Developing An Interdisciplinary Team for Emerging Infectious Diseases

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Stanford Medicine

- Stanford Health Care (SHC)
  - Level 1 Adult Trauma Center
  - Life Flight
  - 613 licensed beds
  - 37 operating rooms

- Stanford Children’s Health (SCH) / Lucile Packard Children’s Hospital (LPCH)
  - Level 1 Pediatric Trauma Center
  - 311 licensed beds
  - 10 operating rooms
Office of Emergency Management (OEM)

- Has 1 director
  - 4 full-time employees
  - 1 part-time employee
- Serves both hospitals and nearly 180 off-site locations

Stanford School of Medicine

- Truly an interdisciplinary effort
- Simulation center
How It All Started

Collaboration

Director of Patient Safety - SCH
Liaison Officer - Office of Emergency Management (OEM)
Finance Section Chief - SCH
MD - Infectious Disease Medicine / Tech Spec.
Planning Section Chief - SCH
Safety Officer - OEM
Medical Director - Emergency Department
Operations Section Chief - SCH
Occupational Health & Safety
Inf. Disease Med./Tech Spec.
Incident Commander - CMG - SCH
Public Information Officer

Stanford
Health Care
OEM
Emergency Management
Stanford
Children's Health
The Team

• The initial team consisted of:
  – Infectious Disease Department
  – OEM
  – Environmental Health & Safety

• The team included:
  – 42 people
  – 21 departments

• Meetings
  – Daily
  – Weekly

Staff

• Safety
• Skill
• Care
• Safety
• Commitment
• Disruption
• Displacement
• Safety
• Communication
• Education
2 Organizations

- Physically connected
- Separate operating license, leadership structure and goals
- Different populations
  - Adult, pediatric, maternity
- Staff
- Experience

**GOAL:** Working together to provide the best care for patients

2 Organizations - Differences

- Supplies
- Equipment
  - Smart pumps: pediatric/adult
- Computer charting systems
- Access to controlled medication
- Logon for glucometer, iStat
## Competencies

<table>
<thead>
<tr>
<th>Skill</th>
<th>Yes</th>
<th>No</th>
<th>Initial</th>
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<tbody>
<tr>
<td>Basic understanding of clinical course of the EVD</td>
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<tr>
<td>Pediatrics basics</td>
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<tr>
<td>Obstetrics basics</td>
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<td>Activation process</td>
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<tr>
<td>Donning and doffing PPE</td>
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<tr>
<td>Waste management</td>
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<tr>
<td>Infection control - including cleaning, transport, disposal and autoclaving</td>
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<tr>
<td>Self-monitoring and procedure for reporting exposures</td>
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<tr>
<td>General room set-up</td>
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<tr>
<td>Personal preparedness</td>
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<td>Unit orientation</td>
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</table>

## Competencies (cont.)

<table>
<thead>
<tr>
<th>Equipment</th>
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<tbody>
<tr>
<td>Ventilators and respiratory support modalities</td>
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<td>Electrocardiogram monitoring</td>
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<td>Radiography: conventional x-rays and ultrasound</td>
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<td>Phlebotomy and special specimen handling</td>
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<td>Dialysis modalities</td>
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<tr>
<td>Utilization of video conferencing and telemedicine resources</td>
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<td>Sports bed training, including weighing scale function</td>
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<td>Point-of-care testing</td>
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<tr>
<td>Ultrasound</td>
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<td>Syringe pump</td>
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<tr>
<td>Teleconferencing</td>
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<tr>
<td>Lift equipment</td>
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</table>
Location Decision: Emergency Room vs. Coronary Care Unit vs. Pediatric

Emergency Room
• Chosen for access, anteroom and ability to secure
Staffing

- Call for volunteers
- Assess skills
- Competencies
- Sample schedules
# Schedules

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<tr>
<th>Time</th>
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<th>Task B</th>
<th>Task C</th>
<th>Task D</th>
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<td>2100</td>
<td>A14</td>
<td>B14</td>
<td>C14</td>
<td>D14</td>
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**Note:** Schedules may vary based on specific department needs.

## Charting/Communication

- Epic – 2 systems
- Barcode scanning
- White boards
- Telemedicine
Commitment

• Both hospitals made it very clear they were willing to do whatever necessary to keep staff, patients and visitors safe

  – 1,500 Tychem suits
  – 20 Stryker helmets
  – Began work on Disaster Manual
  – Provided information to staff on new policies
  – Educated staff on PPE
Training Begins

• Training staff on PPE in daily huddles in the ED and D1 (our designated inpatient unit)
  – Initially, we trained staff on the PPE we had on hand
  – Changes made
  – New intensive training soon after
  – Interdisciplinary

• Education from other organizations
• Room mock-up
Pre/Post Training:
I would feel safe caring for a patient with Ebola

Pre/Post Training:
Comfort level and experience with using personal protective equipment (PPE)
Personal Protective Equipment

• Looked at PPE in three ways:
  1. What did hospitals have on hand that would work?
  2. What could be purchased and acquired immediately?
  3. What PPE would we have to wait for due to a national shortage of supplies?

The Three Stages of PPE

Phase 1  Phase 2  Phase 3
Center for Immersive and Simulation-Based Learning

- A state-of-the-art simulation training facility
- Built an exact replica of inpatient room and anteroom
Training Facility

Phase 2
Phase 3

• Education
• Skills check-off
• Don and doff new PPE
• Scheduling
• Updating contact list

Education

• Original education included hands-on training
• Reviewed skills
• Oriented to equipment
• Oriented to housekeeping
• Oriented to safety
• Oriented to patient populations
• Survey related to comfort level before and after training
Exercise

Tabletop:
• Interdisciplinary
• Both hospitals

ED scenario:
• Created scenario together

Decisions
• Can parents stay in the room with pediatric patients?
• Should staff stay in the room if the patient is not critical?
• What level of nursing staff should care for these patients?
• How large should our team be?
Challenges

• Communication
• Establishing a culture of teamwork
• Sustaining team and interest
Lessons Learned

• Communicate quickly
  – Even if it’s just to say someone’s looking at the issue
  – Make sure everyone tells the same story
  – Bigger isn’t always better
  – Skills are important
  – Be prepared
  – Communication
  – Leadership support
  – Increase awareness of infection prevention

The End
Questions?

Thank you

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