



H1N1 Session:

Science Behind H1N1

8:30-9:20am, Baker room

Speaker:

Lisa M. Koonin, MN, MPH, Senior Advisor for the Influenza Coordination Unit at the U.S. Centers for Disease Control and Prevention

Author:

Mr. Bob Wells, President of Wells Communications, Inc. in Atlanta, covered the conference with Dr. Tom Keating, Founder of Citizens, Learners and Educators Against Neglect. Project CLEAN is a national effort to improve public school restrooms that are too often filthy, inadequate and chronically hazardous to student health.

Six Feet of Separation

By Bob Wells

The meeting room for the session, entitled “Science behind H1N1,” was filled to capacity. The environmental health professionals attending the NEHA (National Environmental Health Association) conference in Atlanta gathered to learn what they could do to combat this new and deadly flu virus. H1N1 had been declared a pandemic by the World Health Organization (WHO) just the week before, and the predictions for the upcoming flu season looked grim. These specialists are the ones charged with preventing danger to public health from becoming catastrophic. When they do their job, few notice. But when crisis hits, from contaminated food to natural disaster to pandemic flu, they are the ones who must respond with the best science available. They know better than anyone that a planned, pro-active, preventive response is the only kind that works.

The speaker, Lisa M. Koonin, MN, MPH, is Senior Advisor for the Influenza Coordination Unit at the U.S. Centers for Disease Control and Prevention. When it comes to public health, the world trusts the CDC to provide the most comprehensive and accurate information, and NEHA had invited one of CDC’s top flu communicators to bring everyone up to date. Her comprehensive, rapid-fire presentation left no doubt: H1N1 is a brand new and virulent form of flu. It attacked during the off-season. Its geographic spread (not its severity) has made it an official pandemic. It will come back this Fall. It can’t be stopped, but there are tools that can mitigate its effects and prepare our communities. In addition, it’s our job.

“This is how flu is transmitted: close contact from sick people to well people... Flu moves fast! ...We will advise people to avoid close contact with others and stay about six feet apart from persons who are sick,” said Ms. Koonan.

Attendees were silent. Okay, theory is fine, but six feet of separation? A dramatic back-lit photograph of a person sneezing a highly contagious spray made the point: **FLU SPREADS LIKE WILDFIRE!** Fever, coughing, runny nose, chills, fatigue, muscle aches, sometimes vomiting – not fun for anyone, but potentially deadly for high-risk groups, including children under five, pregnant women and those with asthma or heart disease. Currently, the numbers of people who are sick and the demographics of those who have died from the virus are changing daily. The pandemic of 1918 left 500,000 dead in the U.S. and killed an estimated 50 million worldwide.

Exposure rates to H1N1 depend upon how proactively the virus is dealt with. So, what can be done? Can we break the transmission cycle? As with putting out a fire, early action can blunt the effects of the disease. There are numerous tools available:

- Isolation – Sick people should stay home for at least seven days, or 24 hours after symptoms stop, whichever is longer. This is somewhat longer than seasonal flu and can be very disruptive to business-as-usual.
- Social distancing – Maintain six feet, if possible.
- Hand washing – Don't touch the face. If water is not available, use alcohol gel, but keep gel use separate from restrooms.
- Anti-viral medications – These can be effective, and the nation's stockpile is allocated according to the severity of the outbreak.
- Vaccine – Take the seasonal flu shot early. An H1N1 vaccine could be developed, but this virus is new and “squishy” with subtle changes (drifts) and huge changes (shifts) that epidemiologists track relying on clinical reports, and virologists burn midnight oil trying to understand.
- Evidence is still out on the effectiveness of personal protective gear like face masks.

If these tools can be put to widespread use, our communities will be able to:

- Delay the outbreak peak. When everyone gets sick at once, as happened in Philadelphia in 1918, everything grinds to a halt and more people die. We have to flatten the curve with timely interventions, as did St. Louis after observing the tragedy in Philadelphia.
- Decompress the burden on hospital infrastructure.
- Diminish the number of cases, reduce the impact and cut deaths.

Government can't make this happen, but communities that plan, prepare, exercise and educate can. Public Health, as the lead agency, must enlist every public and private organization to make it happen. CDC recommends an approach that is early, targeted and layered.

- Early – Results depend on the timing of the intervention.
- Targeted – Who and where. Match intervention to severity. Children are most susceptible. They shed more virus and their hygiene is poor. Necessary school closings are disruptive, but children must not then congregate in other places. Hospitals require different measures than those of a factory or business. Large events should be postponed.

- Layered – Interventions that can be combined have a cumulative effect. Organizations should engage in continuity planning to mitigate absenteeism. Combine this with a policy that lets employees stay home without fear of losing their jobs. Another layer is planning “what-ifs.” Another is disinfecting used surfaces. Yet another is planning care for a sick person at home rather than rushing to the hospital. Employers and Human Resource Managers must plan ways to function effectively that allow as much physical separation as possible. An HR policy can be a life-saving policy. All of these measures provide layers of protection. And did we say, “WASH HANDS?”

Can we stay ahead of the wildfire? Can we prevent disaster? Environmental Health Professionals can make the difference. Despite Ms. Koonin’s informative and engaging presentation, she recognized that H1N1 is an evolving, changing story. CDC provides the most comprehensive and immediate information along with helpful support materials at their constantly updated website www.cdc.gov/h1n1flu. Everyone should bookmark it and check in often. And did we say, “WASH HANDS?”