WISCONSIN HEALTHCARE ENGINEERING ASSOCIATION

PROHEALTH CARE

EMERGENCY PREPAREDNESS

NOVEMBER 9TH, 2023

PRESENTER Scott Groenwoldt



Scott has been the Emergency Preparedness Coordinator / Hazardous Materials Specialist for ProHealth Care, Inc. since 2017. Scott is part of the SE Wisconsin Homeland Security Partnership (SWHSP) which unites public and private entities in partnership in planning for, responding to and recovering from all types and scales of disasters. He is the Vice chair for the hospital caucus with the SE Wisconsin Healthcare Readiness Coalition (HERC Region 7). Previous experience includes working up the ranks of Firefighter/EMT for 28 years and 911 communications for 18 years. For the 8 years prior to ProHealth, Scott implemented and trained local, state and regional EMS, Healthcare, Public Health and coalitions across the country on mass disaster, mass casualty and mass fatality management software applications.

PROHEALTH CARE, INC.

- Primarily located in Waukesha County
- 3 hospitals
 - ProHealth Care-Waukesha Memorial 275 beds
 - ProHealth Care- Oconomowoc Memorial 106 beds
 - ProHealth Care Waukesha Memorial Mukwonago 24 beds
- Angels Grace Hospice
- 15 Clinics -1 in Watertown Jefferson Co and 1 in Waterford Racine Co
- 10 Urgent Care sites
- Cancer Center
- Home Health approx. 500 patients across 6 counties
- Outpatient Physical Therapy (Adult and Pediatric)
- Heart and Vascular Center

WE START BY REMEMBERING WAUKESHA PARADE INCIDENT

6 Fatalities 68 injuries

- Jackson Sparks
- Jane Kulich
- Virginia "Ginny" Sorenson
- Wilhelm "Bill" Hospel
- Tamara I. Carlson Durand
- Leanna "Lee" Owen











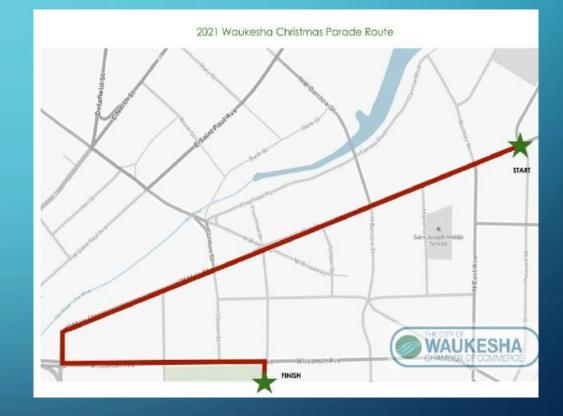


WAUKESHA, WISCONSIN

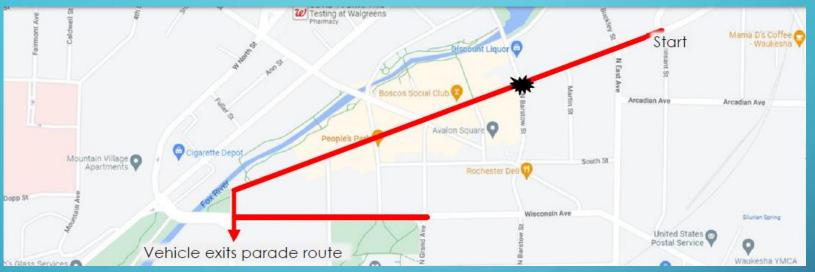
- City of Waukesha population 71,256
- Waukesha County Seat
- County population 408,756 24x24 square miles
- Adjacent to Milwaukee County
- 20 miles west of the City of Milwaukee
- 4 Health systems within the county
 - 5 hospitals
 - 3 micro hospitals (8 to 12 beds)
- Froedtert Hospital / Medical College Level 1 trauma
- Children's Hospital of Wisconsin
 - Both located in Milwaukee County 15 miles away

58TH ANNUAL CHRISTMAS PARADE "COMFORT AND JOY"

- Sunday, November 21st, 2021
- 4p 6p
- 67 groups registered
- Weather
 - Temperature 25 degrees
 - Wind speed 15-20 mph
- Parade route approx. ³/₄ mile



THE INCIDENT STARTED AT APPROXIMATELY 435P



Waukesha Police dispatched approximately 425p to a man with a knife

- Incident was approx. $\frac{1}{2}$ mile north of the parade starting point
- Suspect fled the scene heading south towards the parade route
- Suspect drove around the barriers blocking the entrance to the parade
- Waukesha FD initially dispatched for an unknown problem then quickly upgraded to vehicle vs. pedestrians
- Upgraded to a mass casualty incident
- Waukesha Fire requested a MABAS (Mutual Aid Box Alarm) Life Safety box at 446p

PROHEALTH CARE ON NOV 21ST, 2021

- ProHealth Waukesha Memorial Hospital Ground zero
- Approx. 5500 employees
- At the time of the parade:
 - Two Level 3 trauma hospitals (Oconomowoc and Waukesha)
 - 1 stand alone Emergency Department (Mukwonago)
 - Hospice / Home Health services
 - 21 Clinics, Urgent Care and Off-site therapy services
 - Cancer Center
 - Heart and Vascular Center

ProHealth Waukesha Memorial

Approx. $\frac{1}{2}$ mile from parade route on top of a hill



Hospital Census

>227 staffed beds available for patients 223 number of admitted patients ▶ 46 COVID patients included in census COVID surge 2 weeks prior ED boarding patients due to pandemic ED average was 100 pts per day ED has 34 rooms ≥3 trauma rooms

Initial Notification

Communications and notifications of the incident came through text messages and phone calls to the ED and Security

1639 - Security Dispatch heard radio transmissions of a MCI

• Security officer was on the helipad and heard sirens throughout the city

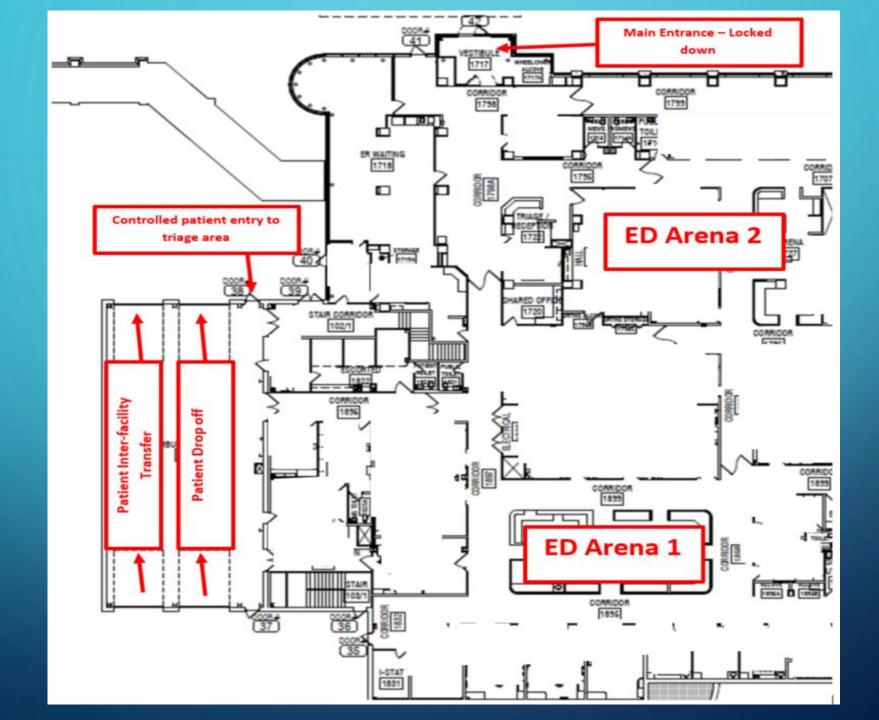
1641 – ED manager, on scene with family, called ED Charge nurse to advise of a MCI w/an unknown number of patients

1647 – First patient arrives – brought in by Waukesha Sheriff and City of WaukeshaPD in a squad

- Radio transmissions heard stating possible active shooter
- Unknown location of shooter
- Hospital put into lockdown
- Activation of Active Shooter Response plan

Response

- Security, ED Charge Nurse and Nurse Manager met
- East ambulance bay for patient drop off
- West ambulance bay for transfers out
- Main ED entrance locked
- Service door to ambulance bay used for walk ins to triage and for security/safety reasons



Response continued

- Mass page sent out to leadership
- Each department activated their own mass casualty and Active Shooter protocols
 - Challenge of Active Shooter activation floors in lockdown
- Incident Command established within 45 min (Sun evening)
- MABAS / SMART (Suburban Mutual Aid Response Team)
 - Battalion Chief from Brookfield FD in Healthcare Command Center (HCC)
 - Waukesha PD, Waukesha Sheriff, Hartland PD, Chenequa PD, Delafield PD and State Patrol assisted with hospital security
- FBI interviewed family and friends

Patients Received

- 36 patients total
- 26 patients within first hour
- 11 patients within first 13 minutes all pediatrics
 - Age range 3 to 11 years old
 - 10 had major injuries
 - 4 had multi-system injuries
- 24 patients were pediatrics (youngest 3, oldest 17)
- 3 patients self-presented to Mukwonago ED two hours after incident for minor injuries / anxiety and discharged
- 2 patients self-presented later that night and the next day with minor injuries and discharged
- 1 Deceased



How they arrived

- 17 by personal vehicle
- 9 by EMS
- 4 by law enforcement
- 1 unknown
- 5 self -presents



When it was all over

- 11 patients were transferred to Children's Hospital of Wisconsin (CHOW)
- 19 were discharged that night or next day
- 5 admitted to the hospital
- 1 adult deceased on arrival

Strengths

- Incredible response by staff
 - Blessing / Curse almost too many staff initially
- Titles no longer mattered everyone stepped up
- Quick reaction of staff and set up of triage area
- Having maximum ED physician staff on site at onset
 - Physicians were at shift change
 - Had an additional 3 ED physicians on site
- Quick activation of EAP for staff
- All but 2 (Does) patients identified at initial registration
- Staff's response (outside of ED proper) to Active Shooter activation

Lessons Learned

COMMUNICATIONS

- All areas impacted, phone calls, runners, etc.
- Increased radio frequencies and radios
- Between departments and IC
- Ear pieces, additional radios, PRACTICE
- Take care of yourself and your own people (staff)
- Almost too many staff improved labor pool

What are we doing different?

- Staff taking drills / exercises more seriously
 - Pandemic challenge cancelling of 2 exercises
 - Include more departments in exercises
 - Majority of time only focused on the ED's and immediate area
- Understanding / accepting that this CAN happen in "Anywhere, USA"
- Improved Administration buy in and support

EXPECT THE UNEXPECTED!! IT'S NEVER JUST ONE INCIDENT

Power outage during the parade

- All of downtown Waukesha was without power
- Hospital generators were operational
- Computers and medical equipment rebooted during the middle of the incident

PREPAREDNESS

The only thing more difficult than preparing for disasters (or any incident) is explaining why you didn't Dr. Rex Archer, Kansas City Public Health



PLANNING, RESPONSE AND RECOVERY

- Planning
 - HVA
 - Emergency Operations Plans
 - Training
 - Reviewing
- Response
 - Exercises
 - Real world
- Recovery
 - Getting back to "Normal" as quickly as possible



GET INVOLVED!

Hazard Vulnerability Analysis
Emergency Management Planning
Incident Command / Management

HAZARD VULNERABILITY ANALYSIS

- Required by CMS and the Joint Commission
- Identifies potential threats (Natural, Technological, Human and Hazardous)
- Based on probability and severity it calculates the relative risk/threat

PROBABILITY AND SEVERITY

EVENT	PROBABILITY							
		HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED- NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	RISK
	Likelihood this will occur	Possibility of death or injury	Physical losses and damages	Interuption of services	Preplanning	Time, effectivness, resouces	Community/ Mutual Aid staff and supplies	Relative threat*
SCORE	0 = NKA 1 = Low 2 = Noderate 3 = High	0 = NHA 1 = Low 2 = Noderate 3 = High	0 = NHA 1 = Low 2 = Noderate 3 = High	0 = NVA 1 = Low 2 = Noderate 3 = High	0 = NHA 1 = High 2 = Moderate 3 = Low or none	0 = NHA 1 = High 2 = Moderate 3 = Low or none	0 = NKA 1 = High 2 = Moderate 3 = Low or none	0 - 100%

PROBABILITY, HUMAN, PROPERTY, BUSINESS IMPACT

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

1 Known risk

- 2 Historical data (last 12 months July 1st, 2022 to June 30th, 2023)
- 3 Manufacturer/vendor statistics

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

PREPAREDNESS, INTERNAL AND EXTERNAL RESOURCES

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

NATURALLY OCCURRING EVENTS

	PROBABILITY								
EVENT		HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED- NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	RISK	
	Likelihood this will occur	Possibility of death or injury	Physical losses and damages	Interuption of services	Preplanning	Time, effectivness, resouces	Community/ Mutual Aid staff and supplies	Relative threat*	
SCORE	0 = N/A 1 = Low 2 = Noderate 3 = High	0 = N/A 1 = Low 2 = Nioderate 3 = High	0 = NVA 1 = Low 2 = Nioderate 3 = High	() = NKA = Low 2 = Moderate 3 = High	0 = NVA 1 = High 2 = Moderate 3 = Low or none	() = NHA = High 2 = Noderate 3 = Low or none	0 = NVA 1 = High 2 = Norderate 3 = Low or none	0 - 100%	
Hurricane								0%	
Tornado								0%	
Severe								0%	
Thunderstorm 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									
Volcano								0%	
Epidemic								0%	
AVERAGE SCORE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TRUE	
*Threat increases with percentage.									
			BABILITY * SE						
		0.00	0.00	0.00					

TECHNOLOGICAL EVENTS

	PROBABILITY			PREPARED- INTERNAL		EXTERNAL	RISK	
EVENT	Likelihood this will occur	IMPACT Possibility of death or injury	IMPACT Physical losses and damages	IMPACT Interuption of services	NESS Preplanning	RESPONSE Time, effectivness, resouces	RESPONSE Community/ Mutual Aid staff and supplies	Relative threat*
SCORE	0 = NHA 1 = Low 2 = Nioderate 3 = High	() = NVA = Low 2 = Noderate 3 = High	0 = NIA 1 = Low 2 = Moderate 3 = High	0 = NIA 1 = Low 2 = Noderate 3 = High	() = NVA 1 = High 2 = Noderate 3 = Low or none	() = NVA = High 2 = Maderate 3 = Low or none	0 = NVA 1 = High 2 = Naderate 3 = Low or none	0 - 100%
Electrical Failure								0%
Generator Failure								0%
Transportation Failure								0%
Fuel Shortage								0%
Natural Gas Failure								0%
Water Failure								0%
Sewer Failure								0%
Steam Failure								0%
Fire Alarm Failure								0%
Communications Failure								0%
Medical Gas Failure								0%
Medical Vacuum Failure								0%
HVAC Failure								0%
Information Systems Failure								0%
Fire, Internal								0%
Flood, Internal								0%
Hazmat Exposure, Internal								0%
Supply Shortage								0%
Structural Damage								0%
AVERAGE SCORE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%
*Threat increases with	percentage.	RISK = PROBABILITY * SEVERITY						
		RISK = PRO		0.00				
		0.00	0.00	0.00				

λ

0

HUMAN RELATED EVENTS

	PROBABILITY							
EVENT		HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED- NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	RISK
	Likelihood this will occur	Possibility of death or injury	Physical losses and damages	Interuption of services	Preplanning	Time, effectivness, resouces	Community/ Mutual Aid staff and supplies	Relative threat*
SCORE	0 = NRA 1 = Low 2 = Moderate 3 = High	0 = NVA 1 = Low 2 = Noderate 3 = High	0 = NVA 1 = Low 2 = Noderate 3 = High	0 = NIA 1 = Low 2 = Noderate 3 = High	0 = NIA 1 = High 2 = Noderate 3 = Low or none	0 = NIA 1 = High 2 = Noderate 3 = Low or none	0 = NVA 1 = High 2 = Maderate 3 = Low or none	0 - 100%
Mass Casualty Incident (trauma) (Active shooter)								0%
Mass Casualty Incident (medical/infectious)								0%
Terrorism, Biological								0%
VIP Situation								0%
Infant Abduction								0%
Hostage Situation								0%
Civil Disturbance								0%
Labor Action								0%
Forensic Admission								0%
Workplace Violence								0%
Bomb Threat								0%
AVERAGE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%
*Threat increases with percen	tage.	RISK = PR		SEVERITY				
				0.00				

0

HAZARDOUS MATERIALS EVENTS

EVENT	PROBABILITY	HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED- NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	RISK
	Likelihood this will occur		Physical losses and damages	Interuption of services	Preplanning	Time, effectivness, resouces	Community/ Mutual Aid staff and supplies	Relative threat*
SCORE	() = NHA = Low 2 = Nicoderate 3 = High	0 = NVA 1 = Low 2 = Noderate 3 = High	0 = NHA 1 = Low 2 = Nioderate 3 = High	0 = NIA 1 = Low 2 = Noderate 3 = High	() = NVA = High 2 = Noderate 3 = Low or none	() = NVA = High 2 = Noderate 3 = Low or none	() = NVA) = High 2 = Noderate 3 = Low or none	0 - 100%
Mass Casualty Hazmat Incident (From historic events at your MC with >= 5 victims)								0%
Small Casualty Hazmat Incident (From historic events at your MC with < 5 victims)								0%
Chemical Exposure, External								0%
Small-Medium Sized Internal Spill								0%
Large Internal Spill								0%
Terrorism, Chemical								0%
Radiologic Exposure, Internal								0%
Radiologic Exposure, External								0%
Terrorism, Radiologic								0%
AVERAGE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0%
*Threat increases with per	*Threat increases with percentage.							
		RISK = PR	OBABILITY * S	EVERITY				
		0.00	0.00	0.00				

ρ

PLANNING FOR THE WORST HOPING FOR THE BEST

- Your departments (facilities/maintenance) have plans for:
 - Generator outages
 - Power failures
 - Sewer failures
 - Water shortages
 - HVAC
 - Fire Alarm System failure

Have you PRACTICED, TRAINED, TESTED your emergency plans? With your Incident Management Team? With the rest of your hospital (s)?



PLANNING FOR THE WORST HOPING FOR THE BEST

St. John's – Mercy May 22, 2011 Before and After



EF5 Tornado Impact on Joplin

- 13.8 mile long path $-\frac{3}{4}$ to 1 mile wide
- 8,000 structures destroyed or severely damaged



- 400 business destroyed or severely damaged
- 8 school buildings destroyed or severely damaged



EF5 Tornado Impact on St. Johns-Mercy

- Direct Hit
- Windows and Walls blown out
- Portions of roof pulled off
- Building infrastructure severely damaged
 - Generators destroyed
 - All communication lost
 - Water, sprinkler, gas and sewer pipes disrupted
 - Liquid O2 tanks damaged
- Massive debris throughout building



EF5 Tornado Impact on St. Johns-Mercy

- 86 Medical Staff Offices - destroyed or severely damaged Medical Office building on property - heavily damaged Rehab building heavily - damaged (some generator power) Helicopter - destroyed
- Disaster trailer destroyed





LESSONS LEARNED – APPLIES TO ALL

Train as if its the real thing because you will fall back on your training

- Evaluate drills/responses to improve your plan
- Drill until you fail
- Store emergency response supplies where you will need to use them
- Keep shut-off tools near equipment
- Make emergency supplies easily portable
- Grab bags at locations throughout facility
- Paper and pen
- Flashlights & batteries

ST JOHN'S CONSTRUCTION ENHANCEMENTS

- Windows with safety glass (withstand up to 250 mph)
- **Protective Zones** with barrier storm doors at hallway ends
- Back-up Generators buried underground with power tunneled to hospital
- Power, Water & Data Communications with 2 lines from different directions
- Hallways & Stairwells with automatic battery-operated lights
- Ventilator & Newborn Bassinets equipped with battery backup systems
- Emergency Grab Bags with flashlights, batteries, first aid and tools (gloves, crowbars, shovels)
- Hardened Shell of precast concrete, concrete roof, mechanical units housed with water-proof boards
- Total cost to tornado-proof new facility = 2% of budget (\$7 million)

6

PREPAREDNESS AND YOU

- Communication is KEY up, down, side to side
- What you do or don't do could have a significant impact on patient care, patient safety or staff safety!
- Don't want to play "Cry Wolf" but...
- It's easier to cancel or downgrade than
 - Wait 30, 60, 90 120 minutes
 - Play "catch up"
 - Scrambling because there's a high possibility it could impact patient care or safety
- Anticipate the needs.... Yours, patient care, patient safety
- 30,000 foot view

ANTICIPATING THE NEEDS

- Plugged toilet / sewer drain
 - Not a significant issue?
 - What if the plug caused back ups into Sterile Processing?
 - Known issue for over 2 hours before word "got out"
 - Within 90 minutes of shutting down surgical procedures
- "Small" gas leak or hissing
 - In an unoccupied surgical suite
 - Perception is that it isn't a significant situation (1/4 in line of a medical gas)
 - Nitrogen
 - Employee putting their face into the hole in the wall to "investigate"
 - Confined space protocols
 - Next to a high risk patient population NICU or Behavior health

INCIDENT MANAGEMENT (IM) RESPONSE

• All hazards

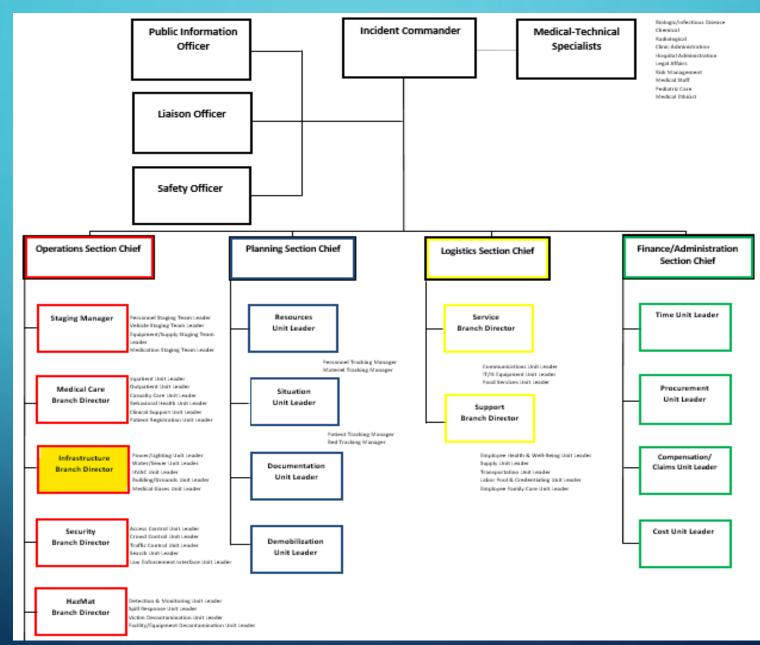
• Organized way to manage any type of incident

• Not just for the "BIG" incidents or mass casualty incidents

• Facilities/Maintenance/Engineering plays a key role in IM

• Infrastructure Branch Director

ORGANIZATIONAL CHART





INFRASTRUCTURE BRANCH DIRECTOR

Operations Section Chief

Infrastructure Branch Director Power/Lighting Unit Leader Water/Sewer Unit Leader HVAC Unit Leader Building/Grounds Unit Leader Medical Gases Unit Leader

FACILITY SYSTEM STATUS REPORT

HICS 251 – FACILITY SYSTEM STATUS REPORT

Department Use

	1	• •) TO:
	TIME:	FROM:	TO:
ting Status Below		Contact Number:	
5. Status		6. Comments If not fit time/resources for necess	ully functional, give location, reason, and estimated ary repair. Identify who reported or inspected.
Fully functional Partially functional Nonfunctional N/A			
Fully functional Partially functional Nonfunctional N/A			
Fully functional Partially functional Nonfunctional N/A			
Fully functional Partially functional Nonfunctional N/A			
Fully functional Partially functional Nonfunctional N/A			
Fully functional Partially functional Nonfunctional N/A			
Fully functional Partially functional Nonfunctional N/A			
		DATE: F TIME: I TIME: I Status I Partially functional I Infunctional I Partially functional I Infunctional I Infunctional <td>DATE: FROM: TIME: FROM: ting Status Below Contact Number: 6. Status 6. Comments: Image: Fully functional Image: From the image status stat</td>	DATE: FROM: TIME: FROM: ting Status Below Contact Number: 6. Status 6. Comments: Image: Fully functional Image: From the image status stat

HICS 251 - FACILITY SYSTEM STATUS REPORT

1. Incident Name		2. Operational Period (#)		
		DATE: FROM: TO: TIME: FROM: TO:		
3. Name of Facility / Building Reporting Status Below				
4. System	5. Status	 Comments If not fully functional, give location, reason, and estimated time/resources for necessary repair. Identify who reported or inspected. 		
COMMUNICATIONS		timerresources for necessary repair, identity who reported or inspected.		
Fax	Fully functional Partially functional Nonfunctional N/A			
Information Technology System Email, registration, patient records, time card system	Fully functional Partially functional Nonfunctional N/A			
Nurse Call System	Fully functional Partially functional Nonfunctional N/A.			
Overhead Paging	Fully functional Partially functional Nonfunctional N/A			
Paging System Code teams, standard paging	Fully functional Partially functional Nonfunctional N/A			
Radio Equipment Facility handheid, 2-way radios, antennas	Fully functional Partially functional Nonfunctional N/A			
Radio Equipment EMS, local health department, other external partner	Fully functional Partially functional Nonfunctional N/A			
Radio Equipment Amateur radio	Fully functional Partially functional Nonfunctional N/A			
Satellite Phones	Fully functional Partially functional Nonfunctional N/A			

RECOVERY

- Getting back to "Normal" as quickly as possible
- Business interruption
- Interruption of critical supplies
- Interruption of product distribution
- Types and volume of supplies on hand
- Staff availability
- Agreements with contractors
- Contractor availability
- Coordination with local and state agencies
- Coordination with proximal health care facilities

GET INVOLVED!

- Emergency Preparedness may already be part of your job description
- Be part of your Hazard Vulnerability Analysis (HVA) review
- Include your departments emergency plans in your hospitals Emergency Operations Plan (EOP)
- Joint Commission requirement
 - 2 community based / full scale exercises each year (real world, high stress)
- If doing a mass casualty exercise, incorporate an infrastructure "issue"
 - Tube system went down forces staff to walk orders/supplies etc.
 - HVAC went down
 - On generator back up
 - "Bubba with a backhoe" hit a water line outside your facility

GET INVOLVED!

- Participate in Tabletop exercises
 - Low stress/no stress
 - Discuss possible scenarios
 - Review your response plans during the tabletop
 - Ask the hard "What if" questions
 - Identify gaps or solutions to those "What if" questions
 - DOCUMENT your plans
 - Train all of your staff
 - Exercise and evaluate

QUESTIONS?

THANK YOU!