Microsoft Hosted Online Service to Help Flu Sufferers Seek the Right Medical Help

Online H1N1 Response Center helps users quickly assess their symptoms so they can decide whether to get medical attention or recover at home.

REDMOND, Wash. – Oct. 15, 2009 – To help flu sufferers get the help they need without overcrowding waiting rooms, Microsoft has begun hosting the H1N1 Response Center (www.h1n1responsecenter.com), a free online service that assesses the symptoms users report and offers guidance for those considering whether to visit a healthcare provider.

The service has two goals: provide quick and easy information to help people who are severely ill or at increased risk make informed decisions for themselves and their loved ones; and encourage those who have mild illness to consider staying home. Crowded doctors' offices and emergency rooms can make it harder for sick patients to get timely care, plus they increase the risk of spreading germs from one person to another. Health officials estimate that between 20 percent and 40 percent of the U.S. population — or 60 million to 120 million people — may get H1N1 or seasonal influenza during the 2009 flu season. A small proportion of those will become seriously ill.

The assessment provided by the online service is based on an algorithm developed by doctors at Emory University with input from medical and public health experts nationwide. Microsoft licensed the assessment from the Emory University School of Medicine. It asks users about their symptoms and other risk factors, such as age, underlying health issues or pregnancy. The assessment dynamically responds to users' answers that indicate a person is seriously ill or at risk. For example, someone who reports high fever or trouble breathing may be advised to visit a doctor or ER within just a few questions.

Dr. Arthur Kellermann, professor and associate dean for health policy at the Emory University School of Medicine, says that during the spring outbreak of H1N1, many people went to an emergency room "just to be safe." But doctors have found that making a needless trip to the emergency room is not a wise choice. "First of all, you don't need to be there," Kellermann says. "And second, you will probably spend a lengthy period of time waiting to be seen among others who are sicker than you. If you didn't have the flu when you got there, you may well have it by the time you return home."

The tool also has the potential to gather information that can help public health officials respond more effectively to the pandemic. Users can choose to make their answers from the assessment available for analysis. Those include demographic information such as gender, ZIP code and health information, but do not include name or contact information. This information can be analyzed to help public health researchers track disease patterns, such as specific regions where symptoms are increasing or clusters of sick patients in particular age groups. Providing this information is completely optional. It is used only for public health, education and research activities.
The tool is quick to use and easy to understand. That’s no accident. Kellermann and his colleagues worked with the Emory@Grady Health Literacy Team, a group of public health and internal medicine specialists who are experts at translating complex medical information into plain language. Working with test users representing a range of backgrounds and reading levels, the team refined the questions to ensure they will be clearly understood, even by users with limited reading skills or who lack sophisticated medical knowledge. “It really doesn't take long at all to do this [work through the assessment],” says Kellermann. “And the sicker you are, the shorter it is. If you are severely ill, it tells you right away.”

When Kellermann and his medical colleagues first met in December 2008 to develop a decision-support tool to respond to a hypothetical pandemic, everyone was worried that avian flu would be the dominant disease, with deadly consequences. To help healthcare systems avoid being overwhelmed with patients, they developed the "Strategy for Off-site Rapid Triage,” or SORT, protocol. When the current outbreak of H1N1 started and quickly spread into the United States, Kellermann’s group adapted their model to reflect the characteristics of the emerging H1N1 pandemic: For example, pregnant women have a higher risk of complications than in previous influenza outbreaks. To ensure that SORT reflects the latest public health science, the Emory team engaged a national network of experts from public health, clinical medicine, health education and infectious disease disciplines. In September, the American College of Emergency Physicians — the leading organization for emergency medicine in the U.S. — officially endorsed SORT. Emory’s work was subsequently adopted and further refined by the Centers for Disease Control and Prevention (CDC) and is offered to healthcare professionals nationwide for use in patient care.

At the same time that Emory was refining SORT, Microsoft’s Health Solutions Group was looking for ways to provide technological resources to help public health authorities deal with the H1N1 pandemic. Says David Cerino, general manager in Microsoft’s Health Solutions Group, “When the data started coming out suggesting that there might not be enough vaccine to meet the demand, we started looking at what might happen if the health system became overwhelmed, and at what we could do about it.”

Cerino and his team quickly identified Emory’s SORT protocol as a tool that Microsoft could help implement and deploy widely, and collaborated with the clinical experts to license the tool and get the H1N1 Response Center online in time for the fall flu season. "What drove us to this tool was Microsoft’s ability to step up and play a part in public health, to use our technical prowess coupled with Emory’s clinical prowess to show people that these types of partnerships can really make a huge difference,” Cerino says.

The H1N1 Response Center includes a prepare-for-visit tool that allows users to compile an organized health history that they can give to their healthcare providers. It does so by combining the assessment answers with health information stored in the user’s account in Microsoft HealthVault (http://www.healthvault.com/), a free personal health application platform designed to put consumers in control of their health information. Users who do not yet have a HealthVault account will be invited to sign up for one.

As the pandemic progresses, Microsoft plans to include any updates Emory provides to help H1N1 Response Center reflect new developments, such as vaccine availability, changes in symptom patterns or updated recommendations for particular risk groups. With its adaptability and...
symptom patterns or updated recommendations for particular risk groups. With its adaptability and flexibility, the technological model is expected to be a foundation for solutions that can be created to address future public health crises.

Kellermann notes that the ability to gather and analyze outbreak patterns gives the tool tremendous potential to empower public health officials to more effectively fight the pandemic.

"And it's free," Kellermann says. "Microsoft is offering it to the country, at no charge. Everyone who has participated in this project has done so on a volunteer basis. Never in my career have I seen so many accomplished people from so many different fields put their self-interest aside and come together to create this kind of resource."