



CDInfo



Richard M. Daley, Mayor

March 2008

Terry Mason, MD, FACS, Commissioner

www.cityofchicago.org/health/

**West Side Center
For Disease Control**
2160 West Ogden Avenue
Chicago, IL 60612

**Communicable
Disease Program**
312-746-5387
312-743-1059 FAX

Immunization Program
312-746-5380
312-746-6144 FAX

Tuberculosis Program
312-746-5983
312-746-5134 FAX

CDInfo is a surveillance newsletter intended to promote prevention of morbidity and mortality by providing useful data and practical recommendations for clinicians, laboratorians and infection control personnel who diagnose, treat and/or report infectious diseases in Chicago.

Save the Date

The Chicago
Department of
Public Health

**13th Annual
Infection
Control
Conference**

May 2, 2008

Holiday Inn City
Center

300 E. Ohio

Use of the Health Alert Network in an outbreak investigation

The Chicago Health Alert Network (HAN) is a secure web portal and communication system that is operated by the Chicago Department of Public Health (CDPH). A primary purpose of this system is to disseminate important and often critical public health information by sending out alerts. These alerts are targeted toward individuals in local health departments, Chicago hospitals, and other institutions in the region's public health community. In the summer of 2007, HAN infrastructure was used not only as an alerting mechanism, but also to rapidly evaluate the scope and severity of an outbreak of norovirus infection affecting a substantial number of international visitors to Chicago.

On Tuesday July 24, 2007, the CDPH Communicable Disease (CD) Program received a call from an administrator of a Chicago hotel who reported gastrointestinal illnesses among multiple attendees of a conference that had taken place at the hotel. The conference was sponsored by an international organization and was held at the hotel from July 20 – 23. During the conference, the majority of guests at the hotel were conference attendees. About 2,300 individuals from 48 countries reportedly attended.

In response to the report, sanitary inspections of the hotel kitchens were performed and CDPH provided recommendations to hotel administrators and employees regarding methods used to halt communicable disease transmission. During on-site visits to the hotel, the CD Program requested stool samples for laboratory testing and obtained information regarding activity and illness histories using standardized questionnaires from ill guests who had not yet departed the hotel. Eight case-patients had stool specimens positive for norovirus genogroup 1 by reverse transcriptase-polymerase chain reaction (RT-PCR). The first positive result was reported on July 26.

On July 26, electronic notifications were posted on the HAN and the Centers for Disease Control and Prevention's Epidemic Information Exchange. Additionally, using the same technology that is in place for HAN alerting, an electronic mail message was sent to 1,815 conference registrants for whom an e-mail address was available. The message invited individuals to participate in a secure, confidential internet-based survey. The survey was deployed using the infrastructure of the HAN and included questions on demographics, illness, and attendance at conference events at which foods were served. Additional e-mail communications regarding the survey and investigative findings were sent using HAN technology on July 27 and August 3.

Figure 1 illustrates the cumulative number of survey responses registered in the HAN over time. Within 3 hours of the first e-mail notification on the afternoon of July 26, 183 responses had been submitted; there were 634 responses received by the time the second notification was sent around midday on July 27. At the close of the survey period on August 6, more than 1,300 responses had been registered from persons residing in 36 different countries (Figure 2).

Over 500 conference attendees (or family members who accompanied an attendee) reported experiencing acute onset of gastrointestinal illness during the last two weeks of July 2007. Illness onsets were reported as early as July 16 and evidence suggested that norovirus transmission might have occurred sporadically among attendees primarily through close contact early in the conference. Use of the HAN resulted in accelerated data collection and analysis in this outbreak investigation, as delays traditionally associated with phone interviews, paper recording of responses, and entry of responses into databases were eliminated.

Medical and public health personnel interested in accessing the HAN are asked to send an e-mail to the HAN help desk at hanhelpdesk@cdph.org that includes name, title, organization name and contact information.

