FUNCTIONAL HAZARD VULNERABILITY ASSESSMENT (HVA) FOR THE MULTIHOSPITAL HEALTHCARE SYSTEM

Kaiser/Swedish2.0 HVA

HAZARD VULNERABILITY ASSESSMENT
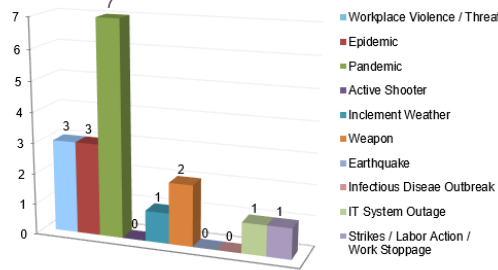**Emergency Management**

Summary for All of the Swedish Medical Centers

ALERT TYPE	OCCURRENCE
Cherry Hill	
Command Center Activation	4
Patient Care Impacts	4
Business / Operational Impacts	4
Structural Impacts	0
Resource Request	3
Recovery Plan Activated	0
AAR	4
Total Alert	**19**
First Hill	
Command Center Activation	3
Patient Care Impacts	3
Business / Operational Impacts	3
Structural Impacts	0
Resource Request	3
Recovery Plan Activated	0
AAR	2
Total Alert	**14**
Ballard	
Command Center Activation	3
Patient Care Impacts	5
Business / Operational Impacts	6
Structural Impacts	1
Resource Request	4
Recovery Plan Activated	0
AAR	3
Total Alert	**22**
Issaquah	
Command Center Activation	3
Patient Care Impacts	3
Business / Operational Impacts	4
Structural Impacts	1
Resource Request	2
Recovery Plan Activated	0
AAR	3
Total Alert	**16**

Top 10 HVA - All Sites

Legend:
- Workplace Violence / Threat
- Epidemic
- Pandemic
- Active Shooter
- Inclement Weather
- Weapon
- Earthquake
- Infectious Diseae Outbreak
- IT System Outage
- Strikes / Labor Action / Work Stoppage

2021

TOTAL TOP 10 HVA	RANK	OCCURRENCE
Workplace Violence / Threat	1	3
Epidemic	2	3
Pandemic	3	7
Active Shooter	4	0
Inclement Weather	5	1
Weapon	6	2
Earthquake	7	0
Infectious Diseae Outbreak	8	0
IT System Outage	9	1
Strikes / Labor Action / Work Stoppage	10	1

2021

TOP 10 ACTUAL ALERTS	OCCURRENCE	HVA RANK
Cherry Hill		
Inclement Weather	1	5
Planned Power Outages	1	11
Pandemic	1	3
Temperature Extremes	1	12
Generator Failure	1	19
First Hill		
Inclement Weather	1	3
Pandemic	1	2
Other	1	9
Ballard		
Inclement Weather	2	6
Internal Fire	2	21
Weapon	2	3
Pandemic	1	2
Temperature Extremes	1	18
VIP Situation	1	30
Issaquah		
Inclement Weather	1	3
Pandemic	1	1
Temperature Extremes	1	10

Abstract

An updated tool to provide a systemwide approach to analyzing hazards that may affect a specific hospital and how those affects impact the decisions and resources provided from a multihospital healthcare system providing those services, helping to prioritize planning, mitigation, response, and recovery.

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Topic: Functional Hazard Vulnerability Assessment for the Multihospital Healthcare System

Discussion of the Issue:

Historically hospitals have consistently conducted a Hazard Vulnerability Assessment (HVA) for an individual hospital within a system, to look at specific hazards that hospital might face. The most recognized and used HVA tool is the Kaiser Permanente HVA tool, which looks at hazards for a single hospital. There has not been an assessment tool that can analyze and establish a systemwide algorithm for determining the top 10 vulnerabilities a system will face based on the aggregate data from each individual hospital. Multihospital healthcare systems tend to have individual hospitals geographically separated with unique risks that may differ from other hospitals, but no way for a corporate function to collate the top shared vulnerabilities across the system.

Action Plan/Implementation:

In reviewing the need to have a "big picture" cohesive dashboard that built upon the Kaiser Permanente model, I set out to build an HVA that could incorporate a 7-hospital healthcare system and roll the top 10 hazards into an easy to review dashboard. Each hospitals Safety/EM program manager score the risk category based on 60 different event possibilities. This scoring looks at probability and severity of an event that can impact the hospitals' ability to respond to the event. With the help of Nancy Albrecht, a recently retired Boeing statistician, I was able to provide her the vision for how the dashboard would populate across a multihospital HVA dashboard. After a few iterations, we finally had a finished, usable product, that I endearingly named the Kaiser/Swedish2.0 Multihospital Healthcare System HVA.

Results/Conclusions:

The result was a multihospital hazard vulnerability assessment tool that provided a systemwide dashboard for viewing top 10 vulnerabilities and Hospital Incident Command System (HICS) activations. The tool is set up so that each hospital within the system has a tab at the bottom, to hold one hospital's individual data, and each of the individual hospitals populate the one systemwide dashboard, allowing for vulnerabilities and activations to be viewed both individually, and collectively. By looking at vulnerabilities from a system level, this tool allows decision makers to drive budgetary needs based on risk stratification.

Next Steps:

Provide this tool to other healthcare systems that need a system approach that collates hazards from each specific hospital into one easy-to-read dashboard.