



*DELAWARE HEALTH AND SOCIAL SERVICES*  
Division of Public Health  
Public Health Preparedness Section

# Public Health Preparedness

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**Public Health Preparedness Section**  
**Division of Public Health**

# Presentation Overview

- **Emergency Responsibility**
  - **Public Health and Medical Services**
  - **Emergency Medical Service**
  - **Public Health Preparedness & Planning**
  - **Preparedness Programs**



# Presentation Overview

- **DPH's Response**
  - **Modular Medical Expansion System**
  - **State Health Operations Center**
  - **Medication Mass Distribution**
  - **Alternate Care Facilities**
- **Pandemic Influenza & Novel H1N1**
- **Delaware Medical Reserve Corps**



# Emergency Responsibilities

## Delaware Division of Public Health (DPH)

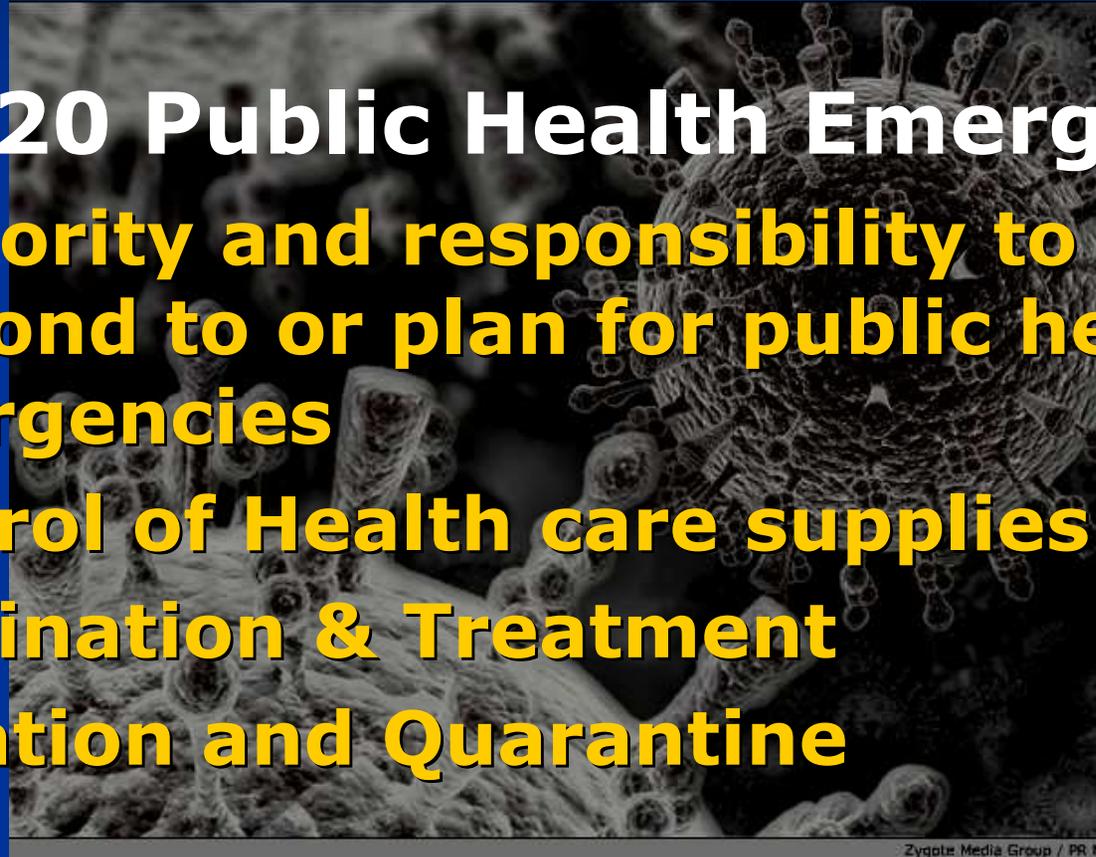
Our mission is to develop, implement, and maintain a comprehensive program to prepare for, mitigate against, respond to, and recover from public health threats and emergencies.



# Emergency Responsibilities

## Authority

- **Title 20 Public Health Emergencies**
  - **Authority and responsibility to respond to or plan for public health emergencies**
  - **Control of Health care supplies**
  - **Vaccination & Treatment**
  - **Isolation and Quarantine**



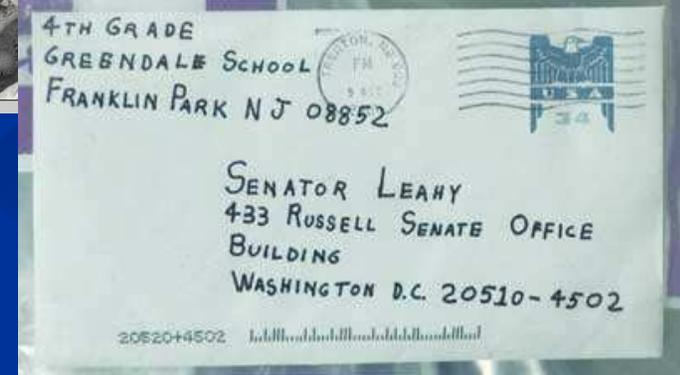
Zygo: Media Group / PR NI



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# Public Health Threats

As one considers the many unique and distinct threats challenging us....



.....public health preparedness is a cross discipline need and requires integrated planning across all sectors



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# Emergency Responsibilities

- **DPH is lead agency**
  - **Public Health and Medical Services**
  - **Emergency Medical Services**
- **Command and control**
- **Representatives at State and Local Emergency Management Agencies (EMAs)**



# Emergency Responsibilities

- Mechanism for coordinated assistance
  - **i.e. Evacuation of hospitals**
- Supplement and support local resources
  - **Medications and medical supplies**



# Emergency Responsibilities

## Preparedness Programs

- Mass Medication Distribution & Countermeasure
- Medical Surge
- Surveillance
- Evacuation Support
- Mass Fatality Management
- Risk Communications & Call Center



# Emergency Responsibilities

## Preparedness & Planning

- **Stockpile**
  - **Medications**
  - **Medical Supplies**
- **Plans**
  - **All Hazards**
  - **Multiple planning scenarios**
  - **'At risk' community**
  - **Risk communications to the public**



# Emergency Responsibilities

## Preparedness & Planning

- **Outreach**
  - **A Guide for Emergency Planners (Considerations for Individual with Non-Typical Functional Needs)**
  - **Emergency Preparedness for Non-Typical Functional Needs Guide**
  - **Pandemic Influenza Outreach**



# Emergency Responsibilities

## Partner Agencies

- Delaware National Guard
- Delaware State Police
- Hospitals
- Emergency Management Agencies – local and state
- Delaware Department of Transportation

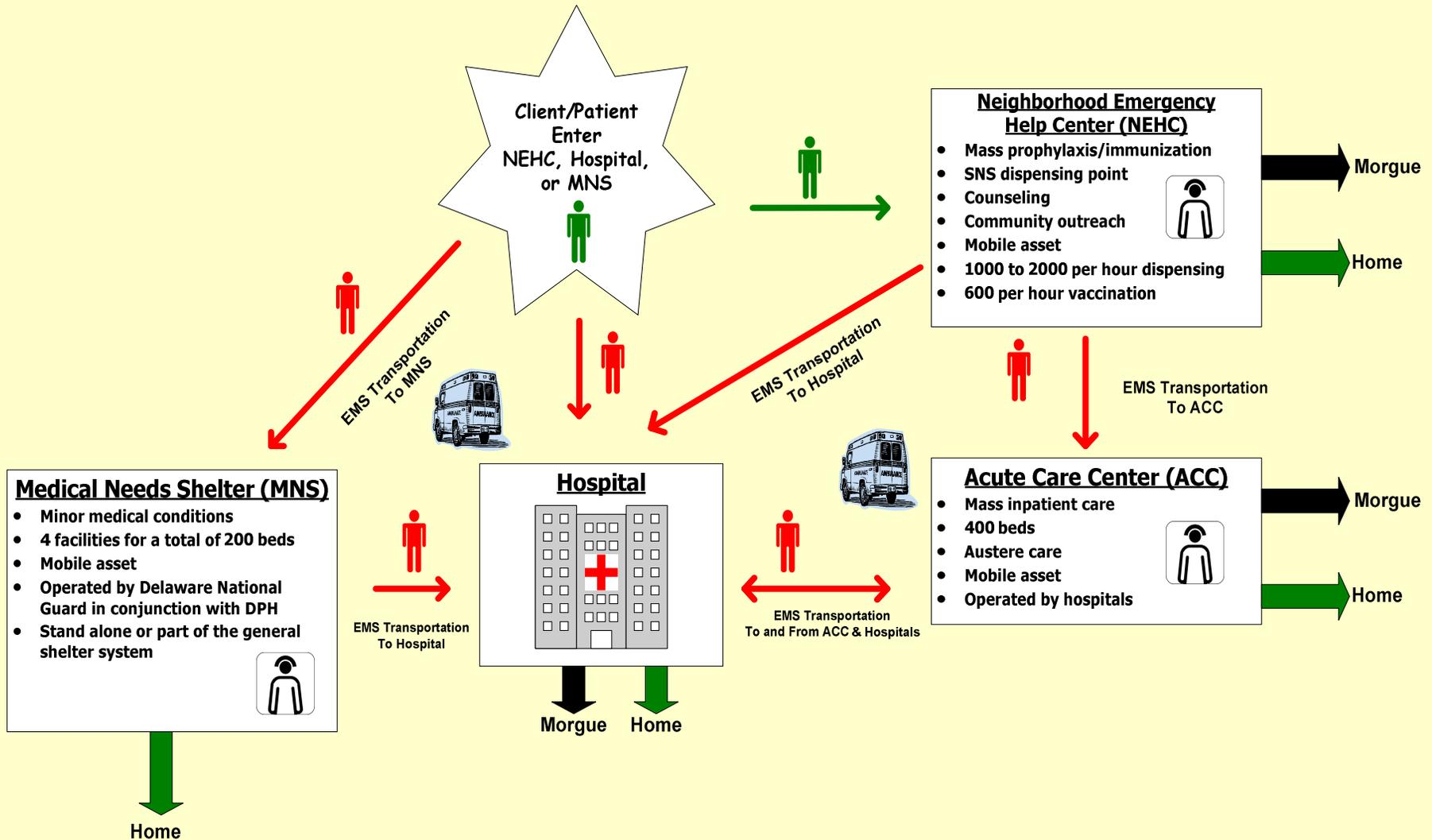


# DPH's Response

## Modular Medical Expansion System (MMES)



# The Delaware Modular Medical Expansion System

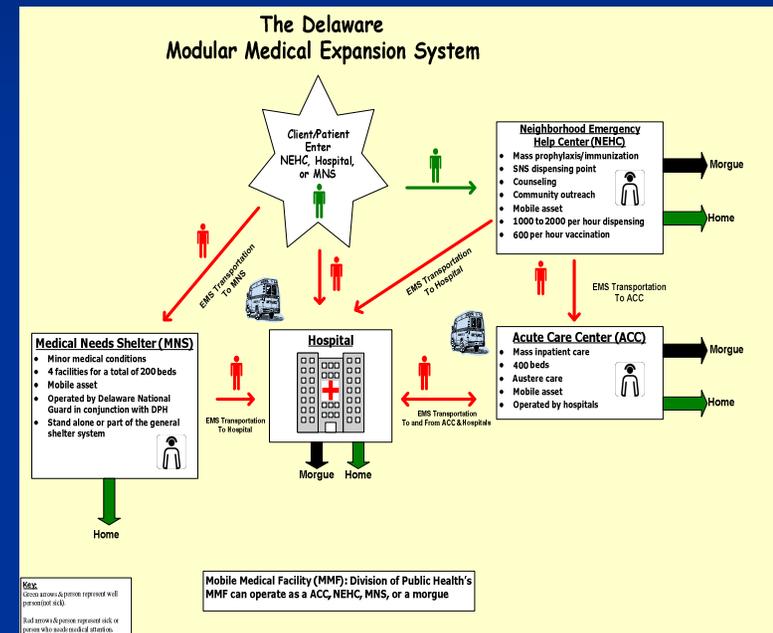


**Key:**  
 Green arrows & person represent well person (not sick).  
 Red arrows & person represent sick or person who needs medical attention.

**Mobile Medical Facility (MMF):** Division of Public Health's MMF can operate as a ACC, NEHC, MNS, or a morgue

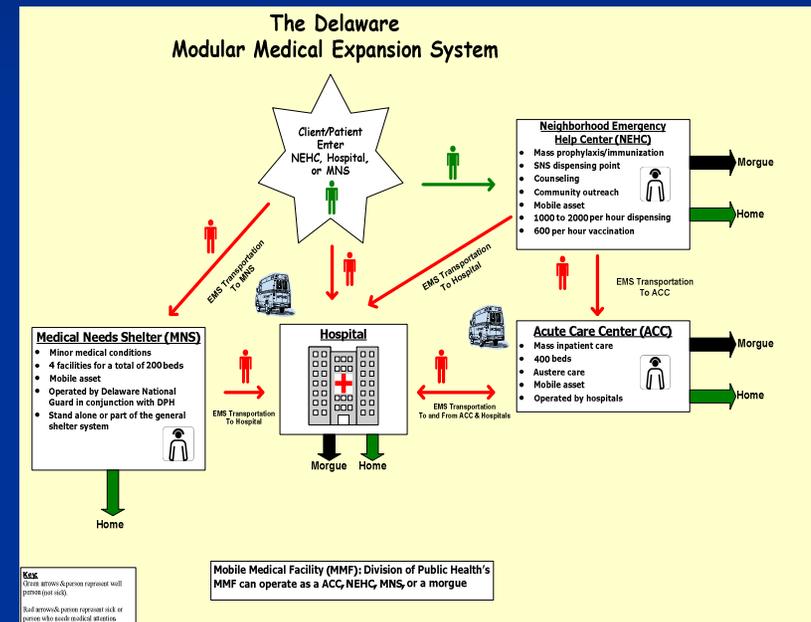
# State Health Operations Center (SHOC)

- **Command & Control**
- **Centralizes coordination**
- **Staffed by DPH and DHSS employees**
- **Technical Expertise**



# Neighborhood Emergency Help Center (NEHC)

- Mass prophylaxis & immunization
- SNS dispensing point
- Counseling
- Community outreach
- Mobile asset
- 1000 to 2000 per hour dispensing
- 600 per hour vaccination

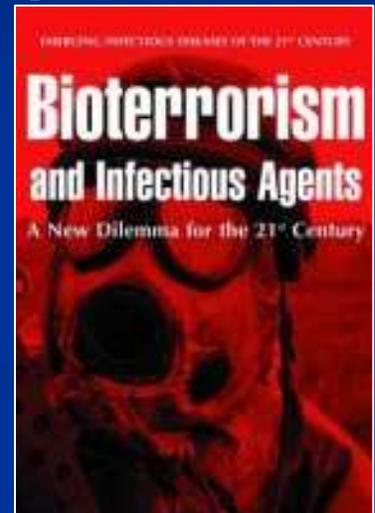






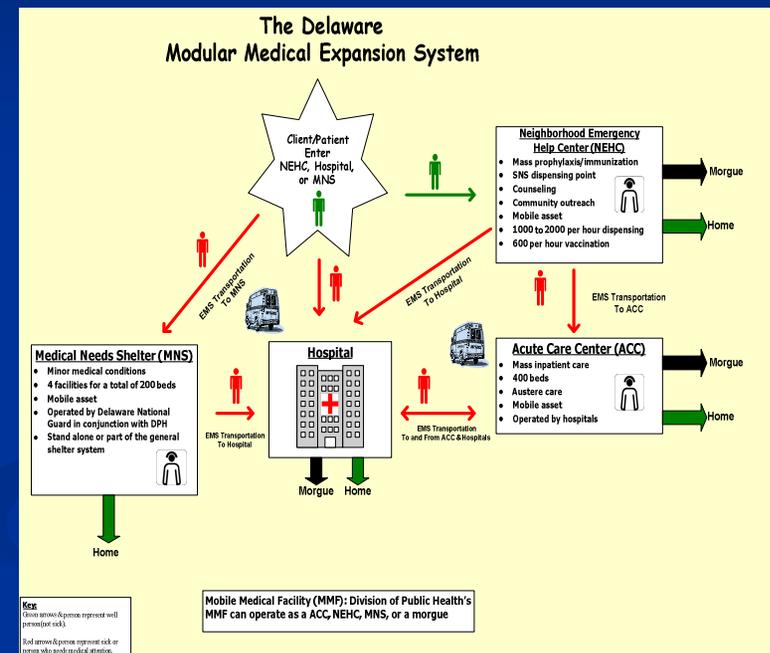
# In-State Stockpile (ISS)

- Countermeasure stockpile of medications to treat essential workers and the public during a public health emergency
- Medications stockpiled are:
  - Antiviral Medication
  - Antibiotics
  - Nerve agent anti-dotes
  - Medication for Radioactive Exposure
- Designed to counter the effects of:
  - Pandemic influenza
  - Biological agents (i.e. Anthrax)
  - Nerve agents
  - Radioactive exposure
- Other medical equipment



# Acute Care Center (ACC)

- Mass inpatient care
- 400 beds
- Austere care
- Mobile asset
- Hospitals operate in conjunction with DPH



# Acute Care Center

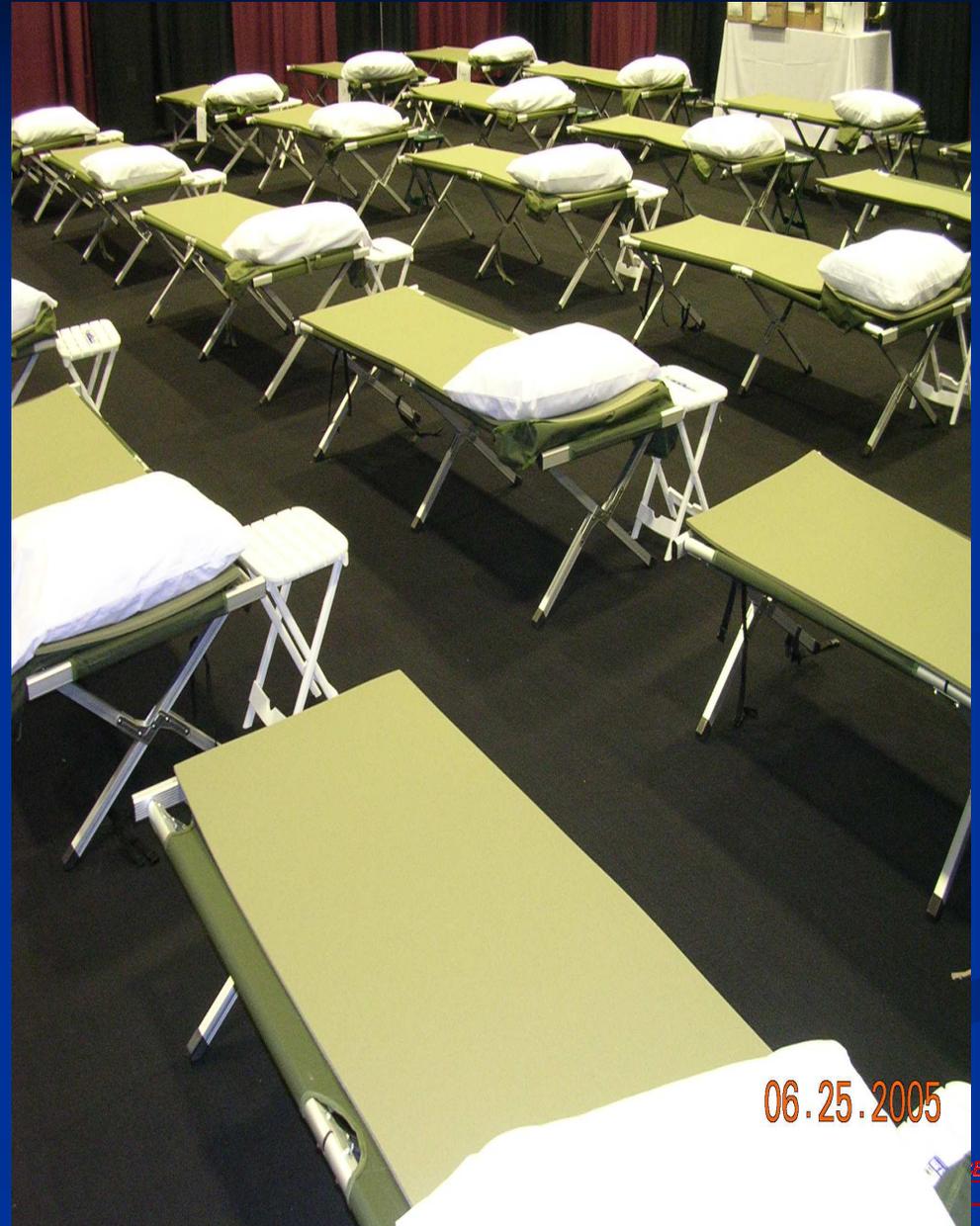


Photo Courtesy of United States Department of Health and Human Services:  
[http://1918.pandemicflu.gov/pics/photos/iowa\\_Flu2.jpg](http://1918.pandemicflu.gov/pics/photos/iowa_Flu2.jpg)



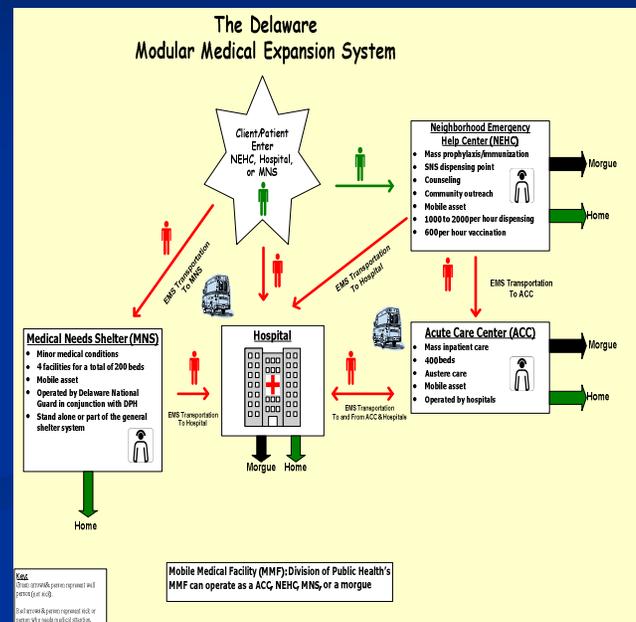
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# DPH Alternate Care Facilities



# Medical Needs Shelter (MNS)

- 4 facilities for a total of 200 beds
- Mobile asset
- Operated by Delaware National Guard in conjunction with DPH
- Stand alone or part of the general shelter system
- House individuals who require support with their medical needs and can't be accommodated in a regular shelter



# Medical Needs Shelter (MNS)



# Mobile Medical Facility (MMF)

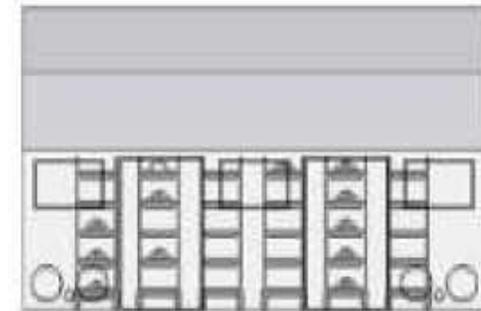
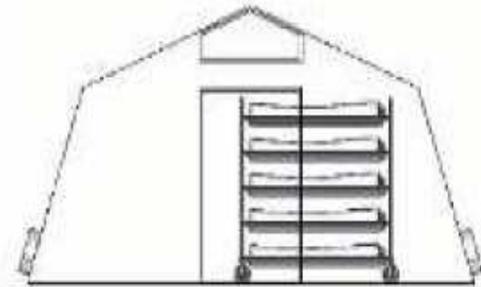
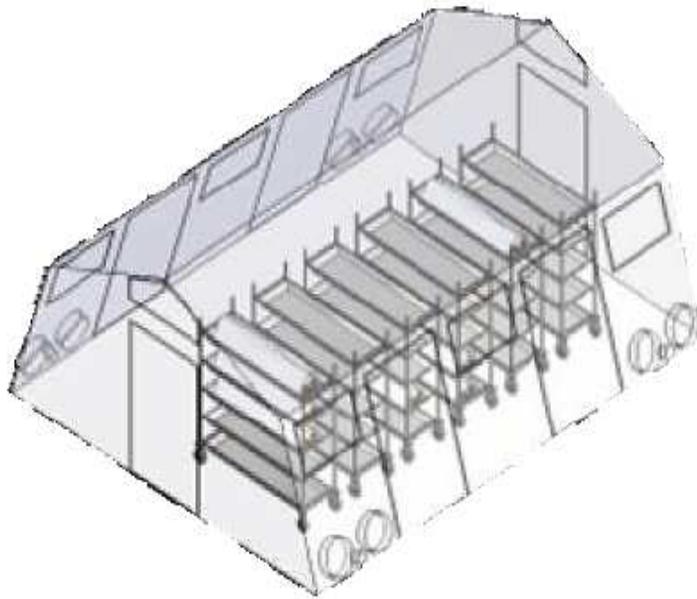
- **Portable medical facility**
  - **HVAC**
  - **Oxygen delivery**
  - **Hygiene stations**
  - **Plumbing**
- **Operate as a:**
  - **Alternate care facility**
  - **Command Center**
  - **Mobile Morgue**



# Mobile Medical Facility (MMF)



# MMF – Mobile Morgue



# Pandemic

- **A disease outbreak that spreads easily as most people are susceptible**
- **Effective human to human transmission is necessary**
- **Measure by how fast the virus spreads**
- **Wide geographic spread**



# Seasonal vs. Pandemic Flu

- **The seasonal flu usually occurs annually between December and March**
- **Pandemic flu is caused by a novel virus strain that humans have no resistance against**
- **Pandemic flu infects large numbers of people of different ages globally and can causes serious illness and deaths**



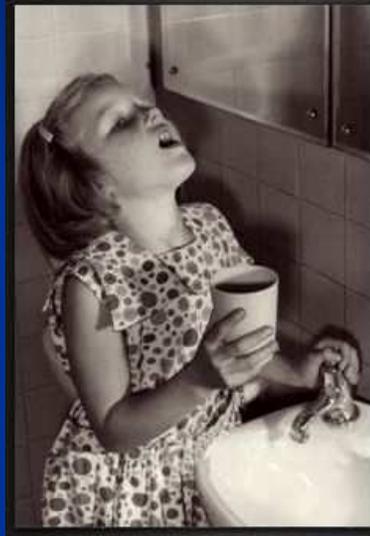
# Influenza Pandemics of the 20<sup>th</sup> Century



**1918 "Spanish Flu"  
Flu"**

**20–40 Million Deaths  
Deaths**

**675,000 U.S.**



**1957 "Asian Flu"**

**1–4 Million Deaths**

**70,000 U.S.**



**1968 "Hong Kong  
Flu"**

**1-4 Million**

**34,000**



# Pandemic Waves

- **Pandemics occur in multiple waves of disease outbreaks**
- **Waves can last six to eight weeks**
- **The time between pandemic waves varies and cannot be easily predicted**



**Novel H1N1  
Influenza  
"SWINE FLU"**

# H1N1 Facts & Figures

- On March 18, 2009 the World Health Organization (WHO) reported an outbreak of Influenza Like Illness in Mexico. Laboratory analysis confirmed (Novel) Swine Influenza A/H1N1virus had emerged.
- April 24, 2009 – WHO reported Influenza Like Illness in Mexico & U.S.
  - Mexico (854 cases / 59 deaths)
  - U.S. (7 cases / 0 deaths)
  - Healthy Young Adults
- April 28, 2009 – University of Delaware – Public Health Responds



# H1N1 Facts & Figures

- **June 11, 2009 – WHO Reported:**
  - **74 Countries**
  - **28,744 Cases**
  - **144 Deaths**
  - **U.S. 13,217 Cases (46%) / 27 Deaths (19%)**

## W H O Declares “Global Pandemic”

- **51 Reporting States & Territories as of 8/13/2009**
  - **7511 Hospitalized Cases**
  - **477 Deaths**



# H1N1 Facts & Figures

- Occurred very late in the flu season
- Affected young people disproportionately
- Caused widespread illness; some severe or fatal
- Socially disruptive, especially for schools – closures and canceling of events
- Thousands of healthcare and public health workers respond in the U.S.

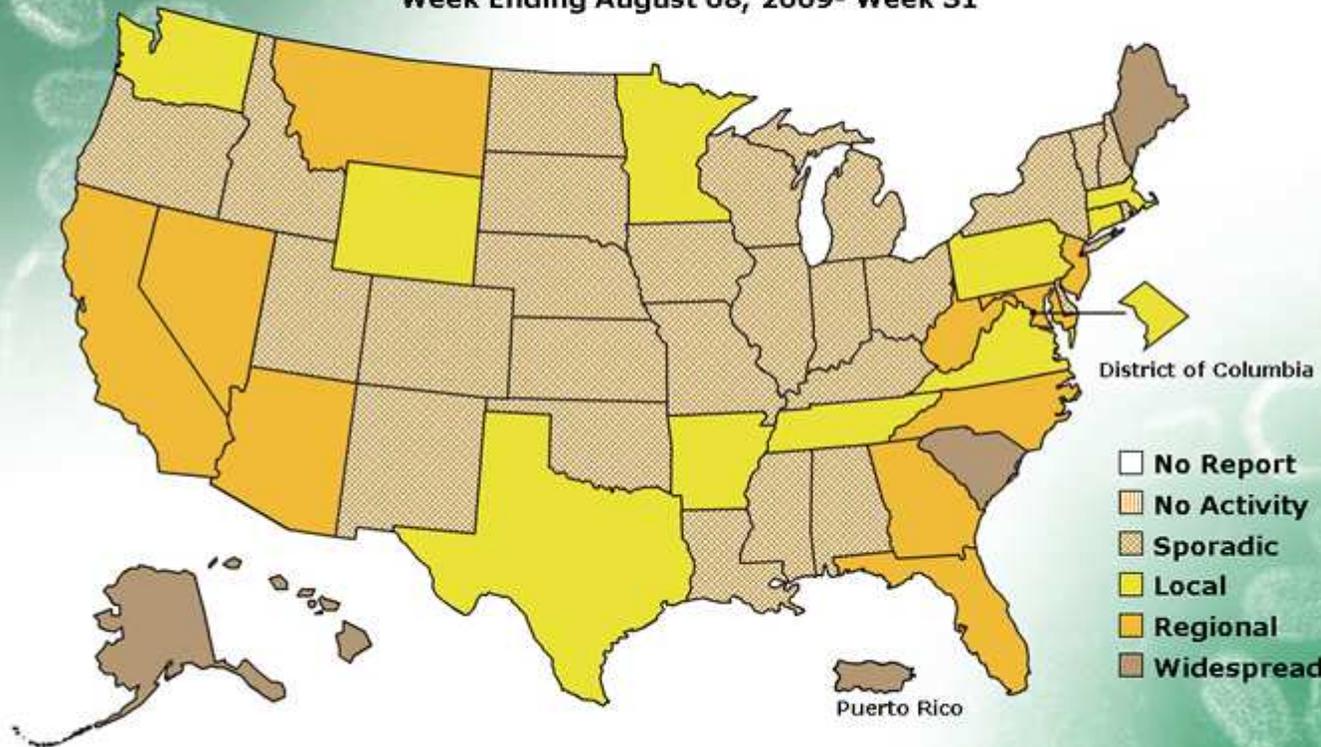


# FLUVIEW



**A Weekly Influenza Surveillance Report Prepared by the Influenza Division**  
**Weekly Influenza Activity Estimates Reported by State and Territorial Epidemiologists\***

**Week Ending August 08, 2009- Week 31**

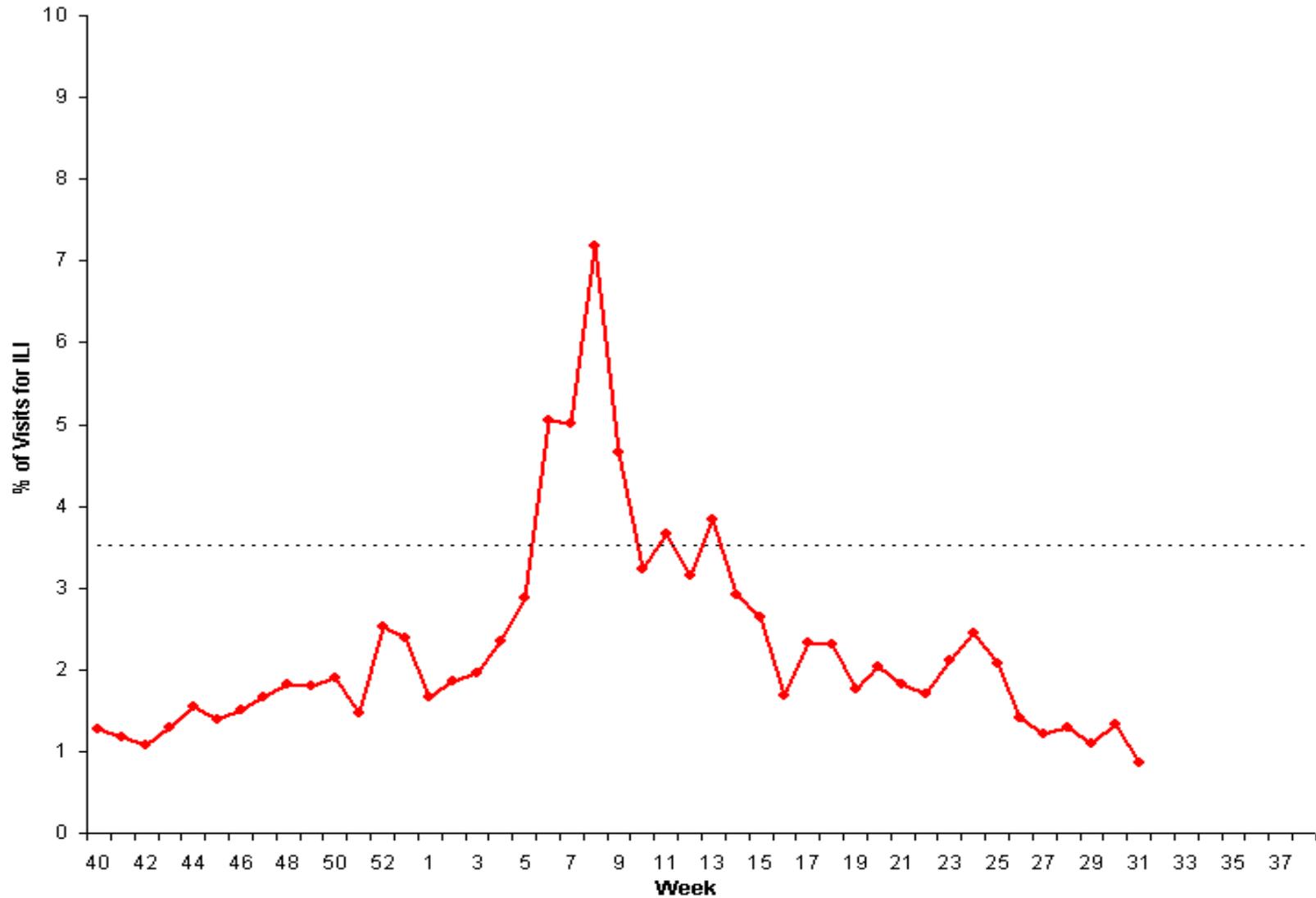


\*This map indicates geographic spread and does not measure the severity of influenza activity.



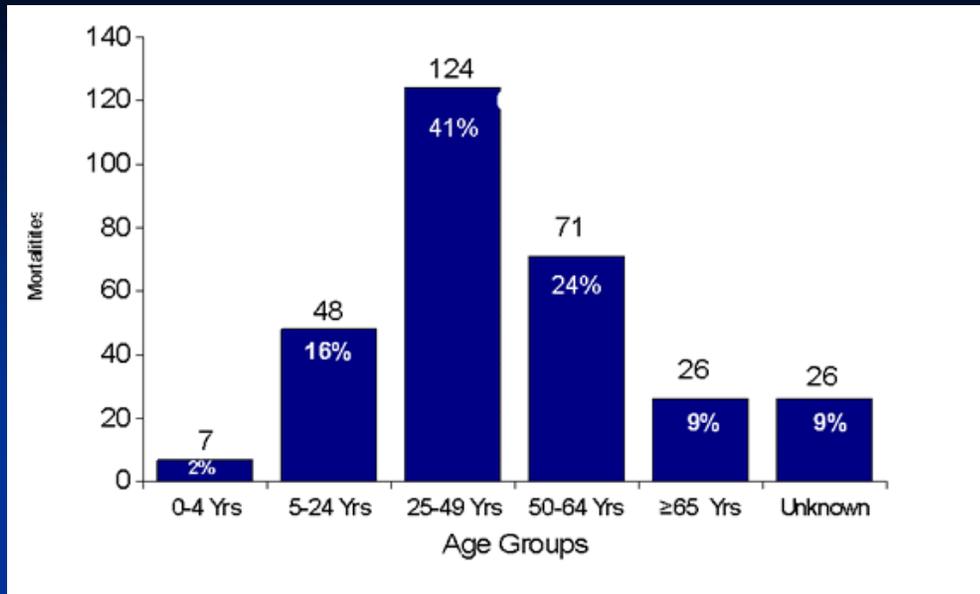
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WEEKLY PERCENT OF VISITS FOR INFLUENZA-LIKE ILLNESS (ILI) REPORTED BY THE U.S. OUTPATIENT INFLUENZA-LIKE ILLNESS SURVEILLANCE NETWORK (ILINET) SUMMARY FOR HHS REGION 3 (DE, DC, MD, PA, VA, WV)

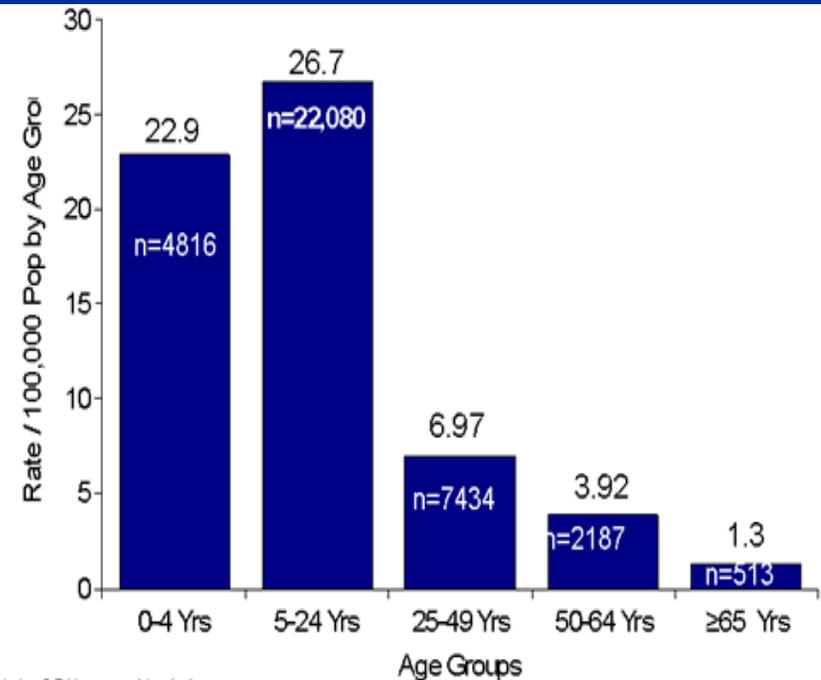


ILIPercent BASE LINE

# Mortalities



## Novel H1N1 Confirmed & Probable Case Rate in the United States, By Age Group



\*Excludes 6,741 cases with missing ages.

Rate / 100,000 by Single Year Age Groups: Denominator source: 2008 Census Estimates, U.S. Census Bureau at: <http://www.census.gov/popest/national/asrh/files/NC-EST2007-ALLDATA-R-File24.csv>

# It's Not Over . . .

- **Continuing spread in U.S.**
  - **Outbreaks in summer camps, some colleges, and communities across the U.S.**
- **Southern Hemisphere Patterns**
  - **Substantial disease in Argentina, Chile, and Australia**
  - **Reported cases from Africa & Asia**
  - **Reported strain on health care system in some localities**
- **CDC anticipates pattern will continue in the U.S. this fall.**



# Preparing for a Pandemic

What can you do? It's a Shared Responsibility

- **Develop, Review & Update Emergency Plans & Policies**
- **Medical & healthcare providers should take PPE Precautions Seriously**
- **Institute & Practice Healthy Hygiene**
  - **Have employees stay home if they are sick!**
- **Develop Continuity of Operations Plans**
- **Follow Delaware & CDC issued guidance**
- **Get vaccinated when H1N1 vaccine is available**
- **Keep yourself informed**



# Preparing for a Pandemic

## What are we doing?

- **Preparing for a vaccination campaign**
- **Enhanced Surveillance**
- **Communicating accurate and timely information**
- **Enhancing policies and plans**
- **Enhancing stockpiles**



# Delaware Medical Reserve Corps (DMRC)

## Purpose

- Supplement existing medical and public health staff during and after an emergency
- Emergency roles performed by DMRC members may include:
  - Mass vaccination
  - Dispensing medications
  - Administrative duties



# DMRC Volunteer Members

- **>400 Volunteers**
- **Medical**
  - **7 Dentists**
  - **4 EMT Basic & Paramedics**
  - **140+ Pharmacists**
  - **32 Physicians**
  - **14 Licensed Practical Nurses**
  - **69 Registered Nurses**
- **Many others – language interpreters, accountants, IT, etc.**



# DMRC Participation Activities

- **Bi-monthly meetings**
- **Exercise participation with DPH and other state agencies**
- **Response to H1N1**
- **Training**
- **Outreach event**
- **DMRC Leadership Team**
  - **Chair & Co Chair**
  - **Focus Groups (Recruitment & Training)**



# Additional Information

- For Public Health Preparedness Section:
  - Contact Timothy O’Hea at (302) 223-1720 or at [Timothy.O’Hea@state.de.us](mailto:Timothy.O’Hea@state.de.us)
- Get additional information about Public Health Preparedness, Health Alerts, and Influenza information at:  
<http://www.dhss.delaware.gov/dhss/dph/php/index.html>  
<http://www.dhss.delaware.gov/dhss/dph/swineflucomm.html>  
<http://www.dhss.delaware.gov/dhss/dph/index.html>
- For Pandemic/Influenza Planning and Information go to:  
<http://www.Flu.gov>
- For Delaware Medical Reserve Corps:
  - Contact Public Health Preparedness at (302) 223-1720 or at [servde@state.de.us](mailto:servde@state.de.us) or register at [www.servde.org](http://www.servde.org)



# Questions.....

