

OVA sample

Below are the results from an organization that completed an outcomes-based vulnerability analysis (OVA) tool, which was developed by the author. This tool promotes a more in-depth analysis than a traditional hazard and vulnerability assessment.

Outcomes vulnerability analysis—Example

*0=Not Applicable; 1=Low; 2=Moderate; 3=High					Primary outcomes																		
Category	Hazard*	Impact (0-3)*	Probability (0-3)*	Risk score (Impact * Probability)	Mass trauma	Mass medical	Infectious disease	Burn	Radiation exposure	Chemical exposure	Worried well/displaced	Structural damage	Security issues	Communications failure	Systems inoperable	Evacuation	Selected transfer of patients	Mass mortality	Shelter-in-place	Labor shortage	Supply shortage	Financial impact	
					Natural Disasters	Tornado	3	2	6	x					x	x	x	x	x	x	x	x	x
Ice/blizzard	2	2	4	x								x	x	x	x	x			x	x	x	x	x
Earthquake	3	1	3	x						x	x	x	x	x	x			x	x	x	x	x	x
Flood	3	3	9	x		x				x	x	x	x	x	x	x	x	x	x	x	x	x	x
Epidemic	2	3	6			x	x			x		x					x	x		x	x	x	x
Pandemic ^a	3	2	6			x	x			x		x					x	x		x	x	x	x
Technological	Utility interruption	2	2	4		x						x	x	x	x	x						x	x
	Dam inundation	3	3	9	x	x					x	x	x	x	x	x	x			x	x		
	Mass transit incident	3	3	9	x							x					x	x		x	x	x	x
	Hazmat release—fixed facility	0	0	0																			
	Cyber threat	2	1	2								x	x	x	x		x				x	x	x
	Hazmat release—transportation	3	3	9	x	x		x		x		x	x			x	x	x		x	x	x	x
Civil disturbance	Labor action	2	1	2								x				x				x	x	x	x
	Riots	3	1	3	x							x	x							x	x	x	x
	High-occupancy fire	3	1	3	x	x		x		x	x					x			x	x	x	x	x
	Structural collapse	2	1	2	x						x	x	x	x	x	x	x			x	x	x	x
Terrorism	Mass shooting	3	3	9	x					x		x				x	x	x	x	x	x	x	x
	Chemical	3	2	6		x	x		x	x	x	x			x		x		x	x	x	x	x
	Biological	3	1	3		x	x			x		x				x	x	x	x	x	x	x	x
	Nuclear accident	0	0	0																			
	Explosive	3	2	6	x		x		x			x				x	x			x	x	x	x
Total outcome relative risk					72	46	24	24	0	21	53	56	98	30	39	51	80	86	28	94	99	90	

The total outcomes relative risk figures are summarized in the bar chart below. Scores were assigned to each of the potential outcomes (x-axis) in relation to the high-risk hazards obtained from the hospital's hazard vulnerability analysis (y-axis). The aggregated percentages identify which outcomes are highest priority for scarce resource planning by the scarce resource management team across all hazards. For this organization, financial impacts, supply and labor shortages, and security issues are the vulnerabilities that score highest—regardless of the type of event. It's important to note that this is a subjective exercise and each hospital's results will be different. The scarce resource management team must make a judicious decision about resource allocation for the outcomes with a lower score, such as mass trauma or infectious disease, based on the current environment.

