

## LOS ANGELES COUNTY DEPARTMENT OF PUBLIC HEALTH PARTICIPATION IN UNITED STATES POSTAL SERVICE BIOHAZARD DETECTION SYSTEM FULL-SCALE EXERCISES

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### INTRODUCTION

In August and October of 2007, Los Angeles County (LAC) Department Public Health (DPH) participated in full-scale Biohazard Detection System (BDS) exercises at United States Postal Service (USPS) facilities in Los Angeles County. The Acute Communicable Disease Control Program (ACDC) Training Unit participated in the planning, coordinating, and training process for the exercises in collaboration with USPS, the United States Postal Inspection Services (USPIS), Los Angeles County and City Fire Departments, DPH's Office of Development and Organizational Training (OD&T), Emergency Preparedness and Response Program (EPRP) and Community Health Service (CHS) in LAC Service Planning Area (SPA) 3 and 6. Both exercises simulated the LAC DPH response to a positive BDS alarm, which is an early warning system that regularly analyzes air samples for the presence of anthrax spores in the mail [1]. Prior to these exercises, USPS facilities in LAC had conducted BDS exercises with DPH and other first responder agencies. The two exercises in 2007 provided LAC DPH the opportunity to exercise, test, and evaluate the readiness and preparedness of new elements, including the activation of the LAC DPH Department Operation Center (DOC), notification and deployment of public health staff to assume Incident Command System (ICS) roles and functions at the DOC, a simplified Point of Dispensing (POD) model, deployment of the mobile DPH Command Center, and real-time response after regular work hours.

### PRE-EVENT EXERCISE PLANNING

#### *Planning Meetings and Discussions*

Several planning meetings among the ACDC Training Unit, EPRP, OD&T, CHS SPAs, EMS, USPS BDS Emergency Coordinators, USPIS, LAC and City Fire Departments took place prior to both full-scale exercises. The USPS retains primary authority for BDS program implementation and training of their employees; and LAC DPH's initial response includes Post-Exposure Prophylaxis (PEP) medication distribution to those employees identified as potentially having been exposed to anthrax and Laboratory Response Network (LRN) lab testing of the BDS sample cartridge. Pre-event planning also involves understanding the roles and responsibilities from all participating agencies involved to ensure optimal response action.

Two pre-event planning meetings were hosted by the USPS BDS Coordinators at both USPS facilities, which included representation from the other responding agencies. These meetings provided an opportunity to discuss and review logistics such as establishing the BDS notification process, entry to the facility and set-up area for Unified Command, pre-designated areas for fire department hazmat decontamination tents and dispensing of PEP; and clarification of issues or concerns from the responding partners prior to the actual exercise.

#### *Pre-Positioning of POD Supplies*

Pre-positioning of POD supplies required for DPH response was previously established and agreed upon with both USPS facilities in a secure room located near the PEP dispensing areas. The ACDC Training Unit ordered, inventoried, and organized the supplies to ensure adequate amounts were available. Supplies were labeled by POD station and was easily accessible for use during the exercise and real incident. Pre-positioning of supplies eliminated the additional task of gathering, storing and transporting supplies in a time of heightened emergency response, as well as decreasing the set-up time for response by SPA CHS staff for PEP dispensing. A complete list of supplies are maintained and updated by the ACDC Training Unit and was provided to the SPA for their reference in the event of an actual response. Supplies are replenished, updated or purchased as needed.

### ***BDS POD Training Sessions***

Approximately two weeks prior to the scheduled BDS full-scale exercises, the ACDC Training Unit, EPRP, and OD&T conducted training sessions for both SPA 3 and SPA 6 staff who had command or supervisory roles (i.e., Unit Leaders, Group Supervisors, Section Chiefs, and Command Staff) within the POD organizational structure. This was an opportunity to review information with SPA staff and answer questions and concerns regarding:

- DPH roles and responsibilities in a BDS incident
- BDS POD model
- POD organizational structure
- ICS and staffing roles in a BDS POD
- on-site (just-in-time) orientation for staff
- radio etiquette and communications
- Unified Command (SPA 6)

Upon completion of the training, each participant completed an evaluation to provide feedback of the training, which included their understanding of the POD model, staffing roles in the BDS POD, and demonstration on how to use orientations guides to conduct on-site orientation to staff.

### ***Other Pre-event Activities***

Other pre-event activities involved the development of the Master Scenario Events List (MSEL) for integration at the POD and DOC sites. The MSEL incorporated various artificial simulations and messages to inject throughout both exercises to stimulate questions, decision-making of command staff, public health recommendations, and response to the media, local hospitals and general public – all which may arise in a real event. These were the first BDS exercises coordinating with the DPH DOC and POD. Pre-event exercise evaluation tools were developed with pre-defined criteria for use by the evaluation teams at both the POD and DOC sites.

## **EXERCISE DESIGN**

Two full-scale BDS exercises were held on August 21, 2007, from 9AM to 11AM and on October 30, 2007, from 4PM to 6PM. The scenario for both exercises involved a BDS alarm ringing at the USPS facility detecting possible anthrax and requiring response agencies to respond to the incident. For the exercises, POD participants from the SPAs were pre-deployed on-site at the USPS facilities prior to the alarm, and DPH DOC players were pre-designated.

The following components of the BDS response were tested:

- evacuation of USPS employees
- USPS employee decontamination
- DPH internal BDS alarm notification
- DPH DOC activation
- Unified Command at the incident site
- communication between the POD and the DPH DOC
- BDS sample cartridge collection and transport to the DPH Laboratory Response Network (LRN) for repeat Polymerase Chain Reaction (PCR) testing (August exercise only)
- delivery of BDS prophylaxis medication to the POD site
- DPH distribution of medication prophylaxis to USPS employees via a POD

## EXERCISE GOALS AND OBJECTIVES

The exercise goals and objectives to be measured for both exercises were determined and agreed upon by the exercise evaluation team, EPRP, and SPA POD command staff, which included the following:

### Goal 1: Test DPH Internal BDS Notification

- Objective 1: Perform initial DPH internal BDS notification within 30 minutes of the DPH AOD (Administrative Officer of the Day) or the ACDC on duty physician being notified of BDS alarm by USPS
- Objective 2: Test the efficiency of transition from BDS Notification to DPH Emergency Management structure/DOC ICS activation by addressing next action steps in the BDS notification protocol

### Goal 2: Test POD Operations

- Objective 1: Set up a functional POD utilizing the current POD model at the USPS site within one hour of accessing supplies at the facility
- Objective 2: Dispense prophylactic medication with labeling to the USPS staff at a rate of 200 per hour
- Objective 3: Utilize proper communication techniques to effectively relay messages among command and management POD staff utilizing 2-way radios (October exercise)
- Objective 4: Set up Unified Command Post at the incident site with Fire and USPS (October exercise)

### Goal 3: Activate DPH DOC

- Objective 1: Set up and establish the DPH DOC
- Objective 2: Designate ICS positions and have staff arrive to DOC within 30 minutes of notification
- Objective 3: Understand functions/roles at the DPH DOC

### Goal 4: Communications

- Objective 1: Establish and maintain effective communication between the POD ICS and the DOC with regular reports
- Objective 2: Test communications via CWIRS, 2-way radios, satellite, cell phone without power

A simplified, updated version of the LAC DPH POD model was tested for the first time at both exercises. Both exercises required the POD site logistics section to determine and maximize the space available for set-up to ensure efficient processing of clients through the five major POD areas.

1. *Queuing Area*: clients wait to receive the required medication screening forms
2. *Registration Area*: clients complete the required medication screening form, followed with review by a member of the registration team.
3. *Dispensing Area*: clients receive the default medication
4. *Evaluation Area*: clients with contraindications to the default medication or those with special medical needs are further evaluated by a clinical team
5. *Q & A Area*: clients can ask further question or obtain additional information regarding anthrax facts, stress, and other resources

Table 1 indicates the number of public health participants at both USPS BDS full-scale exercises.

<b>Table 1. Number of Participants at the USPS BDS Full-Scale Exercise</b>		
<b><u>Participants</u></b>	<b>August 21, 2007 (SPA 3)</b>	<b>October 30, 2007 (SPA 6)</b>
POD Players	45	62
DOC Players	9	6
USPS Clients	118	102
Exercise Evaluators		
• POD site	8	8
• DPH DOC	3	2

## EVALUATION

A set of predefined criteria were used for evaluation of the exercises. DPH staff with familiarity of BDS and ICS, were identified during the planning stage to serve as evaluators at both the POD and DOC site. They would provide documentation of quantitative and qualitative findings of the overall exercise. At the POD site, three team members were assigned to shadow clients (i.e., Post Office workers) through the POD process and note the length of time the client spent in the POD process. One team member was posted at each of the POD areas (Registration, Dispensing, Evaluation, and Q&A) and one at the Incident Command Post. Team members posted at the POD areas were asked to randomly note the length of time clients interacted with POD staff in their area. All team members were also asked to note any significant observations, provide a qualitative evaluation of their observations, and make any recommendations.

Following the exercises, evaluators participated in a hot wash (i.e., post-exercise debriefing) and provided feedback regarding their observations. Their findings and overall evaluations were reviewed and incorporated into the exercise After Action Reports by ACDC Training Unit, with input from OD&T, EPRP, SPA command staff, USPS and Fire Departments.

Table 2 indicates quantitative data measured at the BDS full-scale exercises.

<b>Table 2. Summary of Events at the USPS BDS Full-Scale Exercises</b>		
<b><u>Measures</u></b>	<b>August 21, 2007 (SPA 3)</b>	<b>October 30, 2007 (SPA 6)</b>
• Time from BDS alarm to ACDC activation of DPH Internal BDS Notification Protocol	27 min	4 min
• Time from BDS notification to DOC activation	25 min	11min
• Time from BDS alarm to PH LRN receipt of BDS sample cartridge	3 hours	Not tested
• Time to set-up POD	50 min	36 min
• Time to deliver medication from cache site to USPS sire (from time order was given)	52 min	3 hours
• Average POD dispensing rate (clients/hr)	236/hour	207/hour
• Average client time through POD	5:36 min	7:35 min

## LESSONS LEARNED

Overall, the BDS full-scale exercises were an excellent learning experience and provided DPH staff and other partner agencies the opportunity to practice responding to a BDS incident. Challenges were experienced in the areas of communications and Unified Command. Areas for improvement have been identified in the continued process of preparing to respond to a BDS incident.

### **Major Recommendations**

- Continue trainings and drills on the PH DOC, ICS structure, chain of command, and POD just-in-time orientation
- Incorporate the PH Emergency Desk to receive initial notification from the USPS of a BDS alarm
- Continue trainings on Unified Command for POD command staff
- Continue communication with the Fire Department to pre-establish set up areas for the Incident Command Post and incorporation of Unified Command
- Provide back-up radios for POD staff
- Develop press releases and key public messages to bring to the PH DOC which are preapproved
- Improve POD area set-up and signage to maximize efficiency of client throughput
- Continue update of LAC BDS Incidence Response Plan to include FAQ and procedures for decontamination, PPE, and prophylaxis

## REFERENCE

1. Centers for Disease Control and Prevention. Responding to Detection of Aerosolized *Bacillus anthracis* by Autonomous Detection Systems in the Workplace. MMWR 2004;53(RR07):1-12.

