Unique electronic strategy alerts physicians to latest clinical information on H1N1 flu

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History was made at 2:30 p.m. (EDT) on Wednesday, April 29, when more than 3,000 physicians in Indianapolis were sent a broadcast alert on swine flu (H1N1 virus) from the Marion County Health Department. The message was of critical importance to patient care; history was made in the way it was transmitted and received.

The April 29 swine flu public health message was the first to abandon a traditional, less efficient paper approach to alerting physicians about public health crises in favor of an electronic strategy to quickly and efficiently broadcast public health information critical to patient care.

The electronic alert technology was developed by researchers from the Regenstrief Institute, Inc. in collaboration with Marion County Health Department. For the first time, an electronic public health alert was received by doctors in the same way that they receive laboratory data, radiology reports, hospital discharge summaries and other clinical information in the most health-care wired city in the nation.

"By working with our public health partners to seamlessly deliver public health alerts in precisely the same manner that physicians receive time-sensitive clinical information for patient care, we ensure that physicians have the right information at the time they need to see it," said Shaun Grannis, M.D., Regenstrief Institute investigator and Indiana University School of Medicine assistant professor of family medicine.

Regenstrief researchers developed DOCS4DOCS®, a clinical messaging

service that delivers more than 2.8 million messages per month containing information critical to patient care throughout central Indiana. A new web application that interfaces with the DOCS4DOCS service, operated by the Indiana Health Information Exchange (IHIE), was used to deliver the H1N1 flu alert.

"Through the work of Regenstrief and IHIE, Indiana has the most sophisticated health IT network in the country allowing us to stay to on top of critical events, such as flu outbreaks, bioterrorism and natural disasters to make sure that resources and early warnings are in place to make Indiana's residents safe. We are working with other states to share and eventually expand our experience," said J. Marc Overhage, M.D., Ph.D. Dr. Overhage is the director of medical informatics at the Regenstrief Institute and Regenstrief Professor of Medical Informatics at the IU School of Medicine. He also is president and chief executive officer of IHIE.

Home of the Regenstrief Medical Records System, one of the world's oldest electronic medical records systems, and the growing Indiana Network for Patient Care, the Regenstrief Institute has been capturing and aggregating health-care data since 1994. Building on the pioneering work of Regenstrief, IHIE provides services that enable the right medical information to get to the right provider at the right time to enhance patient care.

Like most other public health departments across the nation, the Marion County Health Department has traditionally performed the public health alert function using a variety of methods, including news releases targeted to the public and mailing letters to physicians. Postal delivery service can delay notification to primary care physicians by 72 to 96 hours - a critical time in which the opportunity to better serve patients has been lost.

"The ability to efficiently and effectively communicate critical messages to our doctors is critical in this time of emerging communicable disease, like the H1N1 virus. The ability to identify crucial information and disseminate it through a reliable and trusted network is a tremendous resource," said Virginia A. Caine, M.D., director, Marion County Health Department.

In 2007 the U.S. Census Bureau estimated that Marion County had a population of 876,804. Currently 3,105 physicians with Marion County zip codes utilize DOCS4DOCS®.

Last year Regenstrief investigators received a $10 million, 5-year contract from the Centers for Disease Control and Prevention (CDC) to enhance the ability of local, state and regional entities to share data and information during potentially catastrophic infectious disease outbreaks and other public health emergencies.

"DOCS4DOCS® is a robust, efficient communication system that can reach virtually all health-care providers in the Indianapolis metropolitan area. On a daily basis it provides essential information that facilitates and enhances clinical practice, and it also provides a superb platform for public health to send critical information to the medical community. It is a prime example of a bidirectional communication system that other communities should seriously consider for implementation," said Charles Magruder, M.D., M.P.H., senior advisor, Health Information Exchange Activities, National Center for Public Health Informatics at the CDC.

Regenstrief plans to offer the new technology to other public health departments.

Note: The first paragraph of the April 29 alert reads as follows.

The Marion County Health Department is asking that all patients being

evaluated for acute respiratory illness with fever should be tested for influenza A virus infection. Specimens testing positive for influenza A virus should be sent to the Indiana State Department of Health laboratory for influenza subtype testing.

Source: Indiana University (news : web)