

Update from the Pennsylvania Department of Health: Pandemic (Novel) Influenza A/H1N1 in Pennsylvania

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The sudden emergence of infectious diseases has become an all too common feature of the public health landscape in Pennsylvania. Examples from just this decade include West Nile virus, food-borne hepatitis A and SARS.

Pandemic influenza is the latest entry to the list of emerging infections. In April, a previously unrecognized strain of influenza A/H1N1 of the swine influenza lineage was identified in children in California and Texas. These cases were linked to an extensive outbreak of influenza in Mexico. Within days, additional cases were recognized along the Mexican border and in school children in New York who had recently visited Mexico. By April 25, the first confirmed case was recognized in Pennsylvania.

Since then, the Pennsylvania Department of Health has been tracking the patterns of illness due to novel (or pandemic) influenza A/H1N1 in the commonwealth. Although this virus came later to Pennsylvania than other areas of the country, it has steadily increased in intensity and spread to virtually the entire state. At this point, close to 2,000 cases of illness have been confirmed in Pennsylvania. Based on national surveys, these confirmed cases likely represent only a fraction of the true disease burden, as is generally true of seasonal influenza, where 10-15 percent of the population becomes infected each year.

Several features of disease associated with novel influenza A/H1N1 are notable. First, 75 percent of confirmed cases have been in children and young adults, ages 5-24. Very little illness has been seen in infants or persons over age 65, the groups usually at highest risk of flu complications. This in large part explains the relatively "mild" illness seen to date. Second, most "severe" disease (severe being those requiring

hospitalization) and the handful of deaths have mostly been in persons with underlying health conditions that put them at higher risk of flu complications. Especially prominent has been diabetes, cardiopulmonary disease and obesity. Third, disease intensity has steadily increased in the commonwealth even as the temperature has warmed. The disease was designated as widespread in early June and has continued that way for weeks. It is distinctly unusual to see significant disease transmission at this time of year, even in past pandemics. Among specimens currently tested at the state public health lab that are influenza-positive, more than 98 percent are due to the novel influenza strain. Seasonal strains have disappeared.

In most other respects, disease associated with the novel influenza strain is typical of flu. This includes modes of transmission (fomite/droplet), incubation period, duration of illness, and secondary spread.

Although disease impact has been moderate, the level of disruption caused by this virus has been significant. Health care providers and public health officials have dealt with numerous concerned patients, clusters in schools, summer camps, correctional facilities, special needs populations, businesses, and health care settings. Media scrutiny has been intense.

The Department of Health has issued guidance regarding diagnosis and treatment of suspected illness, along with handling of disease or clusters in special settings, based on the latest information and our evolving understanding of this infection. To the degree possible, we strive to make our recommendations compatible with those issued by federal authorities, but adapted to our local circumstances.

At present, since almost no seasonal flu is being seen in the state, it is unnecessary to confirm disease at the state lab.

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A positive point-of-use screening test is sufficient to identify the presence of this infection to guide clinical decision-making and public health actions. The lab continues to accept specimens that are screening-test positive from severely ill cases, cases of special interest (e.g. the elderly), and from institutional settings where public health decision-making hinges on confirmation of disease. We remain interested in specimens from areas of the state where disease has yet to be confirmed.

The two neuraminidase inhibitors (oseltamivir and zanamivir) are widely available in Pennsylvania, and a backup stockpile is maintained by the state. Whether to use an antiviral is a clinical decision on the part of the health care provider. Antivirals are currently recommended by the Department of Health for individuals with severe disease or who are in a risk group for flu complications. For all others, antiviral treatment is considered discretionary. Treatment is most effective if given early (within 48 hours of onset) in the course of illness but federal guidance indicates it can be initiated later for severely ill persons. Prophylaxis should be reserved for close contacts of ill individuals at high risk of complications, but even these individuals can be closely monitored and treated at the first signs or symptoms of illness.

Both federal and state authorities continue to emphasize exclusion as a primary method to limit the spread of influenza. This means information. In many parts of the state, age, location, and gender may inadvertently identify an individual, so we do not release this information unless there is a public health imperative. We are working closely with other officials to assure necessary information is available to adequately address the influenza situation. Health care providers should continue to report confirmed illness and disease clusters to local health authorities.

Concerns have been expressed regarding the amount of information being released by the Department of Health on confirmed cases of illness. State regulations, as well as commonwealth law, precludes the department from disclosing information on individuals or outbreaks other than that needed to control the spread of disease. We safeguard disease information just as providers safeguard medically-sensitive patient information.

At this point, it appears that illness due to the novel influenza virus will continue well into the summer months, and there may be no lull before the fall/winter influenza season commences. Between now and then,

many activities will be underway, including planning for vaccine delivery, medical surge needs should disease severity and health care system impact increase, pharmaceutical stockpile dispensing, and community mitigation strategies if necessary. Your cooperation as we move forward is greatly appreciated, as well as your feedback regarding any of these issues.

The Department of Health operates a network of sentinel physicians across the commonwealth who function as our frontline regarding influenza activity. These providers report weekly the proportion of patients in their practice with influenza-like illness, and collect and submit specimens to the state lab for influenza testing and virus isolation. The department is actively seeking additional primary care providers for the sentinel physician network who can assist in monitoring flu in Pennsylvania. There is no compensation for being a sentinel physician other than the knowledge that you are contributing to public health in the state. The department provides kits for specimen collection and shipping. If you wish to participate as a sentinel physician, please contact **Owen Simwale** in the Bureau of Epidemiology of the Department of Health at 717-787-3350 or owsimwale@state.pa.us.

Finally, you can receive real-time electronic updates on influenza and other emerging health issues through the Department of Health's Health Alert Network. The network currently distributes messages to more than 2,000 providers and facilities around the state. If you wish to receive Health Alert Network messages, please contact **Dr. Ram Nambiar** or **Stacey Kalinoski** at 717-787-3350 or anambiar@state.pa.us or skalinoski@state.pa.us.

Information and guidance on influenza available at the Department of Health [Web page](#) and the [Centers for Disease Control and Prevention](#) Web page indicate that individuals with influenza-like illness should not be going to school or work. *That includes ill health care workers.* There have been clear instances where health care workers have not followed this advice, placing their high-risk patients and coworkers in danger of infection resulting in extensive use of prophylaxis.

There are no current recommendations that exposed but non-ill individuals should be excluded from *any* work or school setting, whether or not prophylaxis is used. Instead, prompt exclusion if illness occurs is the preferred control method, as it is the least disruptive way to limit spread.