

Hazard –Based Preparedness for School Nurses

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At the end of this presentation you should be able to:

- ✓ Understand why an emergency plan is important.
- ✓ Determine threats & hazards facing your school.
- ✓ Identify types of hazards through a simple process.
- ✓ Develop an action plan.
- ✓ Conduct site safety assessments.
- ✓ Base your preparedness planning, actions and resources on specific hazards.

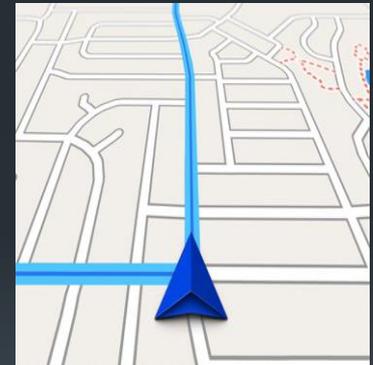
So...Where do I start?

- What should I be prepared for?
- What could happen?
- What is the greatest hazard...the most likely hazard?
- What will I do?
- How do I determine priorities?
- What are my responsibilities during an emergency?
- Who will be in charge?
- What will I need?



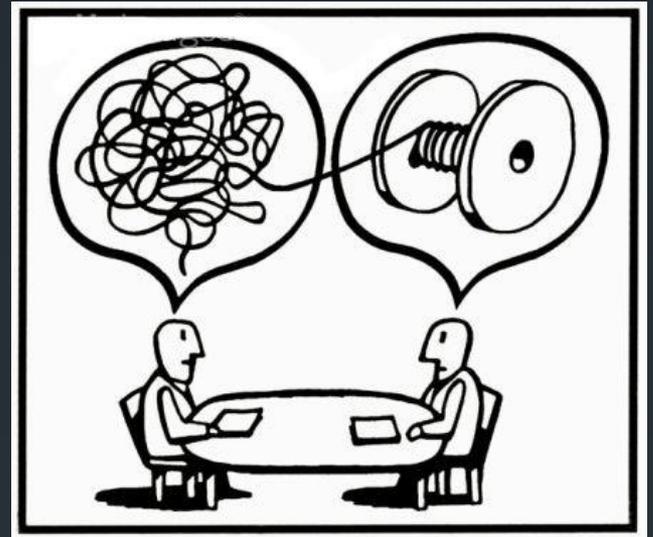
Have a Plan. Know your Plan.

- Start with an emergency plan
 - Get familiar with your plan, or...
 - Start the process to get a plan written
 - ADE provides an excellent school EOP template (endorsed by ADE/DEMA) <http://www.azed.gov/prevention-programs/emergency-preparedness/>
- Every school should have an EOP (state law)
- Plans explain procedures, roles and responsibilities
 - As a school nurse, many depend on you
 - You must know your role so you can properly prepare
 - You must be prepared to lead and take charge within the parameters of your role & responsibilities
 - Remember – “Stay in your lane”
- Having a plan is like a roadmap – tells you where to go, gives you confidence.



Plan Elements

- Base plan
 - What should it accomplish?
 - What does it cover?
 - Who does it apply to?
- Concept of Operations
 - How emergencies are handled?
 - Incident Command System (ICS)
 - Who is in charge?
- Roles & Responsibilities
 - Who does what?
 - Eliminates confusion & redundancy
- Hazard Specific Procedures & Actions
 - What should I be prepared for?
 - What incidents are likely to occur?
 - What do we do when they occur?
 - AZ School EOP contains a list of hazard specific protocols which may be encountered in AZ schools.



Analyzing the Threats & Hazards

- What are the most likely threats & hazards?
- What threats & hazards are of most concern?
- What capabilities & resources are needed to prepare for those threats & hazards?
- What are the potential consequences?
- When are you most vulnerable?



How do we determine the hazards we should be prepared for?

- Experience (yours & others)
- Historical data
- Hazard & Risk Assessment

“Fools learn from experience. I prefer to learn from the experience of others.”

Otto Von Bismarck

Identify Threats & Hazards: Natural, Technological, and Human-Caused

Natural Hazards

- Include severe weather, floods, earthquakes, landslides, fire, and other events of nature.
- Include biological threats such as animal disease outbreaks, pandemics, and epidemics.
- May occur repeatedly.
- Often can be predicted.



Technological Hazards

- May be accidental or associated with another event.
- Occur with little to no warning.
- Include power failures, explosions, computer failures, and hazardous materials releases.



Human-Caused Hazards

- Are deliberate actions taken to threaten or harm others.
- Include bus accidents, school violence, bullying, armed intruder, chemical or biological attack, cyber attack, bomb threat, terrorism or other criminal actions.



School Hazards Assessment & Risk Matrix

Prior to updating your school's emergency plan, it is recommended that your planning/safety team complete the following activities:

1. **Brainstorm & Risk Matrix Assessment (this document)**
2. Safety Policies Assessment Activity
3. Campus Safety Assessment Worksheet

Enlist the help of a willing team →



Each activity will take about an hour, but you don't necessarily need to have your entire planning/safety team involved in each activity. The *Brainstorm Activity* should include at least 3 team members, the *Safety Policies Assessment Activity* should include as many team members as you can get together, and the *Campus Safety Assessment* should include at least 2 members.

Supplies needed (recommended to better facilitate this activity as a group):

Easel and stand, or whiteboard

Markers (colors)

Post-it Pads

Comfortable room and adequate seating

Use easel for writing down input from group.

Post-it pad to write down hazard and move around matrix as needed.

Directions for the Hazard Brainstorm Activity:

As your team completes the activities below, please make sure that a team member creates a master copy of the team's work. The master copy should be typed and digitally distributed to all team members.

Try to keep to the following time schedule:

- Brainstorm 10-15 minutes. In this activity, your planning/safety team will simply brainstorm a list of hazards at your school site or school facility (bus yard, physical plant, etc.). Look at page 2 for the types of hazards to consider.
- Risk Matrix 10 minutes. Once you've completed the brainstorm list, take the brainstormed items and put them into the Risk Matrix on page 4.
- Risk Index 10 minutes. Take the most relevant hazards and complete the Risk Index sheet on page 5.
- Action Plan 15 minutes. Based on your findings in the activities above, what are the most important actions your team can recommend to enhance school safety? Complete the action plan on p. 6.

Identifying Threats and Hazards

Consider your:

- Community.
- Neighborhood.
- School property and buildings.



Safety and Security Assessment

Prior to completing the risk matrix sheet; each group should brainstorm a list of hazards that exist at your school site. Your list should be comprehensive, and should address hazards or risks in each of the following settings:

- School-based/Site-based
 - No emergency operations plan
 - Obstructed or unsafe evacuation pathways
 - Unsafe gathering/rendezvous points
 - Lack of shade/water/etc.
 - Other school site hazards
- Surrounding neighborhood
 - High crime rates
 - Prone to flooding, fires, insect/animal activity
 - Next to an intersection with heavy truck traffic (Hazmat, traffic, etc.)
- Greater community
 - Nearby railroad line, Hazmat, airport/base, floodplain, etc.
- District-wide
 - No emergency operations plan
 - Unclear or outdated school policies and procedure

A comprehensive emergency management plan should address all-hazards, including, but not limited to:

- **Natural** - Earthquakes, floods, fires
- **Technological** - Power outages, nearby chemical plant
- **Infrastructure** - Roads and bridges, utilities
- **Non-structural** - Portable room dividers, bookshelves, suspended ceilings and light fixtures
- **Man-made** - Hazardous materials release, terrorism
- **Biological** - Pandemic flu, contaminated food
- **Physical well-being** - Broken bones, violence
- **Student culture and climate** - Bullying, drugs, violent behavior (take a look at school specific incident data)

When developing a hazard profile, you should consider questions, such as:

- **Frequency of occurrence** - How often is it likely to occur? (Look at historical data)
- **Magnitude and potential intensity** - How bad can it get? (Historical data)
- **Location** - Where is it likely to strike? (Historical data)
- **Probable geographical extent** - How large an area will it affect? (Historical data)
- **Duration** - How long could it last?
- **Seasonal pattern** - When is the time of year it is more likely to occur?
- **Speed of onset** - How fast will it occur?
- **Availability of warnings** - How much warning time is there? Does a warning system exist?



Hazards Brainstorm List:

Have team members express what they feel are hazards facing the school. (Best to use an easel/whiteboard to record the group's list and then have someone write the responses below.) See page 2 for types of hazards to consider.

Hazard/Risk Index

Use the worksheet below when analyzing the potential risk presented by each hazard you identified in the previous activities. Risk applies to population, infrastructure, or facilities impacted by damage or loss of use/access. Circle the appropriate numbers in each column and total them. The highest numerically rated hazards with a rating of High or Medium should be considered in your school's Emergency Operations Plan.

HAZARD	FREQUENCY	MAGNITUDE	WARNING	SEVERITY	RISK PRIORITY
FLOOD	4 HIGHLY LIKELY	4 CATASTROPHIC	4 MINIMAL	4 CATASTROPHIC	<input type="checkbox"/> HIGH
	3 LIKELY	3 CRITICAL	3 6-12 HOURS	3 CRITICAL	<input type="checkbox"/> MEDIUM
	2 POSSIBLE	2 LIMITED	2 12-24 HOURS	2 LIMITED	<input type="checkbox"/> LOW
	1 UNLIKELY	1 NEGLIGIBLE	1 24+ HOURS	1 NEGLIGIBLE	
WILD LAND FIRE	4 HIGHLY LIKELY	4 CATASTROPHIC	4 MINIMAL	4 CATASTROPHIC	<input type="checkbox"/> HIGH
	3 LIKELY	3 CRITICAL	3 6-12 HOURS	3 CRITICAL	<input type="checkbox"/> MEDIUM
	2 POSSIBLE	2 LIMITED	2 12-24 HOURS	2 LIMITED	<input type="checkbox"/> LOW
	1 UNLIKELY	1 NEGLIGIBLE	1 24+ HOURS	1 NEGLIGIBLE	

HAZARD/RISK MATRIX

P R O B A B I L I T Y	HIGH			
	MEDIUM			
	LOW			
		LOW	MEDIUM	HIGH
	SEVERITY			

Directions: First, have members of your school emergency leadership team brainstorm a list of hazards that could affect the safety and security of students and staff at your school site. Plot each significant hazard on the risk matrix chart. Your group can determine its own criteria for probability. For example, probability could be defined as the likelihood of a given event happening in a single school year.

(You may draw the matrix on a board. Hazards may be written on Post-its and placed/moved around matrix during group discussion.)

Action Plan

Based on your team's discussions in the previous activities, what actions can be taken to either prevent or mitigate a hazard or emergency? (Mitigate – prevent or reduce impact of a hazard)

In your recommendations below, note the person or people who should implement your recommendation and the time frame in which the recommendation should be adopted.

For those elements that require longer-term capital planning (i.e. \$\$), it may be necessary to develop immediate procedural modifications that may not fully remove the hazard but will reduce its impact (mitigation).

HAZARD OR EMERGENCY	RECOMMENDATION (ACTION? WHO? WHEN?)	ACTIONS COMPLETED?	COMPLETION DATE
UNAUTHORIZED ACCESS	INSTALL LOCKS – FACILITIES, NLT 14 DAYS.	<input type="checkbox"/> YES <input type="checkbox"/> NO	07/03/2015
SHELTER FROM SUN EXPOSURE	BUY 5 PORTABLE CANOPIES – ADMIN, NLT 14 DAYS.	<input type="checkbox"/> YES <input type="checkbox"/> NO	PENDING

What actions should you plan for?

There are several basic actions that a school will take in response to a given hazard or threat.

- Evacuation
 - On-site
 - Off-site
- Reverse evacuation
- Lockdown (soft)
- Lockdown (hard)
- Shelter in place (hazardous vapors, fumes, chemicals, etc.)
- Reunification

Why Conduct Site Safety Assessments?



- Schools are dynamic environments with inherent vulnerabilities.
- Site assessments:
 - Identify potential safety and security vulnerabilities.
 - Provide a basis for planning and implementing protective and mitigation measures.
 - Look at more than just the physical environment.
 - Should be on-going.

Site Safety Assessments To Identify Vulnerabilities

- Review past incidents and safety assessments.
- Assess existing policies and procedures.
- Consider the surrounding community.
- Conduct a detailed walk-through of the facility.
- Drive the neighborhood & community regularly.
- Talk to key personnel.
- Identify & inventory existing resources (gap analysis).
- Report on findings & request resources.
- Address vulnerabilities = reduced risks

Conducting a Site Safety Walk-Through

- Consider each area from the viewpoint of:
 - Who will be using the space?
 - What will the space be used for, especially during emergencies? (trip hazards in evacuation routes, faulty locks, doors that don't close/open, etc.)
 - Potential intruders who may intend harm.
- Make notes about each space (strengths, vulnerabilities & mitigation actions).
- Do not rush, even in familiar areas.



Assessment Areas

- Neighborhood
- Business & industrial areas
- Vehicle and parking areas
- Outdoor recreation areas
- Building exterior and interior
- Entry and access control
- Information and cyber security
- Communications systems
- Emergency procedures



Resources

- **FEMA Assessing Threats & Hazards Resources**
file:///E:/0364%20Master%2011_13/Toolkit/files/AssessingThreats.htm#item3
- **US Department of Education – A Guide to School Vulnerability Assessments**
http://rems.ed.gov/docs/VA_Report_2008.pdf
- **Guide For Developing High-Quality School Emergency Operations Plans**
http://rems.ed.gov/docs/rems_k-12_guide_508.pdf
- **AZ Department of Education (ADE) School Emergency Response Plan**
<http://www.azed.gov/prevention-programs/emergency-preparedness/>
Under Essential Resources - School Emergency Response Plans
- **FEMA Independent Study Courses – Emergency Management Institute**
<https://training.fema.gov/is/crslist.aspx?all=true>
- **Emergency Management Magazine**
<http://www.emergencymgmt.com/>
- **FEMA Incident Command System (ICS) Resource Center**
<https://training.fema.gov/emiweb/is/icsresource/>
- **No Cost training offered through PCOEM/State DEMA (Announcements through So. AZ School Safety & Preparedness Consortium – email Andy if you want to be on the list)**



For assistance or to become involved in the
Southern Arizona School Safety & Preparedness Consortium

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