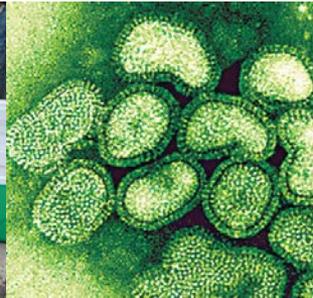
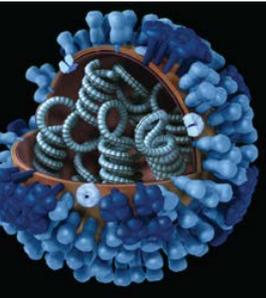


Myths and Misconceptions of the 2009 H1N1 Pandemic



Stephen C Redd, MD
Rear Admiral, USPHS
Director, Influenza Coordination Unit
Office of Infectious Diseases
Centers for Disease Control and Prevention



Myth #1

It was a mild pandemic of little consequence

The World in H1N1 Numbers

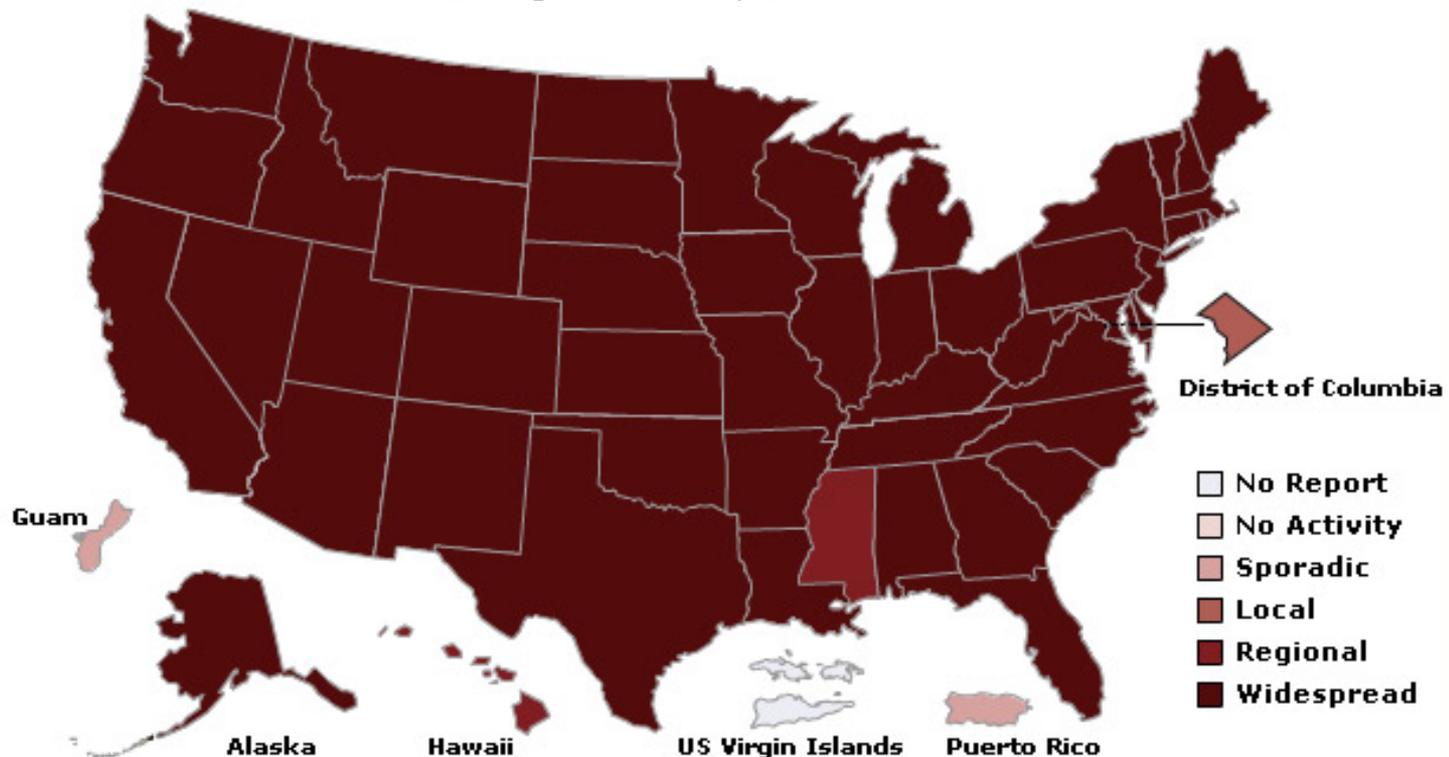
- ❑ **First pandemic H1N1 case confirmed:** **April 15, 2009**
- ❑ **Estimated number of U.S. cases:** **~60 million**
- ❑ **Estimated number of U.S. deaths:** **~12,500**
- ❑ **Number of countries reporting cases:** **190 (all)**



Influenza Activity, October 31, 2009

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

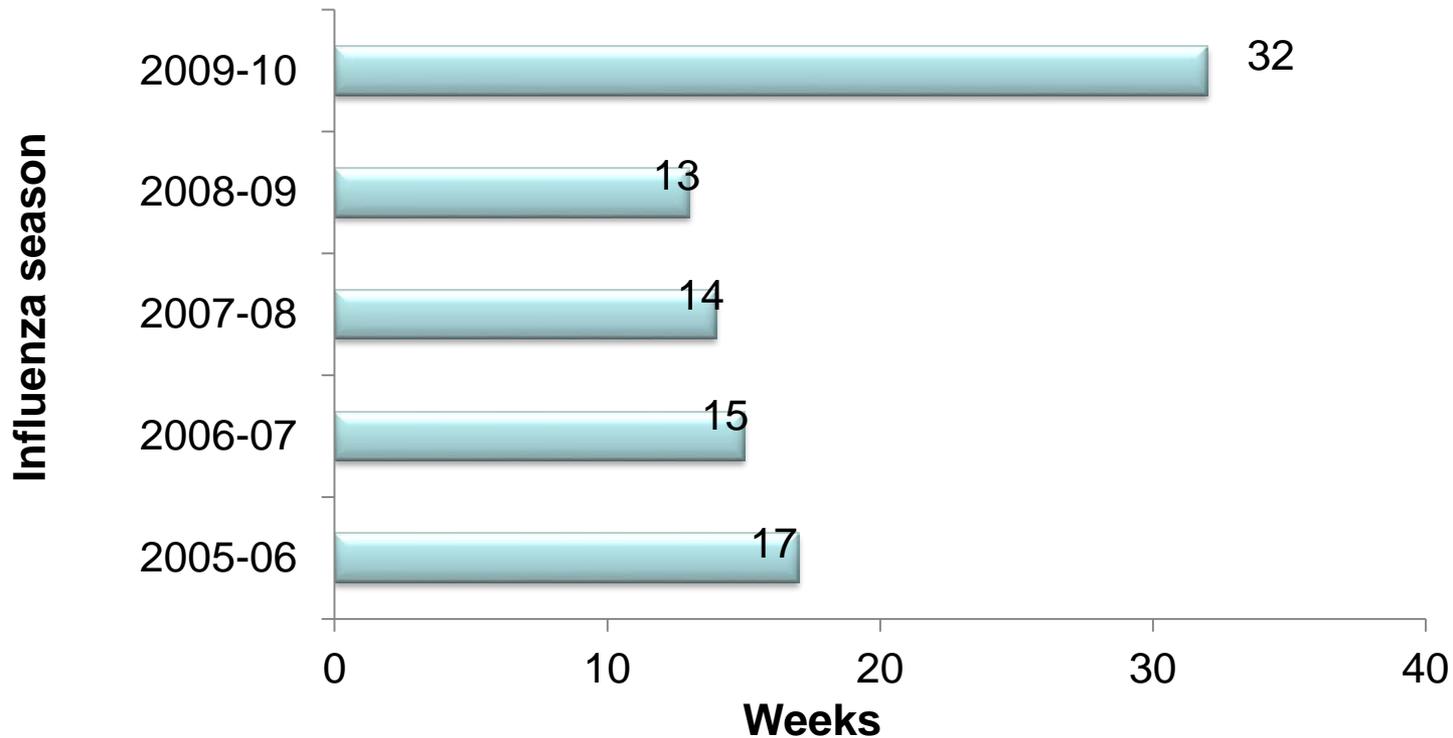
Week Ending October 31, 2009- Week 43



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



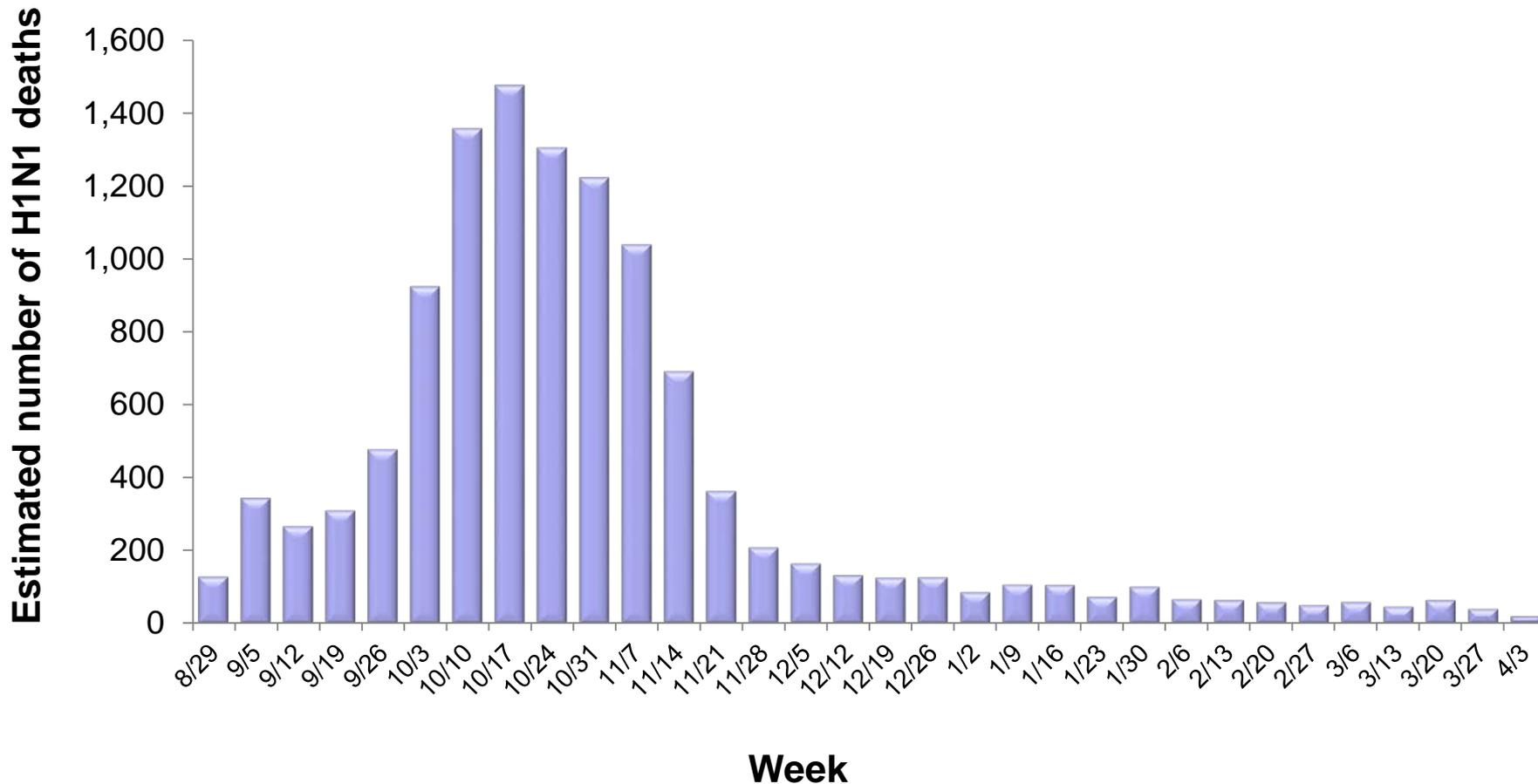
Duration of Recent Influenza Seasons



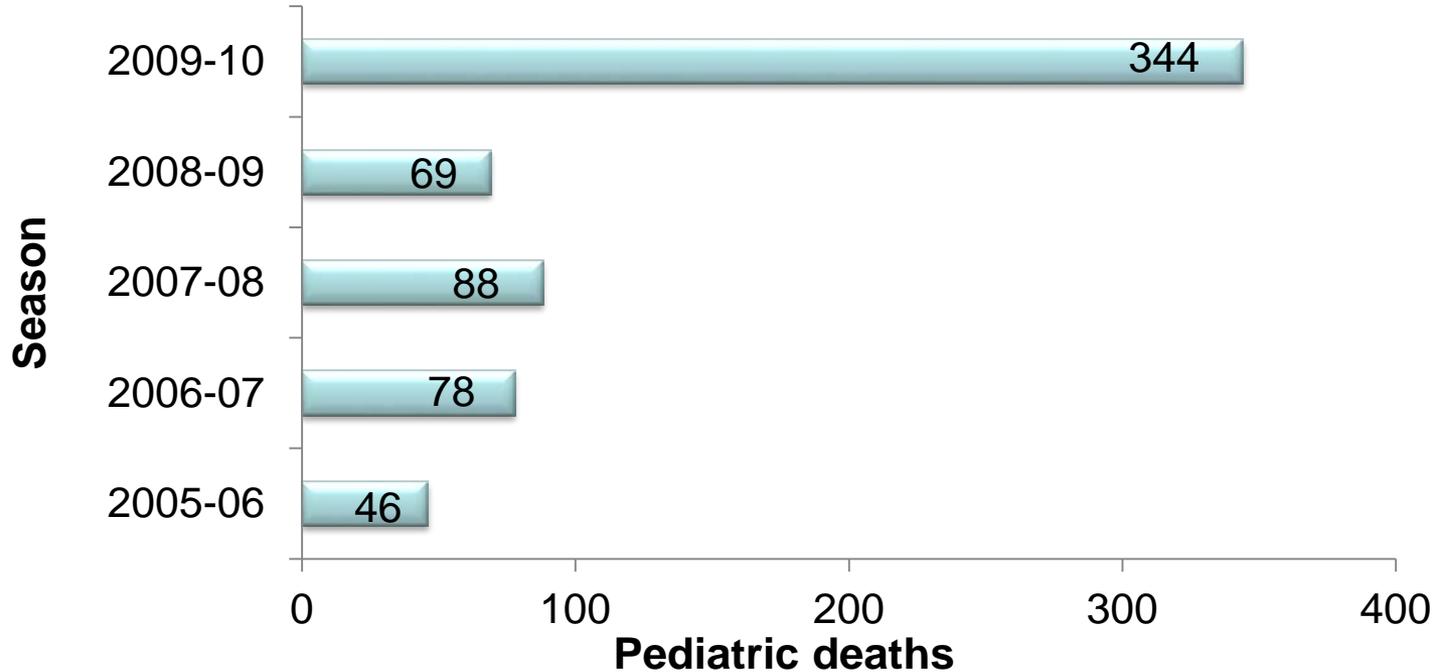
2009 H1N1 season lasted longer than previous seasons

Estimated Number of H1N1 Deaths

September 2009 – April 2010



Pediatric Deaths Reported During Recent Influenza Seasons



More pediatric deaths from flu reported in 2009-2010 season than in previous seasons



Myth #2

***In preparing for a more severe pandemic,
we were unprepared
for the 2009 H1N1 pandemic***

Many Pre-pandemic Planning Assumptions Were Not Experienced

	Planning Assumptions	H1N1 Pandemic
Case mortality ratio	2%	0.02%
Detection	Outside United States	San Diego County
Population susceptibility	Universal susceptibility to pandemic virus	Substantial immunity in the elderly
Decision making	Time to characterize severity/virulence	Decisions based on limited information

Flexibility allowed for an effective response





Myth #3

***Because we have the H1N1 experience,
no further preparations are needed***

Why H1N1 Still Matters

□ **Stephen C Redd, MD**

- *Myths and Misconceptions of the 2009 H1N1 Pandemic*

□ **Michael W Shaw, PhD**

- *H1N1 Laboratory Science Informing the Practice*

□ **Daniel B Jernigan, MD, MPH**

- *Epidemiology and Surveillance: Old and New Approaches for Pandemic Response*

□ **Julie Morita, MD**

- *Chicago Response to the H1N1 Pandemic: Strategy and Partnerships at the City Level*

□ **Vincent T Covello, PhD**

- *H1N1 Risk and Crisis Communication: Successes and Challenges*



H1N1 Influenza Laboratory Science Informing the Practice



Michael W Shaw, PhD

Associate Director for Laboratory Science

Influenza Division

National Center for Immunization and Respiratory Diseases

Centers for Disease Control and Prevention



Overview

- Detection of the virus**
- Development of the vaccine**
- Monitoring the pandemic virus**

Detection of Novel Swine Influenza

□ First case

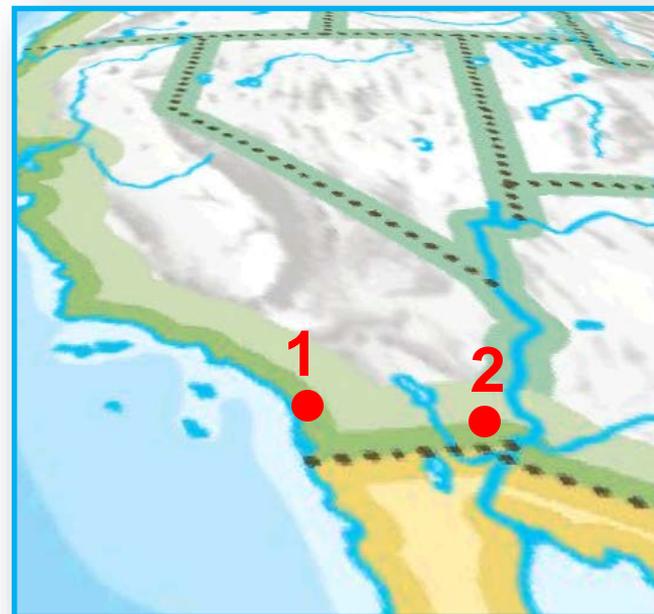
- 10 year old boy
- Identified on April 15, 2009 as part of a CDC-sponsored clinical trial

□ Second case

- 9 year old girl
- Identified on April 17, 2009, as part of CDC border flu surveillance

□ Next cases

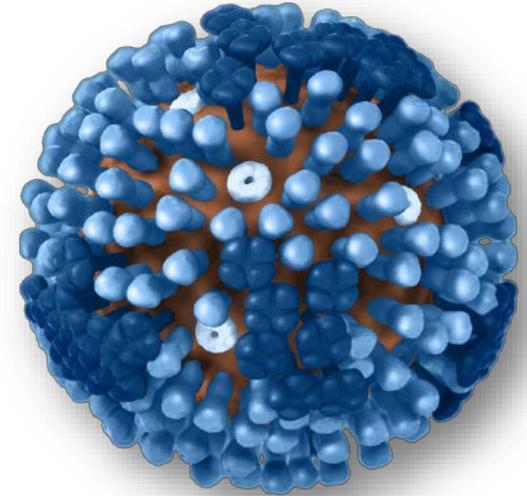
- Genetic match with cases in Mexico and Texas
- Mexico cases appeared to have more severe disease



Southern California, US



Virus of the Year: The Novel H1N1 Influenza



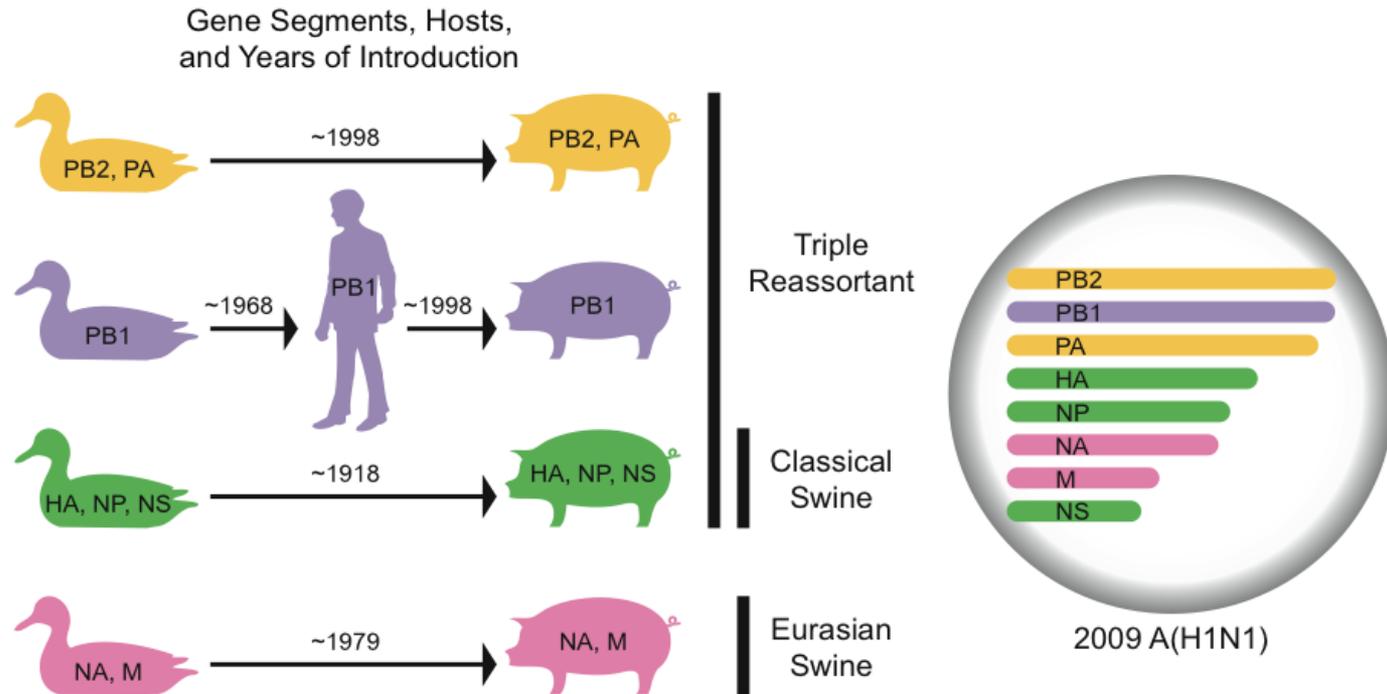
“Scientists characterized the new virus and distributed tests to detect it at record speed, sharing findings nearly in real time.”

– Science Volume 326 18 December 2009–

Behind the Doors of the Influenza Laboratories



Unveiling the H1N1 Genetic Composition



Phylogenetic analyses determine virus is derived from swine influenza

– Garten, Davis, et al. Science, 2009

Pandemic Planning and Preparedness Before April 2009: Laboratory Diagnostics

- Develop new diagnostic tests
- Conduct antiviral susceptibility testing
- Implement proficiency testing
- Improve access to viruses and reagents
- Improve virologic surveillance
- Increase laboratory training
- Improve surge capacity
- Develop policy and regulatory preparedness
- Provide guidance for clinicians

Overview

- Detection of the virus
- Development of the vaccine
- Monitoring the pandemic virus

2009 H1N1 Vaccine Development

❑ Selection of a candidate vaccine virus

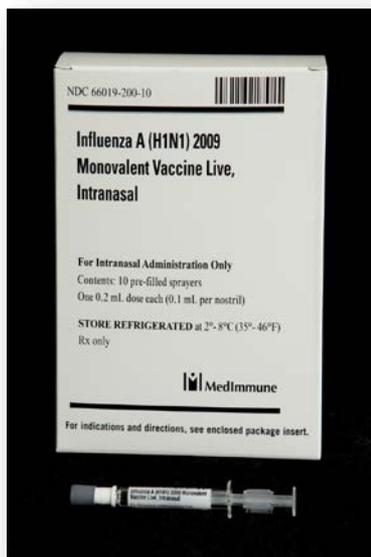
- **Challenge:** Identification of a strain representative of circulating viruses that grow in eggs
- **Partnerships:** WHO and FDA for strain selection; NYMC for generation of high-yield reassortant strain distributed to manufacturers
- **Methodology:** Same approach as used for seasonal influenza vaccines



2009 H1N1 Vaccine Development, cont.

□ Development of a candidate vaccine

- Vaccine candidate strain: A/California/7/2009 virus
- On May 23, 2009, CDC began sending the vaccine candidate strain to vaccine manufacturers for mass production of vaccine



Overview

- Detection of the virus
- Development of the vaccine
- Monitoring the pandemic virus

Tracking the H1N1 virus
Monitoring changes in the H1N1 genetic makeup

Tracking the 2009 H1N1 Virus

- ❑ PCR test for identification of the H1N1 virus in respiratory specimens



For **research purposes**

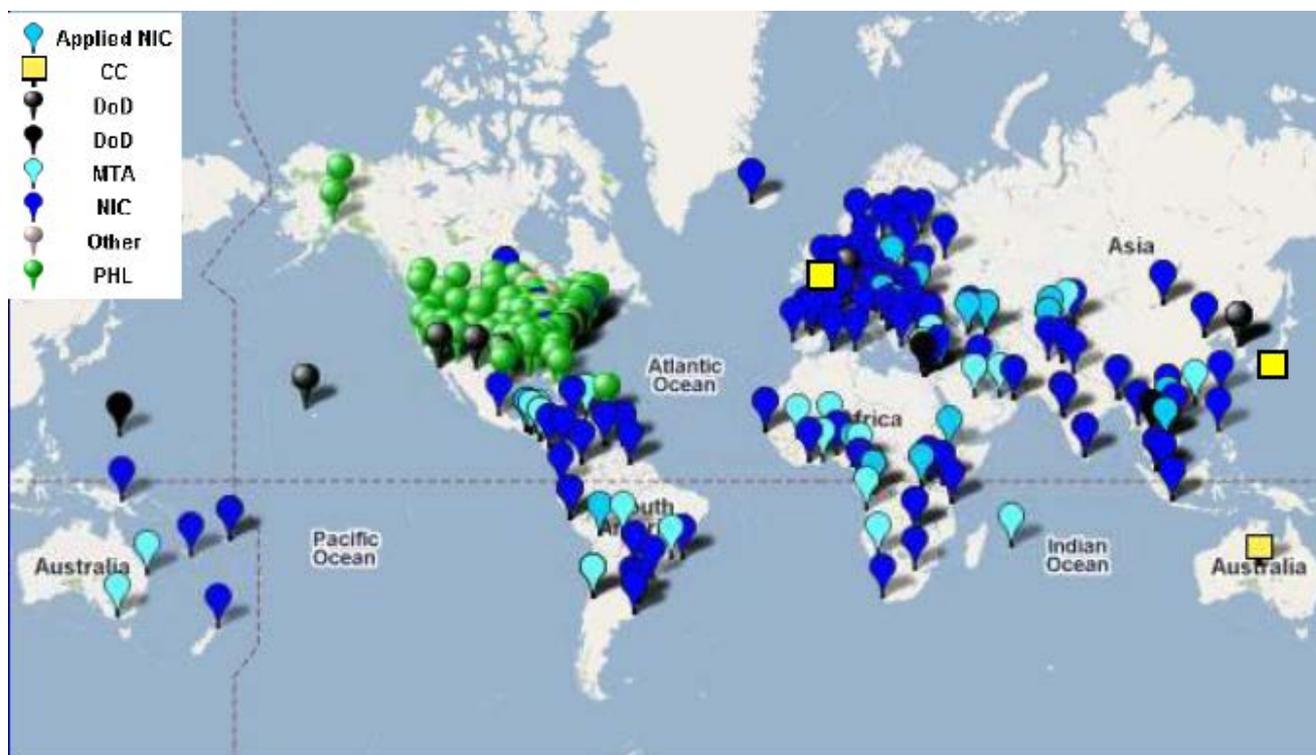


Emergency use authorization
April 28, 2009

**FDA-approved test for use in
diagnostic laboratories**

Tracking the 2009 H1N1 Virus, cont.

- 2,125 PCR kits to 432 laboratories in 142 countries
- 291 WHO HI test kits to 203 laboratories in 99 countries

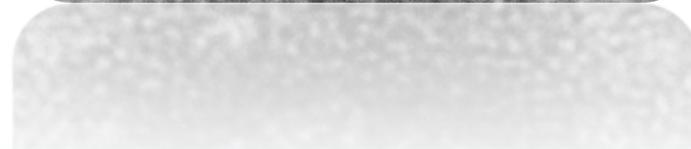
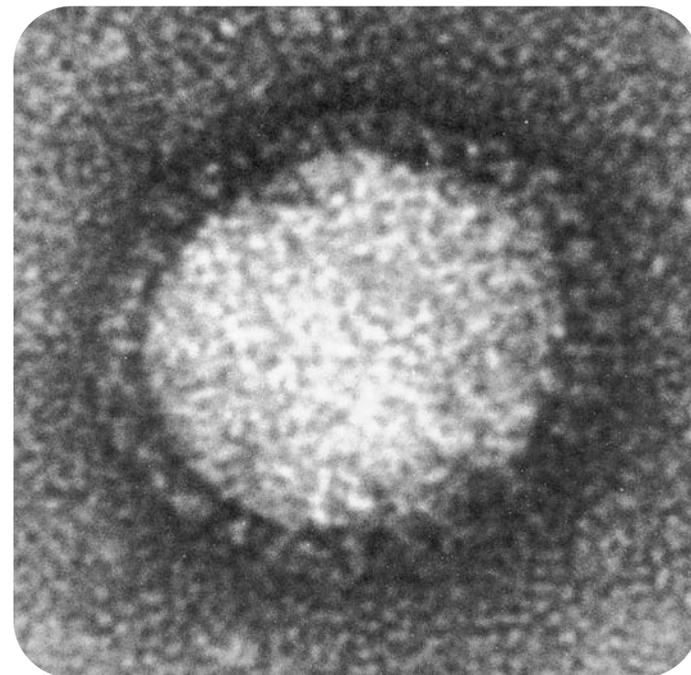


PCR, Polymerase chain reaction
HI, Hemagglutination inhibition



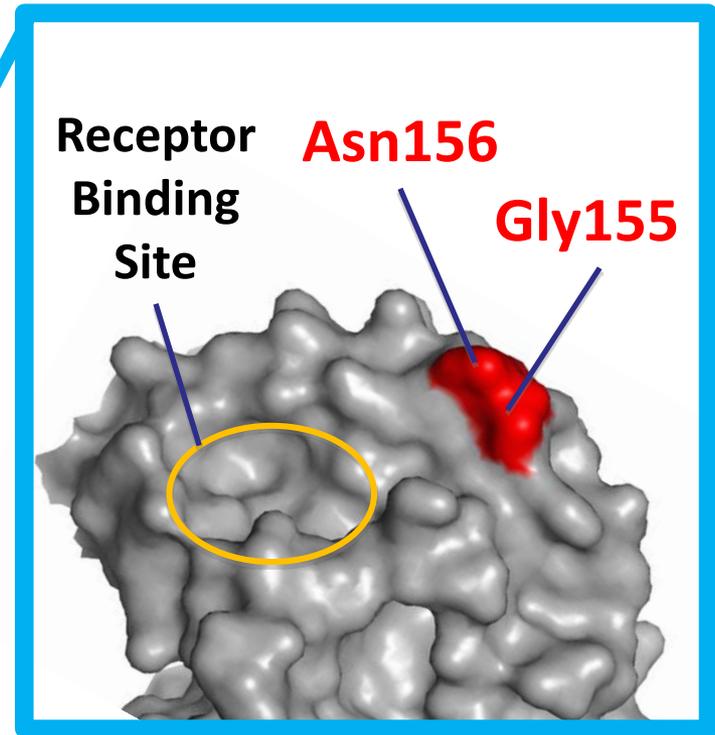
Monitoring Changes in the Virus Genetic Makeup

- ❑ **Genetic properties previously associated with changes in**
 - Transmissibility
 - Virulence
- ❑ **Antiviral susceptibility**
- ❑ **Match with the vaccine strain**
 - Changes in surface antigens

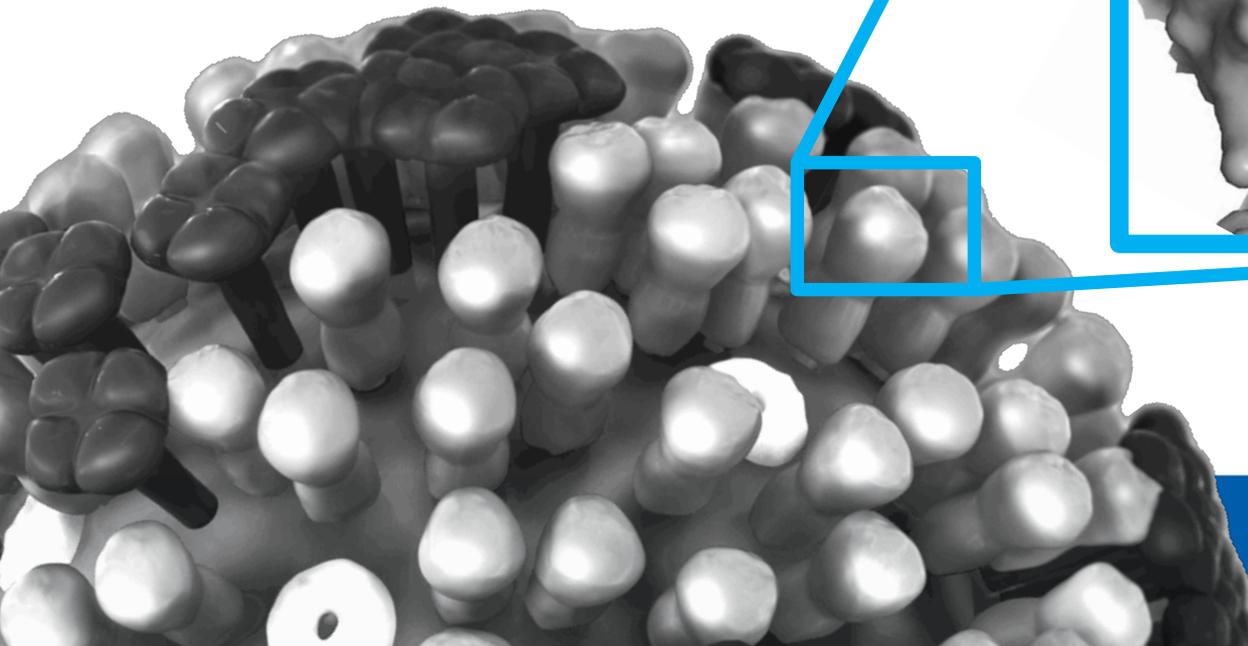


Virus Changes Being Monitored Now

- ❑ Amino acid changes at the apex of hemagglutinin are associated with reactivity to neutralizing antibodies
- ❑ Changes in cell receptor-binding pocket determining tissue tropism and ease of transmission



Hemagglutinin



Monitoring the 2009 H1N1 Virus

What is the Latest Information?

❑ Genetic changes

- No sustained transmission of genetic changes previously associated with increased transmissibility or virulence
- Changes associated with increased virulence in avian viruses have not had the same effect in the H1N1 pandemic strain

❑ Antiviral resistance

- 99% of viruses tested are susceptible to oseltamivir

❑ Vaccine match

- Good match between the circulating virus strains and the vaccine virus strain

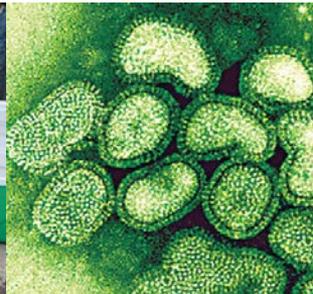
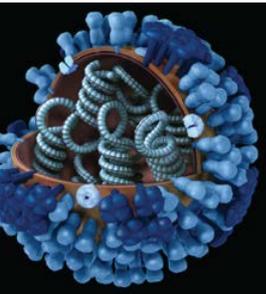
Lessons Learned

- ❑ **Basic laboratory science is the cornerstone for developing applications that can be rapidly deployed in an emergency**
- ❑ **Preparedness pays off and must be continued**
- ❑ **Partnership is critical**
 - Local to national to global
 - Laboratory, public health, healthcare, policy, other

H1N1: What Next?

- ❑ **Changes in the virus are expected as it adapts to the human host**
- ❑ **Changes in the virus are expected as the human population establishes herd immunity**
- ❑ **Any change in the frequency of antiviral resistance must be monitored to inform treatment recommendations**

Epidemiology and Surveillance: Old and New Approaches for Pandemic Response



Daniel B Jernigan, MD, MPH
CAPT, USPHS

Deputy Director, Influenza Division

National Center for Immunization and Respiratory Diseases
Centers for Disease Control and Prevention



Overview

- ❑ **Characteristics of the H1N1 pandemic in the United States**
- ❑ **New surveillance systems and methods for evaluation of the H1N1 pandemic**

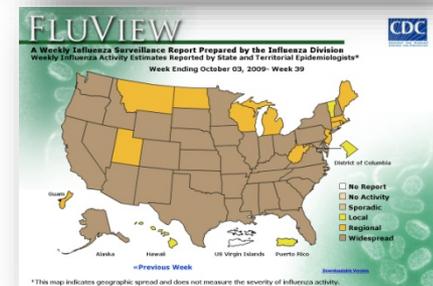
Multiple Efforts for Rapid Characterization of the H1N1 Pandemic

□ Early field investigations

- Case-contact field investigations and community surveys defined:
 - Transmission – e.g., household and secondary attack rates
 - Clinical severity – e.g., spectrum of illness and affected risk groups

□ Enhanced surveillance

- Existing systems were ramped up
- New systems were initiated

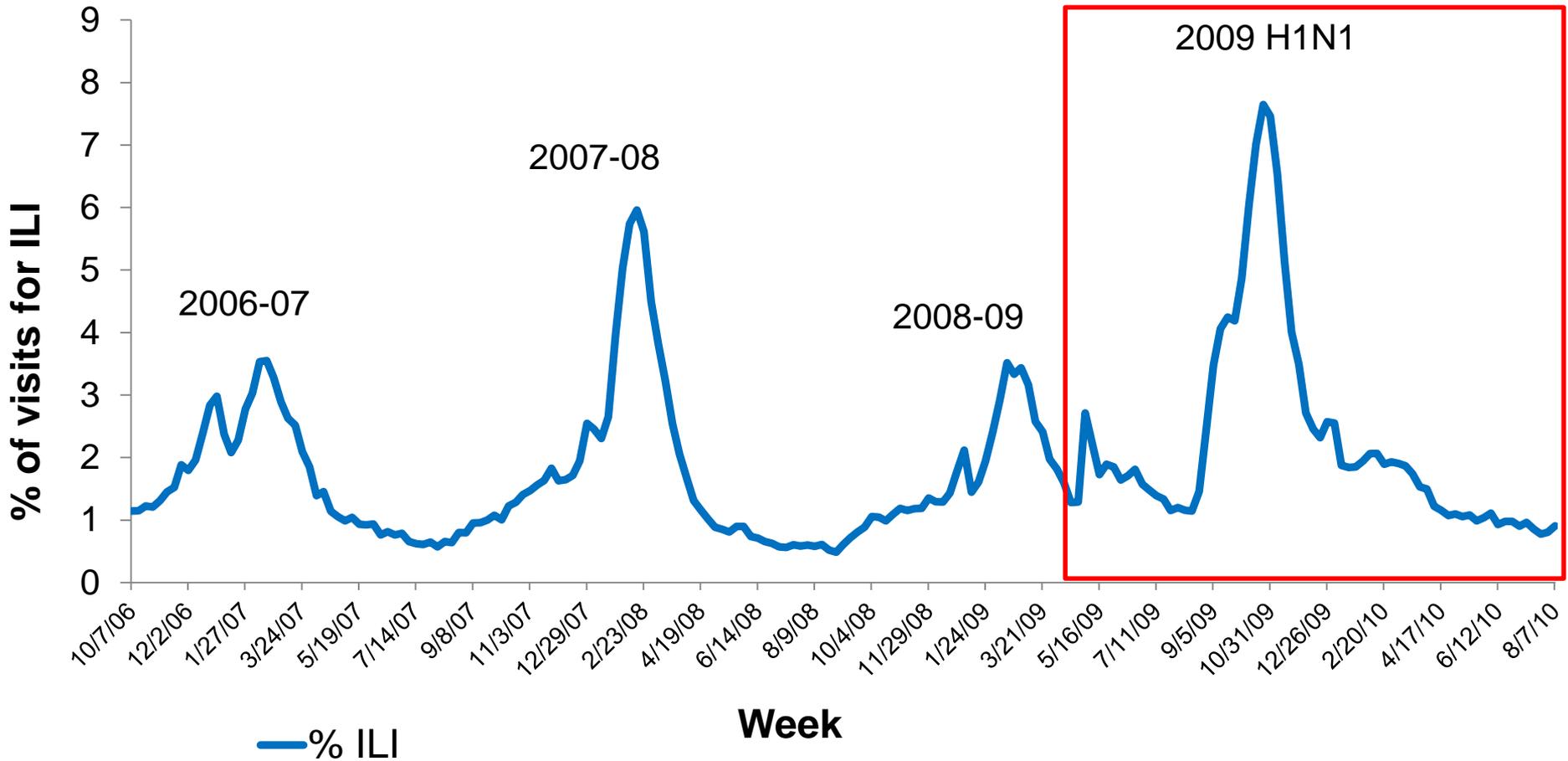


Tracking the Pandemic

Different Surveillance Systems Monitor Disease in Different Settings



Visits for Influenza-Like Illness (ILI) Surpassed Prior Seasons, Notably Among Younger Age Groups



Data are from the CDC Influenza-Like Illness Network (ILI-Net)



A Really Novel Surveillance System...

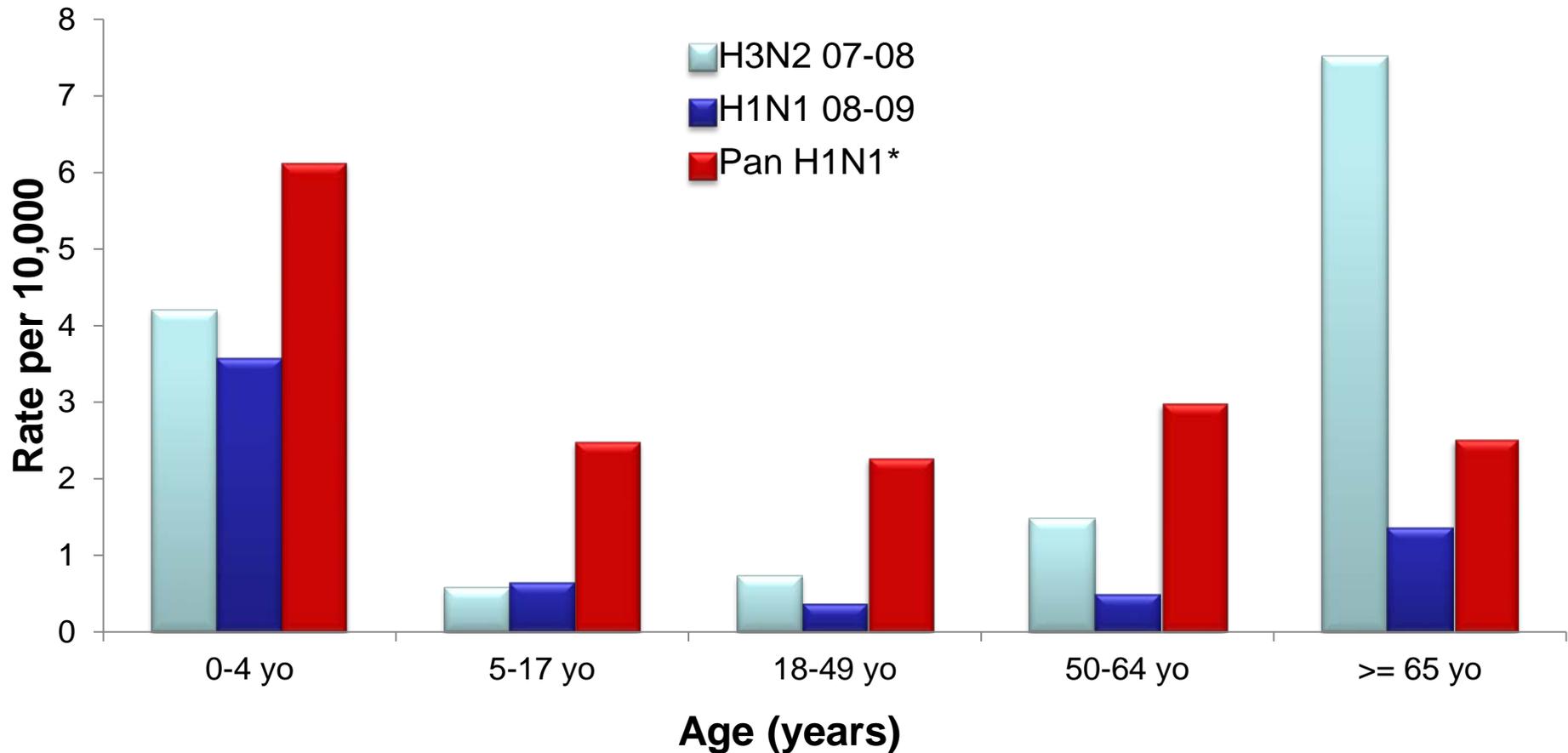


On Arrival at Camp
Cabin has **25** Campers



One Week Later
Cabin has **11** Campers

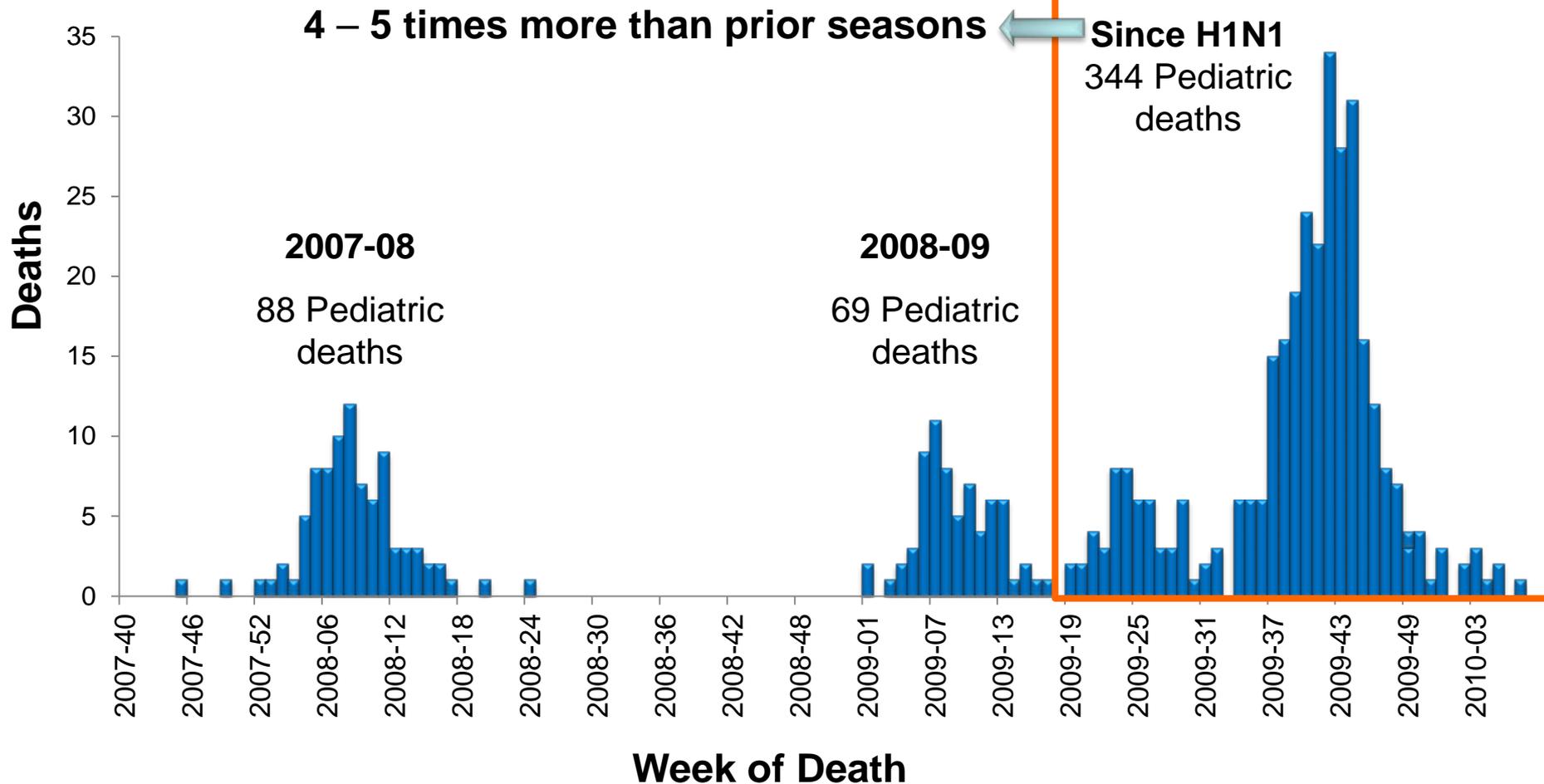
Hospitalization Rates Were Higher among Those Under 65 Years Compared with Prior Seasons



* Pan H1N1 is for data from Sep 1, 2009 to Jan 21, 2010



Number of Influenza-Associated Laboratory-Confirmed Pediatric Deaths

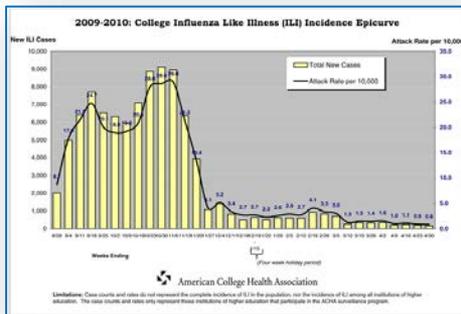


Overview

- ❑ **Characteristics of the H1N1 pandemic in the United States**
- ❑ **New surveillance systems and methods for evaluation of the H1N1 pandemic**

New Surveillance Activities for Monitoring the Pandemic

- ❑ School and college dismissal and illness monitoring
- ❑ Emergency department and intensive care surveillance
- ❑ BRFSS influenza illness and vaccine monitoring
- ❑ Laboratory-confirmed novel influenza case reports
- ❑ Population-based hospitalization surveillance



CDC Home | Search | Health Topics A-Z

National Center for Chronic Disease Prevention and Health Promotion

Behavioral Risk Factor Surveillance System

[BRFSS Home](#) | [Contact Us](#)

BRFSS

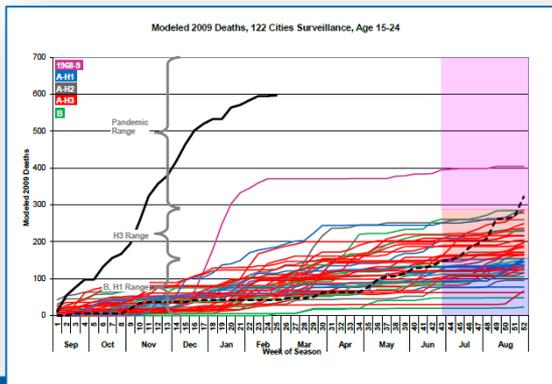
Turning Information Into Health

The Behavioral Risk Factor Surveillance System (BRFSS) is the world's largest, on-going telephone health survey system, tracking health conditions and risk behaviors in the United States yearly since 1984.

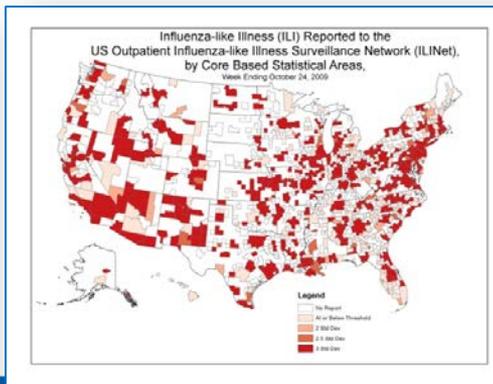
Currently, data are collected monthly in all 50 states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and Guam. [Learn More >](#)

New Epidemiologic Methods

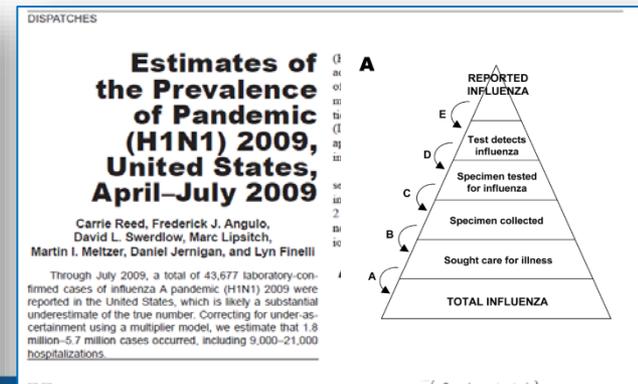
- Estimates for excess deaths
- Aberration algorithm for outbreaks using core-based statistical areas
- New framework for assessing severity and impact of emerging influenza viruses
- Pyramid model for estimating flu disease burden; collaboration of modelers and researchers



Armstrong, CID, in press
Burkom and Kniss, unpublished



Finelli, unpublished CDC data

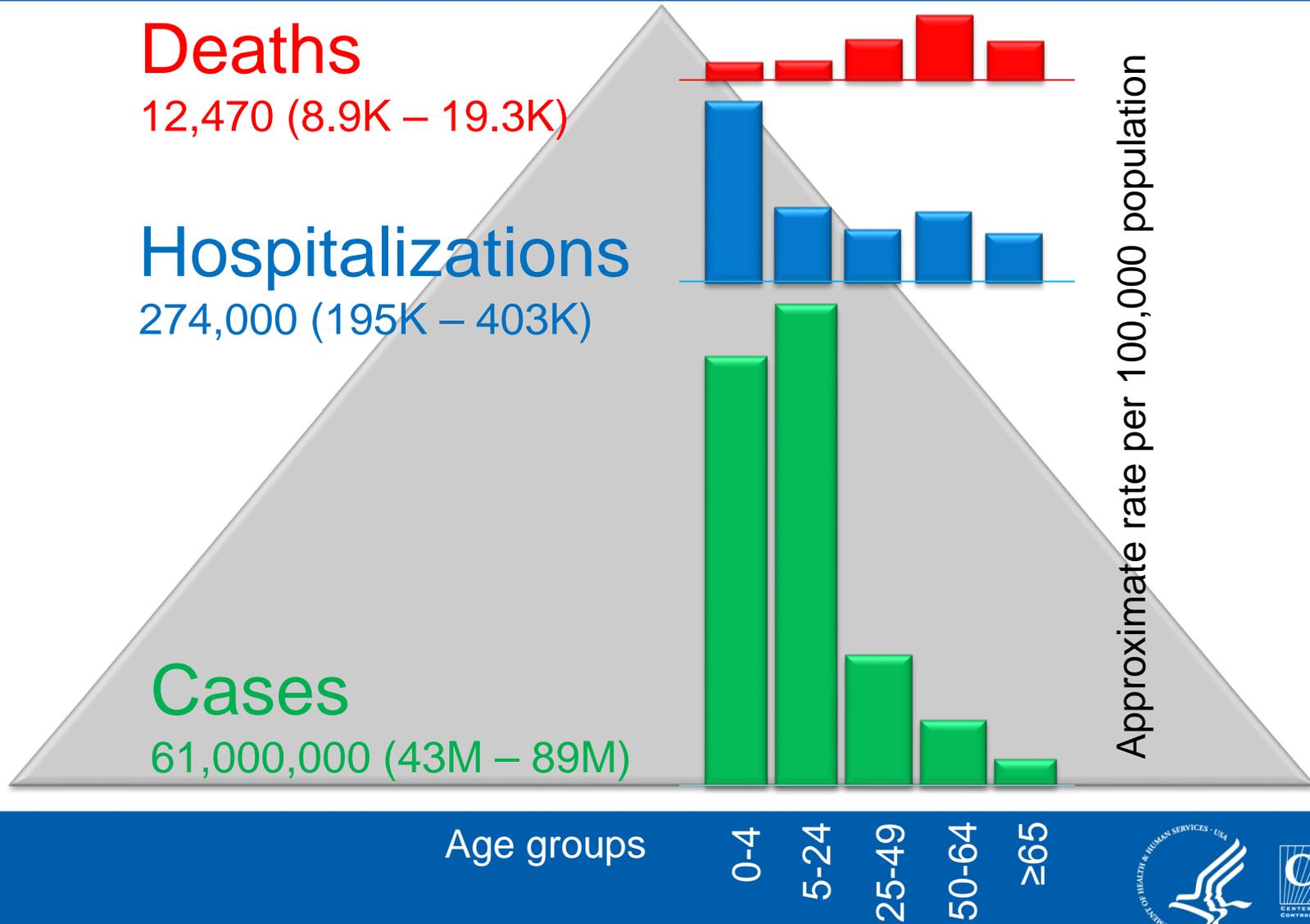


Reed, EID 2009



Characteristics of 2009 H1N1 Influenza Pandemic in the United States

April 15, 2009–April 10, 2010



Epidemiology and Surveillance in Action

- ❑ **Existing surveillance base allowed for rapid surge**
 - Prior years of flu surveillance provided baseline which was easily ramped up
 - Multiple surveillance systems were monitoring for any changes in character of pandemic or in the virus
- ❑ **Rapid translation of data for decision making**
 - Early case-contact and community investigations defined risk groups and directed vaccine policies
 - Ongoing assessment of severity tailored prevention and control activities and recommendations

Chicago Response to the H1N1 Pandemic: Strategy and Partnerships at the City Level



Julie Morita, MD
Deputy Commissioner
Chicago Department of Public Health

<http://www.cityofchicago.org/city/en/depts/cdph.html>

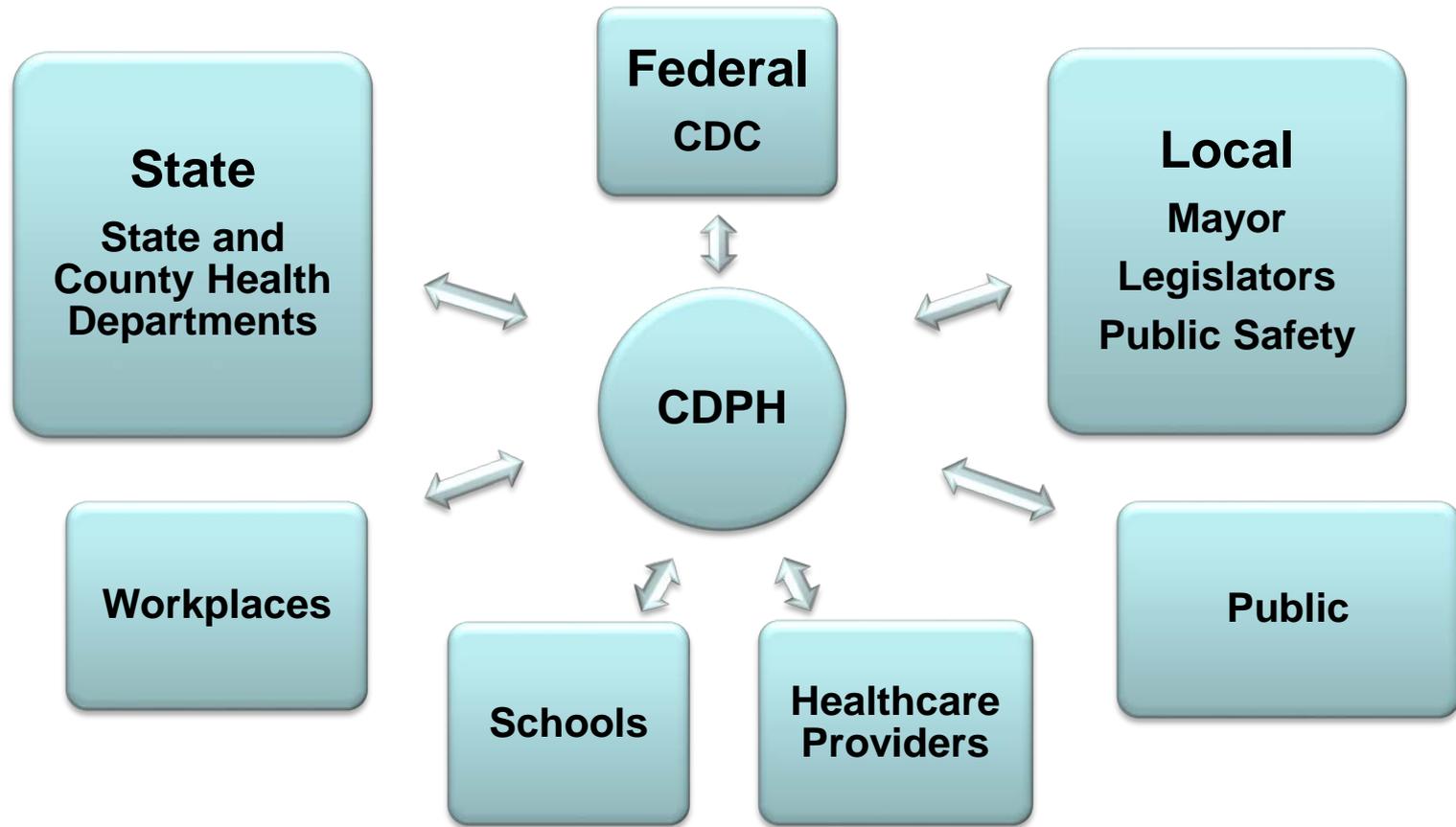


Summary of the H1N1 Pandemic in Chicago

- ❑ **Chicago population: 2.8 million**
- ❑ **First pandemic H1N1 cases confirmed: April 28, 2009**
- ❑ **Hospitalizations: 955**
- ❑ **Deaths: 30**
- ❑ **H1N1 vaccine doses available: 1,293,000**
- ❑ **H1N1 vaccine doses distributed: 1,119,900 (86.6%)**



Partners in Response





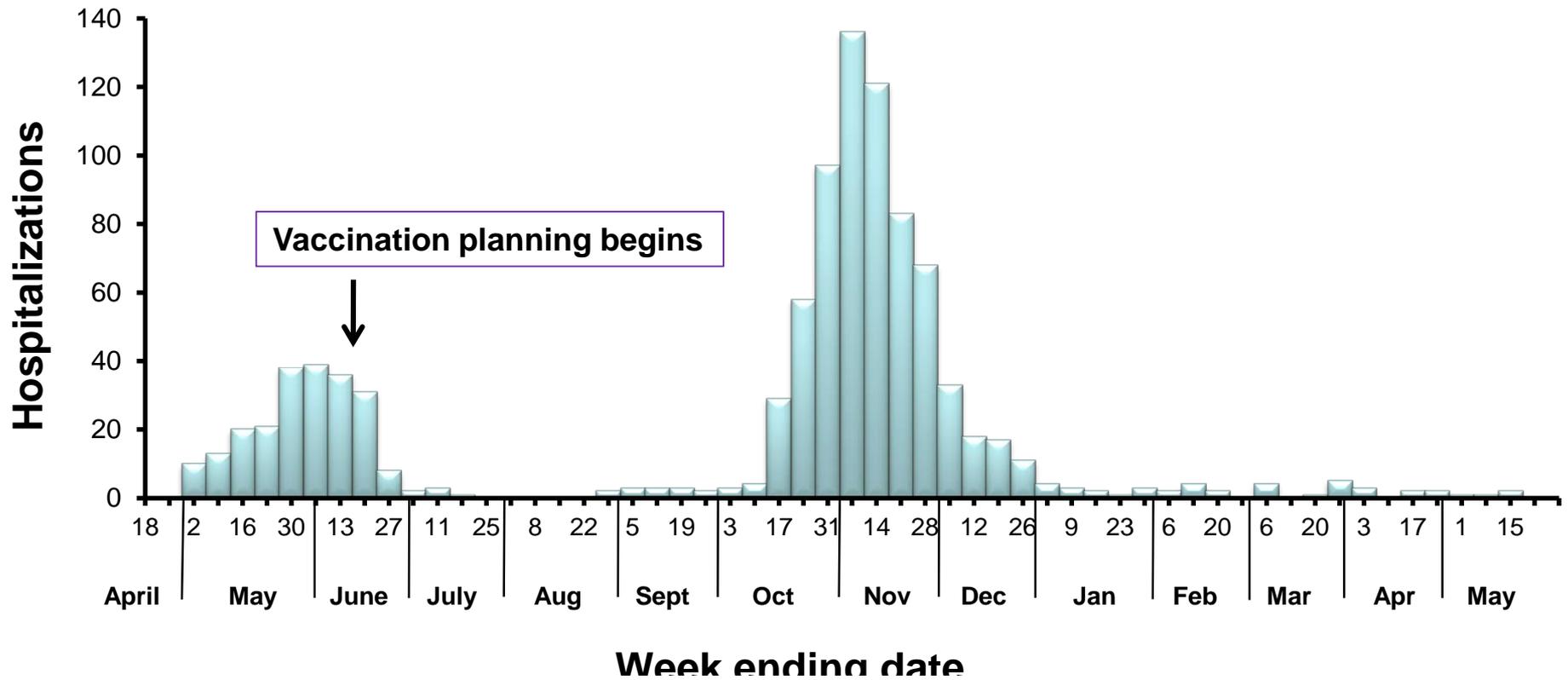
Pictured here are Mayor Richard M Daley and Chicago Public Schools CEO, Ron Huberman

Initial City Response

- ❑ **Surveillance**
- ❑ **Non-pharmaceutical community mitigation guidances**
 - School/daycare
 - Workplace
 - Social gatherings
- ❑ **Communication**
 - General public
 - Healthcare community
- ❑ **Vaccination planning**

Hospitalizations Associated with the H1N1 Pandemic

Chicago, April 28, 2009 – May 15, 2010



Chicago's Vaccination Plan

❑ Distribute vaccine to healthcare facilities

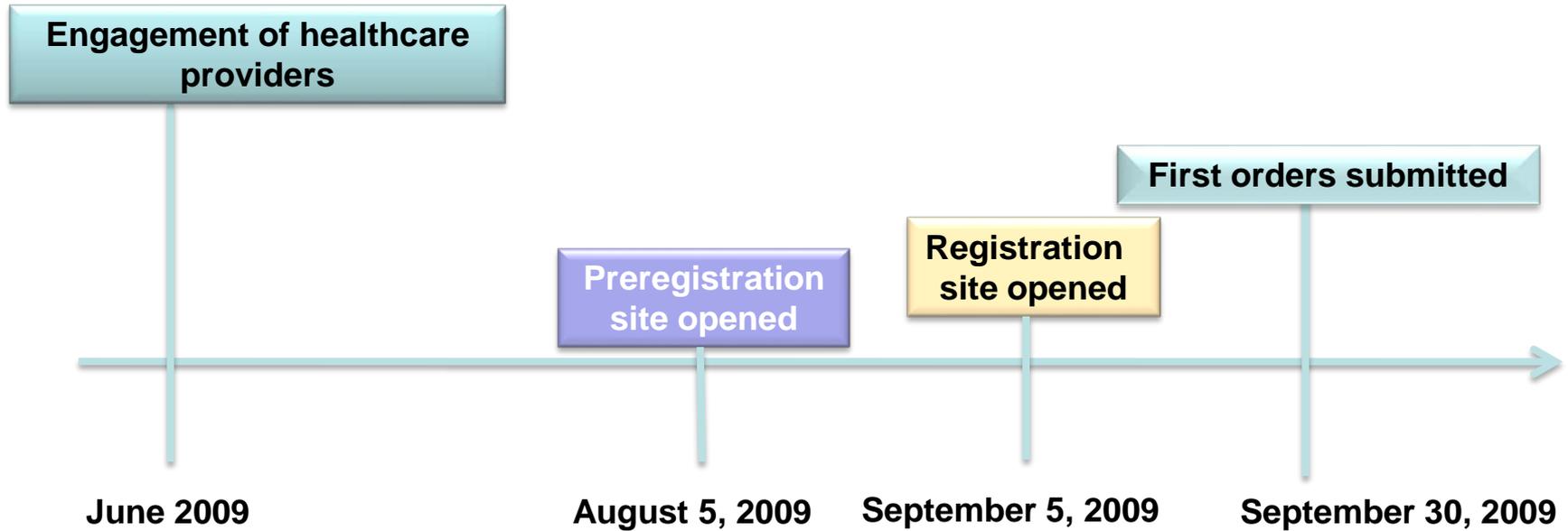
- For healthcare personnel
- For patients

❑ Conduct large-scale mass vaccination clinics

- For those without healthcare providers
- For those whose healthcare providers did not order vaccine



Vaccine Distribution Planning



Guiding Principles for Vaccine Distribution

- ❑ **Distribute to facilities based on patient population (prioritize ACIP target groups)**
- ❑ **Distribute entire allocation when available**
- ❑ **Distribute in small shipments broadly**
- ❑ **Do not stockpile for public health mass vaccination clinics**
- ❑ **Expand distribution to retail pharmacies and community vaccinators when recommendations expand beyond target groups**

Facilities Registered to Receive the H1N1 Vaccine

October 3, 2009 – March 20, 2010

Facility	Number	Percent
Pediatric providers	467	61.1
Adult providers	182	23.8
Long-term care facilities	51	6.7
Hospitals	37	4.8
Community vaccinators	9	1.0
Colleges/universities	8	1.0
Retail pharmacies	8	1.0
City of Chicago EMS	1	0.1
CDPH warehouse (for CDPH mass vaccination clinics)	1	0.1
All	764	100



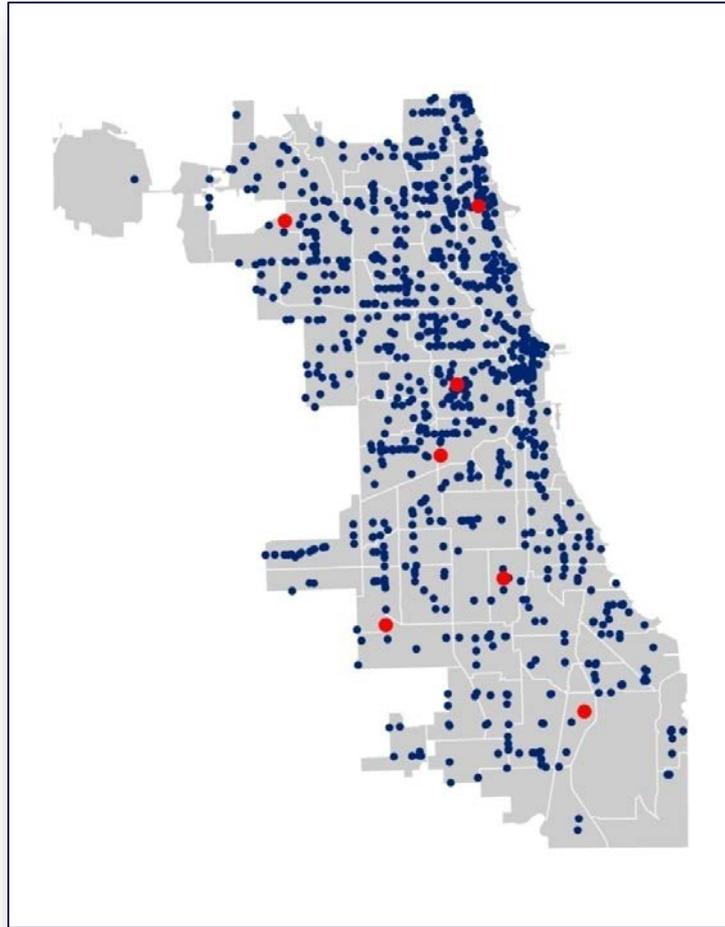
CDPH Mass Vaccination Clinics City Colleges of Chicago

- ❑ Richard J. Daley
- ❑ Kennedy King
- ❑ Malcolm X
- ❑ Olive Harvey

- ❑ Truman
- ❑ Westside Technical
- ❑ Wright



H1N1 Vaccine Distribution Sites in Chicago

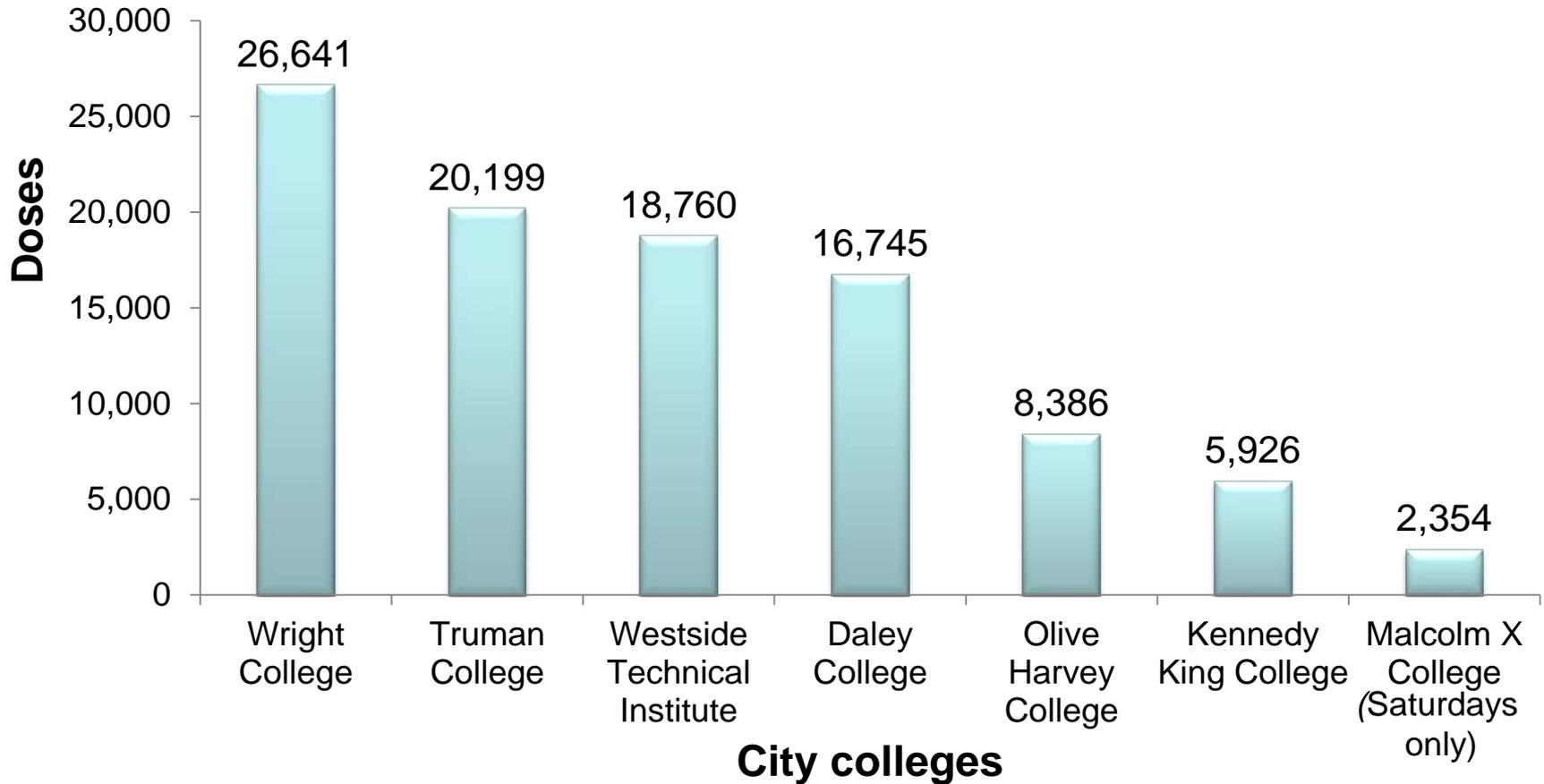


- Healthcare facility
- CDPH mass vaccination clinic

Guiding Principles for Mass Vaccination Clinics

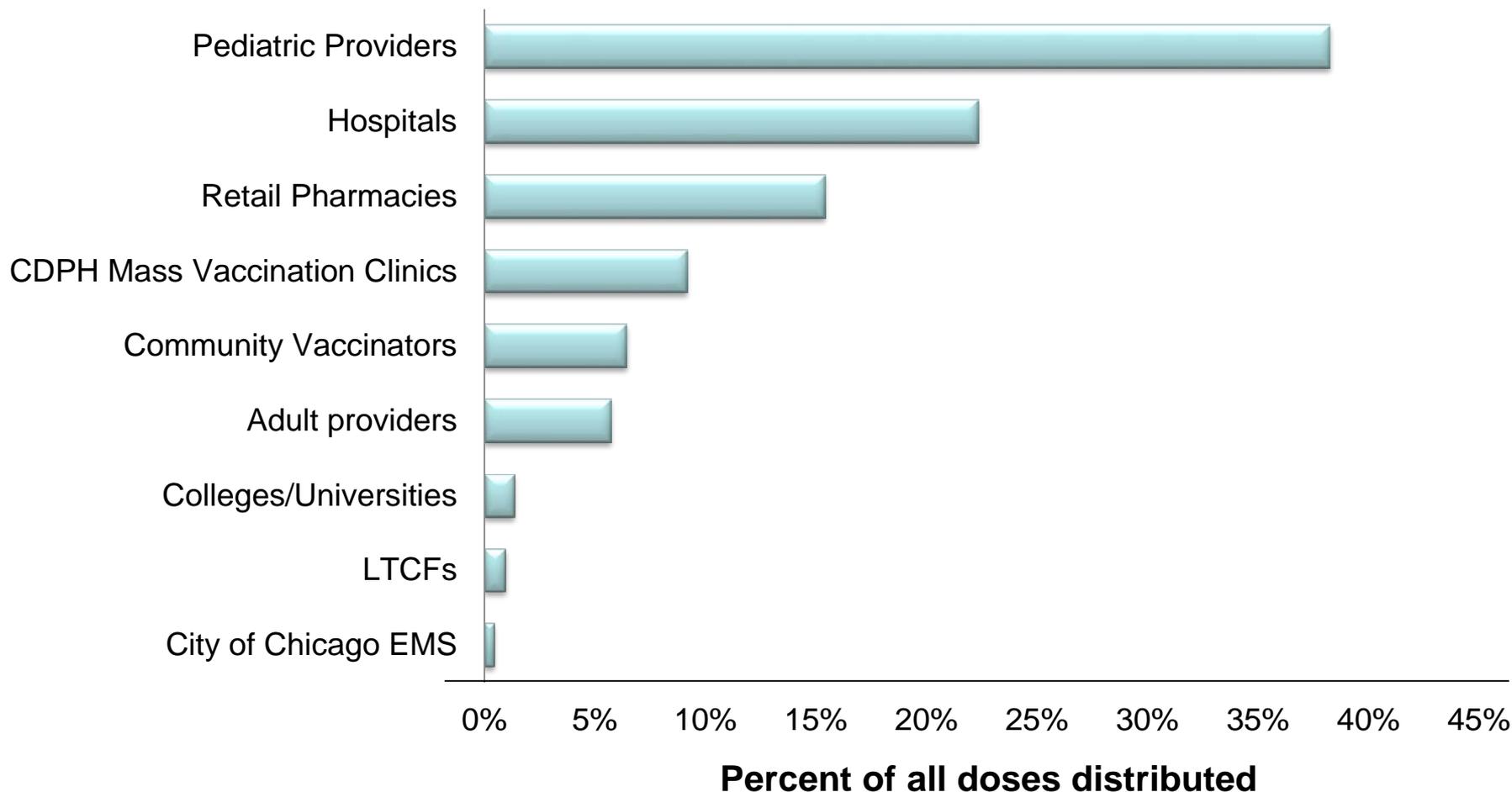
- ❑ **Vaccinate those without healthcare providers or whose healthcare providers do not have vaccine**
- ❑ **Promote clinics for those in ACIP target groups**
 - Do not deny service based on residence or target group
- ❑ **Reserve inactivated vaccine for patients with contraindications to LAIV**

Doses Administered by CDPH Mass Vaccination Site October 24, 2010 – December 19, 2010



Distribution of H1N1 Vaccine by Facility Type

October 3, 2009 – March 20, 2010

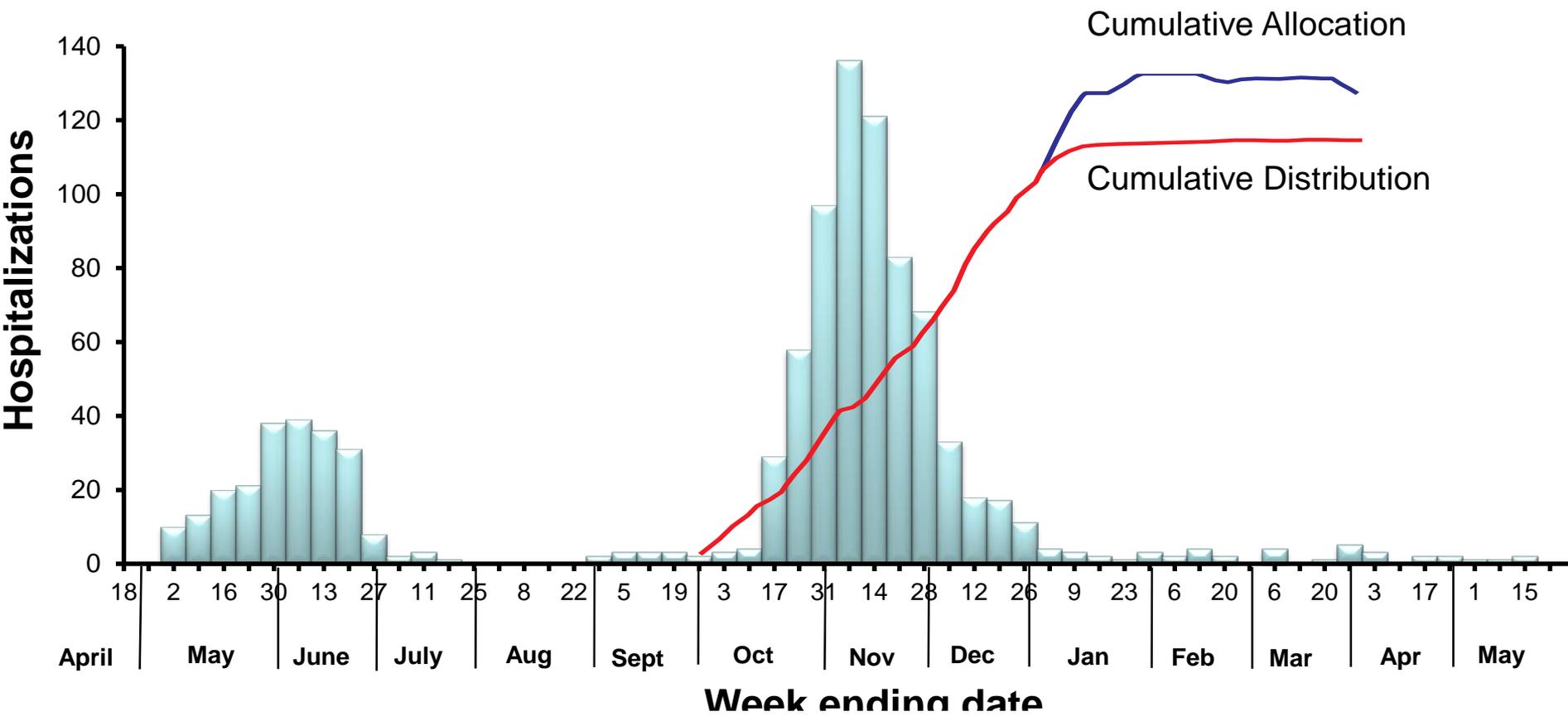


LTCF, Long-term care facility



Hospitalizations Associated with the H1N1 Pandemic and H1N1 Vaccine Allocation and Distribution

May 2009 – April 24, 2010



Vaccine Distribution: Successes

- ❑ **Healthcare facilities played a larger role in vaccine delivery than anticipated**
 - Less than 10% of vaccine administered by CDPH mass vaccination clinics
- ❑ **Pediatric provider enrollment (61%) was higher than other provider types**
- ❑ **Electronic registration was efficient**
- ❑ **Dedicated email and phone line assured high-quality customer service**

Vaccine Distribution: Challenges

- ❑ **Vaccine supply was inadequate when demand was the greatest**
- ❑ **Adult provider engagement was less efficient than pediatric provider engagement**
 - Minimal public health infrastructure for adult vaccination activities
 - Public health relationships less established with adult professional organizations (ACOG and ACP) than with pediatric professional organizations (AAP and AAFP)
- ❑ **Incomplete reporting of doses administered**

Vaccine Distribution: Potential Solutions

- ❑ **Improve vaccine manufacturing processes to increase production speed**
- ❑ **Dedicate sustained funding for development of adult immunization program similar to the childhood immunization program**
- ❑ **Improve use of immunization information systems (registries) to improve reporting of doses administered**
 - Increase recruitment of healthcare facilities
 - Develop interfaces between electronic health records and registries

Mass Vaccination: Successes

❑ Nearly 100,000 people vaccinated

- Minority residents: 80%
- Adults: 55%

❑ Public Health Emergency Response Funds essential

- Contract with a cold chain management company to manage mass vaccination inventory (vaccine and supplies)
- Overtime for CDPH staff
- Contract with temporary nursing agency provided vaccinators for CDPH mass vaccination clinics

Mass Vaccination: Challenges

- ❑ **Paper-based system was used for tracking vaccine receipt and administration**
 - Registration data not linked with registry
 - No reminder system for children needing second doses
- ❑ **Staff mobilization was challenging**
 - Union procedures
 - Contract procedures

Mass Vaccination: Proposed Solutions

- ❑ **Develop web-based mass vaccination registration system to interface with registry**
- ❑ **Establish contracts for services needed during emergencies**
- ❑ **Engage unions to establish efficient processes to mobilize union staff in emergency situations**

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 handkerchief, and if the Coughing or Sneezing Persists. Leave The Theatre At Once.

This Theatre has agreed to cooperate 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

A poster that appeared in Chicago movie theaters during the 1918-1919 influenza pandemic asking those who were sick to go home. Courtesy of the Office of the Public Health Service Historian.

Chicago couple with swine flu say 'I do'

Bride and groom wore face masks and stayed 10 feet away from guests

What you can try:

[Diagnose Connection Problems](#)

[More information](#)

AP Associated Press
 Updated 6/19/2009 3:00:08 PM EDT

Share | Print | Font: A + -

HIGHLAND PARK, Ill. — The bride wore white — and a face mask. Ilana Jackson and Jeremy Fierstien of Chicago wore surgical masks and latex gloves to their wedding last Sunday after finding out less than 48 hours before that they had swine flu. The couple decided to go ahead with the ceremony after doctors assured them guests wouldn't be put at serious risk.



To be sure, they also stayed 10 feet away from guests at all times, even walking around the gathering instead of down the aisle at a Highland



Chicago Public Schools chief Ron Huberman, Chicago Public Health Director Terry Mason, left, and Kilmer Elementary School Principal Miguel Trujillo speaks outside Kilmer Elementary School in Chicago Wednesday, April 29, 2009. Chicago school officials shut down an elementary school Wednesday after one child contracted a probable case of swine flu, and the Illinois Health Department said other cases are suspected in the state. (AP Photo/Eric Y. Exit)





Myth #3

***Because we have the H1N1 experience,
no further preparations are needed***

Key Areas to Ensure Preparedness for the Next Pandemic

□ Vaccine

- Enhancing surveillance – early identification for vaccine strain
- Improving technology for production
- Optimizing administration strategies

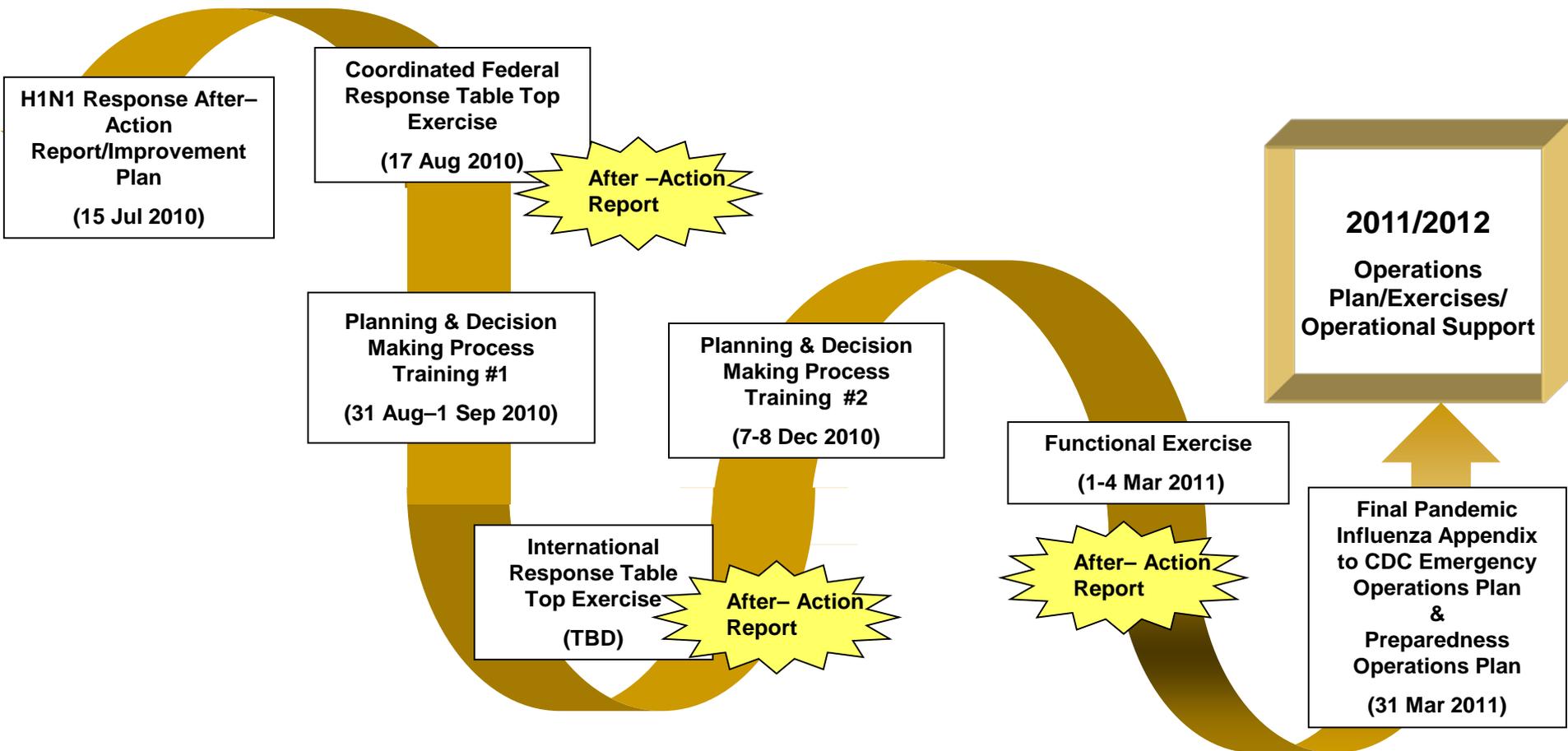
□ Continue planning, training, and exercising

□ Track animal influenza viruses with pandemic potential

Source; Meltzer M, CDC, unpublished data Pan H1N1 is for data from Sep 1, 2009 to Jan 21, 2010

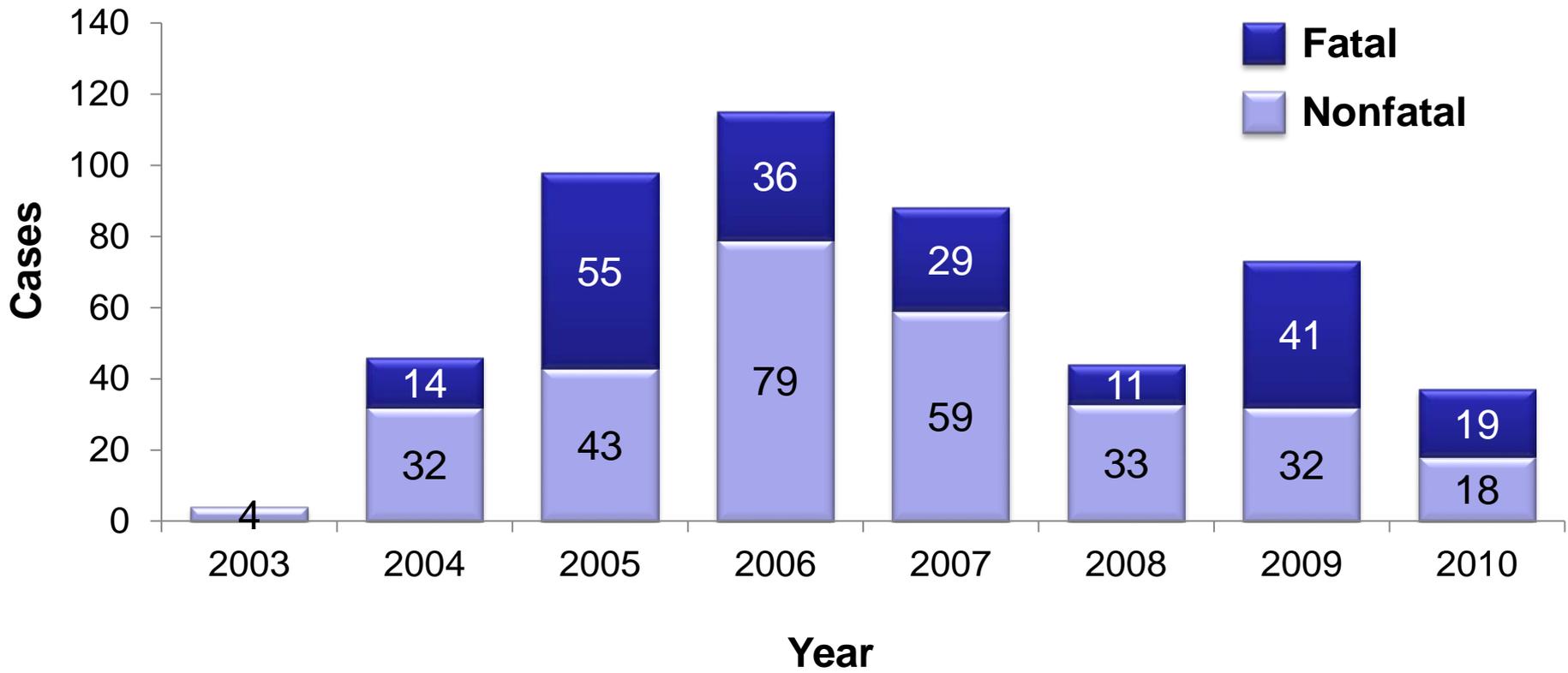


Planned 2010-2011 Pandemic Influenza Training and Exercises



Threat from New Avian Influenza Viruses Unchanged

Human cases of avian H5N1 influenza



WHO report, August 31, 2010
www.who.int/csr/disease/avian_influenza/country/cases_table_2010_08_31/en/index.html



Lessons Learned

Pandemic had a substantial health impact

Preparedness improved our response

Still more work to prepare



H1N1 Risk and Crisis Communication: Successes and Challenges

Dr. Vincent T Covello
Director
Center for Risk Communication
New York, New York

Presentation Goals

- (1) Share key concepts from the risk communication literature**
- (2) Evaluate CDC's H1N1 communications against these key concepts**
- (3) Identify challenges for the future**

Risk Communication: Key Concepts

When people are stressed and concerned, they typically:

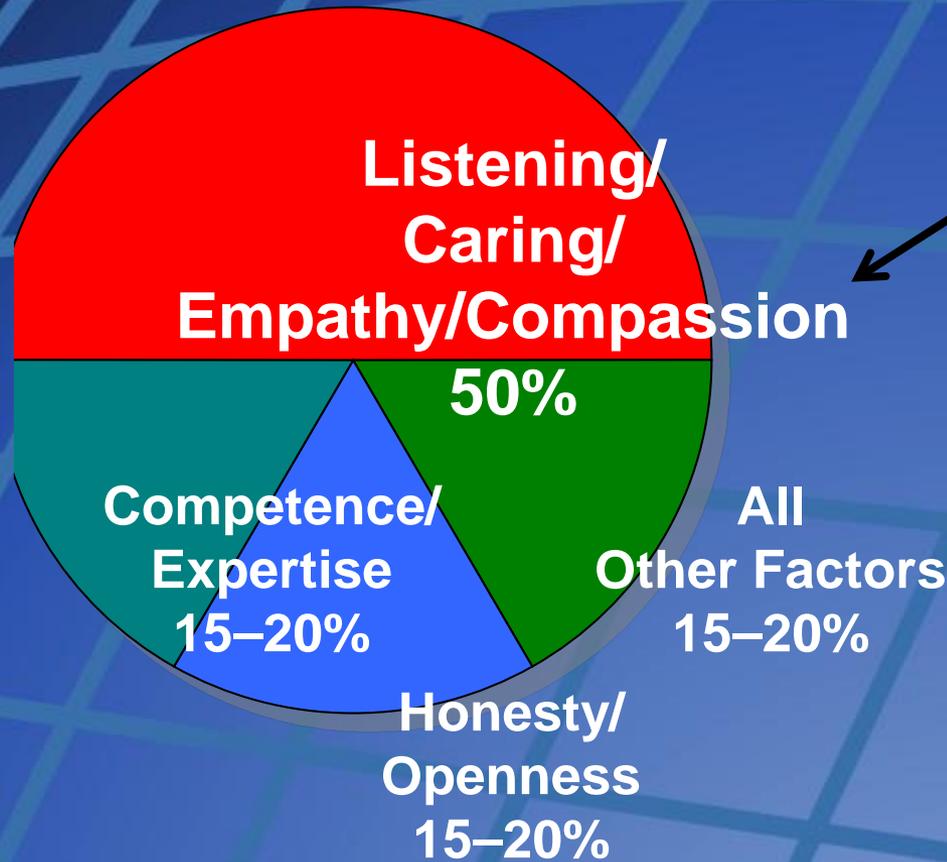
- (1)...want to know that you care before they care what you know**
- (2)...have difficulty hearing, understanding, and remembering information**
- (3)...trust most those willing to acknowledge the importance of uncertainty**

Risk Communication: Key Concepts

When people are stressed and concerned, they typically:

- (1)...want to know that you care before they care what you know
- (2)...have difficulty hearing, understanding, and remembering information
- (3)...trust most those willing to acknowledge the importance of uncertainty

People Want To Know That You Care Before They Care What You Know



Assessed
in first 9-30
seconds

People Want To Know That You Care Before They Care What You Know: 9/11

“The number of casualties will be more than any of us can bear ultimately.”

“My heart goes out to all of the innocent victims of this horrible and vicious act of terrorism.”

Mayor Giuliani, 9/11



People Want To Know That You Care Before They Care What You Know: CDC's H1N1 Communications

“First I want to recognize that people are **concerned** about this situation.

We hear from the public and from others about their **concern**, and we are worried, as well.”

Dr. Richard Besser, CDC Acting Director
H1N1 News Conference, April 24, 2010

People Want To Know That You Care Before They Care What You Know: CDC's H1N1 Communications

- ❑ Extensive use of risk communication
 - “Caring” principles and templates
- ❑ “Templates” – Tools derived from the risk communication literature
- ❑ Examples:
 - ✓ CCO Template (Compassion, Conviction, Optimism)
 - ✓ CAP Template (Compassion, Action, Perspective)

Risk Communication: Key Concepts

When people are stressed and concerned, they typically:

- (1)...want to know that you care before they care what you know
- (2)...have difficulty hearing, understanding, and remembering information
- (3)...trust most those willing to acknowledge the importance of uncertainty

People Have Difficulty, Hearing, Understanding, and Remembering Information:

CDC's H1N1 Communications

- ❑ Extensive use made of risk communication **“KISS”** templates
- ❑ **KISS: Keep It Simple and Short**
(e.g., Bullets, Colors, Information Chunks)
- ❑ Examples:
 - ✓ **“Rule of 3”** Template
 - ✓ **“27/9/3”** Template
 - ✓ **“Primacy/Recency”** Template

People Have Difficulty, Hearing, Understanding, and Remembering Information:

The Rule of 3 (27/9/3)

☐ Everything in Threes:

- ✓ Three Key Messages

 - (27 words, 9 seconds, 3 messages)

- ✓ Repeat Messages at Least Three Times (e.g., Triple T Model)

- ✓ Provide Three Supporting Facts or Credible Sources for Each Key Message

Message Map

Stakeholder
Question or
Concern:

Key Message 1

9 words on
average

Key Message 2

9 words on
average

Key Message 3

9 words on
average

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People Have Difficulty Hearing, Understanding, and Remembering Information: CDC's H1N1 Communications

- ❑ **65 Pandemic Influenza Message Maps**

Posted on pandemicflu.gov in 2006

- ❑ **Message Mapping Topics**

Preparedness, H5N1 avian influenza, pandemic influenza, antiviral medications, vaccines, human-to-human transmission, pandemic response, etc.

- ❑ **Message Mapping**

Ongoing CDC activity based on availability of new science and policy

People Have Difficulty, Hearing, Understanding, and Remembering Information:

Message Mapping References

- ❑ *“Risk Communication and Message Mapping: A New Tool for Communicating Effectively in Public Health Emergencies and Disasters,” Journal of Emergency Management Vol. 4, No. 3, May/June: 25-40 (2006).*
- ❑ *“Effective Media Communication during Public Health Emergencies: A World Health Organization Handbook” World Health Organization, United Nations: Geneva, April 2007.*

Risk Communication: Key Concepts

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**People Trust Most Those Willing To
Acknowledge the Importance of
Uncertainty:
CDC's H1N1 Communications**

**Extensive use made of risk communication
“Uncertainty” principles and templates**

People Trust Most Those Willing To Acknowledge the Importance of Uncertainty: CDC's H1N1 Communications

“I want to acknowledge the importance of **uncertainty**.

At the early stages of an outbreak, there's much **uncertainty**, and probably more than everyone would like.

Our guidelines and advice are likely to be **interim and fluid, subject to change as we learn more.**”

Dr. Richard Besser, CDC Acting Director
H1N1 Press Conference, April 23, 2009

People Trust Most Those Willing To Acknowledge the Importance of Uncertainty: CDC's H1N1 Communications

The opening of the vaccination campaign for H1N1 is **“going to be a little bumpy.”**

Dr. Thomas Frieden, CDC Director
H1N1 Press Conference, Sept. 25, 2009

People Trust Most Those Willing To Acknowledge the Importance of Uncertainty

□ Lesson Learned:

“Messages about numbers or estimates need to be bracketed with statements about uncertainty.”

□ Examples:

✓ 2010: H1N1 Vaccine Availability

(August and October)

✓ 2010 BP Oil Spill

April, 2010 – 5,000 barrels/day

June, 2010 – 60,000 barrels/day

People Trust Most Those Willing To Acknowledge the Importance of Uncertainty

- ❑ “Nothing is more important in pandemic risk communication than persuading the public (and the politicians) **to think probabilistically.**
- ❑ Public health officials need **to insist on their uncertainty.**
- ❑ They need **to make uncertainty the message, not the preamble to the message.”**

Dr. Peter Sandman

People Trust Most Those Willing To Acknowledge the Importance of Uncertainty: CDC's Crisis and Emergency Risk Communication (CERC) Training

- Spearheaded by CDC's Dr. Barbara Reynolds
- CERC Course Materials (e.g., books and videos)
- CERC Online Training
- CERC On-Site Training
- CERC/RiskSmart Certification Training

Three Communication Challenges

- ❑ Cultural Diversity
- ❑ Message Timeliness, Coordination, and Consistency
- ❑ Social Media

Three Communication Challenges

Cultural Diversity

**Message Timeliness, Coordination,
and Consistency**

Social Media

Three Communication Challenges

- ❑ Cultural Diversity
- ❑ Message Timeliness, Coordination, and Consistency
- ❑ Social Media

Three Communication Challenges

- ❑ Cultural Diversity
- ❑ Message Timeliness, Coordination, and Consistency
- ❑ Social Media

**“If I had all day to cut a large tree,
I would spend most of the day
sharpening my axe.”**

—Abraham Lincoln

**“It takes me an average of two weeks
to prepare an impromptu speech.”**

—Mark Twain

PUBLIC HEALTH GRAND ROUNDS

Office of the Director

September 16, 2010

