

## Managing Emergencies by Sharing Information

Hurricane Katrina has brought into sharp focus the need for coordinated and informed emergency response and management. This issue of *In-Depth* describes the emergency data-gathering and communication systems available in NYS that are used to help manage the health care system's response and needs in the event of an emergency.

### Health Emergency Response Data System

The Health Emergency Response Data System (HERDS) is an electronic data collection system, run by the NYS Department of Health (DOH), that links all hospitals, long term care facilities, and other health care providers in NYS via a secure Internet site. HERDS's primary use is to allow DOH to more effectively share and receive information from health care providers when responding to a public health or other emergency. HERDS has also been deployed by DOH to assist with emergency response planning and public health surveillance.

In an emergency, HERDS is designed to capture three main types of data from providers in an interactive, real-time database:

- surge capacity data—beds, staffing, supply needs, and availability;

The screenshot shows a web-based interface titled "Emergency Incident Data Demo System". It has a navigation menu with tabs for "Main", "Event/Patients", "Beds/Equip", "Personnel", "Antibiotics", "Antidotes", "Blood", and "Supplies". The "Event/Patients" tab is selected, displaying "Event Related Patients Information". The interface is divided into several sections: "Waiting in ED", "Treated in ED", "Admissions", and "Event Related Deaths". Each section has a "Total" column on the right. The "Waiting in ED" section includes fields for "Adults", "Children (<16)", and "Patient workload". The "Treated in ED" section includes "Adults - event-related", "Adult total-treated for any reason (including event-related)", "Children (<16) - event-related", and "Child total-treated for any reason (including event-related)". The "Admissions" section includes "Adults - event-related", "Adult total-admitted for any reason (including event-related)", "Children (<16) - event-related", and "Child total-admitted for any reason (including event-related)". The "Event Related Deaths" section includes "Adult Mortalities (including DOA's)", "Pediatric Mortalities (including DOA's)", "Of adult total, how many are unidentified Males", and "Of adult total, how many are unidentified Females".

**In an emergency, HERDS would likely request event-related data on admissions, patients waiting to be seen, and patients who were treated in the emergency department.**

- event-related data—numbers of patients seen, waiting to be seen, unidentified, or deceased; and

- patient locator system data—name, sex, and date of service for patients seen in area hospitals as a result of a disaster.

System administrators at DOH can quickly customize the HERDS data collection screens, allowing them to create targeted data requests and information bulletins crafted for specific emergency, planning, or surveillance needs. For example, during this year's influenza vaccine shortage, DOH issued a targeted request to hospitals via HERDS for infor-

mation regarding hospital influenza vaccine supply. As a result of hospital data reporting via HERDS, NYS was the first state to be able to report to the Centers for Disease Control and Prevention about its supply of influenza vaccine.

**Background.** The availability of data regarding patients, supplies, and staffing is key to effective emergency management and response. Following the events of September 11, 2001, GNYHA formed an Emergency Preparedness Coordinating Council (EPCC), and among the EPCC's initial goals was to ensure that data-gathering in any future emergency is coordinated and efficient.

In particular, the EPCC emphasized the need to:

- identify data elements that should be collected during and after emergencies; and
- create an efficient data collection system.

To accomplish those goals, the EPCC worked closely with DOH to develop HERDS, which is based on a prototype designed by the NewYork-Presbyterian Healthcare System. HERDS is now NYS's official data collection system used during emergencies for hospitals and other health care providers.

**Deployment of HERDS.** As a centralized source of information about health care resources, HERDS can supply data to local and state emergency management and public health agencies to assist them with their response activities. HERDS is also designed so that requests for information can be tailored by event, location, or other variables.

Access to HERDS is available only through

*continued on reverse*

The screenshot shows a web-based interface titled "Enter Patient Information Demo System". It has a navigation menu with tabs for "Main", "Event/Patients", "Beds/Equip", "Personnel", "Antibiotics", "Antidotes", "Blood", and "Supplies". The "Event/Patients" tab is selected, displaying "Enter Patient Information". The form includes fields for "Patient Id:", "Facility Name, id:", "Incident:", "EMS Triage Tag Number:", "PCR Number:", "Hospital's Unique Patient Id:", "Date of Service (mm/dd/yyyy):", "Name (First, MI, Last):", "Street:", "City, State:", "Country:", "Age (exact or estimate):", "Gender:", "Patient Type:", "Patient Injuries/Condition:", and "Patient Disposition:". There are also buttons for "First", "Cancel", "Search", "Initialize", "Add/Continue", "Refresh", "Reset", and "Exit". At the bottom, it says "Page initialized ... Ready for 'Add' (new record)".

**Data gathered via HERDS's "Enter Patient Information" screen could serve as the basis for a patient locator system.**

## Managing Emergencies by Sharing Information *continued from front*

the Health Provider Network (HPN), DOH's secure Internet site. NYS regulations require all hospitals and nursing homes and certain other providers to have HPN accounts. As a result, key emergency management and response staff at each facility should secure an HPN user account. For more information on acquiring access to HERDS, staff should contact the HPN Coordinator at their facility, DOH, or GNYHA for assistance.

HERDS is typically activated by DOH, which sends out alerts regarding activation to individuals registered in the applicable categories in DOH's Communications Directory. These alerts can be delivered via telephone call, pager, and e-mail. Facilities should therefore ensure that information about their key contacts in the Communications Directory is complete.

In addition, as part of their disaster plans, providers should designate specific individuals to begin monitoring HERDS in the event of a disaster. During the initial hours after a disaster, it may not be possible for all HERDS participating providers to gather and enter data into HERDS. If a facility loses its data lines in the event of an emergency, it would also be able to contact, via telephone or radio, GNYHA, DOH, or its local emergency management agency to provide information about its resource needs and event-related data based upon the data elements normally collected through HERDS.

**Emergency and Routine Use of HERDS.** HERDS was activated for emergency use during the power outage of August 2003, Hurricane Isabel in 2003, and the Republican National Convention in 2004. DOH also uses HERDS to conduct surveys of hospitals' basic capabilities and assets on a more routine basis. In particular, DOH activates HERDS on a weekly basis to capture infor-

mation from hospitals about bed capacity. This weekly use of HERDS helps to ensure that hospitals are familiar with it and can readily enter data into the system in the event of an emergency. HERDS has also been used to collect information about airborne-infection isolation rooms, pharmaceutical supplies, and influenza vaccine availability.

**HERDS Drills.** GNYHA has conducted a number of drills designed to assess hospitals' ability to access and enter data into HERDS, provide an opportunity for hospitals to practice using HERDS, test HERDS's bi-directional communication capacity, and demonstrate the HERDS patient locator module. DOH has also started to activate HERDS as a component of traditional emergency preparedness drills. In addition, GNYHA has convened a HERDS Users Group and has been collaborating with DOH to identify desired operational improvements

and technical enhancements to the system.

**Patient Locator System.** In the spring of 2003, DOH added patient locator functionality to HERDS, which was based on a patient locator system developed by GNYHA and the NYC Mayor's Office following the events of September 11, 2001. Like that system, HERDS's patient locator function is designed to capture basic demographic information about patients seen in hospital emergency rooms during a disaster, including name, date of service, gender, and other identifying information if available.

Hospital staff can submit a number of data elements to HERDS's patient locator function, but only the following three are required to create a profile: last name ("unknown" is an acceptable value), gender, and patient disposition. The complete list of data elements that go into the patient locator system includes:

- EMS triage tag number;
- hospital's unique patient ID;
- date of service;
- name;
- address;
- age (exact or estimate);
- gender;
- patient type (emergency medical technician, military, civilian, Federal agency personnel, firefighter, police officer); and
- patient disposition (admitted, discharged, pending, transferred)

These data can serve as the underlying components for any patient locator system. In the days following September 11, 2001, this system became an important tool to help friends and family members determine whether a loved one had been seen at any of the area hospitals. The patient locator system also helped hospitals by creating a centralized source to handle such inquiries, which reduced the number of phone and in-person inquiries that each hospital had to manage. ■

### WHEN COMPUTERS ARE DOWN: CONTACTING GNYHA VIA RADIO OR PHONE

#### **Regional Coordination Through NYC Office of Emergency Management**

Facilities that lose their data lines in an emergency may contact GNYHA via radio or phone at its desk at the NYC Office of Emergency Management (OEM) to report critical data that would normally go through HERDS. OEM is the lead agency responsible for planning efforts for natural and man-made emergencies and events.

*Communicating via Telephone.* NYC's response to an emergency or planned event (such as the Republican National Convention) generally involves the activation of the NYC Emergency Operations Center (EOC), located at OEM. GNYHA participates as part of NYC's response by staffing a desk at the EOC during all emergencies, anticipated possible emergencies, and other planned events, where it has a phone line (718-422-8767). While at OEM, GNYHA is able to address its members' needs and to facilitate the region's health care response to disasters. GNYHA also staffs Westchester County's EOC when it is activated.

*Radio Communication Systems: NYC OEM 800 Megahertz Radio System.* GNYHA has worked closely with OEM to implement a special health care talk group on its 800 megahertz (MHz) radio system so that facilities in NYC can communicate with each other in the event of an emergency. This radio system provided a critical means of redundant communication during the power outage of August 2003 and enabled hospitals to communicate with OEM and each other when regular telephone and data lines failed.

NYC is able to permit only those facilities located within the City limits to be on the 800 MHz radio system because the system utilizes NYC-licensed radio frequencies and NYC resources. A number of GNYHA members outside NYC, however, have radios linking facilities within a system to one another or to local emergency management agencies. Areas that have radio linkages between localities and providers include NYC (all boroughs), Nassau County, Suffolk County, Westchester County, and New Jersey. Facilities outside NYC can reach OEM by making contact through their local radio linkages.