

WSLH Response to 2009 H1N1 Influenza Pandemic September 11, 2009

In March 2006 Governor Jim Doyle called the Wisconsin State Laboratory of Hygiene (WSLH) “CDC North” at the state’s Pandemic Influenza Preparedness Summit. In April 2009, Wisconsin moved from preparing for a future pandemic to responding to a real one and the WSLH led Wisconsin’s laboratory response.

During the 2009 H1N1 influenza pandemic, the WSLH is providing laboratory support to Wisconsin’s citizens, state and local public health agencies, healthcare providers, and 130+ hospital/clinical laboratories in the form of testing, specimen collection and packaging supplies, specimen transport arrangements, training, consultation, and expediting outbreak testing at other Wisconsin laboratories. The WSLH also facilitates communications between the 130+ hospital/clinical laboratories in Wisconsin and state and local public health agencies.

Here are some highlights of the WSLH’s activities during the ongoing pandemic, as well as information about our yearly seasonal influenza surveillance activities:

- Between April 25th and Sept. 10th, the WSLH tested more than 11,600 patients for 2009 H1N1 influenza. While testing decreased somewhat during the summer months, we continued to test between 100 – 300 patients a week during July and August. Testing volume is again on the upswing in September as the school year begins.
- Within weeks of the discovery of 2009 H1N1 influenza in North America, the CDC developed and distributed to state and large municipal public health laboratories a test kit that could identify the new influenza strain. The WSLH began using this new test on May 5th.
- WSLH scientists helped the City of Milwaukee Health Department laboratory validate and begin using the CDC’s H1N1 test for Milwaukee-area patients. The WSLH also worked with the Midwest Virus Respiratory Program laboratory at the Medical College of Wisconsin and the Marshfield Labs/Marshfield Clinic Research Foundation to bring additional testing on-line to enhance the state’s overall testing capacity. Having four laboratories performing testing is one reason Wisconsin led the nation in H1N1 confirmed cases in the spring.
- The WSLH is providing instructions, guidance and information updates to Wisconsin’s clinical laboratory community via teleconferences, fax and email communications. The WSLH surveyed these laboratories in July and results showed a high degree of approval for our pandemic response so far.
- This fall more hospital/clinical laboratories in Wisconsin will begin performing influenza testing that includes the 2009 H1N1 strain. The WSLH met with many of these laboratories on Sept. 9th and discussed issues relating to the testing. The WSLH will assist these laboratories as they bring their testing on-line.
- The WSLH will continue to offer 2009 H1N1 influenza testing for patients meeting criteria approved by the WI Division of Public Health. However, with more hospital/clinical laboratories starting to perform testing, the WSLH will move from case identification to surveillance.



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- The WSLH has operated an influenza surveillance program for nearly 20 years and is considered a national leader in laboratory-based surveillance. Partnering with a select number of healthcare providers, hospital/clinical laboratories and rapid influenza testing kit sites, the WSLH performs testing and gathers data to determine where and when influenza viruses (2009 H1N1 as well as seasonal influenza strains) are circulating in the state, as well as detect changes in the various influenza viruses circulating in Wisconsin to optimize the use of vaccines and antiviral medications. This laboratory-based surveillance data is combined with the healthcare provider-based influenza surveillance program coordinated by the WI Division of Public Health to give state and local public health officials and healthcare providers a clear picture of the impact of influenza on Wisconsin's citizens.
- As a World Health Organization (WHO) collaborating laboratory, the WSLH also shares information with CDC and WHO for national and international influenza surveillance.
- For many years, the WSLH has collaborated with the CDC and private-sector biotech companies on test method development. In fall 2008, the WSLH received research funding from CDC to determine whether combining (i.e. "pooling") multiple patient specimens for testing could help laboratories test more patients in shorter periods of time and still provide accurate results. This two-year study was fast-tracked when 2009 H1N1 influenza hit because CDC thought the pooling method could help laboratories respond more effectively to the pandemic. So while WSLH scientists were responding to the pandemic, some were also completing this research study for CDC.
- WSLH scientists serve on national, state and UW-Madison pandemic preparedness and response committees.

The WSLH was founded in 1903 as the State's public and environmental health laboratory. A part of the University of Wisconsin-Madison, WSLH scientists provide analytical testing, research and education/training in a variety of technical specialties, including infectious diseases (such as influenza), environmental chemistry and microbiology, occupational health, genetics, newborn screening and toxicology.

