

Using a Flu Clinic to Test Emergency Response Plans

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About Clay County Public Health Center

Clay County Missouri is located in the Kansas City metropolitan area. The County comprises 408.86 square miles, with 464.3 people per square mile. The estimated population to be served in Clay County is 204,000 people.

Clay County Public Health Center employs 73 people, including 14 licensed nurses. 1,764 nurses reside in Clay County, some of whom may be available in a time of crisis. Alliances with other agencies such as Mid-America Regional Council (MARC) add affiliated volunteers, but the ratio of clinicians to population is still low.

A routine service of Clay County Public Health Center is the provision of Flu Vaccine to the area residents. Patients covered by certain state or federal programs receive the vaccine at no charge. For those patients not covered by a government reimbursement program, a nominal fee is collected.

Clay County Public Health Center actively participates in regional planning efforts coordinated by Mid America Regional Council (MARC). MARC functions as a regional council of governments and serves as a primary fiduciary agent in the grant initiatives for the bi-state area of Missouri and Kansas. This regional coordination provided the funding necessary to obtain software (NexGenisys Health MEDS|POD™) for hospital and public health mass prophylaxis operations. The MEDS|POD™ system was utilized in the Flu Clinic Exercise.

Purpose for Exercise

Local Public Health Agencies are a critical component to public health emergencies, whether natural or man-made. Typically the plans created for emergencies are drafted, approved and filed for use in the event of a real emergency.

Significant effort had been expended in the development of the Clay County Public Health Center emergency response plan. Area hospitals had planned to exercise their emergency plans using flu vaccine clinics as the event. The opportunity to participate in the flu clinic exercise was presented to the Health Center leadership only six weeks before the actual exercise date.

A scheduled public influenza vaccination clinic was altered to incorporate local resources and systems that are planned for use during large-scale public health response.

The major objectives for the exercise were:

- Community Resources Coordination
- Clinic Flexibility and Incident Command System
- Staff Training and Productivity
- Managing Patient Flow
- Utilize New Tools to Manage Clinic Operations

Community Resources Coordination

It is widely acknowledged that large-scale disasters require a multi-jurisdictional response. The success of the local response will hinge directly upon the ability to foster and coordinate the communication between and integration of diverse local resources. Sometimes, the short notice in planning can be used as a positive factor to demonstrate the ability to quickly coordinate those resources.

This exercise required the coordination of personnel and resources from a wide variety of organizations, including:

- Liberty Hospital
- Two area Colleges
- Five surrounding local public health agencies
- Mid-America Medical Reserve Corps
- Pleasant Valley Baptist Church

Clinic Flexibility and Incident Command System

A community's capacity to respond successfully to an event will rely on the responding agencies' ability to quickly and accurately assess the assets needed. The response must be able to rapidly scale its ability to treat more patients than initially expected (for instance, if local media report the purpose and location of a public clinic and a surge occurs), or to deploy assets elsewhere if required.

To meet an emergency with an effective scaled response requires a command structure designed for flexibility. The Incident Command System is currently accepted as the most efficient means of managing assets during an emergency. Familiarity with the Incident Command System is a key to a successful response effort.

Staff Training and Productivity

During an actual emergency, trained personnel – even those pre-assigned to clinic jobs – may be a limited resource. It is important to maximize the efficiency of the available personnel to ensure prompt and adequate care for patients. Furthermore, the use of non-designated personnel in a just-in-time method using job action sheets will be needed. To simulate the different functions required in the clinic, personnel were rotated through various positions during the exercise. The result was a clinic that provided a high (but safe) rate of patient flow using the fewest number possible of pre-trained staff.



Volunteer clinic workers were trained immediately prior to beginning clinic operations. General orientation and specific training for computer operators was conducted. Subsequent users were trained by the personnel they were replacing.

Managing Patient Flow

Patients entered the facility parking lot where a health assessment form was distributed along with a clipboard and a pen. Upon completion of the health assessment form, the patients proceeded to the entrance where any questions regarding the forms were answered.



Patients entered the clinic where information from the health assessment form was entered into the MEDS|POD system. Data entry was performed by volunteers trained immediately prior to the event.

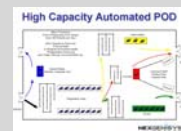
Based on the data input from the patients' health assessment forms, the automated system recommended routing to one of two areas: a Vaccination area or a Consult area. Patients seen in the consult area were those who reported being ill, allergic to a component of the vaccine or having health conditions that might preclude them from receiving the vaccine.

Patients without medical contraindications received the vaccine in one of 3 Vaccination areas. Staffing in each area consisted of 2 nurses or students and 1 clerical assistant.



Many patients interviewed by the media commented on the efficiency of the clinic operation. They were so impressed with the operation that many of them called friends and relatives to let them know about the clinic and urge them to get their flu shots while the clinic was open.

Utilize New Tools to Manage Clinic Operations



Existing models for clinic operations depend on a large number of highly skilled clinical personnel. The shortage of clinical personnel in our area warrants alternative solutions that do not sacrifice safety.

The clinical decision software greatly improved the efficiency of the clinical staff by allowing non-clinicians to enter patient information, relying upon the software to identify patients at risk and routing them to an appropriate care area.



The addition of the automation to the clinic process improved the efficiency of clinic workers. The knowledge that patient care decisions were also being checked by the automated system reduced the anxiety among many of the clinical staff.

A report of all patients treated in the clinic was generated immediately upon closing the operations. In real events, knowing who was treated will be critical for follow-up and risk reporting.

Results

More than 75 staff and volunteers participated during the 6 hour clinic. During the peak of the clinic operation, 8 people staffed the registration stations and 6 people provided vaccine administration supported by 3 clerical staff members. A total of 12 computers were used in the active management of patients.

A total of 267 patients were registered at the clinic. MEDS|POD identified 7 patients that required further evaluation of possible contraindications for the vaccine. Two of these patients did not receive the vaccine for safety reasons.



The clinic was established in a conference room of an area church. To minimize congestion and disruptions in flow, patients entered the clinic from one doorway and exited the clinic in an opposite doorway.

This Flu Clinic provided the staff and volunteers valuable experience in managing large scale public clinics. The public benefited from seeing evidence that the local public health agency, in cooperation with many regional partners, is making progress in developing and executing plans to safeguard the health of the community during public health emergencies.

Conclusions and Next Steps

Previous exercises have been conducted using volunteers acting as role player "victims". While the experience gained is valuable, there was an element of realism missing from the clinic operation. The use of a scheduled public flu clinic offered an opportunity to test emergency plans in a real population. The tenuous availability of the vaccine and apprehension about depleting the supply limited the amount of public information announcements and therefore attendance at the clinic. However, media coverage caused a surge to occur near the end of the clinic.

The knowledge gained from this exercise will be used to further strengthen the emergency response plans. If a predictable and adequate supply of vaccine is available, the public flu clinics in 2007 will also be used to test the emergency response plans.

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