Preparing for Large-Scale Surge Incidents: Alternate Care Systems and Crisis Standards of Care

Clinician Outreach and Communication Activity (COCA)

Conference Call

September 2, 2010

Office of Public Health Preparedness and Response
Division of Emergency Operations

Objectives

At the conclusion of this hour, each participant should be able to:

- Understand CDC's approach to community engagement for the development of strategies such as alternate care systems to deal with a surge in patients during a large-scale incident
- Identify key elements that should be included in developing crisis standards of care for crisis disaster situations
- Describe what a crisis standard of care means and how such a standard of care may be implemented in crisis scenarios.
- Explain the importance if developing an alternate care system versus identifying alternate care sites and describe the process that Summit County went through to identify options for an alternate care system.

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Today's Presenter

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Today's Presenter

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Alternate Care Systems to Prepare for Large-Scale Surge Incidents

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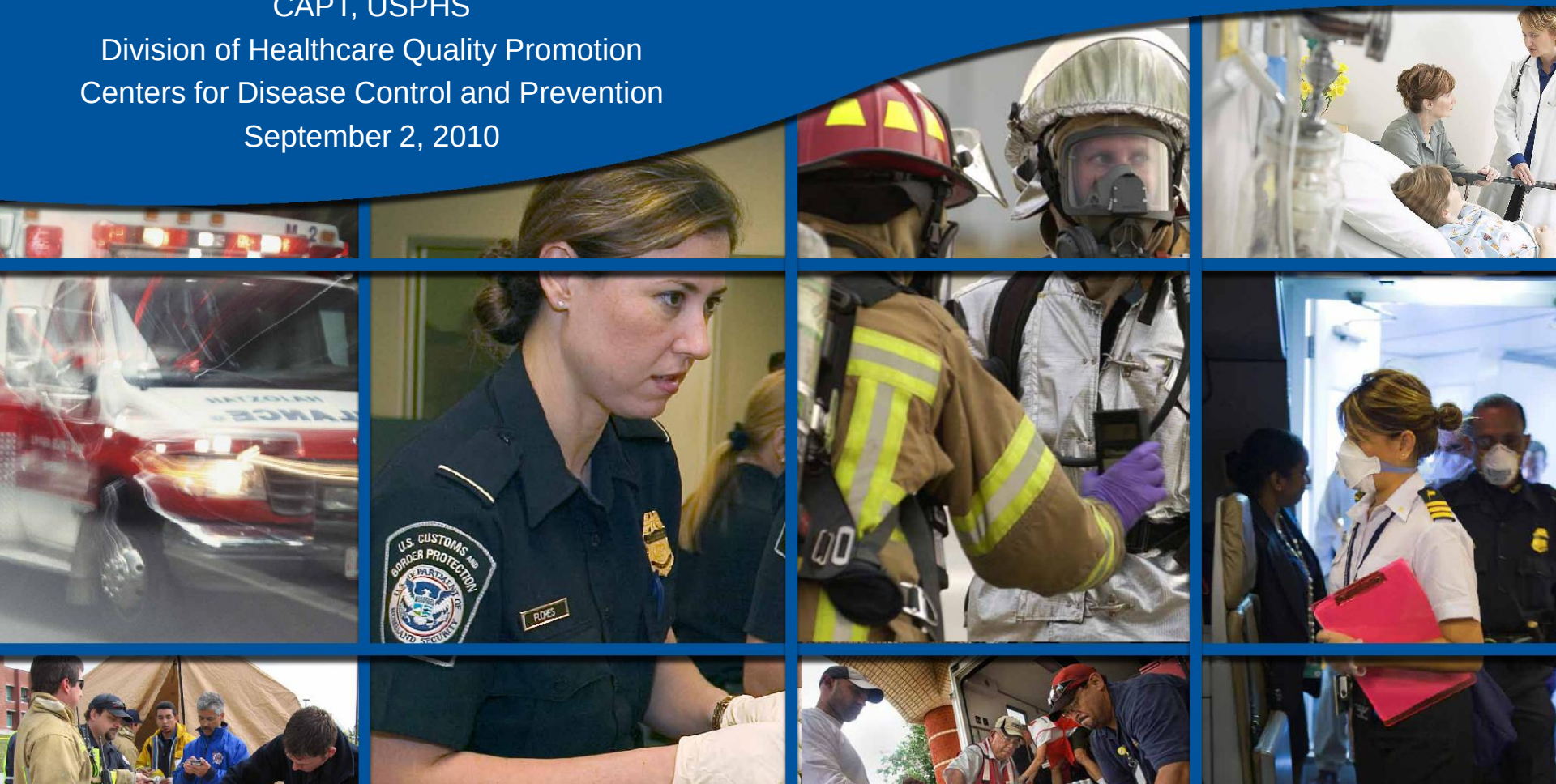
September 2, 2010



Presentation Overview

- Community approach to healthcare delivery
- Workshops to enhance partnerships and develop strategies for dealing with a surge in patients during large-scale incidents
- Lessons learned

The findings and conclusions in this presentation are those of the author and do not necessarily represent the views of the Centers for Disease Control and Prevention/the Agency for Toxic Substances and Disease Registry

Delivery of Care

Call Centers
911 + I&Rs

"Pre-hospital"

"Hospitals"

EMS

Homes

Emergency rooms/ Hospital facilities

Private Providers

Community Clinics*

Long Term Care/ Assisted Living

Alternate Healthcare Sites

Dialysis Centers

Elective Surgical Sites

*Community clinics refers to a spectrum of outpatient/private provider, rural health centers, urgent care centers, federally qualified health centers (FQHC) and FQHC-like entities

Community Workshops for Healthcare Delivery in an Influenza Pandemic

- Develop coordinated strategies for delivering healthcare to those in the community during large-scale surge incidents
- Determine strategies for standing up “Alternate Care Systems” (ACS) in the community
- Workshops include
  - Summit County, OH (2008); Oregon HPP Region 2 (2010); Maricopa County, AZ (2011)

Why a "System"?

- Determine what care is being altered
- Identify potential sites
- Determine what resources are needed
  - Staffing
  - Equipment
  - Supplies
- Develop an implementation plan
  - Integrate with primary and supporting sectors
  - Take legal/regulatory issues into consideration
  - Determine triggers for activation

Workshop Participating Sectors

- 911 and other call centers
- Emergency medical services
- Emergency departments
- Hospital administrators
- Primary care providers
- Urgent care centers and other outpatient clinics
- Home health
- Long term care
- Palliative care
- Pharmacists
- VA medical centers
- Public health
- Emergency management
- Local government
- Mortuary services
- Faith-based organizations
- Schools/school nurses
- Legal
- Public safety
- Non-profit organizations

Selection of Best Strategies for ACS

- Reviewed strategies for standing up alternate care systems
- Discussed advantages and disadvantages
- Listed available resources and those that would have to be developed or acquired
- Selected strategies with the understanding that an implementation plan would be needed for each one

Workshop Lessons Learned

- Sectors did not know of each other's plans and made incorrect assumptions about the plans
- Hospital leadership had not grasped the complexity of the issues and the need to integrate their planning with the community
- Local government was not aware of the types of issues it would have to deal with
- Role of public health in healthcare delivery was not clear to themselves and to the other sectors
- Most effective communities included public health, healthcare, and emergency management in their planning efforts – lead did not matter

Summit County, Ohio Alternate Care System Project

Kerry Kernen BSN, RN
Emergency Preparedness Administrator
Summit County Health District

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Summit County, Ohio

Demographics

- Population: 543,487
- Public Health: 3 Departments
  - SCHD—Akron—Barberton
- Hospital Systems:
  - Akron General Medical Center (I)—Akron Children's Hospital (II)—Summa Health Systems (I)

Alternate Care System Project

- Partnership with CDC and ORISE
- Application Fall of 2007: prioritized need
- History of Local partnerships: EMA-ARHA-SCHD
- Akron Regional Hospital Association: pandemic flu plan (4 county region)

Alternate Care System Project

- Grant Driven from ODH (2006-2008)
- Alternate Care Sites versus Alternate Care Systems
- Partners involved: EMA, PH, Hospitals
- Current Pandemic planning
- Current All Hazards planning
- Need a project lead for collective planning and buy in

Timeline of the Process

- Obtained initial by-in: Domestic Preparedness Steering Committee (January 2008)
- Developed Alternate Care Systems options (January –May 2008)
- Developed Profiles

Profiles

- Developed profiles (May- Sept. 2008)
  - Schools, hospitals, Fire/EMS, law enforcement, court systems, public health, physician offices, jails, home health care, long-term care facilities, urgent care centers, outpatient surgery centers, dialysis centers, social service agencies.
  - Assessed: current pan flu plans, COOP, services, staffing/supplies, potential impact of pan flu (social distancing, Just-In-Time training)

Timeline of the Process

- Identify workshop participants
- Venue
- Invitations
- Profiles-Assumptions
- ACS options
- Agenda
- Facilitation Tools

Options of ACS

- At Home Independent Care (Call Center)
- Patient Isolation/Quarantine and Alternative to Home Care (Motel-Hotel)
- Expanded Ambulatory Care (Outpatient Surgery)
- Care for Recovering Non-Influenza Patients (LTC)
- Limited Supportive Care for Non-critical patients (NEHC)
- Primary Triage and Rapid Patient Screening (ED)
- Overflow Hospital Providing Full Range of Care
- Mobile Hospital

Stakeholder Support

- EMA
- Public Health
- Hospitals
- First Responders (Fire/EMS/Police)
- Schools
- Vulnerable Populations (social service agencies)
- Elected Officials
- FQHC
- Long-Term Care Facilities
- Medical Reserve Corps/Citizen Corps
- Dispatch
- Jail-Court System

Workshop Agenda

- Pandemic Overview
- EMA overview
- Profiles
- Assumptions
- Options facilitated discussions
- Final decisions on Summit County ACS

After Workshop Planning

- Subcommittees
  - Triage
  - Legal
  - Transportation
  - Vulnerable Populations
  - Facilities
  - Health/Hospitals
- Workbook
- Annex/SOG development
- Training Plan
- Exercise Plan

Establishing Crisis Standards of Care for Use in Disasters

Umair A. Shah, MD, MPH

Clinician Outreach and Community Activity (COCA) Conference Call

September 2, 2010

Harris County
HCPHES
Public Health & Environmental Services

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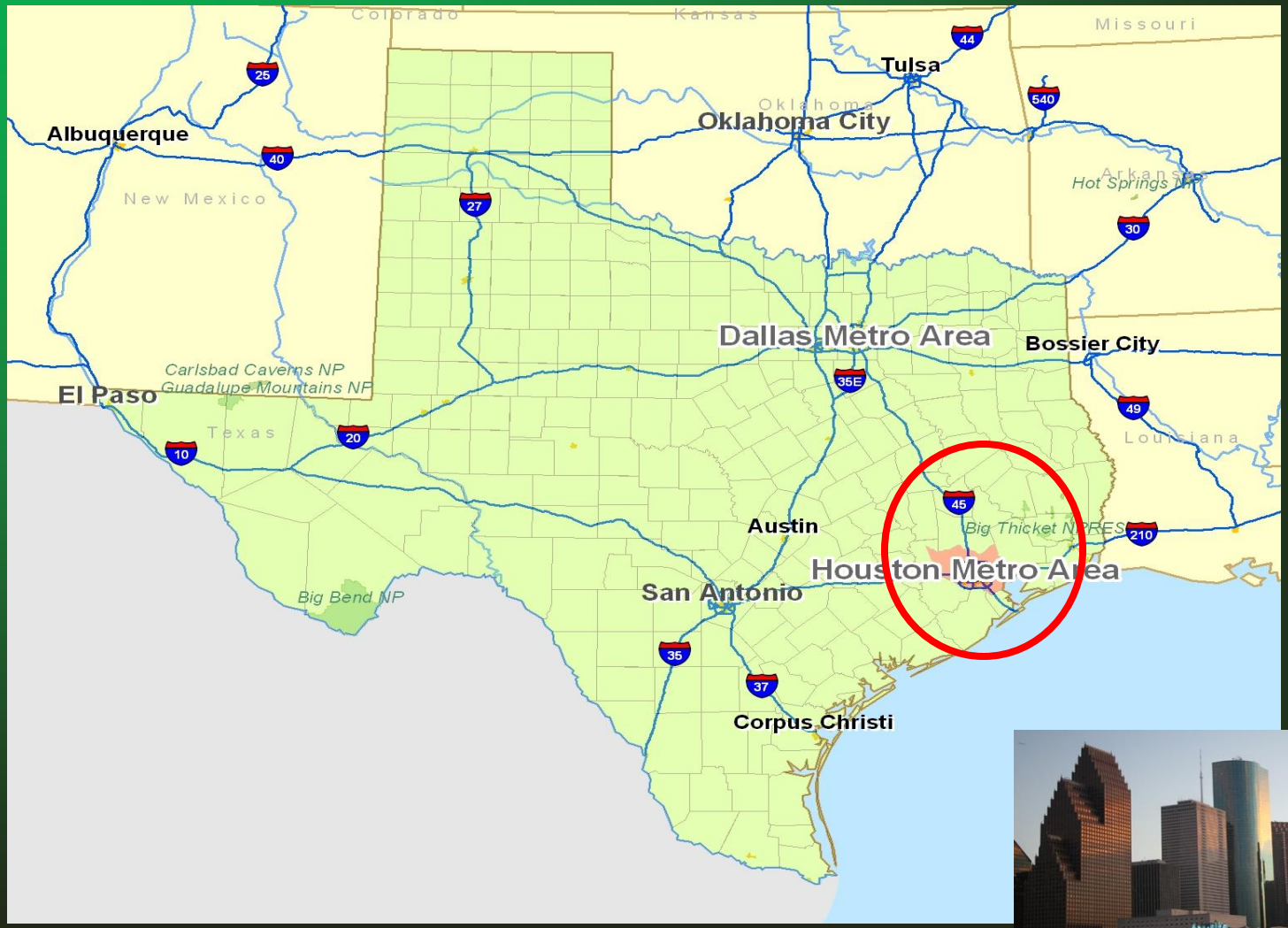
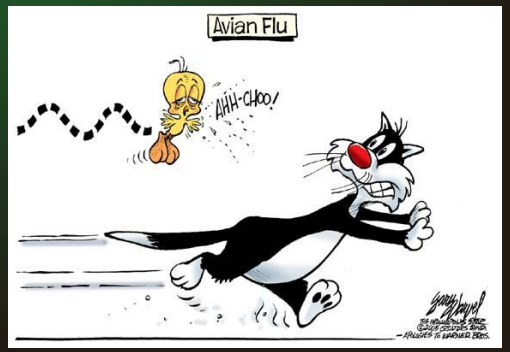
Where is Harris County?



What is a Disaster?

Operational Definition:

A disaster is any large-scale event or occurrence that overwhelms a system's ability to respond



Disaster Examples – Real & Potential

- **Hurricanes** (Katrina, Gustav, Ike)
- **Pandemics** (H1N1, H5N1)
- **Earthquakes** (San Francisco, Kashmir, Haiti)
- **Acts of Intent** (biological, chemical, nuclear)
- **Mass Casualty Incidents** (9/11, Indonesian Tsunami)
- **Other**

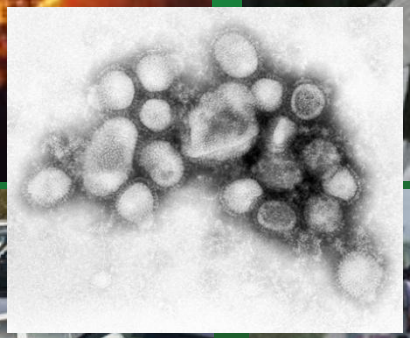
. . . An "All-Hazards" Approach . . .

Categorizing Disasters

- **Catastrophic Events**
  - **Sudden onset with little or no notice**
  - **Examples:**
    - **Acts of Intent, Mass Casualty Incidents**
    - **Earthquakes, Tsunamis**
    - **Hurricanes**
- **Pervasive Events**
  - **Slow onset with gradual progression**
  - **Examples:**
    - **Floods**
    - **Wildfires**
    - **Pandemics**

Catastrophic

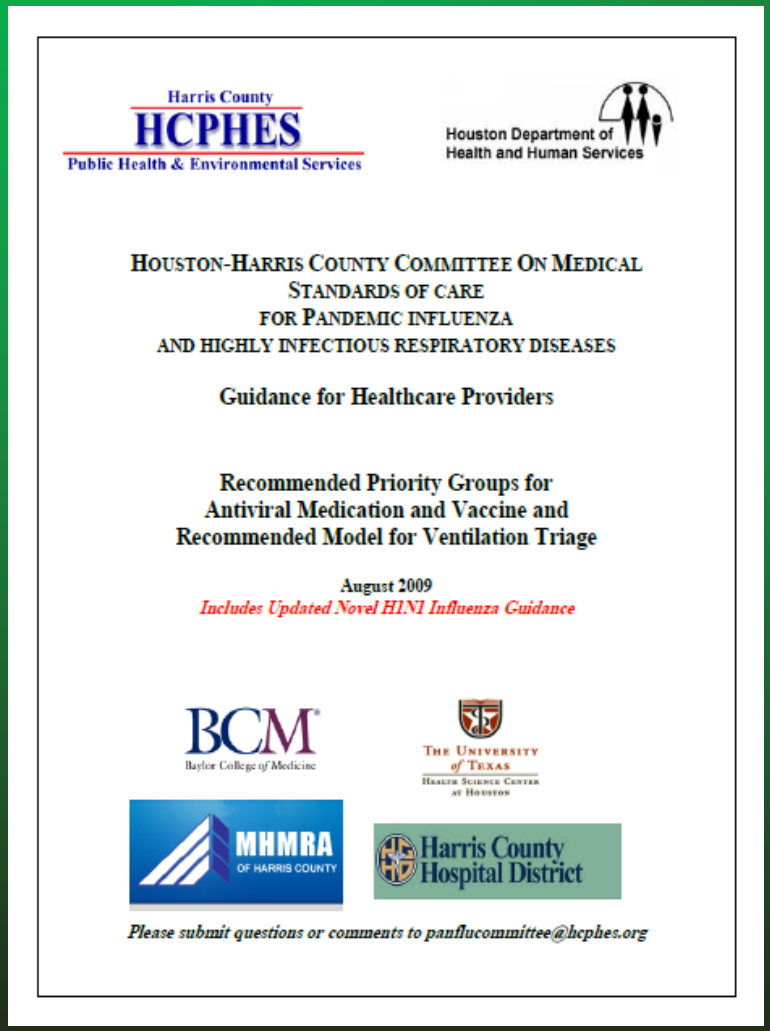
Pervasive



Pandemic (H5N1) Influenza Planning

- **Federal Pandemic Influenza Plan released in 2005**
- **Offered recommendations for altered standards of care for use of scarce resources:**
  - **Vaccines, antivirals, ventilators, etc.**
- **Many entities created pandemic flu planning committees to guide resource use in crises:**
  - **Federal (Health & Human Services, Department of Defense, VA)**
  - **State (New York, California, New Mexico, Massachusetts)**
  - **Local (Boston, Seattle/King County, NYC, Houston/Harris County)**

Houston/Harris County Recommendations



Harris County HCPHES
Public Health & Environmental Services

Houston Department of Health and Human Services

HOUSTON-HARRIS COUNTY COMMITTEE ON MEDICAL STANDARDS OF CARE FOR PANDEMIC INFLUENZA AND HIGHLY INFECTIOUS RESPIRATORY DISEASES

Guidance for Healthcare Providers

Recommended Priority Groups for Antiviral Medication and Vaccine and Recommended Model for Ventilation Triage

August 2009

Includes Updated Novel H1N1 Influenza Guidance

BCM Baylor College of Medicine

The University of Texas Health Science Center at Houston

MHMRA of Harris County

Harris County Hospital District

Please submit questions or comments to panflucommittee@hcphes.org

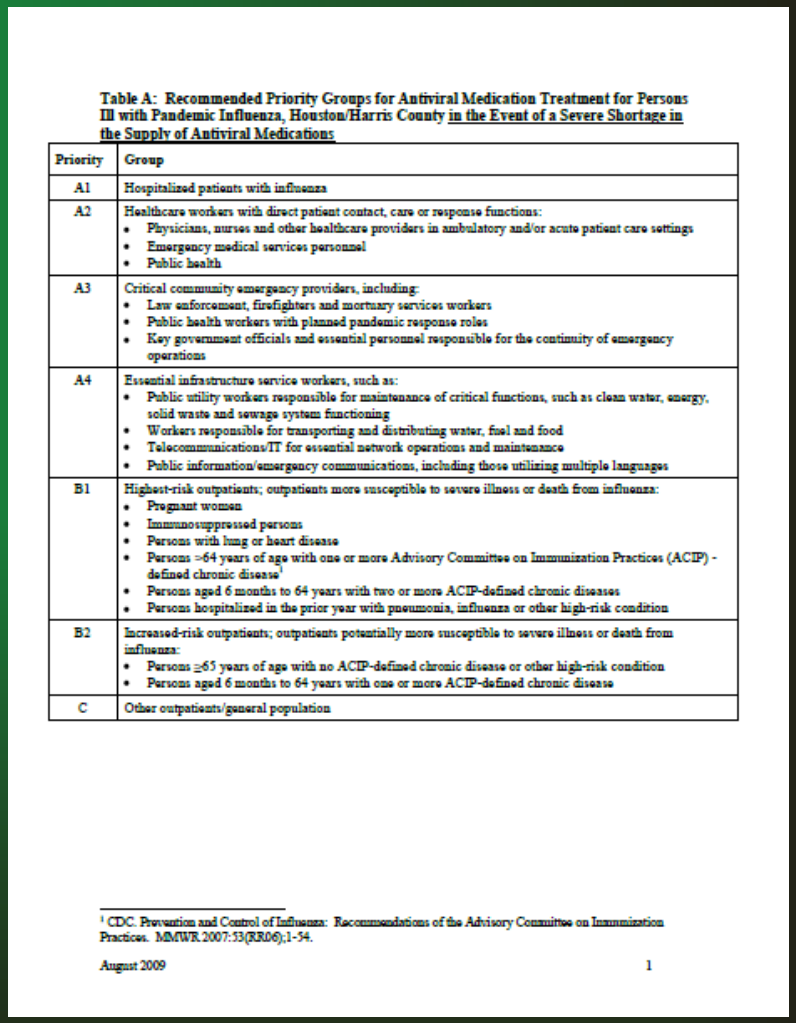


Table A: Recommended Priority Groups for Antiviral Medication Treatment for Persons Ill with Pandemic Influenza, Houston/Harris County in the Event of a Severe Shortage in the Supply of Antiviral Medications

Priority	Group
A1	Hospitalized patients with influenza
A2	Healthcare workers with direct patient contact, care or response functions: • Physicians, nurses and other healthcare providers in ambulatory and/or acute patient care settings • Emergency medical services personnel • Public health
A3	Critical community emergency providers, including: • Law enforcement, firefighters and mortuary services workers • Public health workers with planned pandemic response roles • Key government officials and essential personnel responsible for the continuity of emergency operations
A4	Essential infrastructure service workers, such as: • Public utility workers responsible for maintenance of critical functions, such as clean water, energy, solid waste and sewage system functioning • Workers responsible for transporting and distributing water, fuel and food • Telecommunications/IT for essential network operations and maintenance • Public information/emergency communications, including those utilizing multiple languages
B1	Highest-risk outpatients; outpatients more susceptible to severe illness or death from influenza: • Pregnant women • Immunosuppressed persons • Persons with lung or heart disease • Persons ≥64 years of age with one or more Advisory Committee on Immunization Practices (ACIP) - defined chronic disease[1] • Persons aged 6 months to 64 years with two or more ACIP-defined chronic diseases • Persons hospitalized in the prior year with pneumonia, influenza or other high-risk condition
B2	Increased-risk outpatients; outpatients potentially more susceptible to severe illness or death from influenza: • Persons ≥65 years of age with no ACIP-defined chronic disease or other high-risk condition • Persons aged 6 months to 64 years with one or more ACIP-defined chronic disease
C	Other outpatients/general population

[1] CDC. Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunization Practices. MMWR 2007:53(RR06);1-54.

August 2009 1

Source: http://www.hcphes.org/2007forum/resource.pdf with update 2009.

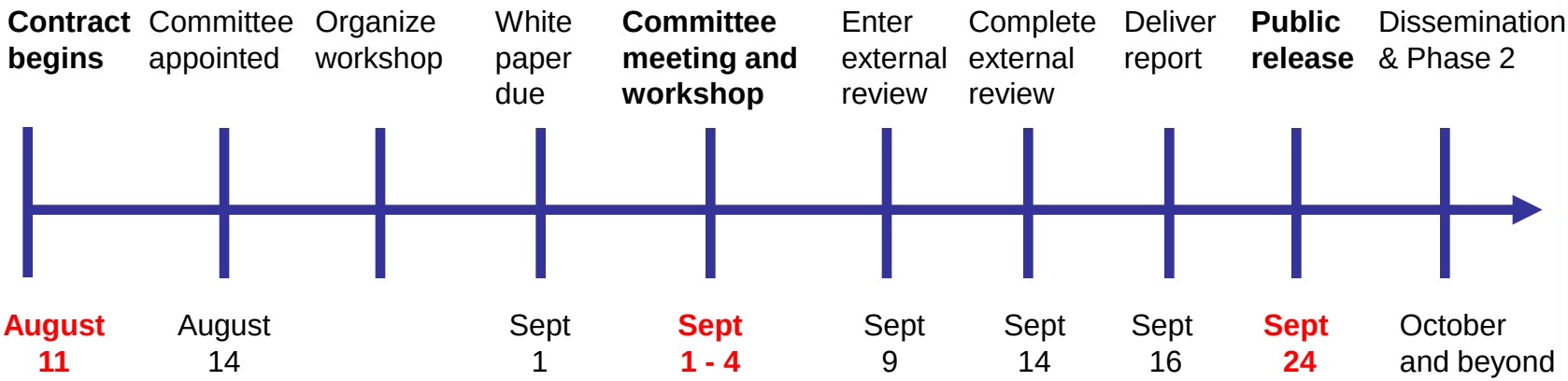
Observations in Crisis Planning

- Recognition that setting up protocols for decision-making should be done in advance of a disaster – not at time of crisis
- While many entities had already begun the deliberation process, many had not
- There were common elements that could be used across jurisdictions in developing crisis standards of care

Guidance for Establishing Crisis Standards of Care for Use in Disaster Situations

INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

Committee Timeline - 2009



Crisis Standards of Care

A **substantial change in usual healthcare operations** and the level of care it is possible to deliver, which is made necessary by a **pervasive** (e.g., pandemic influenza) or **catastrophic** (e.g., earthquake, hurricane) disaster.

When To Adopt Crisis Standards of Care?

If contingency plans do not accommodate incident demands, **healthcare practitioners** will be faced with:

- **severe shortages** of equipment, supplies, and pharmaceuticals
- an **insufficient number** of qualified healthcare providers
- **overwhelming demand** for services
- **lack of** suitable resources

Under these circumstances, it may be impossible to provide care according to the conventional standards of care used in non-disaster situations, and, under the most extreme circumstances, it may not even be possible to provide the most basic life-sustaining interventions to all patients who need them.

SAMPLE STRATEGIES TO ADDRESS RESOURCE SHORTAGES

	Conventional Capacity	Contingency Capacity	Crisis Capacity
Prepare	Stockpile supplies used		
Substitute	Equivalent medications used (narcotic substitution)		
Conserve	Oxygen flow rates titrated to minimum required, discontinued for saturations > 95%	Oxygen only for saturations <90%	Oxygen only for respiratory failure
Adapt		Anesthesia machine for mechanical ventilation	Bag valve manual ventilation
Reuse	Reuse cervical collars after surface disinfection	Reuse nasogastric tubes and ventilator circuits after appropriate disinfection	Reuse invasive lines after appropriate sterilization
Reallocate		Reallocate oxygen saturation monitors, cardiac monitors, only to those with critical illness	Reallocate ventilators to those with the best chance of a good outcome

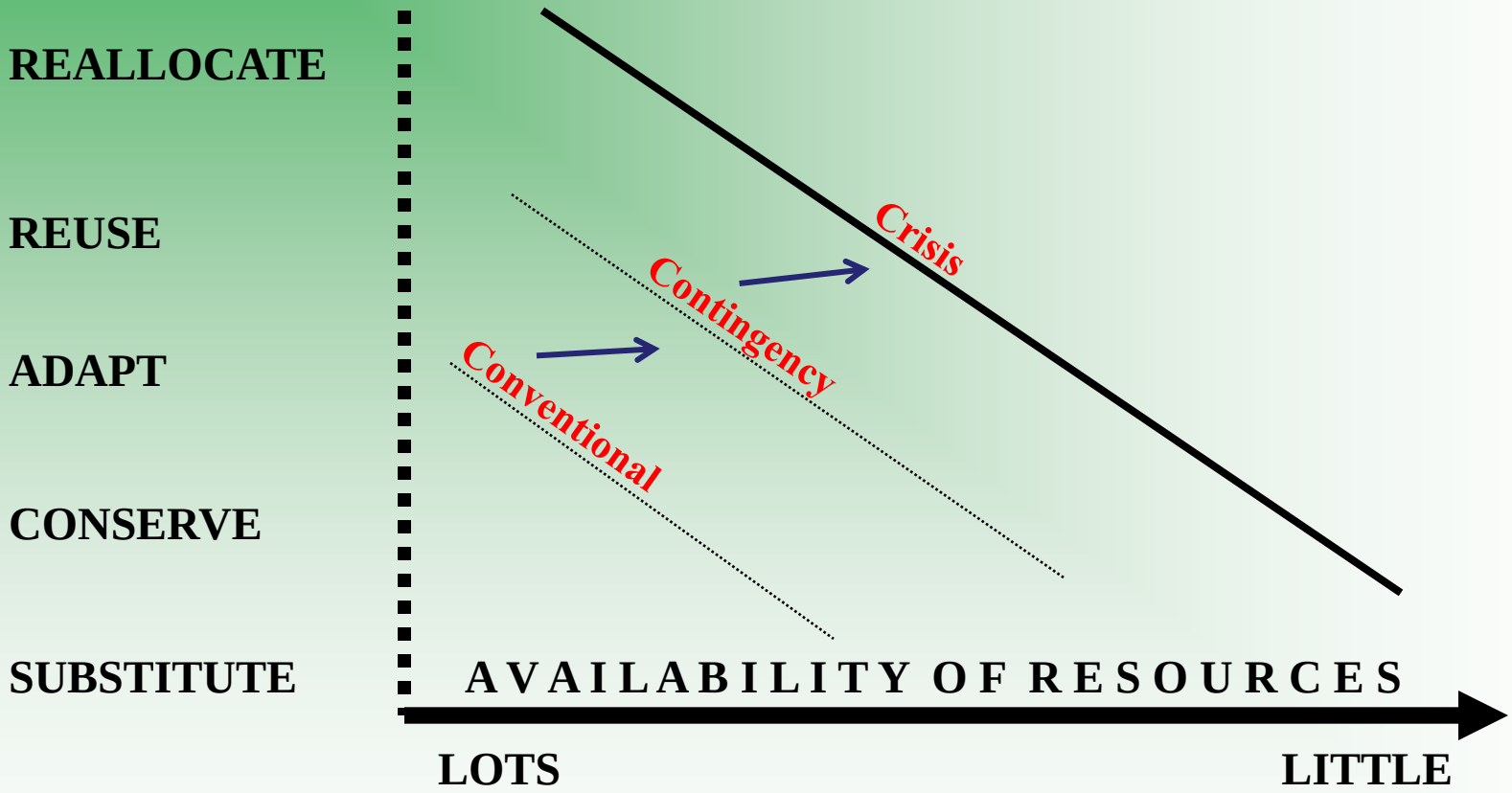
Source: Adapted from Hick, et al. (2009).

THE CONTINUUM OF CARE: CONVENTIONAL, CONTINGENCY & CRISIS CAPACITIES

	Change in Standard of Care?	Resource Constrained	Practicing Outside Experience	Focus of Care
Conventional	**No**	**No**	**No**	***Patient***
Contingency	**Slightly**	**Slightly**	**No**	***Patient***
Crisis	**Yes**	**Yes**	**Yes**	***Population***

Source: Adapted from D Hanfling, et al (2010).

Crisis Standards of Care



Source: Adapted from D Hanfling, et al (2010).

Crisis Standards of Care

Recommendations

1. Develop Consistent State Crisis Standards of Care Protocols with Five Key Elements
2. Seek Community and Provider Engagement
3. Adhere to Ethical Norms during Crisis Standards of Care
4. Provide Necessary Legal Protections for Healthcare Practitioners and Institutions Implementing Crisis Standards of Care
5. Ensure Consistency in Crisis Standards of Care Implementation
6. Ensure Intrastate and Interstate Consistency Among Neighboring Jurisdictions

Planning Considerations

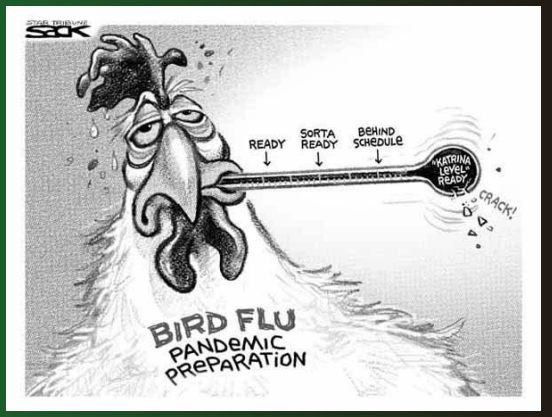
- Crisis standards of care indicators (shortage of ventilators, ICU beds, medications, etc.)
- Triggers for adjusting standards of care (e.g., space, staff, supplies)
- Healthcare facility responsibilities including set up of clinical care committee to review overall institutional approach to resource allocation
- Adjustment of crisis standards of care triage (primary, secondary, and tertiary) with assistance from an oversight triage team
- Development of decision tools and resource use guidance
- Legal issues including legal standards of care, defining scopes of practice, and liability risks / protections
- Needs of vulnerable populations & medical special needs (pediatrics, geriatrics, disabled, etc.) including palliative care and mental health

Next Steps - Immediate

- **Take a step back and reflect on what lessons recent events (e.g., H1N1, Haiti) have taught us:**
  - **What have we learned from H1N1 and what would we do differently if this were an H5N1 scenario instead?**
  - **How would we deliver care if a Haiti-type earthquake occurred here?**

- **Review current plans in place:**
  - **How well do our plans reflect what is necessary for large-scale response activities?**

Next Steps – Immediate



- **For those STATES & LOCAL COMMUNITIES that have completed such deliberations:**
  - **Review of IOM report will be useful to determine if any gaps are present or elements are missing from already developed plans**

- **For those STATES & LOCAL COMMUNITIES that have not completed such deliberations:**
  - **Review of IOM report will provide guidance toward what elements are necessary to incorporate in future planning**

Next Steps – Partnerships

- **STATE & LOCAL partners working together:**
  - **Work in partnership to develop crisis standards of care protocols that include the key elements and associated components (e.g., ethical grounding, community engagement, legal authority, indicators, triggers, clinical processes, etc.)**

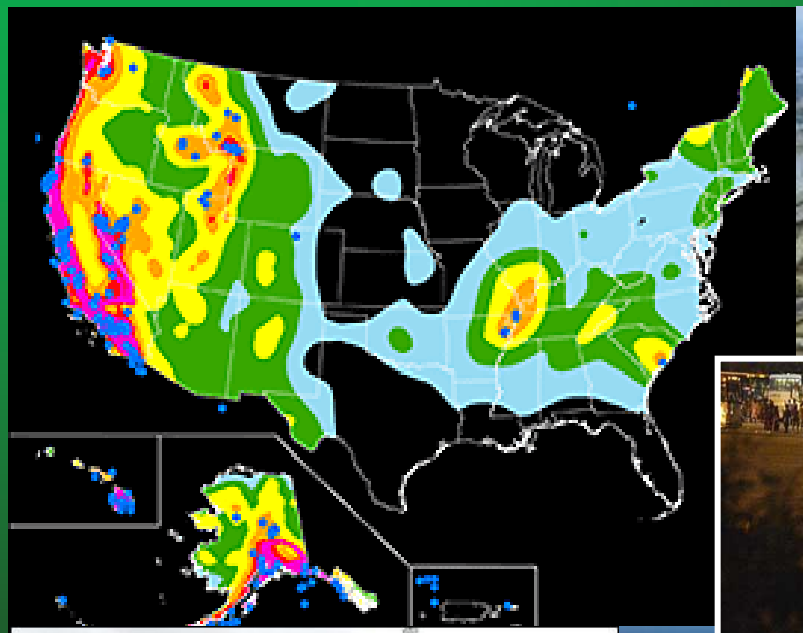
- **LOCAL & COMMUNITY partners working together:**
  - **Working within community (e.g., regional planning groups, hospitals, medical societies, etc.) to develop crisis standards of care that reflect protocols developed at state/local level**

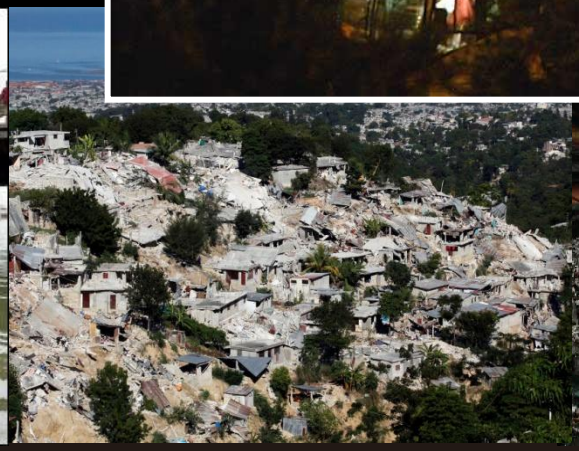
Future Considerations

- Disasters will continue to occur (unfortunately)
- When implementing crisis standards of care become necessary,

Will communities be ready to make this transition effectively?

Future Implications: No Shortage of Events





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IOM Report Website:

www.iom.edu/disasterstandards

HCPHES Website:

www.hcphes.org

Harris County

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