

**Mesa County Health Department
Response Strategy for the 2009-2010
Flu Season,
Including the Novel H1N1 Virus**



August 13, 2009

Table of Contents

Introduction	3
Key Points for the Public	3
Background.....	4
A. Vaccination	5
Seasonal Influenza.....	6
H1N1 Vaccination.....	7
B. Public Health Surveillance and Investigation.....	8
C. Communication and public awareness activities	8
D. Mitigation	11

Figures

Figure 1. Age groups impacted in 2009, by Novel H1N1 virus in the United States	5
Figure 2. Age groups hospitalized in 2009 due to H1N1 in United States.	5
Figure 3. Examples of basic messages reduce spread of disease from the U.S. Centers for Disease Prevention and Control	10
Figure 4. H1N1 Information Sources.....	10

Mesa County Health Department Response Strategy for the 2009-2010 Flu Season, Including the Novel H1N1 Virus

Introduction

The *Mesa County Health Department Response Strategy for the 2009-2010 Flu Season, Including the Novel H1N1 Virus* has one goal: To control and limit the impact of influenza. Response will primarily be at the local level and will require a community response. In support of that goal, all activities described in this document support the prevention and the control of seasonal influenza and the Novel H1N1 virus in Mesa County. The Mesa County Health Department Pandemic Influenza Response Plan, completed in 2007¹, provides the foundation for response activities. This document will complement the previous work with specific actions that are anticipated in fall 2009 and into 2010. While the situation continues to change and public health guidance is evolving, response strategies will focus on four key elements:

- A. Vaccination of the public for seasonal influenza, and if available, the Novel H1N1 virus.
- B. Public health surveillance activities to detect the presence and intensity of seasonal influenza and Novel H1N1 activity in Mesa County.
- C. Communication and public awareness activities to provide information on what people can do to protect themselves.
- D. Mitigation of the spread of the disease through community measures such as work place sick policies and closure of public places.

The need for response preparations in Mesa County is based on the determination of a national emergency due to the spread of H1N1 virus by the U.S. Department of Human & Health Services on April 26, 2009², the declaration of a worldwide pandemic on June 11, 2009, by the World Health Organization³ and the continued spread of the disease in the United States as tracked by the U.S. Centers for Disease Control and Prevention⁴.

Prevention is the best strategy.

The public should not panic, but should be vigilant in following the status of the H1N1 virus and know where to get reliable information. The public is key to limiting the spread of influenza and should take seriously the personal protective measures recommended.

- Cover your cough.
- Wash your hands frequently.
- If you have a fever, stay home for at least 24 hours after fever ends, without the use of fever reducing medication.
- Get a vaccine when it becomes available.

¹http://health.mesacounty.us/disease/pandemicavianflu/pdf/MCHD2007_PandemicInfluenzaResponsePlanV4.pdf

²http://www.hhs.gov/secretary/phe_swh1n1_april_2009.html

³http://www.who.int/mediacentre/news/statements/2009/h1n1_pandemic_phase6_20090611/en/

⁴<http://www.cdc.gov/h1n1flu/>

The symptoms of *Novel H1N1 influenza A* are similar to the symptoms of seasonal flu and may include:

- Fever (most important symptom to watch for)
- sore throat
- cough
- stuffy nose
- chills
- headache
- body aches
- fatigue
- Some people have reported diarrhea and vomiting, especially associate with children

MCHD is asking all individuals with mild flu-like illness to stay home and limit contact with others. Children and adolescents with fever should not go to day care or school. Adults with fever should not go to work. Individuals with flu-like illness should stay home until 24 hours after the fever has resolved without the use of fever reducing medication. Individuals who develop severe illness, such as difficulty breathing, and those with medical conditions that could be worsened by the flu should contact their health care provider.

Pregnant women and those with risk factors for complications should seek care early if they suspect they have influenza. Antiviral medications are available to decrease the duration and severity of the illness, but must be given within the first 48 hours.

Background

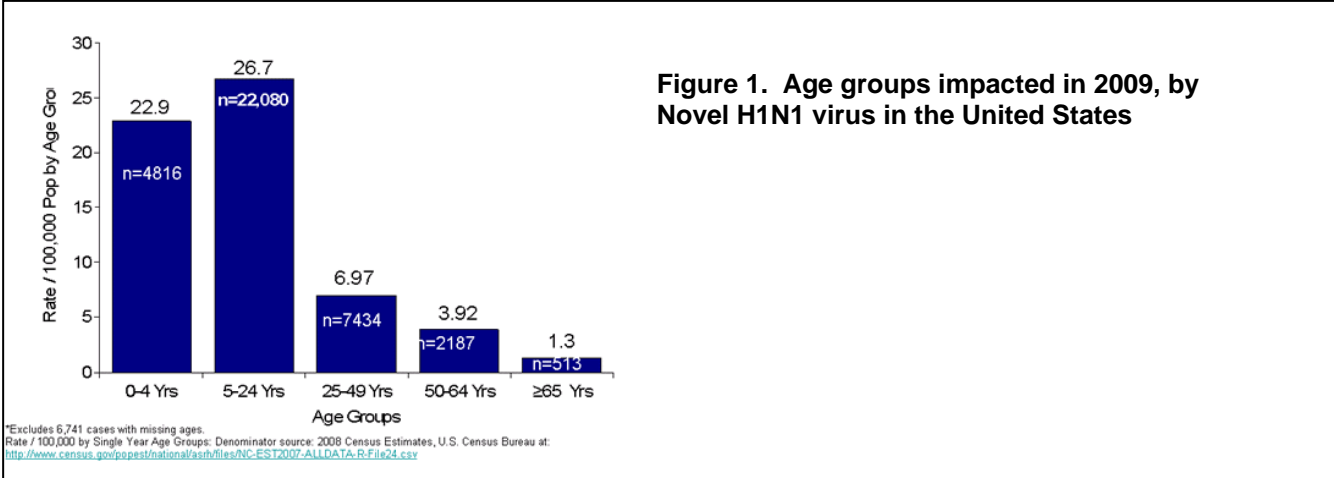
In March of 2006, the Mesa County Health Department held its first community workshop on pandemic preparedness. This coincided with pandemic influenza summits in each state across the nation. Much time, effort, and funding has gone into preparation for pandemic influenza at the national, state and local levels since that time. Much has been accomplished, but MCHD realizes that the challenges are many with the novel H1N1 pandemic.

Each year, 750-850 people die in Colorado from complications related to seasonal influenza primarily in the population over 65 years old. *Novel H1N1 Influenza A* is a new virus that was first detected in April, 2009. It is thought that the *novel H1N1 Influenza A* spreads the same way that seasonal influenza viruses spread: mainly through coughs and sneezes of people who are sick with the virus⁵. Because this is a new virus, most people do not have immunity to it.

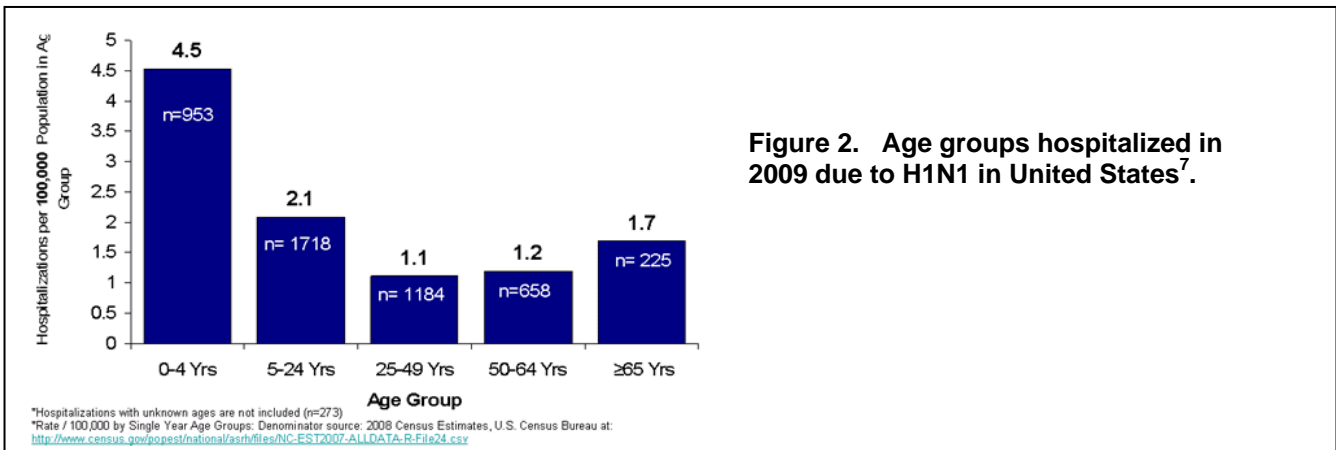
Novel H1N1 is different from the usual strains of seasonal influenza in that the higher attack rates and hospitalizations are in the younger population. Seniors have lower rates and those over age 65 are not in the priority group for vaccination. This is suspected to be due to exposure to influenza viruses in the past which have given some immunity.

⁵ <http://www.cdc.gov/h1n1flu/>

The CDC⁶ reports people between 5 and 25 years of age are the largest age group to have confirmed cases of H1N1 (Figure 1).



In contrast, the CDC reports the largest age group of hospitalized cases of H1N1 is young children 0-4 year's age, followed by 5-24 years as the second largest impacted age group (Figure 2).



A. Vaccination

Vaccination of the public for seasonal influenza, and when available, the Novel H1N1 virus is still the best way for individuals to decrease their chance of getting influenza or developing complications related to it. The U.S. government is aggressively taking early steps in the process to manufacture a novel H1N1 vaccine, working closely with manufacturers. Timely and effective vaccination will require the involvement of the entire community to make this a successful effort. Currently, the seasonal vaccine will be available for administration in September.

⁶ <http://www.cdc.gov/h1n1flu/surveillanceqa.htm>

⁷ <http://www.cdc.gov/h1n1flu/surveillanceqa.htm>

Seasonal Influenza

The seasonal influenza vaccine is widely available in the private sector. In addition, the MCHD will offer the seasonal vaccine through weekly mass clinics at the Community Service Building located at 510 29 ½ Road, Grand Junction. Sites will also be scheduled in the outlying communities of DeBeque, Collbran and Gateway. Other sites may be added as necessary.

The recommendations for seasonal influenza vaccination include all children and adolescents aged 6 months-18 years⁸.

Children and adolescents at higher risk for influenza complications should continue to be a focus of vaccination efforts as providers and programs transition to routinely vaccinating all children and adolescents, including those who:

- Are aged 6 months--4 years (59 months);
- Have chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, cognitive, neurologic/neuromuscular, hematological or metabolic disorders (including diabetes mellitus);
- Are immunosuppressed (including immunosuppression caused by medications or by human immunodeficiency virus);
- Are receiving long-term aspirin therapy and therefore might be at risk for experiencing Reye syndrome after influenza virus infection;
- Are residents of long-term care facilities; and will be pregnant during the influenza season.

Note: Children aged < 6 months cannot receive influenza vaccination. Household and other close contacts (e.g., daycare providers) of children aged < 6 months, including older children and adolescents, should be vaccinated.

Annual vaccination against influenza is recommended for any adult who wants to reduce the risk of becoming ill with influenza or of transmitting it to others. Vaccination is recommended for all adults without contraindications in the following groups, because these persons either are at higher risk for influenza complications, or are close contacts of persons at higher risk:

- persons aged 50 years and older;
- women who will be pregnant during the influenza season;
- persons who have chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, cognitive, neurologic/neuromuscular, hematological or metabolic disorders (including diabetes mellitus);

⁸ <http://www.cdc.gov/flu/professionals/acip/persons.htm> excerpted from [Prevention & Control of Seasonal Influenza with Vaccines - Recommendations of the Advisory Committee on Immunization Practices \(ACIP\) 2009](#). MMWR 2009 Jul 24; Early Release: 1-52.

- persons who have immunosuppression (including immunosuppression caused by medications or by human immunodeficiency virus);
- residents of nursing homes and other long-term care facilities;
- health-care personnel;
- household contacts and caregivers of children aged <5 years and adults aged 50 years and older, with particular emphasis on vaccinating contacts of children aged <6 months; and household contacts and caregivers of persons with medical conditions that put them at higher risk for severe complications from influenza.

H1N1 Vaccination

The Mesa County Health Department is planning for the distribution and administration of the H1N1 vaccine when it becomes available. At the current time a vaccine is being developed and is in clinical trials. Children will be a priority for receiving that vaccination and we anticipate the need for holding vaccination clinics at the schools. Although the final decision has not been made, vaccine delivery may also include distribution through selected physician offices.

The groups recommended to receive the novel H1N1 influenza vaccine⁹ include:

- Pregnant women because they are at higher risk of complications and can potentially provide protection to infants who cannot be vaccinated;
- Household contacts and caregivers for children younger than 6 months of age because younger infants are at higher risk of influenza-related complications and cannot be vaccinated. Vaccination of those in close contact with infants less than 6 months old might help protect infants by “cocooning” them from the virus;
- Healthcare and emergency medical services personnel because infections among healthcare workers have been reported and this can be a potential source of infection for vulnerable patients. Also, increased absenteeism in this population could reduce healthcare system capacity;
- All people from 6 months through 24 years of age
 - Children from 6 months through 18 years of age because we have seen many cases of novel H1N1 influenza in children and they are in close contact with each other in school and day care settings, which increases the likelihood of disease spread, and
 - Young adults 19 through 24 years of age because we have seen many cases of novel H1N1 influenza in these healthy young adults and they often live, work, and study in close proximity, and they are a frequently mobile population; and,
- Persons aged 25 through 64 years who have health conditions associated with higher risk of medical complications from influenza.

⁹ <http://www.cdc.gov/h1n1flu/vaccination/acip.htm>

B. Public Health Surveillance and Investigation

Disease surveillance and investigation is fundamental to public health for control of the spread of diseases in the community. In Mesa County, surveillance is a collaboration between community partners (to collect the key surveillance data) and public health (which compiles and analyzes the data) to monitor disease transmission. Surveillance information provides the context for the investigation that public health conducts in the community. Surveillance and investigation data are the foundation for community control strategies implemented by MCHD.

Primary sources of reliable surveillance data in Mesa County include:

- Lab data from local hospital laboratories
 - Indicates awareness of Influenza-like Illness (ILI) and positive tests in the valley.
 - Graphs are tracking longitudinal data (representative sample).
- Hospitalized Cases
 - As reported by hospital Infection Control Practitioners to MCHD

Secondary sources of surveillance data to complement the primary data include:

- School surveillance
 - All schools in District 49, 50 and 51 will be reporting potential outbreaks of Influenza-like illness (ILI). The intention is to expand to private and parochial schools
 - Monitoring of absenteeism in schools with School RNs (indicator of trends in risk-groups) tracking ILI summary data, absenteeism in 4 categories (Fever, gastrointestinal, cough, sore throat).
 - Mesa State College and MCHD are collaborating on surveillance system that is appropriate for that campus.
- Outpatient Clinic Surveillance:
 - MCHD has partnered with Primary Care Partners, P.C. (With patient load of 30- 40% of the population) to conduct daily surveillance of patients reporting influenza-like illness. This system has been in place for almost a year, providing valuable baseline information.
 - This daily surveillance will be expanded to hospital emergency departments, urgent care facilities and additional physician offices.
- MCHD and healthcare partners will monitor employee illness and absenteeism to manage surge staffing needs on a community-wide basis.

C. Communication and Public Awareness Activities

As described in the MCHD Pandemic Response Plan (2007)¹⁰, communication and public awareness activities will reach to all sectors of the community and include:

1. Implementing non-medical measures to decrease the spread of H1N1 influenza.
2. Advising community partners on H1N1 response preparations aimed at maintaining the provision of health care services, sustaining essential community services, and limiting the spread of disease throughout the duration of the H1N1 influenza in Mesa County.

¹⁰http://health.mesacounty.us/disease/pandemicavianflu/pdf/MCHD2007_PandemicInfluenzaResponsePlanV4.pdf

3. Communicating with and educate the public, local government and community leaders, and the general public about the consequences of H1N1 influenza and what each person can do to prepare.

1. Non-medical measures to decrease the spread of H1N1 throughout Mesa County

Non-medical measures are those steps (Figure 3) that everyone can do to prevent the spread of disease: covering coughs, washing hands, staying home when sick. MCHD is communicating the same non-medical measures to health care facilities as is implemented for seasonal influenza or any other communicable disease:

- Emphasizing infection control measures in health care facilities, including hospitals, outpatient care settings and long-term care facilities, to limit the spread of influenza among high-risk populations and health care workers
- Voluntary isolation of ill persons either in a health care facility or at home
- Because influenza is highly infectious and can be transmitted by people who appear to be well, voluntary quarantine of exposed individuals is likely to be a viable strategy for preventing the spread of the disease in the community

Social distancing measures such as limiting public gatherings and closing schools, colleges, large child care centers, libraries, houses of worship, stadiums, and recreational facilities are intended to decrease opportunities for close contact among persons in the community, thereby decreasing the potential for influenza transmission among people and possibly slowing the spread of a pandemic. Decision makers will consider the scope of their legal authorities, social and economic impacts, anticipated effectiveness and current epidemiology of the H1N1 pandemic in Mesa County prior to implementing these measures.

There is no intention to restrict or close public transportation systems, although partial service reductions may be necessary due to a potential shortage of drivers or limitations on fuel supply.

2. Advise and assist community partners on H1N1 response preparations

An H1N1 pandemic will place a substantial burden on inpatient and outpatient health care services. MCHD and health care partners have developed a concept of operations to assist each other during medical surge situations.

- Health care workers are prioritized for receiving H1N1 when it is received in Mesa County.
- MCHD has planned for opening alternate care facilities in the unlikely event that all beds in the local hospitals become overwhelmed.

Training and technical support will be provided by MCHD and other agencies to community organizations serving vulnerable populations to help assure they are able to sustain their critical services and assist the clients they serve in their preparedness efforts.

3. **Communicate with and educate the public, health care providers, local government and community leaders and the media about the consequences of H1N1 influenza and what each person can do to prepare.**

MCHD will promote basic infection control measures (hand washing, using alcohol hand gel, respiratory etiquette, staying home when sick, and avoiding unnecessary contact with other persons during a pandemic) as a key factor in limiting the spread of influenza during a pandemic. The CDC is a good source for that kind of information as shown in Figure 3.



Figure 3. Examples of basic messages reduce spread of disease from the U.S. Centers for Disease Prevention and Control¹¹

MCHD will utilize H1N1 information published by the CDC¹² for specific groups including:

- Parents and Caregivers
- Pregnant Women
- Day and Residential Camps
- Child Care Programs, Schools, Colleges and Universities
- Travelers and Travel Industry
- Clinicians
- Laboratory workers
- Adults with HIV Infection
- People with Diabetes
- People With Cardiovascular Disease
- Tribal Nations: Preparing Tribal Nations to Receive Strategic National Stockpile Assets
- Businesses and Employers
- Deaf and Hard of Hearing
- People in Contact with Pigs
- "Information about the Flu -including the new H1N1 Flu- for People with Certain Medical Conditions"

The latest information on the evolving seasonal and novel H1N1 situation can be accessed a variety of ways in Figure 4.

Figure 4 H1N1 Information Sources

- CO-HELP 1-877-492-2911
- MCHD flu line (970) 248-6989 recorded information (updated frequently).
- www.cdc.gov
- www.cdph.gov
- www.health.mesacounty.us

¹¹ http://www.cdc.gov/h1n1flu/#stay_healthy

¹² <http://www.cdc.gov/h1n1flu/groups.htm> is frequently updated.

D. Mitigation

CDC¹³ describes social distancing strategies as non-medical measures intended to reduce the spread of disease from person-to-person by discouraging or preventing people from coming in close contact with each other. Currently available information suggests that early and aggressive use of social distancing measures may provide the greatest benefit toward slowing the spread of any influenza, including novel H1N1 virus.

School-age children are a special concern. Recently guidance¹⁴ from the Centers for Disease Control and Prevention has changed regarding school closure stating that “school dismissal is not advised unless there is a magnitude of faculty or student absenteeism that interferes with the school’s ability to function”. They recommend that “schools should focus on early identification of students and staff who are ill, staying home when ill, and good cough and hand hygiene etiquette”. The CDC now recommends that “those with flu-like illness (fever with a cough or sore throat) should stay home and not attend school or go into the community except to seek medical care for at least 24 hours after their fever is gone”. (NOTE: This is a change from the previous recommendation of seven days.)

The decision to dismiss students should be made locally and should balance the goal of reducing the number of people who become seriously ill or die from influenza with the goal of minimizing social disruption and safety risks to children sometimes associated with school dismissal. Based on the experience and knowledge gained in jurisdictions that had large outbreaks in spring 2009, the potential benefits of preemptively dismissing students from school are often outweighed by negative consequences, including students being left home alone, health workers missing shifts when they must stay home with their children, students missing meals, and interruption of students’ education. Still, although the situation in fall 2009 is unpredictable, more communities may be affected, reflecting wider transmission. The overall impact of 2009 H1N1 should be greater than in the spring of 2009, and school dismissals may be warranted, depending on the disease burden and other conditions.

Decisions regarding the implementation of social distancing measures including suspending large public gatherings and closing stadiums, theaters, houses of worship, community centers, and other facilities where large numbers of people gather will be made by the Mesa County Health Department Director after consultation with the Colorado Department of Public Health and Environment, Mesa County Board of Health, elected officials and key policy makers regarding social distancing actions that should be implemented to limit the spread of the disease.

Conclusion

It is important to know that this is an evolving situation. Information is changing rapidly and this plan is subject to change.

¹³ Interim Pre-pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States—Early, Targeted, Layered Use of on Pharmaceutical Interventions. February 2007, www.cdc.gov.

¹⁴ <http://www.cdc.gov/h1n1flu/schools/>