Mass Medical Care with Scarce Resources: Community Planning

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Sally Phillips, RN, PhD Moderator

Co Editor

Director, Public Health Emergency Preparedness

Providing Mass Medical Care with Scarce Resources: A Community Planning Guide

Collaboration between AHRQ and ASPR

- Ethical Considerations in Community Disaster Planning
- Assessing the Legal Environment
- Prehospital Care
- Hospital/Acute Care
- Alternative Care Sites
- Palliative Care
- Influenza Pandemic Case Study

Editors:
Sally J. Phillips- AHRQ
Ann Knebel- HHS/ASPR

- Lead Authors:
  - Marc Roberts, PhD Harvard University
  - James C. Hodge, Jr.- Georgetown and Johns Hopkins University
  - Edward J. Gabriel- Walt Disney Corp.
  - John L. Hick- Hennepin County Medical Center, University of Minnesota
  - Stephen Cantrill- Denver Health Medical Center
  - Anne Wilkerson- RAND Corp
  - Marianne Matzo- University of Oklahoma

Ethical Principles

- Greatest good for greatest number
  - Utilitarian perspective important to consider
- Other principles important to consider
  - Respecting the norms and values of the community
  - Respecting all human beings
  - Determining what is right and fair

Ethical Principles

- Ethical process requires
  - Openness
  - Explicit decisions
  - Transparent reporting
  - Political accountability
- Difficult choices will have to be made; the better we plan the more ethically sound the choices will be

Legal Issues

- Can the local community declare a disaster?
- Advance planning and issue identification are essential, but not sufficient
- Legal Triage – planners should partner with legal community for planning and during disasters

Prehospital Care

Edward Gabriel, M.P.A., AEMT-P

Edward Gabriel, Director of Crisis Management for Walt Disney Corporation; Past Deputy Commissioner for Planning and Preparedness NYC Office of Emergency Management

PREHOSPITAL CARE

The Main Issue For Planners

In the event of a Catastrophic MCE, the emergency medical services (EMS) systems will be called on to provide first-responder rescue, assessment, care, and transportation and access to the emergency medical health care system.

The bulk of EMS in this country is provided through a complex system of highly variable organizational structures.

RECOMMENDATIONS: EMS PLANNERS

Plan and implement strategies to maximize to the extent possible:

- Use and availability of EMS personnel
- Transport capacity
- Role of dispatch and Public Safety Answering Points

RECOMMENDATIONS: EMS PLANNERS

Mutual aid agreements or interstate compacts to:

- Address licensure and indemnification matters regarding responders
- Address memoranda of understandings (MOUs) among public, volunteer, and private ambulance services
- Coordinate response to potential MCEs

RECOMMENDATIONS: EMS PLANNERS

- Use natural opportunities to exercise disaster planning
- Develop strategies to identify large numbers of young children who may be separated from parents
- Develop strategies to identify and respond to vulnerable populations

RECOMMENDATIONS: EMS PLANNERS

- Develop partnerships with Federal, State, and local stakeholders to clarify roles, resources, and responses to potential MCEs
- Improve communication and coordination strategies and backup plans
- Exercise, evaluate, modify, and refine MCE plans

FORGING PARTNERSHIPS AT ALL LEVELS

"Emergency management is really about building relationships, whether you are in the public or private sector."

"And in building those relationships, it is important to remember not to *tell*, but to *talk*."

Hospital Care

John L. Hick, M.D.
Emergency Physician
Hennepin County Medical Center
Chair, Metropolitan Hospital Compact

Hospital Care
Planning Assumptions

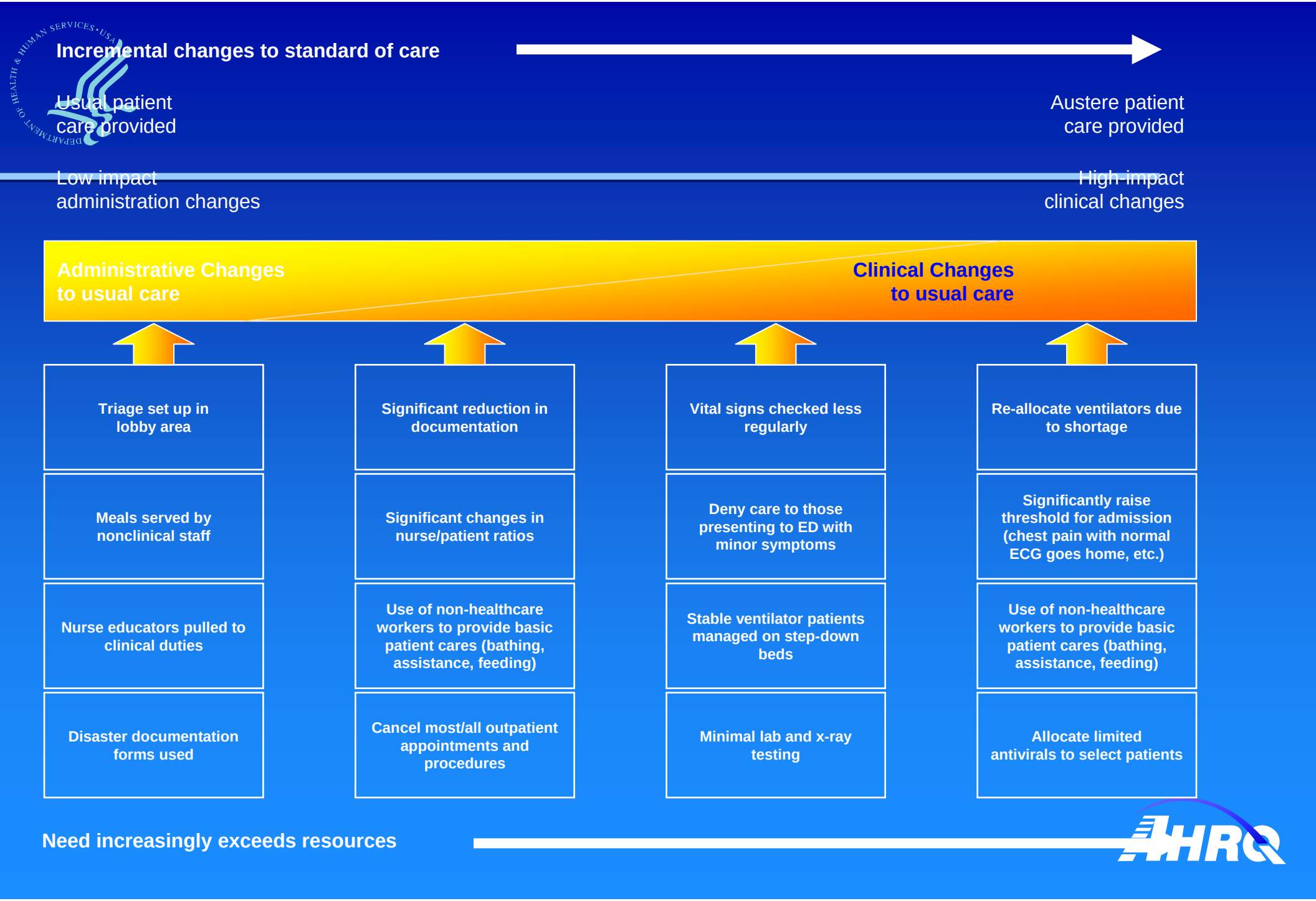
- Overwhelming demand
- Greatest good
- Resources lacking
- No temporary solution
- Federal level may provide guidance
- *Operational* implementation is State/local
- State emergency health powers
- Provider liability protection

Coordinated Mass Casualty Care

- Effective incident management critical
- Fully integrated
  - Conduct action planning cycles
  - Anticipate resource needs
  - Make timely requests and allocate

Coordinated Mass Casualty Care

- Increased system capacity (surge capacity)
- Decisionmaking process for resource allocation
  - Shift from reactive to proactive strategies
  - Administrative vs. clinical changes


Incremental changes to standard of care
Usual patient care provided
Austere patient care provided
Low impact administration changes
High-impact clinical changes
Administrative Changes to usual care
Clinical Changes to usual care
Triage set up in lobby area
Meals served by nonclinical staff
Nurse educators pulled to clinical duties
Disaster documentation forms used
Significant reduction in documentation
Significant changes in nurse/patient ratios
Use of non-healthcare workers to provide basic patient cares (bathing, assistance, feeding)
Cancel most/all outpatient appointments and procedures
Vital signs checked less regularly
Deny care to those presenting to ED with minor symptoms
Stable ventilator patients managed on step-down beds
Minimal lab and x-ray testing
Re-allocate ventilators due to shortage
Significantly raise threshold for admission (chest pain with normal ECG goes home, etc.)
Use of non-healthcare workers to provide basic patient cares (bathing, assistance, feeding)
Allocate limited antivirals to select patients
Need increasingly exceeds resources

State-level Responsibilities

- Recognize resource shortfall
- Request additional resources or facilitate transfer of patients/alternative care site
- Provide supportive policy and decision tools
- Provide liability relief
- Manage the scarce resources in an equitable framework

Hospital Responsibilities

- Plan for administrative adaptations (roles and responsibilities)
- Optimize surge capacity planning
- Practice incident management and work with regional stakeholders
- Decisionmaking process for scarce resource situations

Scarce Clinical Resources

- Process for planning vs. process for response
- Response concept of operations:
  - IMS recognizes situation
  - Clinical care committee
  - Triage plan
  - Decision implementation

Clinical Care Committee

- Multiple institutional stakeholders decide, based on resources and demand:
  - Administrative decisions – primary, secondary, tertiary triage
  - Ethical basis – AMA principles, etc.
  - Decision tool(s) to be used

Triage Plan

- Assign triage staff
- Review resources and demand
- Use decision tools and clinical judgment to determine which patients will benefit most
- Advise “bed czar” or other implementing staff

Implementing Decisions

- "Bed Czar" or other designated staff
- Transition of care support (as needed)
- Behavioral health issues
- Security issues
- Administrative issues
- Palliative care issues

Alternative Care Sites

Stephen V. Cantrill, M.D., FACEP

Associate Director

Department of Emergency Medicine

Denver Health Medical Center

Alternative Care Sites

Concept of an Alternative Care Site

- Nontraditional location for the provision of health care
- Wide range of potential levels of care:
  - Traditional inpatient care
  - Chronic care
  - Palliative care
  - Home care

Potential Uses of an ACS

- Primary triage of victims
- Offloaded hospital ward patients
- Primary victim care
- Nursing home replacement
- Ambulatory chronic care/shelter
- Quarantine
- Palliative care
- Vaccine/drug distribution center

Potential Alternative Care Sites

- Buildings of opportunity
  - Advantage of preexisting infrastructure support
  - Convention centers, hotels, schools, same-day surgery centers, shuttered hospitals, etc.
- Portable or temporary shelters
  - Flexible but may be costly
- Sites best identified in advance

Factors in Selecting an ACS

- Basic environmental support
  - HVAC, plumbing, lighting, sanitary facilities, etc
- Adequate spaces
  - Patient care, family areas, pharmacy, food prep, mortuary, etc
- Ease in establishing security
- Access: patients/supplies/EMS

Site Selection Tool:
www.ahrq.gov/downloads/pub/biotertools/alttool.xls

Potential Non-Hospital Site Analysis Matrix

	Aircraft Hangers	Churches	Community/Recreation Centers	Convalescent Care Facilities	Convention Facilities	Fairgrounds	Government Buildings	Hotels/Motels	Meeting Halls	Military Facilities	National Guard Armories	Other	Same Day Surgical Centers/Clinic	Schools	Sports Facilities/Stadiums	Trailers/Tents (Military/Other)	USAF
Ability to lock down facility																	
Adequate building security personnel																	
Adequate Lighting																	
Air Conditioning																	
Area for equipment storage																	
Biohazard & other waste disposal																	
Communications (# phones, Local/Long Distance, Intercom)																	
Door sizes adequate for gurneys/beds																	
Electrical Power (Backup)																	
Family Areas																	
Floor & Walls																	
Food supply/food prep areas (size)																	
Heating																	
Lab/specimen handling area																	
Laundry																	
Loading Dock																	
Mortuary holding area																	
Oxygen delivery capability																	
Parking for staff/visitors																	
Patient decontamination areas																	
Pharmacy Area																	
Proximity to main hospital																	
Roof																	
Space for Auxillary Services (Rx, counselors, chapel)																	
Staff Areas																	
Toilet Facilities/Showers (#)																	
Two-way radio capability to main facility																	
Water																	
Wired for IT and Internet Access																	
Total Rating/Ranking (Largest # Indicates Best Site)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Some Issues and Decision Points

- Who is responsible for the advance planning?
- "Ownership" and command and control of the site
- Decision to open an alternative care site
- Supplies/equipment
- Staffing
  - Emergency System for Advanced Registration of Volunteer Health Professionals: ESAR-VHP?
  - Medical Reserve Corps?

Some Issues and Decision Points

- Documentation of care
- Communications
- Rules/policies for operation
- Exit strategy
- Exercises

Katrina/Rita: ACS Issues

- Importance of regional planning
- Importance of security
- Advantages of manpower proximity
- Segregating special needs populations
- Organized facility layout
- Importance of incident command system

Katrina/Rita: ACS Issues

- The need for “House Rules”
- Importance of public health issues
  - Safe food
  - Clean water
  - Latrine resources
  - Sanitation supplies

Palliative Care Issues

Marianne Matzo, Ph.D., APRN, BC, FAAN

Professor, Palliative Care Nursing

University of Oklahoma College of Nursing

- Palliative care is care provided by an interdisciplinary team
- Focused on the relief of suffering
- Support for the best possible quality of life

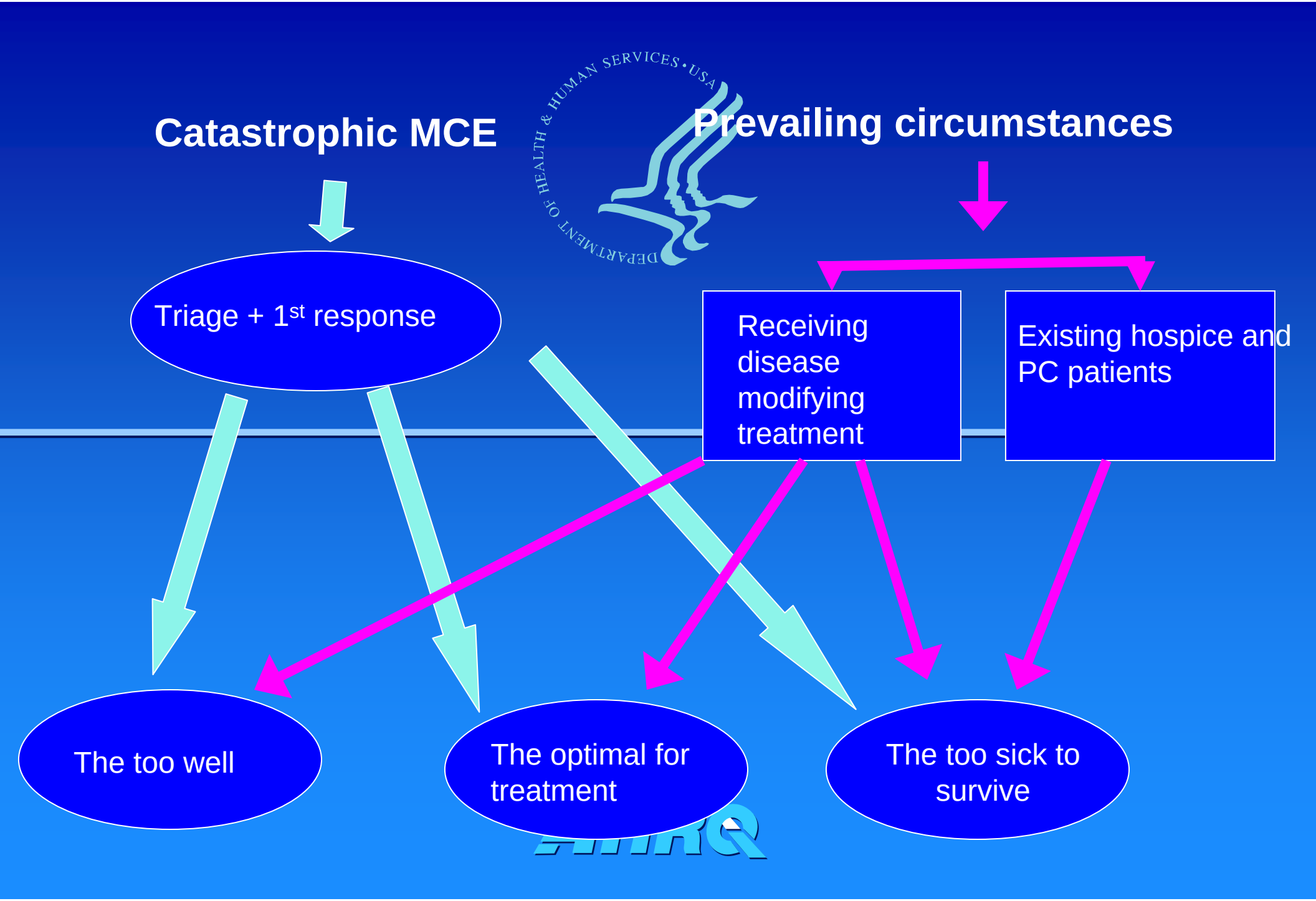
Catastrophic Mass Casualty Palliative Care

- Palliative Care is:
  - Evidence-based medical treatment
  - Vigorous care of pain and symptoms throughout illness
  - Care that patients want
- Palliative Care is not:
  - Abandonment
  - The same as hospice
  - Euthanasia
  - Hastening death

- Good palliative care occurs wherever the patient is.
- The community should be prepared about the principles of palliative care in a disaster situation.

- The minimum goal: die pain and symptom free.
- Effective pain and symptom management is a basic minimum of service.

- Adequate and aggressive palliative care services should be available to everyone.
- Palliative care under circumstances of a mass casualty event is aggressive symptom management.


Catastrophic MCE
Prevailing circumstances
Triage + 1st response
Receiving disease modifying treatment
Existing hospice and PC patients
The too well
The optimal for treatment
The too sick to survive

Catastrophic MCE and Large Volume

The too sick to survive *

Initially left in place

Then: Transport → Other than active treatment site

*

1. Those exposed who will die over the course of weeks
2. Already existing palliative care population
3. Vulnerable population who become palliative care due to scarcity

Clinical Services After Triage

- Resources:
  - Personnel
  - Coordination
  - Supplies

Clinical Process Issues

- Symptom management, including sedation near death
- Spirituality/meaningfulness
- Family and provider support – mental health
- Family and provider grief and bereavement
- Event-driven protocols and clinical pathways

Preparation For The Future

- "Many of us discussed the need to evaluate what happened and learn how to be better prepared for the future."

- "You're expected to know how to do mass casualty…. You must train for the worst and hope for the best."

Application of Concepts to a Pandemic Case Study

Ann Knebel, R.N., D.N.Sc., FAAN
Captain
U.S. Public Health Service
ASPR
Co Editor

The Next Pandemic – What Can We Expect?

INFLUENZA

FREQUENTLY COMPLICATED WITH

PNEUMONIA

IS PREVALENT AT THIS TIME THROUGHOUT AMERICA.

THIS THEATRE IS CO-OPERATING WITH THE DEPARTMENT OF HEALTH.

YOU MUST DO THE SAME

IF YOU HAVE A COLD AND ARE COUGHING AND SNEEZING- DO NOT ENTER THIS THEATRE

GO HOME AND GO TO BED UNTIL YOU ARE WELL

Coughing, Sneezing or Spitting Will Not Be Permitted In The Theatre. In case you must cough or Sneeze, do so in your own hand kerchief, and if the Coughing or Sneezing Persists Leave The Theatre At Once.

This Theatre has agreed to co-operate with the Department Of Health in disseminating the truth about Influenza, and thus serve a great educational purpose.

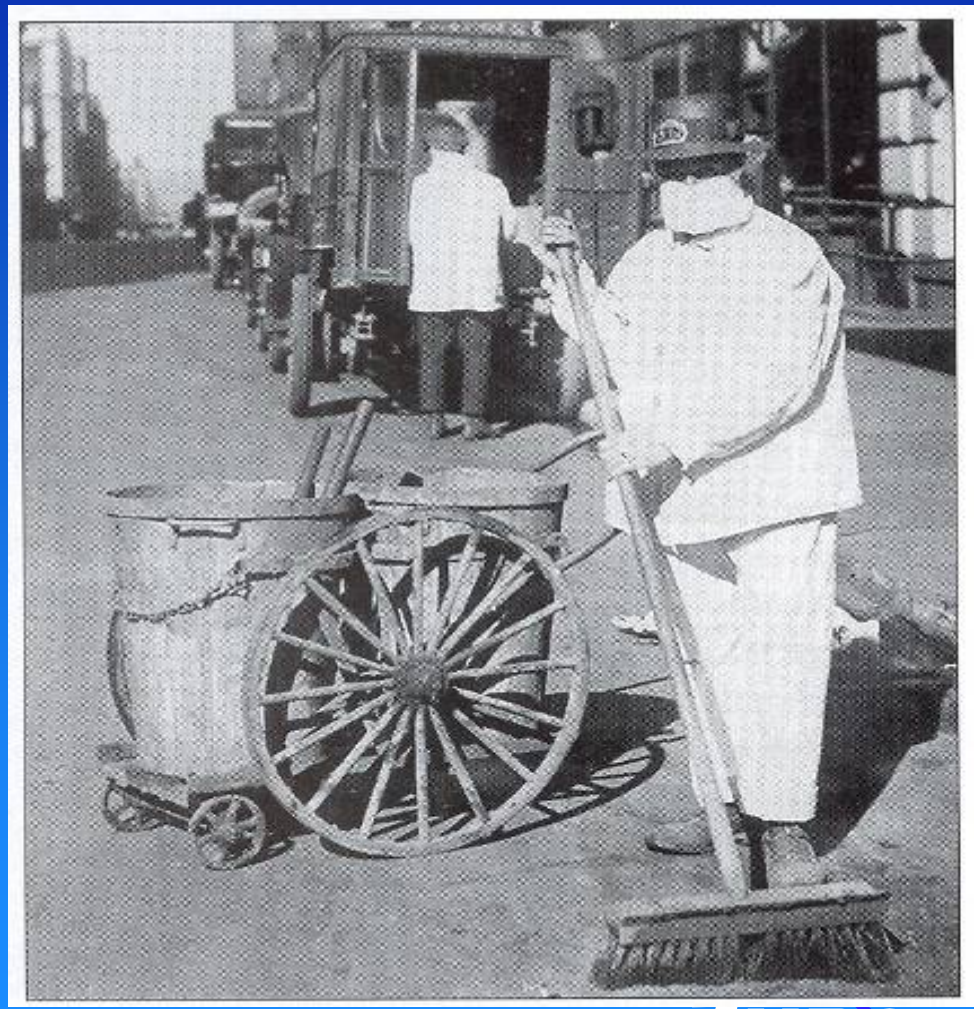
HELP US TO KEEP CHICAGO THE HEALTHIEST CITY IN THE WORLD

JOHN DILL ROBERTSON
COMMISSIONER OF HEALTH

Estimates of Impact of 1918-like Event

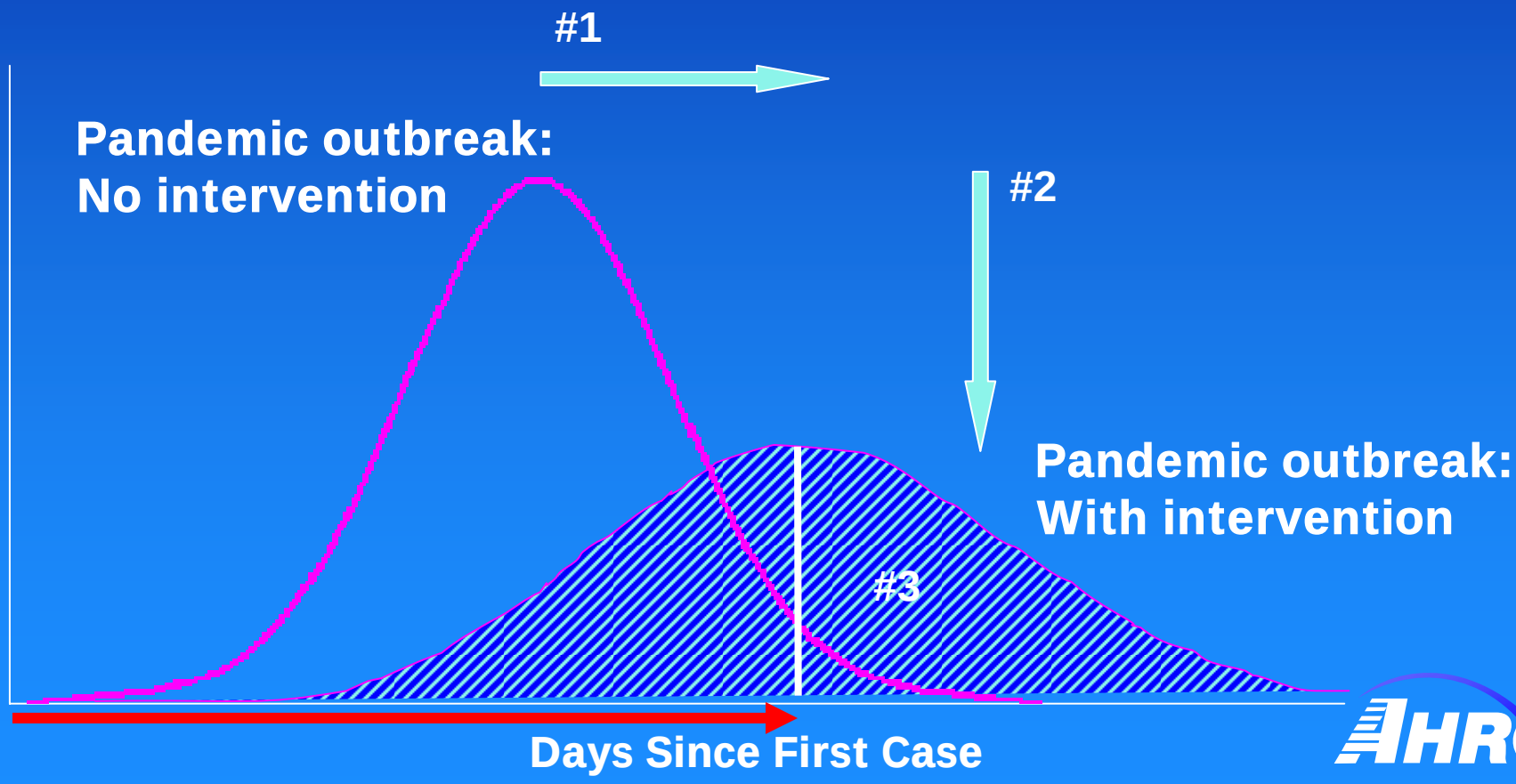
Illness	90 million (30%)
Outpatient medical care	45 million (50%)
Hospitalization	9, 900,000
ICU care	1,485,000
Mechanical ventilation	745,500
Deaths	1,903,000

Containment Strategies



Community-based Interventions

1. Delay outbreak peak
2. Decompress peak burden on hospitals/infrastructure
3. Diminish overall cases and health impacts



Seasonal Flu vs. Pandemic Flu

- Seasonal
  - Predictable patterns
  - Some immunity
  - Healthy adults not at serious risk
  - Health systems adequate to meet needs
- Pandemic
  - Occurs rarely
  - Little or no immunity
  - Health people may be at increased risk
  - Health systems may be overwhelmed

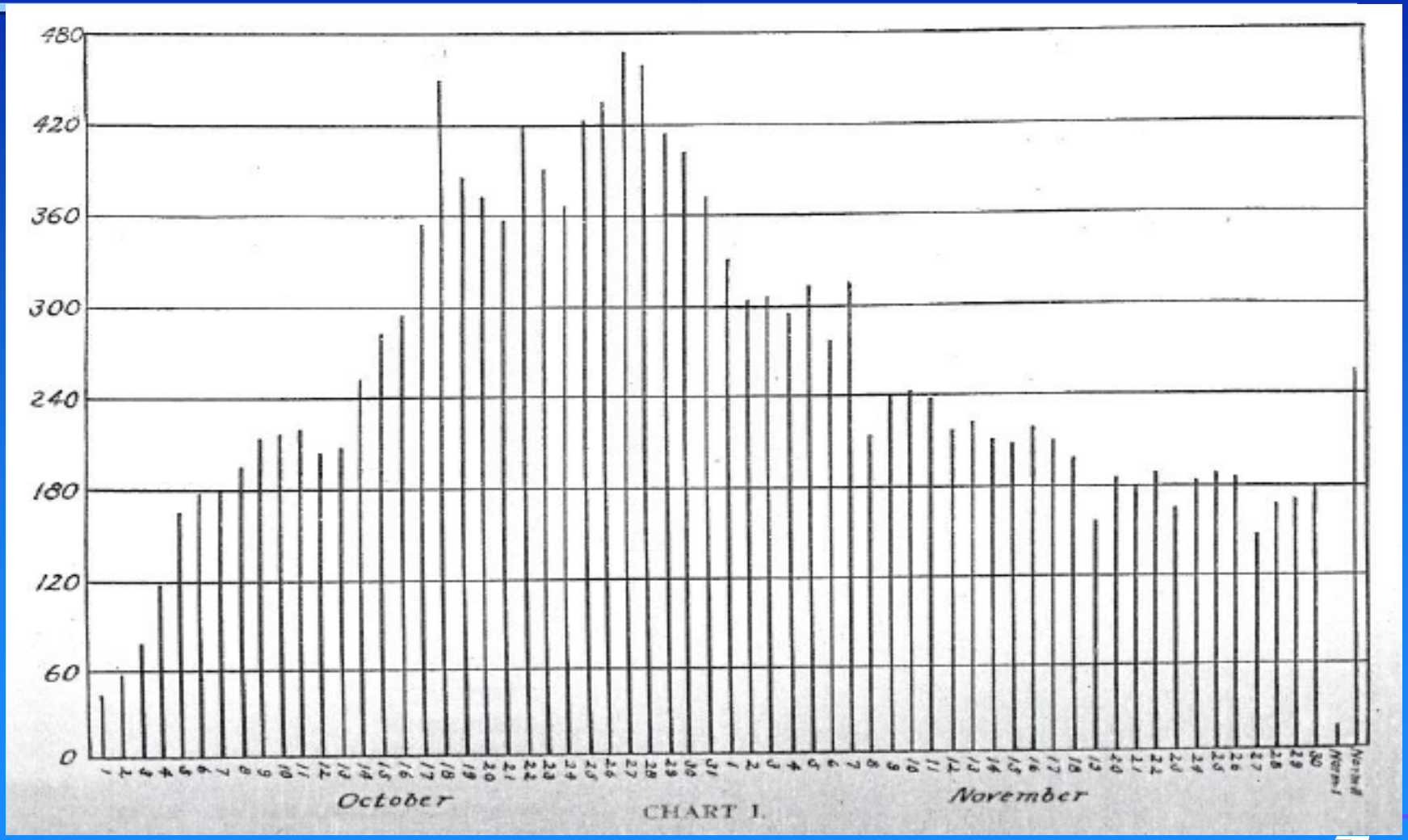
Role of the Primary Care Provider

Emergency Hospital during influenza epidemic, Camp Funston, Kansas. Shows head to foot bed arrangement. National Museum of Health and Medicine, Armed Forces Institute of Pathology, NCP 1603.

Role of Home Care

- Significant role for primary care providers
- Family members will play a significant role
- Planning should consider

Daily Deaths, Ohio, 1918



Brodrick OL. Influenza and pneumonia deaths in Ohio in October and November, 1918. *Ohio Public Health Journal*. 1919;10:70–72.

Take Home Messages

- Community-level planning should be going on now, including the broad range of stakeholders
- Regional planning and coalition building serve as “force multipliers”
- Engage the community in a transparent planning process and communication strategy

More Information

sally.phillips@ahrq.hhs.gov

Visit the AHRQ Web site:

http://ahrq.gov/browse/bioterbr.htm

Community Planning guide:

http://www.ahrq.gov/research/mce