

2021 Medical Facility Hazard and Vulnerability Analysis

INSTRUCTIONS:

Evaluate potential for event and response among the following categories using the hazard specific scale.

Issues to consider for **probability** include, but are not limited to:

- 1 Known risk
- 2 Historical data
- 3 Manufacturer/vendor statistics

Issues to consider for **response** include, but are not limited to:

- 1 Time to marshal an on-scene response
- 2 Scope of response capability
- 3 Historical evaluation of response success

Issues to consider for **human impact** include, but are not limited to:

- 1 Potential for staff death or injury
- 2 Potential for patient death or injury

Issues to consider for **property impact** include, but are not limited to:

- 1 Cost to replace
- 2 Cost to set up temporary replacement
- 3 Cost to repair

Issues to consider for **business impact** include, but are not limited to:

- 1 Business interruption
- 2 Employees unable to report to work
- 3 Customers unable to reach facility
- 4 Company in violation of contractual agreements
- 5 Imposition of fines and penalties or legal costs
- 6 Interruption of critical supplies
- 7 Interruption of product distribution

Issues to consider for **preparedness** include, but are not limited to:

- 1 Status of current plans
- 2 Training status
- 3 Insurance
- 4 Availability of back-up systems
- 5 Community resources

Issues to consider for **internal resources** include, but are not limited to:

- 1 Types of supplies on hand
- 2 Volume of supplies on hand
- 3 Staff availability
- 4 Coordination with MOB's

Issues to consider for **external resources** include, but are not limited to:

- 1 Types of agreements with community agencies
- 2 Coordination with local and state agencies
- 3 Coordination with proximal health care facilities
- 4 Coordination with treatment specific facilities

Complete all worksheets including Natural, Technological, Human and Hazmat. The summary section will automatically provide your specific and overall relative threat.

2021 HAZARD AND VULNERABILITY ASSESSMENT TOOL

NATURALLY OCCURRING EVENTS

EVENT	PROBABILITY	SEVERITY = (MAGNITUDE - MITIGATION)						RISK
		HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	
	<i>Likelihood this will occur</i>	<i>Possibility of death or injury</i>	<i>Physical losses and damages</i>	<i>Interruption of services</i>	<i>Preplanning</i>	<i>Time, effectiveness, resources</i>	<i>Community/ Mutual Aid staff and supplies</i>	<i>Relative threat*</i>
SCORE	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 = Low 2 = Moderate 3 = High	0 = N/A 1 = High 2 = Moderate 3 = Low or none	0 = N/A 1 = High 2 = Moderate 3 = Low or none	0 = N/A 1 = High 2 = Moderate 3 = Low or none	0 - 100%
Tornado	1	1	2	2	2	2	2	20%
Severe Thunderstorm	2	1	2	2	2	2	2	41%
Snow Fall	2	1	1	1	1	1	1	22%
Blizzard	1	1	1	1	1	1	1	11%
Ice Storm	2	2	1	1	2	2	2	37%
Earthquake	1	1	1	1	3	3	3	22%
Temperature Extremes	2	2	1	1	2	2	2	37%
Drought	2	1	1	1	2	2	2	33%
Flood, External	0	0	0	0	0	0	0	0%
Wild Fire	2	1	2	2	2	2	2	41%
Landslide	0	0	0	0	0	0	0	0%
Dam Inundation	0	0	0	0	0	0	0	0%
Epidemic	2	2	1	2	2	2	2	41%
AVERAGE SCORE	1.06	0.81	0.81	0.88	1.19	1.19	1.19	12%

*Threat increases with percentage.

RISK = PROBABILITY * SEVERITY		
0.12	0.35	0.34

2021 HAZARD AND VULNERABILITY ASSESSMENT TOOL

TECHNOLOGIC EVENTS

EVENT	PROBABILITY	SEVERITY = (MAGNITUDE - MITIGATION)						RISK
		HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	
	<i>Likelihood this will occur</i>	<i>Possibility of death or injury</i>	<i>Physical losses and damages</i>	<i>Interruption of services</i>	<i>Preplanning</i>	<i>Time, effectiveness, resources</i>	<i>Community/ Mutual Aid staff and supplies</i>	<i>Relative threat*</i>
SCORE	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 = Low 2 = Moderate 3 = High	0 = N/A 1 = High 2 = Moderate 3 = Low or none	0 = N/A 1 = High 2 = Moderate 3 = Low or none	0 = N/A 1 = High 2 = Moderate 3 = Low or none	0 - 100%
Electrical Failure	1	1	2	2	2	1	1	17%
Generator Failure	1	2	2	3	2	2	1	22%
Transportation Failure	0	0	0	0	0	0	0	0%
Fuel Shortage	1	1	1	3	2	2	2	20%
Natural Gas Failure	1	1	2	3	3	3	3	28%
Water Failure	1	1	1	3	1	1	1	15%
Sewer Failure	1	1	1	3	3	3	3	26%
Steam Failure	0	0	0	0	0	0	0	0%
Fire Alarm Failure	1	1	1	2	2	2	2	19%
Communications Failure	2	1	2	2	2	2	2	41%
Medical Gas Failure	1	2	1	3	2	2	2	22%
Medical Vacuum Failure	1	1	2	3	2	2	2	22%
HVAC Failure	1	2	2	2	2	2	2	22%
Information Systems Failure	2	1	2	2	2	1	2	37%
Fire, Internal	1	1	1	2	1	1	1	13%
Flood, Internal	1	1	1	2	2	2	2	19%
Hazmat Exposure, Internal	1	1	0	2	2	2	2	17%
Supply Shortage	2	2	1	3	2	2	2	44%
Structural Damage	1	1	1	2	2	2	2	19%
AVERAGE SCORE	1.05	1.11	1.21	2.21	1.79	1.68	1.68	19%

*Threat increases with percentage.

RISK = PROBABILITY * SEVERITY
0.19 0.35 0.54

2021 HAZARD AND VULNERABILITY ASSESSMENT TOOL
HUMAN RELATED EVENTS

EVENT	PROBABILITY	SEVERITY = (MAGNITUDE - MITIGATION)						RISK
		HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	
	<i>Likelihood this will occur</i>	<i>Possibility of death or injury</i>	<i>Physical losses and damages</i>	<i>Interruption of services</i>	<i>Preplanning</i>	<i>Time, effectiveness, resources</i>	<i>Community/ Mutual Aid staff and supplies</i>	<i>Relative threat*</i>
SCORE	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 = Low 2 = Moderate 3 = High	0 = N/A 1 = High 2 = Moderate 3 = Low or none	0 = N/A 1 = High 2 = Moderate 3 = Low or none	0 = N/A 1 = High 2 = Moderate 3 = Low or none	0 - 100%
Mass Casualty Incident (trauma)	1	1	0	1	2	2	2	15%
Mass Casualty Incident (medical/infectious)	1	1	0	1	2	2	2	15%
Terrorism, Biological	1	1	1	3	2	2	2	20%
VIP Situation	1	1	0	0	2	2	2	13%
Infant Abduction	1	1	0	0	1	1	1	7%
Hostage Situation	1	1	0	2	3	3	2	20%
Civil Disturbance	1	1	1	2	2	2	2	19%
Labor Action	0	0	0	0	0	0	0	0%
Forensic Admission	0	0	0	0	0	0	0	0%
Cyber Attack	1	0	0	2	2	2	2	15%
Bomb Threat	1	1	1	2	2	2	2	19%
Workplace Violence	1	1	1	1	2	2	2	17%
AVERAGE	1.00	0.80	0.30	1.30	1.80	1.80	1.70	13%

*Threat increases with percentage.

RISK = PROBABILITY * SEVERITY		
0.13	0.30	0.43

2021 HAZARD AND VULNERABILITY ASSESSMENT TOOL

EVENTS INVOLVING HAZARDOUS MATERIALS

EVENT	PROBABILITY	SEVERITY = (MAGNITUDE - MITIGATION)						RISK
		HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	
	<i>Likelihood this will occur</i>	<i>Possibility of death or injury</i>	<i>Physical losses and damages</i>	<i>Interruption of services</i>	<i>Preplanning</i>	<i>Time, effectiveness, resources</i>	<i>Community/ Mutual Aid staff and supplies</i>	<i>Relative threat*</i>
SCORE	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 = Low 2 = Moderate 3 = High	0 = N/A 1 = High 2 = Moderate 3 = Low or none	0 = N/A 1 = High 2 = Moderate 3 = Low or none	0 = N/A 1 = High 2 = Moderate 3 = Low or none	0 - 100%
Mass Casualty Hazmat Incident <i>(From historic events at your MC with >= 5 victims)</i>	1	1	1	2	2	3	2	20%
Small Casualty Hazmat Incident <i>(From historic events at your MC with < 5 victims)</i>	1	1	1	2	3	3	2	22%
Chemical Exposure, External	1	1	1	1	3	3	2	20%
Small-Medium Sized Internal Spill	1	1	1	2	2	3	2	20%
Large Internal Spill	1	1	1	2	3	3	2	22%
Terrorism, Chemical	1	1	1	2	3	3	2	22%
Radiologic Exposure, Internal	1	1	1	2	3	3	2	22%
Radiologic Exposure, External	1	1	1	2	3	3	2	22%
Terrorism, Radiologic	1	1	1	2	3	3	2	22%
AVERAGE	1.00	1.00	1.00	1.89	2.78	3.00	2.00	22%

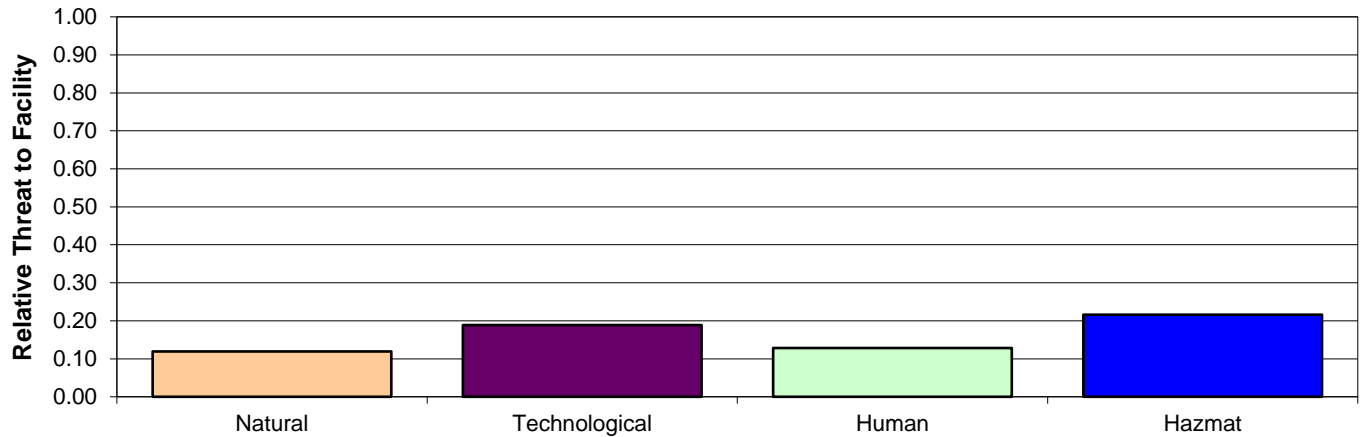
*Threat increases with percentage.

RISK = PROBABILITY * SEVERITY		
0.22	0.33	0.65

2021 SUMMARY OF MEDICAL FACILITY HAZARDS ANALYSIS

	Natural	Technological	Human	Hazmat	Total for Facility
Probability	0.35	0.35	0.30	0.33	0.34
Severity	0.34	0.54	0.43	0.65	0.48
Hazard Specific Relative Risk:	0.12	0.19	0.13	0.22	0.16

Hazard Specific Relative Risk to Medical Facility



Probability and Severity of Hazards to Medical Center

