

Medical Capability Investigation of *USNS Mercy* -Japan in the Future-

Group 1

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Group 1: Medical Capability of Hospital Ship

Investigated

- Practical Flow of Mercy Activities
 - Triage
 - Treatment
 - Transportation
- Capability of USNS Mercy

Discussed

- Advantages and Disadvantages of Medical Service with Hospital Ship
 - Disaster Response
 - Peacetime Use
- Medical Issues of Hospital Ship
- Japan in the Future



Effectiveness of Hospital Ship in Japan

USNS Mercy: Admission Steps and Capacity

<steps>



Helipad



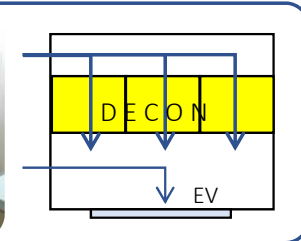
Patient reception



Primary evaluation



Decontamination



Transportation to CASREC



CASREC
(Casualty receiving)



OR (Op & Procedure)



PACU
(Post-Anesthesia)



ICU



Ward



USNS Mercy: Equipment and Ability

Medical Service Capability

Volume (Maximum) and Variety

- 80 ICU beds (& 20 post-surgical recovery)
- 400 intermediate & 500 minimal care beds

Dialysis capacity

- 12 patients/2 machines/day

Self oxygen supply

Equipment Anchoring



Drugs and others (Stock & Supply)

Central pharmacy

- about 350 types of drugs
- including Morphine



Transfusion

- O-type RBC (Basically), FFP, Platelet
- up to 2,500 stocks

Diagnosis

X-ray, CT, Angiography

Laboratory

NBCR Detection



Operation and Procedure

Authorized set

- equivalent amount of 30 days mission
- and extra

Stability

- Central area of the ship

Specialty

- Orthopedics
(about 50% of past cases)
- Trauma
- Head & Neck, ...



USNS Mercy: Staff and Training

Background

Baseline provider requirements (categories)

- 22 medical specialties
- 14 surgical specialties
- 9 clinical support specialties
- Meet all credentialing requirements for their profession, any specialty or sub-specialty they intend to practice

Standard of staffing (humanitarian assistance and disaster response)

With personnel to a 4 OR / 250 bed,
6 OR / 500 bed, or 12 OR/ 1000 bed capability

Approximately 66 nurses

- 16 ICU nurses
- 5 perioperative nurses
- 4 post-anesthesia recovery nurses

Approximately 132 corpsmen or medics

- including 19 surgical technicians

Training and Practice

Practice on Mercy



Train frequently and each other

Issues of 4S's in Japan

System

Call up staff and loading materials

Guideline

Others...

Stuff

Medical Equipment

- Maintenance of equipment on ship

Drugs selection and supply

Others...

Staff

Securing staff resources

- Each specialties

Training

Peacetime works

Others...

Structure

Setting of Ship Capacity

- Speed or capacity
- Reception and transportation capability
- Operation capability
- Other ...

Legal Issues as "Hospital"

- Guideline for design and construction of Hospitals and outpatient facilities
- Number of beds
- Others...

Advantages Compared to Disaster Base Hospital

- **Additional High-quality Medical Service Near by Damaged Area**

- With fixed, used and enough instruments
- Without PPEs or activity clothes
- Comfortable line of flow
- Others ...

- **Nothing to Worry About;**

- Bed Control for Admissions inside
- Hospital Evacuation themselves
- Living themselves
- Others ...

-Lesson Learned from Haiti 2010-

(USNS Comfort)

872 patients (40 days)

- from 7days after the shock

927 op or procedures

- 454 patients

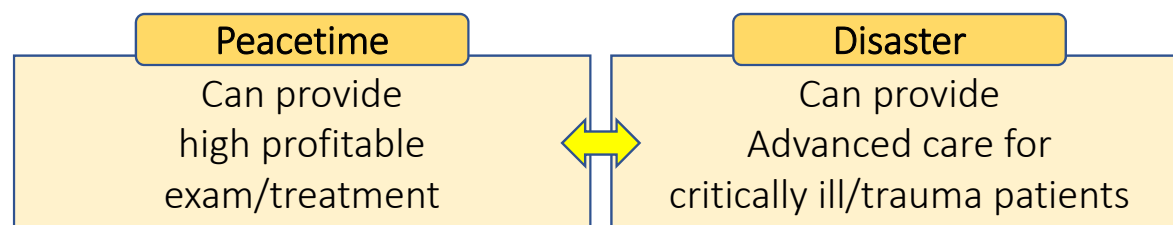
8.0 admission days (Average)

-Walk 2012

Advantages Compared to Multipurpose Ship

- High-Quality Medical Services are **EXPLOITABLE** for Peacetime Services

- X-ray / CT / Angiography
- Laboratory
- Operation room
- Others...



- Dedicated Ship Can Provide;

- Rapid response and speedy access
- Reliability
- Safer environment
- Marine and Medical unification

If surgery is necessary while underway, the rocking of the ship can be mitigated by steering the ship into perpendicular to the waves.

Conclusion - 1

1. regulations are set.
2. staff and stuff are flexible (Taylor made).
3. marine and medical care are unified.
4. advanced technology is always important.
5. floating billboard