

New Jersey Health Officers Association



Mass Vaccination Exercises Best Practices Report

with lessons learned from
Bergenfield/Englewood
Central East Regional
Clifton and Passaic
Irvington
Monmouth
Northwest New Jersey Public
Health Region
Randolph
Wayne

New Jersey Health Officers Association
July 2011

NJHOA Mass Vaccination Exercises Best Practices Report

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This report was created by the New Jersey Health Officers Association, in collaboration with the New Jersey Department of Health and Senior Services and Rutgers University's New Jersey Agricultural Experiment Station Office of Continuing Professional Education.



Acknowledgements

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Dear Public Health Partners,

On behalf of the New Jersey Health Officers Association, it is a privilege to present you with this Mass Vaccination Best Practices Report. This document is the second in a series of reports and was modeled after the efforts and successes of the 2009 Mass Vaccination Exercise Best Practices Steering Committee.

Over the past decade Public Health has made great strides in its emergency preparedness efforts including pandemic influenza preparedness. This report highlights the lessons learned and provides best practices from eight (8) local health departments and/or partnerships who received funding from the New Jersey Health Officers Association's H1N1/Public Health Emergency Preparedness grant.

We encourage you to review the report and incorporate lessons learned to improve your own mass vaccination clinics and exercises.

On behalf of the New Jersey Health Officers Association, we wish to acknowledge and thank the many local health departments who participated in the exercises and the many folks who helped make this project a success, including our funder, the New Jersey Department of Health and Senior Services.

Very Truly Yours,

Carlo DiLizia, President
NJ Health Officers Association

Margy Jahn, Chair
H1N1/PHER Grant Steering Committee


New Jersey Health Officers Association Pandemic Influenza Grant Exercises

Major Findings

In 2011, the New Jersey Health Officers Association awarded pandemic influenza exercise grant funding to eight local health agencies. Commonalities and strengths among the grantees included: an emphasis on local and regional collaboration and the development of worthwhile exercises despite the limited time to prepare between notification of the grant award and exercise deadline. One grant recipient stated that the time constraints were a good thing because it replicated the time constraints in an actual emergency. Grantees also learned a valuable lesson through these exercises: Vaccination clinics require continual planning and preparation; have a clinic proposal/ exercise/ scenario ready and waiting because you never know when unexpected grant funding will appear. Additional specific findings and lessons learned follow.

FREE VACCINES FOR CHILDREN AND ADULTS


RANDOLPH REGIONAL HEALTH DEPARTMENT

 9


PREPAREDNESS EXERCISE

WHEN: Sunday, June 12, 2011 from 12:30 PM – 2:00 PM
Gateways Rental Office Parking Lot, Randolph


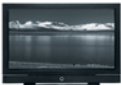
Sunday, June 12, 2011 from 3:00 PM – 4:30 PM
The Meadows on Woods Edge Rd. in Roxbury

WHERE: In the big white tent! 

Come help us make our exercise a success. We will be offering the following vaccines free of charge for anyone wanting and needing them while supplies last:

- **Tdap vaccine (Tetanus, diphtheria and acellular pertussis).** This vaccine is recommended for all adults and is required for students entering grade 6 so bring your 10 year olds. 
- **Meningococcal vaccine** is required for students entering grade 6 so bring your 10 year olds. For older teens, the CDC recommends a booster 5 years after their first dose before going off to college. It can also be given to people through age 55 who travel.
- **HPV vaccine (Human Papillomavirus)** can prevent most cases of cervical cancer and genital warts in both males and females. This three-dose vaccine is recommended for men and women ages 9 – 26 years.
- **Pneumococcal Polysaccharide vaccine** is for anyone 65 years and older, those who smoke and those who have long term health problems such as heart disease, lung disease, diabetes, auto immune disease or asthma.

* BE*WISE*IMMUNIZE***BE*WISE*IMMUNIZE*

 If you don't need any vaccines, stop by and help us test our ability to handle a crowd. Everyone coming will be given a chance to win a 19" flat screen TV – drawing to be held at the end of each event. 

Consent forms and all vaccine information are posted on our website:
www.randolphnj.org. Please complete the forms and bring them with you.
Questions? Call the Public Health Nurses at 973-537-7118.

These additional major findings and useful information were identified:

1. Communications

- The use of social media and electronic online appointment systems will have a place in future health department community clinics. In previous years other local health departments have used Appointment-Plus <http://www.appointment-plus.com> Online Scheduling Software to assist with clinic flow. SurveyMonkey (www.surveymonkey.com) is another efficient way to conduct participant and worker evaluations electronically.
- Communicating with diverse ethnic groups was a common challenge for the grantees. Use the following as a reference and discussion point at your next meeting with local community groups to discuss how to improve communications with limited English speaking populations: "National Resource Center on Advancing Emergency Preparedness for Culturally Diverse Communities" <http://www.diversitypreparedness.org/What-s-New/40/>

2. Just in Time Training (JITT)

- Five grant recipients incorporated JITT of staff and volunteers in their exercises. What each grantee found was that JITT will play a crucial role in providing smoother clinic services and increase satisfaction among workers. Here are resources from NACCHO on the latest information/templates for improving 'Inclusive JITT': Inclusive Just-in-Time Training for Mass Prophylaxis/POD Operations: Checklist and Material Templates <http://apc.naccho.org/Products/APC20102199/Pages/Download.aspx>
NACCHO Advanced Practice Centers Inclusive Just-in-Time Training Online Course <http://apc.naccho.org/products/pages/default.aspx?k=JITT&s=Products>

3. Clinic Logistics and Solutions

- From acoustics to clocks, tents to wheelchairs; from the placement of tables and number of medical staff needed at each station, these grantees have a wealth of practical information to share.

4. Memorandums of Agreement and Contracts

- Learn from these exercises and explore if your township has a need to develop or update the Memorandums of Agreement/ Understanding between neighboring municipalities for use during an emergency. Reach out to your municipal attorney to discuss the need of 'right of entry' documentation to ensure your health department's entry into apartment complexes to distribute medication/ vaccinations during an emergency.

5. The role of nurses and medical staff at a clinic

- Nurses are crucial to a good community clinic. However, while they may be fully utilized, they may not be placed in the best and most suitable stations for their skill set. For example, nurses can teach staff how to give succinct reporting to the next crew at a shift change. This is a nursing skill set that could help any clinic. Grantees and planners would benefit from including nurses in future planning discussions.

6. Creative Innovations from Pandemic Flu Clinic Exercises

- One organization utilized this experience to advertise and offer actual vaccines available through the American Recovery and Reinvestment Act to those who needed them: Tetanus, diphtheria and pertussis (Tdap) and meningitis to those entering sixth grade, meningitis to high school juniors and seniors, pneumovax to senior citizens and high-risk individuals and Human papillomavirus (HPV) for those aged 9-26. In doing so they accomplished several things: Increased the visibility of their local health department, conducted a mass vaccination clinic exercise and actively prevented disease by increasing the vaccination rate of their community.

Reports, forms and templates are available upon request from the respective agencies. Please contact them directly for more information.

Bergenfield/Englewood

Lead agencies: City of Englewood and Borough of Bergenfield.

Type of exercise: Drive-through vaccination clinic in response to a novel flu outbreak.

Date: June 4, 2011.

Planning team: Englewood health department, police department office of emergency management (OEM), fire department emergency medical services (EMS) and volunteer ambulance corps, Bergenfield health department and volunteer ambulance corps.

Objectives: Plan and conduct a joint mass prophylaxis clinic, including effective on-site management, a successful publicity effort and proper training and coordination of community volunteers.

Summary: The Joint Command Drive-Through Clinic of Englewood and Bergenfield tested the planning, management, communication and mass prophylaxis capabilities of the two communities. An assumed 60,000 people (the population of both communities) need to be vaccinated against flu. The Emergency Powers Act has been implemented so the clinic uses non-traditional vaccinators. There is a table top exercise three days prior to the point of distribution (POD) and lessons learned are incorporated into the full scale exercise. The clinic is held at the McCloud School in Englewood. Just in time training (JITT) prepares volunteers, including student nurses, to help traditional medical personnel handle the anticipated crowds. Officials believe some sick people will attend and need a medical evaluation. Approximately 1,360 doses of vaccine were dispensed. Most patients were processed in 10 minutes or less.

Personnel: Health departments' staffs, OEM personnel, EMS, student nurses.

Bergenfield/Englewood

What worked:

- An incident command structure ensured all people had specific functions and there was a clear chain of command in place.
- Planning committee members were well-qualified, each bringing specific technical and functional knowledge to the process, and met at least weekly in the months leading up to the exercise.
- Specially created forms allowed for the successful tracking of participants and measurement of success.
- All supervisors had two-way radios and were in constant contact throughout the POD. Englewood police had the ability to monitor communications. Additional portable radios were available if needed.
- Signage and floating staff enabled patients to self-select into the proper line: either dispensing or triage for possible contraindications to vaccination.



What did not work:

- Some key personnel did not keep to their assigned duties and some did not follow the chain of command.
- The use of attendance and assignment sheets was inconsistent, creating gaps in accounting for volunteers.
- There were only student nurses and emergency medical personnel at the medical triage area of the clinic. Skilled, registered nurses should staff this section.
- More signs were needed to direct the general patient flow.
- More people walked in than expected, necessitating real-time changes in the distribution setup to include a station for pedestrians and one for drivers, instead of two vehicle stations.

What Did It Cost?

Personnel: \$1,458.

Printing and office expenses: \$1,271.

Equipment and program costs: \$22,190.

Bergenfield/Englewood

Lessons learned:



- Train key personnel about their assigned duties and the value of chain of command structure.
- Train on how to use attendance and assignment sheets for improving accountability of volunteers. Create a method to account for and track credentials of volunteers.
- Involve nurses in determining how to best staff the medical triage area of the clinic.
- Create more signs to direct general traffic flow better.
- Law enforcement was not included due to budgetary constraints but are crucial to the planning process and for site control, traffic and medication security.
- Maximize public outreach. In addition to traditional media, use email, Facebook and flyers, a reverse 911 email and text system and variable message sign boards.
- Allow ample time, more than you probably anticipate, for the JITT of volunteers.
- Teach staff a more “austere care” model of POD operations to minimize talking to patients, which may lead to contradictory information given and a slowing of vaccinations.
- Create a directory of nearby nurses, doctors, phlebotomists, pharmacists, veterinarians and others who are medically trained, both active and retired, who could be contacted to volunteer at a POD.
- The communities should create a Community Emergency Response Team (CERT) to serve as volunteers for future activities.



Greatest challenge and solutions:

IDENTIFYING ROLES & RESPONSIBILITIES: Figuring out what role emergency services personnel should play in dealing with sick people who come to the clinic. Ambulances may not be available during a serious, widespread crisis. The need for medical personnel will depend on the type of flu, number of sick people and seriousness of symptoms. Identify the role of EMS and create contingency plans in advance in case EMS is not available.

Central East Regional

- Lead agencies:** Middlesex, Monmouth, Ocean and Union counties' health agencies.
- Type of exercise:** Mass prophylaxis distribution.
- Date:** June 22, 2011.
- Planning team:** Health officers, public health nurses, health educators, public health planners, doctors, police, OEM officials.
- Objectives:** Using regional resources and JITT, conduct a POD operation first to dispense antibiotics in accordance with the JEM model and then to provide vaccines using a needle-free method.
- Summary:** There has been a potential anthrax exposure in Union County. Mass prophylaxis needs to occur quickly so regional resources from all four counties are mobilized at a clinic held at the John J. Stamler Police Academy in Scotch Plains. Later, the clinic changes to vaccine distribution to test distribution with traditional syringes compared with a needle-free method. The clinic must be able to handle a number of people who have difficulty walking. It uses 8 dispensing stations.
- Personnel:** Thirty, including vaccinators, health office staff, MRC, logistics support, evaluators and security. About 120 participants also volunteered.

Central East Regional

What worked:

- Staff was able to provide proper answers to patients and deal with all those who came to the clinic, including several with different ailments and large numbers of the worried well.
- Staff reviewed documents and directed patients appropriately.
- Organizers used lessons learned in the prophylaxis part of the exercise to improve the operation of the vaccination portion, including moving the medical screening and distribution tables closer together.
- The POD location was properly sized to accommodate the operation; the entrance and exit were large enough to handle high traffic volumes.

What did not work:

- Pictograms were not effective as translators; lines backed up quickly and caused delays.
- Stations were too close to the front door and the clinic flow bottled up during most of the exercise.
- The runners were confused about how to handle the lines forming between stations.
- The noise in the clinic was deafening at times given the large numbers of people in the facility at once.

What Did It Cost?

Printing: \$2,000.

Signage: \$3,000.

Office supplies:
\$1,000.

Refreshments and
other exercise
materials: \$8,000.

Syringes and other
medication and
vaccine materials:
\$13,000.

Central East Regional

Lessons learned:

- The operation would have been too small to handle a mass emergency in Union County.
- Since pictograms were not as effective as originally thought, the use of language interpreters as escorts for non-English speakers could improve communication throughout all clinic stations. If signage is used again, it should be adjusted for height so that it is at eye level of clinic attendants.
- Recommend that distance from entrance to registration tables should be at least 10 feet.
- Using a color-coded system of forms based on the initial assessment could make the process of moving patients from assessment to distribution better.
- Train and Assign an adequate number of runners between medicine distribution and information/interpretation stations, particularly to help non-English speakers know what to do when they receive several different sets of instructions and medications.
- Reevaluate the JEM method education station, and focus on pre-event education through all media outlets.

Greatest challenge and solutions:

COMMUNICATIONS: Dealing with the large number of non-English speakers proved challenging to the operations. The use of an electronic translator, testing out the usability of 'Spanish in a Pinch' program as well as including ethnic community organizations to assist in translation during an exercise in the future might help.

Clifton and Passaic

Lead agencies: Clifton and Passaic City health departments.

Type of exercise: Mass vaccination clinic.

Date: May 21, 2011.

Planning team: Health educators and nursing supervisors from Clifton and Passaic City; from Clifton: health officer, OEM coordinator and deputy coordinator, deputy fire chief, police captain, schools' nurse coordinator, board of health president, Clifton Residents On Call members, representatives of Passaic Valley CERT, a resident.

Objectives: Test both communities' abilities to work together to conduct a mass vaccination clinic, including on-site incident command and medical supplies management and distribution.

Summary: The cities of Clifton and Passaic held a mass vaccination clinic full scale exercise at Clifton Public School #17 to deal with a mock mutated H1N1 strain easily transmitted from person to person and capable of killing many people quickly. There are already 1,000 cases and 150 deaths in Passaic County. Other health departments throughout New Jersey are also holding clinics for the mass distribution of vaccines to all residents. About 200 volunteers proceeded through the POD as many as five times.

Personnel: Fifty-four total, including 29 public health workers and 25 Clifton Residents on Call (CROCs) . Also participating were the Clifton city administration, OEM, board of health, fire and police departments, Passaic County Health Department, Passaic Valley CERT, and the Passaic City Business Administrator.

Clifton and Passaic

What worked:

- The team was well-staffed with experts in different areas: Experienced staff served as area leaders; members with some experience in counseling and calming personalities helped those with special needs; those who had run prior PODs served as evaluators; those experienced with crowd control worked security (the head of security used to work in security at the Meadowlands sports complex).
- Much advance work, including about 10 hours of small group meetings and JITT the day of the POD, made for good planning and organization that allowed for large numbers of volunteers to be vaccinated.
- The combined efforts of the two health departments allowed for greater work to be done than if either department had worked on its own.

What did not work:

- The location was not ideal: There was not enough parking; the acoustics were poor; some dead spots hampered radio communications; it was very hot despite air conditioning and fans; lighting under the tents in the gym was inadequate.
- Staffing levels were inadequate: Not enough vaccinators led to long lines and patients getting angry and reluctant to follow directions; the exercise also could have used more runners, security, controllers and backup for command.
- Some staff did not realize they had to remain until the patients were finished filling out their evaluation forms, so getting all those forms back was challenging.
- There were several issues with training: Area leaders' training was inadequate as they failed to educate those reporting to them and those replacing them; a number of staff members did not understand the flow of the POD; some of the staff was not trained in using radios.
- Neither the nurses' stations, nor the clinic area were adequately staffed; at least two clinic managers should be on hand.
- Getting some agencies to participate was difficult.
- There were no registration forms in Spanish, which slowed the process considerably.
- Some messages that should have been transmitted person-to-person were sent via radio.

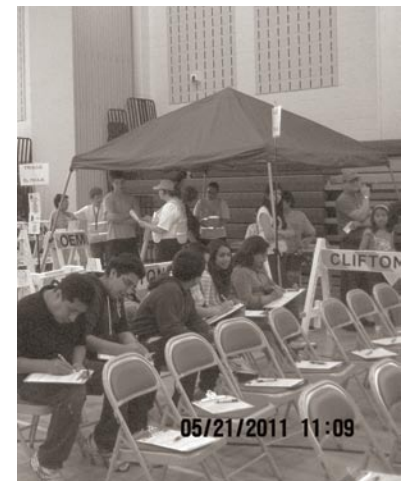
What Did It Cost?

Personnel: \$15,454.

Printing and office supplies: \$2,292.

Equipment and other program costs: \$5,869.

Food and other costs: \$1,385.



Clifton and Passaic

Lessons learned:



- Use a better location if possible.
- Different levels of experience among volunteers and staff necessitates additional pre-training, particularly so area leaders feel more comfortable handling issues themselves without seeking help from command leaders.
- Job action sheets should be distributed to all staff, and workers need to be told that they must know the responsibilities of all job descriptions. Indicate when a shift starts and ends and requirements of that shift. Include chain of command training and shift change notification training.
- Have more than one wheelchair available and know where all are at all times.
- Provide better exiting directions for patients.
- Have a translator table for those who do not speak English; consider using a device that translates other languages into English; have sign language interpreters on hand. Create Spanish registration forms.
- Recruit more volunteers with and without medical experience.
- To ensure better trained staff, have biannual training, including cross training and training in the use of radios, as well as POD set-up and purpose.
- Make sure there are enough radios and that they will work throughout the location.
- Have direct communication with police available in case of an emergency.
- Have a designated first aid area.
- Prepare for patients with many different needs. A large number of patients had language barriers, physical handicaps, fear of crowds, were impatient, had mobility challenges or had trouble registering and that truly tested the process.
- Document training completed and specific strengths.

Greatest challenges and solutions:

CREATIVE SOLUTION: The two best sites were not available on the date of the exercise, so the POD had to be redesigned for the ultimate location, which had only 77 parking spaces. The team had to find an offsite parking area to accommodate all the volunteers and bus them to the POD. Greeters used hand counters at the reception station to track the number of people who entered, then compared this to post-vaccine and rejected registration forms. This data was reconciled with the clinic manager's counts of vaccine to keep track of doses.

Irvington

Lead agency: Irvington Department of Health.

Type of exercise: Mass prophylaxis clinic and mobile vaccination at targeted sites.

Dates: June 20 and June 23, 2011.

Planning team: Irvington's health officer/director, public health nurse, exercise consultant.

Objectives: Use the JEM model to mobilize and conduct a high-volume POD vaccination clinic and establish a team to effectively administer vaccine at specific sites using volunteers with little or no health care background who receive JITT. Determine the resources needed to vaccinate most township residents. Test the capability of a mobile vaccination unit.

Summary: Irvington has just received a supply of vaccine to protect the population against a flu that is circulating and proving deadly in Asia. The governor has declared a state of emergency and vaccinations are beginning throughout the state. A clinic is scheduled at Irvington High School. The demand is overwhelming. To reach other groups, including those who might have difficulty getting to a clinic, a mobile vaccination effort is to begin at the Irvington Housing Authority site on Nye Avenue three days after the POD. Township departments and the board of education lent staff for the clinics and most received only JITT. The clinics lasted between 2.25 and 2.5 hours, with vaccine operations continuing for 80 minutes at each. The throughput measured was 334 people and 299 vaccinations per hour at the POD and 135 people and 116 vaccines per hour at the mobile clinic.

Personnel: Health officials, consultant, nurses, Irvington Community Health Center Staff, and township officials representing the administration, police and fire, offices of community development, emergency management and business development, departments of neighborhood services and revenue and finance, board of education and housing authority. Total of 20 staff at the POD and 19 at the mobile clinic. Volunteers: 150 high school students and 100 housing authority residents.

Irvington

What worked:

- A team with little or no experience in high-volume patient activities conducted a clinic with only JITT and guidance.
- The mobile clinic was an effective way to supplement the mass vaccination effort to ensure the entire population would be served.

What did not work:

- Getting the clinics open and operational was challenging because few staff received an advance briefing prior to the day of the event and because the final planning and organization followed a tight timeline.

What Did It Cost?

Personnel: \$9,580.

Consultant: \$5,500.

Office expenses
(including flyers):
\$210.

Program costs
and equipment (t-
shirts, refreshments,
laptops, refrigerator,
projector, television
ad): \$9,088.

Lessons learned:

- As many as 2/3 of the clinic staff does not need a medical or public health background when using the JEM model.
- Leaders need to be assigned to manage operations within each area of the POD and mobile clinic, and they need to get appropriate training.
- Clinic managers and other key personnel must get to clinic sites at least 90 minutes before the start of an operation to assure it begins on time.
- Designate staff (maybe even volunteers/runners can help to do this) to ensure those who need to remain for observation after vaccination and those ineligible for vaccination get to the appropriate locations.
- A vaccination campaign to accommodate a population of 56,000 residents would last for two weeks, with two clinics each operating 8 hours a day and mobile clinics operating as needed.
- Use one-piece pre-assembled units rather than separate needles and syringes for efficiency.
- Cultivate relationships with community and non-traditional partners who may serve as volunteers before an emergency occurs.

Greatest challenges and solutions:

ACCOMODATIONS FOR SPECIAL NEEDS POPULATIONS: Not enough space was allocated to the mobile clinic, given the number of people and the fact that many used walkers or wheelchairs or otherwise had difficulty walking. Still, a larger facility could make it even harder for these patients to get through all the stations. Optimal space requirements for a mobile clinic based on the size and characteristics of the population will be studied further. This was the first time Irvington has done a mass vaccination exercise. Partnering with all community agencies, as well as the local television channel, helped make the exercise happen and made it a success.

Monmouth

Lead agency: Monmouth Public Health Consortium.

Type of exercise: Public information effort during a mass vaccination clinic.

Date: June 2, 2011.

Planning team: Twelve total including 5 health officers, 3 registered environmental health specialists (REHS) and 2 clerical staff from five health departments and 2 specialized public health staff from the Monmouth Public Health Consortium.

Objectives: See how well social media can be used to disseminate information quickly to large numbers of people at clinics or during a health emergency.

Summary: A vaccine is available for a new pandemic flu strain that is highly contagious and deadly in Asia. Monmouth has scheduled clinics in Long Branch and Freehold for the same day, each with 1,000 doses of vaccine. The exercise simulated huge demand and long wait times (10 hours) at these two clinics. It used social media (Facebook, Twitter, email, text messages) to alert those waiting and gauge their interest in setting an appointment to attend an upcoming clinic or switching to a line with only a 30-minute wait to receive antiviral medication. Another 5,000 doses available within the county and three more clinics are scheduled within the next week. About 190 people participated in the virtual exercise.

Personnel: Eight, including 3 health officers, 3 REHS and 2 specialized staff.

What worked:

- Participants said they are very interested in receiving public health information and updates via social media.
- Survey Monkey was used to critique the clinic. Such an online application could be useful in registering people for and getting their opinions of actual flu clinics.

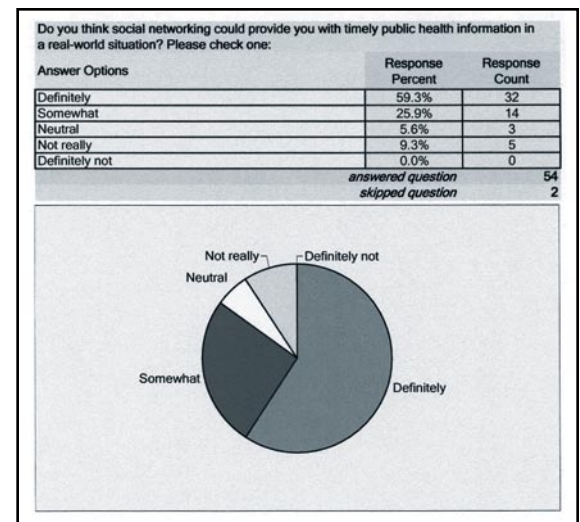
What did not work:

- It would take a higher level of technical expertise than the participating agencies had to use social media to put out information and answer questions quickly during a crisis.
- Some work locations block Facebook, which would make relying on that platform to disseminate time-sensitive information difficult.
- Some participants' mobile units had trouble opening attachments, making it difficult for them to get detailed information.
- Participants need more information about participating in advance: Some said they did not know how to reply to messages and others had forgotten they had signed up.
- Only 20 text messages could be sent at a time via Blackberry. More staff with multiple phones would be needed to send messages to more users.
- Texting and emailing require entering numbers and addresses in advance and some mistakes were made, which precluded some people from participating. Contact information should be checked after it is entered.
- It was hard to both answer questions and check others' answers to assure that responses were consistent and accurate.
- Not everyone could access all information: A fact sheet on antivirals was only available on the Facebook page.

What Did It Cost?

Personnel: \$22,900.

Equipment and program costs: \$2,227.



Lessons learned:

- It takes a lot of time to develop and set up the social media platforms and a significant number of staff is needed to respond to queries.
- Hire a student that can help set up a system to easily send and track messages for staff.
- All staff members need passwords for each social media platform.
- Use one large clock so everyone is operating on the same time.
- Make sure there are enough outlets and adapters for all devices being used.
- Provide scripts to answer common questions so information given out is consistent.
- Tell the public not to “reply to all” to messages from health officials.
- Post frequently asked questions and direct people to them for standard answers to common questions.
- Have IT technical support on hand during the exercise to handle problems.
- Redeploy staff to a different media type when necessary and dedicate one staff person to post notifications and check for public comments/questions.

Greatest challenge and solutions:

COMMUNICATIONS & TECHNOLOGY: Using social media proved difficult, but public health officials need to evaluate such systems and take advantage of them whenever possible because so many people use them. A municipal reverse 911 system with text abilities and alert systems also would be one good way to communicate. Health officials need to remember, though, that significant numbers of people also still get information from traditional news sources.



Northwest New Jersey Public Health Region

Lead agencies: Morris, Passaic, Sussex and Warren counties' health departments.

Type of exercise: Use of the Hippocrates communications system and a mass prophylaxis and vaccination.

Dates: April 12 and May 14, 2011.

Planning team: County health officials, state health department officials, hospital officials.

Objectives: Use Hippocrates and share resources and personnel to set up and operate a prophylaxis and vaccination clinic in a temporary shelter, measuring the effectiveness of the management of an emergency operations center and critical resources' logistics and distribution.

Summary: A six-hour communications and Hippocrates session was held April 12 at the medical coordination center. A month later, a Category 4 hurricane has devastated the region during an influenza pandemic. Several counties are working to help Morris County set up and operate a vaccination clinic in a tent at the relatively remote Craigmear Recreation Area with limited power. Each county has committed to providing at least 30 medical volunteers. The clinic is to operate for two hours using Bioject and Pharmjet needle free technology. In the midst of the clinic's operations, officials learn they need to stop vaccinations and change over to antibiotics distribution to people possibly exposed to anthrax released by terrorists at distant shelters. The goal is to dispense 400 medications per hour per line.

Personnel: Twenty-four participated in the training and 175 in the clinic, including health department officials, Medical Reserve Corps (MRC) volunteers, public health workers and nurses. Participants also included staff of the municipal health departments of Paterson, Rockaway Township, Denville, Lincoln Park, Washington Township (Morris) and West Milford; New Jersey Department of Health and Senior Services; Medical Coordination Center at Morristown Memorial Hospital; Rockaway Township police department; Morris County department of law and public safety and park commission; Warren County OEM; and the Passaic County Sheriff's Department.

Northwest New Jersey Public Health Region

What worked:

- The counties' health departments were able to share personnel and equipment on a large scale.
- MRC volunteers were able to take leadership roles in the POD, freeing up public health workers to do more specialized tasks.
- Workers successfully used Bioject and Pharmajet technologies for vaccinations. However, some vaccinators strongly preferred traditional needles. Evaluators are still trying to determine the dispensing rate and whether to recommend those technologies for future use.
- A tent rented for \$4,814, including set up, was more than large enough to hold 175 people. Generators and other equipment were already on hand and worked well.

What did not work:

- New Jersey's JEM model for staffing the pill distribution led to backups. Additional screening staff is needed to work each line.
- Senior staff was confused about the POD command structure.

Lessons learned:

- Only one Spanish translator was available and while that was not a factor in the exercise due to its location and the population that attended, it could be in the future, leading to the purchase of digital translation devices.
- The departments realized a regional plan for mass prophylaxis needs to be in place in advance and are developing one now. This plan will include the establishment of mutual aid agreements between Morris, Sussex, Warren and Passaic counties, which currently do not exist.

Greatest challenge and solutions:

LIMITED USABILITY OF HIPPOCRATES: Access to NJDHSS's Hippocrates system by local health departments is severely limited. Those departments need to be able to update and report on responses to regional incidents, not just view them. County staff likely would not use Hippocrates again in a regional emergency unless those restrictions are lifted. The departments are recommending the state give local departments greater access to Hippocrates.

What Did It Cost?

Supplies (food, tent, shirts and hats, etc.): \$19,781.

Mileage: \$469.

After-action supplies (digital translators): \$4,750.

Randolph

Lead agency: Randolph Regional Health Department (serving Mine Hill, Randolph, Rockaway and Roxbury).

Type of exercise: Mobile mass immunization clinics in two communities.

Date: June 12, 2011.

Planning team: Health officer, public health nurse and nurse supervisor, OEMs of Randolph, Rockaway and Roxbury.

Objectives: Coordinate and conduct mass immunization clinics in two different locations on the same day, including the set up, break down and moving of the mobile facility and staff. Increase vaccine awareness and provide needed vaccines to students and residents. Increase awareness of the regional health department.

Summary: The Randolph Regional Health Department held a mobile mass immunization exercise in two of its four coverage communities: from 12:30 – 2:00 p.m. in Randolph and 3:00 – 4:30 p.m. in Roxbury. After its close in Randolph, the clinic was broken down, transported and set up again in Roxbury to determine how much time that would take. Because residents of apartment complexes were targeted, tents were set up in the parking lots of two complexes. The scenario envisioned vaccination against a flu outbreak in the community, but it advertised and offered actual vaccines available through the American Recovery and Reinvestment Act to those who needed them: Tetanus, diphtheria and pertussis (Tdap) and meningitis to those entering sixth grade, meningitis to high school juniors and seniors, pneumovax to senior citizens and high-risk individuals and Human papillomavirus (HPV) for those aged 9-26. The flyers urged participants to get consent forms from the department's website, fill them out in advance and bring them the day of the exercise. A total of 133 vaccines were distributed, including 78 actual inoculations.

Personnel: Thirty-seven, including the public health officer, nurse and nurse supervisor; Randolph, Rockaway and Roxbury OEMs; Randolph and Roxbury police departments, rescue squads and public works staff; a medical director; eight nursing professionals; health educators; Spanish translator; and a webmaster.

Randolph

What worked:

- Good organizational planning and the coordination of vehicles allowed for adjustments to the needs at each individual site.
- Staff and paperwork – including vaccine lot numbers -- were color-coded, which limited confusion.
- Several types of pre-training were held -- for nursing professionals on the four vaccines given, for support staff on their responsibilities and for evaluators – that helped the exercise run smoothly. Most staff had experience with H1N1, which obviated the need for longer training. Nurse orientation lasted 3-4 hours.
- A mass recruitment effort in the four municipalities included sending flyers to the schools to be sent home with students in the targeted grades, and to residents of the apartments and senior citizen complexes. There were 35 people who said they learned about the exercise from a flyer distributed through school and 24 from flyers at the apartments.
- Posters advertised the vaccines offered and sample forms with highlighting guided participants in advance.
- Traffic flow was adjusted between the two sites to help the exercise run better.

What Did It Cost?

Personnel: \$8,300.

Office expenses (forms, posters, name tags etc.): \$1,985.

Equipment and program costs (FridgeFreeze with battery and cart, lightweight tables and chairs, hand sanitizers, snacks and water, tent rental, etc.): \$12,495.

Other: \$2,221.

What did not work:

- Providing written materials in English and Spanish and engaging bilingual support staff was challenging. Only one municipal employee is bilingual and it took convincing to get his supervisor to allow his participation. It was impractical to poll the apartment complexes to determine all the languages spoken.
- Organizing materials and staff to ensure there were enough for two different sites proved complicated. Site specific changes upset staff training so some staff needed to be refocused on their assigned tasks.
- There were several difficulties with the tent: To set it up on blacktop required water barrels to weight it down, which necessitated a water source nearby. Furthermore, the need arose for additional tables which led to changes in the operation and took up more space.



Randolph



Lessons learned:

- Use a table larger than 4-feet for two nurses, and bring 10 percent more tables than you think you will use because you will likely need them for keeping equipment and supplies off the ground.
- The staff size was perfect for the exercise, but if more patients showed up that might have proven challenging for the staff.
- Organize down to the last detail because something will come up that you didn't expect.
- Create detailed logs to help in a future exercise or clinic, including specifics on set up and break down.
- To help draw both staff and participants, use incentives: Pay for staff and offer free vaccines and a prize drawing for participants.

Greatest challenges and solutions:



VACCINATION DISTRIBUTION: It was harder to give four actual vaccines than to simulate a single vaccine, but the color coding helped and providing the different vaccines educated the communities about immunizations. Because both PODs were held outdoors without access to refrigeration or electricity, a FridgeFreeze mobile self-contained vaccine storage unit was purchased. It would be better to use an indoors location than a tent outside, but the apartment complexes targeted don't have common areas suitable to conduct a POD. Planning staff would consider using a school that is within walking distance of the apartments for future PODs.

Finding the site locations and getting approval to enter private property was difficult. Identify a list of communities like these where future clinics may be held and get written approval from all sites in advance. Have the municipal attorney draft letters to make the right of entry process easier in the event of a declared emergency.

Wayne

Lead agency: Wayne Department of Health.

Type of exercise: Drive through vaccine/medication distribution clinic.

Date: June 4, 2011.

Planning team: Health officer, chief sanitarian, OEM director, public health nurse supervisor, representatives of police, fire and first aid.

Objectives: Conduct a drive through clinic using the JEM model to distribute as many doses as quickly and efficiently as possible.

Summary: A drive through vaccination clinic was set up in the large parking lot of an office complex with two lanes for the distribution of American Red Cross Emergency Preparedness Kits to simulate vaccine distribution. This is in response to a pandemic outbreak of avian flu that has spread worldwide. Wayne is going to distribute vaccines from the strategic national stockpile and coordinate with the Local Information Network Communications System (LINCS) to order vaccine electronically through the state and federal ordering system. A drive through POD was chosen due to the high level of communicability. Appointment software was used to set up appointments in advance.

Personnel: Staff of the Wayne health, police and fire departments, first aid squad, Community Emergency Response Team and Volunteer Medical Reserve Team; Passaic County OEM and health department.



Wayne

What worked:

- The site was well-equipped, including ample space, all necessary supplies and two temperature controlled tents.
- The system of traffic flow, tailored to the site, was well-designed and kept the lines moving. Police and CERT volunteers directed traffic at the entry and exit points.
- Staff and leaders were well-prepared and knowledgeable, through JITT.
- Communication, including the use of walkie-talkies, worked well.
- Wi-Fi was available on the site and the organizers arranged to use it, allowing for quick and easy Internet access.

What did not work:

- There were not enough volunteer participants so cars were directed to come through the line multiple times. This may have resulted in a different experience than if everyone came through only once and was not familiar with the operation on subsequent visits.
- The first aid stations and vehicles were not equipped and not tested during the exercise.
- There was no vaccine after-care station, which should be tested as part of a scenario.
- Participants who showed up because they saw a sign at the location did not have enough information about the exercise.

What Did It Cost?

Personnel: \$8,400.

Consultant: \$6,500.

Printing and office expenses: \$2,000.

Equipment and program costs: \$3,000.

Other (Red Cross emergency packs): \$5,100.



Lessons learned:



- The space might not have been large enough to accommodate a large crowd of people.
- Cars tended to take longer to get through the dispensing stations, so it might be better to have two dispensing stations for each data collection station to increase throughput.
- Only one doctor was on hand and he had to travel between data collection and dispensing stations multiple times, which could cause congestion at a larger clinic. Between two and four doctors or nurse practitioners should attend.
- Consider using roll down walls for the dispensing stations in case of bad weather.
- Display a large organization chart so everyone knows their responsibilities.
- Public works staff should provide stop signs for each station so vehicles know where to stop.
- Have on-site transportation, such as a golf cart, for supervisors to get around the POD.
- Although software was available to help communication with non-English speakers, it was not used and should have been tested.
- Incorporate or separately test first aid stations, vehicles and a vaccine after-care station.

Greatest challenges and solutions:

DRIVE-THRU FLU CLINIC: Finding a location to hold a large number of vehicles and having enough space for multiple clinic stations. Make sure to keep a lane available for disabled vehicles and have a tow truck available in case of a breakdown. The reception station originally was near the road, which is a main artery. It was moved further into the site to improve traffic flow.

Glossary

- CDC:** The Centers for Disease Control and Prevention is an agency of the US Department of Health and Human Services based in the Atlanta area. See www.cdc.gov.
- CERT:** The Community Emergency Response Team. See www.citizencorps.gov/cert/.
- CROCs:** Clifton Residents on Call.
- EST:** The Exercise Support Team of the NJDHSS.
- Hippocrates:** Hippocrates is a web-based application developed by the NJ Department of Health and Senior Services to enhance situational awareness, assisting with preparation for, response to, and recovery from natural and man-made health threats and emergencies. <https://hippocrates.nj.gov/common/heprLogin.jsp>
- Hotwash:** A military and government term used to describe the “after-action” discussions and evaluations of an agency’s (or multiple agencies’) performance following an exercise, training session, or major event.
- HSEEP:** Homeland Security Exercise and Evaluation Program. See www.hseep.dhs.gov.
- ICS:** An Incident Command System is a set of personnel, policies, procedures, facilities and equipment, integrated into a common organizational structure designed to improve emergency response operations of all types and complexities.
- Influenza H1N1:** A contagious strain of the influenza virus. <http://www.flu.gov/>
- JEM POD:** Justified Emergency Mass Prophylaxis Point of Distribution (or JEM POD) was produced by the NJDHSS as a condensed model designed to rapidly distribute medications during a public health emergency.
- JITT:** “Just-in-time training” is training delivered immediately before it is used.
- LINCS:** The New Jersey Local Information Network and Communications System. See www.state.nj.us/health/lh/lincs/.
- MRC:** The Medical Reserve Corps is dedicated to establishing teams of local volunteer medical and public health professionals. See www.medicalreservecorps.gov.
- NACCHO:** National Association of County and City Health Officials. See www.naccho.org
- NJDHSS:** New Jersey Department of Health and Senior Services. See www.state.nj.us/health/.
- Non-Traditional Vaccinator:** An individual without formal medical training who is provided training on vaccine administration by a licensed medical professional.
- OEM:** An Office of Emergency Management is an agency at the local, state or national level that holds responsibility of comprehensively planning for and responding to all types of disasters, whether man-made or natural.
- POD:** Point of Distribution, e.g. location where a flu vaccination occurs.

