

2023 HEALTHTRUST UNIVERSITY CONFERENCE

PLAYING // TO WIN

ALIGNED FOR SUCCESS

OPTIMIZING OUTCOMES

Using Disaster Management Systems to Mitigate Everyday Healthcare Stress

Jocelyn Bradshaw

Trina Kaylor

Jake Marshall

Haley Porter

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HEALTHTRUST
UNIVERSITY CONFERENCE



Meet the Presenters



Jocelyn Bradshaw,
SVP, Strategic Sourcing
HealthTrust



Trina Kaylor
VP, Supply Chain
HealthTrust



Jake Marshall
Sr. Director, Emergency Operations
HCA Healthcare



Haley Porter
Manager, Emergency Operations
HCA Healthcare

Disclosures

- The presenters have no real or perceived conflicts of interest related to this presentation

Note: This program may contain the mention of suppliers, brands, products, services or drugs presented in a case study or comparative format using evidence-based research. Such examples are intended for educational and informational purposes and should not be perceived as an endorsement of any particular supplier, brand, product, service or drug.

Learning Objectives



At the end of this session, participants should be able to:

1. Recall emergency management tools and technologies that prevent moderate constraints from becoming larger crises in a healthcare setting
2. Identify proprietary and open source resources and tools applicable to healthcare facilities
3. Describe strategies to aid healthcare leaders in decision-making during disasters



Polling Question #1

How would you rate your organization's overall ability to handle emergency situations?

- A. Excellent
- B. Good
- C. Average
- D. Needs Improvement

Polling Question #2



I have been a leader during a disaster/crises event:

1. True
2. False

HCA Healthcare is one the nation's leading providers of healthcare services, comprised of **182** hospitals and approximately **2,400** ambulatory sites of care in **20** states and the United Kingdom



◆ Distribution Centers

- | | | | |
|----------------|------------------|-----------------------|--------------------|
| Asheville, NC | El Paso, TX | Nashville, TN | Salt Lake City, UT |
| Atlanta, GA | Houston, TX | New Orleans, LA | San Antonio, TX |
| Austin, TX | Jacksonville, FL | Portsmouth, NH | San Jose, CA |
| Charleston, SC | Kansas City, KS | Southern California | Tampa, FL |
| Dallas, TX | Lakeland, FL | Richmond, VA | |
| Denver, CO | Las Vegas, NV | Rio Grande Valley, TX | |

▲ SIM Centers

- | | |
|---------------|-----------------|
| Asheville, NC | Nashville, TN |
| Augusta, GA | Orlando, FL |
| Austin, TX | Pearland, TX |
| Brandon, FL | Plantation, FL |
| Denver, CO | Richmond, VA |
| Frisco, TX | San Antonio, TX |

Network Patients

182
hospitals

35.7M
patient encounters

127
freestanding emergency rooms

8.5M
emergency room visits

125
surgery centers

2.1M
admissions

268
urgent care clinics

217k
deliveries



History of EPEO

CE Credit Deadline: 8/25/23

Confidential: Not for distribution

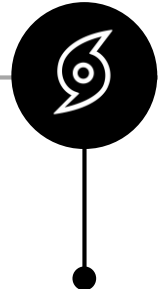
Building from Teachings of the Past...

- Single facility exposure, mitigated by early detection by an astute clinician
- Demonstrated broader risk to Enterprise



2001
Anthrax Attack

2005
Hurricane Katrina



- Limited Enterprise-level planning & coordination
- Leadership leveraging personal relationships to obtain needed resources (i.e., JIT contracting)
- Lack of purposeful coordination with local & state emergency operations

- Enterprisewide downtime
- Foundational basis for downtime program need
- Downtime Program Playbook development in late 2016



2015
Meditech Enterprise Outage



2016
EPEO Dept established

2016
Bayonet Point Incident



- Developed concept for emergency response playbooks
- Revised HICS structure to HCA Emergency Operations model used today
- Pre-designated Unified Command sites have been established with Statements of Authority

...to Evolve HCA's Emergency Operations

2017

Hurricane Harvey



- Marshalling of Enterprisewide resources
- Stood up Communication's functional area to assist facility with coordinated messaging
- EEOC activated AirMethods contract for interstate movement of critical supplies
- Deployed EPEO & Corporate leadership 12 hrs. after incident occurred for up to 2 weeks
- Leveraged EEOC contacts to obtain staff mental health support with federal partners

- First test of divisionwide catastrophic Enterprise-level response
- Innovative response solutions for patient movement during response
- Large-scale relief staff movement
- First storm mass transport AirMethods agreement used

2017

1-Oct Shooting



- Long-standing relationships with state & federal agencies accelerated federal resources (i.e., Disaster Medical Assistance Teams (DMATs))
- Assisted state EOC to ensure community shelters were staffed & equipped appropriately
- EPEO collaborated with the Data Science team to develop & operationalize evacu-NATE within the 2018 hurricane season

2018

Hurricanes Florence & Michael



- Brought consistency & stability to a prolonged response
- Began Enterprise readiness efforts in early December 2019
- Leveraged vast HCA data to advise CDC & other agencies
- Matured innovative surge capacity solutions
- Developed Enterprise directives

2019

COVID-19



- De-risked 4 facilities prior to storm
- 186 evacuated after storm
- During the evacuation, transported 1 PT every 5 minutes to safety
- Utilized HCA's own ground transport contract
- Deployed # IST/IMT members pre-landfall to assist with de-risking, employee support & leadership augmentation

2022

Hurricane Ian



HCA Healthcare Emergency Operations Framework

The Enterprise Preparedness & Emergency Operations (EPEO) department is **focused on our patients, staff and the communities we serve to ensure the integrity and continuity of healthcare operations** in the face of anticipated and unanticipated threats.

Objectives & Priorities:

Responsible Leadership

Uphold a positive HCA mission across times of normal and emergency operations

Readiness

Ensure safe, uninterrupted quality patient care within a safe working environment

Response

Prevent damage and protect our patients, staff, facilities and equipment from both natural and man-made events

Recovery

Maintain continuity of healthcare and business operations



Protecting the Enterprise

“Our Enterprise Emergency Operations is part of HCA’s core business fabric.”

~Sam Hazen, HCA Board of Trustee’s Meeting 2021

Core Priorities:

➤ Life Safety

- Ensuring the physical & mental wellbeing of our patients, staff, visitors & communities

➤ Infrastructure

- Providing resources to enable our staff to care for patients & continue operations

➤ Operations

- Delivering essential care & operations to the communities we serve

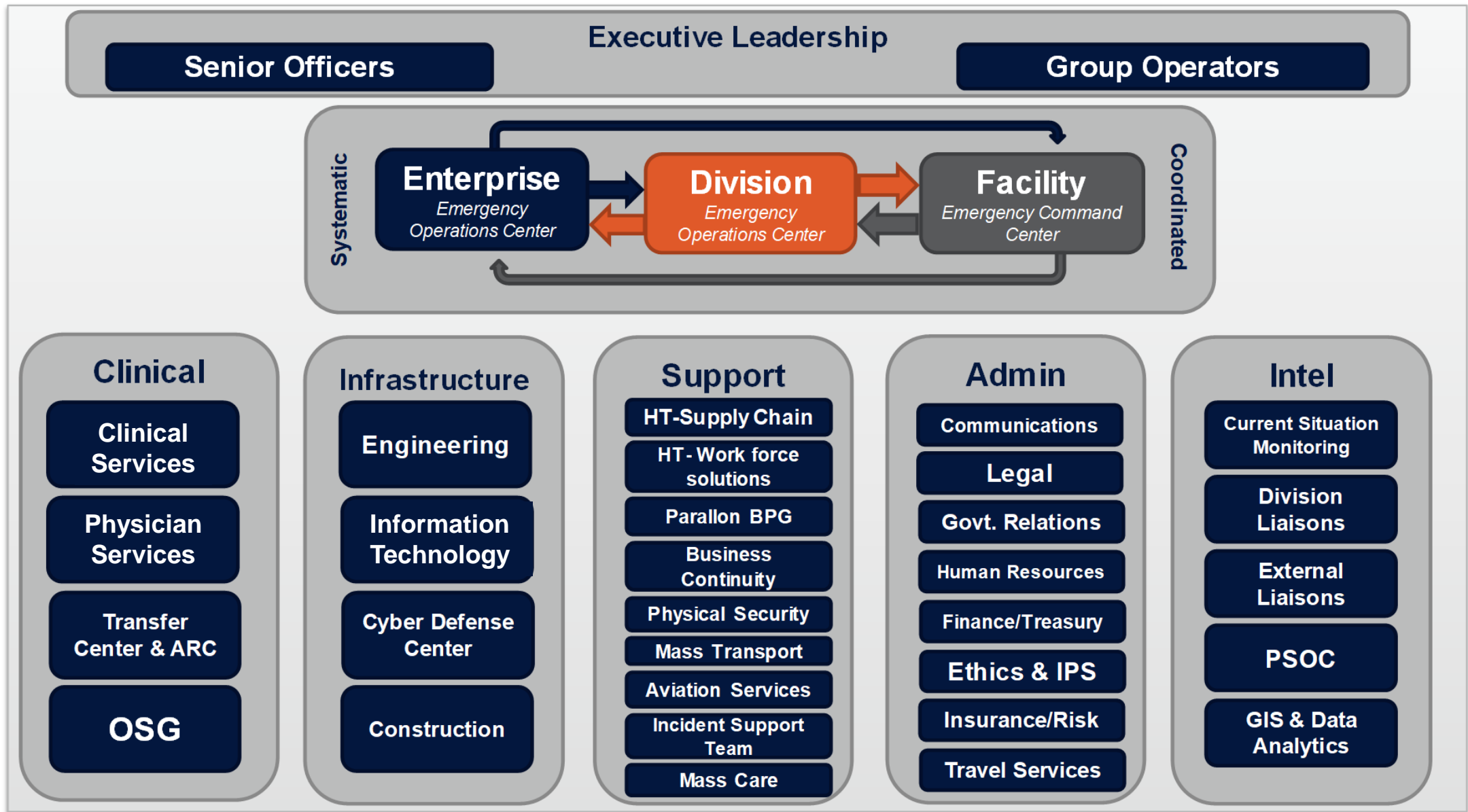
➤ Mission

- Delivering care & improvement to human lives

Ownership of Emergency Operations at Every Level

Leadership Expectations to Maintain a Resilient Healthcare System





Playbook Development

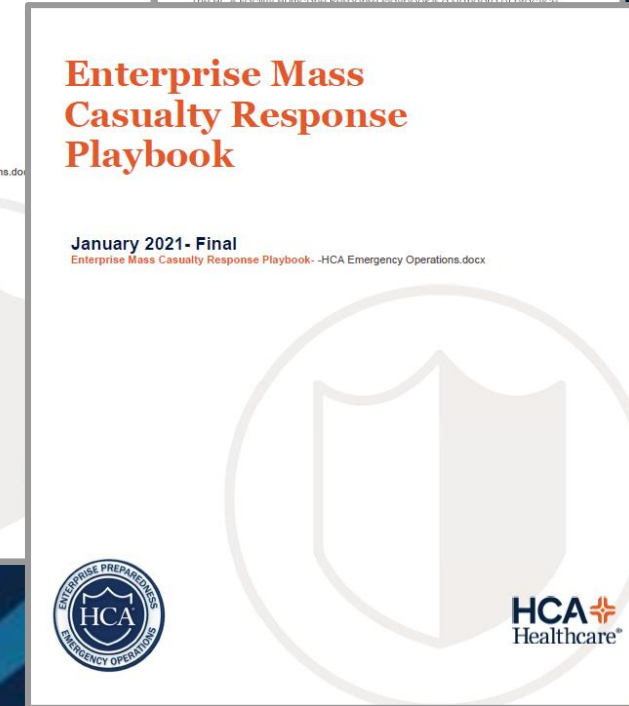
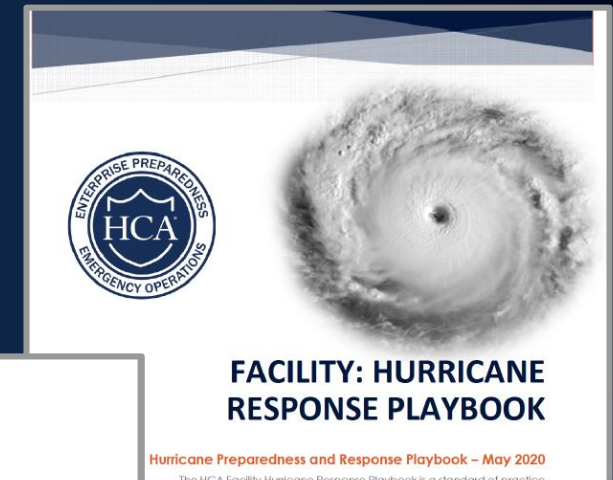
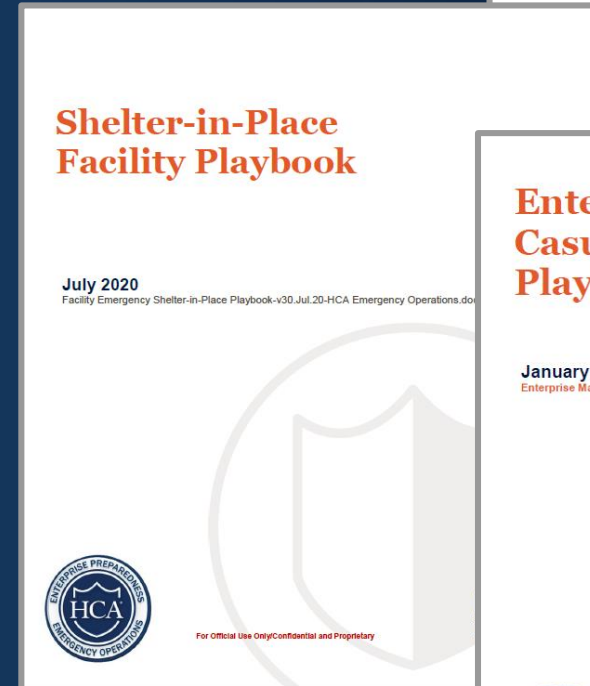
Current list of playbooks:

Enterprise/Division

- Enterprise Mass Casualty Response
- Division Hurricane / Facility Hurricane
- Engineering Disaster Planning & Response
- DMAT Integration
- Employee Fuel Distribution Playbook
- Downtime

Facility Playbooks

- Patient Evacuation to include Behavioral Health
- Flooding Response
- Shelter-in-Place
- Wildfire Response
- Hurricane Response



Enterprise Emergency Operations Center



Scope:

- Coordination, collaboration & communication
- Multi-Agency Coordination Center to facilitate HCA partnership
- 27 Functional Areas/Service Lines of HCA Healthcare represented across five sections of coordination



Capabilities:

- 24/7 dedicated physical space, technologies & support staffing model
- Redundant communications technologies & modalities
- 24/7 real-time worldwide situational awareness
- Resilient & hardened utilities & technologies to protect operations in Nashville
- Technologies, processes & procedures to support full activation virtually in times of crisis or if EEOC is physically unavailable

Source: HCA Healthcare, EEOC Activation. Accessed 06/01/2023

Community Engagement

HCA EPEO maintains professional relationships in each of the communities we serve, as well as at State and Federal levels. Our mission includes support to the community, including neighboring health systems in need and private industry



FEMA



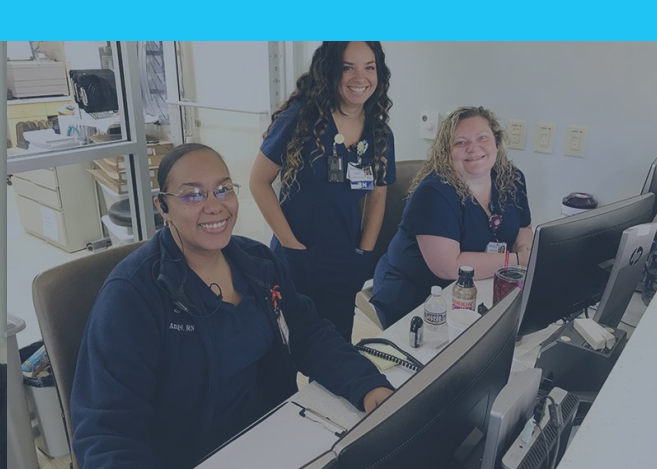
American Red Cross





Above all else:

HCA Healthcare teams come together in response to support our Patients & Families, Staff & Families & Communities.





Emergency Operations Tools

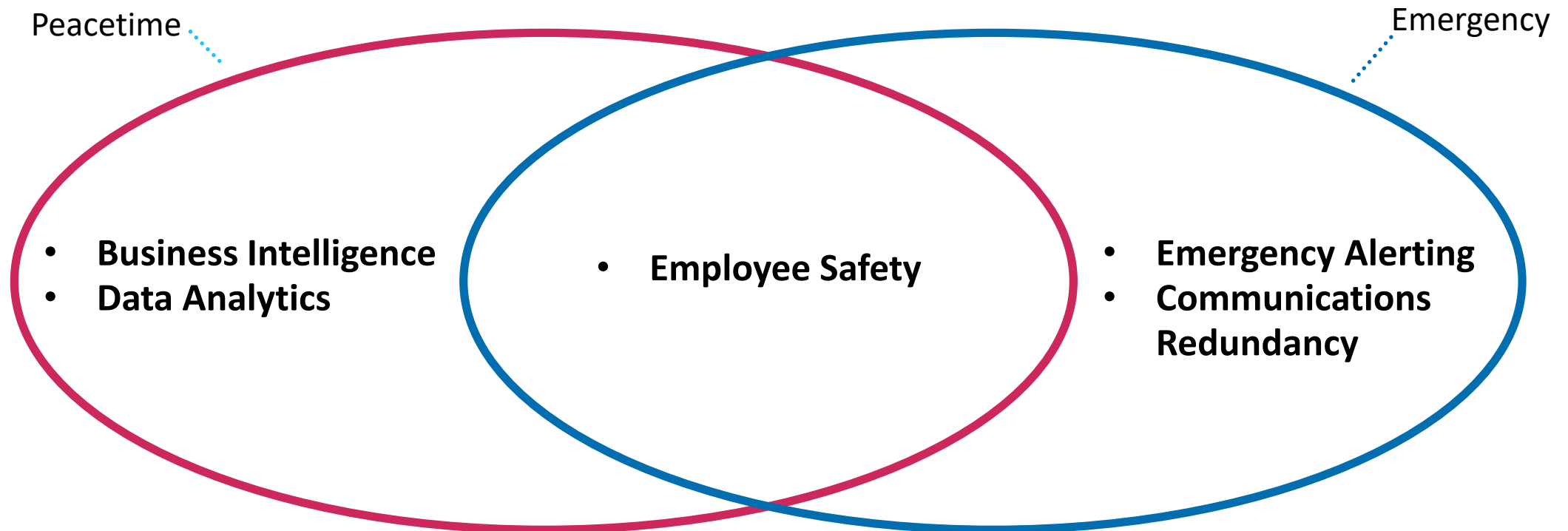
**Emergencies happen 24/7/365,
rarely once at a time;
they don't have a pause button,
and there are no mulligans...**

Informal Technology Imperatives for Emergencies

1. **Always on the Go** – Tools must be mobile, useable in austere environments & have interoperability across devices types
2. **Teamwork Makes the Dream Work** – Tools should allow for real-time collaboration between team members
3. **Seconds are Cumulative & Each Counts** – Tools must save time, period
4. **Trust but Verify** – Tools will inevitably be used for confidential &/or security sensitive information so they must be secure & trusted
5. **It Just Has to Work** – Tools must support the process, not the other way around. They must be user-friendly, as highly available as possible & be backed by robust & ready downtime processes
6. **The future is AI, today it's API** – Use application interfaces wherever possible to integrate tools into a comprehensive solution. Drive for a “single pane of glass”
7. **Dual Use** – Tools should have utility & add value to users’ day-to-day “peacetime” workloads & processes. If users use a tool consistently, proficiency is maintained for use of the platform in times of emergency

Dual Use Technology

Tools should have utility and add value to users day-to-day “peacetime” workloads and processes. If users consistently utilize the technology, proficiency is maintained for use of the platform in times of emergency



Resilient Coordination, Communication & Collaboration

- Emergency Mass Alerting – HCA Alert
- Enterprise Comprehensive Incident Management Platform – CodeReadyEOC
- Enterprise Radio Program

HCA CodeReady
Off HCA Network – web hosted with redundancy
Mobile phone enabled and management tools
Asset tracking and enterprise resource deployment, dashboards and management
Healthcare features – Patient Tracking, reunification, bed counts
Next generation technology with ongoing updates and support

HCA Alert
Off HCA Network – web hosted with redundancy
Mobile phone enabled – multi alerts available (txt, call, call backup #)
Polling for extent of event and possible impact assessments in near real time
Healthcare specific design and features
Next generation technology with ongoing updates and support

Situational Awareness



Urgent Update SHARE

To anticipate threats & preempt complications of late response, HCA maintains organizational situational awareness at the local, regional & global levels.

- In a “Post 9/11 Culture,” all incidents are considered intentional (terroristic) until otherwise proven accidental.
- This requires HCA to both maintain local situational awareness of the risk & threats in our communities, as well ensure a strong working relationship with local, state & federal public safety agencies.

● ● ○ URGENT UPDATE
6.05 mi from St. Mark's Hospital +2 more
11:09am Jun 19, 2019

Forty-three exposed to sulfur dioxide, two hospitalized at chemical manufacturing plant in Salt Lake City, UT: Reporter via Twitter.

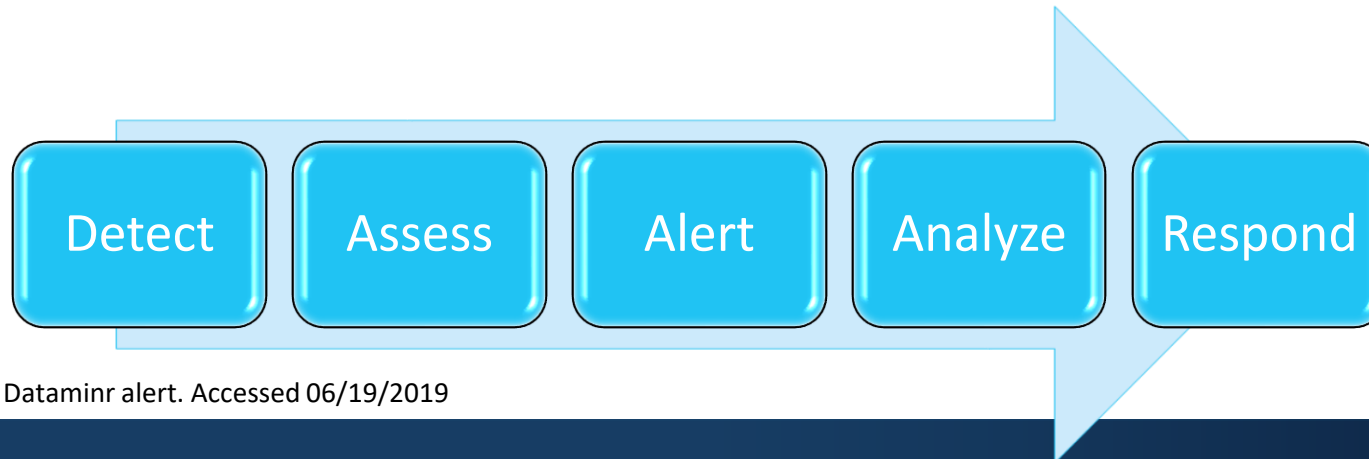
🐦 @FollowWIN

Per @slcfire 43 patients, two people transported to area hospitals. There are four locations crews are at. Sulfur dioxide is the chemical released. @abc4utah

Source: HCA Healthcare Dataminr alert. Accessed 06/19/2019

Dataminr

- New technology to support emergency operations. Earliest alert for unfolding emergencies in your community.
- Enterprisewide license – any person with an emergency operations role can gain access to the platform. No cost to facilities.
- Recommend key facility leaders have access.
- Dataminr uses advanced AI-driven analytics to provide real-time detection, alerting & first analysis.

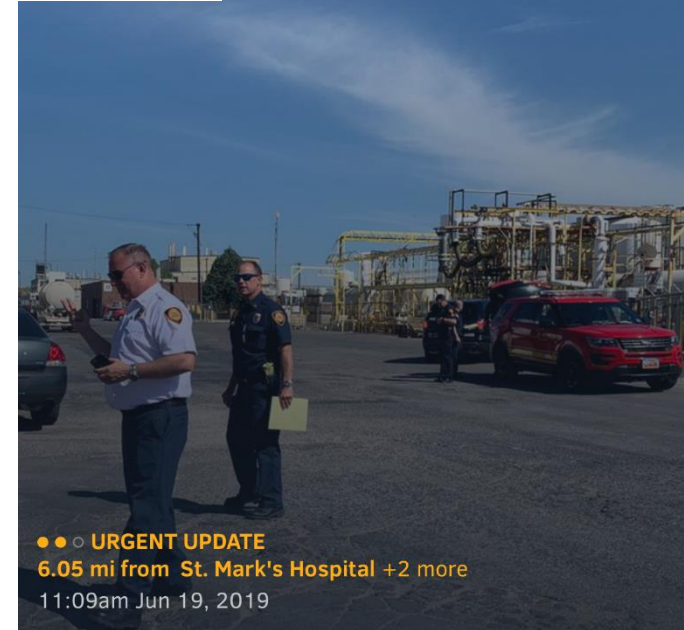


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Urgent Update

SHARE



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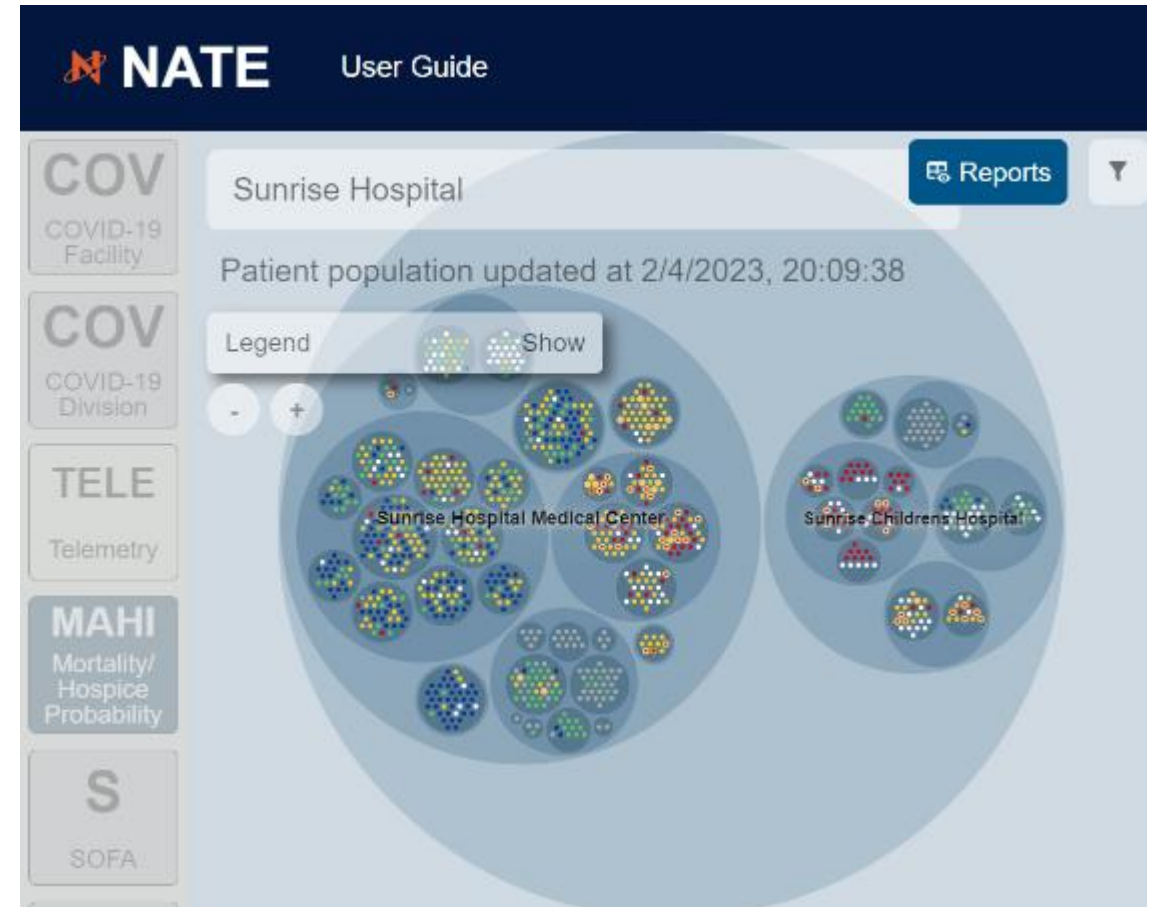
What is NATE?

Next-gen Analytics for Treatment & Efficiency

- Flexible, holistic visualization of a hospital or Division
- Integrates real-time facts & predictive analytics
 - Enables clinicians & facility operators to have a clearer understanding of what's happening in the facility now & what's likely to happen in the future

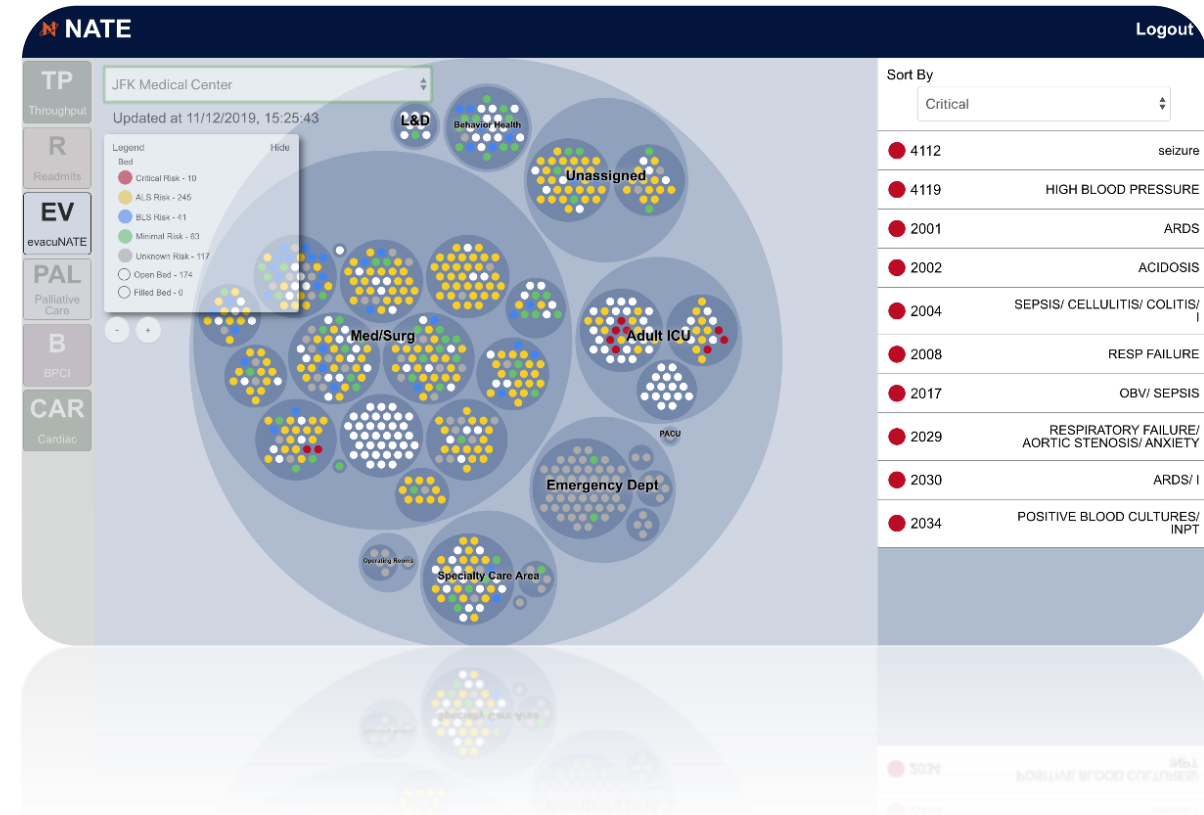
NATE Modules Relevant to Emergency Operations

- evacuNATE, coroNATE, C-ARDS (COVID ARDS), SOFA, Throughput



evacuNATE: Real-time Evacuation Planning

- Uses near real-time facility & clinical data
- Triage patients based on clinical criteria
- Estimates evacuation resources by patient
- Displays local & neighboring facility capacity



Evacuation Resource Categories

Color	Risk Assessment	Evacuation Needs
RED	CRITICAL	<p>Critical Care Ambulance or Air Transport:</p> <p>Air transport, AMT, HEMS, Specialty Interfacility Intensive Care Team required (i.e., neonatal), etc.</p>
YELLOW	ALS	<p>Advanced life-support Ambulance:</p> <p>Medication Management, Continuous Telemetry Monitoring, etc.</p>
BLUE	BLS OR NON-AMBULATORY	<p>Basic life-support Ambulance:</p> <p>Stretcher-bound, Suicidal/Homicidal Patient, Oxygen dependent, etc.</p>
GREEN	MINIMAL	<p>Ambulance care may not be required or can be readily cohorted for mass transport:</p> <p>Patient is ambulatory & can be eligible for medical bus or other appropriate mass transport, wheelchair van, etc.</p>

Qualifying Conditions:

CRITICAL	ALS	BLS
<ul style="list-style-type: none"> ICU/CCU NICU Ventilator Intra-aortic balloon pump Intracranial pressure Ventricular assist device Critical care drip Cath lab * 	<ul style="list-style-type: none"> Surgery in last 24 hrs. PACU phase 1 Anesthesia in last 12 hrs. Telemetry Not ambulatory Bariatric ALS drip C-Section * Interventional radiology * 	<ul style="list-style-type: none"> On dialysis Violence risk Isolation PACU phase 2 Involuntary hold 1:1 monitoring * Suicide assessment *

*Not yet available

General Pharmacy Preparedness

- Labor Availability/Licensure
- Medication & Blood Supply/Stockpile
- Environmental Conditions
- Community Preparation/Patient Access
- Regulatory/Legal Requirements
- Evacuation/Patient Transport Needs



Pharmacy Considerations

Situation	Emergency Scenarios	Disaster Specific Considerations	Disaster Agnostic Considerations
Natural Disasters	Hurricanes Tropical Storms Floods Fires Earthquakes	Hurricane order templates updated annually Community access to DC & retail meds Pre & Post Event Staffing Burn treatment Equipment/IV room damage assessments	<ul style="list-style-type: none"> • Alternate care site planning • State/local plans for emergency preparedness • Medication supply – stockpile considerations, drug shortage considerations, wholesaler plan, other vendor plan • Alternate transport of supply • Licensure transfer requirements/exception process • Discharge medication emergency supply process/regulatory exception allowances • Storage, handling, dispensing, labeling emergency medications • Patient evacuation plan – specialty medications, MAR, SMART IV Pumps, IV drips • Technology contingency plans
	Pandemic/Epidemic	Availability of treatments/preventative medications	
Human-Caused Disasters	Explosions Hazardous Material Spills Chemical Attacks Bioterrorism	National/Regional/Local stockpile of antidotes Exposure protocols Chemical specific treatment protocols	
	Terrorist Attacks Mass shootings Transportation Accidents	Blood derivative supply Surgical medications	
Technology Disasters	Computer Ransomware Attacks/Downtimes Utility Failures	Back-up systems/paper documentation Data recovery/redundancy/continuity Generator access for technology Alternate storage for temperature impacted	



HealthTrust GPO Support

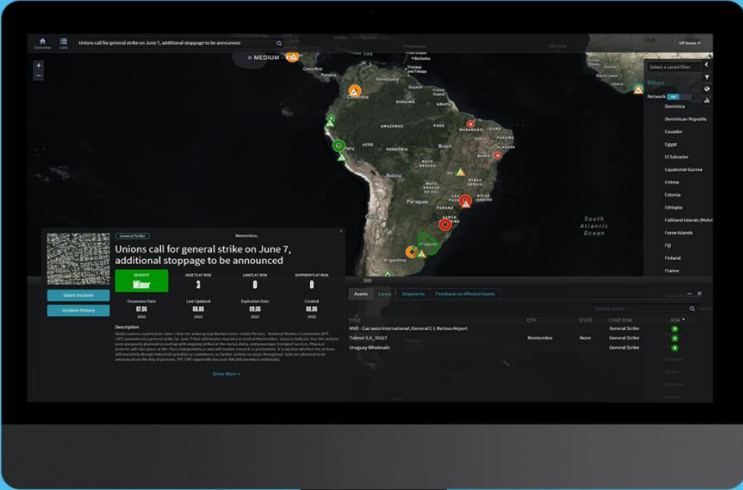
Jocelyn Bradshaw

HealthTrust Resiliency Efforts



CE Credit Deadline: 8/25/23
Confidential: Not for distribution

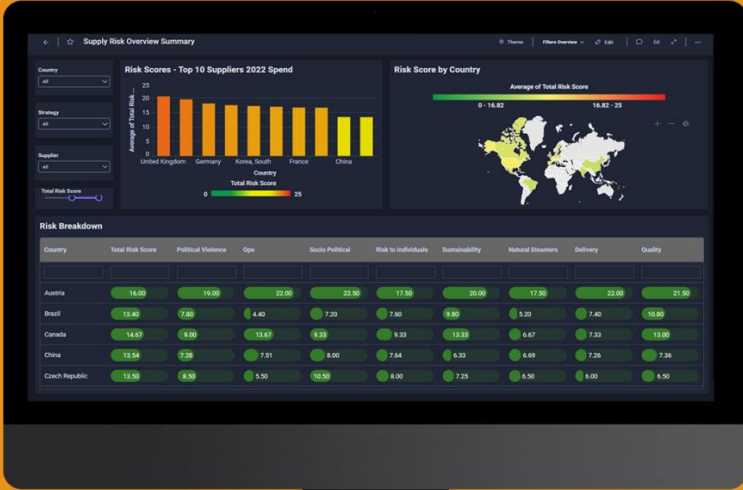
Proactive Supply Chain Risk Management | HealthTrust Partnered With Everstream Analytics



Reveal

E2E Global Event Monitoring

Visualize hidden risks, disruptions & potential opportunities with monitoring & real-time, actionable insights for your known network



Explore

Strategic Risk Visibility

Optimize your supply chain with customizable & dynamic risk scoring covering location, company & material risk so you can build long-term resiliency



Discover

Sub-Tier Mapping & Monitoring

Automated multi-tier mapping, monitoring, predictive analytics & insights to strengthen even the most complex supply chains

Conclusions

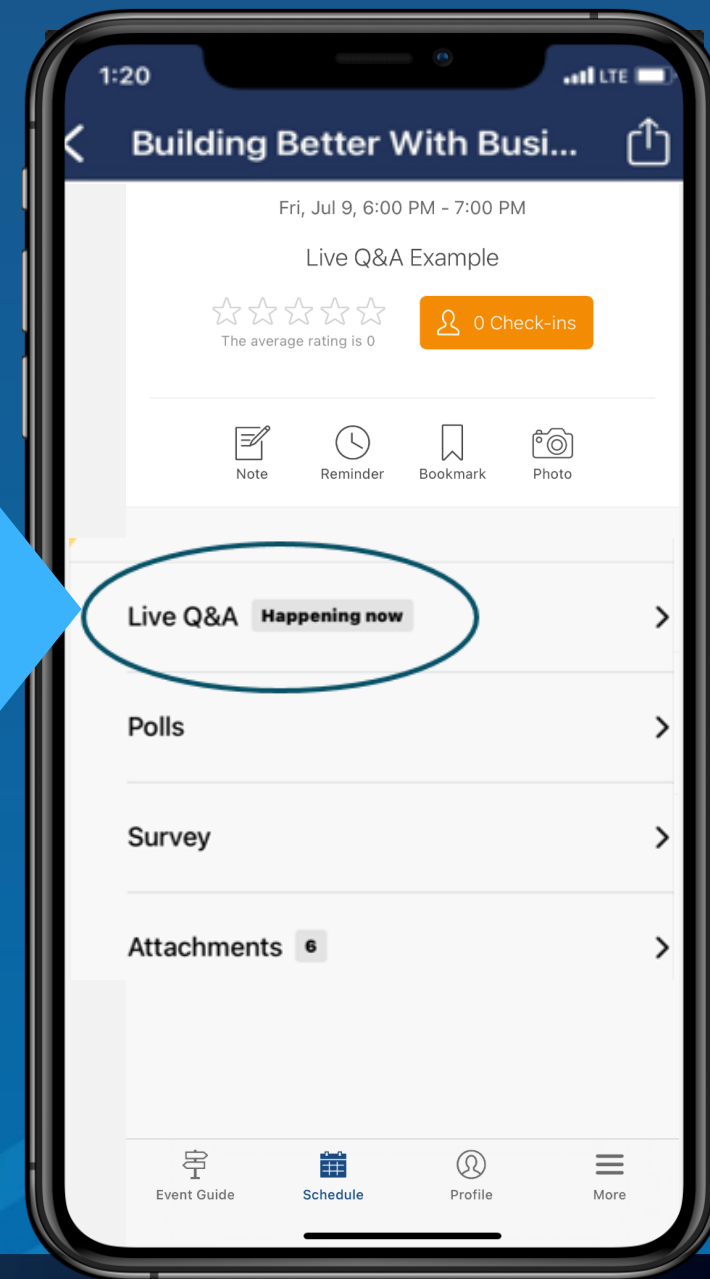
- ❑ Responsible Leadership begins with **you**
 - As a leader your goal is to promote & encourage a culture of safety
 - Assure that emergency readiness is woven into the fabric of your organization
 - Ensure your facilities are assessing, preparing & understanding the risks to your organization
 - Mimic daily roles or practice/utilize incident command **routinely**
- ❑ Planning is important outside of the knowns
 - Redundant systems often plan for the expected, but even back-up systems fail. Plan for the unexpected
- ❑ Understand the processes and drivers for a range of hazards
 - Planned, emergent, urgent
 - Flexible solutions
- ❑ Data & Situational awareness facilitates good decision-making
 - Understand all aspects of the risks to your organization
 - If it isn't a data problem, it is a data permissions challenge



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- › Select session name
- › Click on “Live Q&A,” then “Ask a Question”
- › Type your question & hit “Submit”
- › Send in any time; Qs will be held until the end of the session



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Thank you...

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