Memories of the past, preparing for the future

North Country POCC
Network Meeting
October 25, 2013
Minnesota
Peggy Mann, M.S., MT(ASCP)

RED RIVER FLOOD APRIL 2011

Using POCT in Preparedness & Recovery

Objectives:

- Identify the strengths of lab-trained employees

- Discuss potential quality issues arising during or post emergency event

- State recommendations to improve facility readiness

Definitions
(inclusive of: Natural, Technological, Human Events

Emergency	• a serious, unexpected, urgent and often dangerous situation requiring immediate action
Disaster	• a calamitous event; occurring suddenly and causing great loss of life, damage, or hardship
Response	• acutely responding to and surviving the disaster as it's ongoing
Recovery	• restoring the community once outside help has gone
Preparedness	• the state of readiness; possession of adequate resources for unexpected event

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Emergency Management: 6 critical functions

1. Communications
2. Resources and Assets
3. Safety and Security
4. Staff Roles and Responsibilities
5. Utilities
6. Clinical Support Activities

Resources... Who? What? must you have to properly function

"I'm just making some grilled cheese sandwiches for my co-workers and then you can start your tanning session, miss."

Memories of IKE

Lessons Learned in Preparedness Recovery

University of Texas Medical Branch (UTMB Health)
Galveston Island Campus & Clinics; Mainland Ambulatories

IKE Sept. 2008
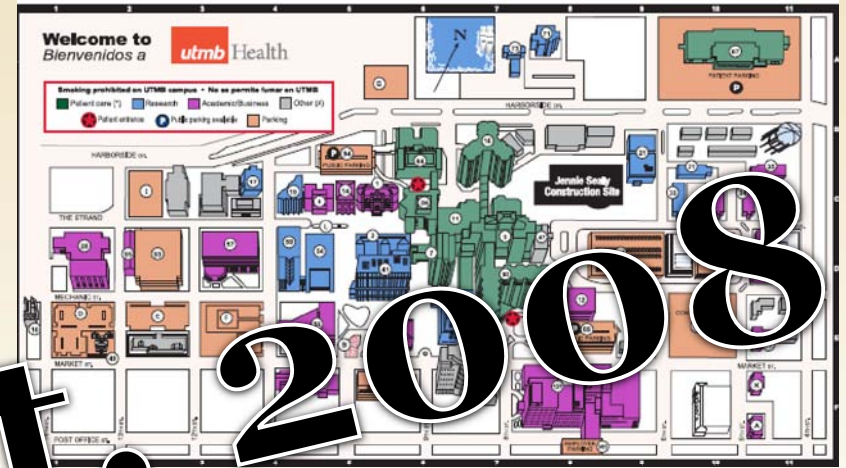
~80 ambulatories

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Island & Mainland Ambulatories

University Hospital Clinics

UTMB Pediatric Associates Adult and Specialty Care

UTMB Pediatric Associates Family Health Care

University campus

Galveston Island, Texas

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UTMB IKE damage:

• D/c Ptn care 3 bld. ;
• D/c 2 offsite community clinics (FM, Geri)
• Partner Shrine Burns (Children) Hospital closed ~16 mo;
• Lost ~ 1.3 M sq.ft. flr space = Corrosive & salt laden flood water (depth 1 – 6 ft.);
• Lost Pharmacy, Bld Bank, Kitchen, Ptn meal prep rms, Cafeteria, All retail, Entire Radiology Onc Facility;
• Materials Management CLOSED (damage + trucks not entering isle);
• Unable to reopen = 2500 employees laid off; no ER, lack of critical care

Phased in Ptn services 1st admit =1mo; 1,000 babies = 3 mo;

• By Nov.09 use of 6M/7M total sq. ft.; 85%

Repairs: 1.4 B reconstruction project
Including major equip, labs, electrical & plumbing above potential flooding

Hurricane Ike
3rd most destructive hurricane to make landfall in U.S.

Dates:
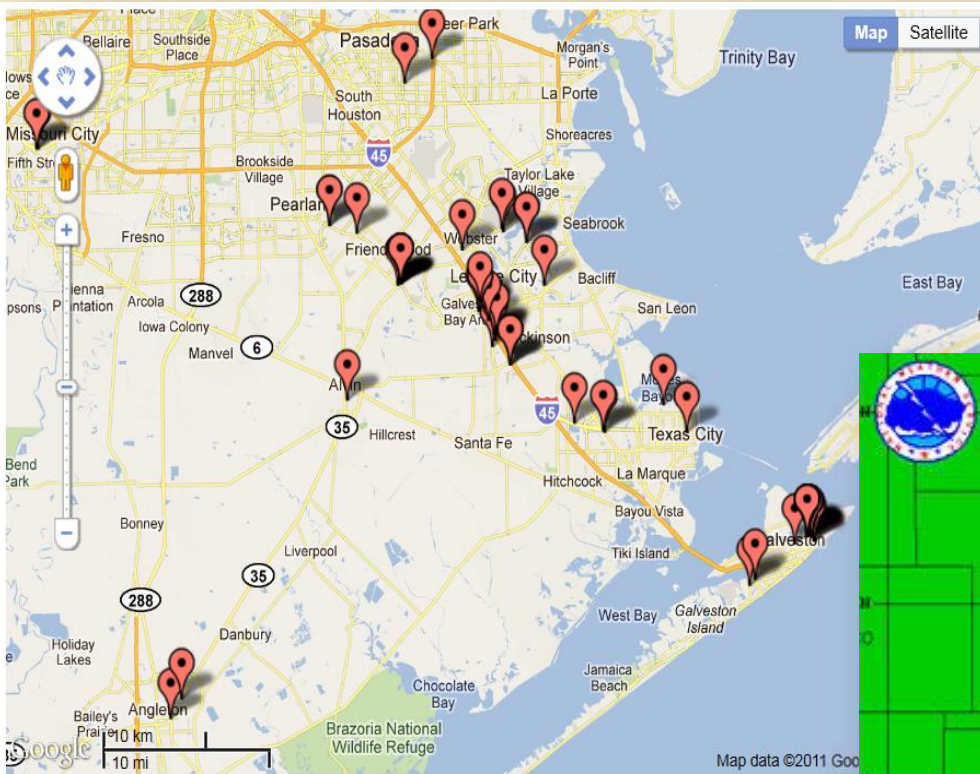- Formed 9-1-2008
- Dissipated 9-14-2008

Winds
- 145 mph
- Lowest pressure 935 mbar

Fatalities
- 103 direct
- 92 indirect
- 34 missing
- $28.2 B

Ike approaching landfall on the Texas coastline

http://earthobservatory.nasa.gov/NaturalHazards/Archive/Sep2008/ike_tmo_2008256_lrg.jpg

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vs path of Hurricane IKE

Evacuating patients

UTMB hurricane-related photos compliments of Pep Valdes, UTMB Public Affairs

As IKE comes to campus

Post IKE

Storm surge, wind, flooding (bay side)

IKE:$15
Billion
2008 figure

Initial Emergency Healthcare Rapid Response

Use POCT Devices & reagents; Fed Gov lab caches, warehouses

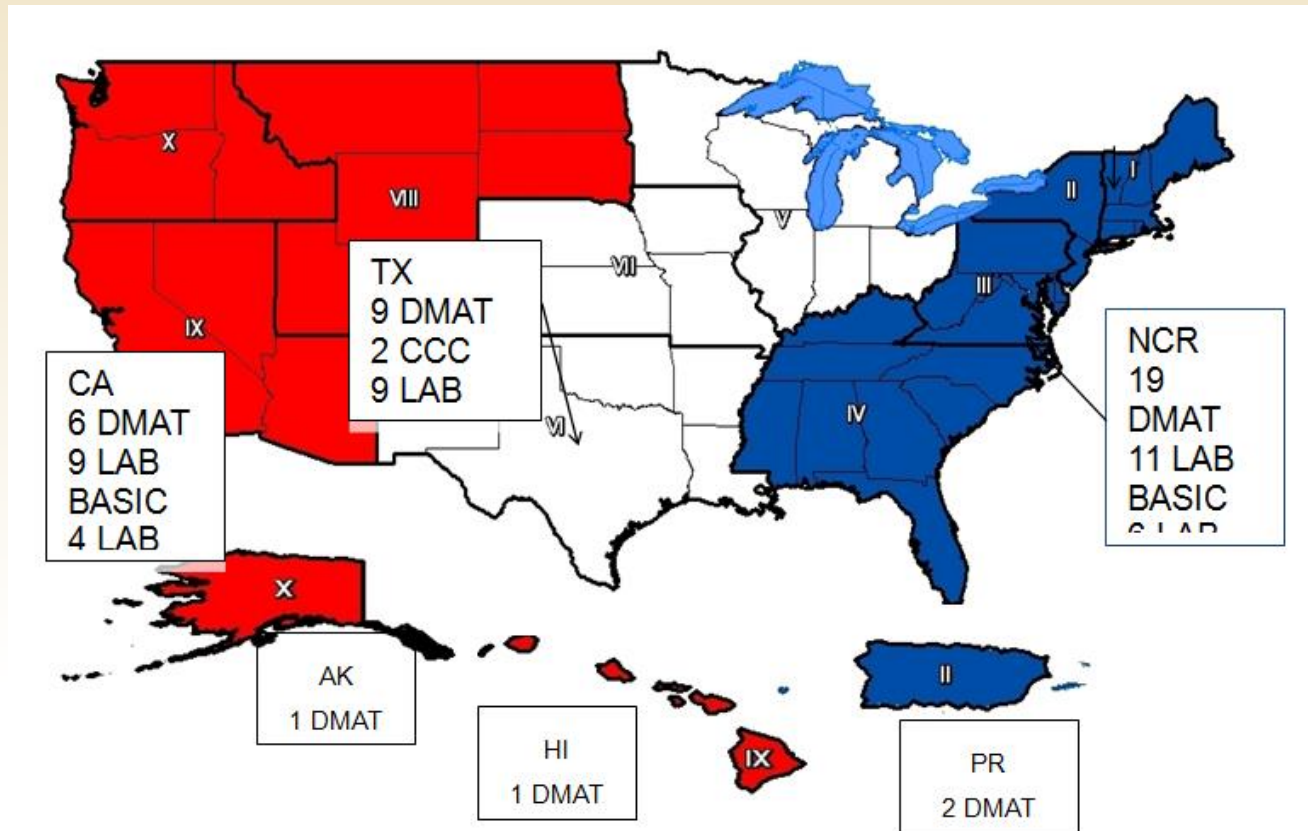**Disaster Medical Assistance Team (DMAT)**
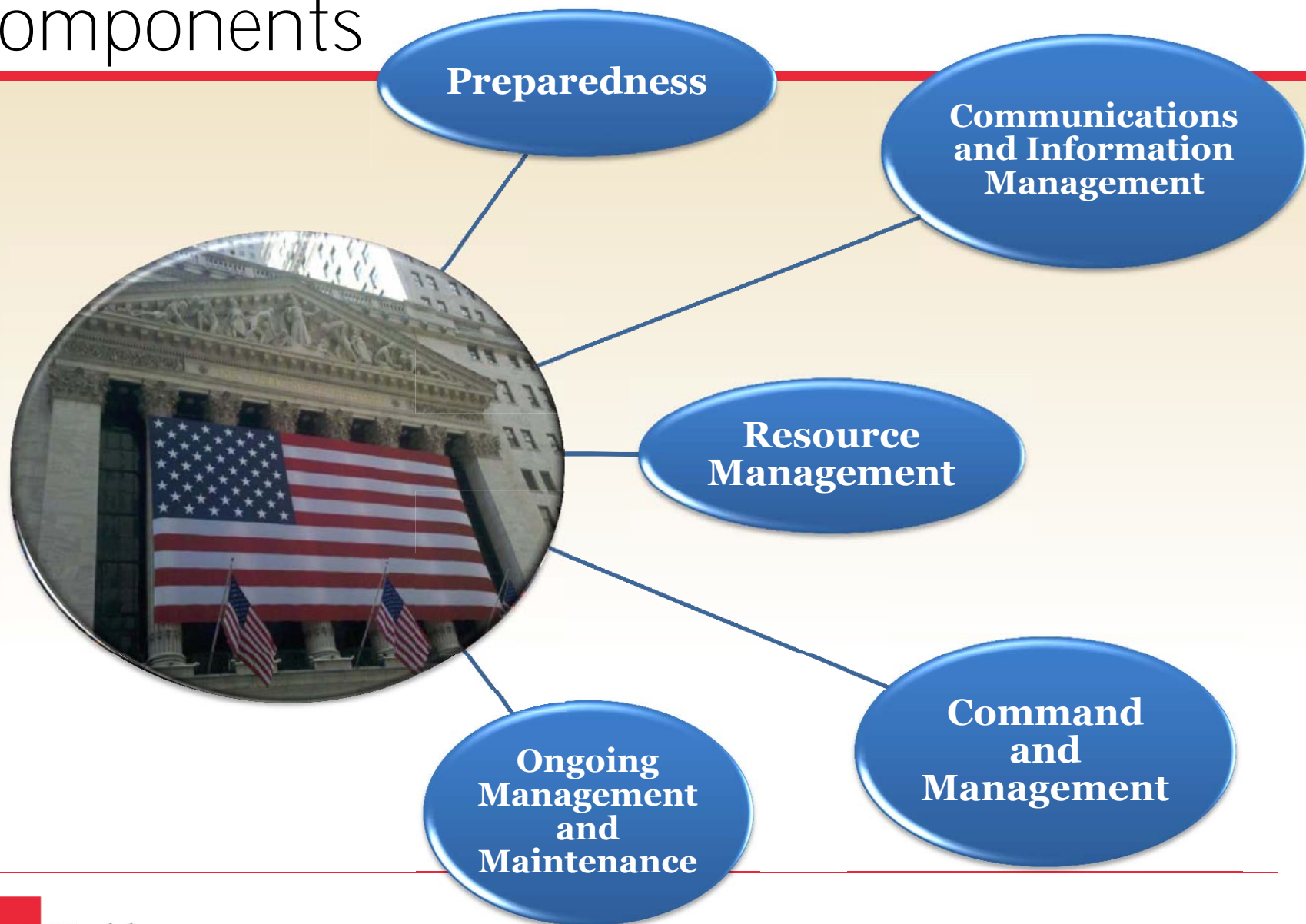
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Disaster Medical Assistance Team

Lab Caches

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NIMS National Incident Management System Components

Preparedness

Communications and Information Management

Resource Management

Ongoing Management and Maintenance

Command and Management

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NIMS purpose

NIMS provides a systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work seamlessly to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and harm to the environment.

FEMA Preparedness & NIMS

Definition: ICS

Incident Command System

Standardized approach to incident management that:

1. Enables **coordinated** response, multiple jurisdictions and agencies;

2. Establishes **common processes,** planning and managing resources;

3. Allows **integration of facilities, equipment, personnel, procedures, communications** operating within a common organizational structure.

When Is ICS Used?

Manage **any** type of incident, including a planned event

(training conference, charity fundraising event)

Applicable to **all** hazards, including:

Natural Hazards: Disasters, such as fires, tornadoes, floods, ice storms, earthquakes, foodborne illnesses, or epidemics.

Technological Hazards: Dam breaks, radiological or hazmat releases, power failures, or medical device defects.

Human-Caused Hazards: Criminal or terrorist acts , school violence, or other civil disturbances.

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Local > State > Federal

Annex to the UTMB Health [Emergency Operations Plan](#)

Incident Command Center

In the event of an incident/event, an Incident Command Center (ICC) will be established on the main campus in Galveston. If a secondary ICC is needed due to loss of communication with the campus ICC, an Ambulatory ICC may be established on the mainland, and will report to the ICC on campus or operate independently until communication is restored. The Incident Commander, Safety Officer, Operations Section Chief, and Planning Section Chief jobs will be assigned by Ambulatory Leadership.

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Teena Kennedy, RN, content recovery – Galveston FHC 10/09

Only healthcare facility open on Galveston Island

Community Clinics recovery while hospital closed for patient care

2008/09/30 09:19

Mobiles
Galv group practice
& FRW Radiology

2008/09/27

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UTMB campus recovery

Pumping in chilled air; utility/power disruptions

Removal & decontamination

Temporary campus 'cafeteria'

ME?

UTMB Recovery
Need for off-campus leadership

1. Health System shut down campus facilities; moved all patient care to off island

2. No initial contact from Clinical Laboratory post IKE

3. No preparedness/plan in place by Clinical Laboratory for lab closure; no pre-plan for using reference lab (Transplant and Dialysis most challenging)

4. No inclusion in Ambulatory Business Continuity Plan for all lab samples going outside of own clinical lab; no inclusion for immediately adding off island clinic space and services

5. Hospital/Health System Emergency Management never included into hurricane drill

   1. Lack of clinical lab
   2. Loss of entire hospital care services
   3. Loss of Trauma Center_ER_OR
   4. Relocating all services from campus to off island

Stepping Up

"There are those who are appointed leaders, some are born leaders, and others have leadership thrust upon them. Those who stepped up to save lives during Hurricane Katrina are people I will never forget."
([ADVANCE](#))

Kerry Jeanice, RN, clinical manager of emergency preparedness at West Jefferson Medical Center in Marrero, LA
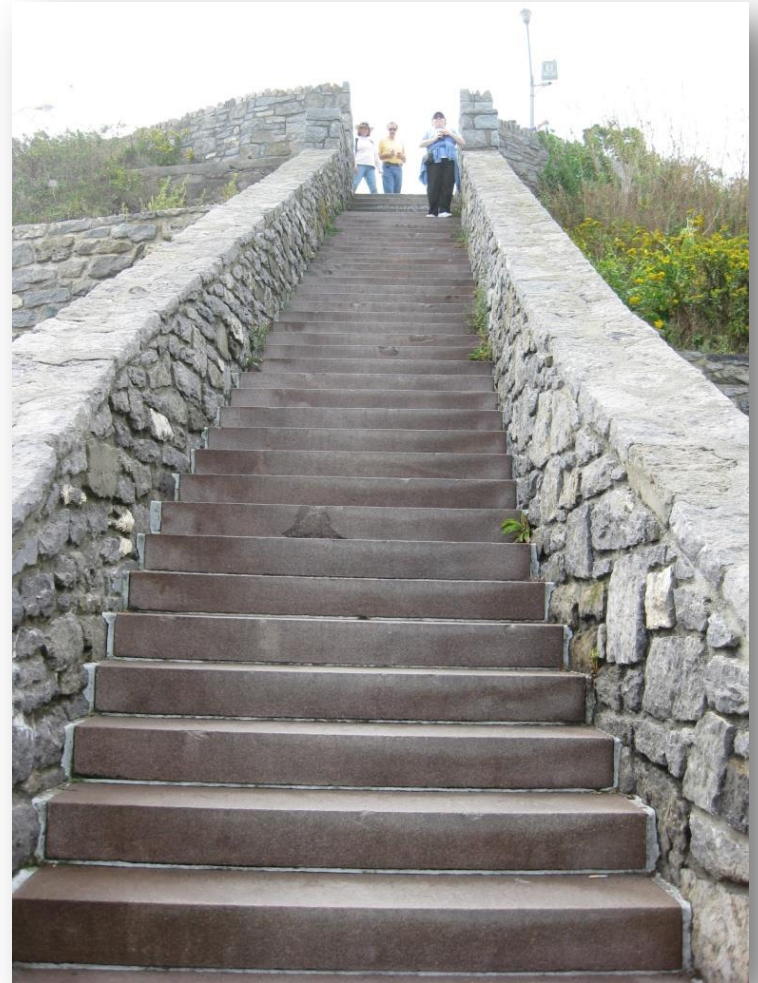
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Annex to the UTMB Health Emergency Operations Plan

Emergency Roles

The following roles are designed for hurricanes and may be adapted as needed for all hazards.

Administrators/Directors/Managers/Supervisors (ADMS)

Initiates emergency procedures, assigning roles below.

Determines designated safe areas (rooms in the middle of the building (no windows), computer and small medical equipment up off the floor).

Communicates updates on storm preparation and recovery plans to staff.

Ensures all Phone Trees phone numbers are accurate.

Oversees and assists with the evacuation of patients.

Oversees and assists with the movement of all equipment to designated safe areas and proper labeling and storage.

If ADMS has a laptop, takes it with them when leaving the facility.

Registered Nurse/Nurse Practitioner (RN/NP)

Assigns roles and performs ADMS duties if ADMS is not available.

Assists with the evacuation of patients.

Places all small medical equipment into plastic bags, seals with duct tape, and labels them.

POCC in preparedness & post-disaster leadership role

Typical POCC duties

Auditing QC

Ptn results

EMR

Re-cert/ validation

Maintenance of instruments

Support – coaching - troubleshooting

Initial training/

Competency validation;

Update current operator dbase

Operators

QC

Products/Devices

Test Site Management

Test Site **'Compliance'**

Standards & Regulations

Other: Liaison to industry, Advisor re: new technology, Oversee or conduct lab studies, Method comparisons, Correlations , Recalls/alerts, Liaison or chair facility committees; Professional contacts & organizations; Journals, Webinars, List serve
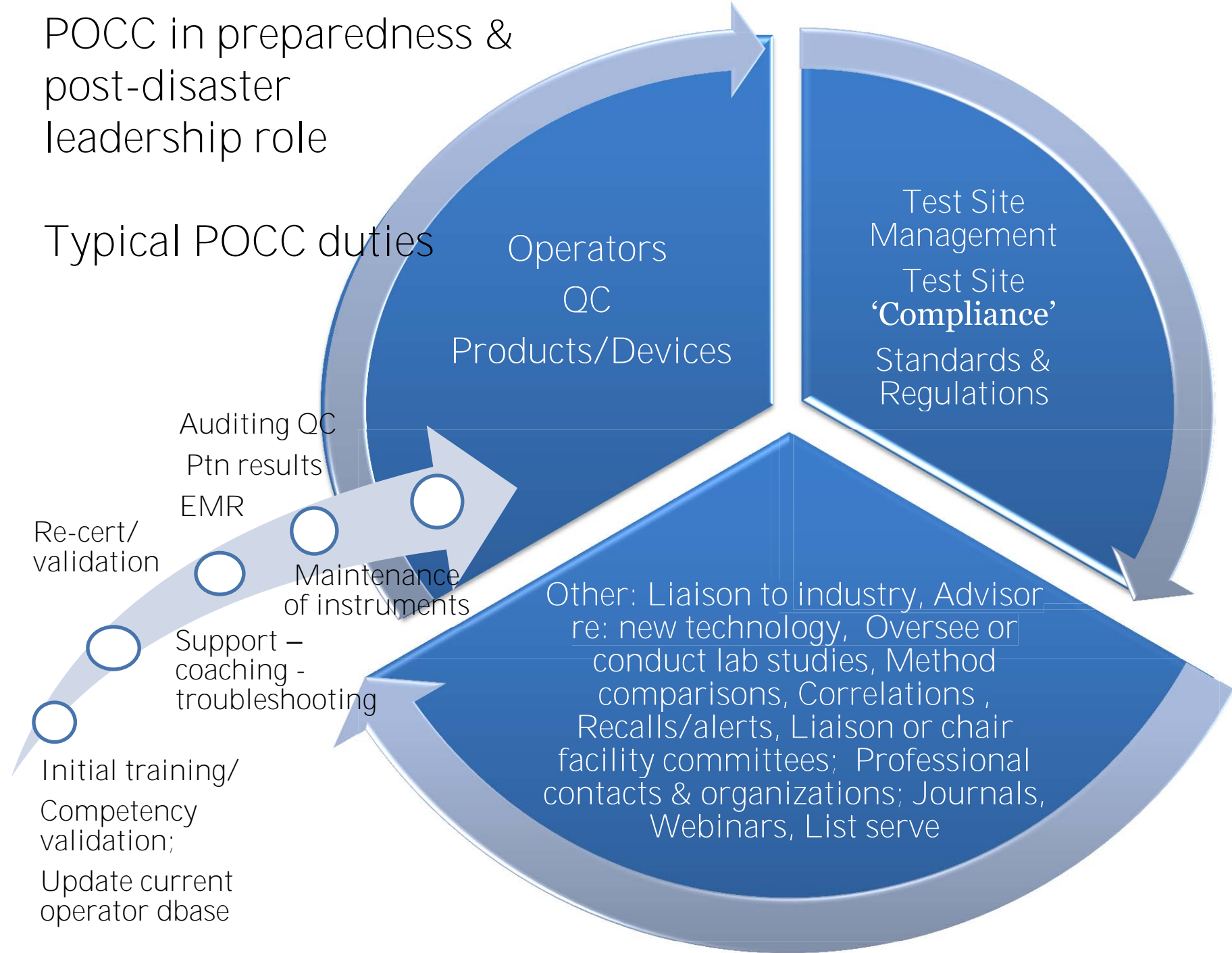
Other 'duties as required':

Pushed to the max by the algebra test, Tim's brain spontaneously combusted.

Industry request; Ptn trials, Inter- lab comparisons

Nursing or Physician inquiry; New product investigation or Improved process

POC Director or Clin. Lab. or Site Med. Director; (Research or Clinical)

Allied Science, Medical or Nursing students; Residents; Fellows

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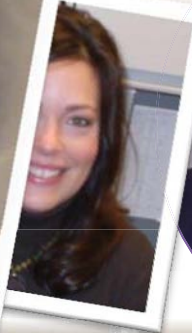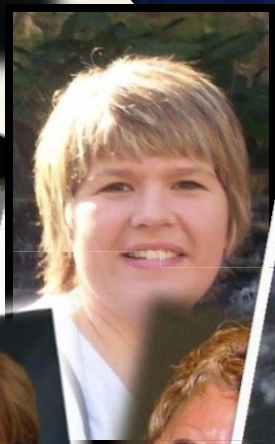# POCC Qualities: preparedness & recovery
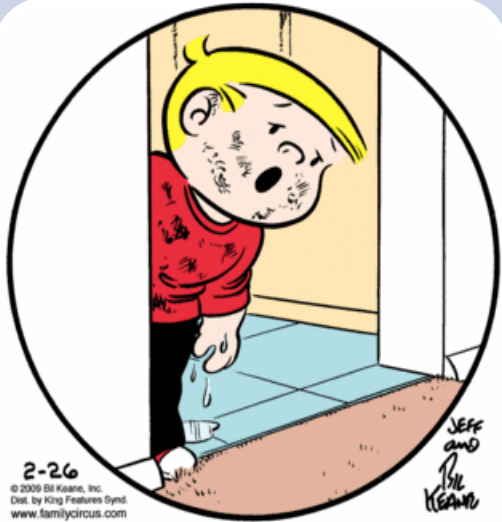
"Did you say wash my hands AND my face?"

Detailed;

Organized;

Regardful of standards,

regulations,

& policies

Use what's available;

Creative problem troubleshooting (left & right brained blend?)

Make it fit;

Have high expectations;

Goal oriented

POCC's

We Deliver!
THROUGH STORM, AND RAIN, AND HURRICANE!

Department of Obstetrics & Gynecology
The University of Texas Medical Branch at Galveston

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Emergency Management: 6 critical functions

1. **Communications**
2. **Resources and Assets**
3. Safety and Security
4. Staff Roles and Responsibilities
5. **Utilities**
6. Clinical Support Activities

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Most important?
Affecting Quality of POCT

In off-campus clinics able to open:

1. Unstable temperatures – electrical outages

    - Employee work conditions
    - Device use & storage
    - Reagents/products use & storage

2. Unstable environments

    - Mold & residue (mud, dirt, flood **water…debris from damaged** furniture, flooring, walls)
    - Repairs to facility during work hours

Work

Home

HURRICANE
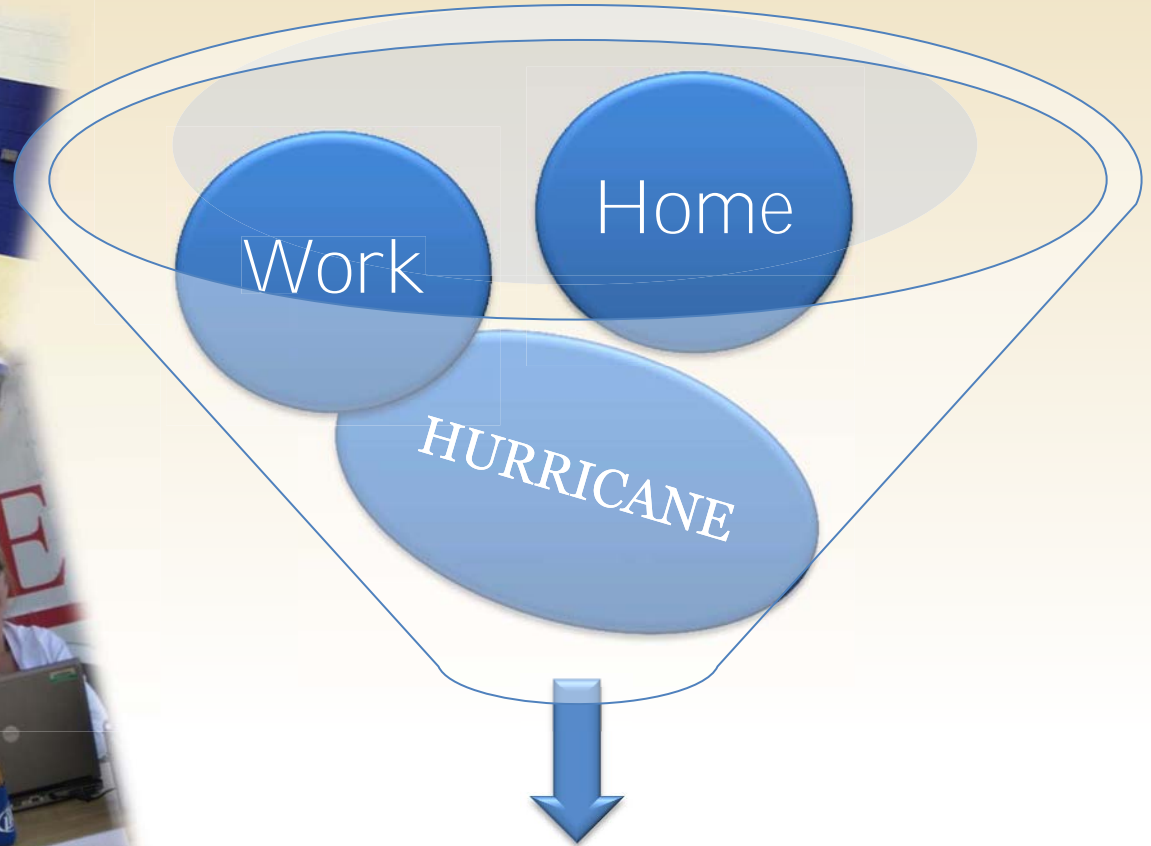
3.Unstable employee

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POCC IKE retrospect: "what went right"

1. Routine POCC & POC Test Site Manager hands-on oversight in offsite POCT;

2. Followed Quality & POC Governance Policies;

3. Consistently adheres to TJC WT Standards;

4. Pre-established accounts with non-UTMB Materials Management distribution (eg PSS Physician Sales & Service)

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POCC IKE retrospect: "what went right"

5. Ambulatory POCC support network:

- ✓ Familiar with testing menu nearby community hospitals
  - Potential available devices to borrow
  - Potential reagent pool
- ✓ Cooperative ties with Tx Med Center POCCs
- ✓ Distribution experience preIKE – reagent share

#1 help in being prepared?
Standardization of POCT across healthsystem

www.utmb.edu/poc

UTMB rising from the storm
Texas Medicine, December 2009

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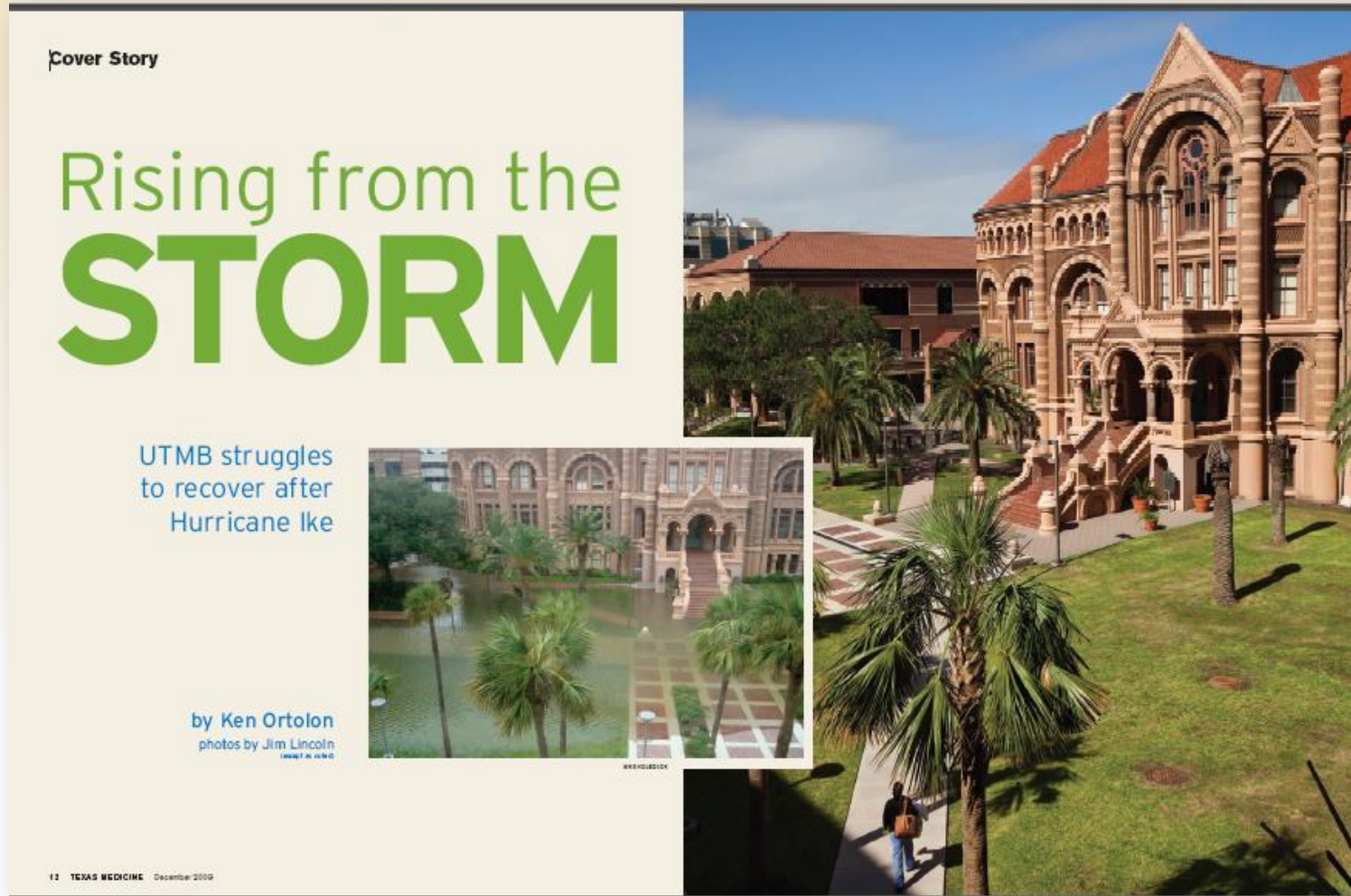
Emergency Management: 6 critical functions

Cover Story

Rising from the
STORM

UTMB struggles to recover after Hurricane Ike

by Ken Ortolon
photos by Jim Lincoln

TEXAS MEDICINE December 2009

Recommendations: Communications

Preparedness:

Consider (embrace!) Non-traditional means of training and communicating to POC Operators

- CELL PHONE #s (↑ cell traffic but can resort to texting; land phones down) ** investigate radios with appropriate distance capabilities
- Lists for:
  - Key Department Administrators & 'count on's you know from committees
  - Vendor/industry reps
  - Must haves: Lab, IS, EMR, Purchasing, Environmental Health & Safety, Employee Health

Recommendations: Resources & Assets

Supplies/reagents

- Sharing/redistribution made more difficult as ↑ new offsites; geographically dispersed;

- Charging or cost center confusion due to relocations; purchase of costly POCT reagents

CLIA Certificates – *which # where for what?*

allowable 'exemptions' or fast-tracks for immediate start-ups?

Recommendations: Resources & Assets

- Manufacturer support, supply? same reagents?
- Stockpile back-ups or borrow?
- Secondary supplier for reagents?
  - Existing accounts
  - Distribution/transportation - delivery

Available Clinical Equipment Services staff
  Equipment checks/tagging (bringing b/ups out of storage)
  Facilitate borrowing/loaners vendor rep or helpful neighboring hospitals and outpatient practices
  Aren't we supposed to have the operating manuals WITH the medical device?

All competency/validations retrievable post event
  Server file, USB travel or external drive
  Not retrievable [No access to PC, flooding, fire, storage falling over & spilling out, blowing away!]

Recommendations: Resources & Assets

Prepare backup plan for:

Devices which are 'connected'
   IKE – brought in patient care
   glucose meter using same reagent
   strips and controls as the connected
   meter

Immediately available spare
   devices (loss or can't get to)
   IKE – glucose meter on the counter top or
   on base; digibox below water line. PCP
   locked up, no access to pull out what was
   not destroyed

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"We don't have to anesthetize patients anymore. I just walk in with this and they pass out in a second."

Recommendations: Resources & Assets

Instruments & products

- Locked out on the lockout!
- Redundancy – backup plan; experienced lab staff for running connectivity
- Flooding/ceiling leaks affect campus POC devices
  (base/meter mounted on walls, sit on countertops; data ports, digiboxes);
- Lack of temperature control for prolonged periods of time

↑ Patrol on discard & expiration dates

Recommendations: Security

Plan for:

Re-entry access

       existing hospital & campus clinics

- Devices

- Products/reagents if possible to salvage/use

as soon as safe to enter the environment

Recommendations:
Staff Roles & Responsibilities

Preparedness: General

- o Key employees may not return from evacuation
- o Clear policy/ consequences
- o Flexible staffing; project relocating employees in best fit scenerio
- o Drill effectively on Emergency Plan

Preparedness: Lab Staff

- o Available lab staff trained on connectivity, connected devices to add/remove/relocate instruments & operators
- o Ditto trained to troubleshoot devices and products
- o Available IS/LIS trained staff to re-establish or relocate data connections and resume connectivity function.

Recommendations:
# Staff Roles & Responsibilities

Operators

- 'Offsite' POCC overseeing unknown campus POCT operators
- Campus POCC not available to verify campus POCT operator validation dates;
- Campus managers unable to access computer or paper files (used hard drive not server; paper in file cabinets inaccessible or flooded);
- Unknown providers, unknown proficiency status (PPM)

Operators Con't.

- Lack of communication inside Clinics: unaware of rapid, frequent reorganization of sites, services provided, new sites added
- Most campus operators lacked sufficient EMR documentation skills to enter/edit POCT results.

POC TSManager required to maintain (electronic or paper) competency roster

Dates of initial, recert

Email POCC & Manager

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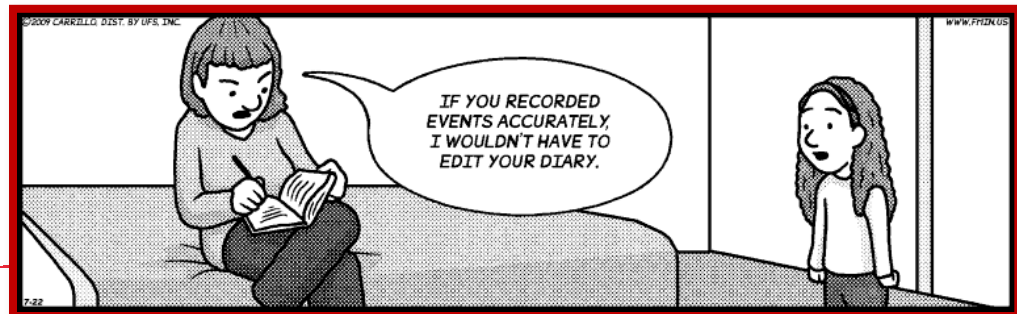
Recommendations: Utilities

Mainland generators

ONLY used to continue clinical procedures – not to continue clinic operations for outpatient visits

Preparedness:

Vaccine relocation plan for loss of electricity – no plan to relocate POC reagents to spare potential loss

Plan for re-entry:

Prove temperature stability

Run QC on all open and stored kits/strips

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Recommendations: Clinical Support Activities

Preparedness:

Consult other Department Business Continuity Plans

- How will you receive info from outside your Department?
- Are you the contact in event patient care units are relocated?

Lab support helpful to off-campus facilities

Facilitate relocation of POC operators, devices & products moving to patient care sites off campus.

Immediate lab support helpful in resuming patient and employee services returning to campus

Ideal to offer (lab staff) manpower to assist in setting up reference lab accounts to cover lack of campus lab testing

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Applicability to non-weather, non-natural disasters

Potential hazardous vulnerability includes:

Technological & Human

Homeland Security

eg UTMB Research includes:

     BSL4 labs

     Galveston National Laboratory (GNL)

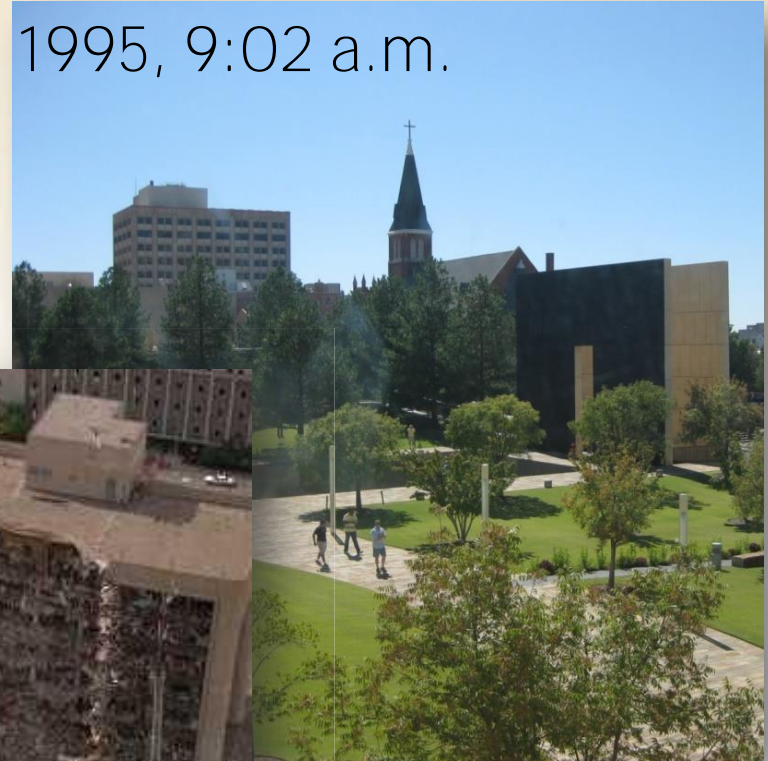   Center for Biodefense & Emerging Infectious Diseases
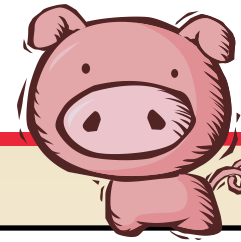
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Terrorism & mass casualties

September 11 NYC

Oklahoma City

April 19, 1995, 9:02 a.m.

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POCT Applicability
Emerging diseases, Public Health

H1N1

April-May2009

Healthcare worker (wearing protective equipment) screens patient entering facility for symptoms of influenza

Positive verbal screen

✓Surgical mask on patient
✓Escort patient to exam room , close door

✓Clinical evaluation
✓ Influenza point-of-care test (POCT) administered (POCC implements/oversees)

Improvement out of necessity...

Recovery: 2011 UTMB

Before

After

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Recovery: 2011 UTMB

Before

Bay water

After

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Recovery: 2011 UTMB

Before

After
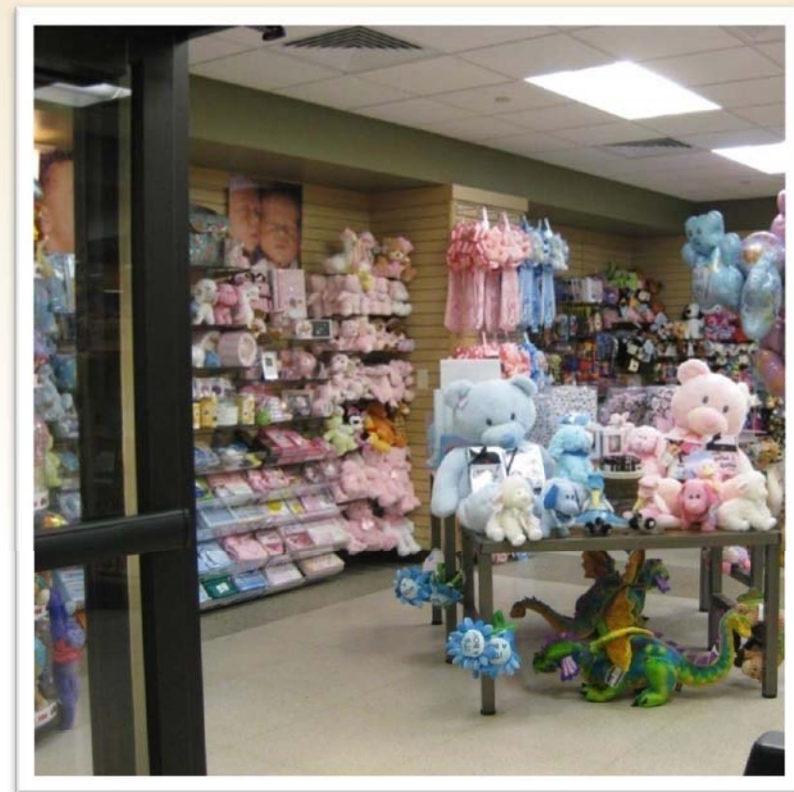

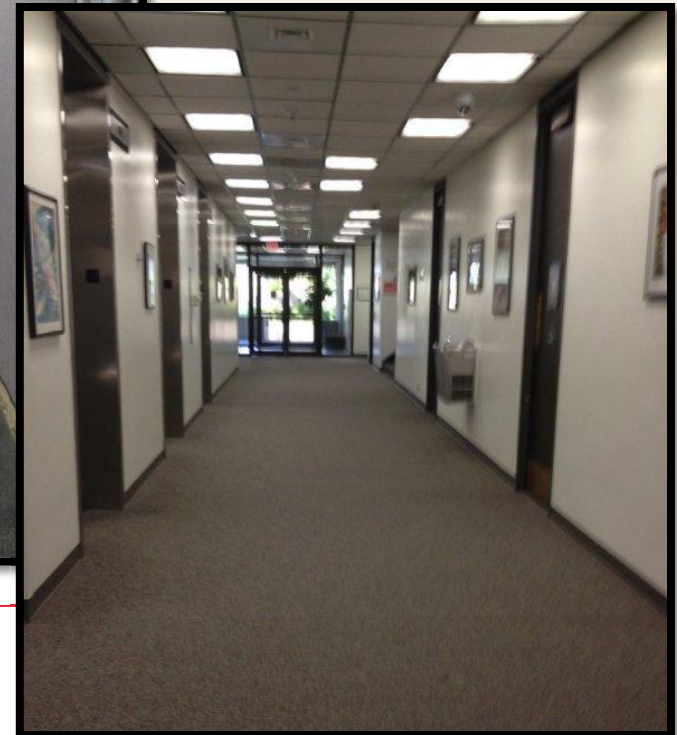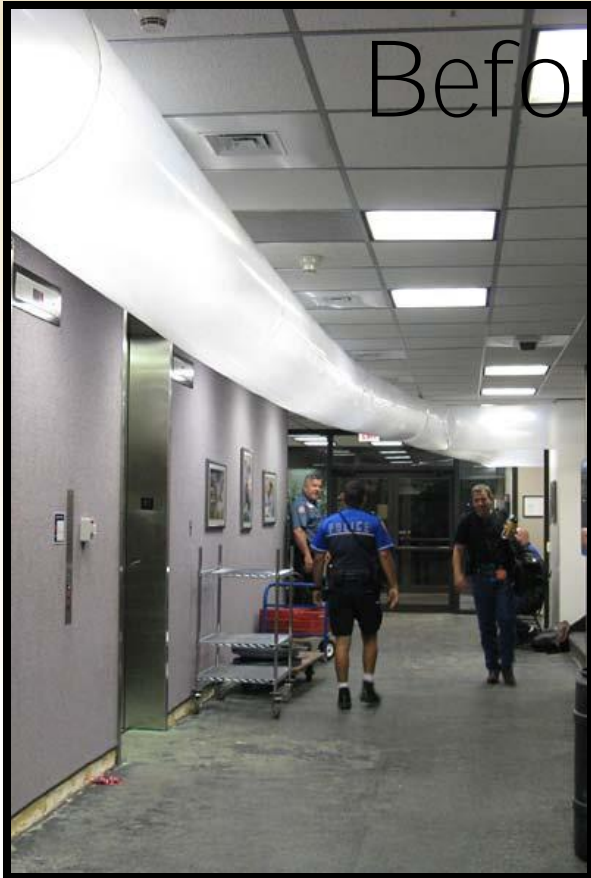
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Recovery:

Before   2011   After

2012

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Recovery:

Before

UTMB Post-IKE 5 Years
Strategic Planning & Mitigation

UTMB News Highlights – Sept. 13, 2013

Then and now: UTMB 5 years after Hurricane Ike
KTRK-TV (Ch. 13, Houston), Sept. 12, 2013
This was UTMB after Hurricane Ike sent contaminated salt water pouring through its ground floors and shut down the 125-year-old hospital, medical school and research labs. About 2,400 people were laid off. Many worried UTMB would be closed permanently.

"Should we move this facility off this storm-prone barrier island?" Dr. David Callender, UTMB President, recalled state officials asking.

It is the oldest medical school in Texas. But Hurricane Ike caused $700 million in damage to the hospital and research labs. Dr. Callender said state officials finally agreed with medical staff at the institution that it was too valuable to close.

Having a hospital on the coast with a burn unit, a Level One trauma center and a medical school, were critical to the island and to Texas.

If they tried to move it, "it would take 10 to 15 years to reconstitute that as it existed before Ike, and the state couldn't afford that," Callender said.

So began a $1.2 billion revitalization, the biggest on any UT campus. The hospital reopened department by department. The emergency department reopened almost a year after Ike. And they worked to storm proof it.

The floor is terrazzo tile. The walls are made of impervious materials. Even the outlets are 4 feet above ground, and flood gates protect the lower floors.

Patients like Brian Alley, who was broke his leg and 5 ribs in a motorcycle accident, recover in renovated rooms with state-of-the-art equipment.

"It's really nice now, they've done a wonderful job with. The room's amazing," he said.

The new Jennie Sealy building will add 300 beds. When it opens in 2016, UTMB will have close to 600 beds, more than before Ike.

"We're so much less vulnerable to damage we promised the state of Texas we would fix that vulnerability and we have," Callender said.

For UTMB's 27,000 inpatients and almost 700,000 outpatients, that is good news.

Resource: Journals

1) Bieigel, **Douglas, "Lessons Learned from** Hurriane **Irene", September** 26, 2011.
2) **Cowles, Luke & Carter, Stefanie, "The first step to disaster recovery is preparation", Vol. 19, Issue 25, page 25 (Column 'At the Ready').**
3) Nosalek, **Frank, "Disaster recovery planning", June 17, 2002.**
4) **Warner, Scott, "When disaster strikes", August 29, 2011**
5) **Wolfram, Eleanor, "Hope for the best, but plan for the worst", August** 29, 2011.
6) Point of Care, Special Editions 2012-2013

In process

CLSI POCT15 Guideline: "Document Development Committee on Emergency and Disaster Point-of-**Care Testing".**
CLSI GP36P "Planning for Laboratory Operations During A Disaster; Proposed Guideline
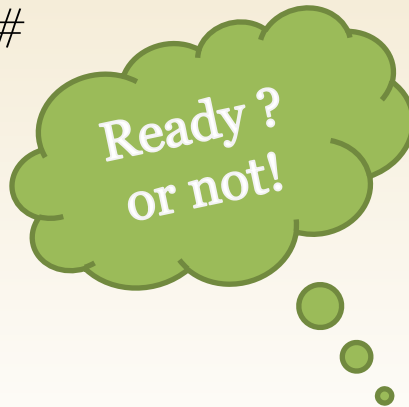
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Contact

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Ready ? or not!

Speaker Disclaimer: the model **does not** depict the wearing of **appropriate** PPE recommended during performance of disaster and emergency POC testing.