

Influenza A (H1N1) 2009

The 21st Century's First Influenza Pandemic

September 22, 2009

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Influenza A (H1N1) 2009

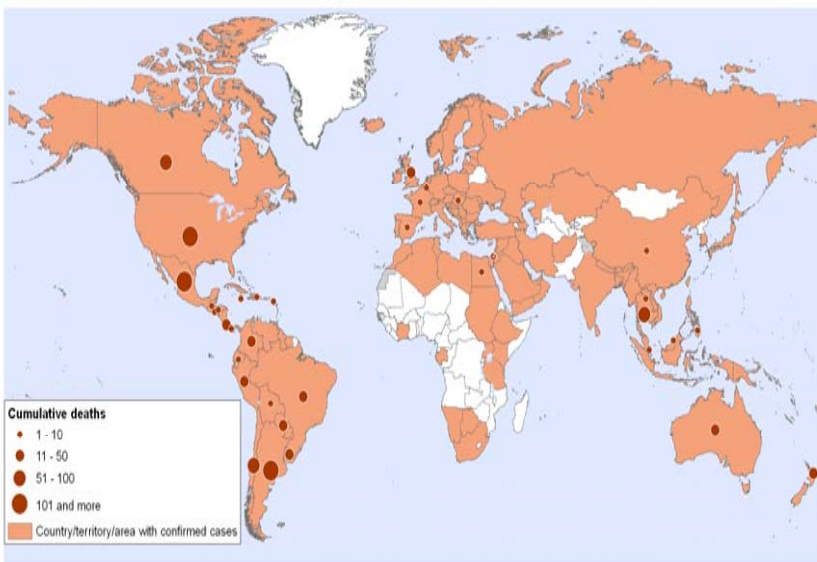
- Also known as swine flu
- April 2009, Mexico and SE California
- Rapid spread through Mexico and US
- May 2009, spread throughout world
- WHO Pandemic Phase 6 June 2009

World Health Organization H1N1 as of August 2009

Pandemic (H1N1) 2009

Status as of 31 July 2009

Countries, territories and areas with lab confirmed cases and number of deaths as reported to WHO



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Health Organization
Map Production: Public Health Information and Geographic Information Systems (GIS)
World Health Organization



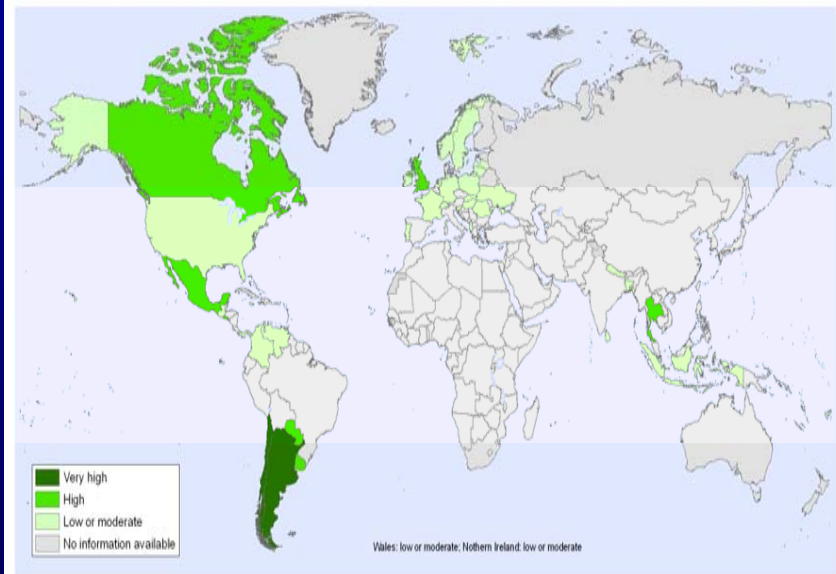
Map produced: 04 August 2009 13:00 GMT

Intensity of acute respiratory diseases in the population

Status as of Week 29

(Intensity is an estimate of the proportion of the population with acute respiratory diseases, covering the spectrum of diseases from influenza-like illness to pneumonia.)

13 Jul - 19 Jul 2009



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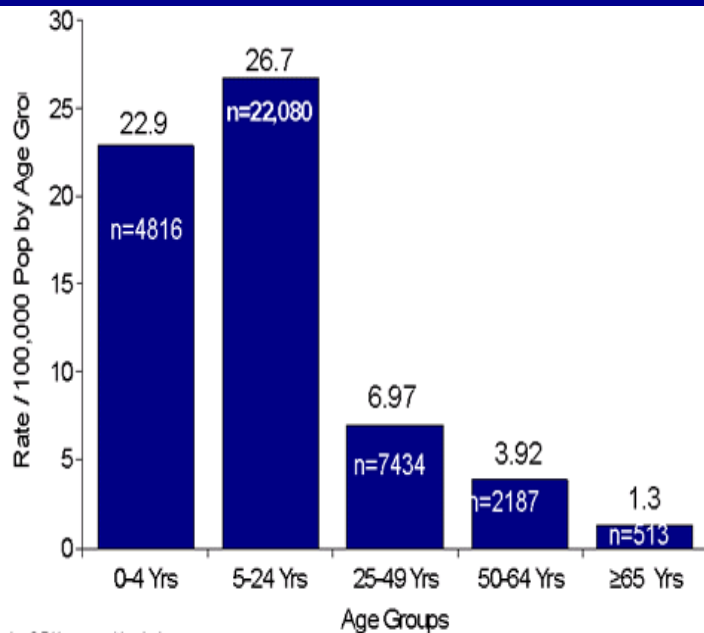


Map produced: 04 Aug 2009 13:00 GMT

Macomb County Epidemiology Confirmed/Probable Cases

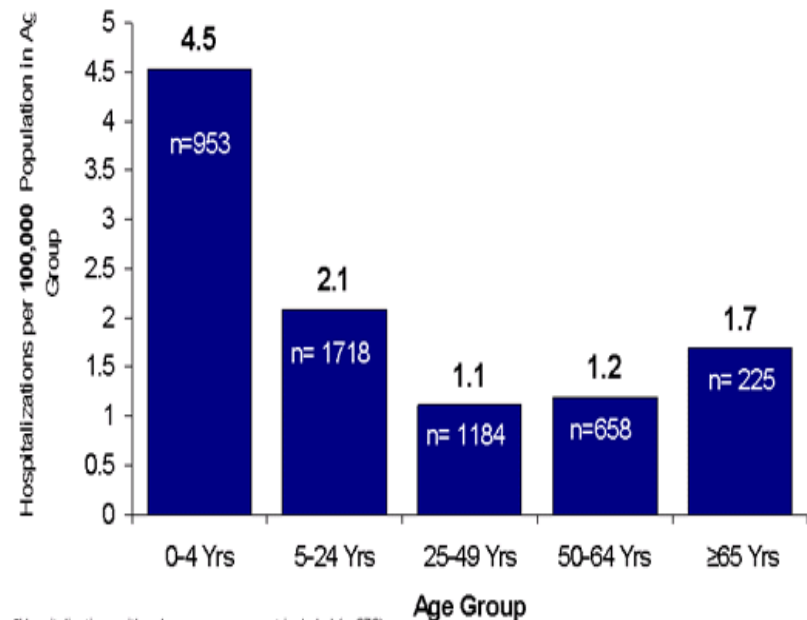
- 30 cases (29 confirmed/1 probable)
- 4 deaths
 - 53 y/o female
 - 63 y/o female
 - 28 y/o male
 - 53 y/o male
- Average age 26 years (median age 21 years)
- Age range (5-63 years)
- Actual number of cases significantly higher

US Epidemiology H1N1 August 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>

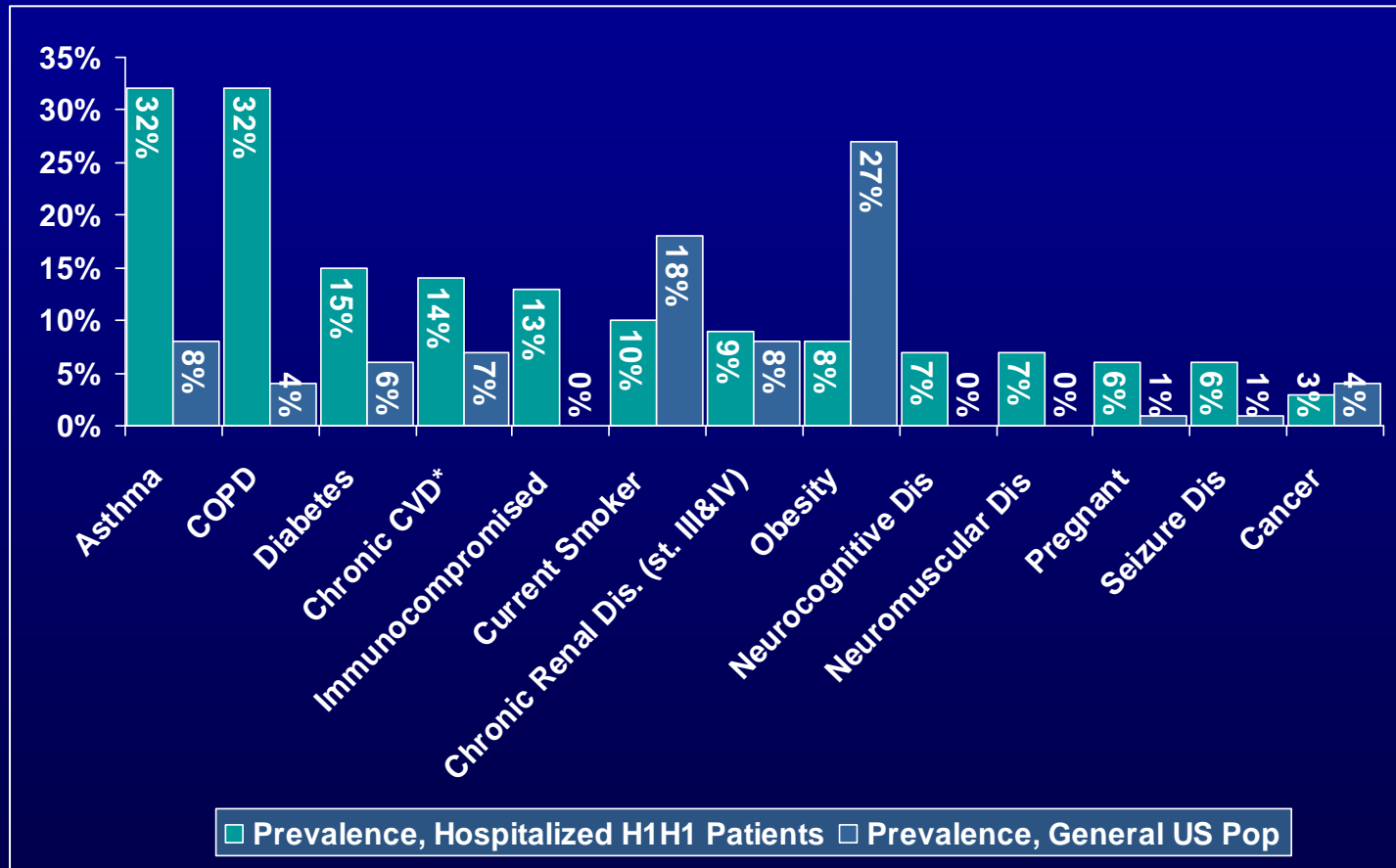


*Hospitalizations with unknown ages are not included (n=273)

*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>

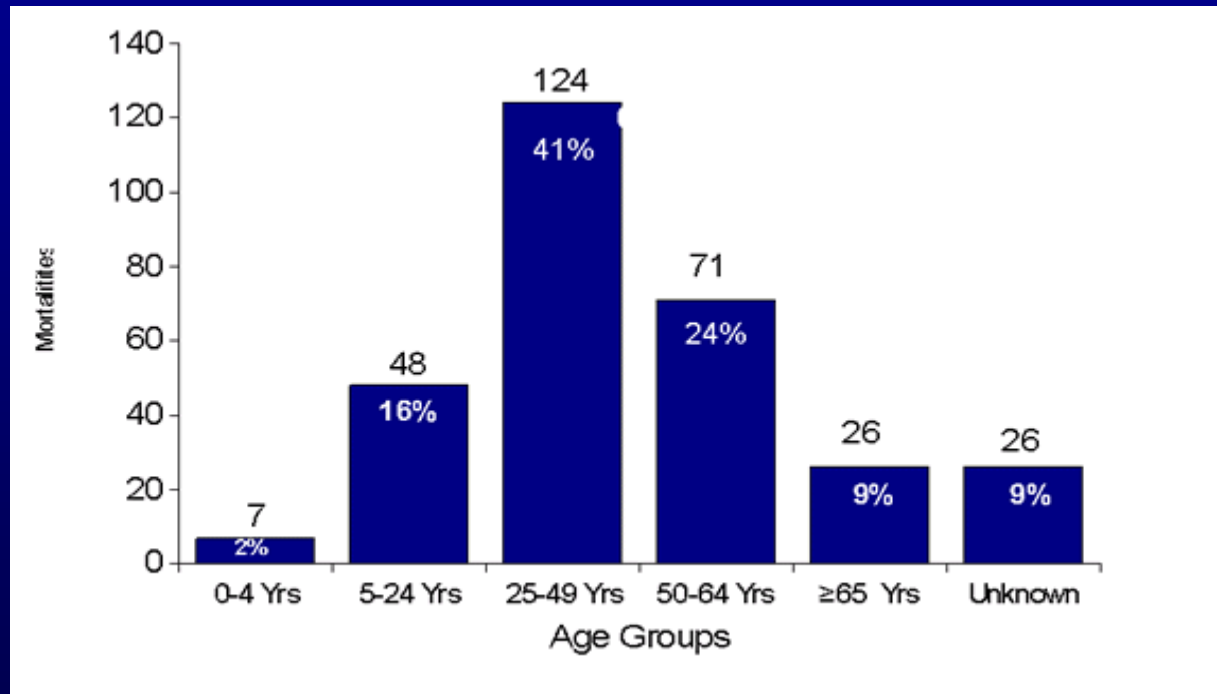
Epidemiology/Surveillance

Pandemic H1N1 Hospitalizations Reported to CDC Underlying Conditions as of 19 JUN 2009 (n=268)



*Excludes hypertension

Mortality by Age, US, as of August 1, 2009



US Epidemiology, as of August 2009

“More than one million people became ill with novel H1N1 flu between April and June 2009.”- cdc.gov

Transmission

- Transmitted much like seasonal influenza
 - Exposure to nearby coughing or sneezing
 - Contact with contaminated surfaces
- Incubation: can range from 1-7 days, and more likely 1-4 days
- Infectious period:
 - one day before to 7 days following illness onset
 - Children, especially younger children, may be infectious up to 10 days

Illness Signs and Symptoms

- Similar to seasonal influenza
- Signs and symptoms include fever, chills, cough, sore throat, runny or stuffy nose, headache, muscle aches
- Vast majority of cases are mild
- A very small number of cases have been severe

High Risk Medical Conditions

Consistent with seasonal influenza

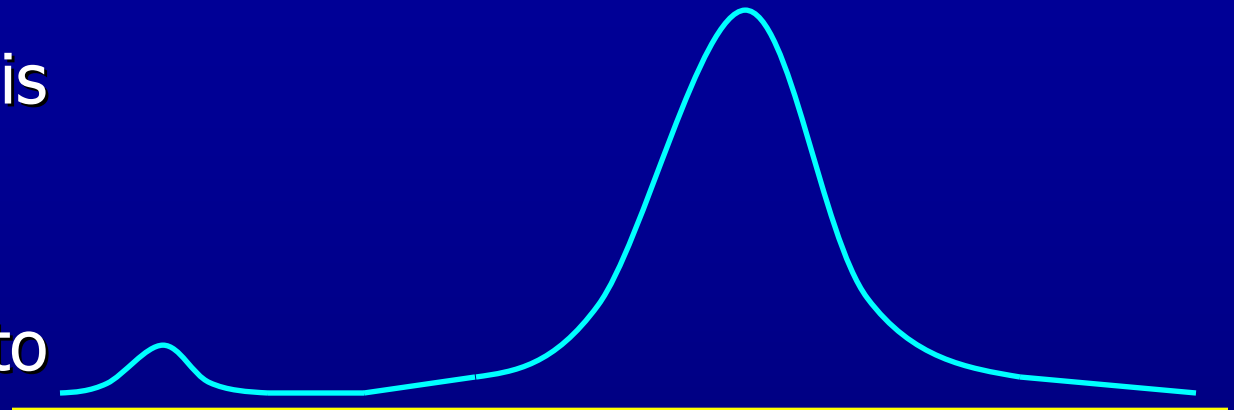
- Heart disease
- Lung disease
- Asthma
- Kidney disease
- Liver disease
- Weakened immune system
- Metabolic diseases such as diabetes
- Muscle or nerve disorders such as seizure disorders or cerebral palsy

Preventive Measures

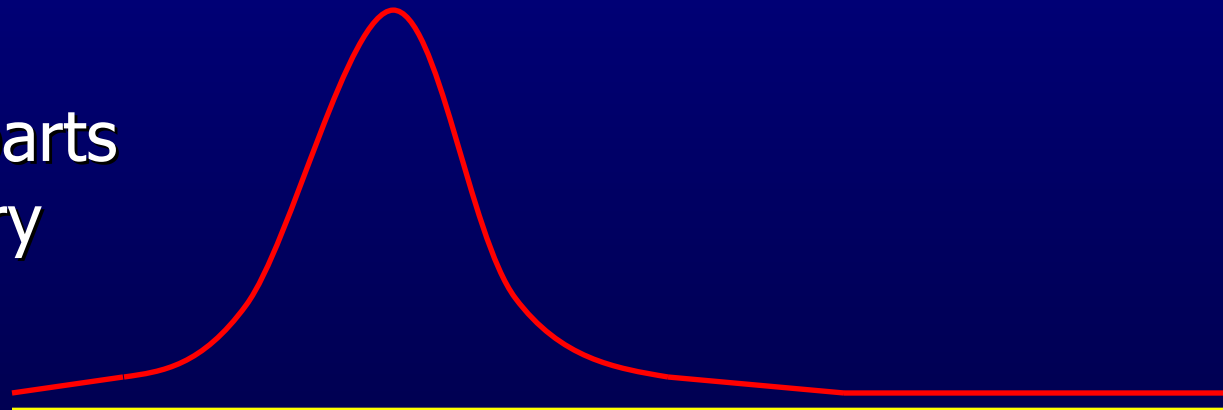
- Avoid close contact with ill persons
- If ill stay home from school or work
- Wash hands frequently
- Cover mouth and nose when you cough or sneeze
- Social distancing (6 feet)
- Vaccination

What's Next

- Expected surge this fall
- Severity of fall epidemic difficult to predict
- Surveillance continuing
- Outbreaks being reported in many parts of U.S. which is very unusual
- Almost all viruses isolated are influenza A (H1N1) 2009



Northern Hemisphere



Southern Hemisphere

Summary of Key Points

- Once emerged, pandemic H1N1 virus spread to all 50 states and globally quickly
- Some areas more affected than others
- Expect continued circulation this fall and winter with local and regional outbreaks
- Elderly seem relatively spared
- Capable of causing severe disease and death
 - Most severe outcomes among people with underlying health problems that are associated with high risk of influenza complications
- Virus remains sensitive to oseltamivir and zanamivir but cases of resistance being reported

Vaccination

Target groups different from seasonal flu:

- 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

Vaccination

- Once demand is met for 5 initial priority groups, vaccine will be offered to all persons 25 through 64 years of age and persons 65 years of age and older
- MCHD will make the decision for Macomb County

Vaccination

Highest Priority Groups:

- Pregnant women
- Household contacts and caregivers of children younger than 6 months of age
- Healthcare and emergency medical services personnel who have direct contact with patients
- Children 6 months – 4 years
- Children and adolescents aged 5-18 years who have health conditions associated with higher risk of medical complications from influenza

Vaccination Federal Plan

- Public and private delivery
- Vaccine procured and purchased by US government (195 million doses)
- Vaccine manufactured in exactly the same way as seasonal influenza vaccine
- FDA approved vaccine September 15, 2009
- Vaccine will be allocated across states based on population
- Vaccine distributed by McKesson to public and private providers
- Private providers will need to enter into agreement and place orders with public health to receive vaccine

Vaccination Federal Plan

- Clinical trials ongoing at this time
- Vaccine available mid-late October (some vaccine early October possible)
- Initial amount 45 million doses by mid-October
- Subsequent weekly production 10-20 million doses
- Macomb County allocation approximately 100,000 doses initially with 25,000 per week thereafter
- Young children (<9 or 10 years) will require two doses administered 3-4 weeks apart

Vaccine Manufacturers

CSL

- 18 years of age and older
- Prefilled single dose syringe 0.5 ml
(Thimerosal free)
- Multi-dose vial 5.0 ml
(contains Thimerosal)

Vaccine Manufacturers

Sanofi Pasteur

- 6 months of age and older
- Prefilled syringe 0.25 ml (6 through 35 months)
- Prefilled syringe 0.5 ml (Thimerosal free)
- Single dose vial 0.5 ml (Thimerosal free)
- Multi-dose vial 5.0 ml (contains Thimerosal)

Vaccine Manufacturers

Novartis

- 4 years of age and older
- Prefilled single dose syringe 0.5 ml
(≤ 1 mcg mercury)
- Multi-dose vial 5.0 ml
(contains Thimerosal)

Vaccine Manufacturers

MedImmune

- 2 - 49 years of age
- Live intranasal

Vaccine Manufacturers

Influenza A (H1N1) 2009 Monovalent vaccines in the U.S. will not contain an adjuvant

Vaccination Macomb County Plan

- Large scale clinics
 - Community-based
 - School-based (all 21 districts and MISD)
 - MCHD locations
 - Community College (possible)
- Private providers (physicians, hospitals, pharmacies, long term care)
 - Enrollment
 - Order processing

Vaccination Macomb County Plan

Macomb County Priority Groups

Pregnant women	7,600
Contacts of infants > 6 months	10,000
HCWs and EMS	14,515
*Persons 6 months-24 years	247,700
Persons 25-65 years with medical conditions	45,700
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	325,515

*K-12 approximately 170,000

Vaccination Macomb County Plan School-Located Clinics

- Planning ongoing with MISD and school districts
- Approximately 150,000 K-12 public school students in approximately 280 school buildings
- 15-20 clinics per day for 3 weeks
- Enrolled population of 10,000 per day
- Expect 40-60% will want to be vaccinated

Vaccination

Macomb County Plan

School-Located Clinics

- First week of November to Thanksgiving break
- School-day clinics in middle/high schools
- Evening/weekend clinics for preschool/elementary schools
- Second dose clinics (when necessary) will begin after first dose clinics completed (December)
- If vaccine availability becomes an issue, high school clinics then middle school clinics will be postponed or cancelled

Vaccination

Macomb County Plan

School-Located Clinics

- Voluntary
- No cost for vaccine or the vaccination
- Written consent required
- Parent/guardian must be present at preschool/elementary school clinics
- Clinics will be for enrolled students only

Vaccination Macomb County Plan

Private/Charter Schools

- Schools have been surveyed and many interested in school-located clinics
- Estimated 20,000 additional students
- Conducted in November/December

Vaccination Macomb County Plan

- Will need 200 or more additional vaccinators
 - Nurses
 - Medical Assistants
 - Paramedics/EMTs
- Clinics staffed with MCHD staff, contractual temporary staff, and volunteers
- Clinics structured based on two vaccinators per vaccination station with each station administering 25-30 injections per hour
Example: 1920 persons vaccinated in 8 hours using 8 vaccination stations (16 vaccinators)
- Medical Standing Orders

Vaccination Macomb County Plan

- NIMS/ICS
- Size of clinics will be scaled to meet anticipated demand
- Temporary staff (vaccinators) to be hired through SEMHA
- Training sessions in October (Job Action Sheets)

Vaccination Macomb County Plan

Private Providers

- Providers must enroll in program and MCIR
- Order vaccine through MCHD
- 100 dose minimum for any particular formulation
- Vaccine shipped to provider by McKesson
- Provider may bill insurance for administration (not cost of vaccine)
- Refer to MCHD clinic if no insurance
- Provider must enter data into MCIR or send scan forms to MCIR staff

Vaccination Macomb County Plan

Persons interested in working/volunteering:

Macomb County Health Department
Emergency Preparedness Program

Jennifer.Messana@macombcountymi.gov

586-493-0603

Management of Ill Students and Staff*

- Stay home when sick
- Sick students and staff should be sent home
- Ill students
 - Place in separate room until picked up
 - Surgical mask (if available) or cover mouth/nose with tissue when coughing or sneezing
- Staff
 - Limit interaction with ill students
 - High risk staff should not be assigned to supervise ill students
 - Surgical mask may be used (if available)

* Recommendations may change if disease becomes more severe

School Cleaning

- School staff should routinely clean areas that students and staff touch often with cleaners they typically use
- CDC does not believe any additional disinfection of environmental surfaces beyond the recommended routine is required
- Virus survives on environmental surfaces for 2-8 hours

Macomb County Plan School Dismissal

- Proactive dismissal unlikely to be recommended for public health reasons
- School may close for administrative reasons (reactive dismissal)
- Will work with schools in making these decisions

References

- Mivolunteerregistry.org
- Macomb County Health Department
www.macombcountymi.gov/publichealth
- Michigan Department of Community Health
www.michigan.gov/flu
- WHO www.who.int
- CDC www.cdc.gov
- DHHS www.pandemicflu.gov (CHECKLISTS)