HHS Seeking Electronic Biosurveillance System

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WASHINGTON — Government officials and health information technology leaders plan to spend this year laying the groundwork for a system that would allow for the electronic transfer of ambulatory, emergency department, and laboratory data to public health agencies in less than a day.

Over time, officials would like to implement a real-time nationwide public health monitoring system.

"The system we have is simply not adequate," Mike Leavitt, secretary of the Health and Human Services department, said at a meeting of the American Health Information Community. The United States faces the possibility of a bioterrorist attack and the threat of pandemic, he said.

Mr. Leavitt said he would like to get a "spotty net" of surveillance off the ground quickly by collecting a few key indicators from as many electronic data sources as possible. Getting just 2-4 basic data points from all available sources would be a "quantum leap forward," he said.

Information from small and medium-sized primary care practices will be key to any electronic biosurveillance system, said Dr. David Kibbe, who represented the American Academy of Family Physicians at the meeting. The American Health Information Community is an advisory committee to the HHS department.

"There is widespread agreement that information technology can substantially improve surveillance both for ongoing public health and for health emergencies," said Dr. Thomas R. Frieden, commissioner of the New York City Department of Health and Mental Hygiene, who presented information on current electronic surveillance programs at the meeting.

There is a wide range of biosurveillance activities underway at the federal, state, and local levels, and in the private sector, Dr. Frieden said. For example, the Centers for Disease Control and Prevention operates the Public Health Information Network, which provides an architecture for public health information technology. Most recently, the agency established the BioSense program, which is aimed at supporting the connection of clinical care to public health and supporting "situational awareness" at the national level.

A number of state and local health departments have begun electronic reporting either from clinical laboratories or clinical information systems.

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In New York City, the health department uses electronic reporting data on a daily basis. The system, which has been operating for more than 5 years, collects information from ambulance dispatches, emergency department visits, pharmacy purchases, outpatient visits, and other sources. The system also collects free text, which allows officials to evaluate information they might not have thought about otherwise.

Currently, 50 hospitals—representing about 90% of emergency department visits in the city—report daily. The electronic reporting system has proved helpful in the early detection of pockets of influenza. The electronic syndromic system consistently picks up influenza activity 2-3 weeks before any other system.

New York City is not alone. North Carolina has a statewide, hospital-based clinical data monitoring system. It allows for monitoring of real-time inpatient, outpatient, and emergency department data.

But there are major needs that must be addressed to reach the goal of a nationwide system, said Dr. John Loonsk of the federal Office of the National Coordinator for Health Information Technology. For example, data need to be standardized so they can be compared across reporting organizations, privacy and confidentiality must be ensured, and improvements need to be made in the current patchwork of state and local health information technology capability, he said.

In the short term, one area that could be implemented rapidly is the electronic reporting of lab results. This has value both to public health and for the routine use of clinicians, Dr. Loonsk said. ■