and spokesperson are suggested. A graphical decision support tool that would assist administrators in making decisions regarding school lockdown, evacuation or relocation is presented. The development and use of decision support tools during the mitigation or preparation stages is important in that it allows important decisions to be made in advance and reduces the possibility that argument, debate or decision deadlock will occur during the response phase when teamwork is needed the most. The handbook suggests that no matter what degree of effort and foresight that goes into an emergency response plan, events unfolding in the wake of a crisis will almost undoubtedly occur with an element of surprise.

Recommendations include that maps of the school and information about the facilities be collected, stored and made available. During a crisis, responders need to know the location of utility shut-offs and shut-off procedures, first aid resources and facilities such as kitchens and other building facilities. Site maps should include information about classrooms, hallways, and stairwells. Potential staging sites should be identified on the maps as well. The handbook provides a more comprehensive list to serve as a general guideline. The ability to provide easy accessibility and multiple copies of the materials are important.

The development and roles of school and district level crisis intervention teams for the recovery phase of a crisis are discussed. The importance of establishing clear lines of communication between the state, the district, the school, and community groups and responder agencies is emphasized. The potential for utilizing resources (materiel and volunteer) within the community is addressed in the handbook. The concept of the Incident Command System is introduced in the handbook.

The final chapter in the DHS-DoED Emergency Planning Handbook for Schools emphasizes the importance of collaborating with community emergency responders during emergency response plan development. Web-accessible resources provided by FEMA for emergency and crisis mitigation are listed. Information resources for volunteer organizations such as Freedom Corps are provided.

Some of the more important aspects of emergency response that are elaborated on in some detail are: Considerations for students and staff with special needs; Recommendations for communicating with families about crisis prevention; Models of crisis intervention for students and; Suggestions on how to work with the media before, during and after a crisis. Descriptive examples of successful emergency planning initiatives that have been implemented by schools and school districts are discussed in the final chapter of the handbook.

### Software Automated Preparedness and Response Tools

Many of the criteria suggested in the handbook are supported by software and internet-enabled tools that are currently available. Tools can be obtained that provide a verifiable means of training to the plan, evaluating the plan, communicating the plan and providing plan related details in an efficient manner. Current products conform to DoEd and DHS recommendations by providing access to school specific data such as building floor plans; locations of fire alarm switches, exits, fire extinguishers, evacuation routes and rally points.

Software and web-based or web-enabled emergency preparedness management systems are designed in part to help schools comply with OSHA and local codes through enabling the easy accessibility, distribution and maintenance of Emergency Preparedness Plans, Disaster Recovery/Contingency Plans and general safety guidelines and personnel rosters. Information including points of contact, daily attendance, schedule and roster information can be made accessible through a network enabled system. Information about students and staff with special needs should be supported.

Web-based systems have the potential to go beyond what non-web solutions can provide by supporting direct access by emergency responder personnel. Emergency responders can use the system to plan for various kinds of emergencies that could impact the school and to obtain the most current response-related information. Such systems support a dialogue between the schools and the responder agencies and enable responders to comment upon and contribute to a school's emergency response plan, in conformance with DHS/DoEd recommendations.

Depending on the resources of the responder agencies, they may either be able to access critical building information directly from their vehicles or they can maintain a printout or notebook of the critical information and keep it on hand in case a response is necessary.

For schools that do not already have an up-to-date emergency response plan, providers of automated emergency preparedness/response systems will often be able to provide a template that will make developing one, conformal to the main, technical DHS/DoEd recommendations a straight forward process. Some tool providers will be able to arrange more specific guidance at an additional cost. The aspects of the DHS/DoEd recommendations that involve the outreach to the community and cooperation with responders will need to be coordinated by the school, although guidance on those tasks is likely to also be available from the vendor.

Of course, no automated tool to support emergency preparedness or response will be effective if enough people do not know of it's availability or how to use it. It is advantageous to have a system that can automatically administer training material and tabulate training related statistics for each school employee as required. Some of the more advanced systems support training in both slideshow and streaming video formats. The system should be able to flag any individuals that are not current in their training schedule and, if the system is web-based or web-enabled, it can send out reminders <sup>2</sup>.

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<sup>2</sup> US Life Safety Inc., Life-Counts®, 2006, URL: <http://www.uslifesafety.com/>



The capacity for an emergency preparedness/response system to self-verify training is one indicator of a premium system and a capability that is not matched by non-automated systems. Systems that support self-evaluation of the emergency response plan that they support can automatically identify which parts of the plan users have difficulty understanding (through missed test questions) so the plan can be improved. The capability would tend to have excellent implications in terms of risk reduction and reducing underwriting costs and liability protection. Parents of students would also be likely to appreciate the comprehensive approach to school emergency preparedness.

The web-based services provide for offsite data storage at multiple sites and with frequent back-ups, which is consistent with NFPA 1600 standards and DHS guidelines for business continuity planning. They are also more supportive of access from multiple sites than web-enabled systems that might reside on a company's intranet and are subject to more restrictive remote access controls. Flexibility in configurations can support hybrid deployment of web-based systems where some of the schools data would remain on the school's server while some data would remain on the remote host server.

The cost of the automated systems varies depending upon the deployment options and the many features that can be supported. The web-based systems are associated with one time installation and licensing costs as well as a recurring monthly cost similar to the cost of a basic cable TV account. Depending on the data mirroring and back-up services that are provided, the recurring fee may represent a significant bargain. The good news about the systems are that often times special prices are available to schools and school districts are often offered volume discounts when they purchase a system. Referral programs may also be offered.

## **Discussion**

The current political climate is one of awareness of the threat of domestic and international terrorists. Recent events such as the terrorist attack in Beslan, Russia reinforce the fact that schools are not immune from specific targeting by terrorists. The aftermath of poor emergency preparedness and response in the wake of the storm Katrina further underscored the importance of diligent planning. Public administrators are essentially "on notice" in that lack of due diligence is not likely to be so easily excused in the future. Lists of grant recipients are long and it is apparent that currently the government is willing to help school administrators in implementing the means to better protect students and staff and better support cooperation and communication between schools and responder agencies.

School or school district administrators should be aware of grant programs that have been offered on a consistent basis by DHS and DoEd, and other federal, state and local agencies in order to improve safety and emergency communications for schools (and hospitals and local government agencies). Many school administrators are adopting low-risk strategies to try to secure top-shelf automated systems. Volunteer grant writers, or grant writers that will work on a contingency or low-cost basis are being retained in order to plan project implementation and pursue grants. General information on two U.S. government grant programs are provided below.

### DoEd OSDFS Grants

The U.S. Department of Education Office of Safe and Drug-free Schools (OSDFS) has initiated the Emergency Response and Crisis Management Grant Program, which is specifically directed towards local education agencies. \$24M has been allocated to this program for 2006 and OSDFS expects to award about 105 new grants. The range of awards is between \$100k and \$500k with an average award anticipated to be about \$230k. The grant program is designed to provide funds to local education agencies so they may strengthen and



improve their emergency response and crisis plans. Crisis prevention, mitigation, preparedness, response and recovery must be addressed in the grant proposal. Partnerships within the community are also required.

Implementation of automated emergency preparedness and response tools by a school or school district would appear to be a viable basis an application for the OSDFS grant program. Detailed information about the grant program, and related grant materials can be obtained by visiting the Department of Education Grants website: <http://www.ed.gov/fund> and browsing the education programs by topic.

#### DHS Assistance to Firefighters (AFG) Fire Prevention and Safety Grants

For 2006, the U.S. Department of Homeland Security (DHS) has set aside \$32.5M for its Fire Prevention & Safety Grants. This grant program is not limited to schools but emphasizes support to local fire responder agencies. Some grants to schools and to school districts have been made under this grant program. The aspect of automated emergency preparedness and response systems that allows for before the fact access of school floor plans and other data, by firefighters for their own planning purposes would tend provide a nexus between a school seeking to implement an automated system and the Fire Prevention and Safety Grant. More information on the Assistance to Firefighters, Fire Prevention & Safety Grants can be found on the Assistance to Firefighters Grant Program website:  
[http://www.firegrantsupport.com/fp\\_about.aspx](http://www.firegrantsupport.com/fp_about.aspx).

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## **Author Biography**

Christopher D. Hekimian received a Masters of Science degree in electrical engineering from the California Polytechnic University in Pomona in 1995, and received his Doctor of Science in Systems Engineering and Engineering Management from the George Washington University in Washington, DC, in 2004. As a software engineer and policy analyst, Dr. Hekimian has co-Authored 3 papers related to emergency management or homeland security. Dr. Hekimian founded DXDT Engineering and Research, LLC, a company that performs research consulting, patent development, and engineering, in 2003

