

**Hazards
Vulnerability/Business Impact
Analysis**

Primary Reference

- *Emergency Management Principles and Practices for Healthcare Systems*, The Institute for Crisis, Disaster and Risk Management (ICDRM) at the George Washington University (GWU) for the Veterans Health Administration, Department of Veterans Affairs (VA), Washington, DC, June, 2006. Available at www.va.gov/emshg

Lesson Objectives

- Explain the purposes of a Hazards Vulnerability Analysis (HVA).
- Describe how an HVA is related to a Business Area Analysis and to the overall emergency management program.
- Provide examples of Mission Critical Systems.
- Identify the six steps involved in a comprehensive HVA process.

Discussion Question:

- *What are some unique characteristics of health care facilities that make them especially prone to hazard impacts?*

Key Terms 1

- Hazard – a potential or actual force, physical condition, or agent with the ability to cause human injury, illness, and/or death and significant damage to property, the environment, business operation and other types of harm or loss.
- Vulnerability – the likelihood of an organization being affected by a hazard and its susceptibility to its impact and consequences (injury, death and damage) of the hazard.

Key Terms 2

- Risk – risk is the product of probability (likelihood) and the impact/consequences of a hazard event.
- Risk Management – a management science that employs the findings of the HVA process to make strategic and tactical decisions on how risk will be treated – whether deferred, reduced (through mitigation and preparedness activities), transferred (insurance), or avoided.

Hazards Vulnerability Analysis (HVA)

- A systematic approach to identifying all hazards that may affect an organization and/or its community, assessing the risk associated with each hazard and analyzing the findings to create a prioritized comparison of hazard vulnerabilities. The consequence or “vulnerability” is related to both the impact on organizational function (resiliency) and the likely service demands created by the hazard impact (medical surge).

Hazards Vulnerability Analysis

- Is focused on the hazards and their impacts.
- Serves as the needs assessment for the CEM program, providing direction for mitigation, preparedness, response and recovery planning.
- An educational process for the emergency management committee.
- Focuses on hazard impact on the health care facility, as well as patients and staff in the community.

“Business Area Analysis”

- Is focused on the business of the organization (people, property, management, operations), including suppliers and partners.
- Examines day-to-day operations to determine efficiencies and critical functions and processes, their interdependencies, and their vulnerability to hazards.
- Often conducted separately from the HVA but should be integrated into the program development process.

Identify Critical Operations & Infrastructure

- Revisit Y2K planning efforts.
- Identify critical operations and determine the human, physical and informational resources on which they depend.
- Analyze the number of alternatives or degree of redundancy supporting the systems.
- Rate the various critical operations on survivability and recommend improvements.

Mission Critical Systems

- Lighting
- Electrical Power
- Steam Distribution
- HVAC
- Room or Hood Exhaust
- Water Delivery
- Water Conditioning
- Waste Stream
- Critical Supplies
- Communications
- Computer Systems
- Alarms
- Vertical Transportation
- Central Medical gases
- Staff

HVA Process 1

- Establish the context for the HVA.
- Identify the hazards.
- Assess the hazard-associated risk (probability and consequence).
- Sort the hazards by magnitude of risk.

HVA Process 2

- Analyze the vulnerability of Mission Critical Systems to each individual hazard or hazard threat, and identify each vulnerability element.
- Group and prioritize the hazard vulnerabilities and consider risk interventions.

Discussion Question:

- *What are some of the “common denominators” for determining the impact of a hazard on a health care facility?*

Questions?