Responding to H1N1 novel influenza

Editor’s Note: H1N1 articles appear in chronological order.

The MDH Response

On April 23, 2009, the Centers for Disease Control and Prevention (CDC) held a press conference to confirm seven cases of H1N1 novel influenza (formerly known as swine flu) in the United States. These cases were detected through routine influenza surveillance. The affected individuals did not appear to have had contact with pigs, which indicated the virus was being transmitted person-to-person. Further, this swine virus was genetically novel; it had a combination of influenza virus gene segments that had not been recognized before anywhere in the world.

Although the preliminary disease activity was centered in California and Texas, the disease spread rapidly, bringing a national and international response. Minnesota was no exception; the need for a public health response was imperative. After initial briefings and guidance from CDC, national and international leaders, the Minnesota Department of Health (MDH) communicated criteria for collecting specimens and data with partners, including clinics, laboratories and local public health.

In order to respond comprehensively to this serious threat to public health, MDH:
- Activated its Department Operations Center
- Issued press releases and Health Alert Network (HAN) messages
- Developed and posted Website fact sheets and guidance
- Set up hotlines for the public and for clinicians
- Initiated numerous conference calls with local public health and healthcare
- Convened community outreach workgroups and forums

The first case in Minnesota was associated with a school, which was subsequentially closed. MDH staff worked closely with area local public health and school officials to ensure students, parents and others in the community received accurate messages. Local public health communicated with the public, especially schools. (See article A local response to a case of H1N1.)

Communication was both a success and a challenge in this response. Information needed to be disseminated to many groups, yet the information changed faster than had been experienced in most previous disease outbreaks. Many communication challenges were affected by the uncertainty of how this novel virus would behave. MDH staff continue to evaluate and change the messages and methods of communication to better serve the public and clinicians.

More than two months later, cases of H1N1 novel influenza continue in Minnesota, including a number of hospitalized cases. To prevent this flu, the messages are familiar:
- Wash your hands
- Cover your cough
- Stay home when you are sick

MDH Laboratory responds to new flu

The Minnesota Department of Health Public Health Laboratory (MDH-PHL) has seen a dramatic increase in activity in response to the emergence of the H1N1 novel influenza.
- On April 25, 2009, the PHL Clinical Laboratory Section began coordinating with Infectious Disease Epidemiology, Prevention and Control Division (IDEPIC).
- The PHL Molecular and Virology Units put in countless hours performing all H1N1 novel influenza lab tests for the state.
• The PHL Emergency Preparedness and Response (EPR) unit organized specimen transport to the MDH-PHL from hospitals and clinics across Minnesota for influenza testing.
• The Minnesota Laboratory System (MLS), a collaborative network linking MDH to other public and private laboratories, used its MLS Lab Alert system and e-mail listserv to provide up-to-the-minute laboratory information and resources.

On April 30, after PHL performed molecular analysis, the Centers for Disease Prevention and Control (CDC) confirmed the first Minnesota case of H1N1 novel influenza. In May, the number of cases continued to rise across the nation. The CDC distributed a molecular test for the new flu strain (approved by the U.S. Food and Drug Administration) to all qualified public health laboratories in the United States. This allowed MDH-PHL to confirm new cases of H1N1 novel infection without sending specimens to CDC.

While the new strain appears to cause relatively mild disease similar to seasonal influenza strains that have since waned, H1N1 novel influenza continues to circulate in the population. To date, MDH-PHL has tested over 2,100 specimens and confirmed 611 cases of H1N1 novel infection in Minnesota.

Collaboration between MDH-PHL and its partners is ongoing.
• The Metro Region Laboratory Preparedness Workgroup met with emergency preparedness and response staff on May 26 to discuss issues such as specimen transport, availability of specimen collection supplies and reporting results.
• On June 29, the EPR unit held a conference call with Minnesota’s nine viral culture laboratories to provide procedural updates and develop plans for an expanded and improved lab response in the event of a surge in new H1N1 cases later this year.

MDH-PHL continues to work with Infectious Disease Epidemiology, Prevention and Control staff and gathers feedback from Minnesota Laboratory System to plan for a possible resurgence of the virus in the fall and winter months.

A local response to a case of H1N1
Stearns County has been cooperatively planning between Public Health and Emergency Management for almost two decades. This partnership paid off! On Thursday April 29, 2009, Minnesota Commissioner of Health Dr. Sanne Magnan notified Stearns County of its first case of H1N1 novel influenza associated with a local school.

The day before the Commissioner’s phone call, Stearns County Emergency Management, Public Health and its other partners outlined three “triggers” that would initiate the Stearns County Disaster Response Action Team (DRAT) to meet. Those triggers:
• A death in the US related to H1N1
• A case in MN or in Stearns County
• All events occur in one day

On Friday April 30, the Stearns County DRAT was initiated at 2:00 a.m. By 6:00 a.m., the Stearns County Emergency Operations Center (EOC) was activated and ready to respond to the needs of the community. Its job was to assure coordination was occurring between responding agencies (clinics, hospitals, EMS, schools, churches, media, county, cities, Law Enforcement) and the public health system (both state and local).

According to Renee Fraudlinski, director of Stearns County Human Services Public Health Division, “It was obvious as the days progressed that the years of planning paid off. Partnerships had long been established and coordination across systems was smooth. People knew what needed to get done and were able to garner the resources or knew where to go to for help.

“Even though people knew what to do, inexperience using the Incident Command System and a long-term plan for coverage was lacking. And, as always, people were also looking for better communication between partners and across systems.”

Commissioner Magnan said many times of this spring activity, “We have been given a gift.” For Stearns County, that gift has mobilized intensive planning activities across systems to address identified gaps. This effort, coordinated by Stearns County Emergency Management, has looked at those areas where things could have gone better with the ultimate goal to be even more prepared for the future.

Communications Quick Tips

Riding the Wave: H1N1 is still with us
No one knew how H1N1 novel influenza would behave when it first arrived in late April, but it quickly became clear that the virus was widespread, both in the U.S. and globally. In early June, the World Health Organization announced that we were in the midst of the first worldwide influenza pandemic since 1968.

The emerging H1N1 pandemic presented special communications challenges. State and local public health communicators needed to strike a balance between “sounding the alarm” and providing a sense of perspective, in a situation where the magnitude of the threat still wasn’t clear.

What was clear was the intense demand for information. Calls from media organizations flooded the MDH Communications Office, and a triage system was set up to handle media inquiries. Four news conferences were held in St. Paul and two in Cold Spring, where the state’s first confirmed case was reported. MDH issued 11 news releases, and responded to a steady flow of requests for on–camera and telephone interviews.

No matter what journalists asked, responding in a timely fashion was vital. A rapid response was essential in order to...
ensure that the public received accurate and consistent information about H1N1.

Although H1N1 is no longer front-page news, it’s still with us, and right now we face the challenge of preparing to communicate about events that can’t be predicted. Will H1N1 simply go away in the fall? Will it stick around but continue to behave in the same way, causing only relatively mild illness for most people? Or will it begin to cause more severe illness, and become the kind of global, life-threatening event that public health officials have long feared?

Plans are currently being developed to educate the public about what could happen in the fall – and to relay vital, time-critical information if a severe pandemic does occur. We need to be ready. We can’t afford not to be.

**Director’s Chair**

This newsletter highlights the importance of Minnesota’s long-standing emphasis on “All-Hazards” approach to emergency preparedness and response. The stories of the flood and H1N1 outbreak are linked by the need for situational analysis, effective use of resources, and ability to adjust the response to the changing nature of the incident. We also had the opportunity to practice flexibility in moving quickly from one hazard response to another.

The sobering message of the H1N1 articles in this newsletter is that we need to be ready for the next round – whether that involves serving a larger numbers of sick outpatients; expanding care for more acute care hospital patients; vaccination clinics to reach many Minnesotans; or public information about protecting themselves and their families. The old adage of “hope for the best but plan for the worst” has never been truer.

I hope you find inspiration in the hard and creative work described in the flood and the H1N1 response stories. Our planning, exercising and preparation work over the summer months will improve our ability to react effectively to the coming fall H1N1 activities as well as other potential hazards and public health incidents. Building on our past experiences is one of the best ways to be ready for the next challenge.

Aggie Leitheiser, Director of Emergency Preparedness

**Stories about 2009 Red River Valley Floods**

**News Release from State Emergency Operations Center**

“A deep snow pack and recent warm weather have elevated the spring flood threat in parts of the Midwest. Water released by melting snow pack that is deeper than normal – while running off the already saturated and frozen ground—poses a serious flood threat in the Red River Valley. The National Weather service reports that the flood risk is high and flooding is imminent for the Red River of the North Basin” (also called Red River of the North).

MN.DOT Map of Northwest and West Central MN, March 2009. Red area shows difficult driving conditions. Red circles indicate road closures. Green shows good driving. Many roads were impossible to drive.

**West Central region’s response**

**Tuesday March 24, 2009.** As the rising waters approached a river level that was predicted to go higher than ever recorded along the Red River in Moorhead, Minnesota, the decision was made to prepare for possible evacuation of Eventide and Golden Living Center Nursing Homes.

Evacuation plans were put into action. Initial steps were to stop new admits, determine resident counts and level of care, and look at possible evacuation sites. This was challenging as several predetermined evacuation sites were also threatened due to the rapidly rising waters.

**Wednesday March 25.** The decision was made to find nursing home beds throughout the state for a planned relocation of Eventide residents. A total of 194 residents needed to be relocated; only two were ambulatory. Because of outstanding help from nursing homes, local, regional and state partners, the bed counts were completed and delivered to Eventide that afternoon.

Eventide staff needed to find temporary homes for residents who would be evacuated. To determine where the residents could be placed, the guidelines used were available beds, staffing, distance (closest to farthest away), and type of care needed. The staff at Eventide used post-its, manifests and triage tags to help track and place residents.
Thursday March 26. The evacuation began at Eventide 7:00 a.m. and was completed by Friday 1:00 a.m. Transportation came from the entire state through Emergency Medical Services, local transportation companies and strike teams, along with MN Responds personnel to help with the transfers.

Golden Living Center was not evacuated at this time. However, the resident numbers were reported daily, along with information about where residents would be placed. Arrangements for transportation were also made if an evacuation was needed.

Receiving facilities went out of their way to make the residents feel welcome and comfortable by taking pictures and even creating t-shirts. Most of the residents said it felt like a vacation! What really mattered was the safety of the residents and all who helped with the evacuation.

Central region’s response

Thursday March 26, 2009. As the rising waters approached flood stage along the Red River in Moorhead, Minnesota, the decision was made to evacuate 30 Eventide Nursing Home residents with special medical needs. They were to be moved to St Joseph’s Medical Center in Brainerd, approximately two-three hours away.

The Central Minnesota Healthcare System Preparedness Program’s Hospital Response Team (HRT) was deployed to assist. The team had been on stand-by the previous two days but with the rapidly changing flood conditions, they were activated on Thursday at 3:00p.m. and deployed to St. Joseph’s Medical Center (SJMC) at 5:00p.m. The Alternate Medical Care Site (within St. Joseph’s) was setup and ready to receive patients by 10:00p.m.

That same day, the MDH Department Operations Center formally requested the Central Region MN Responds Medical Reserve Corps (MRC) unit to provide “Support for Central Region Hospital Response Team.”

Friday March 27. The first patients arrived at St. Joseph’s at 12:30 a.m. The last patient was tucked into bed by 3:00 a.m. The patients slept well and settled into their new accommodations with very few issues.

On Friday afternoon, the Central Region MN Responds MRC coordinator sent a volunteer mission request to 938 volunteers. Within a few hours, over 60 volunteers had signed up via Minnesota Responds and were scheduled for shifts.

Saturday, March 28. Several MRC volunteers arrived at St. Joseph’s for the 7:00 a.m. shift. Patients received all scheduled medical care and medications by licensed medical staff and providers. They also received medical evaluations at least twice during their seven-day stay at the Alternate Medical Care Site. Meals were served cafeteria style and regularly scheduled group activities occurred.

The patient care duties were transitioned to the Eventide staff under the auspices of the Central Region MN Responds MRC and were overseen by the Central Region’s Regional Hospital Resource Center.

Friday, April 3. All patients and their staff were returned to Eventide Nursing Home. Thirty eight Central Region MN Responds MRC volunteers provided care at St Joseph’s over seven days. These voluntary efforts had an estimated value of over $35,000.

Special thanks to all who helped, from Tony Buttacavoli, Central Region MN Responds MRC Administrator, Isanti County Public Health; Cynthia Heltunen, Benton County Public Health; and Chuck Hartsfield, Central Minnesota Healthcare System Preparedness Program. The CentraCare Health System also extends a special thanks to Saint Joseph’s Medical Center for their hospitality and space; to other MNResponds coordinators and their volunteers for assisting; and other public health staff who assisted in this response.

Great assistance from many staff and volunteers assured smooth evacuations.
Red River rising – two states coordinate medical evacuations

In March 2009, the Red River between Minnesota and North Dakota reached an historic crest and caused extensive flooding, which required coordination of State Emergency Operations Centers and Department of Health Operations Centers from both states.

On Thursday, March 26, Eventide Nursing Home in Moorhead MN decided they needed to evacuate their facility. Over the next 24 hours, 192 skilled nursing residents and an additional 56 assisted living residents were evacuated to 22 facilities around the state. The residents were all transferred to other skilled nursing facilities and an Alternate Care Site within Minnesota with the help of many, many others.

Typically, it is assumed that local public health, with support from regional Public Health Preparedness Consultants (PHPC) in the Office of Emergency Preparedness (OEP), are the main players in disasters. The evacuation of Eventide Nursing Home demonstrated critical response functions of MDH Compliance Monitoring division which provided timely and accurate assistance for the coordination of resident care during the evacuation and in obtaining federal regulatory waivers for Long Term Care settings to which residents were transferred.

At 9:00 PM on the same day, MDH learned from the North Dakota Department of Health that MeritCare Health System would evacuate its Fargo-based Level II Trauma Center and Long Term Acute Care Hospital, as well. The two State Emergency Operations Centers were notified and a Tier 5 (Interstate Coordination) response was initiated. (Minnesota uses a Tiered Response System to coordinate local, regional, state, interstate and federal healthcare responses).

The MDH Department Operations Center (DOC) immediately sent a MNTrac Alert to all Regional Healthcare Preparedness Coordinators (RHPCs) and Public Health Preparedness Consultants (PHPCs) to participate in a 10:00 PM Conference Call. The North Dakota Department of Health also participated in the call.

During that call, approximately 110 patients from the MeritCare Health System received predetermined placements at 14 hospitals in five of Minnesota’s eight health regions. The evacuation began at midnight and was completed by approximately 6:00 AM on Friday, March 27.

The Minnesota Department of Health wants to thank everyone who made the Eventide, Meritcare and Triumph healthcare facilities a textbook example of how an evacuation should be done. Minnesota hospitals, nursing homes, and assisted living facilities did a great job! More importantly, the patients and residents from these facilities received great care!

How MDH Department Operations Center assisted

When an emergency occurs, multiple public health and healthcare issues may arise. During the recent flooding in west central and northwest Minnesota, the Minnesota Department of Health (MDH) opened its Department Operations Center (DOC). While the State Emergency Operations Center (SEOC) coordinates the State’s overall response to disasters, the DOC coordinates and facilitates actions specific to MDH, public health and healthcare.

Command and general staff worked in the DOC to:

- Maintain daily situational awareness of the flood, and public health and healthcare impacts.
- Create daily action plans to prioritize MDH activities.
- Coordinate activities of MDH employees working in multiple counties.
- Solicit volunteers to assist local agencies and healthcare facilities.
- Coordinate public health and healthcare activities with the SEOC and the regional Multi-Agency Coordination Centers (MACCs).
- Respond to local public health and healthcare resource requests (via the SEOC).

After the flood, employees identified improvements to the DOC’s operation, such as:

- Staffing. MDH has an insufficient number of employees assigned and trained to incident management roles in the DOC to provide for a sustained effort over several weeks.
- Roles. Additional incident management roles are needed to assist the command and general staff, especially planning and logistics.
- Facilities. The location and space of the DOC are important for an efficient response. The current room is inadequate to serve the needs of the DOC and its staff. A new location is being explored.
- Equipment and technology. Recent changes in equipment and technology resulted in procedural and other challenges. Plans and procedures must be updated to reflect these changes.
- Continuity. The Department must not only respond to a public health emergency, but also assure continuity of MDH’s priority services. Staff are working to integrate its public health emergency and continuity of operations incident management systems.
"Over the past five years, we’ve increased our ability to assist with a wide range of emergencies that impact public health and healthcare,” stated Aggie Leitheiser, Director of Emergency Preparedness. “The development and expanded use of the DOC is a critical management tool for our agency to assist with large-scale disasters; respond to simultaneous, multiple emergencies around the state; or deal with emergencies that impact the continuity of our services. We’re committed to providing citizens, local agencies and healthcare providers with the services and resources they need to keep all Minnesotans safe."

The MDH Department Operations Center was open at least 12 hours a day from Tuesday March 24 through Friday April 3. Staff continued to be on stand-by until the flooding ended.

**Social Media used during the floods**

Five social media devices were used during some uncertain and very challenging times as people waited for the Red River to crest. According to Wikipedia, “Social Media is online content created by people using highly accessible and scalable publishing technologies.” Social media allows people to read and share news, information and content.

These tools provided invaluable just-in-time communication when many people worked in the flooded areas without a computer. Examples of technologies used during the Red River Flood:

- **FirstLink** is a nonprofit agency that provides people with critical community resources. By calling 2-1-1, individuals and families in need and volunteers received information and resources.
  - FirstLink helped coordinate volunteers and the call center.

- **Twitter** allows individuals to stay connected in real-time by responding to “What am I doing?” During the flood, people sent messages to serve as a volunteer.
  - People in the field accessed real time updates and information regarding current water levels and other pertinent information.
  - Many college students in the flood zone used Twitter and Facebook to communicate with family and friends.

- **Facebook** connects family, friends and people others who work together on the computer. During the flood, a Facebook page called for volunteers.
  - Individuals posted messages on a Facebook page to be a volunteer
  - Individuals learned about relief efforts and flood information.

- **A Blog** (contraction of the term “weblog”) is a website where individuals can enter information or describe events. Entries are commonly displayed in reverse-chronological order.
  - By reading a blog, people had access to news releases and alerts.

- **Mapping** allows a person to create a map, add more detail to a map or enlarge a current map
  - The mapping capability showed evacuation areas – crucial information to responders and residents.

During the flood, these social media facilitated real-time communication and provided valuable current, up-to-date information.

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**Conference highlighted health response**

On June 23, 2009, several principal responders to the Red River flood shared stories and lessons learned at the Health Response to the Red River Floods 2009 Conference held in Moorhead, MN. Even though the flood seemed to last forever, people had a déjà-vu feeling when the river returned to flood stage just in time for the conference!
About 90 flood participants heard Bryan Green, Clay County emergency manager and Kathy McKay, Clay County public health director, describe the timeline of the river’s crest and key health-related response activities. Several sessions focused on the need to evacuate vulnerable citizens – from nursing homes and assisted living facilities, to hospitals and high rises. Days later, residents were relocated back to their facility, safe and dry.

Stories were shared about how help came from all over the state through the Minnesota Responds volunteer program. A behavioral health strike team came to help plan the mental health response for responders, displaced individuals, residents who fought the battle in their own back yards and the community. Public Health nurses came as volunteers to move many residents to safety. Patients felt they did such a wonderful job they asked for those same, sweet nurses to help them move back.

Volunteers also worked hard and fast in Brainerd to get an empty floor at St. Joseph’s Hospital ready to welcome 30 guests from Eventide. In Detroit Lakes, additional volunteers served the needs of many residents who were evacuated from assisted living facilities. These missions really tested the Minnesota Responds system, which worked well.

This conference also highlighted the many-pronged transportation responses; how two states (Minnesota and North Dakota) worked together to help a hospital evacuate patients in the middle of the night; and the numerous ways people tried to stay connected. The conference provided valuable information that participants can use in their future planning efforts.

The West Central Healthcare Systems Preparedness Program coordinated the logistics of the conference; Clay County Public Health and partners developed the content.

Throughout the state, people from multiple agencies worked to gather information, make and implement life-saving decisions.

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**Emergency Preparedness Resources**

**Psychological First Aid, a Community Support Model: Responding to Pandemic Influenza**

The 36 slides address special psychosocial needs of a pandemic influenza, how to utilize PFA principles to respond to those needs, and how to increase workforce, individual, and community resilience. Topics include:

- Overview of H1N1 novel influenza
- WHO pandemic alert levels
- Minnesota threat level
- Psychosocial issues
- Complications for grief & loss
- Possible impact on key personnel
- Workforce consequences
- Psychological impact for responders
- Protective factors for responders
- Utilize PFA principles

Go to [http://www.health.state.mn.us/oep/responsesystems/behavioral.html](http://www.health.state.mn.us/oep/responsesystems/behavioral.html)

**New course offered for environmental health professionals**

The Centers for Disease Control and Prevention’s National Center for Environmental Health and the US Department of Homeland Security/Federal Emergency Management Agency are sponsoring a new course, *Environmental Health Training in Emergency Response (EHTER) - Introductory Level*. The three-day course will be held at the Center for Domestic Preparedness in Anniston, Alabama at **no cost** to students from state and local jurisdictions.

The purpose is to increase preparedness among environmental health practitioners by providing knowledge and skills necessary to recognize and address environmental public health impacts of emergencies and disasters. The course covers a broad range of health and safety hazards associated with wastewater management and disposal; water quality and provision of safe potable water; management of hazardous materials and solid waste; food safety; vectors and pest control; building assessments; responder safety; and the challenges related to feeding and housing responders and evacuees.

The class is appropriate for local, tribal and state public health professionals, plus other individuals who prepare for and/or respond to public health hazards following disasters. Attendees will acquire practical resources; exchange best practices ideas and lessons with students and instructors from federal, state and local programs; and improve awareness about the capabilities of other responder organizations and disciplines. As practitioners across the country attend, this course should improve the ability of attendees to assist neighboring communities, states or even other parts of the country when needed.
To view the training schedule, go to http://www.cdc.gov/nceh/ehs/Resources/EHTER.htm The Minnesota Department of Health may organize a group of state and local participants to attend this course together later in the year. Please contact David Jones at david.bw.jones@state.mn.us if you are interested.

What issues do businesses face when planning for disasters?
The University of Minnesota Center for Public health Preparedness is offering two free training courses can help you start your preparedness planning.

Introduction to Business Continuity Planning for Disasters and Emergencies
This 45-minute online module orients learners to the basics of business continuity planning. It examines how planning can reduce business vulnerability, the eight parts of formulating a plan, the relationship between risks and hazard prioritizing, and business continuity principles.

Preparing Employees for a Disaster in the Workplace
Employers and business continuity experts are featured in a video segment during this 60-minute module. You’ll learn about issues that businesses face when creating disaster plans and how employers work with their employees to prepare for and work through emergency situations.

Both courses can be found online: http://cpheo.sph.umn.edu/cpheo/umncphp/online/home.html

MN.TRAIN

Did You Know? Drills and exercises enhancements have been added to MN.TRAIN. This feature is available to course providers and facilitates tracking exercises in a standardized format. Exercise participants can also get credit for exercise participation and roles they have performed. What a great way to track exercise participation and document role experience! Go to the MN.TRAIN Course Provider manual for more information or log on to http://mn.train.org/.

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