

Novel H1N1 Influenza and nH1N1 Vaccine

Michigan Update

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Health

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Today's Outline

- nH1N1 Mitigation Goals
- nH1N1 Update
- nH1N1 Response Pillars
 - The nH1N1 Vaccine Campaign

nH1N1 Mitigation Goals

- To limit the burden of disease
- To minimize social disruption
- Assist in getting treatment to those citizens in need

DRAFT 2.0

June 2008

Michigan Pandemic Influenza State Operational Plan



Preparedness-Local

“All Emergencies are Local”

■ All 45 local health departments:

- **Health Officer with legal authorities**
- **Medical Director**
- **Emergency Preparedness Coordinator**
- **Immunization Staff**
- **Communicable Disease Staff**

- **Coordination of plans**
- **Partnerships**
 - **Emergency Management**
 - **Businesses**
 - **Community/organizations**
 - **Schools**
 - **Healthcare**

Monroe County

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Public Health Emergency Preparedness

Planning. Preparing. Protecting.



Please click on one of the headings below to obtain information on the topic of interest.

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- [Family and Household Preparation](#)
- [Community Organizations](#)
- [Professionals and Business](#)

During and After a Disaster

- [If a disaster does occur](#)
- [Tips for power outages](#)
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Announcements

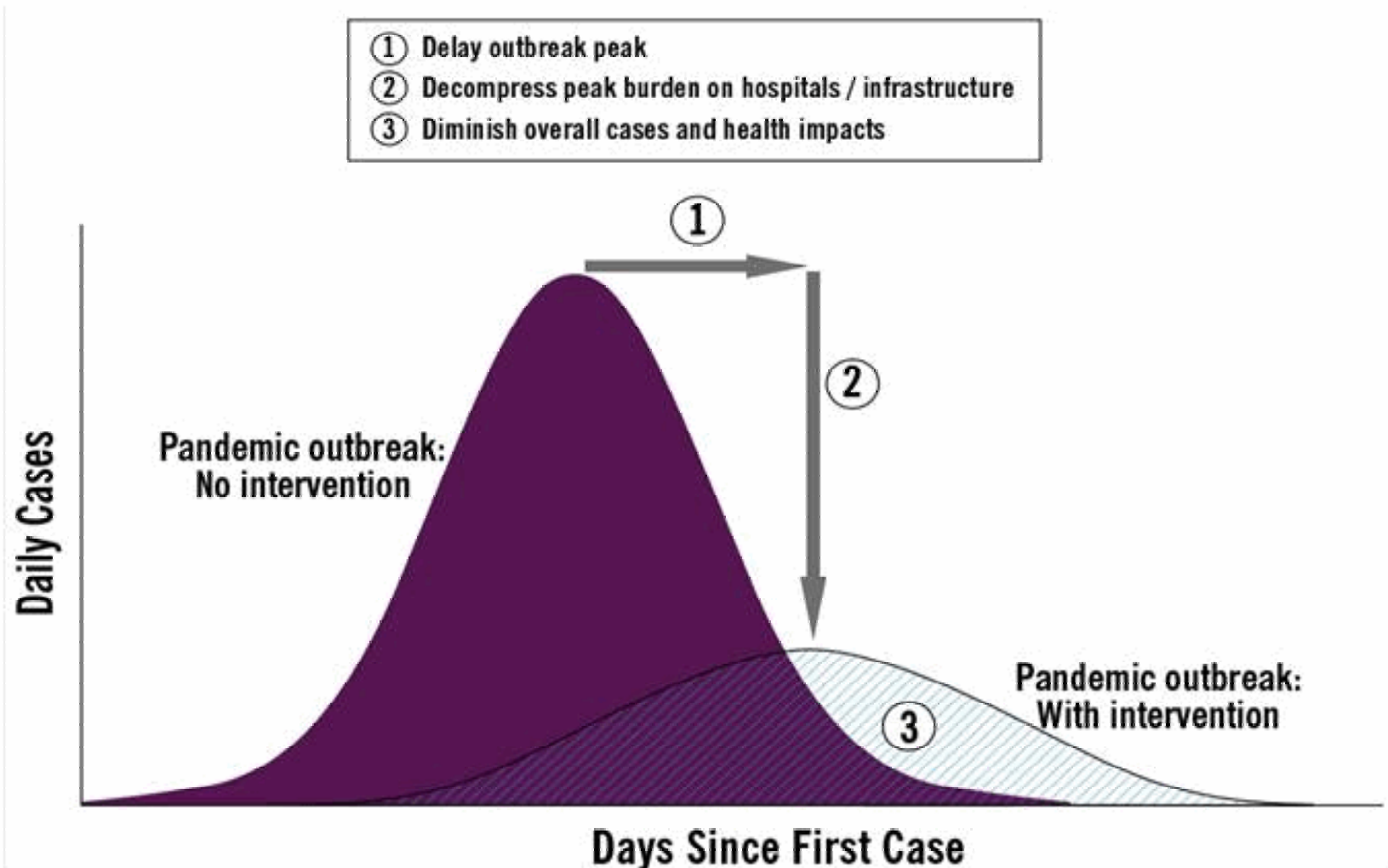
[Registration for Pandemic Flu Symposium](#)

In preparation for Pandemic Influenza, a toolkit has been released



Goal of Mitigation

Figure 1. Goals of Community Mitigation



H1N1 Update

2009 Novel Influenza A (H1N1)

- April 2009, Mexico and SE California
- Rapid spread through Mexico and US
- May 2009, intercontinental spread
- WHO Pandemic ***Phase 6- June 2009***

International Epidemiology Update

2009 H1N1 Influenza

As of October 2, 2009:

- World Health Organization (WHO) regions have reported over 343,298 laboratory-confirmed cases
- At least 4,108 deaths
- The laboratory-confirmed cases represent a substantial underestimation of total cases

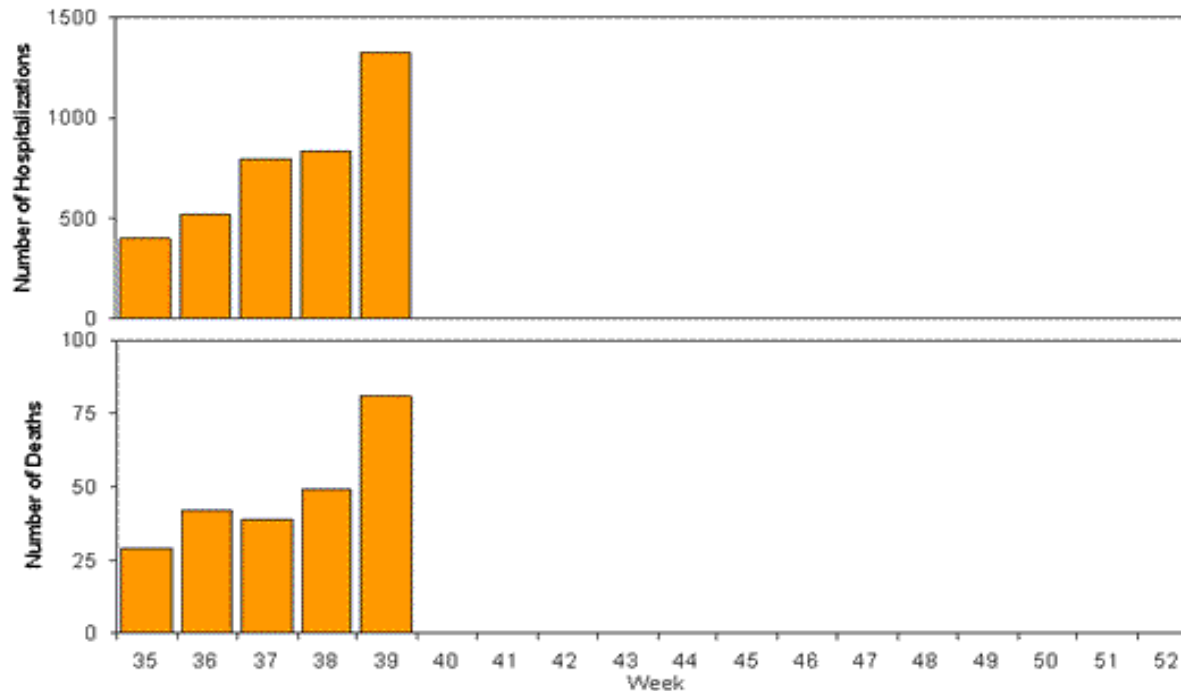
International Epidemiology Update

- From April 19 to September 19, 2009, 59.8% of influenza were 2009 H1N1 viruses
- 2009 H1N1 is still circulating widely
 - Southern Hemisphere - trends are downward or baseline in temperate regions
 - Tropical Asia - variable rates
 - Tropical regions of Central America – increased activity
 - Northern temperate zones – increased activity

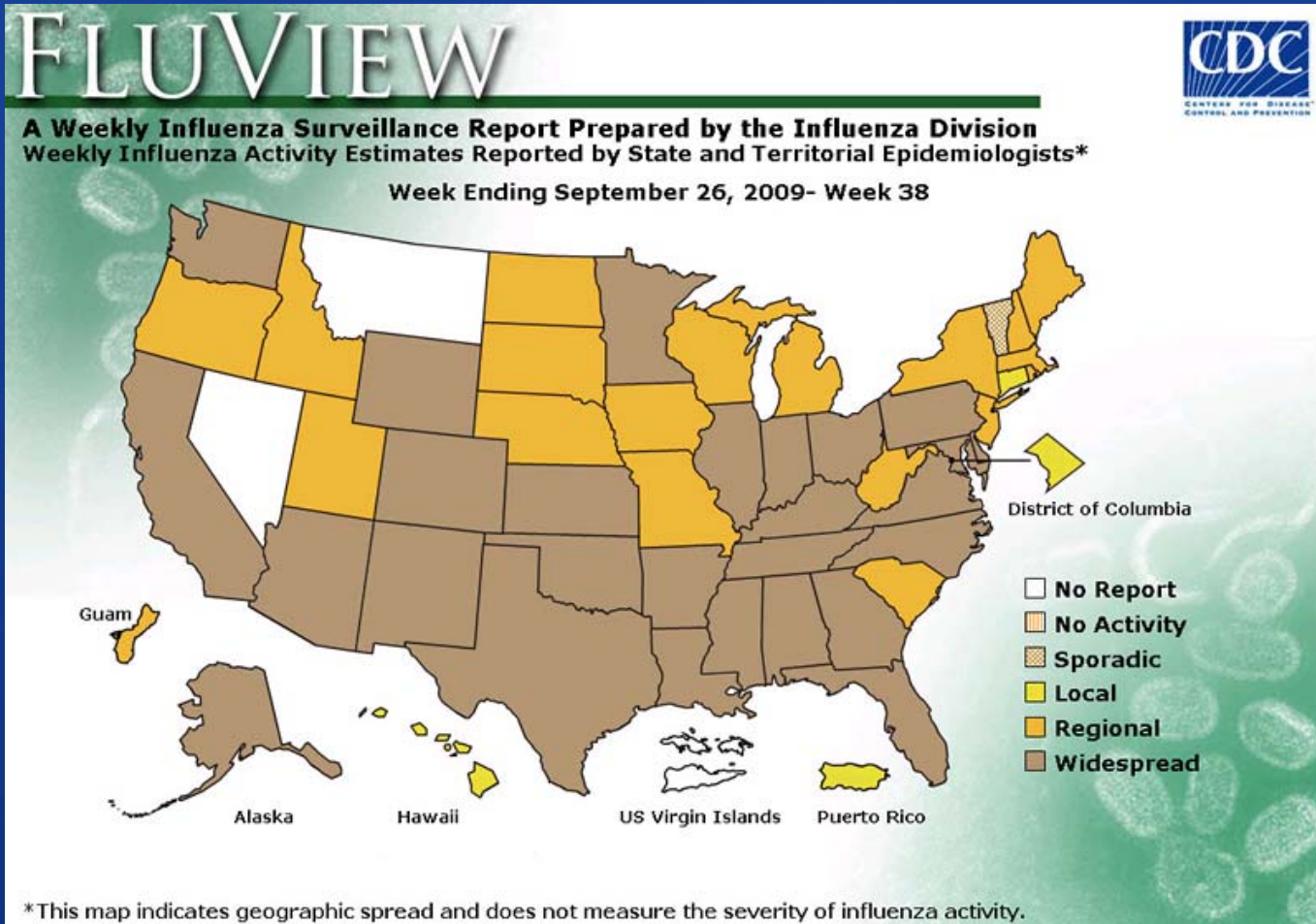
United States Update

- 37 states reporting widespread influenza activity at this time.

Weekly Laboratory-Confirmed Influenza-Associated Hospitalizations and Deaths, National Summary, 2008-09



Epidemiology/Surveillance
Weekly Influenza Activity Reported by SLTT's
novel 2009-H1N1 – Oct 9



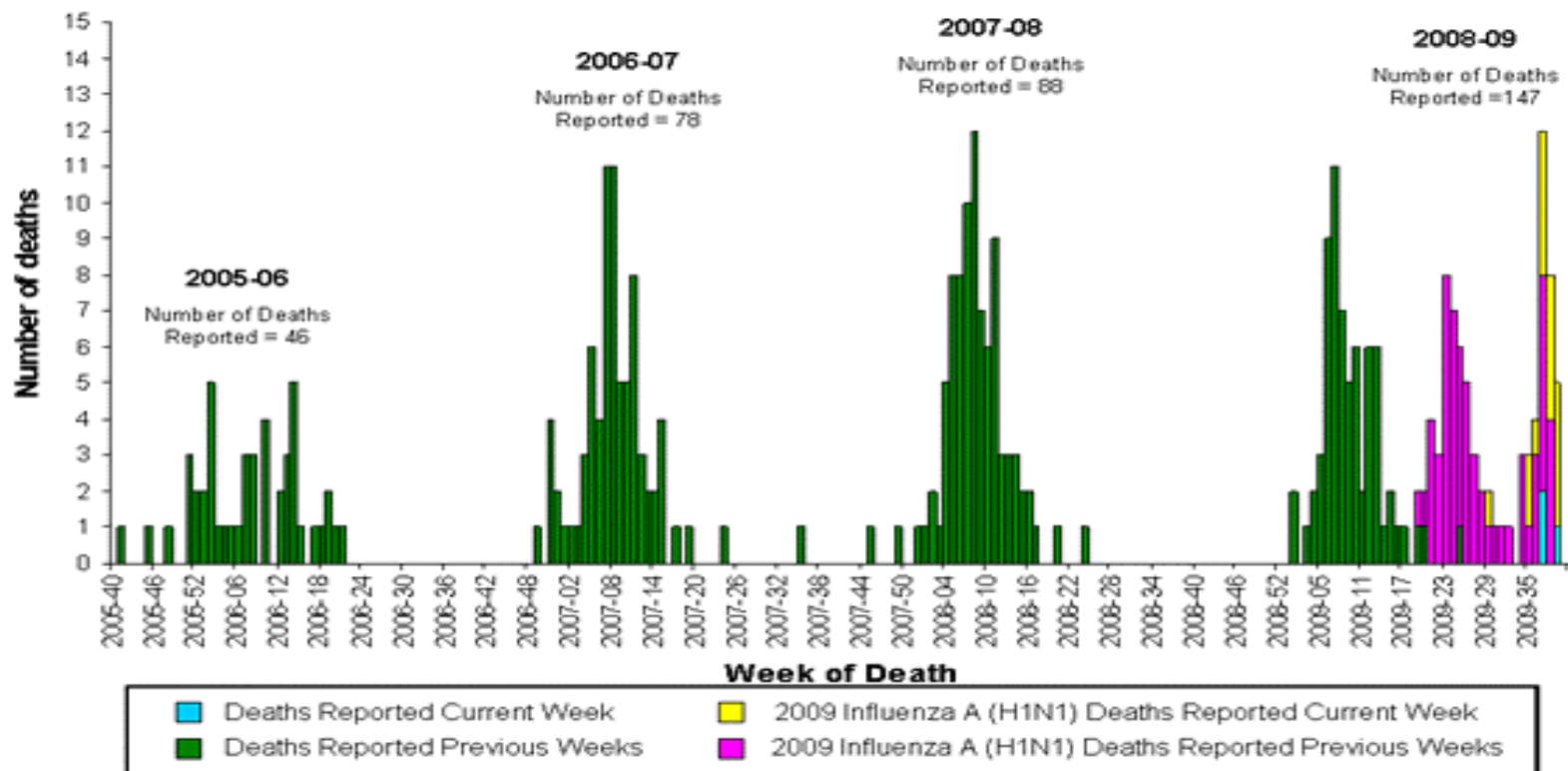
Data are provisional and will not be officially released by the CDC until 1100 EDT
Internal Use Only (FIUO)--For Official Use Only (FOUO) -Sensitive But Unclassified (SBU)
NOT FOR FURTHER DISTRIBUTION



Influenza Associated Pediatric Mortality

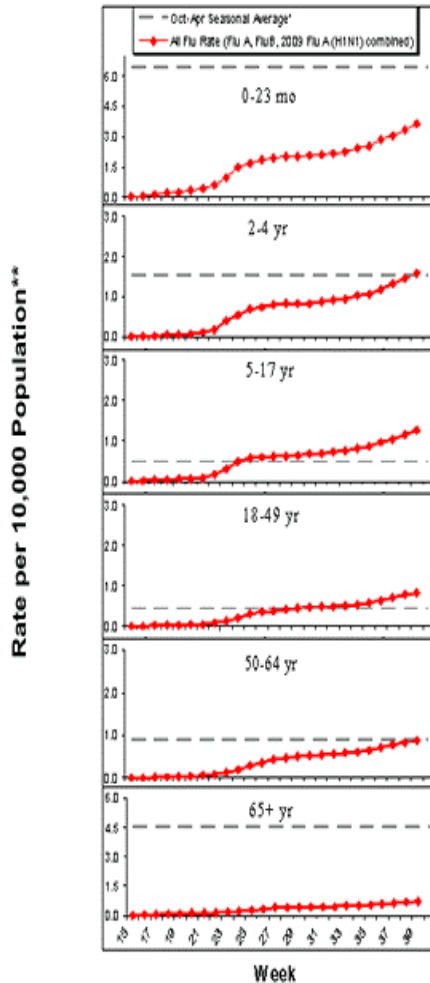
Number of Influenza-Associated Pediatric Deaths by Week of Death 2005-06 season to October 9, 2009

Number of Influenza-Associated Pediatric Deaths by Week of Death: 2005-06 season to present



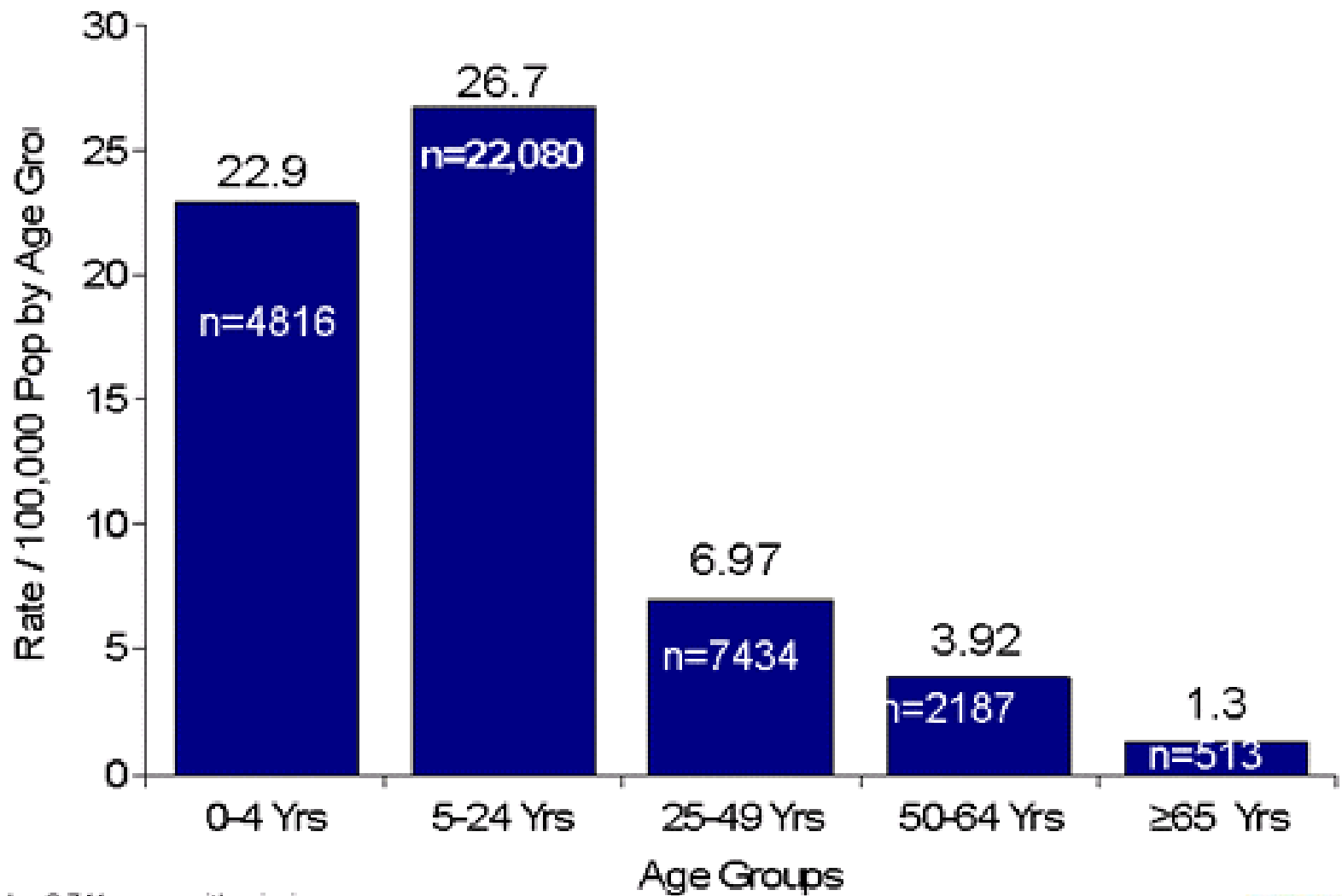
Current Hospitalization Rates

EIP Influenza Laboratory-Confirmed Cumulative Hospitalization Rates, Spring/Summer 2009



- Rates for children aged 0-23 months, 2-4 years, and 5-17 years were 3.6, 1.6, and 1.3 per 10,000, respectively.
- Rates for adults aged 18-49 years, 50-64 years, and ≥ 65 years, the overall flu rates were 0.8, 0.9, and 0.7 per 10,000, respectively.

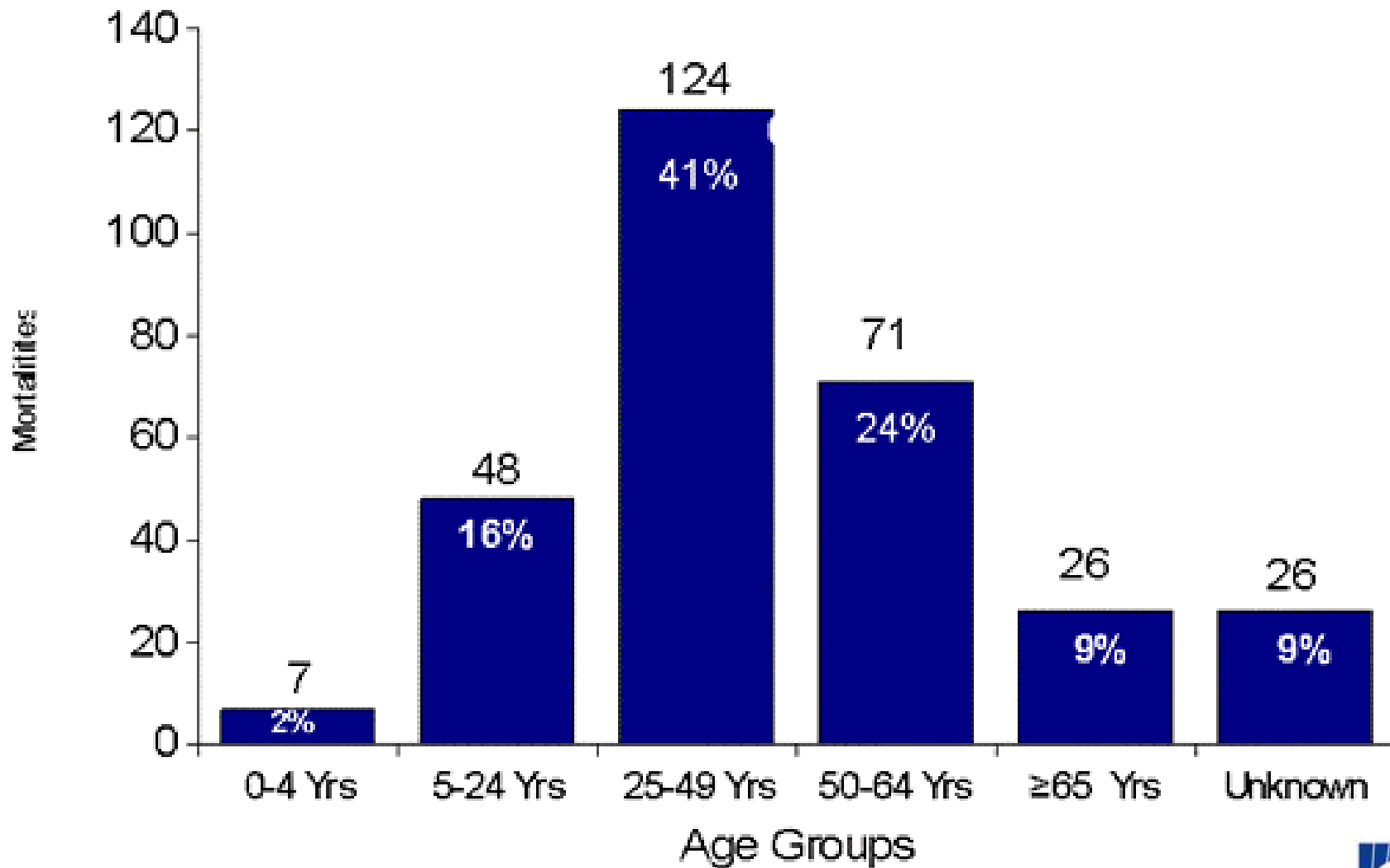
Novel H1N1 Confirmed and Probable Case Rate in the United States, By Age Group Spring 2009



*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>



Novel H1N1 U.S. Deaths, By Age Group Spring 2009



Michigan- October 13, 2009

- Since September 1, 2009:
 - 55 hospitalizations
 - 5 deaths
- 8,000-11,000 cases influenza-like illness cases/wk over last 2 weeks

Goals and Strategies

H1N1 Response

H1N1 Response Pillars

- Surveillance
- Mitigation
 - Prevention
 - Early Detection
 - Isolation
 - Treatment
- Vaccination
- Communication

H1N1 Response Strategy

Surveillance

Challenges of Flu Surveillance

- Majority of cases are subclinical or mild
 - Never enter public health or health care systems
- Individual cases of influenza not reportable
- Infection rates and severity of illness typically vary greatly between age groups

Over-the-Counter Pharmaceutical Surveillance



Emergency Department Syndromic Surveillance

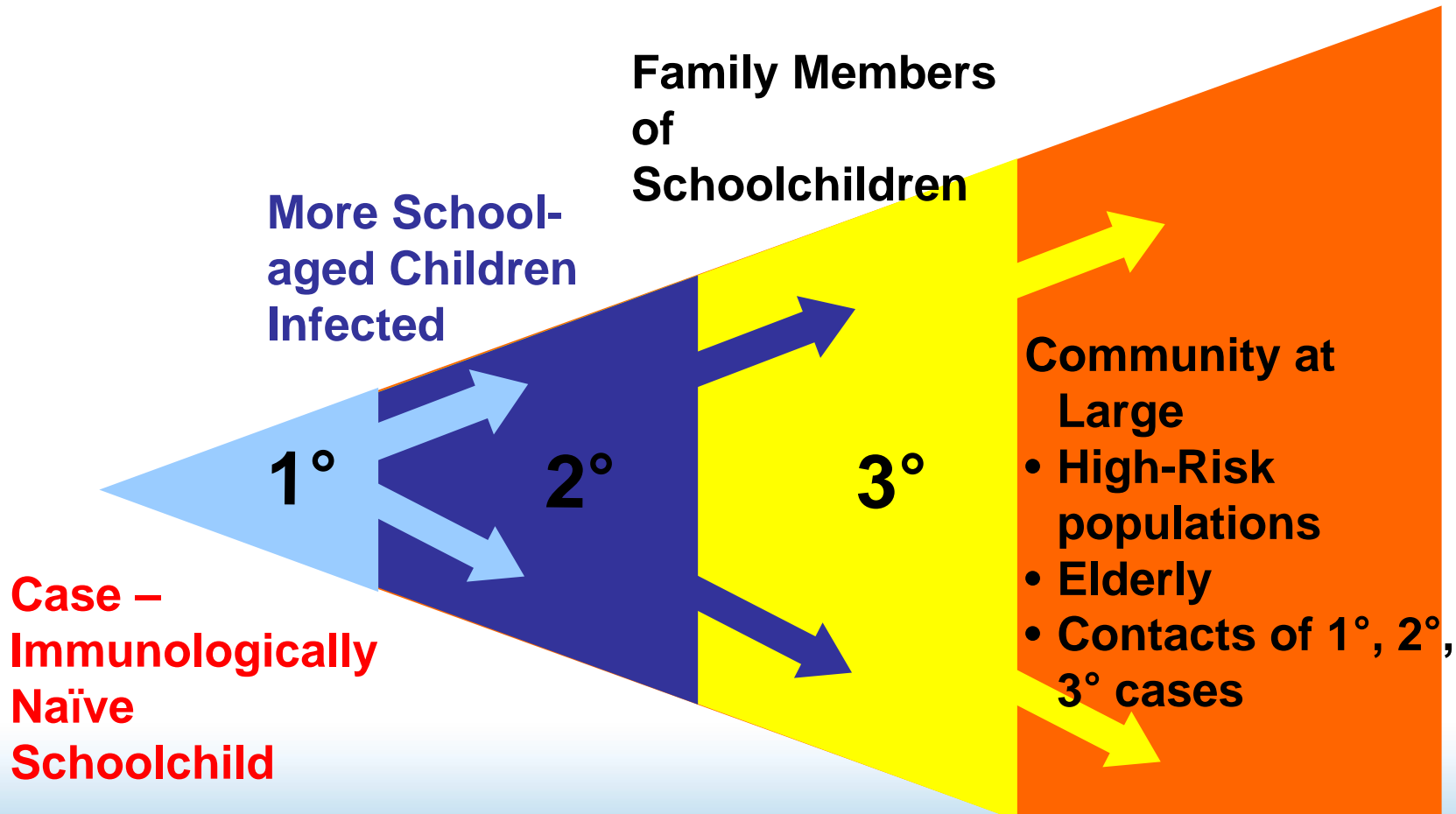


MDSS

- Michigan's web-based routine communicable disease reporting system
- Primarily used for reporting diagnosed cases of communicable disease
- Also used to capture aggregate Flu-like illness data from the Michigan School Building Weekly Report of Communicable Disease

Why monitor school absenteeism?

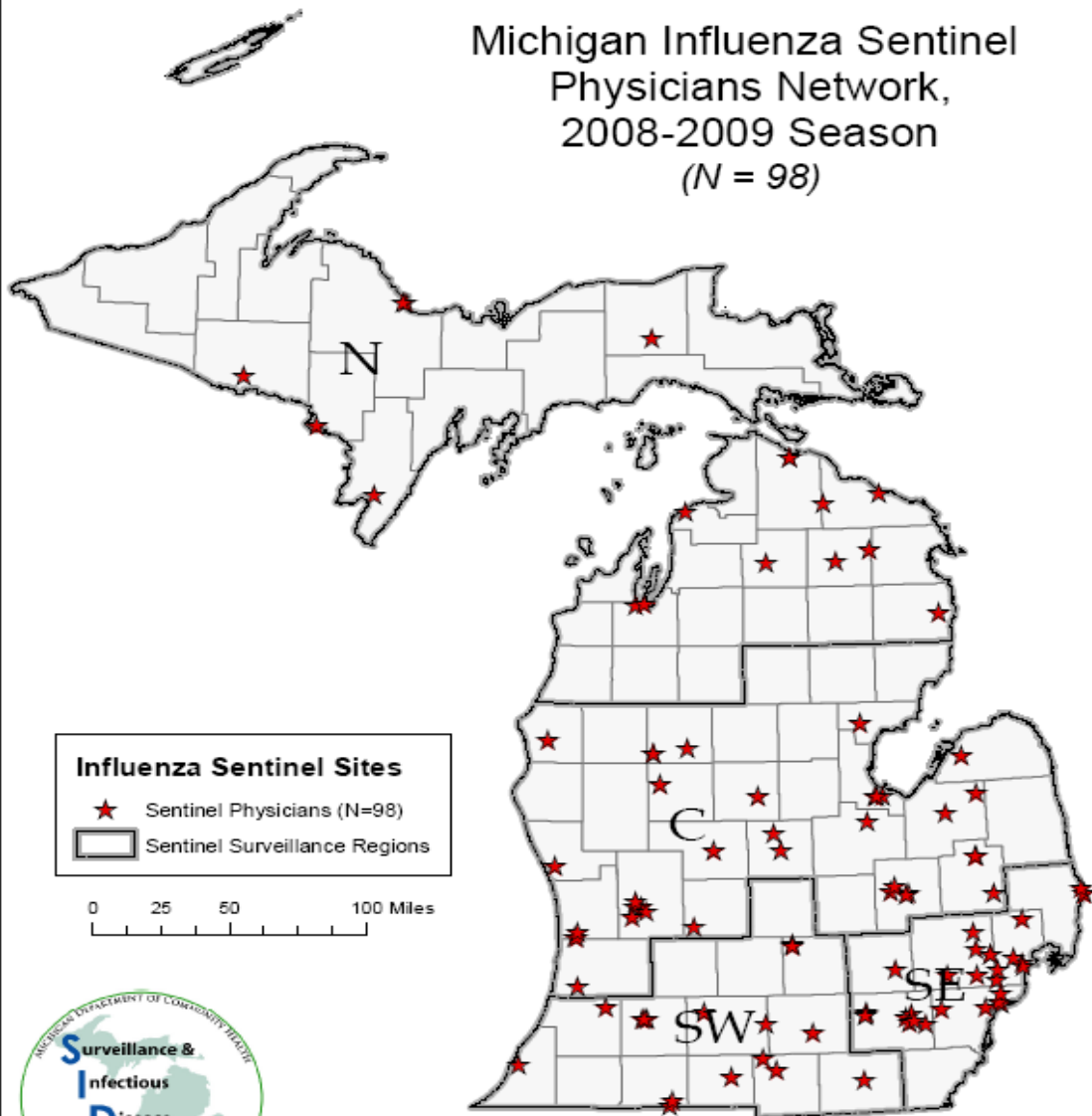
Earliest cases are in Schoolchildren



Influenza Sentinel Physicians

- Part of a national system
 - CDC U.S. Sentinel provider surveillance network
 - Over 2,200 sentinel providers enrolled throughout the U.S. last year
 - Michigan has approx 100 participating providers for the 2009-2010 influenza season

Michigan Influenza Sentinel Physicians Network, 2008-2009 Season (N = 98)



- Family Practices
- Pediatricians
- Infectious Disease
- Internal Medicine
- Emergency
- Urgent Care
- Student Health
- Other



Mi-FluFocus

Communicating our Surveillance

- Michigan Disease Surveillance System
 - School-based absenteeism
- Sentinel Surveillance
 - Laboratory
 - Sentinel Physicians/Clinics
- Syndromic
 - Over-The-Counter Pharmaceuticals
 - Emergency Room
- Laboratory
 - Sentinel
 - Requested
- National
- International



MI FluFocus

Influenza Surveillance and
Avian Influenza Update

Bureau of Epidemiology
Bureau of Laboratories

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Surveillance and Infectious Disease Epidemiology
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www.michigan.gov/flu

Current Reporting

■ Action Steps for Clinicians

- Report ALL laboratory-confirmed influenza-associated hospitalizations and deaths, including both those due to seasonal influenza strains and 2009 novel influenza A (H1N1), as soon as possible to your local health department.
- This reporting begins immediately and will continue throughout the influenza season until further notification.

H1N1 Response Strategy

Community Mitigation

Community Mitigation

- Efforts to decrease disease impact upon a community
- Attempt to keep children in school
 - Schools may consider temporary dismissal
 - Virus severity, or uncontrolled transmission
- Do **NOT** go to work or school if sick!
- Social distancing
- Infection Control
- Medical intervention, if necessary
 - Antivirals for at-risk individuals
 - Hospital surge responses

School Dismissal

- School superintendent and public health partnership
 - All decisions are *local*
 - One jurisdiction's plans or response may not look like neighboring jurisdiction's
 - local conditions rapidly change
- A 180 degree shift from Spring 2009
 - Communicating the change in guidance
 - Maintaining unified communications
 - Correcting expectations: schools may still need dismissal

School Planning for Influenza-Season Similar to Spring '09

- Educate and encourage students and staff to cover their mouth and nose
- Remind teachers, staff, and students to practice good hand hygiene
- Send sick students, teachers, and staff home
 - advise them and their families that sick people should stay at home until at least 24 hours after they no longer have a fever or signs of a fever (without the use of fever-reducing medicine).
- Clean surfaces and items
- Move students, teachers, and staff to a separate room
- Have Personal Protective Equipment (PPE) such as masks
- Encourage early medical evaluation for sick students and staff at higher risk of complications from flu.
 - People at high risk of flu complications who get sick will benefit from early treatment with antiviral medicines.
- Stay in regular *communication* with local public health officials.

Schools- Mitigation Communications

- What if the influenza season is different from Spring'09?
- CDC/MDCH school guidelines available if influenza season worsens compared to Spring '09
 - www.michigan.gov/flu
 - www.cdc.gov/h1n1flu
- Maintain a unified message

Communicating About “Social Distancing”

- Common messages
 - 6 foot Rule
 - New community mask guidance-
 - <http://www.cdc.gov/h1n1flu/masks.htm>
 - Workplace- reinforce ill employees stay home
 - Public gatherings-potential postponements and cancellations
 - Depending upon influenza activity
 - Impact of influenza varies for different populations

Colleges and Universities



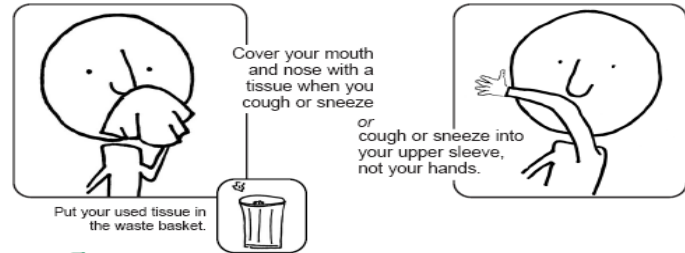
- Guidelines released August 21
 - Facilitate self-isolation of residential students
 - Considerations for high-risk students and staff
 - Routine Cleaning
 - Special populations

Infection Control- Buzz Words

- “Hand Hygiene”
- “Respiratory Etiquette”
- “Social Distancing”

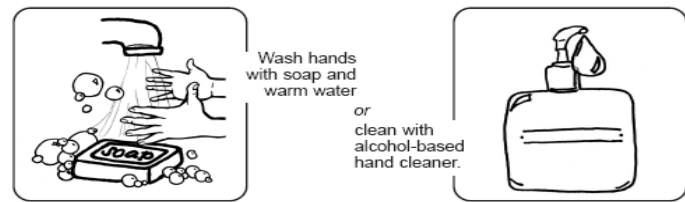
Stop the spread of germs that make you and others sick!

Cover your Cough



Clean your Hands

after coughing or sneezing.



Infection Control

October 14, 2009

- CDC continues to recommend the use of respiratory protection that is at least as protective as a fit-tested disposable N95 respirator for healthcare personnel who are in close contact with patients with suspected or confirmed 2009 H1N1 influenza.
- This recommendation applies uniquely to the special circumstances of the current 2009 H1N1 pandemic during the fall and winter of 2009-2010 and CDC will continue to revisit its guidance as new information becomes available, within this season if necessary

Antivirals

- New guidance (September 8, rev Sept 22)
- Treatment for patients with influenza and at high risk
 - People without severe illness and/or are not at high risk should not receive antiviral medication
 - Clinical judgment is important factor
 - Lab testing generally reserved for hospitalized patients
 - Chemoprophylaxis is discouraged

Antiviral Resistance

- To date, 12 resistant nH1N1 influenza viruses detected in US
- All of these viruses show the same H275Y mutation
 - confers resistance to the antiviral oseltamivir
 - but not to the antiviral zanamivir

Summary of Antiviral Resistance, U.S. 2008-09

| | Influenza viruses | | | |
|-------------|-------------------|-------------------|-------------|---------------|
| Antiviral | Seasonal A (H1N1) | Seasonal A (H3N2) | Seasonal B | Pandemic H1N1 |
| Adamantanes | Susceptible | Resistant | No activity | Resistant |
| Oseltamivir | Resistant | Susceptible | Susceptible | Susceptible |
| Zanamivir | Susceptible | Susceptible | Susceptible | Susceptible |

Antivirals and Clinical Care

- Actions that should be taken to reduce delays in treatment initiation include:
 - Informing persons at higher risk for influenza complications of signs and symptoms of influenza and need for early treatment
 - Ensuring rapid access to telephone consultation and clinical evaluation
 - empiric treatment of patients at higher risk for influenza complications based on telephone

Testing and Clinical Care

- Treatment should not wait for laboratory confirmation of influenza
- Laboratory testing can delay treatment
- *A negative rapid test for influenza does not rule out influenza.* The sensitivity of rapid tests can range from 10 % to 70%.

H1N1 Response Strategy

Vaccination

2009 H1N1 Influenza

- Distribution of cases by age group is markedly different compared to seasonal influenza
 - Higher proportion of hospitalized cases in children and young adults
 - Few cases in older adults
 - No outbreaks among elderly in long term care facilities
- Older adults have evidence of immunity already, presumably based on exposures to somewhat similar viruses in early 20th century

Influenza Target Group Comparison

| Seasonal Flu Target Groups | 2009 H1N1 Initial Target Groups |
|--|--|
| Pregnant women | Pregnant women |
| Children aged 6 mo-18 yrs | Persons aged 6 mo-24 yrs |
| Persons aged 19-49 yrs with a medical condition* that puts them at higher risk | Persons aged 25-64 yrs with a medical condition* that puts them at higher risk ± |
| Adults aged 50 yrs and older | ± see below |
| Health care personnel | Health care personnel and emergency medical services personnel |
| Persons living with or caring for children birth-4 yrs, adults over 49 yrs & those with a medical risk condition | Persons living with or caring for infants less than 6 mo of age |
| Residents of long-term care facilities | ± see below |

± **Expanding vaccination beyond initial target groups:** When it is determined by state and local health departments that vaccine is in greater supply, vaccinate 1) healthy persons 25-64 yrs of age and then 2) persons 65 years of age and older

* **See next slide for list of medical conditions**

What are the Medical Risk Conditions?

- Medical risk conditions are similar for both seasonal and 2009 H1N1 and include:
 - Children 6 mo-18 years on long-terms aspirin therapy
 - Persons with the following conditions or disorders:
 - chronic pulmonary (including asthma)
 - Cardiovascular (except hypertension)
 - Renal or hepatic
 - Neurologic or neuromuscular
 - Hematologic or metabolic (including diabetes)
 - Immunosuppression (including that caused by medications or HIV)

Two Types of 2009 H1N1 Influenza Vaccine

- Influenza A (H1N1) 2009 Monovalent Vaccine (Inactivated)
 - Given IM
 - For persons 6 months of age or older
 - May be given to any person at high risk due to a medical condition, including pregnant women
- Influenza A (H1N1) 2009 Monovalent Vaccine (Live, Attenuated)
 - Given Intranasal
 - An option for vaccinating **healthy** non-pregnant persons aged 2-49 years only
 - Do not administer to:
 - Children 2-4 years of age with a history of wheezing
 - Persons with a chronic medical condition

Influenza A (H1N1) 2009 Monovalent Vaccine (“flu shot”) Presentations

| Manuf. | Presentation | Ages |
|-------------------|---|--|
| sanofi pasteur | Pre-filled 0.25 mL syringe w/pink plunger Single dose 0.5 mL syringe/vial Multi-dose vial | 6-35 mo 3 yrs & older 6 mo & older |
| CSL | Single dose 0.5 mL syringe Multi dose vial | 18 yrs & older 18 yrs & older |
| Novarti S | Pre-filled 0.5 mL syringe Multi-dose vial | 4 yrs & older |

2009 H1N1 Monovalent Vaccine Live Presentation

| Manuf. | Presentation | Ages |
|-----------|---|-----------------------------|
| Medimmune | Pre-filled, 0.2 mL single-use sprayer | 2 years of age and older |

How Many Doses of H1N1 Vaccine?

- Adults will need 1 dose of vaccine
- Children, ages 6 months through 9 years ***will*** need 2 doses
 - Awaiting final ACIP/CDC recommendation
 - This is different from seasonal flu
 - Seasonal: 1-2 doses for children 6 mo-**8 years**
 - 2009 H1N1: possibly 2 doses for children 6 mo-**9 years**

2009 H1N1 Vaccine

- Novel influenza A (H1N1) vaccines produced using methods similar to those for seasonal vaccine
- Licensure of novel influenza A (H1N1) 2009 vaccine based on the same standards used for seasonal influenza vaccines
- As with seasonal influenza vaccines, none of the influenza A (H1N1) 2009 vaccines currently licensed contain an adjuvant

*Use of Influenza A (H1N1) 2009 Monovalent Vaccine
Recommendations of the ACIP 2009, MMWR August 21,*

2009 H1N1 and Vaccine Safety

- Vaccine Adverse Event Reporting System (VAERS) will collect and analyze reports of adverse event after H1N1 vaccination
- Healthcare providers are encouraged to report clinically significant adverse events after H1N1 vaccine to VAERS
- A report should be submitted even if the reporter is not certain that the vaccine caused the event
 - Reports may be completed on-line, faxed or mailed
 - For more information: www.vaers.hhs.gov

About the 2009 H1N1 Vaccine

- 2009 H1N1 vaccine will be publicly purchased and available to providers at no cost
- It will be direct-shipped to sites in amounts of 100 doses per presentation
 - 100 doses of 0.25mL or 100 doses of intranasal vaccine
- Sites requiring less than 100 doses will need to work with their Local Health Departments (LHD) to obtain vaccine through LHD depot
- Ancillary supplies will also be made available
 - syringes, needles, alcohol wipes, sharps containers, vaccine record cards

Becoming an H1N1 Vaccine Provider

- First Step!
 - **Call your Local Health Department** and let them know you want to be an H1N1 Provider
- Next Steps!
 - Complete a H1N1 Provider enrollment form
 - Sign a Michigan Care Improvement Registry (MCIR) agreement and receive MCIR training
 - Develop standing orders
 - Assure proper vaccine storage and handling

Pneumococcal Polysaccharide Vaccine (PPSV23) and Influenza

- Influenza predisposes persons to bacterial community-acquired pneumonia
- Ensure high risk patients have received PPSV23 vaccine
 - Any person age 65 years or older
 - Any person 2-64 years with a high-risk condition
- New recommended groups for vaccination are:
 - **Persons 19 years of age or older** who have asthma or who smoke cigarettes
- No more than 2 **lifetime** doses are recommended, spaced at least 5 years apart

Health Care Personnel (HCP) & Seasonal Influenza Vaccination

- Only 44% of HCP in the U.S. received seasonal influenza vaccine in 2006-2007
- HCP often work while ill, exposing vulnerable patients and their coworkers to influenza
- HCP can spread influenza if infected
 - Virus can be shed before symptoms develop
- HCP have caused outbreaks among patients in health care settings

The 2009-2010 Flu Vaccine Season

- Unprecedented public health effort
- Uniform risk communication vital
 - Information and expectations changing often
 - Anti-vaccine movements
 - Vaccine safety concerns

H1N1 Response Strategy

Communications

H1N1 Communications

- Streamlined, unified- federal, state, local
- Primary federal websites
 - www.flu.gov
 - <http://www.cdc.gov/h1n1flu/>
- Mi Pandemic Influenza Coordinating Committee
- Primary state website
 - michigan.gov/flu
- Alternate routes:
 - Twitter
 - Facebook
- Regular media calls and updates

Health Alerting System

- The Michigan Health Alert Network (MI-HAN) is a secure, Internet-based, emergency notification system
- Every state has a similar public health alert system
- The MI-HAN contains over 4,000 participants
 - local health departments
 - Hospitals
 - Clinics
 - Critical first responders across the state
 - Michigan's state governmental agencies.

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Influenza



Flu Vaccine: For Everyone, Every Year

| | | | |
|--|--|---|---|
| <u>Novel H1N1 Influenza</u> | <u>Seasonal Influenza</u> | <u>Avian Influenza</u> | <u>Pandemic Influenza Planning</u> |
|--|--|---|---|

How Are Novel H1N1, Seasonal, Pandemic, and Avian Influenza Different?

[Novel H1N1 Influenza](#) (referred to as "swine flu")

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One-stop access to U.S. Government H1N1, avian and pandemic flu information.



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Updated Guidance for Schools for the Fall Flu Season



Updated federal guidelines offer state and local public health and school officials a range of options for responding to 2009 H1N1 influenza in schools, depending on how severe the flu may be in their communities. The guidance says officials should balance the risk of flu in their communities with the disruption that school dismissals will cause in education and the wider community. [Find the guidance and associated toolkit on the school planning page](#) or [watch the video archive of the school guidance news conference](#).

Know What to Do About the Flu



- Cover your cough
- Wash your hands frequently
- If you have a fever, stay home for at least 24 hrs after

Send to a Friend



[Send an eCard](#)



Got Questions?
Ask the FLU EXPERTS!

Q: I am a school nurse in Massachusetts, and I am wondering if the H1N1 guidelines will be the same for this

Tips to Stay Well this Flu Season

- Get your Seasonal Flu vaccine today!
 - Get yours and offer the vaccine to your patients
- Wash your hands frequently
- Cover your cough
- Stay home from work—and other social activities, if you are sick
- HCP need to get the 2009 H1N1 vaccine as soon as it is available
 - Don't wait until your facility gets vaccine

FLU VACCINE CATEGORIES



ANY QUESTIONS?

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