

HAZARD VULNERABILITY ANALYSIS TOOLS

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GREATER NEW YORK
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Purpose of an HVA

A Hazards Vulnerability Analysis (HVA) provides a systematic approach to recognizing hazards and prioritizing planning, mitigation, response, and recovery activities.

RISK = PROBABILITY x SEVERITY

Severity = Magnitude – Mitigation

Federal HVA Requirements & Standards

□ Centers for Medicaid & Medicare (CMS)

- Facilities are expected to develop an emergency preparedness plan that is based on the facility-based and community-based risk assessment using an “all-hazards” approach. Facilities must document both risk assessments.
 - *Emergency Preparedness Final Rule Interpretive Guidelines and Survey Procedures, E0006*

□ The Joint Commission (TJC)

- “The hospital conducts a hazard vulnerability analysis (HVA) to identify potential emergencies that could affect demand for the hospital’s services or its ability to provide those services, the likelihood of those events occurring, and the consequences of those events. The findings of this analysis are documented.”
 - *Hospital Requirements, EM Chapter, Elements of Performance for Standard EM.01.01.01*

ASPR Evaluation of Healthcare Facility HVA Tools

- [Comparison Chart](#) lists similarities and difference among several HVA tools
 - Intended audience/sector
 - Summary of primary use/purpose
 - Tool development
 - Format and calculations approach
 - Benefits and limitations
- Tools applicable to hospitals and healthcare facilities
 - Kaiser Permanente Hazard Vulnerability Analysis (HVA) Tool
 - Community Hazard Vulnerability Assessment (CHVA)
 - Big Bend Healthcare Coalition (Florida) Hazard Vulnerability Analysis (HVA) Risk Assessment Tool
 - General Health Care Community Risk Assessment

2019 DOHMH HVA Workgroup Recommendations

□ Independent Hospitals & Small Hospital Networks

- [Kaiser Permanente HVA Tool](#)
- Incident Management Solution's (IMS) HVA tool (*proprietary*)
 - Adapted from Kaiser Permanente HVA tool with additional questions pertaining to internal threats and vulnerabilities
 - To inform threat selection: NYCEM Hazard Mitigation Plan (HMP), 2018 NYCHCC Jurisdictional Risk Assessment (JRA) results

□ Large Hospital Networks

- Consider ASPR [Healthcare and Public Health \(HPH\) Risk Identification and Site Criticality \(RISC\) Toolkit](#)
 - Three modules (THAH, RIST-V, and RIST-C)
 - Pros: aggregation feature, links to valid external data sources
 - Cons: time-consuming and requires cross-department involvement
- Kaiser Permanente HVA Tool or IMS HVA Tool at the facility level

2019 DOHMH HVA Workgroup
Participants: NYC DOHMH,
Montefiore Medical Center,
Calvary Hospital

Kaiser Permanente HVA Tool

- Revised version released in 2017
- Benefits
 - Generate charts/graphs to analyze hazards relative to each other
 - Pre-loaded tool includes 61 scenario-based hazards
 - Incorporates data from real-world emergency alerts and activations to inform probability and risk calculations
- Limitations
 - Does not incorporate baseline data
 - Does not address at-risk populations

Kaiser Permanente											
Emergency Management											
Hazards - Enter name of hospital											
Hazard and Vulnerability Assessment Tool											
Naturally Occurring Events											
Event	PROBABILITY	ALERTS	ACTIVATIONS	SEVERITY = (MAGNITUDE - MITIGATION)						RISK	
	Likelihood this will occur			HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE		* Relative threat
SCORE	0 = N/A 1 = Low 2 = Moderate 3 = High	Number of Alerts	Number of Activations	0 = N/A 1 = Low 2 = Moderate 3 = High	0 = N/A 1 = Low 2 = Moderate 3 = High	0 = N/A 1 = Low 2 = Moderate 3 = High	0 = N/A 1 = High 2 = Moderate 3 = Low	0 = N/A 1 = High 2 = Moderate 3 = Low	0 = N/A 1 = High 2 = Moderate 3 = Low	0 = N/A 1 = High 2 = Moderate 3 = Low	0 - 100%
Internal Flood											
IT System Outage											
Landslide											
Large Internal Spill											
Mass Casualty Incident											
Natural Gas Disruption											
Natural Gas Failure											
Other											
Other Utility Failure											
Pandemic											
Patient Surge											
Picketing											
Planned Power Outages											
Power Outage											
Radiation Exposure											
Seasonal Influenza											
Sewer Failure											
Shelter in Place											
Strikes / Labor Action / Work Stoppage											
Suicide											
Supply Chain Shortage / Failure											
Suspicious Odor											
Suspicious Package / Substance											
Temperature Extremes											
Tornado											
Transportation Failure											
Trauma											
Tsunami											
VIP Situation											
Water Contamination											
Water Disruption											
Weapon											
Workplace Violence / Threat											
Zombies											

Zombies

ASPR HPH RISC Tool

- Developed by ASPR CIP
- Three self-assessment modules
 1. Identify threats and hazards
 2. Assess vulnerabilities
 3. Determine criticality and consequences
- Benefits
 - Incorporates external threats and internal hazards
 - Compares multiple facilities across systems, coalitions, and regions
 - Identifies dependencies, interdependencies, and supply chains
 - Informs preparedness activities and resource allocation
 - Enables risk trend analysis



Community Discussion

1. *What HVA tool does your facility/system use?*
2. *How did your facility/system select your HVA tool? Who was involved in this selection process?*
3. *Have you switched tools over the last 3 years? If so, why? How have you dealt with comparability between tools?*
4. *Who within your facility/system conducts the HVA? Which outside partners are involved?*
5. *How are the results of your annual HVA utilized at your facility/system? Are they shared with community partners and local response agencies?*