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Homeland Security Exercise and Evaluation Program (HSEEP)
After Action Report/Improvement Plan
(AAR/IP)

OPERATION DOORHANGER
Lafayette County Health Dept. April 2009

OPERATION DOORHANGER

April 7, 2009

Draft

**AFTER ACTION
REPORT/IMPROVEMENT PLAN**

June 30, 2009



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After Action Report/Improvement Plan **OPERATION DOORHANGER**
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EXECUTIVE SUMMARY

The Lafayette County Health Department (LCHD) exercise “Operation Door Hanger” was a full scale exercise designed to test emergency response plans, policies, and procedures as they relate to utilizing community resources and partnerships to distribute emergency information to the citizens of Lafayette County by following alternate dispensing methodologies as set forth in City Readiness Initiative (CRI) planning for the distribution of Mass Prophylaxis from the Strategic National Stockpile.

The Lafayette County Health Department exercise “Operation Door Hanger” was developed to test Lafayette County’s ability to perform to the Homeland Security Exercise and Evaluation Program (HSEEP) Common Target Capabilities of Planning, Communications, and Community Preparedness and Participation. The exercise also tested Response Mission Capabilities of Onsite Incident Management, Critical Resource Logistics and Distribution, Emergency Public Information and Warning, and Mass Prophylaxis. The exercise was to be conducted over a short time duration and therefore, for evaluation purposes, only a few Activities corresponding to the related Target Capabilities were selected from the HSEEP toolkit for Exercise Evaluation Guide (EEG) planning.

Under the Response Mission Capability of Mass Prophylaxis, the key function of a local public health agency is to distribute preventive or treatment pharmaceuticals from the Strategic National Stockpile (SNS) or emergency information to an entire jurisdiction (in this case—county-wide and every household) needed to protect the health of the population of the jurisdiction. Execution of these critical interventions will result in greatly reducing the spread of disease and therefore, hopefully, limit the impact on the overall infrastructure of the county.

Lafayette County has an overall population of roughly 33,500 people; according to various census sources, it is made up of approximately 12,000 households. The population is distributed between incorporated areas as well as rural un-incorporated areas.

Under HSEEP Common Target Capabilities, Communications is a fundamental capability within disciplines and jurisdictions that responders must demonstrate in order to achieve even the most routine and basic operations of their job, but are especially critical in emergency situations. Agencies must first be operable—meaning sufficient redundant communications to conduct routine and basic operations. Then agencies must work toward becoming interoperable in their communications with other agencies.

The exercise planning team was composed of representatives from Public Health, Emergency Management, Law Enforcement, and Elected Officials. Members were:

- Rodney Kirchhoff, Emergency Response Planner Lafayette County Health Department
- Nola Martz, Administrator, Lafayette County Health Department

- Local Emergency Managers from the Lafayette County communities of Alma, Concordia, Corder, Higginsville, Lexington, Odessa, Wellington, Napoleon, and Waverly.

The planning process began roughly 6 months in advance of the exercise. During the planning process, members received an overview of the local public health agency role in mass prophylaxis. Given that there are only 12 public health employees available to conduct mass dispensing operations for the entire county, the dialogue included what strategies might be employed to be able to reach every household in the county in a very short time frame. (CRI planning requires an attempt to treat everyone in the jurisdiction in 48 hours). The overarching goal of the exercise was to make contact with as many households as possible within a 5 hour window of time. This was due to the time of year that the exercise was conducted being early spring. In order to assure the safety of staff and volunteers (many of which were students and retirees) conducting dispensing operations, the exercise needed to conclude by 2000 hours (at dark). HAM radio operators would be stationed at each community staging area and would communicate back to the central command HAM radio operator departure and return times of the distribution operations teams.

The discussion included the logistics of empowering incorporated areas to utilize various volunteer groups to provide the manpower for the door-to-door campaign that would simulate CRI alternate dispensing methodology for mass prophylaxis. Under these alternate methodologies, emergency treatment medications are 'pushed out' to the population rather than setting up and operating Points of Distribution (PODs) which require citizens to report to dispensing centers to be screened and receive their medications. It was agreed that each incorporated area in the county should use their local plan to organize their response. It would be the responsibility of each Emergency Management Director to recruit staff and volunteers sufficient to conduct response operations in their jurisdiction.

The Operation Door Hanger exercise design team set goals for the exercise that focused on the ability to conduct mass prophylaxis operations under the alternate dispensing methodology outlined in CRI planning guidance. The following goals were identified for Operation Door Hanger:

- An attempt would be made to reach every household in the participating jurisdictions—Each community would use local emergency operations plans (EOPs) to make contact with all households in their jurisdiction
- Ensure adequate staff and volunteers—Each Emergency Management Director (EMD) would recruit volunteers and other staff needed to conduct the operation
- Interagency communication—Clear lines of communication would be needed between the Health Department and other participating entities
- Communication between public service agencies—Communication interoperability between public safety agencies (law enforcement, EMS, Fire) and

community service agencies (CERT teams, HAM radio operators) would allow communication across and within agencies and between jurisdictions via radio

- Just-in-Time training for exercise players and HAM radio operators—Each EMD would conduct a safety briefing and provide maps, materials, and other training prior to start of exercise. Each HAM radio operator would be given radio frequencies, call signs, and exercise briefing prior to start of exercise.

Operation Door Hanger was designed to provide an opportunity for testing local emergency operations plans and procedures to simulate dispensing of emergency medicine or information in a non threatening learning environment. Exercise play was scheduled to begin at 1500 hours and end at 2000 hours on April 7, 2009.

Based on the exercise planning team's deliberations, the following objectives were developed for Operation Door Hanger:

- Objective 1: Exercise players will demonstrate knowledge of and ability to conduct operations under Incident Command System (ICS) principles
- Objective 2: Exercise players will demonstrate ability to utilize redundant communications systems (HAM radio) to conduct response operations
- Objective 3: Exercise players will attempt to reach as many households in their jurisdiction as possible within four hours

The purpose of this report is to analyze exercise results, identify strengths to be maintained and built upon, identify potential areas for further improvement, and support development of corrective actions.

Major Strengths

The major strengths identified during this exercise are as follows:

- Operation Door Hanger began on time and continued through until termination as scheduled and as planned
- The effort to contact all community partners and potential participants was extensive; the pay off was a smooth and efficient exercise. Advance county-wide awareness of the exercise was evident
- EMD's were empowered to formulate the strategies they believed would work best in their jurisdiction. The exceptional knowledge the local EMD's possessed about their respective jurisdictions' communities and resources was evident and facilitated their localized planning strategies for

accomplishing the goals and objectives of the exercise with great success

- Labeled bags containing educational literature about individual emergency preparedness were used to simulate the emergency medication or information to be dispensed or distributed. There were adequate supplies of these materials and more were staged to be resupplied to the communities if needed

Primary Areas for Improvement

Throughout the exercise, several opportunities for improvement in Lafayette County's ability to respond to the incident were identified. The primary areas for improvement, including recommendations, are as follows:

- The exercise demonstrated how critical an adequate supply of workforce is to conducting these kinds of operations. It would appear that additional volunteers would have been helpful
- The exercise demonstrated that existing capabilities could probably handle an operation of this type in the incorporated areas of the county; however, there is work to be done to develop sufficient plans for reaching the unincorporated areas of the county, which will require more manpower and vehicles. The lack of ability to test distribution in the unincorporated areas leaves a gap in estimating the time it would take to reach citizens in these areas under CRI planning methodologies

As a Mass Prophylaxis exercise testing an alternate methodology, the exercise was extremely successful. Approximately 83% of the households in the county were reached in a 5 hour period of time. The bringing together of numerous agencies and participants was hugely successful as well. All worked toward the goal of contacting as many households in their jurisdiction as possible, but were allowed to use strategies developed by their local EMD's to best work for their unique communities. These individuals know their communities and resources better than anyone else and it was evident in the success of the exercise.

Future exercises should focus on developing strategies for reaching the unincorporated areas of the county, and then a cumulative exercise should be conducted that would truly test capabilities to reach the entire county.

SECTION 1: EXERCISE OVERVIEW

Exercise Details

Exercise Name

Operation Door Hanger

Type of Exercise

Functional exercise

Exercise Start Date

April 7, 2009

Exercise End Date

April 7, 2009

Duration

5 hours

Location

Lafayette County, Missouri

Sponsor

Lafayette County Health Department

Program

Fiscal Year 2008 State Homeland Security Grant Program

Mission

Response

Capabilities

Common Target Capabilities:

Planning, Communications, and Community Preparedness and Participation

Response Mission Capabilities:

Onsite Incident Management, Critical Resource Logistics and Distribution,
Emergency Public Information and Warning, and Mass Prophylaxis.

Scenario Type

Public Health emergency requiring distribution of emergency information or mass prophylaxis

Exercise Planning Team

Rodney Kirchhoff, Emergency Response Planner, LCHD

Nola Martz, Administrator, LCHD

Emergency Management Directors from:

Alma, Concordia, Corder, Higginsville, Lexington, Odessa, Wellington, Napoleon,
and Waverly

Participating Organizations

Alma EMA

Aullville Elected Officials

Blue Springs, Amateur Radio Club (Jackson County)

Concordia EMA

Concordia Fire Department

Corder EMA

CERT members

Dover Elected Officials

Emma EMA

Higginsville CERT

Higginsville EMA

Johnson County, Missouri ARES

Lafayette County, Missouri ARES

Lafayette County Health Department

Lake Lafayette Elected Officials

Lexington EMA

Lexington PD

Lexington R-V School FFA

Mayview Fire Department

Odessa EMA

Odessa R-VII Schools

Waverly EMA

Wellington EMA

Number of Participants

A total of 313 people participated in the exercise from the following organizations:

- Fire departments (paid and volunteer members)
- 4-H club members
- Elected officials
- HAM Radio operators
- EMS personnel
- Mid America Regional Council
- Church youth groups
- Lafayette County Health Department
- EMD's / EMA's
- CERT team members

SECTION 2: EXERCISE DESIGN SUMMARY

Exercise Purpose and Design

Operation Door Hanger was a functional exercise designed to provide an opportunity for testing local emergency operations plans and procedures between partnering agencies as would be required of them in response to a public health emergency requiring either distribution of emergency information or alternate dispensing methods to provide mass prophylaxis. The exercise was intended to give participants a realistic idea of the demands on manpower and resources that would be necessary to effect such a response in a learning environment.

It was hoped that from this exercise would public health workers would be able to more accurately assess the existing capabilities of the agency to utilize community resources to support mass prophylaxis operations in an alternate dispensing scenario and determine if they could hit the target of treating the entire population within 48 hours as set forth in CRI planning guidelines.

Other benefits of the design included:

- testing of communications between the health department and community dispensing sites using contingency plans (use of HAM radio in place of the usual telephone or radio communications).
- Surveying the population contacted through the exercise to estimate potential adverse reactions to medications that would be distributed through the Strategic National Stockpile

The concept for the exercise was based on CRI planning guidelines that direct local public health agencies to develop plans for dispensing prophylactic medications to 100% of the population in their jurisdiction in 48 hours. The Lafayette County Health Department has participated in or conducted numerous exercises of the Point of Distribution (POD) model for dispensing, but was unaware of any exercise of this type being attempted that tested the alternate methodology on this scale. LCHD Emergency Planner, Rodney Kirchhoff, organized a design team to bring the exercise to completion. Funding from the CDC Cooperative Agreement contract with the Missouri Department of Health and Senior Services was used to create the educational packets that simulated emergency information/mass prophylactic treatment.

Extensive contacts, advertising, and media notifications were done weeks and days prior to the exercise in an effort to notify citizens about this training exercise. Advance notification greatly enhanced the safety of the volunteers by making citizens aware of why there were people in their neighborhoods placing the packets on doorknobs of the households.

In addition, contacts were made with transportation partners, chambers of commerce, school boards and administration, county commissioners, and city councils in an effort

to ensure that all elected officials and response partners were fully educated about response plans that would require this type of an effort in a real event.

HAM radio organizations in Lafayette, Johnson, and Jackson counties provided assistance with radio operations at the command center in the Health Department and at the dispensing staging locations in each community.

Exercise Objectives, Capabilities, and Activities

Capabilities-based planning allows for exercise planning teams to develop exercise objectives and observe exercise outcomes through a framework of specific action items that were derived from the Target Capabilities List (TCL). The capabilities listed below form the foundation for the organization of all objectives and observations in this exercise. Additionally, each capability is linked to several corresponding activities and tasks to provide additional detail.

Based upon the identified exercise objectives below, the exercise planning team has decided to demonstrate the following capabilities during this exercise:

Objective 1: Exercise players will demonstrate knowledge of and ability to conduct operations under Incident Command System (ICS) principles

Objective 2: Exercise players will demonstrate ability to utilize redundant communications systems (HAM radio) to conduct response operations

CAPABILITY TITLE: COMMUNICATIONS

Capability description: Communications is the fundamental capability within disciplines and jurisdictions that practitioners need to perform the most routine and basic elements of their job functions. Agencies must be operable, meaning they possess sufficient wireless communications capabilities to meet their daily internal and emergency communications requirements before they focus on interoperability.

Capability outcome: A continuous flow of critical information is maintained as needed among multi-jurisdictional and multi-disciplinary emergency responders, command posts, agencies, and governmental officials for the duration of the emergency response operation in compliance with National Incident Management System (NIMS). To accomplish this, the jurisdiction has a continuity of operations plan for public safety communications to include the consideration of critical components, networks, support systems, personnel, and an appropriate level of *redundant communications* systems in the event of an emergency.

Activity 1.1: Alert and Dispatch

Activity description: In response to an incident alert, notify and provide communications management until the Incident Command (IC), Emergency Operations Center (EOC), and Emergency Management Agency (EMA) are activated.

EEG Tasks:

- 1.1.1 Implement response communications interoperability plans and protocols
 - Interoperable communications equipment, channels and protocols are activated
- 1.1.2 Communicate incident response information per agency protocols
 - Timely, accurate and clear incident information is passed to dispatched response teams
 - Incident information relayed to pertinent incident management facilities (e.g., Incident Command Post, EOC)
 - Incident information logged and disseminated to communications staff as appropriate
- 1.1.3 Use established common response communication language (plain English) to ensure information dissemination is timely, clear, acknowledged, and understood by all receivers.
- 1.1.4 Initiate documentation process of required forms and follow up notations
 - create logs of actions and messages sent and received
 - forms, logs and reports are created in accordance with local requirements
- 1.1.5 Alternate communications centers are staffed in the event of a catastrophic loss of the primary site

Objective 3: Exercise players will attempt to reach as many households in their jurisdiction as possible within five hours

CAPABILITY TITLE: MASS PROPHYLAXIS

Capability description: Mass Prophylaxis is the capability to protect the health of the population through administration of critical interventions (antibiotics, vaccinations, antivirals) to prevent the development of disease among those who are exposed or potentially exposed to public health threats. This capability includes the provision of appropriate follow-up and monitoring of adverse events, as well as risk communications messages to address the concerns of the public.

Capability outcome: Appropriate drug prophylaxis and vaccination strategies are implemented in a timely manner upon the onset of an event to prevent the development of disease in exposed individuals. Public information strategies include recommendations on specific actions individuals can take to protect their family, friends, and themselves.

Activity 2.1: Direct Mass Prophylaxis Tactical Operations

Activity Description: In response to notification of an incident requiring mass prophylaxis, provide overall management and coordination of mass prophylaxis operations.

EEG Tasks:

2.1.1 Coordinate distribution/administration of mass prophylaxis

- Identify and train site leadership prior to POD activation
- Ensure sufficient staff levels to address expected throughput

Activity 2.2: Conduct Mass Dispensing

Activity Description: Provide citizens with appropriate prophylaxis and maintain inventory control

EEG Tasks:

2.2.1 Implement dispensing plan in accordance with State/local plans

- Rate at which dispensing operations provide prophylaxis meets SNS/CRI guidance
- Percentage of at-risk population that was successfully provided with initial prophylaxis is within 48 hours of decision to provide prophylaxis within SNS/CRI and state/local guidelines.
- Percentage of general population that was successfully provided initial prophylaxis within SNS/CRI and State/local guidelines

Scenario Summary

The scenario presented for this type of exercise would be any public health emergency requiring either emergency distribution of information or mass prophylaxis.

The exercise will begin with the point in the scenario at which local EMD's have operationalized their local plans utilizing volunteers and community resources to stage at community dispensing points in preparation for distribution of emergency information or mass prophylactic treatment to every household in their jurisdiction.

Planned Simulations

Packets containing "Ready in Three" personal preparedness information booklets previously prepared by the Lafayette County Health Department will have been pre-positioned in the communities simulating distribution of the SNS medications for dispensing to the households. HAM radio operations were tested as a redundant communications tool to simulate the loss of normal telephone or other radio communications in a real event.

SECTION 3: ANALYSIS OF CAPABILITIES

This section of the report reviews the performance of the exercised capabilities, activities, and tasks. In this section, observations are organized by capability and associated activities. The capabilities linked to the exercise objectives of **Operation Door Hanger** are listed below, followed by corresponding activities. Each activity is followed by related observations, which include references, analysis, and recommendations.

CAPABILITY: COMMUNICATIONS

Capability Summary:

Capability description: Communications is the fundamental capability within disciplines and jurisdictions that practitioners need to perform the most routine and basic elements of their job functions. Agencies must be operable, meaning they possess sufficient wireless communications capabilities to meet their daily internal and emergency communications requirements before they focus on interoperability.

Capability outcome: A continuous flow of critical information is maintained as needed among multi-jurisdictional and multi-disciplinary emergency responders, command posts, agencies, and governmental officials for the duration of the emergency response operation in compliance with National Incident Management System (NIMS). To accomplish this, the jurisdiction has a continuity of operations plan for public safety communications to include the consideration of critical components, networks, support systems, personnel, and an appropriate level of *redundant communications* systems in the event of an emergency.

Activity 1.1: Alert and Dispatch

Activity description: In response to an incident alert, notify and provide communications management until the Incident Command (IC), Emergency Operations Center (EOC), and Emergency Management Agency (EMA) are activated.

Observation 1.1:

Strength: HAM radio communications between the Health Department command center and the community distribution points was good. HAM radio would provide an excellent resource as a redundant communications tool in a real event.

Area of Improvement: Communications at the community distribution points between the HAM radio operators at those points and the dispensing teams were lacking. The exercise revealed that there were basically no communications between the operators and the teams except for when the teams departed and when they returned.

References: LCHD Emergency Response Plan and Resource manual

Analysis: Use of HAM radio as a redundant communications tool proved to be very effective for this type of operation. HAM operations worked nicely within the ICS structure. Timely, accurate and clear incident information was passed to dispatched response teams; Incident information was relayed to pertinent incident management facilities (e.g., Incident Command Post, EOC); and Incident information was logged and disseminated to communications staff as appropriate successfully. Participant at each community dispensing center received ICS Structure briefings by key contact personnel to include identification of the Incident Commander and Health Department command post structure. Positions at the command post were filled according to function and ICS training.

Key contacts at each community dispensing point were briefed on the exercise in advance, including ICS structure and lines of communication. Two weeks in advance of the exercise, a “media blitz” began that included contacts to newspapers, radio stations, chambers of commerce, schools, fax contact lists, email contact lists, web sites of these groups, and presentations to city councils, county commissioners and other elected officials. The result was a population that was very aware of the exercise and therefore no alarmed citizens wondering what was going on.

Recommendations:

1. Communications need to be improved to provide a line of communication between the delivery teams and HAM radio operators at the Community distribution point.
2. If the solution to #1 is to purchase radio equipment, interoperability of purchased and existing equipment must be assured. Possible equipment might include Citizen Band (CB) radios in areas where range is not an issue, however for harder to reach areas, VHF radios may be required.

CAPABILITY: MASS PROPHYLAXIS

Capability Summary:

Capability description: Mass Prophylaxis is the capability to protect the health of the population through administration of critical interventions (antibiotics, vaccinations, antivirals) to prevent the development of disease among those who are exposed or potentially exposed to public health threats. This capability includes the provision of appropriate follow-up and monitoring of adverse events, as well as risk communications messages to address the concerns of the public.

Capability outcome: Appropriate drug prophylaxis and vaccination strategies are implemented in a timely manner upon the onset of an event to prevent the development of disease in exposed individuals. Public information strategies include recommendations on specific actions individuals can take to protect their family, friends,

and themselves.

Activity 2.1: Direct Mass Prophylaxis Tactical Operations

Activity Description: In response to notification of an incident requiring mass prophylaxis, provide overall management and coordination of mass prophylaxis operations.

Observation 2.1:

Strength: City Readiness Initiative planning guidelines direct LPHA's to be able to provide lifesaving pharmaceuticals to 100% of their population in 48 hours. This exercise was the first of its kind to use alternate dispensing methodology to attempt making an actual contact with every household in the county. Community response and support for this exercise was phenomenal. The exercise revealed that nearly 83% of the total households in the county were reached in under 5 hours. This was accomplished using a variety of strategies unique to each community, and a combination of fire department, EMS, Law enforcement, students and other volunteers, and HAM radio operators.

Area of Improvement: The exercise revealed that strategies are needed to provide coverage to the unincorporated areas of the county. A high level of success was reached in the incorporated areas, but these outlying areas remain a question. The exercise also revealed that to cover remote areas, recruitment of additional volunteer manpower will be critical.

References: LCHD Emergency Response Plan and Resource manual

Analysis: One assumption of this exercise was that 100% of the population would not be reached in the allotted time; however, the largest percentage of the county's population resides in incorporated areas, so if these communities were effectively reached, a high rate of success would still be achieved.

The exercise began at 1500 hours. Materials had been prepared for 12,000 households. At the conclusion of the exercise (1940 hours), materials had been delivered to just over 10,000 households. This exercise was based on an alternate dispensing methodology that could be considered a "modified postal" plan. Community volunteers replaced USPS workers delivering the "medication". One issue that was encountered in the design of the exercise was that the U.S. Postal Service was not willing to relax regulations for this exercise. USPS officials conceded that regulations might be waived in an actual event, but not for training exercise purposes. This creates a barrier to LPHA's testing methodologies for rapid dispensing.

NOTE: During the exercise briefings, exercise participants were explicitly told NOT to place the simulation packages in mail boxes. One postmaster contacted

the health department to complain on the day following the exercise that materials were found in mail boxes by carriers. Legal action was threatened, but not taken as long as it didn't "happen again."

Overall distribution of this simulated mass prophylaxis was very well coordinated. Site leadership were identified and trained prior to POD activation; in this case the "POD" was the community distribution rally point.

Staff levels for this exercise proved to be adequate to accomplish the mission in the time allotted, and the "throughput" in this case was the percent of households reached using the alternate dispensing methodology.

Recommendations:

1. Advanced and persistent recruitment of volunteers is needed to assure that the manpower is available to execute mass dispensing operations in a real event.
2. Further development of strategies (including #1) to reach the unincorporated areas of the county is needed. These strategies must include how to recruit adequate numbers of volunteers (perhaps groups identified solely for this purpose), additional transportation needs (church or school buses, other transportation providers) to run rural routes, and accurate and detailed mapping of the areas identifying the location of the houses.
3. If agreement is not reached with the USPS to allow delivery of the medications to mail boxes, reaching these households will require additional driving time and exposure of volunteers to hazards such as dogs will become a concern.

Activity 2.2: Conduct Mass Dispensing

Activity Description: Provide citizens with appropriate prophylaxis and maintain inventory control

Observation 2.2:

Strength: Adequate simulation materials were prepared. No restocking of the simulated inventory was necessary.

References: LCHD Emergency Response Plan and Resource manual

Analysis: The exercise revealed that operations were conducted in accordance with State and local SNS plans. The rate at which dispensing operations were conducted provided coverage of the population that was highly successful toward meeting SNS/CRI guidance (83 of 100% were reached in 5 hours).

One task under the Target Capability of Mass Dispensing is to successfully provide the at-risk population initial prophylaxis within 48 hours of decision to provide prophylaxis

within SNS/CRI and state/local guidelines. In this exercise, the percentage of general population that was successfully provided initial prophylaxis within SNS/CRI and State/local guidelines was 83%.

This task raises the question, however, of what defines “successful”. One concern about using alternate dispensing methodologies is the risk of adverse reactions to the medications supplied in the SNS. Persons with medication or chronic disease contraindications to the SNS medications could experience adverse reactions, unaware that they should not take these medications. LCHD took this opportunity to conduct a survey of a sample of the population (6,000 surveys were randomly distributed with the simulation materials). Just over 500 surveys were returned. The analysis is found in **APPENDIX D** of this document and may be of interest to agencies considering using alternate dispensing methodologies to assess risk.

Recommendations: N/A

SECTION 4: CONCLUSION

Operation Door Hanger was a functional exercise designed to provide an opportunity for testing local emergency operations plans and procedures between partnering agencies as would be required of them in response to a public health emergency requiring either distribution of emergency information or alternate dispensing methods to provide mass prophylaxis. The exercise was intended to give participants a realistic idea of the demands on manpower and resources that would be necessary to effect such a response in a learning environment. Target capabilities tested were Communications and Mass Prophylaxis.

COMMUNICATIONS TARGET CAPABILITY:

Exercise Objective 1: Exercise players will demonstrate knowledge of and ability to conduct operations under Incident Command System (ICS) principles

Exercise Objective 2: Exercise players will demonstrate ability to utilize redundant communications systems (HAM radio) to conduct response

Key contacts at each community dispensing point were briefed on the exercise in advance, including ICS structure and lines of communication. Two weeks in advance of the exercise, a “media blitz” began that included contacts to newspapers, radio stations, chambers of commerce, schools, fax contact lists, email contact lists, web sites of these groups, and presentations to city councils, county commissioners and other elected officials. The result was a population that was very aware of the exercise and therefore no alarmed citizens wondering what was going on.

Use of HAM radio as a redundant communications tool proved to be very effective for this type of operation. HAM operations worked nicely within the ICS structure. Timely, accurate and clear incident information was passed to dispatched response teams; Incident information was relayed to pertinent incident management facilities (e.g., Incident Command Post, EOC); and Incident information was logged and disseminated to communications staff as appropriate successfully. Participant at each community dispensing center received ICS Structure briefings by key contact personnel to include identification of the Incident Commander and Health Department command post structure. Positions at the command post were filled according to function and ICS training.

MASS PROPHYLAXIS TARGET CAPABILITY:

Exercise Objective 3: Exercise players will attempt to reach as many households in their jurisdiction as possible within five hours

The exercise began at 1500 hours. Materials had been prepared for 12,000 households. At the conclusion of the exercise (1940 hours), materials had been delivered to just over 10,000 households. This exercise was based on an alternate dispensing methodology that could be considered a “modified postal” plan. Community volunteers replaced USPS workers delivering the “medication”. One issue that was encountered in the design of the exercise was that the U.S. Postal Service was not willing to relax regulations for this exercise. USPS officials conceded that regulations might be waived in an actual event, but not for training exercise purposes. This creates a barrier to LPHA’s testing methodologies for rapid dispensing.

The exercise revealed that operations were conducted in accordance with State and local SNS plans. The rate at which dispensing operations were conducted provided coverage of the population that was highly successful toward meeting SNS/CRI guidance (83 of 100% were reached in 5 hours).

MAJOR STRENGTHS:

- Preplanning was thorough and resulted in a well coordinated multi-community response
- Assuring that the public was well informed in advance about the exercise resulted in a very smooth and efficient exercise
- Local EMD’s demonstrated exceptional knowledge about their respective communities and resources allowing strategies to be developed uniquely for each community by the community partners and with community resources
- Exceptional volunteer support preparing the simulation material packets produced an adequate supply for the exercise and pre-placement of the supplies prior to start of the exercise resulted in no issues with inventory management or resupply

MAJOR RECOMMENDATIONS:

- Gaps in communication devices between volunteers distributing medications under alternate methodologies and the community dispensing points need to be addressed
- Advanced and persistent recruitment of volunteers is needed to assure that the manpower is available to execute mass dispensing operations in a real event.
- Further development of strategies to reach the unincorporated areas with the same efficiency as the incorporated areas of the county is needed.

APPENDIX A: IMPROVEMENT PLAN

This IP has been developed specifically for Lafayette County Health Dept. as a result of Operation Door Hanger conducted on April 7, 2009. These recommendations draw on both the After Action Report and the After Action Conference.

Table A.1 *Improvement Plan Matrix*

Capability	Observation Title	Recommendation	Corrective Action Description	Capability Element	Primary Responsible Agency	Agency POC	Start Date	Completion Date
Capability 1: Communications	1. Observation 1 Better communications between distribution teams and Community Distribution center is needed	1.1 Research possible solutions to this gap in communication with EMD's	1.1.1 Discuss equipment needs with EMA's	Planning	LCHD EMA's	LCHD Planner	4/7/2009	5/30/2010
			1.1.2 Assure that any equipment purchased is interoperable with existing equipment	Planning	LCHD EMA's	LCHD Planner	4/7/2009	5/30/2010
		1.2 Research resources available to provide or purchase equipment if indicated	1.2.1 Discuss equipment needs with EMA's	Planning	State X EMA	EMA Director	4/7/2009	5/30/2010
			1.2.2 Assure that any equipment purchased is interoperable with existing equipment	Systems/ Equipment	EMD's	EMA Director	4/7/2009	5/30/2010

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Table A.1 Improvement Plan Matrix continued

Capability	Observation Title	Recommendation	Corrective Action Description	Capability Element	Primary Responsible Agency	Agency POC	Start Date	Completion Date
Capability 2: Mass Prophylaxis	2. Observation 1 Strategies are needed to reach unincorporated areas of the county as effectively as the incorporated areas	2.1 Continue participation in county wide EMA meetings to develop strategies for reaching unincorporated areas	2.1.1 Engage groups such as neighborhood watch, churches, public transportation, civic groups, and retired military in the planning process	Planning	LCHD EMA's	LCHD Planner	4/7/2009	5/30/2010
			2.1.2 Provide training to newly recruited groups	Planning	LCHD EMA's	LCHD Planner	4/7/2009	5/30/2010
	2. Observation 2 N/A	N/A	N/A	N/A	--	--	--	--
			N/A	N/A	--	--	--	--

APPENDIX B: LESSONS LEARNED

While the After Action Report/Improvement Plan includes recommendations which support development of specific post-exercise corrective actions, exercises may also reveal lessons learned which can be shared with the broader homeland security audience. The Department of Homeland Security (DHS) maintains the *Lessons Learned Information Sharing* (LLIS.gov) system as a means of sharing post-exercise lessons learned with the emergency response community. This appendix provides jurisdictions and organizations with an opportunity to nominate lessons learned from exercises for sharing on *LLIS.gov*.

For reference, the following are the categories and definitions used in *LLIS.gov*:

- **Lesson Learned:** Knowledge and experience, positive or negative, derived from actual incidents, such as the 9/11 attacks and Hurricane Katrina, as well as those derived from observations and historical study of operations, training, and exercises.
- **Best Practices:** Exemplary, peer-validated techniques, procedures, good ideas, or solutions that work and are solidly grounded in actual operations, training, and exercise experience.
- **Good Stories:** Exemplary, but non-peer-validated, initiatives (implemented by various jurisdictions) that have shown success in their specific environments and that may provide useful information to other communities and organizations.
- **Practice Note:** A brief description of innovative practices, procedures, methods, programs, or tactics that an organization uses to adapt to changing conditions or to overcome an obstacle or challenge.

Exercise Lessons Learned

NO OBSERVATIONS FROM THIS EXERCISE ARE BEING NOMINATED FOR INCLUSION IN THE DHS LLIS.GOV SYSTEM.

PART II – EXERCISE DESIGN AND CONDUCT: ASSESSMENT

Please rate, on a scale of 1 to 5, your overall assessment of the exercise relative to the statements provided below, with **1** indicating **strong disagreement** with the statement and **5** indicating **strong agreement**.

Table C.1: Participant Assessment

	Strongly Disagree					Strongly Agree				
Name of agency you represent										
The exercise was well organized	1	2	3	4	5					
The exercise plan was explained clearly enough	1	2	3	4	5					
Sufficient supplies/materials were available	1	2	3	4	5					

PART III – PARTICIPANT FEEDBACK

Please give your overall view of the Exercise:

Please explain how planning meetings or communications may have helped you understand the exercise better:

This exercise represented the type of event that would require distribution of emergency information or medications. Please provide any recommendations on how this exercise or future exercises could be improved or enhanced.

If this had been an actual emergency, what if anything would you do differently and why?

APPENDIX D: SUMMARY OF SURVEY FINDINGS

Cities Readiness Initiative – Antibiotic Home Delivery Lafayette County, Missouri

The goal of this study is to measure the effectiveness of antibiotic home delivery for use in an event where a large number of individuals are likely exposed to aerosolized anthrax. This will be measured by the proportion of households with at least one occupant who is contraindicated, needs further clinical consultation or who are simply too young to swallow pills or take an adult dose. We will refer to the combination of these risk factors as complications.

On April 7, 2009 Lafayette County Public Health distributed ≈6,000 questionnaires to the community in an exercise testing the home delivery method. Questionnaires inquired about children living in the house, medical conditions, current medications and medication allergies for all individuals living in the residence. Figure 1 shows the questionnaire.

On June 19, 2009 Lafayette County Public Health had received back 551 completed questionnaires. Information was entered into epi-info and exported to Microsoft Excel. Variables were generated in Microsoft Excel using logic statements to measure households with one or more complications to Doxycycline and Ciprofloxacin respectively. Data was imported into Stata version 10. Frequency tables were produced measuring the frequency, proportion and 95% confidence intervals for each observation.

Results show that 18.9% (95% confidence interval, 15.5% to 22.2%) and 21.1% (95% confidence interval, 17.6% to 24.5%) of Lafayette County households would have at least one member with some form of complication to Doxycycline and Ciprofloxacin respectively.

Table 1					
Household Antibiotic Delivery Effectiveness					
Lafayette County, Missouri - 2009					
Households	Frequency	Percent	95% Confidence Interval		
Doxycycline Complications*	104	18.9%	15.6%	22.2%	
No Doxycycline Complications	447	81.1%	77.8%	84.4%	
Ciprofloxacin Complications †	435	21.1%	17.6%	24.5%	
No Ciprofloxacin Complications	116	78.9%	75.5%	82.4%	

*Households with at least one member with Hepatitis, Doxycycline allergies, taking Acitretin, Carbamazepine, Fosphenytoin, Isotretinoin, Methotrexate, currently taking antibiotics, or under age 9.

†Households with at least one member having dialysis, kidney/renal disease, chemotherapy, ethotoin, phenytoin, theophylline, thuja, tizanidine, ciprofloxacin allergies, currently taking antibiotics, or under age 9.

Age less than nine years and the current use of antibiotics complicate the use of both Doxycycline and Ciprofloxacin. Children younger than nine years cannot usually take an adult dose of antibiotics and are prescribed suspensions under normal circumstances. Individuals

already taking antibiotics should consult with a clinician in normal circumstances to determine their course of action. In this study 13.1% (95% confidence interval, 10.2% to 15.9%) of households had at least one child under the age of nine years and 7.3% (95% confidence interval, 5.1% to 9.4%) of households had someone currently taking antibiotics.

Condition		Frequency	Percent	95% Confidence Interval	
Current antibiotic use	yes	40	7.3%	5.1%	9.4%
	no	511	92.7%	90.6%	94.9%
Age less than nine years	yes	72	13.1%	10.2%	15.9%
	no	479	86.9%	84.1%	89.8%

Tables three and four describe the prevalence of contraindications to Doxycycline and Ciprofloxacin respectively.

Condition		Frequency	Percent	95% Confidence Interval	
Hepatitis	yes	3	0.5%	0.0%	1.2%
	no	548	99.5%	98.8%	100.0%
Acitretin*	yes	0	0.0%		N/A
	no	551	100.0%		N/A
Carbamazepine**	yes	6	1.1%	0.2%	2.0%
	no	545	98.9%	98.0%	99.8%
Fosphenytoin†	yes	2	0.4%	0.0%	0.9%
	no	549	99.6%	99.1%	100.0%
Isotretinoin††	yes	0	0.0%		N/A
	no	551	100.0%		N/A
Methotrexate	yes	6	1.1%	0.2%	2.0%
	no	545	98.9%	98.0%	99.9%
Doxycycline Allergies‡	yes	21	3.8%	2.2%	5.4%
	no	530	96.2%	94.6%	97.8%

* Soriatane ** Tegretol † Cerebyx †† Accutane
‡ Achromycin, Chlortetracycline, Declomycin, Demeclocycline, Doxycycline, Dynacin, Minocin, Minocycline, Oxytetracycline, Sumycin, Terramycin, Tetracycline, Tetracycline & Derivatives, Tigecycline, Tygacil, Vibra-Tabs and Vibramycin

Condition		Frequency	Percent	95% Confidence Interval	
Dialysis	yes	2	0.4%	0.0%	0.9%
	no	549	99.6%	99.1%	100.0%
Kidney/Renal Disease	yes	13	2.4%	1.1%	3.6%
	no	538	97.6%	96.4%	98.9%
Chemotherapy	yes	3	0.5%	0.0%	1.2%
	no	548	99.5%	98.8%	100.0%
Ethotoin*	yes	0	0.0%	N/A	
	no	551	100.0%	N/A	
Phenytoin**	yes	4	0.7%	0.0%	1.4%
	no	547	99.3%	98.6%	100.0%
Theophylline†	yes	5	0.9%	0.1%	1.7%
	no	546	99.1%	98.3%	99.9%
Thuja	yes	0	0.0%	N/A	
	no	551	100.0%	N/A	
Tizanidine††	yes	7	1.3%	0.3%	2.2%
	no	544	98.7%	97.8%	99.7%
Ciprofloxacin Allergies‡	yes	25	4.5%	2.8%	6.3%
	no	526	95.5%	93.7%	97.2%

* Paganone ** Dilantin † Theochron, Theo-Dur, Theo-24, Slo-Bid Gyrocaps, Uniphyl †† zanaflex
‡ Avelox, Cinobac, Cinoxacin, Cipro, Ciprofloxacin, Factive, Floxin, Gatafloxacin, Gemifloxacin, Levaquin, Levofloxacin, Lomefloxacin, Maxaquin, Moxifloxacin, Nalidixic Acid, NegGram, Ofloxacin, Quinolone, Quixin, Sparfloxacin, Tequin, Trovafloxacin, Trovan, Zagam, Zymar

Discussion

This study is prone to the effect of chance variation and bias. Chance variation has been inspected by including 95% confidence intervals for all observations. This means we can be 95% confident the true value for the study population lies within this range.

Roughly 6,000 surveys were distributed and 551 surveys were returned. The response rate is 9.2%. Selection bias will occur if complications with taking either antibiotic are associated with response. The most likely effect of selection bias in this study is that healthy households were more probable to respond; this could underestimate the proportion of households with complications.

Information bias is unlikely. The questionnaire lists medications by name. Respondents could view their prescription labels to ensure correctness. Medical conditions inquired about were severe enough that individuals should not have recall problems.

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Figure 1

Total Household Occupant Summary

_____ Adults & Children 9 years & older _____ Children (under 9 years of age)

Medical Conditions/Illnesses (Write in the total number of household members with the following)

	Asthma/Emphysema		Hepatitis		Seizure
	Cancer		HIV/AIDS		Spleen Removal
	Dialysis		Kidney/Renal Disease		Stomach Ulcers
	Heart Disease		Organ Transplant		Stroke

Current Medications (Write in the total number of household members that have taken medications in the last 60 days)

	Accutane		Glipizide and Metformin		Primidone
	Acetohexamide		Glucotrol		Probenecid
	Acitretin		Glucovance		Propranolol
	Amaryl		Glyburide		Quinapril
	Benemid		Glyburide and Metformin		Rifabutin
	Birth Control Pill		Glynase		Rifadin
	Carbamazepine		Inderal		Rifampin
	Cerebyx		Isotretinoin		Rifapentine
	Chemotherapy		Lanoxicaps		Slo-Bid Gyrocaps
	Chlorpropamide		Lanoxin		Soriatane
	Coumadin		Lopressor		St. Johns Wort
	Cyclosporine		Metaglip		Tegretol
	DiaBeta		Methotrexate		Theo-24
	Diabinese		Metoprolol		Theo-Dur
	Didanosine		Micronase		Theochron
	Digoxin		Mycobutin		Theophylline
	Dilantin		Mysoline		Thuja
	Dong Quai		Peganone		Tizanidine
	Dymelor		Phenobarbital		Tolazamide
	Ethotoin		Phenytoin		Tolinase
	Foscarnet		Photofrin		Toprol
	Foscavir		Porfimer		Uniphyl
	Fosphenytoin		Prednisone		Warfarin
	Glipizide		Priftin		Zanaflex

Medication Allergies (Write in the total number of household members with severe allergic reactions to the following)

	Achromycin		Gemifloxacin		Sparfloxacin
	Avelox		Levaquin		Sumycin
	Chlortetracycline		Levofloxacin		Tequin
	Cinobac		Lomefloxacin		Terramycin
	Cinoxacin		Maxaquin		Tetracycline
	Cipro		Minocin		Tetracycline & Derivatives
	Ciprofloxacin		Minocycline		Tigecycline
	Declomycin		Moxifloxacin		Trovafloxacin
	Demeclocycline		Nalidixic Acid		Trovan
	Doxycycline		NegGram		Tygacil
	Dynacin		Ofloxacin		Vibra-Tabs
	Factive		Oxytetracycline		Vibramycin
	Floxin		Quinolone		Zagam
	Gatafloxacin		Quixin		Zymar

Other Health Issues (Write in the total number of household members with the following health-related issues)

	Currently taking antibiotics		Breast-feeding		Pregnant/suspect Pregnancy
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Please return this form to Lafayette County Public Health or your local City Hall by April 14, 2009.

APPENDIX E: PERFORMANCE RATING

The performance rating categories refer to how well each activity was performed during the exercise and are detailed in the table below.

Table E.1: Performance Ratings

Rating	Description
Performed without Challenges	The performance measures and tasks associated with the activity were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws.
Performed with Some Challenges, but Adequately	The performance measures and tasks associated with the activity were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. However, opportunities to enhance effectiveness and/or efficiency were identified.
Performed with Major Challenges	The performance measures and tasks associated with the activity were completed in a manner that achieved the objective(s), but some or all of the following were observed: demonstrated performance had a negative impact on the performance of other activities; contributed to additional health and/or safety risks for the public or for emergency workers; and/or, was not conducted in accordance with applicable plans, policies, procedures, regulations, and laws.
Unable to be Performed	The performance measures and tasks associated with the activity were not performed in a manner that achieved the objective(s).

The responses undertaken during OPERATION DOOR HANGER did not reveal any activities that were unable to be performed, or that were performed with major challenges. All response activities demonstrated objectives achieved to support Target Capabilities that were at a minimum performed with some challenges, but adequately, and had no negative impact on performance of other activities, and did not contribute to additional safety and health risks to the public or to responders.

APPENDIX F: ACRONYMS

Table F.1: Acronyms

Acronym	Meaning
AAR/IP	After Action Report/Improvement Plan
CERT	Community (Citizen) Emergency Response Team
CRI	City Readiness Initiative
EEG	Exercise Evaluation Guide(s)
EMA	Emergency Management Agency
EMD	Emergency Management Director
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
FOUO	For Official Use Only
HAM	"Help All Mankind" refers to Amateur Radio Operators
HSEEP	Homeland Security Exercise and Evaluation Program
IC	Incident Commander
ICS	Incident Command System
LCHD	Lafayette County Health Dept.
LPHA	Local Public Health Agency
MARC	Mid America Regional Council
MDHSS	Missouri Department of Health and Senior Services
NIMS	National Incident Management System
POD	Point of Dispensing
SNS	Strategic National Stockpile
TCL	Target Capabilities List
USPS	United States Postal Service
VHF	Very High Frequency