

# **RESILIENT & HEALTHY COUNTIES LUNCH:**

*Strengthening Counties' Resilience by  
Addressing the Public Health Impacts of  
Natural Disasters*

Sunday, March 4, 12:00pm – 1:30pm

#ResilientCounties

# **A Framework for Healthcare Disaster Resilience: A View to the Future**



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**Center for  
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# Project Overview

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- **Goals:** In the context of ongoing changes in the healthcare and public health landscape:
  - Investigate what a highly functional disaster health system would look like
  - Identify what practical, high-impact improvements/redesign of disaster health would be feasible in the coming decade with thoughtful shifts in policy.

# Methods

- Reviewed the literature
- Talked to 44 key stakeholders, SMEs, and thought-leaders from diverse perspectives: individual interviews, 2 working group meetings, 2 conference calls and a focus group in Cedar Rapids Iowa
- Analysis of themes
- Preliminary external feedback
- Advisory group meeting

# Think about Three Distinct Disasters

- Hurricane Sandy
- Boston Bombing
- Severe pandemic



- What's similar and what's different in terms of healthcare needs/response?
- How well prepared are we for each?



# Progression of the Field

- **Demonstrable progress** has occurred since the implementation of the HPP and PHEP programs
- **Our thinking has evolved** about the intersection of health and disasters :
  - Healthcare coalitions
  - resilience vs. preparedness
  - Whole-of-Community
  - Whole-of-Government
  - Health-in-All-Policies
  - A Culture of Health
- **Scholarship has progressed**
  - The resilience of a community to disaster depends on both inherent and adaptive factors.
    - Inherent factors: underlying health and wealth of the population, access to nutritious food and clean water, and education.
    - Adaptive factors: actions taken before, during or after an event that lessen the negative impact



# Accumulated Experience Indicates that...

- Many health care issues in disasters arise from outside the traditional health care system and require a broader public health and community response.
- Medically fragile, socially marginalized, and economically disadvantaged people bear the brunt of disaster impacts, and limits to their resilience place additional stresses on the healthcare system as a whole.
- Many sectors of society other than just the healthcare system impact people's health.

# The Healthcare Landscape Is Evolving

- **Consolidation** of healthcare facilities and providers into integrated healthcare networks and Accountable Care Organizations (ACOs),
- **Transition** of hospital-based services to non-hospital-based:
  - various forms of urgent and convenient care facilities
  - Surgi-centers
  - Home care
- **Policy Changes:** Affordable Care Act (ACA)...or whatever
  - More people with insurance but many with Medicaid or high deductibles—varies by state
  - Decreased reimbursement for charity care
  - Requirement for hospitals to engage in a Community Health Needs Assessment



# New Pressures on Healthcare Preparedness

- Increasingly frequent natural disasters
- Epidemics *du jour*
- Daily terrorism and mass casualty events
- The decreased funding of HPP and PHEP
- The CMS emergency preparedness rule

What Kinds Of Disaster Health Events  
Should We Be Preparing For?

# 4 Types of Disasters

- **Relatively small mass injury/illness events** (e.g., bus crash, tornado, multiple shootings, and local epidemics/small disease outbreaks).
- **Large scale natural disasters** (e.g., Hurricanes Sandy and Katrina, moderate earthquake, and large scale flooding)
- **Complex mass casualty events** (e.g., large scale shootings or bombing with many victims; mass casualty burn events, chemical; radiological, limited-scale bioterrorism; limited outbreaks of lethal and contagious infectious diseases such as Ebola or SARS)
- **Catastrophic health events** (e.g., nuclear detonation, large-scale bioterrorism, severe pandemic, or major earthquake)

**Differ with respect to characteristics and response requirements**

# Small Mass Injury/Illness Events

(bus crash, small epidemic, tornado)

## **Characteristics:**

- Civil infrastructure (e.g., electricity, communications, water) is mostly intact
- Normal healthcare system is mostly intact (isolated damage possible, e.g., Joplin)
- Most response resources exist in the local area,

## **Response Requirements:**

- Healthcare coalitions (HCCs) and their constituent members provide the structure and function required for small scale events. Tested many times in recent years

# Large Scale Natural Disasters

(e.g., Hurricanes Sandy and Katrina, moderate earthquake, and large scale flooding)

## **Characteristics:**

- Civil infrastructure is often damaged across a wide area,
- Healthcare facilities are damaged or degraded for long periods
- Vulnerable populations are at greatest risk,
- Much of the population is displaced from normal sources of health care,
- Most individuals seeking health care are patients displaced from normal sources of healthcare.

## **Response Requirements :**

- Greater resilience of all aspects of the health sector as well as many other parts of civil society (transportation, utilities, and communication) is needed to prevent overwhelming hospitals

# Complex Mass Casualty Events

(large scale shootings or bombing; mass casualty burn events, chemical; radiological, limited-scale bioterrorism; limited outbreaks such as Ebola or SARS)

## **Characteristics:**

- The infrastructure and normal healthcare system are mostly intact
- Specialty care and/or special training is needed for large numbers of victims

## **Response Requirements :**

- HCCs, trauma networks, and sophisticated EMS dispatching systems have enabled an impressive response to many recent events that are at the low end of the scale of this kind of event
- These events require highly specialized care that is only found in large academic medical centers. Most community hospitals would not be able to achieve and maintain the level of expertise and preparedness needed for this kind of patient care
- Need disaster centers of excellence among large medical centers connected to one or more local HCCs.

# Catastrophic Health Event

(nuclear detonation, large-scale bioterrorism, severe pandemic, or major earthquake)

## Characteristics:

- infrastructure may be damaged,
- the normal healthcare system may be degraded and therefore many people displaced from normal sources of care,
- vulnerable populations are at enhanced risk,
- many complex casualties can be anticipated,
- and the geographic extent of casualties likely covers a large area

## Response Requirements :

- All of the efforts discussed above (building community resilience, HCCs, disaster hospitals) would be needed for optimal response to a catastrophic health event.
- What is lacking is a detailed national strategy and concept of how the many pieces would work together—how to enlist all national resources, public and private, as well as a well-developed system for crisis standards of care.

# Operating Principles for a Future System



# Build on What We Have

- There are functioning federal programs that are advancing healthcare and public health preparedness (e.g., HPP, PHEP, NDMS, MRC, etc.)
- State and local governments now have well-established preparedness programs
- Hospitals all have preparedness programs
- Many businesses have CoOP plans and programs
- There are numerous related volunteer and community organizations
- Although change may be warranted, it should be **evolutionary and not revolutionary**

# Foster Broad Effective Health Care Coalitions

- HCCs are a natural hub and connection point for further engagement of other essential community partners
- HCCs connected to newly-developed nearby hospital disaster centers of excellence would provide the capabilities and capacities needed for a complex mass casualty event.
- HCC are the bridge that can connect community resilience efforts to disaster hospitals and creates the infrastructure for a response to a catastrophic health event
- Continue current efforts to strengthen HCCs, broaden their memberships/partnerships and foster development and maturation via sharing best practices, education, guidance.

# New Initiatives

- Establish a Network of Specialized Disaster Hospitals
- Enhance Community Disaster Health Resilience
- Focus More on Catastrophic Health Events

# Establish a Network of Specialized Disaster Hospitals

- A network of geographically distributed disaster specialty centers (Disaster Resource Hospitals) in large academic medical centers.
  - Each closely connected to the local HCCs, MRCs and NDMS units
- Provide:
  - **specialized care** for complicated patients
  - **Surge capacity and capabilities**
  - **Education and training** to their local partners and coordinate exercises
  - **Research test bed** for best practices and innovation
  - **A brain trust of expertise** for each other and state and national governments.
  - **Advanced practice innovation** including exploring ways for the formal healthcare system to interact more closely with civil society and community-based organizations

# Enhance Community Disaster Health Resilience

- Need to encourage and incentivize all “ancillary” health entities and community-based organization to:
  - enhance their own resilience to disasters and that of their communities
  - engage with local HCCs around preparedness and resilience.

# Focus More on Catastrophic Health Events

- Designate an office which is responsible for preparing the nation specifically for catastrophic health events.
- Not distracted by 'day-to-day' events and has the time, expertise, and focus needed to coordinate other programs.

# Putting the Pieces Together

- Together these elements along with existing programs could create a resilient, tiered, regionalized and adaptive system of disaster health resilience for all types of disasters.
- Creates a web of interconnected parts with 3 tiers:
  - Resilient communities;
  - Broad, effective healthcare coalitions;
  - Specialized disaster resource hospitals

# Recap of Recommendations

1. Create a national network of regional ***Disaster Resource Hospitals***
2. Launch a federal ***Culture of Resilience*** initiative to promote greater disaster resilience among community-based organizations at the grassroots
3. Strengthen support and fostering of Healthcare Coalitions with increased funding
4. Designate a program at ASPR exclusively dedicated to catastrophic preparedness



# Opportunities for PAHPRA 2018

- Increased funding for HPP to enable the growth of HCCs
- Authorize ASPR to study and report back steps needed to create a network of Disaster Resource Hospitals
- Authorize ASPR to study and report back opportunities to incentivize community-based disaster health resilience
- Authorize the establishment of a program on catastrophic preparedness at ASPR.

# Acknowledgments

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- The 44 participants

# Questions?

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# **Strengthening Counties' Resilience by Addressing the Public Health Impacts of Natural Disasters in Oklahoma County**

**National Association of County Officials  
March 4<sup>th</sup> 2018**



[occhd.org](http://occhd.org)



# OKLAHOMA

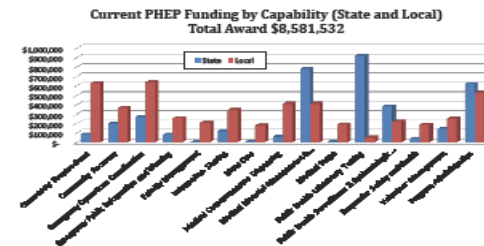
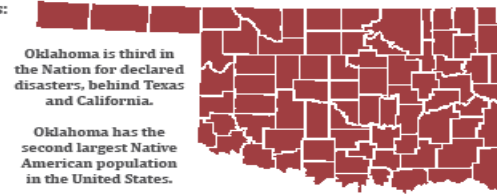
## Public Health Emergency Preparedness (PHEP) Program

### All Hazards, Preparedness and Emergency Response

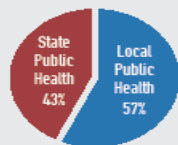
PHEP funding gives Oklahoma the ability to respond to disasters.  
It's not a matter of IF, but WHEN.

#### Examples of Oklahoma's catastrophic responses:

- 1995 OKC Federal Building Bombing
- 1999 Central OK Tornado (highest wind speed recorded: 300+mph)
- 2008 E. coli 0111 Outbreak
- 2008 Hurricane Gustav Mass Care Shelter
- 2009/2010 H1N1 Pandemic
- 2009 Christmas Eve Blizzard
- 2010 January Ice Storm
- 2012 West Nile Virus Outbreak
- 2012 Wildfire Response
- 2013 Tulsa Dental HAI Investigation
- 2013 Central Oklahoma Tornado Outbreak
- 2014 Wildfire Response
- 2014 Oklahoma City Ricin Response
- 2014/2015 Ebola Virus Disease Response
- 2016/2017 Zika Virus Response
- 2016/2017 Mumps Outbreak



#### Allocation of Current Year PHEP Grant Between State and Local Public Health Departments



#### IMPROVEMENTS IN PUBLIC HEALTH EMERGENCY PREPAREDNESS SINCE 9/11

PROGRAM Awardees Who:	THEN	NOW
Can mobilize staff during an emergency.	20%	98%
Have an Incident Command System with pre-assigned roles in place.	5%	100%
Include collaboration with health care agencies in their preparedness plans.	8%	92%
Have sufficient storage and distribution capacity for critical medicines and supplies.	0%	96%

Source: CDC



# Learn From Past Experiences

## OKC Drive Through Feb. 2018



- OKC-County Health Dept. recently provided a drive-through flu clinic to administer flu vaccines. It was a plan developed many years ago. Very effective.
- Remember to incorporate lessons-learned from After Action Reviews into your response plans. No need to recreate the wheel.

# Develop Trust with Response Partners Before Incidents Occur

- Meet often with Response partners to develop trust and to determine all resources that are available. When this occurs everyone knows their role and may be able to accentuate the response when an unplanned need arises.
- Trust has to be earned!
- Partners have to prove that they are responsible and will perform.
- That goes both ways.
- Everyone has to know how to work in Incident Command System(ICS).
- Communication is critical.

# Developing Plans with Partners is Essential Emergency Managers are the Key to Success

- Plans developed in silos are worthless, information has to be explained to all responders or things can and will go wrong.
- Annual meetings should occur with Emergency Management to make changes to plans and refamiliarize.
- While in Response Mode the Emergency Manager is the key to success.
- When in recovery mode, responsibility transitions to coalitions or Volunteer Organizations Active In Disasters (VOAD). These groups do not typically follow the ICS so great care has to be taken to ensure that objectives are met.



# Edmond Tornado and H1N1 Pandemic



# Utilize Volunteer's Effectively

- Okla. County has a cadre of 1800 Medical Reserve Corps volunteers that may be utilized during a disaster response. We use our volunteers regularly at many events to keep them active and ready to deploy. Recently they have been activated for animal relocation during the aftermath of Hurricane Harvey. We have also utilized the Stress Response Team trained in Psychological First Aid after Tornado strikes.
- Baptist Disaster relief is integral in our incidents (Part of VOAD).
- Oklahoma County does not use spontaneous, unaffiliated volunteers, there has been an incident in the past that caused us to take this stance.



# Keep Continuity of Operations Plans (COOP) Current

- Update frequently
- Realize the struggle between response and COOP
- Make plans with outside entities where needed
- Practice when possible
- Be realistic in your expectations of staff

# Recap of Key Elements for Community Resilience

- Learn from the past and improve.
- Develop trust with partners before events occur and remove barriers and silo thinking.
- Developing plans with partners is essential; Emergency Managers and coalition leaders are the key.
- Utilize volunteers effectively.
- Keep COOP planning current and relevant.



# Questions?

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