Getting Out! Perinatal and County-Wide Evacuation Strategies

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Kathy has been a practicing public health professional for 25 years and has been with the Marin County Department of Health and Human Services, Public Health Division for 13 years. She is currently the manager of the Public Health Preparedness program where she convenes the Healthcare Preparedness Program coalition that includes hospitals, clinics and long term care facilities in Marin. In this position she is also responsible for ensuring that staff and infrastructure are ready to respond to a medical health emergency. Kathy is an Adjunct Professor with the MPH program at Touro University in Vallejo, CA. She practices international public health as part of the One Heart World Wide volunteer staff in Nepal focusing on women’s health issues in remote communities in the Himalayas.

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Miles Julihn has been with the Marin County Emergency Medical Services Agency since 2008 where he is responsible for overall coordination of Marin’s EMS system. Mr. Julihn’s knowledge of EMS developed over nearly three decades in the California fire service, where he started as a paramedic firefighter and led four fire departments as fire chief. In 1999, Miles earned a master’s degree in Organizational Management. He has overseen preparations to deploy California Task Force 3 (CA-TF3), a federal Urban Search and Rescue team sponsored by Menlo Park Fire District, to New York City following the attacks on the World Trade Center on September 11, 2001. From 2009 to 2011 Miles served as President of the EMS Administrators’ Association of California, where he provided leadership for this statewide organization of EMS executives responsible for 32 local EMS systems in California.
Chief (ret.) Michael De Capua has over 40 years of service in fire, law enforcement, emergency management and military counter-terrorism/special operations. He has extensive emergency management, counter-terrorism/ WMD, and public safety operations experience including positions as U.S. Department of Justice WMD Curriculum Director – Nevada Test Site, Air Force Security Police Counter-Terrorism Instructor and Fire HazMat Incident Commander and Safety Officer. Mr. DeCapua’s formal education includes graduation from the FBI National Academy and a master’s degree in Administration of Justice. He is the founder of Public Safety Consultants Northwest, LLC, a Washington State-based international emergency management small business with over 900 clients.

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Bridget Pearce has served for more than 25 years in the health care industry as a nurse, nurse manager, and operations and program director. Her areas of expertise include critical care, quality assurance, and facilities management with an emphasis on patient safety and emergency preparedness. For the past 10 years Bridget has directed the disaster planning and emergency preparedness activities of Sutter Health Novato Community Hospital. She has incorporated hospital surge response into Novato Community Hospital disaster drills and has formed partnerships with community-based organizations such as the Marin Medical Response Corps to enhance triage and treatment capabilities at her hospital site. Bridget has received certification and training in emergency preparedness from ECRI Institute.
Sharon L. Carlson, RN
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Sharon Carlson has worked in the emergency preparedness field for 14 years. She is currently responsible for the emergency preparedness program for Sharp HealthCare in San Diego. Sharon is a member of the California Statewide Medical and Health Exercise Work Group, the San Diego HealthCare Disaster Council and the San Diego Civilian/Military Liaison Emergency Planning Group. Sharon serves as the incident commander or liaison officer for the Sharp HealthCare Corporate Command Center in San Diego.

Healthcare Facility Evacuation Planning In Marin:
A Case Study In Cooperation For Local Preparedness

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Overview Of Project

- Marin County evacuation planning project involving Healthcare Preparedness Program coalition members
- Utilization of Healthcare Preparedness Program (HPP) funding
- Collaboration between 4 hospitals, 3 clinics (8 sites), 5 Skilled Nursing Facilities (SNF), Public Health Preparedness program, Emergency Medical Services, MHOAC

Welcome To Marin!

- Immediately north of San Francisco – north-side of Golden Gate Bridge
- 252,000 population
- Population centers located along Hwy 101 corridor
- 28 cities & towns
  Disparities – there are health, social, economic disparities in Marin – life expectancy disparity, aging population
Healthcare Preparedness Program in Marin

Primary members: hospitals, clinics, SNFs
Adjunct members
Stable partners and players

Hospitals
Clinics

Skilled Nursing Facilities
HPP Funding In Marin

Historical use vs. 2013/2014 use

Population-based funding formula

• Marin grant = $204,000 budget for 2013-2014
• Shift from “buying stuff to learning stuff”
• Funding is decreasing – 15% decrease in 2014-15

Decision to address a gap or area that required collaborative coordination and planning

Medical Health Operational Area Coordinator Perspective

MILES JULIHN
Evacuation Planning Project

MHOAC responsibilities during medical health operations:

- Notification and alerting
- Situation status reporting
- Coordination of EMS, public health, environmental health, mental health and other resources
- Supporting healthcare facilities and providers

Decision to conduct evacuation planning for healthcare facilities

- Recognized known gap in our preparedness planning
- Consensus decision reached with HPP partners
- New paradigm for shared funding source (HPP grant)

Evacuation Planning Project (Cont.)

What we knew we needed as an OA

- “We did not know what we did not know…”
- Expert advising for our facilities and partners
- Subject matter expert review and recommendations on existing facility evacuation plans (emphasis on “real-world”)
- Realistic and implementable incident action plans and checklists
- Workshop and exercise (TTX)

Finding a consultant

- Acknowledged lack of subject-matter expertise among partners
- Review, selection, and contracting process
Development & Implementation of an Evacuation Planning Project

- Major project steps
- Table top exercise/after action report
- Next steps road map
Planning The Evacuation Pre-plan

- Evacuation: Response within a response
- Emergency Operations Plans: Challenges
- Gap Analysis
- Site visits: All hazards approach
- Critical locations identification
- HICS
- Incident action pre-plan
Table Top Exercise

- Objectives
- Audience
- Scenario Development
- Subject Matter Experts
- BFOs

After Action Report and Improvement Plan

- Better definition of evacuation roles and responsibilities
- “First Hour” resource management
- Communications backups
- Defining HICS training levels
- Integrating EOP with COOP
Next Steps Road Map Proposal

- Formalize coalition agreements in County plan addendum
- Identify consistent EOP and COOP process/format
- Coordinate incident action pre-plans with first responder community
- Identify HICS training levels
- Continue incident action pre-plan refinements

Healthcare Partner Perspective

BRIDGET PEARCE
CHOOSING THE PROJECT

• Delighted to learn there were additional funds. Goal to benefit all coalition partners. We didn’t need more “things”

• Evacuation plans were present for all acute care facilities but no real confidence in our staff ability to perform efficiently due to lack of practice

• Challenging process to drill – past attempts minimally effective and did not include other healthcare coalition partners who would be instrumental in a full facility evacuation

• Agreement to hire consultant who would provide individual review and recommendations for each participating partner to enhance their plans

“I didn't know our evacuation gathering point was on top of the gas line connections.”

– Coastal Health Alliance

Communication

Discussions with local emergency responder and health providers during assessment identified misunderstanding of roles and responsibilities between coordinating agencies.
“I am not clear when to immediately evacuate my patients or when to wait for the order to evacuate from Supervisor or Incident Commander.”

– Charge Nurse, Marin General Hospital

Education

Written plans may meet regulatory requirements but nothing is more effective than active engagement with staff responsible for performing tasks and clarifying and educating.

“...The best part of the tabletop exercise was the interaction with a wide array of emergency responders and providers.”

– The Tamalpias, Skilled Nursing Facility

Collaboration

Office of Emergency Services, Emergency Medical System, Medical Health Operational Area Coordinator, Public Health, Medical Reserve Corps, County and City Fire, Acute Care Hospitals, Acute Rehabilitation Hospital, Skilled Nursing Facilities, local clinics and county community clinics.
Accomplishments

• Written Coalition Charter developed and signed by all Healthcare Preparedness Partners
• 13 of 26 HPP had independent review of Emergency Operations Plans and Evacuation plans
• Started local relationship with emergency providers to understand roles and emergency preparedness plans especially known hazards
• Strengthened partnership between different types of healthcare providers – acute care, acute rehab, skilled nursing, stand alone clinics, community clinics

Challenges

• Coalition partners are at varying levels of preparedness and knowledge of Incident Command System. Preplanning document helpful but basic, not enough details

• Terminology challenges with acronyms and inconsistent use of Incident Command System terms

• Too big
“Exercises are like buffet tables, everything looks good but you need to narrow focus to a vital few for effective drills.”

– FEMA staff during Exercise Planning

Broad Scope
Tabletop exercise was thrilling but too many variables to identify facility specific opportunities for Evacuation. HOWEVER raised issue with coordination and communication amongst local and county emergency providers.

“It was confusing and difficult to figure out all the abbreviations and terms.”

– Multiple participants

Two key issues identified:
Use of acronyms for newer participants was difficult to understand and choice of terms not consistent with Incident Command System.
Consistent Meaning Of Terms

**INCIDENT COMMANDER**
Person/Position with overall responsibility for the event.

OR

Charge Nurse coordinating efforts on their unit

**ALTERNATE CARE SITE**
Staging areas for patients evacuated from hospital area awaiting transport and disposition.

OR

Government sponsored facility designated to take care of medical patients when local facilities are overwhelmed

Name That Acronym

**“BRT”**
- Bomb Response Team?
  OR...
- Big Red Trucks?

**“MHOAC”**
- A great hair cut for living on a boat?
  OR...
- Role assigned to coordinate Medical Health needs during a disaster in Emergency Operations Center?
Next Steps

“We need to know your decisions and plans in order to make our decisions and plans…”

– All Agencies

Marin County presents challenges with the combinations of county and city agencies providing emergency support.

Difficult to know “who” to include and share plans with.
Communication & Collaboration Opportunities

Marin HPP Coalition Strengths

- We know our neighbors and have personal connections.
- The stable leadership and membership in our HPP group with hospitals and clinics has provided opportunities to work and learn together for several years.
- Education is a cornerstone of our program. We changed the format of our regular meetings to include time for presentations. We utilize local FEMA resource, Public Health Physicians, Marin Medical Reserve Corps and other local experts.
Where Do We Go From Here?

- Implement Corrective Action Plan developed out of the Evacuation Table Top Exercise
- Facility/HPP coalition specific corrective actions
- Define project for a consultant to assist with utilizing 2014/2015 HPP Funds
- Continuation of evacuation planning

Thank you!

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How We Did It

- Borrowed “best” practices from others
- Developed our own “best practices”
- Sharing our “how to” information and tools
- Utilized San Diego County Disaster Partnerships to build the work group
Background

San Diego County (who are we?):

- San Diego County covers 4,526 square miles
  - Population is approximately 3,211,252 (2013)
- 22 acute care hospitals
  - 20 with perinatal services
  - >300 beds for newborns, NICU, Maternal

HPP Partnership Projects

Utilize HPP Grant Funding to benefit all Lead Partnership Hospitals Projects:

- Standardized Decontamination Training and Response
- Large Venue/Mass Transit Reunification
- NICU/Newborn/Maternal Evacuation
Mission Statement:
The Sharp HealthCare Disaster Preparedness Partnership will develop an atmosphere of mutual trust and cooperation in order to achieve a collaboration of preparedness activities in the networking, planning and sharing of resources, trainings, plans and information for the mutual benefit of its partners.

Objectives:
1. Successful communications with partners during the Statewide Medical Health Exercises
2. Develop a Concept of Operations Plan for NICU/newborn/maternal evacuation for San Diego County
Sharp HealthCare
Disaster Partnership (cont.)

- HPP 11
  - Began working on NICU evacuation
- HPP 12
  - Began working on maternal/newborn evacuation
  - Decision to combine and develop a perinatal evacuation plan
    - NICU, newborns, maternal

How to Develop Workgroup Membership

- Who should be included?
  - Perinatal experts
    - RN’s
    - Physicians
    - Respiratory therapists
  - Emergency managers
  - Ambulance companies
  - LEMSA representatives
Reaching Out

- San Diego Healthcare Disaster Council
  - Meets monthly to collaborate on emergency preparedness
  - All hospitals, clinics, American Red Cross, law enforcement, military, OES, LEMSA
- Requested workgroup members provide contact information

Kickoff Meeting

- Introductions
- Why are we here?
- Is anyone missing?
- Set meeting time and place
- Develop outline of the plan
Plan Outline

- Transportation
- Education
- Equipment
- Assembly Areas
- Receiving/transferring site responsibilities
- Family notification
- Communication

Transportation

Goal: Safe, efficient evacuation of patients from one area to another area or another hospital

Identify types of transport:
Transportation (cont.)

Types:
- Private vehicles, vans, busses
- CHET: Children’s Hospital Emergency Transport
- CCT: Critical Care Transport
- ALS: Advanced Life Support
- BLS: Basic Life Support

Which Type is Needed?
- Dependent upon the needs of the patient
  - Ventilator or other life support equipment
  - Ambulatory/bed-dependent
- How can we decide quickly and efficiently?
TRAIN — Triaging by Resource Allocation for Inpatients

- Developed by Dr. Ronald Cohen, Clinical Professor of Pediatrics, Stanford
  - Categorizes inpatients according to their resource and transportation need
  - Quick, easy to use
  - Allows for pre-planning

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TRAIN 2013 — NICU

<table>
<thead>
<tr>
<th>Transport</th>
<th>Car</th>
<th>BLS</th>
<th>ALS</th>
<th>CCT</th>
<th>Specialized</th>
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<tbody>
<tr>
<td>Life Support</td>
<td>Stable</td>
<td>Stable</td>
<td>Minimal</td>
<td>Moderate</td>
<td>Maximal</td>
</tr>
<tr>
<td>Mobility</td>
<td>Car/Carseat</td>
<td>Wheelchair or Stretcher</td>
<td>Wheelchair or Stretcher</td>
<td>Stretcher</td>
<td>Incubator or Immobible</td>
</tr>
<tr>
<td>Nutrition</td>
<td>All PO</td>
<td>Intermittent Enteral</td>
<td>Continuous Enteral or Partial Parenteral</td>
<td>TPN Dependent</td>
<td>TPN Dependent</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>PO Meds</td>
<td>IV Lock</td>
<td>IV Fluids</td>
<td>IV Drip x1</td>
<td>IV Drip x2</td>
</tr>
</tbody>
</table>

- Minimal = Hood or Low Flow Cannula O2, chest tube, etc.
- Moderate = CPAP/BIPAP/HI-Flow, Conventional Ventilator, Peritoneal Dialysis, Externally paced, continuous nebulizer treatments, etc.
- Maximal = Highly specialized equip., e.g., Neonatal Ventilator, HFOV, ECMO, IVO, CVVH, Berlin Heart, wt. ≤ 1.5 kg, etc.
- Pharmacy = Pharmacologic agents, ex TPN, that cannot be discontinued for transport.
- Car/Carseat = Able to ride in automobile with age-appropriate restraints.
- Stretcher = Includes pediatric transport gurney with size-appropriate securement harness.
- Incubator = Transport incubator with equipment for connecting to ambulance.
- Immobile = Unable to move without special equipment, e.g., neurosurgical patients.
TRAIN

- Endorsed by California Association of Neonatologists
- Ambulance/transportation assessment tool
- **Not** the same as START Triage which categorizes patients for treatment
- Consider daily TRAIN assessment
TRAIN — San Diego

- Editing the TRAIN tool for entire perinatal population
- All patients assessed and labeled every shift
- During evacuation nurses report to Command Center:
  - Number of patients to be moved
  - TRAIN category

TRAIN — San Diego (cont.)

- Command Center notifies San Diego County Emergency Medical Services Departmental Operations Center/Medical Operations Center (EMS DOC/MOC) of TRAIN categories
- EMS DOC/MOC makes transportation arrangements
Transportation

- Evacuation equipment/ambulances
  - Dedicated one meeting to trial of hospital perinatal evacuation equipment in the ambulances
- Why?
  - Does it fit?
  - Is it safe and secure?
  - How many can an ambulance hold?

Education

- Who?
  - All who will be involved in evacuation
    - Physicians, nurses, other perinatal staff
    - Hospital Command staff
    - Pre-hospital providers
    - LEMSA staff
Education

- Education topics
  - TRAIN
  - Evacuation equipment
  - Roles and responsibilities
  - Evacuation planning for hospitals

Equipment

- Types
  - Evacuation equipment
  - Patient Care equipment that may be shared
  - “Go Bags” or equipment boxes
- Developed a spreadsheet of the equipment by hospital
- EMS DOC/MOC and hospitals have a copy
- Update annually with HPP Equipment inventory
Assembly Areas

- Determine areas where patients may be moved to await transportation
- Considerations:
  - Environment/weather
  - Utilities support
  - Safety and security
  - Accessibility

Transferring and Receiving Sites

- SD County hospitals have signed MOUs to share resources, staff and equipment in a disaster
- Checklists developed for perinatal staff
- Staff to accompany patients for continuity of care if possible
Family Notification

- Develop a plan to notify family members about the event
- Consider transporting family members with the patient if possible
- Consider arranging transportation for the family members if necessary
- Develop maps with hospital locations clearly marked for families driving themselves

Communication

- Pre-event, develop a list of who needs communication about the event
  - Hospital staff
  - Media
  - Vendors
  - Governing agencies
    - Licensing and Certification
    - LEMSA
    - Hospital clients
Communication (cont.)

- Work with Public Information Officers to develop communication templates for:
  - Patients
  - Staff
  - Vendors
  - Media
  - Governing agencies

Thank You!!

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Thank you to all members of the San Diego County Perinatal Evacuation Work Group; an amazing group of talented individuals!
References