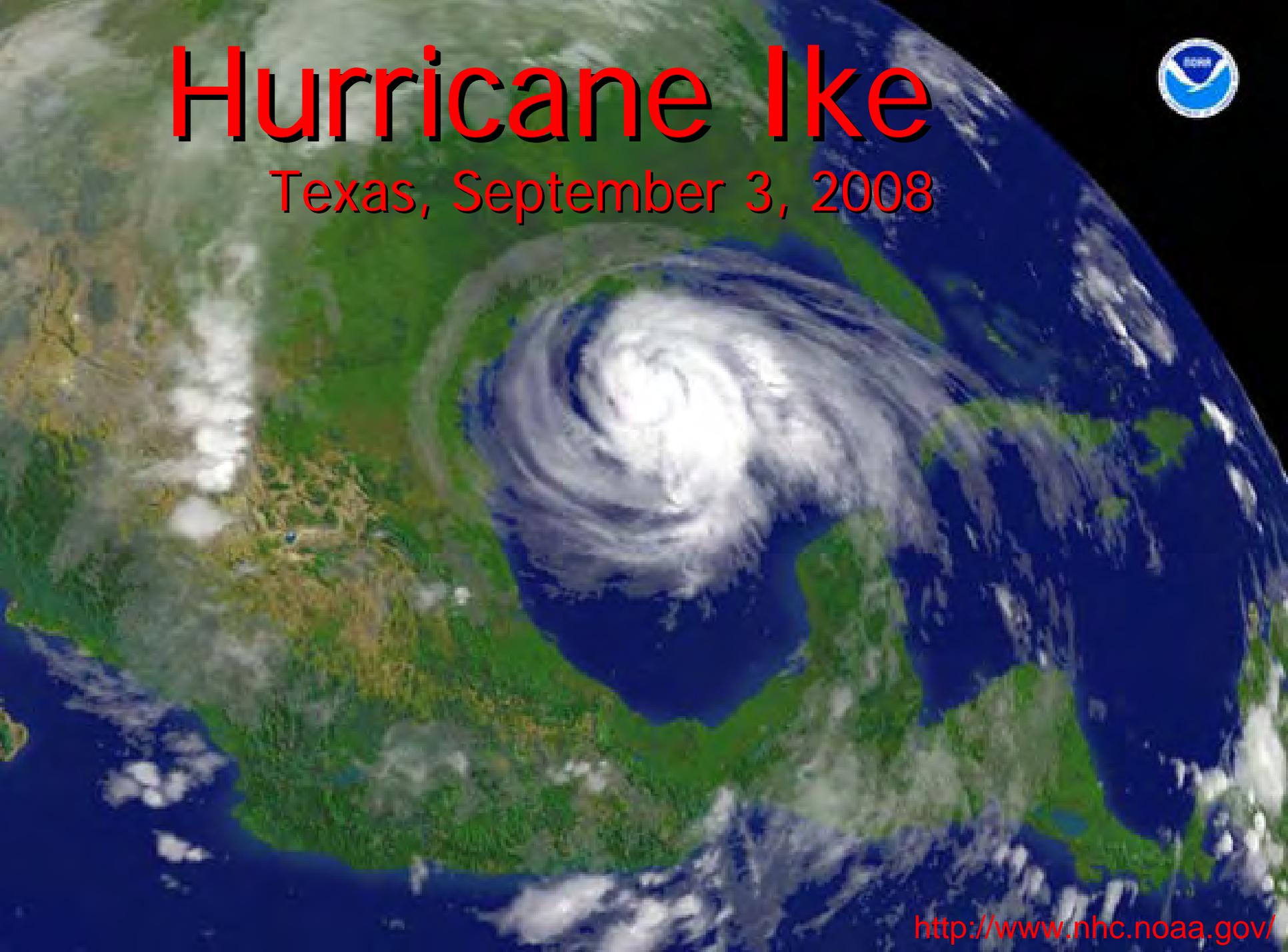
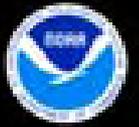


Hurricane Ike

Texas, September 3, 2008



The following information is based on the experience of PHS pharmacists deployed to the Federal Medical Station (FMS) established at Reed Arena in College Station (CS), Texas during the month of September 2008.

Purpose is to:

Provide insights for future pharmacy-related operational improvements to PHS colleagues

Present PHS RDF-CS Pharmacy Branch Lessons Learned
Summarize PHS RDF-CS Pharmacy Branch Operations

Some information was collected during a PHS RDF CS After Action meeting and has been submitted to OFRD, Team Leadership and Pharmacy Leadership

RDF PHS-1 College Station, Texas FMS Pharmacy

What we will cover

- Some lessons learned
- Some frustrations to address
- Some best practices – at least for that day
- Some things that worked
- Some that did not work
- And some that just kept changing

Getting to know you....

Worked -



Pharmacist Roles

- ID team Pharmacist skill
 - Clinical practice
 - Ambulatory care practice
 - Administrative
 - Public health
 - Discharge planning
 - Immunization or other specialties
 - Code/ ACLS/
- Comfort in clinical, dispensing or counseling role

Designate initial roles prior to boots on the ground

- Clinical
- Code
- Administrative
- Inventory and ordering
- Inventory and control of Schedule meds
- Pharmacy flow and design
- Community outreach and network
- Staff accountability and scheduling

“The best laid plans of mice and men...”

- Do plan to be surprised
- Maintain flexibility
- Re-assess and expand or contract the pharmacy role as required
- Remember
 - Stabilize
 - Maintain
 - Improve status if resources available now and after departure

First lesson....

- Designate..



Reed Arena, College Station, Texas

Dr. Elsa A. Murano
President, Texas A&M

Texas A&M University Core Values

Loyalty - Acceptance forever.

Integrity - Character is destiny.

Excellence - Set the bar.

Leadership - Follow me.

Selfless Service - How can I be of service?

Respect - We are the Aggies, the Aggies are we.



Source: LCDR William Pierce. September 15, 2008

Chronology

- On-site – in conjunction with planning, determine site for pharmacy
 - Electricity
 - Secure – able to limit access
 - Accessible to providers
 - Clean and dry
 - Control temperature
 - Running Water





Pharmacy set-up – Community resources and Network

Designate primary = Team commander

- IRCT
- Facility contacts
 - Janitorial
 - Volunteers
 - Administration
- Community
 - Community pharmacies
 - Hospitals

Pharmacy set-up – Designate primary = Deputy team commander

- Assess space and plan for work-flow
- Determine resources
 - Computers
 - Electronic Medical Record computers
 - Printers
 - Distributions points
 - Filling points
 - Check points
 - Stock – arrangement, availability,

Suggestions

- Development of a standardized FMS blueprint for pharmacy work flow (e.g., supplies/storage, processing station, fill station, checking station, and “will-call” area).
- Include one lockable storage cabinet for security of controlled medication and accompanying documentation
- Verification EMR stations set up away from the pharmacy window
 - protect patient confidentiality
 - minimize risk of medication errors

Pharmacy – PHS-1 College Station Texas

This is probably the fourth configuration of the pharmacy area -





Challenges

- FMS cache
 - Not full cache
 - No invoice or packing slip
 - Stock inadequate to address unexpected rate of episodes of seizures
- DMAT cache added -met several high acuity medication needs
 - DMAT Cache – easy to use, compartmentalized
 - Inventory forms
 - Indexed alphabetically and by drug/therapeutic class

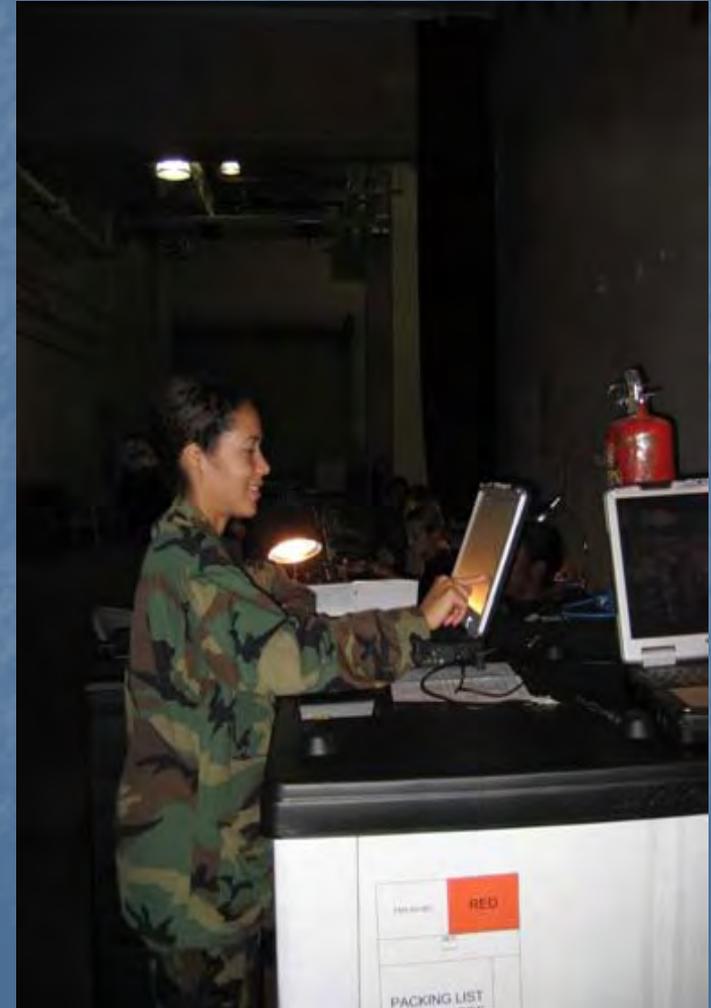
Challenges

- Patient population
 - Higher acuity than expected for an FMS
 - Larger volume of medications
 - Lower number of care givers with patients
 - Higher number of patients deemed not capable of self medicating
 - Concern with “predatory” personalities among patient population
 - Accountability for Scheduled medication – for patient safety and accuracy of dosing

■ Electronic Medical Record (EMR)



EMR issues significantly impaired pharmacy operations. Paper Medication Dispensing Records (MDR) and Medication Administration Records (MAR) were required to address several EMR medication management issues.



- Electronic Medical Record
 - No actual pharmacy component software
 - No formulary
 - No allergy check
 - No medication interaction check
 - No ability to transfer Rx to a viable label program
 - Ability to view only 2 of patients Rx on screen at a time
 - Time consuming and labor intensive
 - No Rx report capability

Electronic Medical Record (EMR)

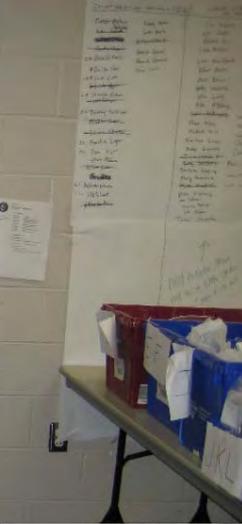
- Pharmacy operations were negatively impacted by numerous EMR work-arounds required to complete basic medication dispensing operations.
- Voluminous EMR order entry adjudications were necessary during this mission.
- EMR does not include pre-loaded drug formularies and improved pharmacy physician order entry functions

EMR continued

- Two EMR Panasonic Toughbooks were insufficient -Recommend 3-4 Toughbooks be designated for pharmacy
 - (e.g., one for order retrieval and filling
 - one for order verification
 - and at least one for pharmacist order adjudication
- No capability in EMR to track orders or doses requiring paper medication dispensing records (MDR) and Medication Administration Records (MAR)

Preparing the days doses





Flexibility, adaptation and improvise!

- Label program – decision – do not use
 - Hand written labels – set up checking station on second EMR – request third to speed flow
 - VERY labor intensive
 - Multiplied exponentially by “unit-dose” system developed
- Medication delivery and accountability
 - Medication Administration Records
 - Medication Distribution Records
 - Packaging / Repacking medication for single dose distribution

- More unit dose packaging....



Communication important!

- Process changed and evolved – many times
 - Initially providers picked up doses each shift –
 - Changed – pharmacist delivered to provider
 - 3rd change – provided shift medications to bins secured on nursing station
- Control medication policy

What worked? Collaboration and communication – Chief medical officer, chief nurse officer of each shift – written policy for off shift and repeated communication

Shift Briefings



Worked!

Shift Briefing

Pharmacy log book – may need modification

Use of varied talents

Shift leaders

Designated Control and inventory each shift

Communication with Nursing and provider personnel at shift change and via written updates

Mentoring gave members confidence in alternate roles

Staffing

- Staffing Requirements:
 - Twelve pharmacists per shift to meet pharmacy operational needs in most cases.
 - Twelve hour shifts early in the FMS operation.
 - Pharmacy setup, integration of new pharmacy teams, and team meetings occasionally required pharmacists to work greater than 12 hour shifts
- Specialized Pharmacy Staffing:
 - A designated control medication pharmacist assigned for each shift
 - A designated procurement, inventory and distribution pharmacist assigned for each shift.
 - FMS Code Team Pharmacists
 - “Roving” clinical pharmacist – used 2 per shift



- “If I never see a MAR or one of these bins again, I will be a happy pharmacist....”



Equipment addition suggested

- One lockable storage cabinet.
- Two additional small refrigerator
 - for storage of patients own medications that require refrigeration.
 - for storage of laboratory reagents and analysis equipment.
- A dedicated pharmacy laptop with email access
- A dedicated printer, toner cartridges, and labels for pharmacy label printing and printing drug information, medication instruction sheets, and medication guides
- FMS pharmacy policies and procedures.

Needed equipment, cont

- Fax/copier
- At least two mortars and two pestles.
- Medication storage carts for cart fill operations in special needs shelter operations.
- Shred bins and shredder for confidential patient information.

First flight – Pharmacy 2009

RDF PHS-1 College Station, Texas



Inauguration – Point of Distribution exercise (POD)

- “Pick-up” area



VIP Visitor



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Interview area for POD



Acknowledgements

- LCDR William Pierce
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- RDF PHS College Station pharmacy team members for their input, spirit, can-do attitude, and imagination
- RDF PHS-1 College Station After Actions Report