

# Disaster Relief: Haiti vs. Katrina

Is there a role for a hand surgeon  
in a disaster zone?

# Haiti: January 22, 2010





**Airlines**

Name of passenger  
ROZMARYN/MARTIN

26

Feb SEAT 1745

26

From MIA

MIAMI

To PAP

PORT AU PRINCE

DATE

FLIGHT  
V2

Class  
401

Date

Time

DEPARTURE TIME

BOARDING  
Y 16 Feb  
G9 1600 7F

SEAT  
1745  
N

7F

NO

Gate

Time





# Living Quarters









# ER 'waiting room'



# ER and triage



# Living Quarters- Command Center



# The main adult hospital



# Pediatric ward



# Pediatric ward



# Adult ward





# Adult ward



# Adult ward



# Storage tent



# Food delivery 2x daily



# The Ortho team



# OR supply



# “Sterile” instruments



# Bleach soak...no autoclave





# “Patient transport” inside the OR





This was her “good” hand











# 4 week old untreated Galleazzi





# Patient transfer



# Port au Prince ...Aftermath













# The National Cathedral







# Municipal Cemetary



















# Where was the USNS Comfort after 3 weeks?











# Project Medishare

- UM Project Medishare's facility at the airport in Port au Prince maintained and inpatient census of over 300 patient's
- It housed and fed 2x daily double that number in immediate family and patient's close friends
- It saw over 500 outpatient visits daily

# PROBLEMS

- However at the time of our “rotation” it was impossible to do any internal fixation on fractures as the infection rate from previously performed ORIF or IM rods neared 95%
- Soft tissue surgery, I&D with removal of infected hardware, external fixation and amputations were the mainstay of orthopedic surgery performed.
- THINGS COULD HAVE BEEN BETTER PLANNED AND EXECUTED FROM THE TOP DOWN.



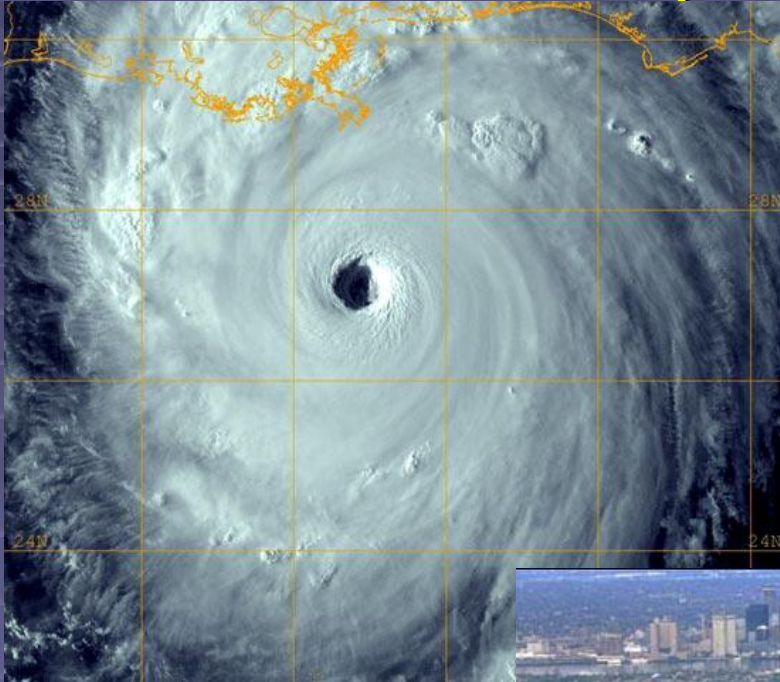
# PROBLEMS

- It was nearly impossible to transfer patients to other facilities with sterile OR's staffed by foreign or US teams.
- We were left “babysitting” patients with severe spinal injuries with unstable neuro status, unstable pelvic and subtrochanteric fractures.
- We were eventually able to transfer a handful of patients the last day



# Hurricane Katrina: New Orleans

## September 2005



# Military transport C-130







# At West Jefferson Hospital



# The hospital feeding the community





# “Commandeering” Meadowcrest Hospital



# Living quarters



# “Looting” the Hospital





WOUND CARE  
Wound / Dressing  
Wound Care  
Wound Care  
Wound Care

337100  
SAFE-F-PRO  
IV20

VOLVINE

# Daily military briefing



# Commandeering the school for use as a clinic





# Jefferson Parish... Aftermath







# Convoy to the clinic





# The Surgical “clinic”



# Triage





# Unloading relief supplies







# The team



- In the four weeks of its existence, “Operation Lifeline” saw and treated over 6,000 patients during September - October 2005

# Katrina vs. Haiti

## Similarities

- Military based infrastructure
- Austere working, living environment
- Conditions changed hourly
- The need to be flexible and not to stand on protocol. *You're not just a hand surgeon!*
- Physicians are not in charge but just “a cog in the wheel”
- Things are constantly “going wrong”

# Similarities -2

- Our need to provide non medical services such as food, water, clothing and bedding to patients and extended families
- Miserable weather and concerns for our health i.e. typhoid , malaria, hepatitis
- Our food and water concerns

# Similarities -3

- Extremely poor and vulnerable patient population
- Extreme disorganization in relief supply distribution
- Societal and governmental breakdown
- Security concerns
- Long term strategic planning not evident on the ground
- Things improved slowly as time went on

# Katrina vs. Haiti

## Differences

- Level of physical destruction far worse in Haiti
- Level of patient trauma far worse in Haiti
- Local infrastructure worse in Haiti but lessons learned from Katrina made the response in Haiti far more robust
- Referral for advanced care far more difficult in Haiti
- New Orleans is in the USA

# Lessons Learned

- If you don't have a means to sterilize instruments and maintain a sterile environment, you don't HAVE an OR
- Disaster management must be managed prospectively and proactively and not reactively
- A well managed disaster management team if non military, should be comprised of members who have trained together and generally know each other.

# Lessons Learned-2

- It is imperative to pre-position supplies that along with the team is ready to go in short notice
- Infrastructure in place for re-supply of personnel and materiel
- Teams must have ongoing and pre-existing relationships with relief agencies on the ground that have been working locally long before the disaster especially in international missions.
- Disaster management is very different from ongoing elective relief missions in the developing world like “Orthopedics Overseas”



# ASSH

## Volunteer Services Committee

- Our new mandate is the formation of rapid response teams that would be available at short notice to provide upper extremity surgical services in the event of domestic or international disaster

# Committee Responsibilities

- Form liaisons with the ACOS and AAOS to coordinate relief efforts
- This includes creating a database of potential volunteers: availability & areas of expertise
- Creating ongoing relationships with existing governmental relief agencies and NGO's which include training exercises and formal didactic instruction in general disaster management
- Creating relationships with surgical/medical supply vendors to donate OR and outpatient equipment prospectively
- Reporting to the ASSH council who will advise and consent