

MASS CASUALTY INCIDENT ROUNDTABLE EVENT

Presented by:

Kari Kotara MSN, MSA, RN, EMT-LP, NDLP, FF

Objectives

- Explain a Mass Casualty Incident (MCI) and how to prepare
- Understanding Disaster Paradigm for emergency mass casualty events and hazardous vulnerability assessment
- Discuss the allocation of proper resources to improve response efforts working as a team instead of operational silos
- Identify gaps in training and MCI exercises



Disaster Paradigm

- ▣ Prevention
 - Actions taken
- ▣ Mitigation
 - Prevention measures
- ▣ Preparedness
 - Prepping for response area
- ▣ Response
 - Responding to the incident
- ▣ Recovery
 - Recovering & Reunification



Lessons Learned

- ▣ Oklahoma City Bombing
 - April 1995, Federal buildings are not safe
 - 168 dead, over 750 wounded, including one responder
- ▣ Columbine Shooting
 - April 1999 Schools are not safe, unsecure
 - 13 dead
- ▣ 9/11
 - Multiple prior attempts to collapse the WTC
 - Deaths 2,996 of which 343 first responders
 - Additional injuries from medical staff running towards the towers before the collapse
- ▣ Hurricane Katrina
 - August 2005
 - 1,836 victims almost triple that injured

Lessons Learned

- ▣ Colorado Shooting
 - ▣ July 2012 Aurora Movie Theater
 - ▣ 12 dead
- ▣ Pulse Nightclub
 - ▣ June 2016 Nightclub
 - ▣ 49 deaths and over 50 injuries
- ▣ Waukesha Parade
 - ▣ November 2021
 - ▣ 6 deaths with ten times that injured
 - ▣ PEDI patients brought to the limelight
- ▣ Uvalde Shooting
 - ▣ May 2022
 - ▣ Chase turned into Mass shooting
 - ▣ 21 deaths with the same injured
- ▣ San Antonio
 - ▣ June 2022
 - ▣ Human Trafficking
 - ▣ 51 dead including children

Hazardous Vulnerability Assessment

- ▣ Probability
 - ▣ Risk
 - ▣ Historical Data
 - ▣ Predictive Data
- ▣ Impact
 - ▣ Human
 - ▣ Property
 - ▣ Business
- ▣ Preparedness
 - ▣ Plans
 - ▣ Partnerships
 - ▣ Resources

EVENT	PROBABILITY	SEVERITY ~ (MAGNITUDE - MITIGATION)					RISK
		HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPAREDNESS	INTERNAL RESPONSE	
	Likelihood this will occur	Possibility of death or injury	Physical losses and damages	Interruption of services	Preplanning	Time, effectiveness, resources	Community Mutual Aid staff and supplies
SCORE	0 = Nil 1 = Low 2 = Moderate 3 = High	0 = Nil 1 = Low 2 = Moderate 3 = High	0 = Nil 1 = Low 2 = Moderate 3 = High	0 = Nil 1 = Low 2 = Moderate 3 = High	0 = Nil 1 = High 2 = Moderate 3 = Low or none	0 = Nil 1 = High 2 = Moderate 3 = Low or none	0 = Nil 1 = High 2 = Moderate 3 = Low or none
Hurricane							0%
Tornado							0%
Severe Thunderstorm							0%
Snow Fall							0%
Blizzard							0%
Ice Storm							0%
Earthquake							0%
Tidal Wave							0%
Temperature Extremes							0%
Drought							0%
Flood, External							0%
Wild Fire							0%
Landslide							0%
Dam Inundation							0%
Volcano							0%
Epidemic							0%
AVERAGE SCORE	0.00	0.00	0.00	0.00	0.00	0.00	0%

*Threat increases with percentage

RISK = PROBABILITY * SEVERITY
0.00 0.00 0.00

Columbia, 2021

Calculating Hazardous Vulnerability Assessment

- ▣ General Risks
 - Use data to current risks within the community
 - Gathered from multiple resources including health department, FEMA, response services, businesses, and etc
- ▣ Historical Data
 - Data that has been gathered over the years in the current areas
 - Weather data, wildland fires, drought, and other incidents that have occurred
- ▣ Predictive Data
 - Forecasted during hurricane season, fire season, earthquake risks
 - Threat assessment on terrorism

Collaborative Exercise

- ▣ Response efforts
 - All agency's develop different processes to respond to incidents
 - Get key players together to develop operational goals
- ▣ Avoiding operational siloes
 - Normal operations are operating together while independently
 - Example: Police, Fire, EMS
 - Example: Hospital floors, emergency departments, & Intensive care providers
- ▣ Collaboration
 - Tabletop exercises allow collaborative communication

First Responder to First Receiver

- ▣ Tabletop exercises allow for lessons learned and the options that we can pre-existence issues
 - Lessons learned
 - Initial breakdown of response efforts
 - Initial surge capacity issues
 - Determination sick vs unsick; wounded vs walking wounded
 - Stopping surge response efforts
 - Full response efforts
 - Recovery
 - Reunification

CAMLS, (2022)



Full scale hospital MCI



- ▣ Difficult to determine MCI vs first responder
- ▣ EMS/Fire
- ▣ What is one more than ER's can handle
- ▣ UMC Emergency rooms
 - Averages 200+ patients/daily
 - 89,000 prior to Covid
 - Most emergency departments place the warning under timing for overflow

Portions Disaster Self-Assessment

- ▣ Assessment Summary
 - Hospital Profiles
 - Emergency Planning
- ▣ Clinical Preparedness Factors
 - Leadership
 - Emergency planning
 - Clinical Operations
 - Safety, Security, and Fire
 - Logistics
 - Communication
 - Training
 - Performance Improvement

(Calonge, Brown, & Downey, 2020)

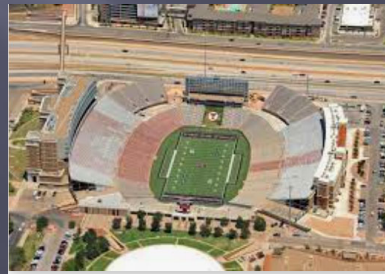
Tabletop Exercise Apartment Fire-Burn Surge

- ▣ Apartment Building two stories started in the middle of the night of south Lubbock
- ▣ 200 apartments started on bottom floor without working smoke detector/alarm system
- ▣ 25 major burn victims
- ▣ 30 wounded victims
- ▣ 40 smoke related victims

(UMC, 2021)

Tabletop Exercise Jones Stadium

- ▣ Texas Tech against Texas
- ▣ Jones is “blackout,” full
- ▣ Small drone flies over the north end of the stadium shooting and dispersing an “unknown substance powder”
- ▣ Initial report 40 dead, barricaded from additional response



Benefits & Take Homes

BENEFITS

- ▣ Tabletops allows for layered response efforts
- ▣ Breaks operational siloes
 - ▣ No disaster is managed by one person it takes the entire team
- ▣ Communication outside of the physical event

TAKE HOMES

- ▣ Know your system
- ▣ Know your responses
- ▣ Collaborate as operational teams
- ▣ Use every available resource to determine any roadblocks or barriers
 - ▣ Include daily operations

Questions



References

- ▣ Calonge, N., Brown, L., & Downey, A. (2020). Evidence-based practice for Public Health Emergency Preparedness and response. *JAMA*, 324(7), 629. doi:10.1001/jama.2020.12901
- ▣ Center for Advance Medical Live Simulation (Ed.). (2022). <https://www.ceme.org/mcit#group-tabs-node-course-default1>. In *Mass Casualty Incident Training* (pp. 1-50). Tampa, FL: Center for Emergency Medical Education.
- ▣ Columbia. (2021, September 27). National Center for Disaster Preparedness (NCDP): Columbia University. Retrieved September 1, 2022, from <https://ncdp.columbia.edu/>
- ▣ Thomas, J. (2010). Anhydrous Ammonia Poisoning Warning Video for training - First Responders: Youtube. Retrieved September 1, 2022, from <https://youtu.be/znQwAcOQffQ>
- ▣ Vaca-Valencia, H. (2021). *Hospital Preparedness Disaster Self Assessment Tool* (pp. 1-53, Rep.). Lubbock, TX: University Medical Center.