

Continuity of Operations Planning (COOP) for Hospitals

VALUE BEYOND CMS COMPLIANCE

Chuck Russell, CBCP, MBA
Business Continuity and Risk
Texas Children's

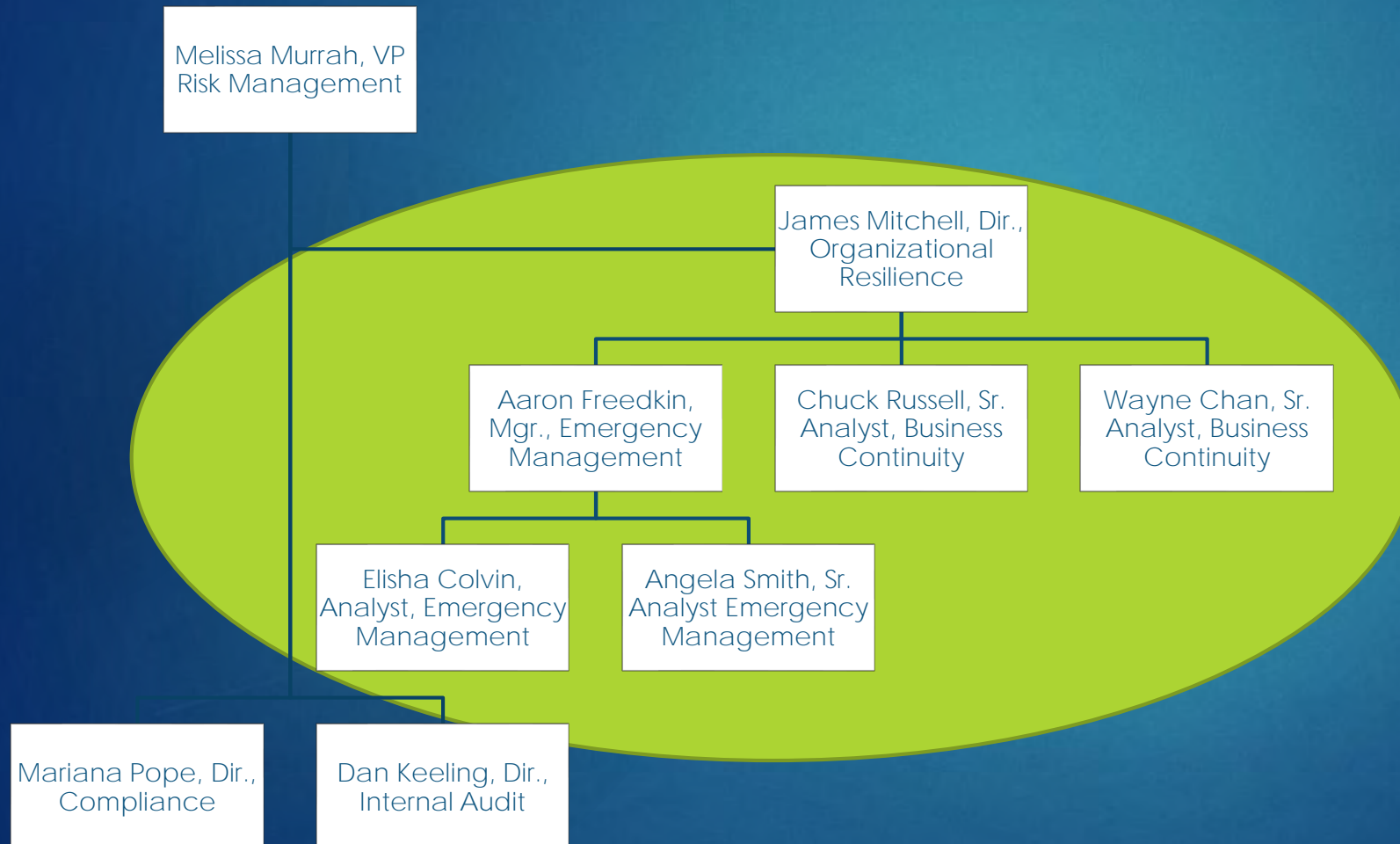
What is Success in this session!

- ▶ Leave with an understanding of CMS expectations for COOP
- ▶ Understand how to derive more value from your work than just CMS compliance
- ▶ Know how to keep the organization on its toes for the unexpected

How are we going to achieve that success

- ▶ Background
- ▶ CMS regulation and minimum expectations
- ▶ Achieving greater value
 - From business impact analysis
 - From supplier analysis
 - From resiliency visibility
 - Keeping the organization on its toes via fast-follower exercises

The Texas Children's Organizational Resilience team addresses many risks



- ▶ Emergency Management
- ▶ Business Continuity
- ▶ Enterprise Risk Management
- ▶ Crisis Management
- ▶ Disaster Recovery Integration
- ▶ Texas Children's Hospitals
- ▶ The Healthplan
- ▶ Urgent Care and Pediatric Practices

Keeping it interactive

- ▶ Any interest in joining me for steak or seafood?
- ▶ Answer 5 questions throughout my presentation and record on the back of a business card or piece of paper and drop in the bowl on your way out
- ▶ From the cards with the correct answers I will draw one and text you

Question: #1

Question: #2

Question: #3

Question: #4

Question: #5

1. A
2. C
3. D
4. B
5. C

What famous singer songwriter was born in Galveston?

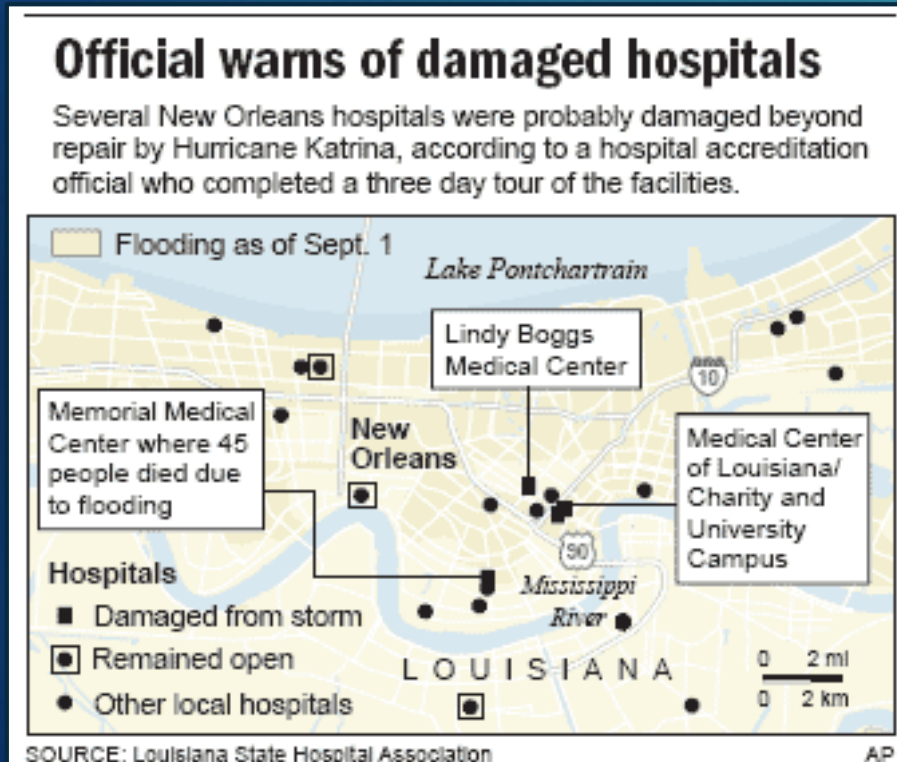
- A. Barry Manilow
- B. Barry White
- C. Barry Gibb
- D. Barry Harris



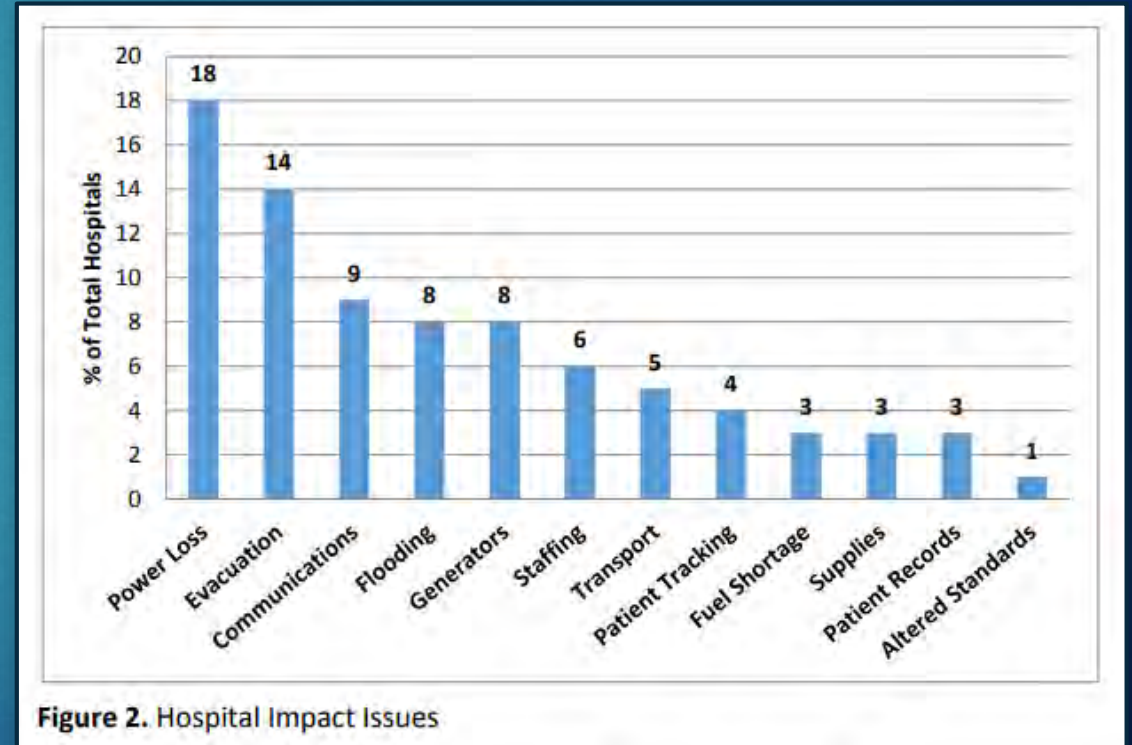
CMS Regulation and Minimum Expectations

Two events in particular drove regulators to “get religion”

Hurricane Katrina



Super Storm Sandy



Source: Lessons Learned from Hurricane Sandy and Recommendations for Improved Healthcare and Public Health Response and Recovery for Future Catastrophic Events. American College of Emergency Physicians, 2015

Why are there new requirements?

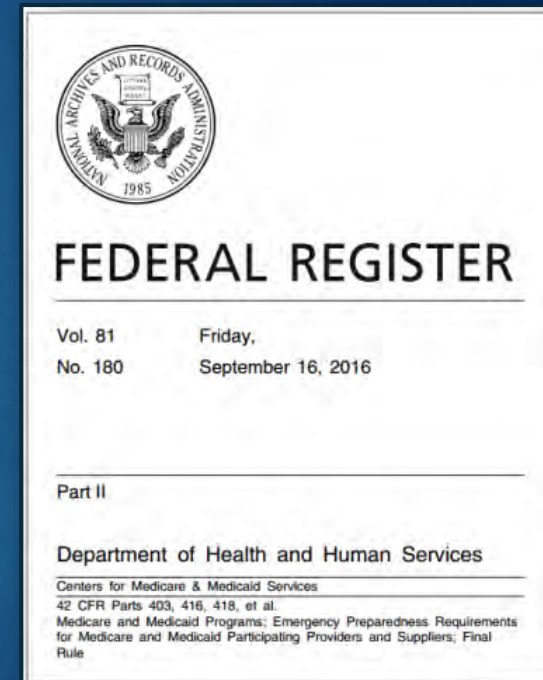
- ▶ Call to action following 9/11, Hurricane Katrina, super storm Sandy, Ebola, and Zika
 - Breakdown in patient care
 - Inconsistent standards
 - Inconsistent levels of preparedness
- ▶ Debate on incentivizing vs. mandating preparedness



How do the requirements work?

- ▶ Outlines emergency preparedness Conditions of Participation (CoPs) & Conditions for Coverage (CfCs)
 - CoPs and CfCs are health and safety standards all participating providers must meet to receive certificate of compliance
- ▶ Applies to 17 provider and supplier types
 - Different emergency preparedness regulations for each provider type

Bottom line: Providers and Suppliers that wish to participate in Medicare and Medicaid – i.e. the nation's largest insurer – must demonstrate they meet new emergency preparedness requirements in the rule.



CMS Condition of
Participation: §482.15
Emergency Preparedness,
September 2016

Who does it apply to?

▶ Inpatient

- ▶ Hospitals
- ▶ Critical Access Hospitals
- ▶ Religious Nonmedical Health Care Institutions
- ▶ Psychiatric Residential Treatment Facilities
- ▶ Long-Term Care / Skilled Nursing Facilities
- ▶ Intermediate Care Facilities for Individuals with Intellectual Disabilities

▶ Outpatient

- ▶ Ambulatory Surgical Centers
- ▶ Clinics, Rehabilitation Agencies, and Public Health Agencies as Providers of Outpatient Physical Therapy and Speech-Language Pathology Services
- ▶ Community Mental Health Centers
- ▶ Comprehensive Outpatient Rehabilitation Facilities
- ▶ Rural Health Clinics and Federally Qualified Health Centers
- ▶ Home Health Agencies
- ▶ Hospice
- ▶ Organ Procurement Organizations
- ▶ Programs of All-Inclusive Care for the Elderly
- ▶ Transplant Centers

There are 4 core elements to the requirements

Our Focus:
More value
from here



Emergency & Continuity of Operations Plans

- Based on a risk assessment
- Using an all-hazards approach
- Update plan annually

Policies & Procedures

- Based on risk assessment and emergency plan
- Must address: subsistence of staff and patients, evacuation, sheltering in place, tracking patients and staff

Communications Plan

- Complies with Federal and State laws
- Coordinate patient care within facility, across providers, and with state and local public health and emergency management

Training & Exercise Program

- Develop training program, including initial training on policies & procedures
- Conduct drills and exercises

Question #2: Who is most often credited with this quote: “The secret to creativity is knowing how to hide your sources?”

- A. Albert Einstein
- B. Ivanka Trump
- C. Mark Twain
- D. Joe Biden
- E. Joe Piscopo



What does a departmental plan look like?

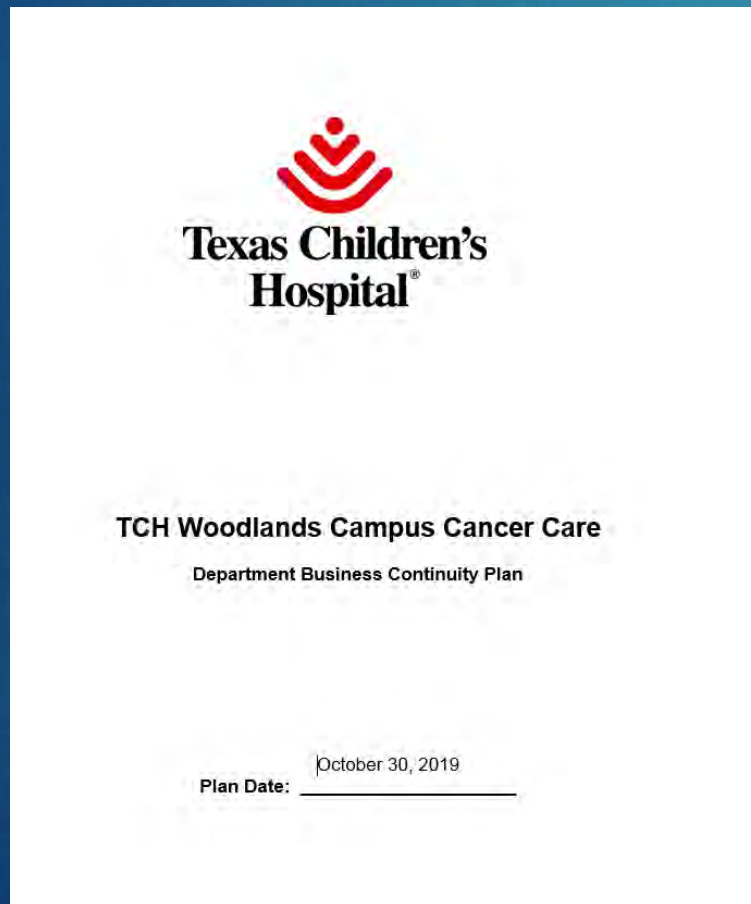


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What does a departmental plan look like? (cont.)

III. CRITICAL BUSINESS FUNCTIONS

A. Critical Business Function #1: Deliver Infusion Room Services

Description of Business Service

Description of Service or Function		
Provide administrative support and delivery of infusion room services including transfusions, injections and phlebotomy. Approximately 10 TCH staff, 1 Baylor staff, support this critical function within the department.		
Recovery Time Objective (RTO)	Recovery Point Objective (RPO)	Explanation for Why this is Critical
< 3 days	< 24 hours	Patient Care: Delays beyond 3 days impact patient health most often by delaying therapy

The items in the tables below are required to enable this function to be minimally operational in the RTO timeframe specified.

Service / Function Business Continuity Leader and Key Business Continuity Staff

Business Continuity Role	Name & Title	Contact Information	Description
Business Continuity Service Lead	Kim Holt, AD Nursing		This role leads the business continuity preparation, activation, and recovery activities for this function and is most familiar with the plans to restore this function
Alternate Business Continuity Service Lead	Aaron Mansfield, Mgr. Patient Care		Back up to role above
Position Title		Minimum FTEs Required During a Crisis	
Sr. Admin. Coord.		1	
Physician		1 (shared)	
Vocational Nurse		3	

Key Dependencies Including IS Systems

To perform this critical service, the department relies on the following internal and external dependencies. The recovery time objective is the maximum length of time that the service or function can be discontinued without causing irreparable harm to people or operations (research, finances, compliance).

Service / Function	Team & Point of Contact	Actions if Dependency is Unavailable	Recovery Time Obj.
Epic – EMR system	IS on-call Manager 832-824-3512	Downtime procedures in appendix indicating how to access static version of Epic plus how to manually record events	<3 days
Family Services: Social Worker, Child Life, Financial Counseling	Outpatient Services	Move forward without them	<3 days
Vascular Access Team (troubleshoot central line issues)	Kim Holt	Wait until available	<3 days
Respiratory therapy	Jay Mennel, Mgr. Therapy, 936-267-7313	Seek resources from West or Med Center or neighboring hospital if urgent	<3 days
Supply Chain Mgmt.	Sheila Little – 936-267-5896	Alternate suppliers accessed through SCM	<3 days
Pharmacy	Brady Moffett, AD Pharmacy	Use alternate internal or external pharmacy	<3 days
Pathology	Tyler Giess, AD Pathology 936-267-5259	Use St. Lukes-Woodlands or other TCH facility	<3 days
Optiflex Software	IS on-call Manager 832-824-3512	Use manual recording sheet behind door	<3 days
Base IS Infra.: Network, Avaya phones, Email, MS Office, etc.	IS on-call Manager 832-824-3512	Use downtime procedures. Wait for restoration	<3 days

Vital Records

Description	Where	Loss Strategy	Contact
None			

Facilities, Equipment and Office Supplies

To execute this business function, the following equipment and office supplies must be accessible. Include IS hardware in this list.

Description	Where	Loss Strategy	Contact
6 Consult Room with patient table and chairs at 3 days	Woodlands Outpatient/Administration Building 1 st and 2 nd Floor	Request space from Facilities,	Facilities 832-824-5000
1 large infusion room with sitting space for 5	Woodlands Outpatient/Administration Building 2 nd Floor	Request space from Facilities	Facilities 832-824-5000

What does a departmental plan look like? (cont.)

Description	Where	Loss Strategy	Contact
12 <u>Alaris</u> Smart Pumps (facility has 10 large volume and 10 small volume pumps total)	Woodlands Campus Outpatient/Administration Building 1st Floor	Utilize back up pumps	Biomed 24 hr dispatch 832-824-1999
1 Supply <u>Optiflex</u> with supplies (ace bandages, splints, tape etc.)	Woodlands Campus Outpatient/Administration Building 1st Floor	Contact IS for replacements	IS on-call Manager 832-824-3512
1 <u>OmniCell</u> (pharmacy)	Woodlands Campus Outpatient/Administration Building 1st Floor	Contact IS for replacements	IS on-call Manager 832-824-3512
2 desks with chairs (one per person)	Woodlands Campus Outpatient/Administration Building 1st Floor	Contact Facilities	Facilities 832-824-5000
2 Workstation on Wheels (<u>WVoWs</u>) with network connectivity (one per person)for recording patient care	Woodlands Campus Outpatient/Administration Building 1st Floor	Contact IS for replacements	IS on-call Manager 832-824-3512
1 shared printer and 1 telephone, 1 lab label printer	Woodlands Campus Outpatient/Administration Building 2 nd Floor	Contact IS for replacements	IS on-call Manager 832-824-3512
1 Supply <u>Optiflex</u> with supplies (ace bandages, splints, tape etc.)	Woodlands Campus Outpatient/Administration Building 1st Floor	Contact IS for replacements	IS on-call Manager 832-824-3512

Suppliers and Vendors

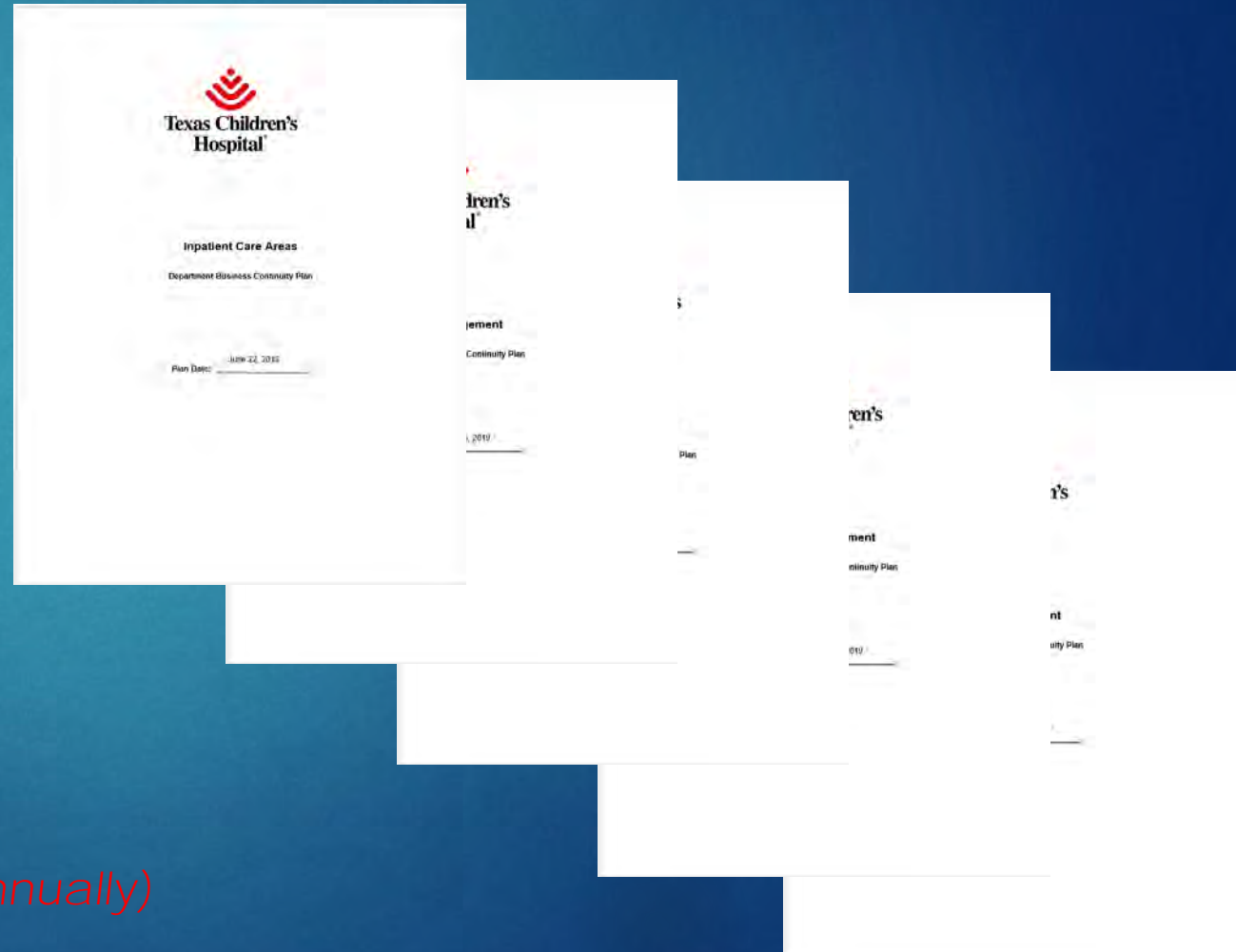
Supply Chain management will be the primary point of contact but list critical services and verify if they have an emergency contract with TCH.

Name of Supplier/ Vendor	Key Goods or Services Provided	Loss Strategy including whether Emergency Contract in Place	Normal Contact Details
GE	<u>Dinamap</u> vital signs equipment	Use backups or borrow from another TCH facility. No back up provider	GE (832) 778-8608
<u>Alaris</u>	Tubing and incidentals	Use backups or borrow from another TCH facility No back up provider	866.488.1408

The bulk of achieving CMS compliance requires developing the right set of plans and exercising them

TCH Footprint (CooP only)

- Enterprise BIA
- Enterprise BC Plan
- 52 Critical & Important Dept. Plans
- ~30 annual exercises
- After action reviews



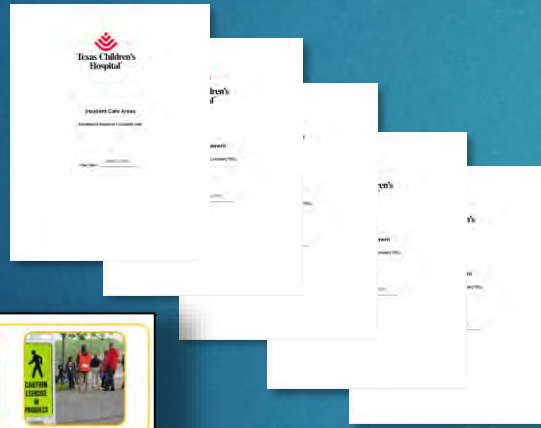
All for the low, low price of \$5200 (and \$345/annually)

Achieving Greater Value

- 1 Business Impact Assessment
- 2 Supplier Resiliency
- 3 Engagement
- 4 “On their toes” fast-follower exercises

What do you earn by delivering on the minimum rule requirements

			
Emergency & Continuity of Operations Plans <ul style="list-style-type: none">• Based on a risk assessment• Using an all-hazards approach• Update plan annually	Policies & Procedures <ul style="list-style-type: none">• Based on risk assessment and emergency plan• Must address: subsistence of staff and patients, evacuation, sheltering in place, tracking patients and staff	Communications Plan <ul style="list-style-type: none">• Complies with Federal and State laws• Coordinate patient care within facility, across providers, and with state and local public health and emergency management	Training & Exercise Program <ul style="list-style-type: none">• Develop training program, including initial training on policies & procedures• Conduct drills and exercises



- Continuation of patient services
- Fulfill moral responsibility to protect
 - The patients/staff/visitors
 - The community
 - The environment
- Compliance with regulatory requirements allowing CMS payments and avoiding fines

There is more benefit available BEYOND compliance with only a little more effort

- Reduced disruptions to service delivery
- Reduced financial losses
- Maintenance of or enhanced market share
- Maintained or even enhanced reputation
- Enhanced philanthropic activity

- Continuity of research programs
- Investment in emergency management
- Supply chain resiliency
- Resiliency against the strange & unknown

Achieving more
value

Achieving the
minimum value



- Continuation of patient services
- Fulfill moral responsibility to protect
 - The patients/staff/visitors
 - The community
 - The environment
- Compliance, CMS Pmt., and avoid fines

Question #3: How many research animals were destroyed in tropical storm Allison?

- A. 900,000
- B. 9,000
- C. 900
- D. 90,000

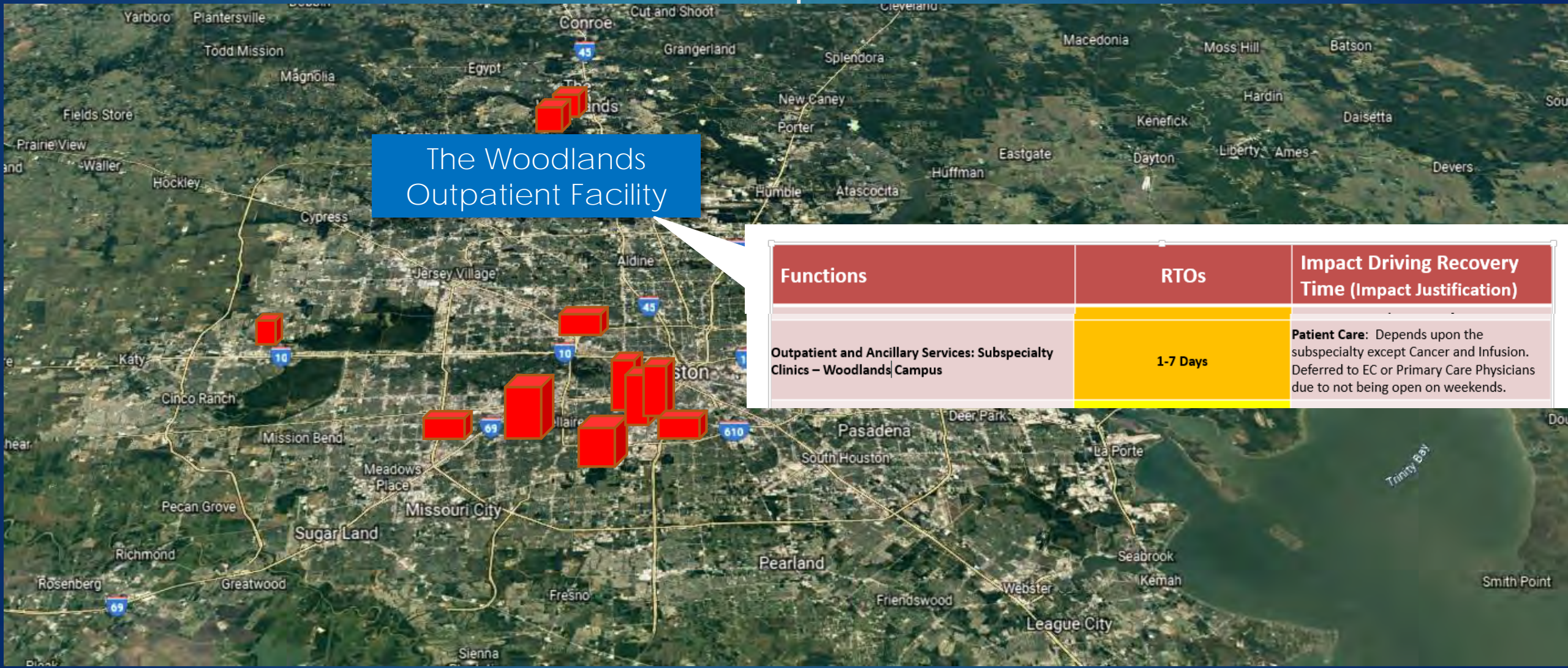


Greater value through the business impact assessment

- What is a business impact assessment?

Process by which the criticality of business functions is established and the key resources (personnel, facilities, applications, records and suppliers) required for that business function are identified.

Our Woodlands ambulatory clinics were one of the critical departments identified



The Woodlands Outpatient Facility

Functions	RTOs	Impact Driving Recovery Time (Impact Justification)
Outpatient and Ancillary Services: Subspecialty Clinics – Woodlands Campus	1-7 Days	Patient Care: Depends upon the subspecialty except Cancer and Infusion. Deferred to EC or Primary Care Physicians due to not being open on weekends.

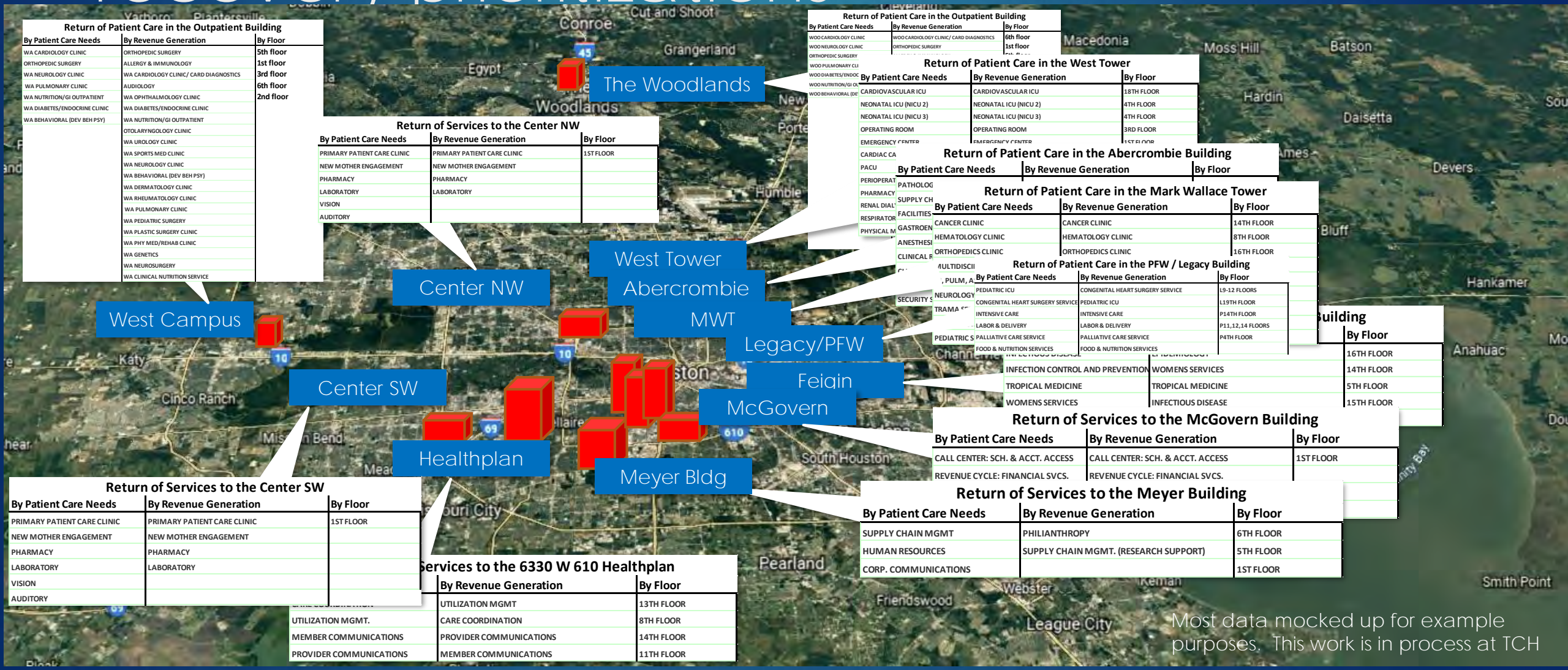
A more granular BIA will enable better recovery prioritizations



The Woodlands Outpatient Facility

Return of Patient Care in the Outpatient Building		
By Patient Care Needs	By Revenue Generation	By Floor
WOO CARDIOLOGY CLINIC	WOO CARDIOLOGY CLINIC/ CARD DIAGNOSTICS	6th floor
WOO NEUROLOGY CLINIC	ORTHOPEDIC SURGERY	1st floor
ORTHOPEDIC SURGERY	ALLERGY & IMMUNOLOGY	5th floor
WOO PULMONARY CLINIC	AUDIOLOGY	3rd floor
WOO DIABETES/ENDOCRINE CLINIC	OTOLARYNGOLOGY CLINIC	2nd floor
WOO NUTRITION/GI OUTPATIENT	WOO DIABETES/ENDOCRINE CLINIC	
WOO BEHAVIORAL (DEV BEH PSY)	WOO NUTRITION/GI OUTPATIENT	
	WOO OPHTHALMOLOGY CLINIC	
	WOO UROLOGY CLINIC	
	WOO ADOL/PEDI GYNECOLOGY	
	WOO NEUROLOGY CLINIC	
	WOO BEHAVIORAL (DEV BEH PSY)	
	WOO DERMATOLOGY CLINIC	
	WOO SPORTS MED CLINIC	
	WOO PULMONARY CLINIC	
	WOO PEDIATRIC SURGERY	
	WOO PLASTIC SURGERY CLINIC	
	WOO PHY MED/REHAB CLINIC	
	WOO RHEUMATOLOGY CLINIC	
	WOO INFECTIOUS DISEASE	
	WOO CLINICAL NUTRITION SERVICE	
	WOO GENETICS	
	WOODLANDS NEUROSURGERY	

A more granular BIA will enable better recovery prioritizations



Actionable recommendations: Recovery order by location

During the business impact analysis:

- ▶ As a start, for ambulatory departments, ask your practice administrator to provide recovery order by patient care, revenue and floor
- ▶ Ask your finance or decision support team for a list of departments with location, encounters/day, revenue per encounter
 - ▣ Alternatively, ask your finance or decision support team for utilization and financial numbers for each department and create your own list
- ▶ Create a reference sheet for your enterprise business continuity plan and put a copy in the “administrator on call” packet

Who else would want to know the priority of departments to bring back online?

Call Center for Scheduling and Account Services

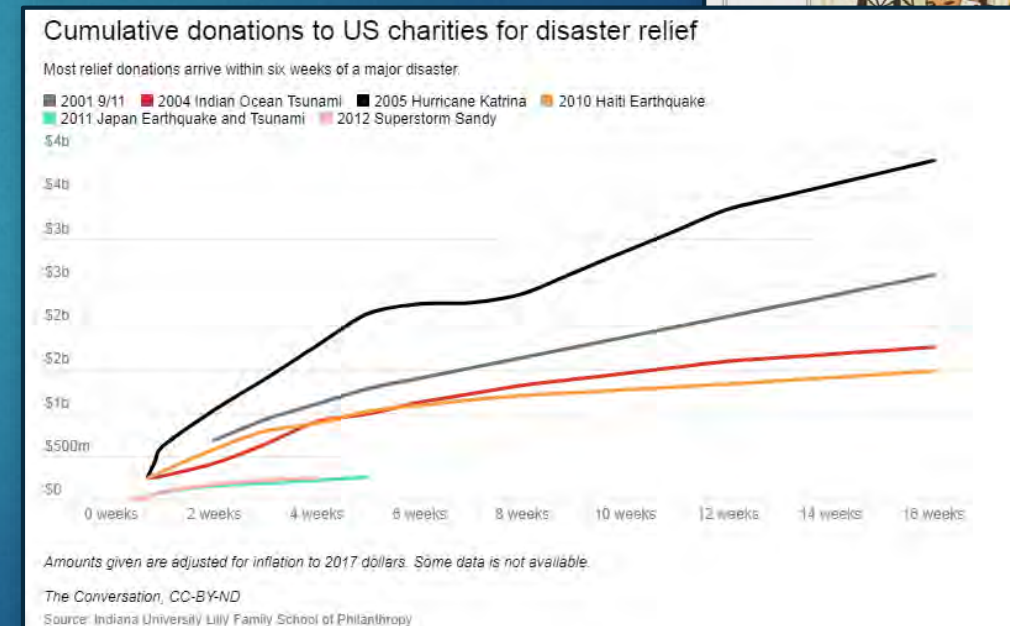
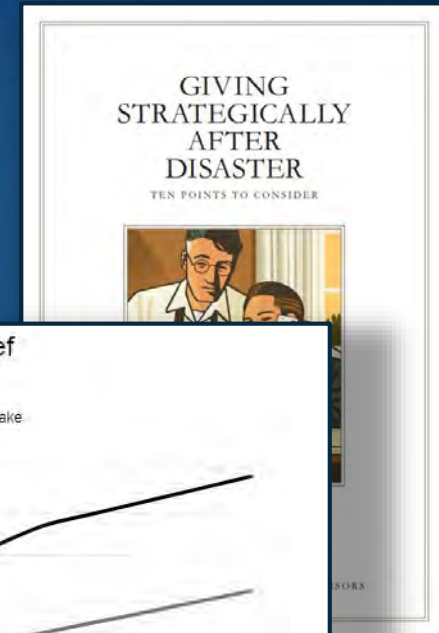
- ▶ In the aftermath of Harvey, we initiated automated messaging. There was quite a bit of deliberation on when to begin to take live calls to reschedule appointments with limited staff:
 - Risk long wait times and unhappy customers
 - Risk not having answers and unhappy customers
- ▶ Partially opening the center for automatic call routing of prioritized calls may be the winning way in the future



A department that wouldn't naturally rise to the top during a business impact analysis is . . .

Philanthropy!

- ▶ CMS doesn't ask you to recover it
- ▶ Your BIA likely didn't prioritize it as they rank departments or functions by:
 1. Patient care
 2. Research
 3. Finances
 4. Compliance/Regulatory
 5. Reputation
- ▶ In a disaster they become ultra valuable for finance and reputation



Vendor resiliency is an area that is often overlooked in healthcare partly due to a false sense of security from managing through endless drug shortages

The screenshot shows the CDC Rabies Homepage. The left sidebar contains a navigation menu with links to 'What is rabies?', 'Transmission', 'When to seek care', 'Prevention', 'Signs and symptoms', 'Diagnosis', 'Rabies in the U.S. and around the world', 'Information for specific groups', and 'State and local rabies consultation contacts'. The main content area is titled 'Vaccine and Immune Globulin Availability' and includes a 'Current Situation' section with an update date of October 1, 2019. A red text box states: 'Supply is limited or unavailable for two rabies vaccines and one rabies immune globulin product. Healthcare providers should continue to administer PEP when indicated.' Below this, the 'Rabies Vaccine' section lists two vaccines: RabAvert (produced by GlaxoSmithKline) and IMOVAX (produced by Sanofi Pasteur), both of which are experiencing temporary supply shortages. RabAvert is still available for pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP), while IMOVAX is not available at this time. Healthcare providers unable to obtain IMOVAX are advised to use RabAvert during this period.

Rabies

CDC > Rabies Homepage > Resources

Rabies Homepage

- What is rabies?
- Transmission
- When to seek care
- Prevention
- Signs and symptoms
- Diagnosis
- Rabies in the U.S. and around the world
- Information for specific groups
- State and local rabies consultation contacts

Vaccine and Immune Globulin Availability

Current Situation

Updated: October 1, 2019

Supply is limited or unavailable for two rabies vaccines and one rabies immune globulin product. Healthcare providers should continue to administer PEP when indicated.

Rabies Vaccine

- RabAvert** rabies vaccine (produced by GlaxoSmithKline) is experiencing a temporary limited supply, but is still available for both [preexposure prophylaxis \(PrEP\)](#) and [postexposure prophylaxis \(PEP\)](#). Clinicians can request RabAvert for any patient who needs PrEP or PEP by contacting GSK's Vaccine Service Center directly at 866-475-8222, option 3.
- IMOVAX** rabies vaccine (produced by Sanofi Pasteur) is experiencing a temporary supply shortage and is not available at this time. Healthcare providers who are unable to obtain IMOVAX should use RabAvert during this time, even if IMOVAX was used to start a PrEP or PEP schedule that is in progress.

We have had at 4 events in the last 2 years that have heightened awareness of the risk

Vendor: IS Call Center Provider

Situation: In late August of 2017 a water leak shut down Midwest call center and systems did not fail over to alternate site

Resolution: IS backfilled with local staff in conference room call center

Vendor: IV Fluid Shortage

Situation: Hurricane Maria exacerbated a product shortage issue leaving TCH with inadequate supply

Resolution: TCH adjusted usage, made their own, found alternate Vendors

Vendor: Controlled Substance Vendor

Situation: **Vendor's Distribution Registration** was revoked by the DEA on Friday May 4, 2018

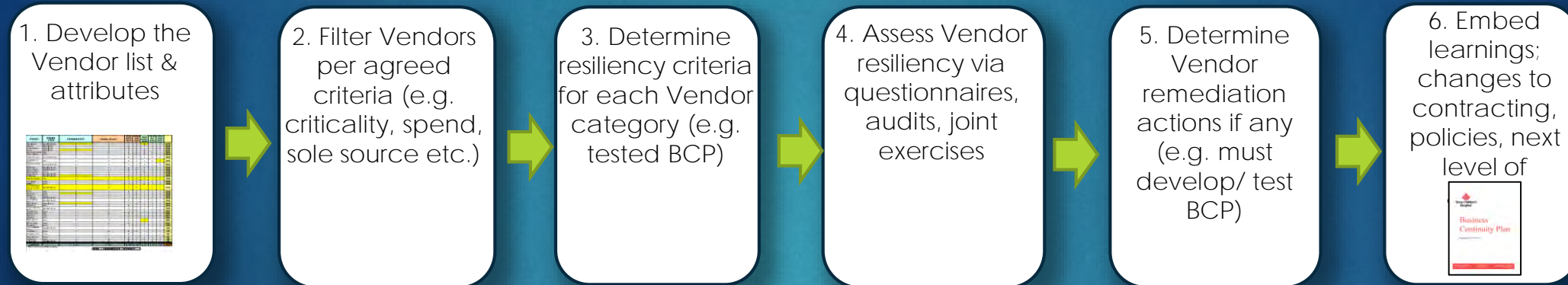
Resolution: Alternate Vendor contracted on May 8, 2018

Vendor: Medicaid Transportation Vendor

Situation: In June 2019 the vendor terminated their contract with the Healthplan with no notice due to claims not being paid by the state.

Resolution: Temp transport providers arranged until state issues resolved.

An industry-standard approach could establish a Vendor resiliency program quickly



Shrinking number of Vendors in the funnel

Actionable recommendations: vendors

- ▶ During the BIA or plan writing stage, ask each department for their most critical supplier
- ▶ 1st year:
 - Select 3 vendors and request their supply chain onboarding material from your supply chain dept.
 - Ask the vendor for their latest version of their business continuity plan. Review towards understanding risk level. Request gap closure with the vendor or request SCM help
- ▶ 2nd year:
 - Develop minimum expectations in partnership with SCM
 - Become part of new vendor review regarding resiliency
- ▶ 3rd year:
 - Full process from prior slide

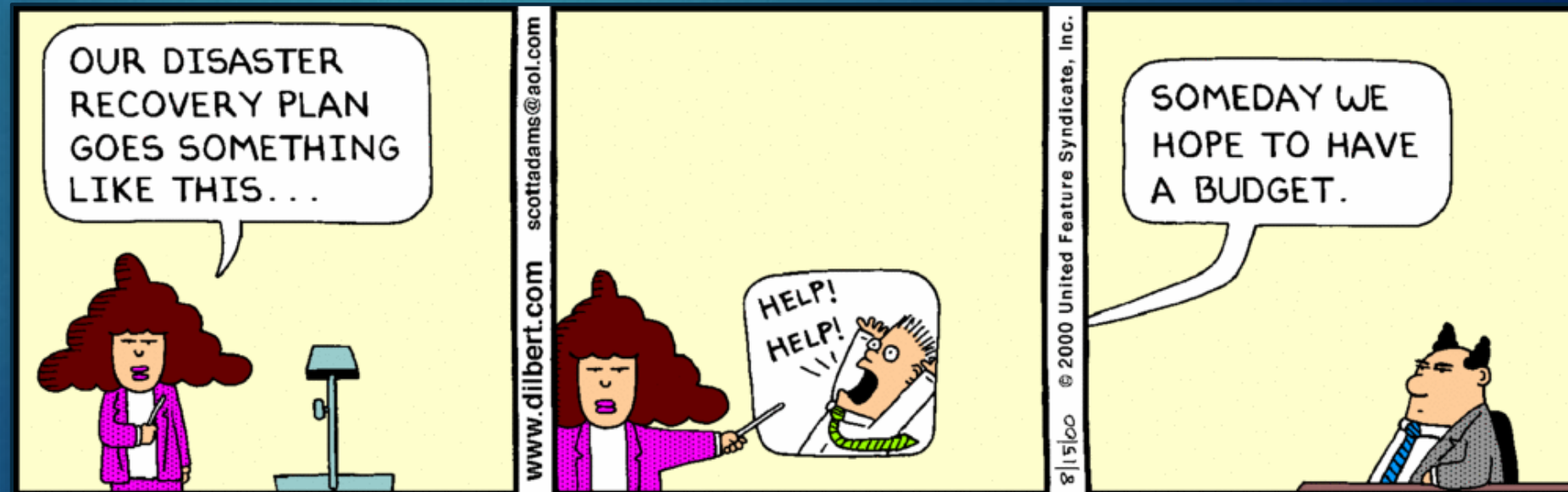
Achieving compliance affords an opportunity to elevate department visibility

-which begets funding



Question #4: Who is the author of this famous business continuity cartoon

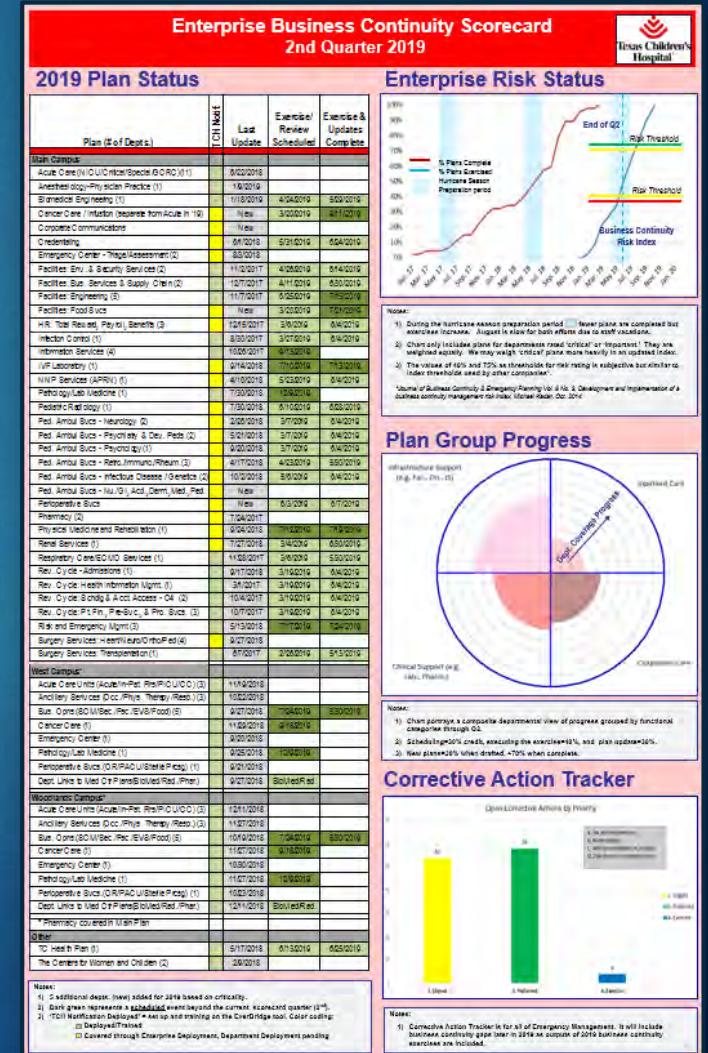
- A. Berkeley Breathed
- B. Bill Waterson
- C. Scott Adams
- D. Garry Trudeau
- E. Gary Larson



Source: Dilbert

Achieving compliance affords an opportunity to elevate department visibility

- ▶ Engage leadership in the BIA
- ▶ Become a single source of truth for methods of dept. prioritization (value)
- ▶ Engage all departments annually in exercises
- ▶ Demonstrate you can get things done



Keeping the organization on its
toes

The increase in the number of exercises gives you a platform for even more creative ways to prepare your organization

- ▶ Employees are going to tire of the same severe weather exercise year after year
- ▶ They aren't going to sign up for your PowerPoint fiction

The Office



Life is stranger than fiction

- ▶ Utilize the crises we read about daily to test our own preparedness and ability to respond

U.S. drug agency suspends Louisiana distributor over opioid sales

3 MIN READ

WASHINGTON (Reuters) - The U.S. Drug Enforcement Administration said on Friday it had suspended a Louisiana pharmaceutical distributor from selling controlled substances for allegedly selling unusually large quantities of opioids to pharmacies without reporting the sales.

Water pipe break prompts 'internal disaster' at Ben Taub, Harris Health

Anuja Vaidya (Twitter) - Tuesday, September 10th, 2019 [Print](#) | [Email](#)

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Houston-based Harris Health System declared an "internal disaster" systemwide at 11:35 a.m. on Sept. 9, after a water pipe break at Ben Taub Hospital, also in Houston.

Seattle Children's Hospital mold infections leave one dead, force closure of most operating rooms

UPDATED ON: JULY 3, 2019 / 9:32 AM / CBS/AP

[f](#) [t](#) [v](#)

Ransomware attack locks CHI Health providers out of EHR database

Mackenzie Garrity - 7 hours ago [Print](#) | [Email](#)

[SHARE](#) [Tweet](#) [Share 0](#)

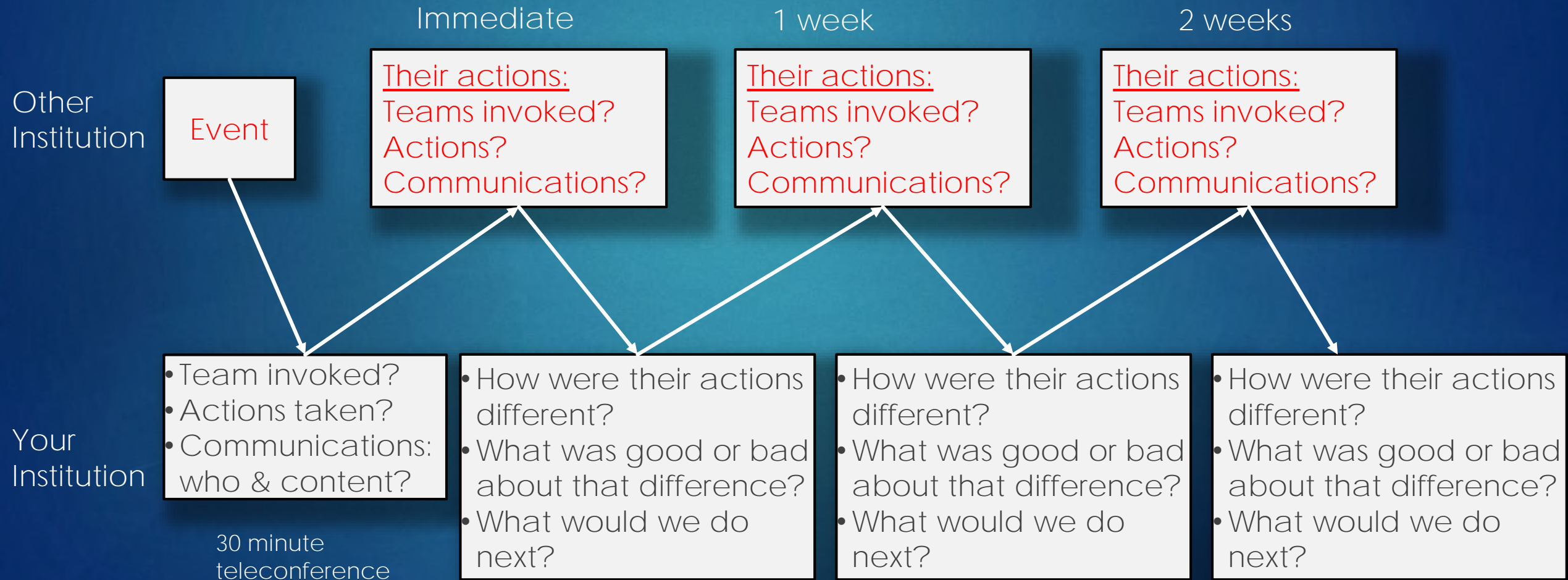
Omaha, Neb.-based CHI Health Lakeside Hospital announced Sept. 27 it was hit by a ransomware attack that may have exposed patients' protected health information, according to the *Omaha World-Herald*.

Hospital officials discovered Aug. 1 that a database storing EHRs had been locked as the result of ransomware. The ransomware attack specifically targeted the hospital's orthopedic clinic.

The ransomware attack only affected an older records system that held records from patients who were seen at the CHI Health orthopedic clinic before April 2016. Patient data that could have been exposed included names, dates of birth, Social Security numbers, phone numbers, addresses and medical information.

CHI Health officials said there is no evidence that patient information has been misused. However, affected patients can receive a year of complimentary credit monitoring and identity protection services.

A “fast follower” exercise is free form and enables learning from others



Event: A 3 hospital system is hit with a Ryuk ransomware attack

- ▶ Tuesday, Oct. 1st
- ▶ Not aware of access to employee or patient information
- ▶ Cannot access patient lists to contact them to reschedule
- ▶ No demands have been made

Event



The DCH Health System hospitals in Tuscaloosa, Northport and Fayette were closed Tuesday to new patients due to a ransomware attack on their computer systems.
[cbs42.com/news/local/dch...](https://www.cbs42.com/news/local/dch...)



DCH hospitals in Tuscaloosa, Northport and Fayette closed d...

A Closer Look at the Alabama Hospital Ransomware Attack

The Alabama hospital ransomware attack was discovered Monday, DCH stated. Investigators have determined that Ryuk was used to encrypt files at the three Alabama hospitals, and there is no indication that any patient or employee data has been misused or removed from DCH systems.

After the ransomware attack was discovered, DCH implemented emergency procedures to provide patient care, and it initiated an incident response plan that includes coordination with law enforcement and independent IT security and forensics experts. However, Alabama hospital medical staff have shifted their operations into manual mode and are using paper copies in place of digital records, and they do not have access to patient lists and cannot call to reschedule appointments.

DCH is investigating all options to restore IT systems at the affected hospitals. To date, DCH has not been informed that anyone has been identified or charged in association with the ransomware attack.

What does our protocol say to do?

- ▶ Invoke the IS and PIR Plan
- ▶ Engage the teams noted: Admin. On Call, Legal, Privacy, Security, Compliance, Risk Management, Human Resources, Information Security, Corporate Communications, Emergency Management & Business Continuity
- ▶ Issue employee communications via our alert tool, issue patient and public communications among others
- ▶ IS begins disaster recovery procedures

Event

- Team invoked?
- Actions taken?
- Communications: who & content?

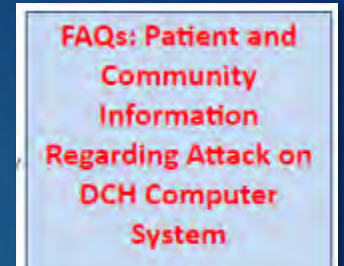


Information Security & Privacy Institutional Response Plan

Information Security Department
Compliance & Privacy Office
Business Continuity & Emergency Management

What do we know about their response?

- ▶ Invoked downtime procedures, contingency plans
- ▶ Made no mention of disaster recovery (probably to avoid the use of the term 'disaster' in the press)
- ▶ Engaged authorities and outside IT forensic experts
- ▶ Issued patient and public communications via homepage, twitter, Facebook and provided an FAQ
- ▶ Closed emergency departments and limited new inpatient acceptance. Continued planned procedures.



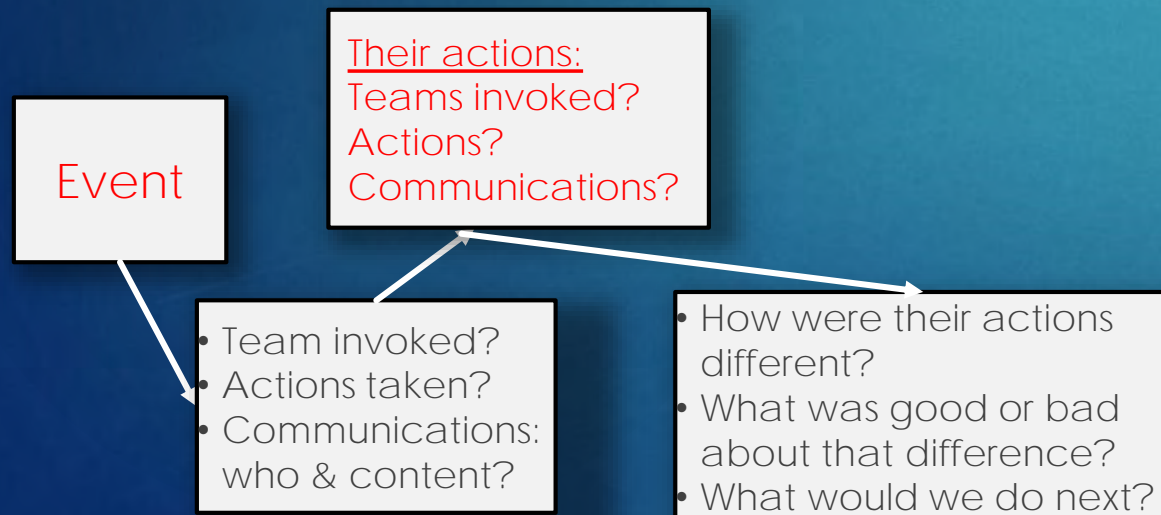
Event

Their actions:
Teams invoked?
Actions?
Communications?

- Team invoked?
- Actions taken?
- Communications: who & content?

How do the actions compare and what would we do next?

- ▶ Similar plan activations, communications, and personnel engagement
- ▶ I don't know that our emergency department would go into diversion status
- ▶ The use of an FAQ may be a learning
- ▶ Next
 - Restore operations and disaster recovery
 - Open ED and continue communications with the public



What actions do they take next (1 week)?

- ▶ *“we have begun a methodical process of system restoration. We have been using our own DCH backup files to rebuild certain system components, and we have obtained a decryption key from the attacker to restore access to locked systems.”*
- ▶ Open their ED to walk ins

DCH Ongoing Response to Cyberattack and IT System Outage

10/2/2019

Messaging Regarding Decryption and System Restoration

October 5 8:30 a.m.

In collaboration with law enforcement and independent IT security experts, we have begun a methodical process of system restoration. We have been using our own DCH backup files to rebuild certain system components, and we have obtained a decryption key from the attacker to restore access to locked systems.

We have successfully completed a test decryption of multiple servers, and we are now executing a sequential plan to decrypt, test and bring systems online one-by-one. This will be a deliberate progression that will prioritize primary operating systems and essential functions for emergency care. DCH has thousands of computer devices in its network, so this process will take time.

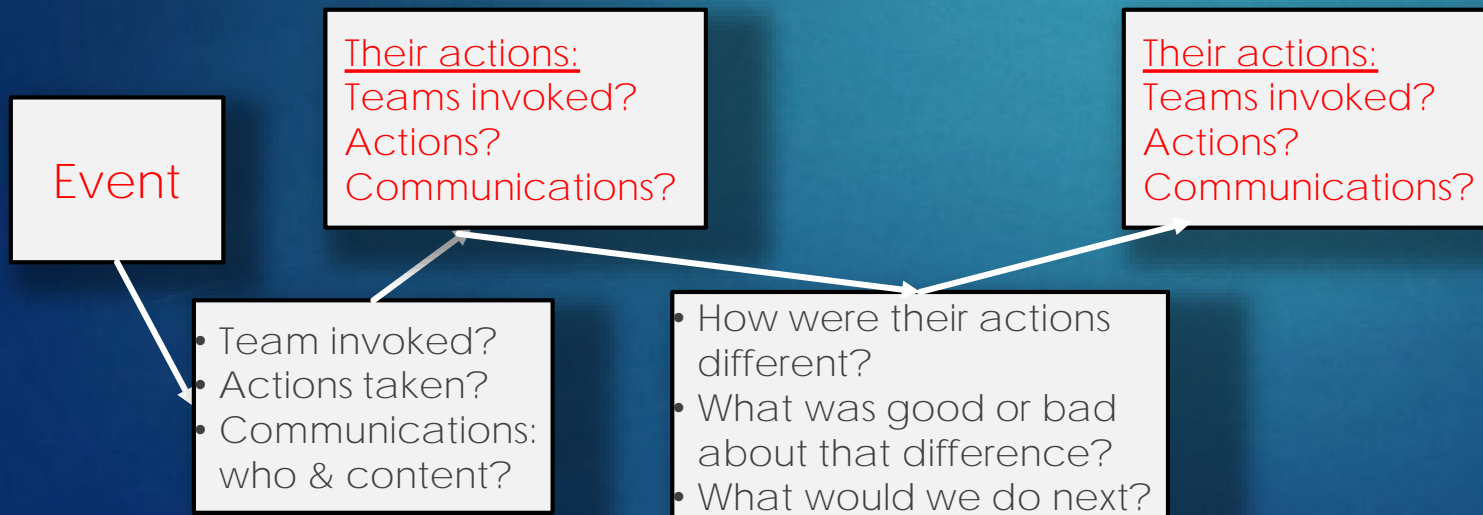
We cannot provide a specific timetable at this time, but our teams continue to work around the clock to restore normal hospital operations, as we incrementally bring system components back online across our medical centers. This will require a time-intensive process to complete, as we will continue testing and confirming secure operations as we go.

As we complete this process, all three hospitals will continue to be on diversion for all but most critical patients through the weekend. Our Emergency Departments will continue to see patients who bring themselves to the hospital.

We expect to be making additional announcements in the coming days, as key systems are restored and more patient services resume. Meanwhile, we are grateful for the dedication and professionalism of our staff, as they continue using our emergency downtime procedures to provide safe and patient-centered care.

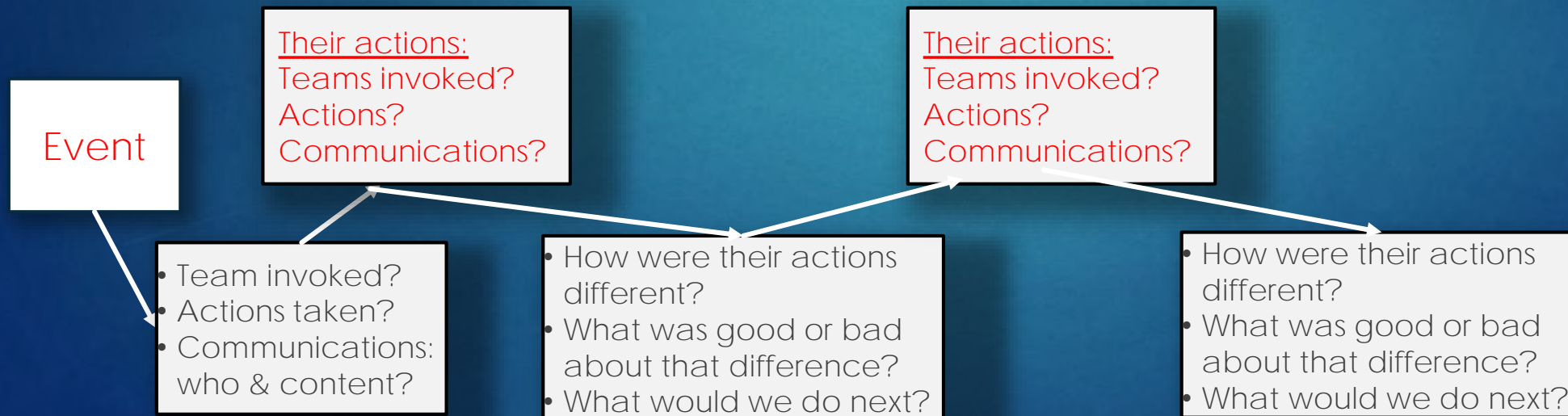
We will provide continual updates on our website as patient services become available and departments reopen.

FAQs: Patient and Community Information Regarding Attack on DCH Computer System



How do the actions compare and what can we learn?

- ▶ Again, very similar
- ▶ What would be the impact to ambulatory departments?
- ▶ Learnings:
 - ▶ How quickly can we determine when the system was first corrupted? Does this confirm out RTO or suggest we are too aggressive?



Actionable recommendations: exercises

- ▶ Once you've exhausted the basics and have a routine, shake your leaders up with some events out of the headlines
- ▶ Take it a step further and follow the events real time or a day after the event and try to anticipate what the institution is going to do
- ▶ Take the time to reflect on what you can learn from how they responded

1 killed, 5 infected by mold at Seattle Children's hospital in last two years

The hospital closed 14 operating rooms in May. It just reopened them after a deep cleaning and an upgrading of systems for humidifying, air purification and air handling.

There is more benefit available BEYOND compliance with only a little more effort

- 1 Reduced disruptions to service delivery
- Reduced financial losses
- Maintenance of or enhanced market share
- Maintained or even enhanced reputation
- 1 Enhanced philanthropic activity

- 3 Continuity of research programs
- 2 Investment in emergency management
- 4 Supply chain resiliency
- Resiliency against the strange & unknown

Achieving more value

Achieving the minimum value



- Continuation of patient services
- Fulfill moral responsibility to protect
 - The patients/staff/visitors
 - The community
 - The environment
- Compliance, CMS Pmt., and avoid fines

Question #5: How many hospitals in the US have gone out of business in the last 18 months?

- L. 98
- M. 173
- N. 4
- O. 27
- P. 1200



Questions?