

GABLE
THE GLOBE AND MAIL
Toronto
CANADA

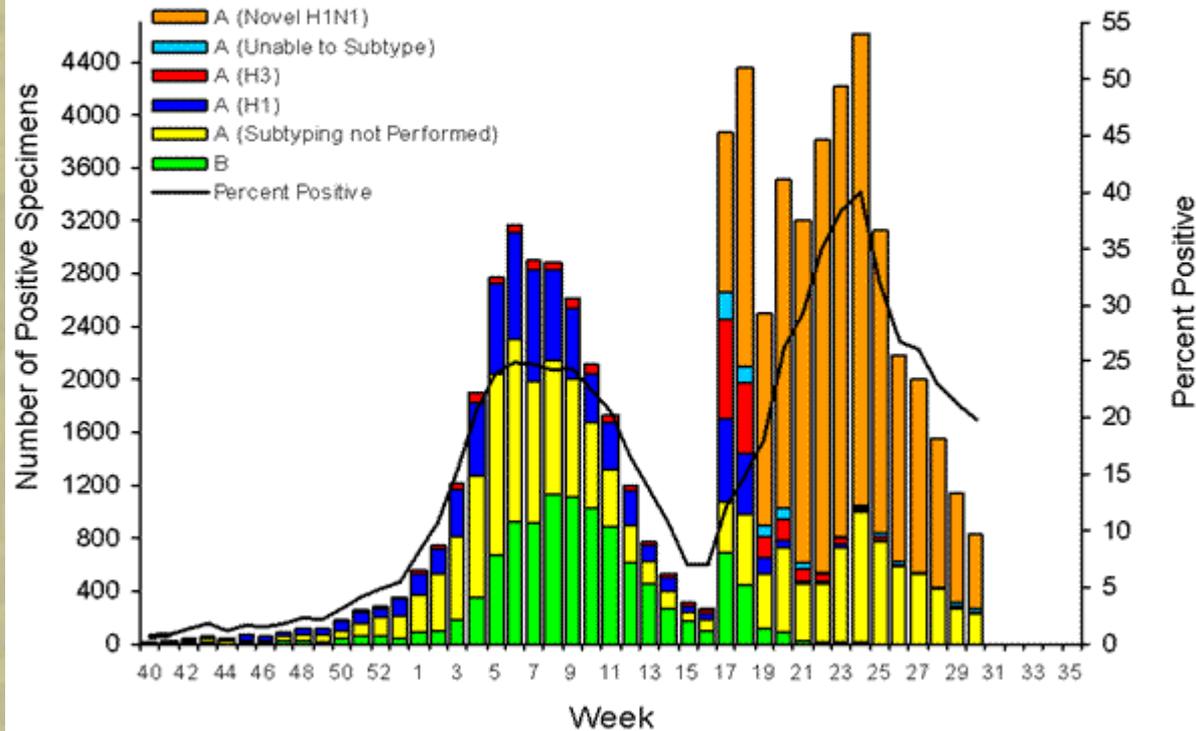


Background

- Novel H1N1 influenza virus first identified in April 15 & 17, 2009 (2 US cases)
- Linked to respiratory illness outbreaks in Mexico
- WHO declares worldwide pandemic on 6/11/09
- Antigenically and genetically distinct from human Type A H1N1 influenza virus (in circulation since 1977)
- Signs and symptoms **similar** to seasonal influenza
- Hospitalization higher in persons <65 **unlike** seasonal influenza
- Current worldwide circulating novel H1N1 viruses all appear antigenically similar (CDC 8/1/09)

Summertime flu!

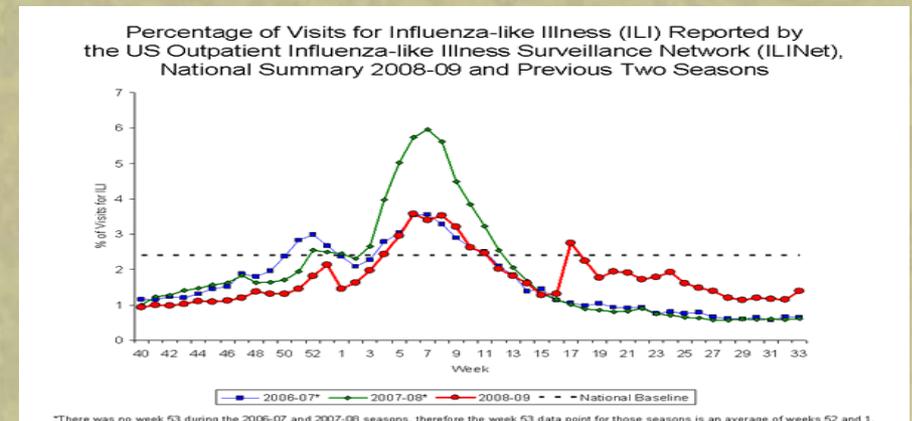
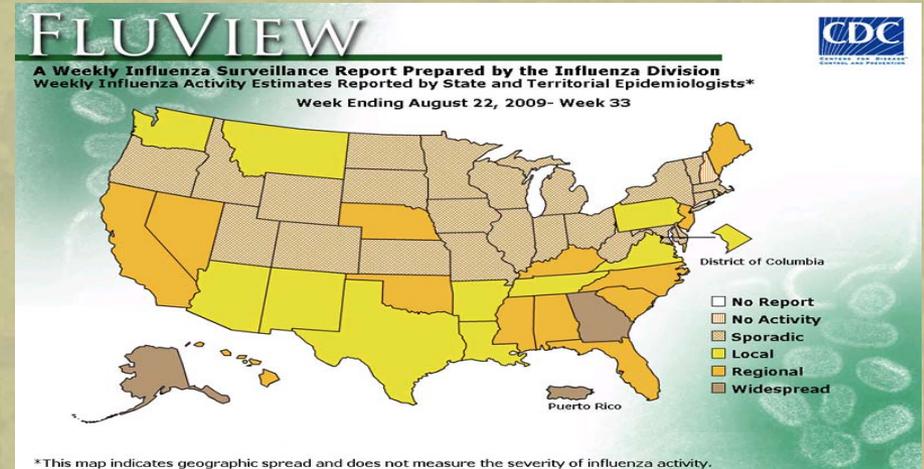
Influenza Positive Tests Reported to CDC by U.S. WHO/NREVSS Collaborating Laboratories, National Summary, 2008-09



A closer look at the U.S.*

- 1 million infected
- 43,771 confirmed cases
- 9079 hospitalizations
- 593 deaths
- 36 child/adolescent deaths (67% with high risk conditions defined by ACIP)
- Virus is sensitive to oseltamavir and zanamivir

*Centers for Disease Control & Prevention and includes the District of Columbia, American Samoa, Guam, Puerto Rico and the U.S. Virgin Islands.



Other US Data*

- Definitive lab testing using PCR and/or viral culture
- Rapid influenza detection tests (RIDTs) have poor sensitivity 40-70%
- Median age of laboratory confirmed infection is 12 years of age
- Median age of hospitalization is 20 years (highest among <4 years)
- Median age of death is 37 years
- Highest infection incidence 5-24 years
- Lowest infection aged >65 years

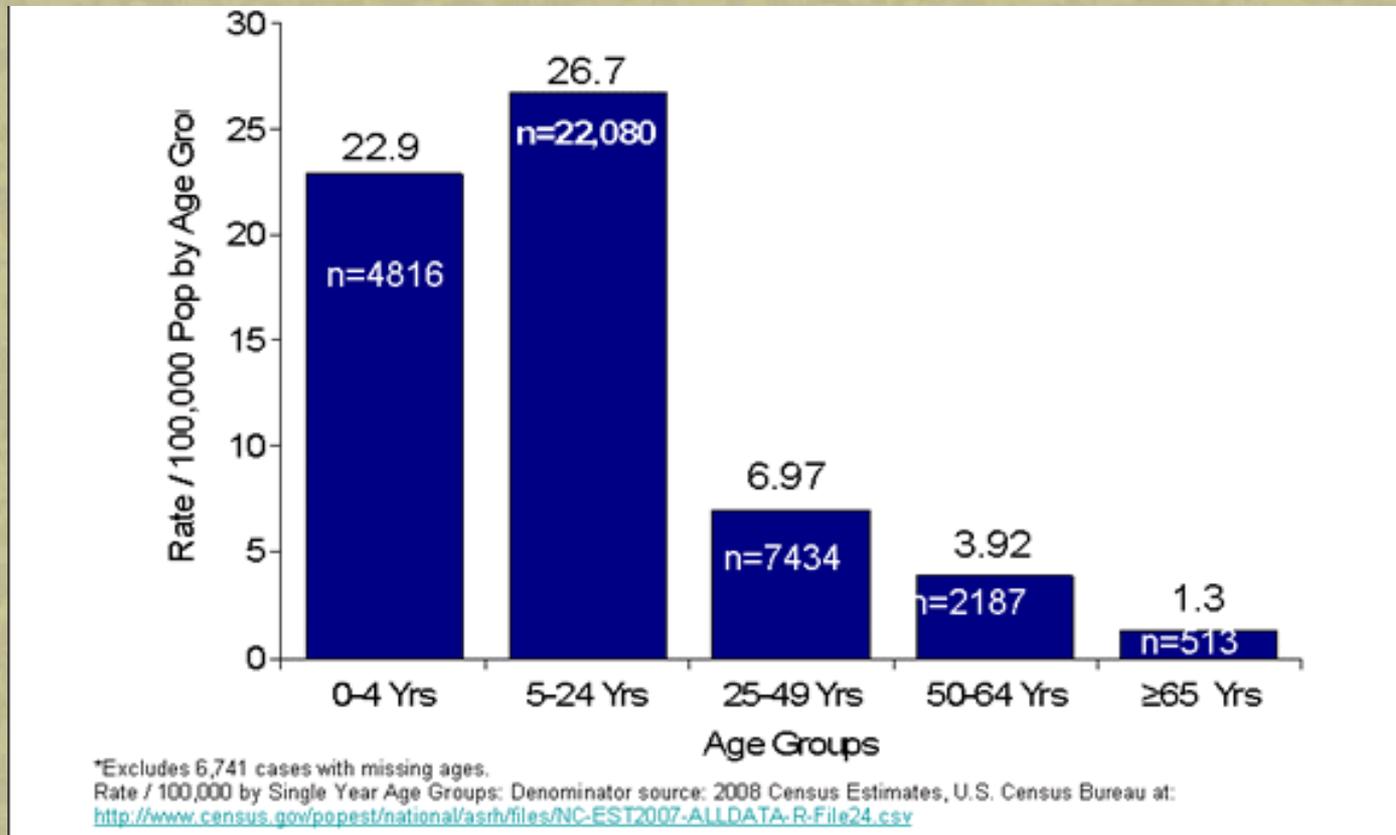
*CDC MMWR 8/21/09

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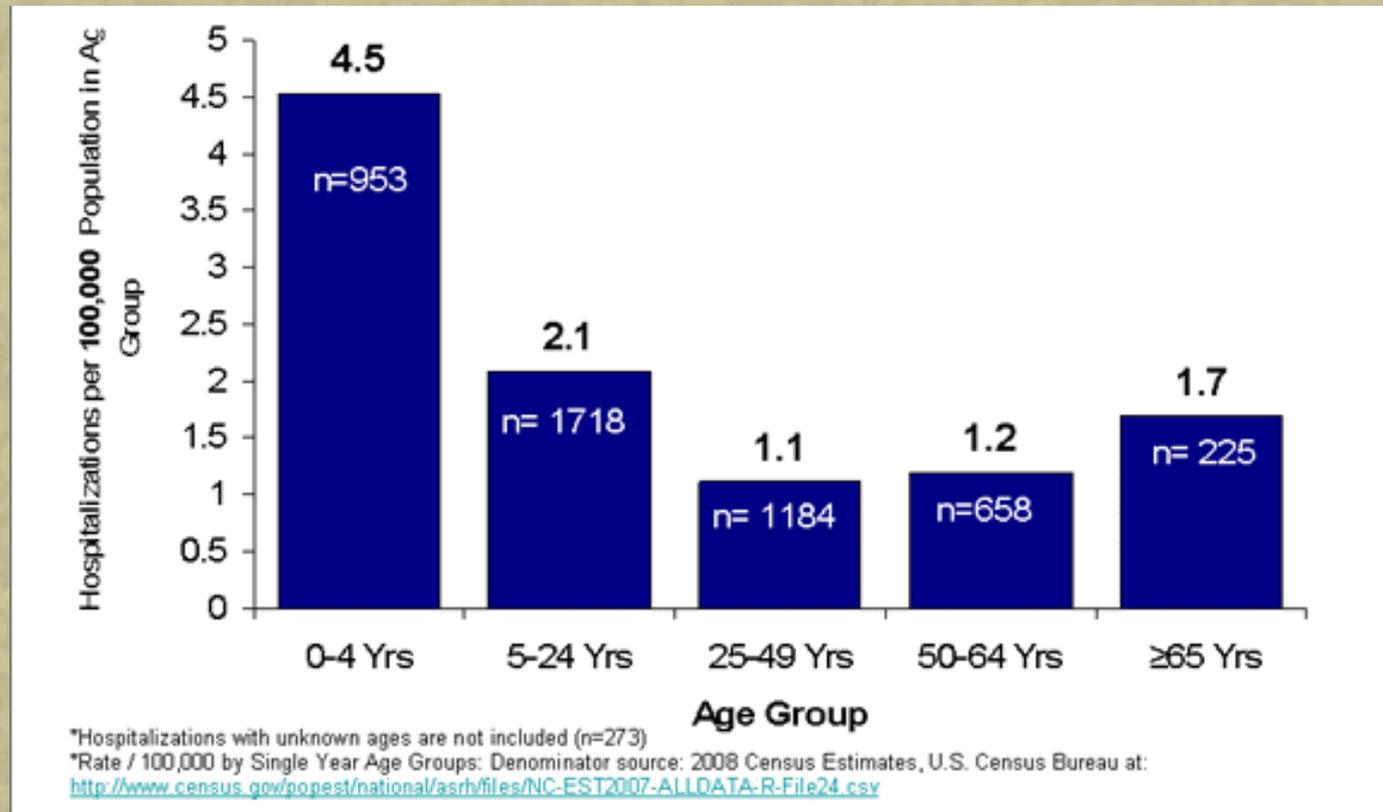
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Novel H1N1 Confirmed and Probable Case Rate in the United States, By Age Group



Novel H1N1 U.S. Hospitalization Rate per 100,000 Population, By Age Group



Hospitalizations

- 229 (3.7%) of 6,225 reported cases were hospitalized for H1N1 infection
 - 54 (23%) received care in ICU
 - 21 (9.2%) intubated
 - 183 (80%) had an underlying condition
 - Asthma (32%)
 - Any lung condition (45%)
 - Any heart condition (19%)
 - Kidney condition (8%)
 - Sickle cell disease (6%)
 - Obesity

Symptoms of hospitalized H1N1 patients

Symptom	Number (%)
Fever*	249 (93%)
Cough	223 (83%)
Shortness of breath	145 (54%)
Fatigue/Weakness	108 (40%)
Chills	99 (37%)
Myalgias	96 (36%)
Rhinorrhea	96 (36%)
Sore Throat	84 (31%)
Headache	83 (31%)
Vomiting	78 (29%)
Wheezing	64 (24%)
Diarrhea	64 (24%)

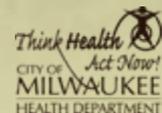
Children and Adolescents*

- Cerebral palsy
- Muscular dystrophy
- Neurodevelopmental disorders
- Respiratory illness
- Cardiac conditions

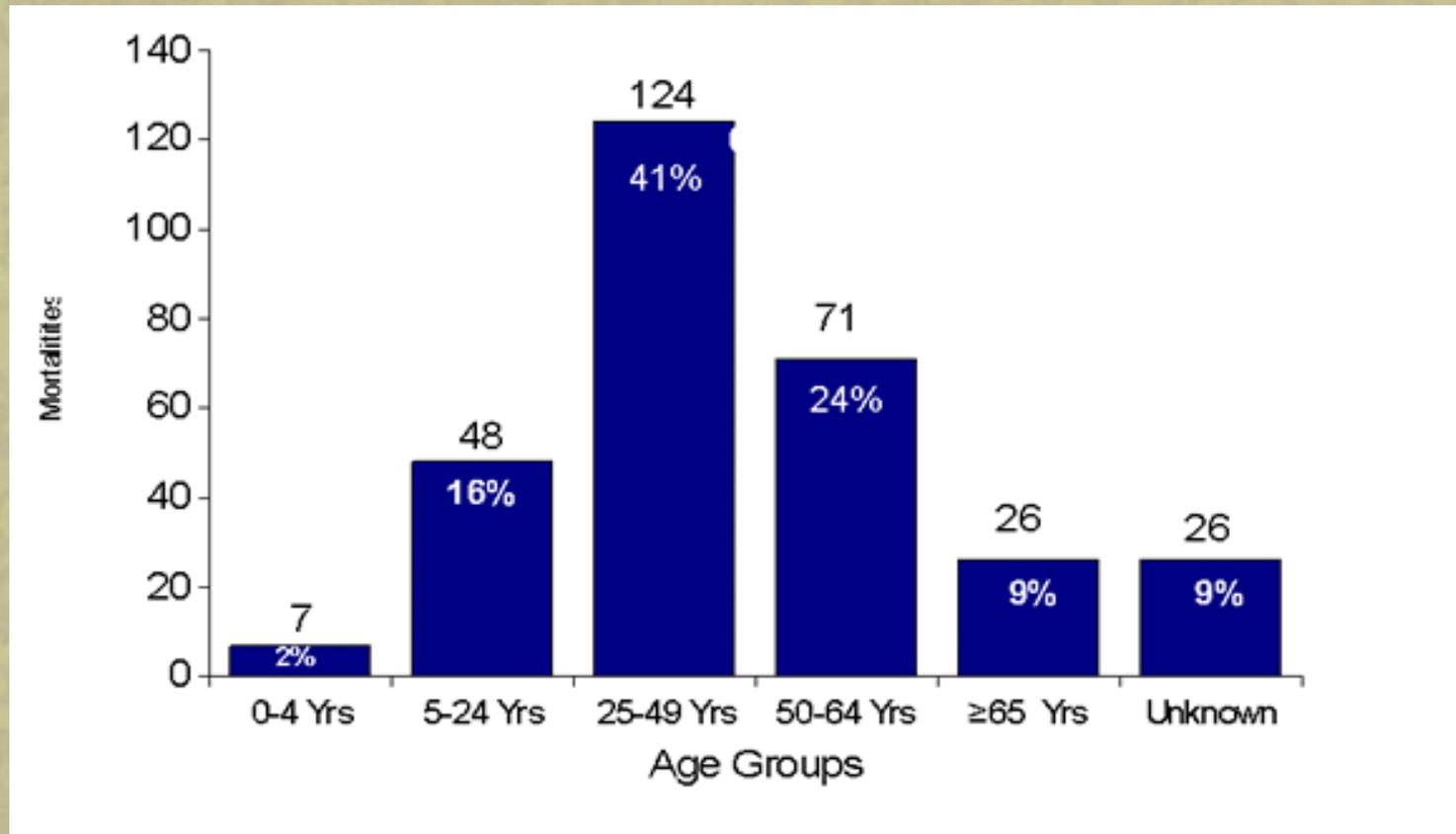
CDC MMWR 8/27/09

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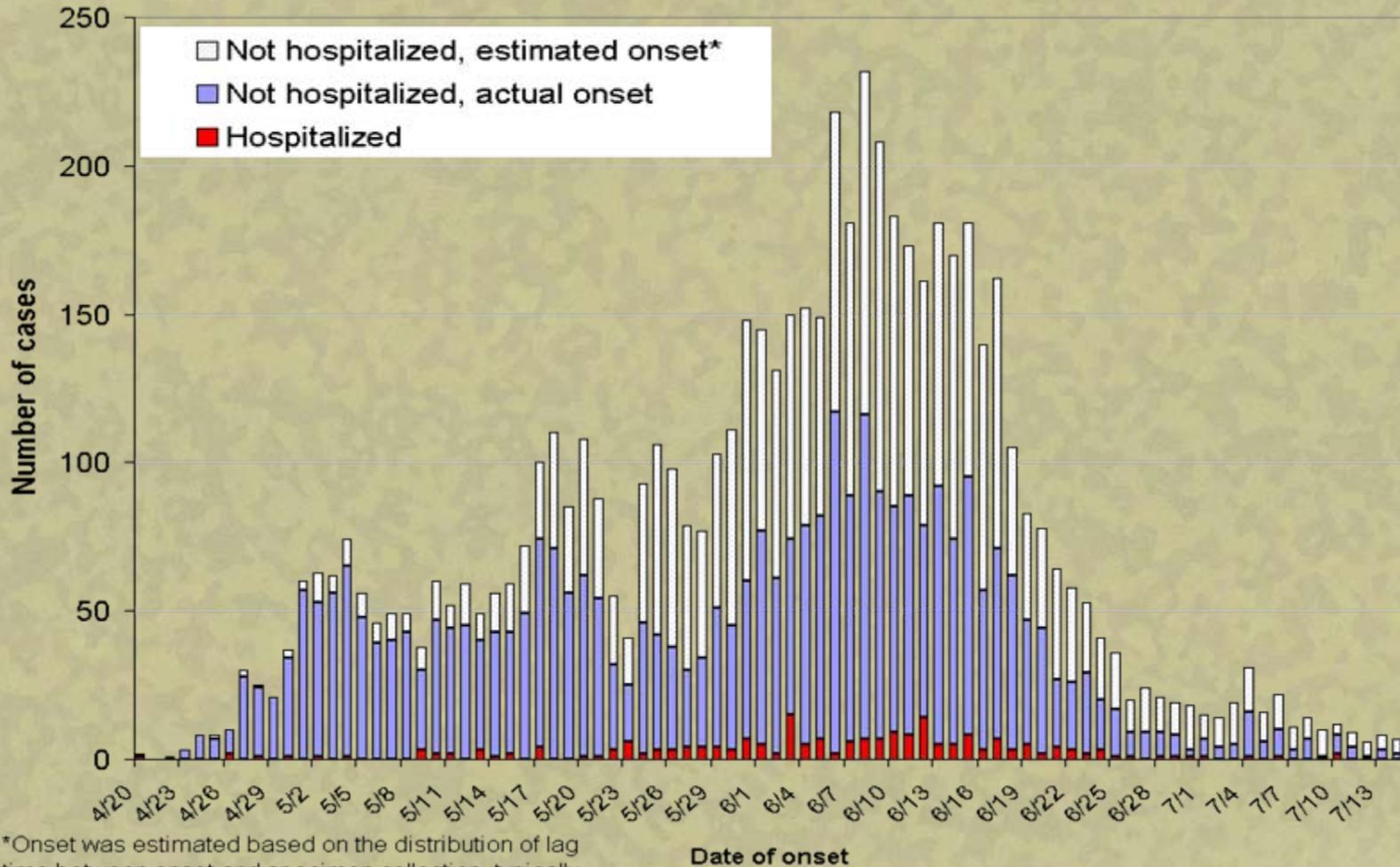


Novel H1N1 U.S. Deaths, By Age Group



Epidemic Curve – Wisconsin

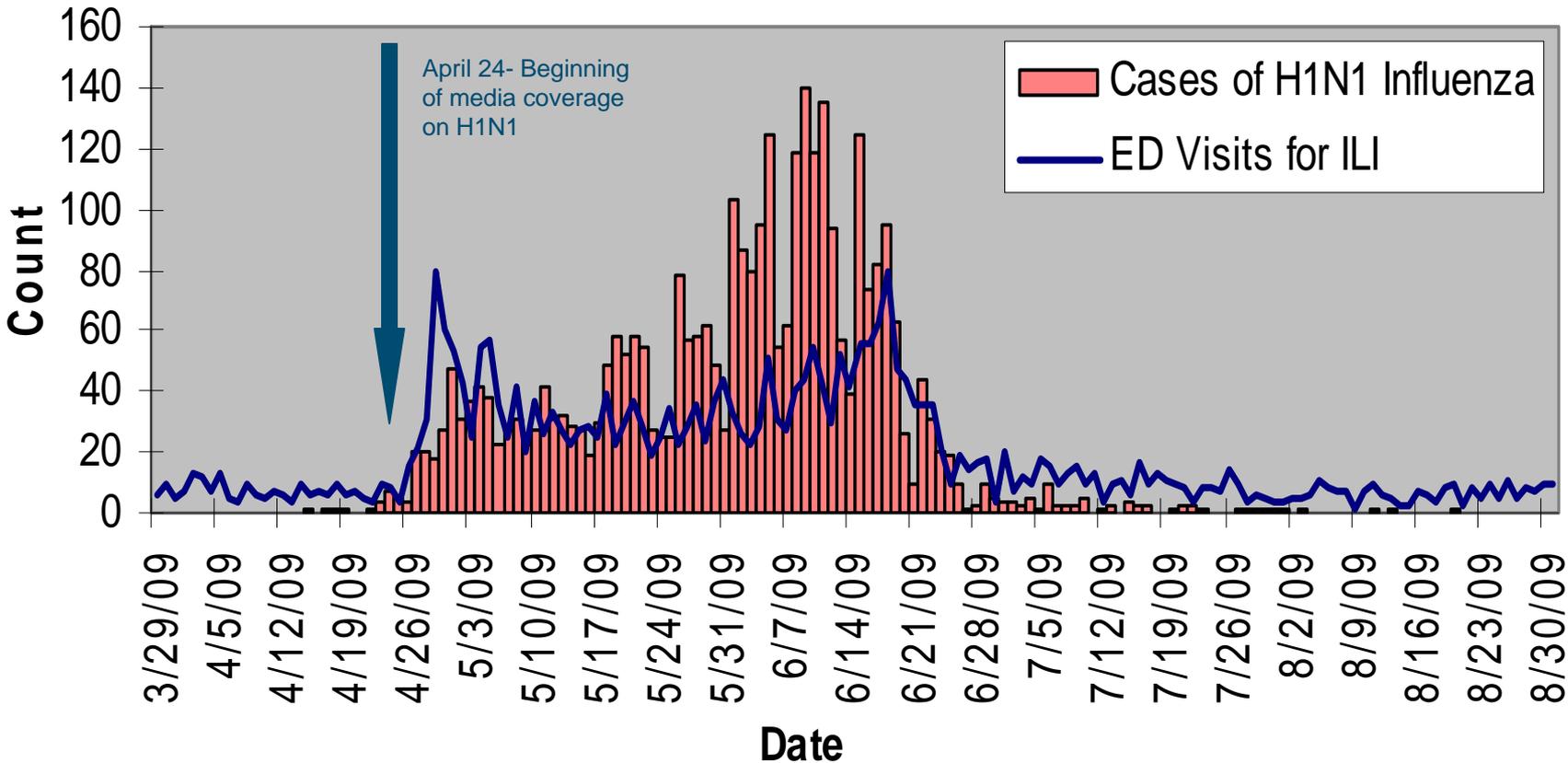
Confirmed or probable novel H1N1 infections



*Onset was estimated based on the distribution of lag time between onset and specimen collection, typically 2-3 days.

Created 7/22/09

Overlay of H1N1 Case Epicurve and Emergency Department Visits for Influenza-like Illness (ILI)



City of Milwaukee H1N1 Morbidity and Mortality Data

Age Group	Cases	Hospitalizations	Deaths	Incidence Rate ²	Incidence Rate of Hospitalizations by Age ²	Deaths Per Hospitalization (%)	Hospitalization /Confirmed Case ³
0-4	595	35	0	1,251.4	73.6	0	5.9
5-18	1,743	42	2	1,310.0	31.6	4.7	2.4
19-24	233	18	0	368.5	28.5	0	7.7
25-64	714	93	2	247.9	32.3	2.2	13
65 or more	20	6	0	30.7	9.2	0	30
All ages	3,306*	194	4	553.6	32.5	2.1	5.9

¹US Census Bureau Census 2000 Data

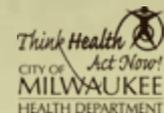
²Incidence Rate per 100,000 population

³Hospitalizations per 100 cases (% of cases hospitalized)

*One case reported did not include an age

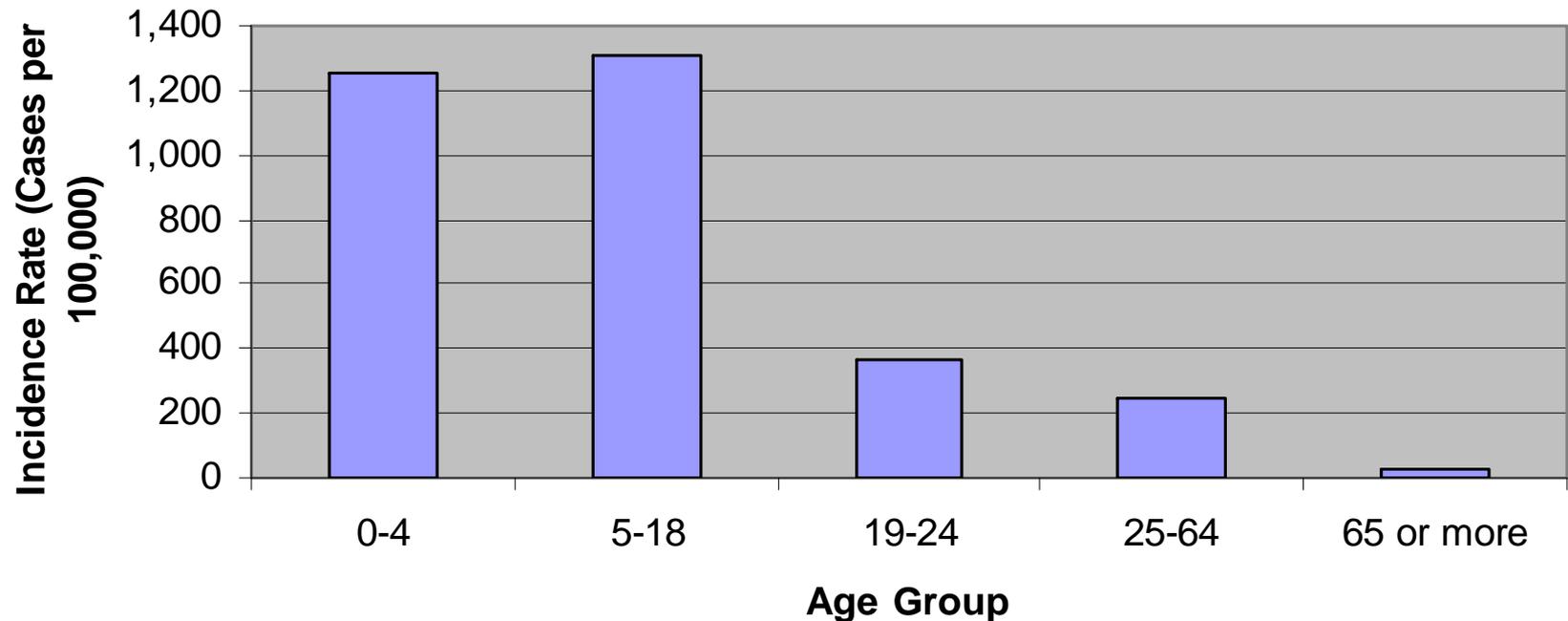
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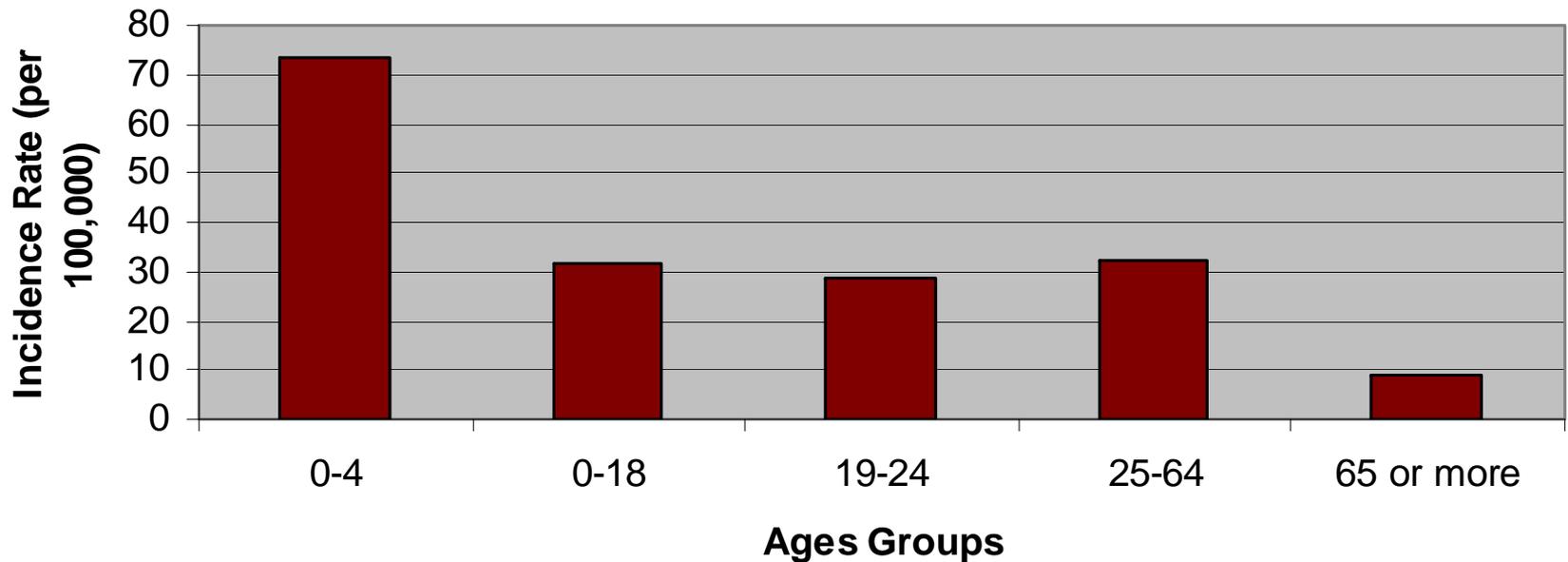
City of Milwaukee Incidence

Incidence (Attack) Rates of H1N1 by Age



City of Milwaukee Hospitalization Rate

Incidence Rate of Hospitalization for H1N1 Influenza by Age Group







Seasonal Influenza
Preparedness

Pandemic Influenza
Preparedness

Key Strategic Issues for H1N1 Planning in Fall 2009

- Surveillance
 - Severity
- Communications
 - Sector triggers
- Vaccination
 - Target groups
- Community Mitigation
 - School closure



Fall Swine Flu Severity in U.S. *

“plausible scenario”

- Infection of half of U.S. population
- Symptoms in 60-120M person
- 1.8M hospitalizations
- 300,000 ICU admissions
- 90,000 deaths
- Data based on U.S. and Southern Hemisphere experience as well as previous pandemics

*President’s Council of Advisors on Science and Technology (8/09)

Flu Surveillance for Fall 2009

- Laboratory testing
- Sentinel ILI network
- Hospitalizations
- ME Reports
- ED Presentations
- School Absenteeism
- OTC medicines
- Antivirals
- Other



**DEPARTMENT OF HEALTH SERVICES
DIVISION OF PUBLIC HEALTH**
Weekly Surveillance Report
For the Week ending August 29, 2009 (week 09-34)



AT A GLANCE

- Predominant respiratory viruses in Wisconsin:
2009 A/H1N1 and Adenovirus
- Influenza-like illness activity in Wisconsin and five public health regions:

	Current Week 09-34	Previous Week 09-33
Wisconsin	Low	Low
Northeastern Region	Low	Low
Northern Region	Low	Low
Southeastern Region	Low	Low
Southern Region	Low	Low
Western Region	Low	Low
- Influenza-like illness percentage:

	Current week 09-34	Baseline
United States	2.1%	2.4%
Wisconsin	1.3%	*1.6 % (3.1%)
Region V (WI, MN, IL, MI, OH)	0.5% (from week 33)	1.9%
- The Predictive Value Positive (PVP) for rapid influenza tests is:
(PVP is the probability of disease in a patient with a positive test result)
- The Predictive Value Negative (PVN) for rapid influenza tests is:
(PVN is the probability of not having disease when the test result is negative)

Use of the influenza rapid test to diagnose 2009 H1N1 is discouraged

- Antiviral resistance:

		ADAMANTANE RESISTANCE							
		Influenza Subtype				A/H3			
Season/Lab		Seasonal A/H1		2009 A/H1N1		2009 A/H1N1		A/H3	
		Tested	Resistant	Tested	Resistant	Tested	Resistant	Tested	Resistant
08-09	WSLH	51	0%	NA	NA	19	100%		
08-09	CDC	1152	0.5%	486	100%	252	100%		

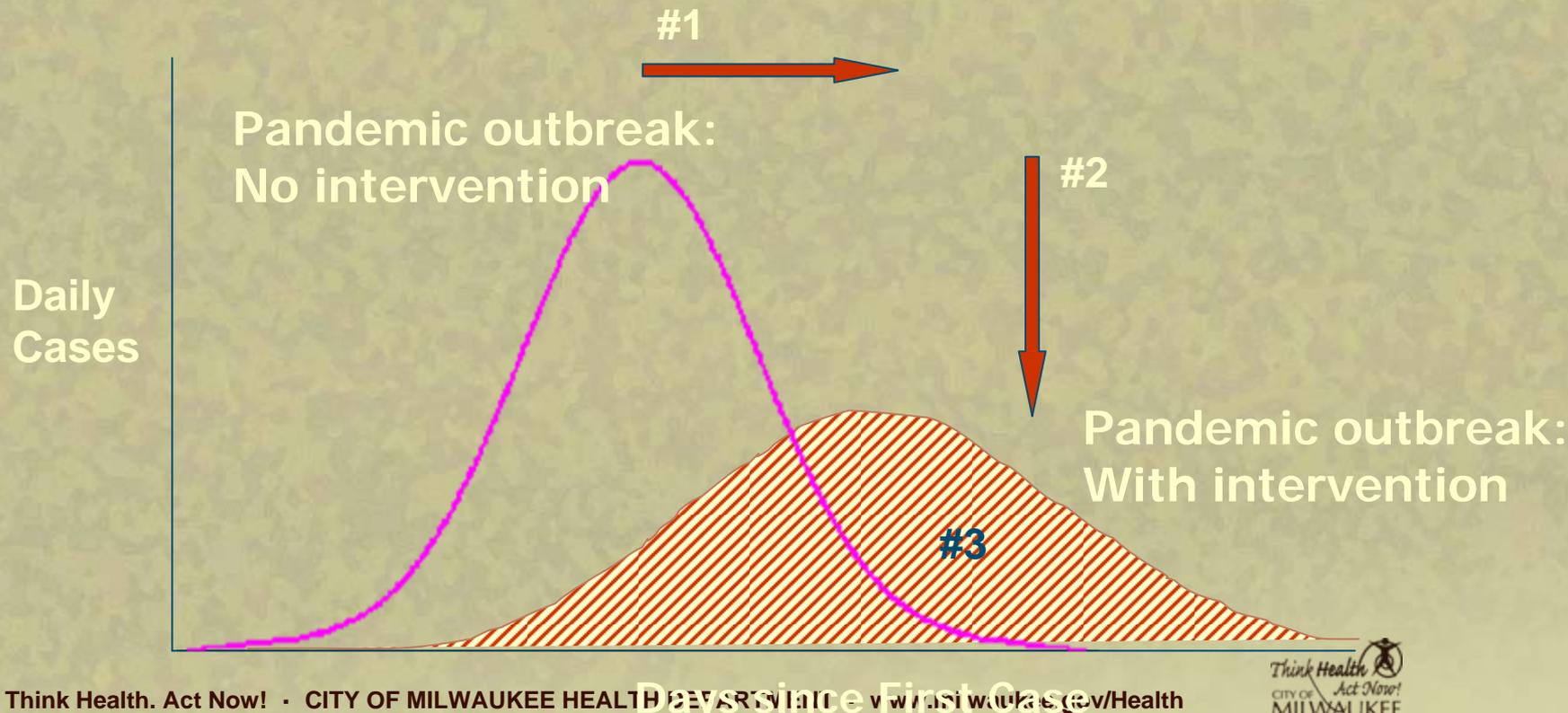
		OSELTAMIVIR RESISTANCE							
		Influenza Subtype				A/H3			
Season/Lab		Seasonal A/H1		2009 A/H1N1		2009 A/H1N1		A/H3	
		Tested	Resistant	Tested	Resistant	Tested	Resistant	Tested	Resistant
08-09	WSLH	100	100%	50	0%	NA	NA	NA	NA
08-09	CDC	1148	99.6%	1277	0.6%	255	0%	652	0%
- Influenza-associated pediatric deaths

	Current Week 09-34	2008-09 Season Total	Due to 2009 H1N1
United States	1	111	43
Wisconsin	0	3	3
- Pneumonia and influenza mortality (P&I), United States:

	Current Week 09-34	Previous Week 09-33
P&I %	5.8%	6.1%
National P&I threshold %	6.3%	6.3%

Community-Based Interventions

1. Delay disease transmission and outbreak peak
2. Decompress peak burden on healthcare infrastructure
3. Diminish overall cases and health impacts



Proposed CDC School Closure Guidance (revised 8/09)

- Benefits of closure do not outweigh social and economic disruption based on modeling of current epi data
- Exclude persons until 24 hours after fever resolves without use of antivirals or other medications
- Siblings and other close contacts to suspect, probable, confirmed cases recommended for exclusion
- PPE for school nursing staff
- Routine environmental disinfection
- LPHAs to use discretion on school closure after assessment of local severity and impact

Risk Communication



Communications

- Hotline (211)
- Website (milwaukee.gov/flu)
- Social Networking
- Sit Report
- Sector POCs
- CityWatch
- Media
- Survnet
- Witrac



MHD H1N1 “Sit Report”

- Local “on the ground” activity
- Key development highlights
- Action-oriented intelligence
- Use for sector strategic decision-making
- Informs community activities/continuity

City of Milwaukee Health Department (MHD) Novel Influenza A (H1N1) Situational Awareness Report

The following Novel Influenza A (H1N1) situational report is being provided to key stakeholders to provide information on the latest updates regarding the MHD, State of Wisconsin Department of Health Services and the Centers for Disease Control & Prevention (CDC) response to Novel Influenza A (H1N1). MHD will provide a weekly situational awareness report during the 2009 – 2010 influenza season.

New Key Developments

1. **KEY DEVELOPMENT #1:** Target groups announced on 7/29/09 for Novel Influenza A (H1N1) vaccine (see below for these priority categories)
2. **KEY DEVELOPMENT #2:** CDC updates isolation timeline guidance for individuals who have influenza-like illness as of 8/5/2009 (see page 2 for more details)
3. **KEY DEVELOPMENT #3:** CDC has provided updated school (K-12) guidance for the upcoming 2009 – 2010 Influenza Season as of 8/7/2009 (see page 2 for more details)
4. **KEY DEVELOPMENT #4:** CDC has provided updated institutions of higher learning guidance for the upcoming 2009 – 2010 Influenza Season as of 8/20/2009 (see page 3 for more details)
5. **KEY DEVELOPMENT #5:** CDC has provided guidance for businesses and employers to plan and respond to the 2009 – 2010 Influenza Season as of 8/19/2009 (see page 3 for more details)

MHD Activities

- MHD has been meeting with local and state health department partners to plan for a possible second wave of Novel Influenza A (H1N1) during the traditional fall Seasonal Influenza Season.
- MHD is currently planning to initiate 3 vaccination sites within the city to vaccinate individuals who are listed within the five key priority groups when Novel Influenza A (H1N1) vaccine becomes available, which is expected to be in mid-October.
- MHD has planned 3 sector specific Novel Influenza A (H1N1) summits. These sector specific summits are listed below:
 - College/University Summit → September 9, 2009
 - (2) K-12 and Childcare Summits → September 15-16, 2009
 - Faith Based Organizations and Community Based Organizations → September 25, 2009

www.milwaukee.gov/flu

The screenshot shows a Windows Internet Explorer browser window displaying the City of Milwaukee Health Department website. The page title is "H1N1 Flu (Swine Flu)". The navigation bar includes links for Home, Calendar, Do Business, Live & Work, Play, Departments, Services, and Payments. A search bar and a Sitemap link are also present. The main content area is titled "H1N1 Flu (Swine Flu)" and includes a sub-section for "Gripe H1N1 (Gripe Porcina)". Below this, there is a section for "City of Milwaukee Case Counts" as of August 16, 2009, at 5 pm. A table displays the following data:

Category	Number
Confirmed H1N1 Cases	3,304
Confirmed H1N1 Deaths	4

Below the table, there are links to Wisconsin's Pandemic Flu website and a CDC report. The "News" section includes links for media updates and a press conference video. The "General Information" section lists various resources, including a brochure in Spanish, key facts, and information for healthcare professionals. The left sidebar contains a "City of Milwaukee Health Department" logo and a list of services such as "Welcome to the City of Milwaukee Health Department", "About Us", "Locations and Schedules", "Home Visits for Moms and Babies", "Woman and Child Health", "Teen Health", "STD / HIV / AIDS Services", "Health Insurance Assistance", "Tobacco Control Program", "Food Safety, Inspections and Licensing", "Birth and Death Certificates", "Immunizations", "Injury & Violence Prevention", "Disease Control and Environmental Health", and "Influenza".

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Hotline

- 211
- 24/7
- Bilingual capability
- Basic flu information
- University Student Health Services
- Local public health agency



www.cdc.gov/h1n1flu

The screenshot shows a Windows Internet Explorer browser window displaying the CDC website. The address bar shows the URL: <http://cdc.gov/h1n1flu/institutions/guidance/>. The page title is "CDC H1N1 Flu | CDC Guidance for Responses to Influenza for Institutions of Higher Education". The main content area features the heading "H1N1 Flu" and a sub-heading "CDC Guidance for Responses to Influenza for Institutions of Higher Education during the 2009-2010 Academic Year". The date is "August 26, 2009 10:00 AM ET". The text provides guidance on helping decrease the spread of flu among students, faculty, and staff of higher education institutions during the 2009-2010 academic year. It mentions that the guidance expands upon earlier guidance and provides a menu of tools for IHE and health officials. A "KNOW What to Do About the Flu" box is visible on the left side of the page. The right sidebar contains links for "Text size", "Email page", "Print page", "Bookmark and share", "Subscribe to RSS", "Get email updates", "Follow on Twitter", and "Watch Video/Podcast". The footer of the page includes contact information for the Centers for Disease Control and Prevention.

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Recommendations for students living on campus

- not going to classes (if fever >100 F) and self-isolate
- not going out to meals,
- not socializing in person
- avoiding close contact such as kissing, sharing eating or drinking utensils,
- stay at least 6 feet away from people the sick person
- wear a surgical mask if close contact can't be avoided,
- Shared bathrooms be avoided or cleaned frequently



Other measures ...

- Consider setting up temporary, alternate housing -- such as a gym -- where sick students can recover.
- Enlisting a friend to help out as a swine flu "buddy" who can bring in food, class notes, and other necessities
- Encourage vaccination (seasonal and H1N1)
- Talk to healthcare provide if symptoms severe or underlying medical conditions
- Preparing university health centers for student "surge"



Get the word out to students !

- Providing updates to university community
- Messaging via text or email
- Use posters and fact sheets in classroom settings
- Use of Facebook, Twitter or Digg
- Posters in unions, dorms, libraries and restrooms



Finally ...

- Discourage ill students to attend campus event involving large groups
- Consider distance learning options for self-isolated students
- Review sick policies to remove barriers for students, staff and faculty to stay at home
- Communicate routinely with university community
- Keep in contact with LPHA on changes in recommended guidance



If severity and impact in community changes, consider

- Extended self-isolation
- Increased social distancing measures
- Expansion of distance learning options
- Suspension of classes



And now a word about vaccine...

- 45M by mid-October
- 20M every week after
 - multi-dose vials
 - intranasal sprayers
 - Pre-filled syringes for school-aged and pregnant women
 - Pediatric formulations
 - Infant formulations



H1N1 Vaccination Update

- Clinical trials underway (for adverse effects and dosing)
- “Critical workforce” plan (H5N1) replaced by “risk status” plan (H1N1)
- Likely two doses needed especially for children with 3 week interval and additional 2 weeks for sufficient immune response
- Must engage all levels of government and private sector
- Communications and marketing critical for vaccine uptake
- Must monitor safety and efficacy
- Program will be voluntary

CDC Vaccination Target Groups

July 29, 2009 (approx 159M)

- Pregnant women
- Persons who live with or provide care for infants aged <6 months (e.g. parents, siblings and daycare providers) age
- Health-care and emergency services personnel
- Persons 6 months -24 years of age
- Persons aged 25-64 years who have medical conditions that put them are risk for influenza-related complications

Expanding Vaccination beyond Target Groups

- Decisions to be made at local level
- Based on availability and demand by public
- Recommended after target group demand has been met
- Current studies indicated risk of infection for persons >65 years less than younger age groups
- Reassessment of epidemiology, immunologic and clinical data may warrant a change in vaccination recommendations

MHD Vaccination Plan

- Mass clinic sites selected
- K-12 target group focus
- Underinsured and uninsured outlet
- Strictly voluntary
- First come, first serve
- Expansion based on demand



Antiviral Update (9/8/09)



- Treatment
 - Severely ill/hospitalized
 - Persons at risk for complications who are ill

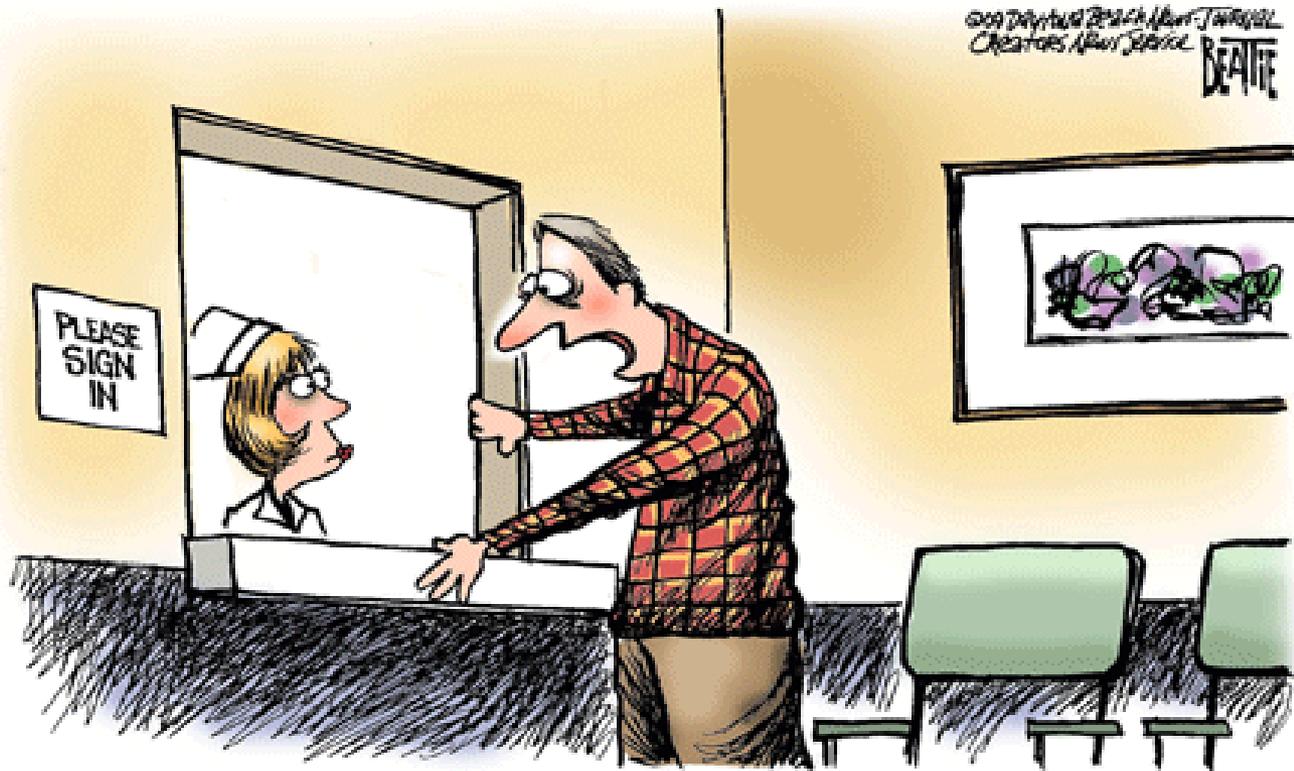
- Chemoprophylaxis
 - HCWs who come into contact with suspect ILI infections
 - Persons at risk for complications through household contact with suspect ILI

How to wear a mask to protect yourself from H1N1 ...



Key points

- Influenza is unpredictable
- Cases already confirmed in several university and college settings
- Plan and prepare for lots of flu activity (seasonal and H1N1)
- Stay home if sick, wash hands and good cough etiquette
- Mitigate effects through preparing well and responding effectively



"I'm not here to be treated for swine flu . . . I want something for the hysteria I'm feeling because of it."

<http://cdc.gov/h1n1flu/schools/>

- **Institutions of Higher Education**
- **Updated Guidance for the Fall Flu Season Aug 20**
 - Higher Education Aug 20 Guidance for Responses to Flu for Institutions of Higher Education during the 2009-2010 Academic Year Aug 20
 - Technical Report on CDC Guidance for Responses to Flu for Institutions of Higher Education during 2009-2010 Academic Year Aug 20
 - Preparing for the Flu: A Communication Toolkit for Institutions of

Questions???



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www.milwaukee.gov/health