

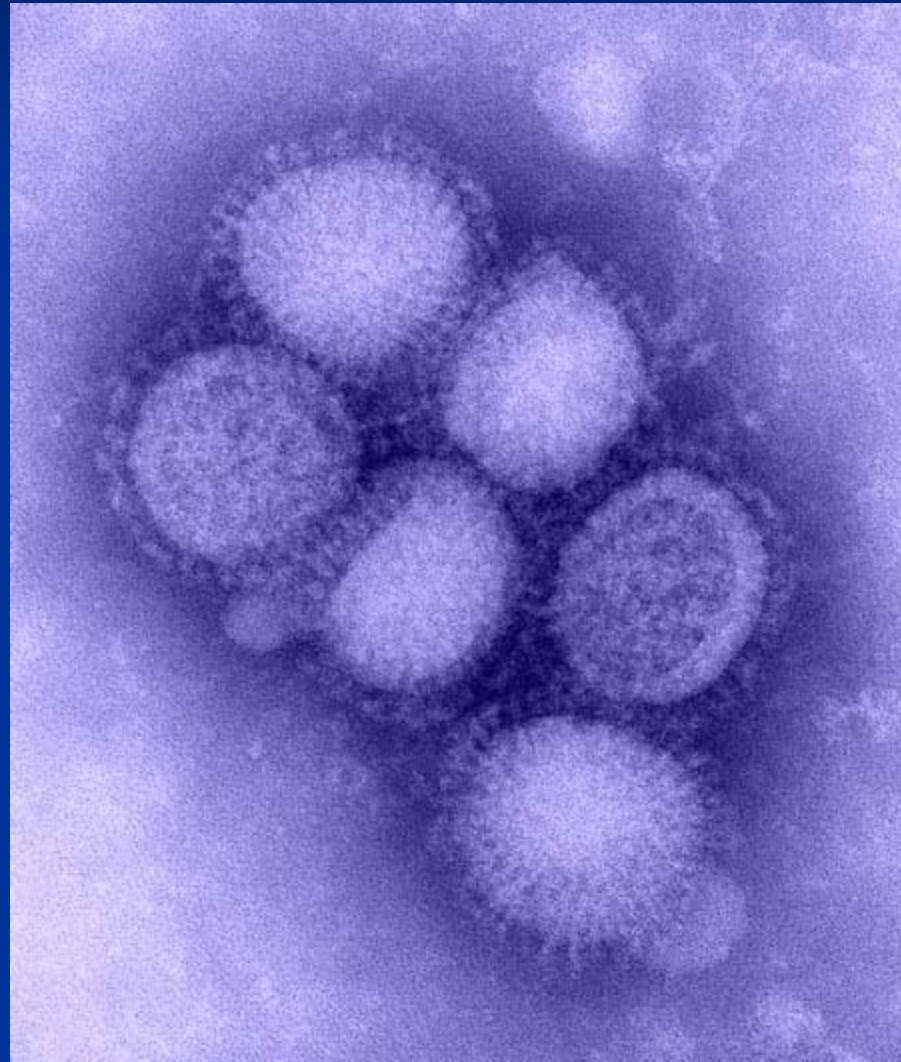
H1N1

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The Culprit

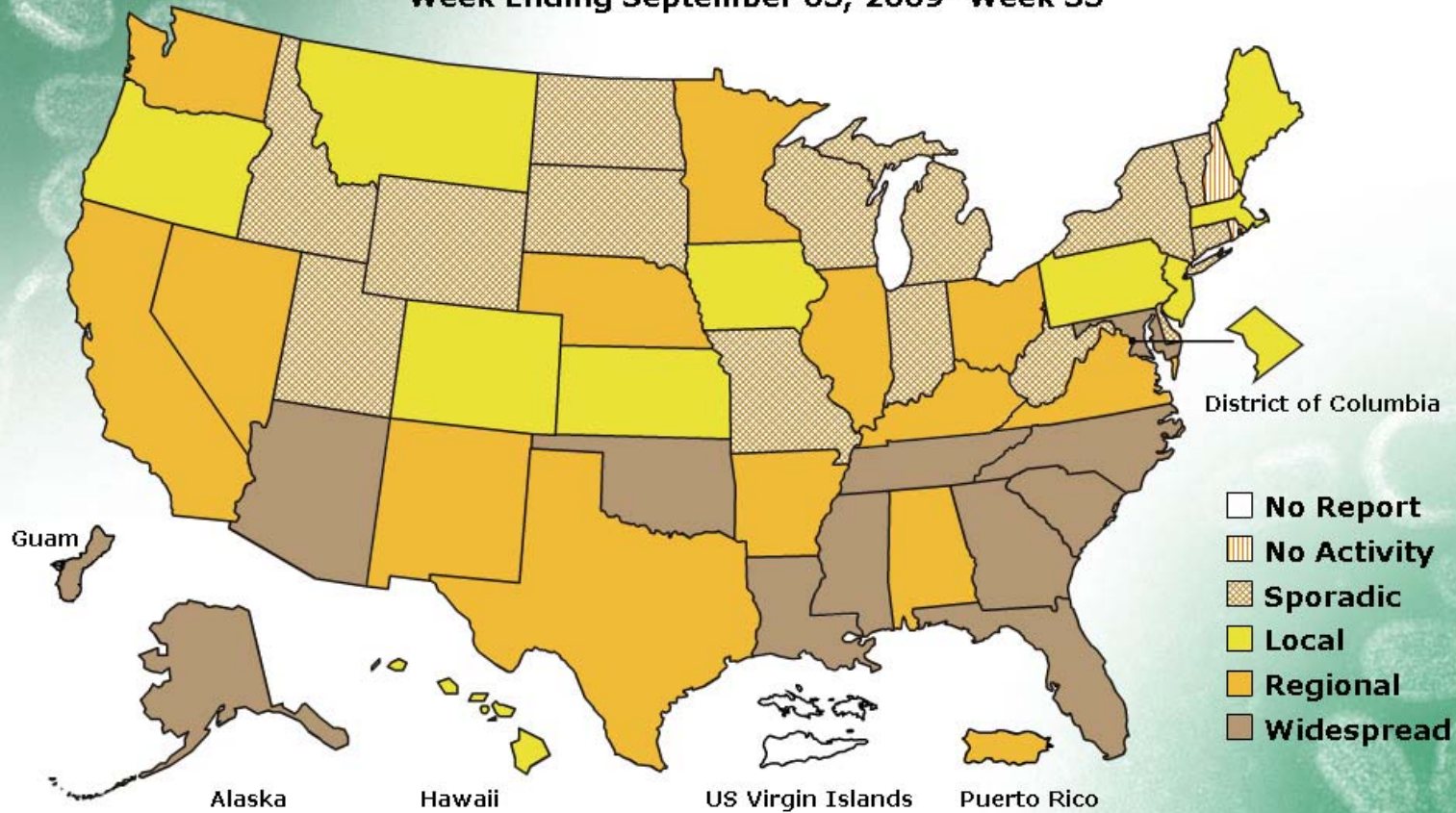


FLUVIEW



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

Week Ending September 05, 2009- Week 35



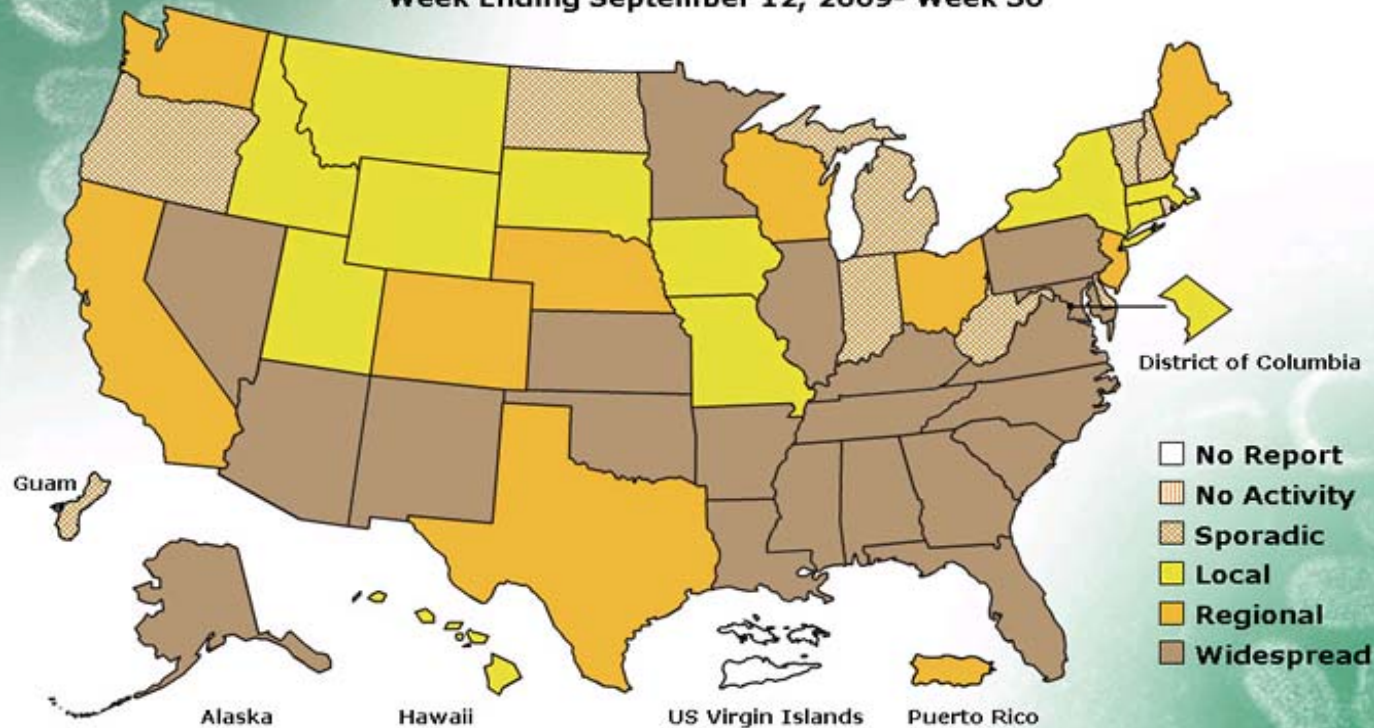
*This map indicates geographic spread and does not measure the severity of influenza activity.

FLUVIEW



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

Week Ending September 12, 2009- Week 36

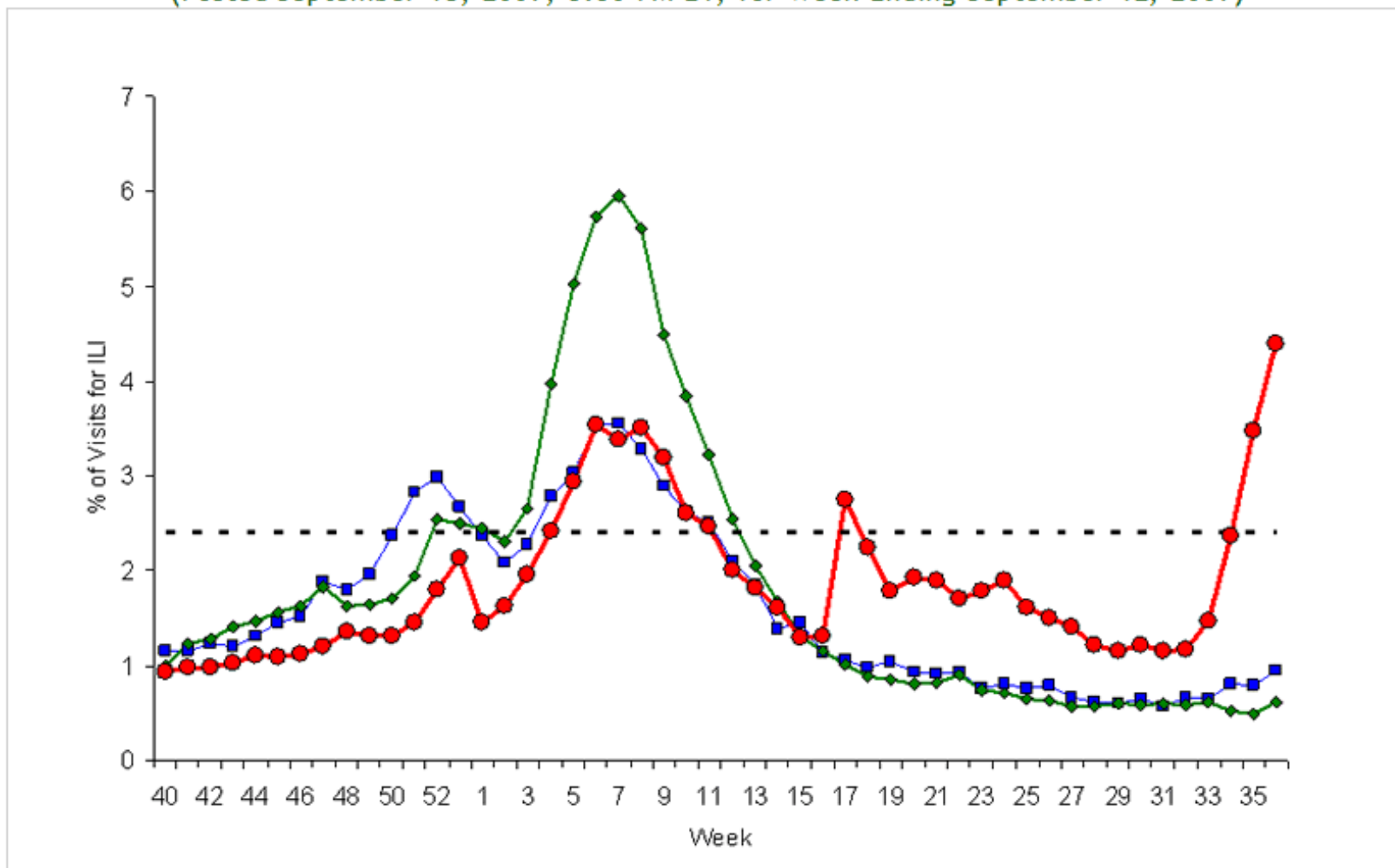


*This map indicates geographic spread and does not measure the severity of influenza activity.

The 2009-10 influenza season officially begins October 4, 2009.

Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), National Summary 2008-2009 and Previous Two Seasons

(Posted September 18, 2009, 5:30 PM ET, for Week Ending September 12, 2009)



Blue 2006-07, Green 2007-2008, Red 2008-09

TABLE 3-1: A POSSIBLE (NOT PREDICTIVE) SCENARIO TO HELP PLAN FOR THE FALL RESURGENCE OF 2009-H1N1 INFLUENZA IN THE UNITED STATES

Peak incidence date (unmitigated)	October 15
Peak incidence of symptomatic disease	1–2% of U.S. population (3–6 million people) on the U.S. epidemic’s single peak day
<i>Percent of U.S. population (and approximate numbers) assuming no change in virus</i>	
Infected (indicated by seroconversions, with or without symptoms)	30–50% (90–150 million)
Symptomatic	20–40% (60–120 million)
Needing medical attention	15–30% (45–90 million)
Needing hospital care	0.3–0.6% (0.9–1.8 million)
Needing Intensive Care Unit (ICU) facilities	0.05–0.1% (150,000–300,000)
Deaths	0.01–0.03% (30,000–90,000)
Peak occupancy of ICU beds due to 2009-H1N1	10–25 ICU beds/100,000 population ¹
Peak occupancy of hospital beds due to 2009-H1N1	50–150 hospital beds/100,000 population ²
High-risk groups for death or hospitalization	Pregnant women; children (0–4 years old); patients with neuromuscular/neurocognitive disorders, asthma, chronic obstructive pulmonary disease, cardiovascular disease, diabetes, severe obesity, or immunocompromising conditions ³

Seasonal Flu

- 36,000 people die from flu-related complications and more than 200,000 people are hospitalized from flu-related causes each year.
- Over 90% of deaths and about 60 percent of hospitalization occur in people older than 65.
- Of those hospitalized, 20,000 are children younger than 5 years old
- Classically Influenza A or B

2009 H1N1

- Quadruple reassortant virus with genes from flu viruses found circulating in pigs from Europe and Asian, birds, and humans.
- First appeared in the U.S. in April of 2009
- June 11, 2009 WHO declared H1N1 Pandemic
- Spread in the same manner as seasonal flu

H1N1 cont.

- Coughing and sneezing increase transmission
- Touching contaminated surfaces
- Illness ranges from mild URI to death
- Cough, sore throat, HA, myalgias, fevers
- Significant number with N/V/D
- Most people will recover without treatment

H1N1 cont.

- People infected with seasonal and 2009 H1N1 flu shed virus and may be able to infect others from 1 day before getting sick to 5 to 7 days after.

With H1N1...

- About 1/3 of adults >60 have circulating antibodies against H1N1 but unsure what this means clinically.
- At this time, there are few cases and few deaths reported in people older than 64 years old, which is unusual when compared with seasonal flu.
- greater disease burden in people younger than 25 years of age than older people.
- No children and few <60 have antibodies to H1N1

If you are treating them...



Should we order flu swabs?

- The sensitivity of rapid influenza diagnostic tests can range from 10-70% for 2009 H1N1 virus.
- We no longer routinely swab for flu in the ED, treatment will be empiric based on clinical presentation.
- MD may order a flu swab in only extenuating circumstances and all charts are audited.
- The H1NI PCR will be ordered by the admitting physician only.

Who should we treat?

- Require hospitalization
- Patients presenting < 48 hours from symptom onset AND high risk for influenza complications which includes:
 - Ages <2 years old or >65. Risk for severe complications from seasonal influenza is highest among children younger than 2 years old. Consider between 2-5 years.
 - Ages < 19 years old **AND** receiving long term aspirin therapy because of an increased risk of Reye's syndrome
 - Pregnant
 - Preexisting history of chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, hematological (including sickle cell disease), neurologic, neuromuscular or metabolic disorders (including diabetes mellitus) or immunosuppressive conditions
 - Immunosuppression, including that caused by medications or by HIV
- Present with warning signs and symptoms of lower respiratory tract infection including dyspnea, tachypnea, and unexplained oxygen desaturation

Prophylaxis? Maybe

- Contact occurred <48 hours from presentation **AND** during the infectious period (defined as one day before until 24 hours after fever ends) **AND** if the **EXPOSED PATIENT MEETS ONE OF THE FOLLOWING CRITERIA**
- High risk for influenza complications **AND** are a close contact (see below)
- Health care personnel, public health workers, or first responders who had recognized, unprotected close contact exposure (see below)
- **Close contact** defined as having cared for or lived with contact or been in a setting where there is a high likelihood of contact with respiratory droplets and/or body fluids.
- **DOES NOT** include activities such as walking by an infected person or sitting across from asymptomatic patient

Prophylaxis cont.

- 1. Initiate prophylaxis with 10 day course of Tamiflu (oseltamivir) 75mg po daily or Relenza (zanamivir) 10mg inhaled daily.
- 2. Counsel patient on early signs and symptoms of influenza contact HCP for evaluation and possible treatment **IF** symptoms develop.
- 3. Give script for option 2 above for 5 days of Tamiflu to be filled if symptoms begin.

Antivirals

- Oseltamivir (trade name Tamiflu®) or zanamivir (trade name Relenza®) Should be started within 2 days after becoming sick.
- They decrease the ability of flu viruses to reproduce.
- Second line defense after vaccination.
- Can reduce the severity of flu symptoms and shorten the time you are sick by 1 or 2 days.

Antiviral Resistance

- Seasonal Flu – Resistant to Tamiflu but sensitive to Amantadine
- H1N1 for the most part is sensitive to Tamiflu but resistant to Amantadine
- There are sporadic cases of Tamiflu resistant H1N1 appearing.
- Almost all the Influenza A cases now are H1N1

Vaccination

- The seasonal flu vaccine DOES NOT offer protection.
- The H1N1 vaccine should....SHOULD provide protection
- It will be available in the next two weeks.

Who Should Get Vaccinated?

- Pregnant women
- Household contacts and caregivers for children younger than 6 months of age
- Healthcare and emergency medical services personnel
- All people from 6 months through 24 years of age
- Persons aged 25 through 64 years who have health conditions associated with higher risk of medical complications from influenza.

If Supplies are Limited

- pregnant women
- people who live with or care for children younger than 6 months of age
- health care and emergency medical services personnel with direct patient contact
- children 6 months through 4 years of age
- children 5 through 18 years of age who have chronic medical conditions

Who Should Not Get Vaccinated?



Take Home Message

- Get vaccinated
- Mask and foam
- Masks on patients
- Selectively treat those at high risk
- Selective prophylaxis
- We can't afford to have health care providers ill.
- It's OK though if lawyers get ill...