



Development of a Resource Center Model and Exercise for Supporting Mass Prophylaxis in a Large Urban Area

Philadelphia Department of Public Health
Division of Disease Control
Bioterrorism & Public Health Preparedness Program



Introduction

- Presenters
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- Acknowledgements
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Continuing Education

- Apply at the Continuing Education desk in the registration area
- You will receive an email with information on the web-based evaluation

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Overview

- Background & mass prophylaxis plan
- The Resource Center model & exercise
- Staffing model
- Information flow
- Communications systems
- Data management systems
- Just-in-time training and facilities

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POD Resource Center

BACKGROUND & MASS PROPHYLAXIS PLAN

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Philadelphia

- ~ 5 million in metropolitan area
- ~ 1.5 million residents and visitors
- "City of neighborhoods"
- Cultural, academic, historic and professional center of the region



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Philadelphia

- 2000 Census
- 45% white, 43% African-American, 12% other races; 8.5% Hispanic
- 590,071 households; average household size=2.48
- Household median income=\$30,746
- 18.2% families below poverty line

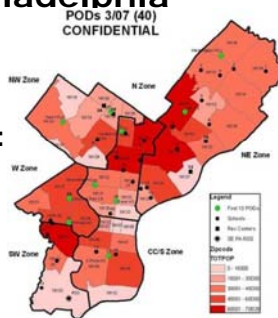
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Mass Prophylaxis in Philadelphia

- CRI city
- 40 PODs
- 40,000/POD
- Hybrid model:
 - Postal option
 - Push to vulnerable, non-mobile
 - Select closed PODs



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Mass Prophylaxis Plan

- Public transit allows most to walk to PODs
- Pill dispensing Head of Household model
 - Pick up for up to 15 people
- Translation services available
- Minimal screening
- Five pre-trained command staff
 - Most others receive just-in-time training

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Mass Prophylaxis Plan

POD Organizational Chart



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The POD Manager

- Oversee POD setup
- External POD communications
- Direct on-site media interviews
- Identify big picture needs
- Communicate regularly with POD Resource Center
- Hourly situation updates

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Mass Prophylaxis Challenges

- EOC/Health Command Center busy
- Situation reports to Mayor & executives
- Urgent issues
- Medical consultation
- Rumor collection/tracking
- Public information dissemination
- Resource allocation
- Unmet needs

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Background & Plan

Questions?

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POD Resource Center

MODEL & EXERCISE

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Resource Center Model

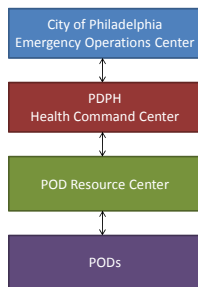
- Intended to coordinate and support the logistics and operations of a mass medication distribution response
- Comprised of key public health and City personnel organized into a management structure that fits into the Incident Command System

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Resource Center Placement



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Resource Center Duties

- Managing mass prophylaxis distribution operations including the notification, setup, staffing, and supply needs of PODs
- Summarizing and coordinating the fulfillment of requests from PODs and Local Logistical Nodes
- Receiving situation reports from PODs and Local Logistical Nodes

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Resource Center Duties

- Providing situation reports to the PDPH Health Command Center and City EOC
- Forwarding requests for unmet needs to EOC



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Resource Center Benefits

- Reduce the burden on Health Command Center and EOC
- "One number" to call for help
- Triage of urgent vs. non-urgent
- Record of all communications with PODs
- Automatic "birds eye" situation reports

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Resource Center Exercise

- Evaluated technical and procedural systems used by the POD Resource Center during ongoing support operations
- It did not address elements involved in the set-up or closing of PODs or of the POD Resource Center

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Exercise Preparation

- Upper Management positions given two-hour training
- "POD Managers" given one-hour training
 - Consisted of City and State Health Department staff and MRC volunteers
- Facility set up

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Resource Center Model & Exercise

Questions?

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POD Resource Center

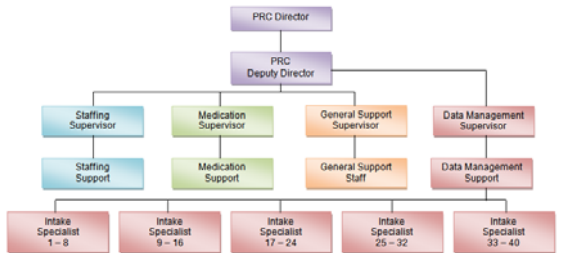
STAFFING MODEL

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Tested Staffing Model



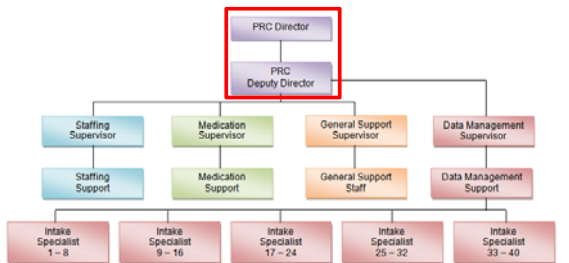
Total standard staffing complement: 15

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Tested Staffing Model



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Upper Management

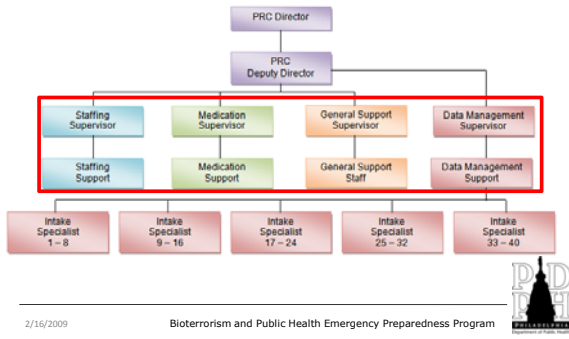
- Oversees entire POD Resource Center operations
- Communicates situation reports and urgent issues to Health Command Center
- Oversees and manages the Supervisors

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Tested Staffing Model

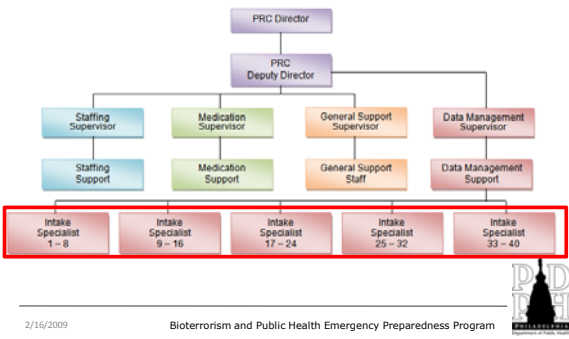


Functional Supervisors

- Responsible for resolution of all staffing, medication and general needs and requests from PODs
- Responsible for maintaining database and data flow
- Responsible for supervising Support staff



Tested Staffing Model



Intake Specialists

- Interface directly with POD Managers to receive urgent requests and situation reports
- Input requests and reports into POD Resource Center database
- Inform POD Managers of request resolutions
- Communicates with 8 PODs each



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Exercise Lessons Learned

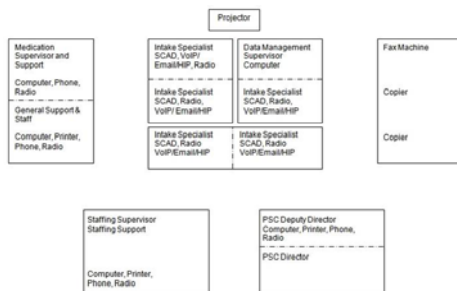
- Call Takers overwhelmed
- Supervisory staff under-utilized
- Ongoing tech support necessary



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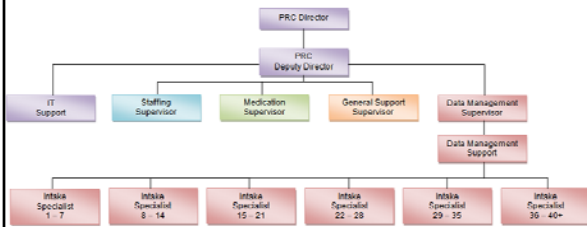
Resource Center Diagram



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Revised Staffing Model



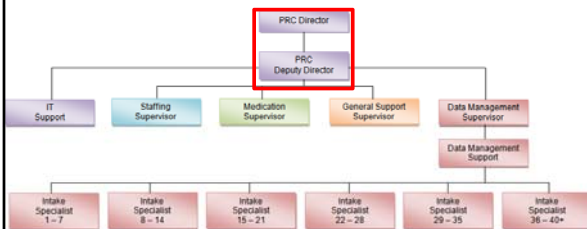
Total scalable complement: 9-14-17

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Revised Staffing Model



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Revised Upper Management

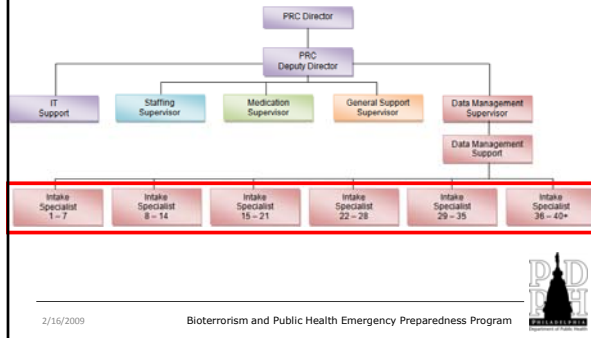
- Deputy Director responsible for tracking urgent requests through to completion/delivery
- May contact POD Managers directly

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Revised Staffing Model

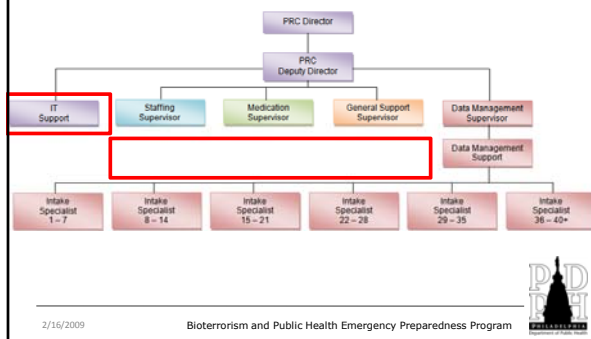


Revised Intake Specialists

- Responsible for maximum of 7 PODs
- Fewer communications modalities
- No paper transcription
- Added sixth Intake Specialist



Revised Staffing Model



Revised Positions

- New IT Support position
 - Setup and maintain network
 - Setup and maintain workstations and communications equipment
- Support positions optional
 - Can be added as needed

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Staffing Model

Questions?

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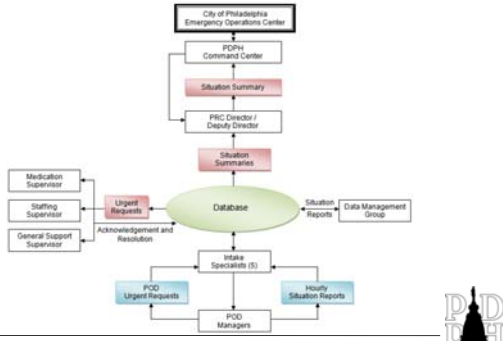
POD Resource Center
**INFORMATION FLOW &
MANAGEMENT**

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Tested Information Flow

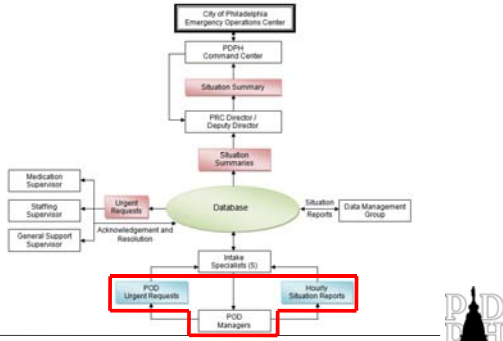


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Tested Information Flow



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Tested Information Flow

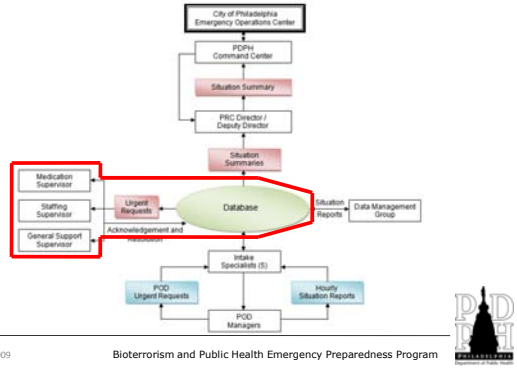
- Intake Specialists receive calls from POD Managers
 - Hourly reports
 - Urgent needs or issues
- Via one of five communications modalities

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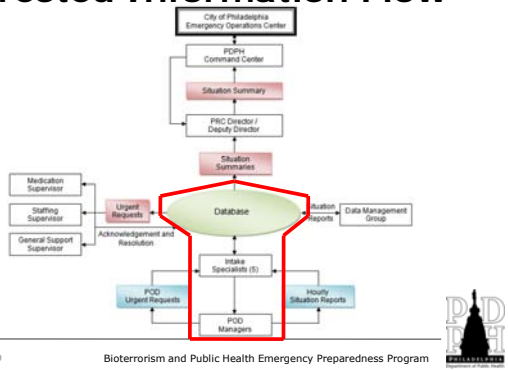
Tested Information Flow



Tested Information Flow

- Urgent needs are flagged by database for appropriate Supervisor
- Appears on line list of appropriate Supervisor
- Supervisor calls appropriate agency (RSS, water dept., food vendor)
- Enters "resolution" into database using specially created Access form

Tested Information Flow



Tested Information Flow

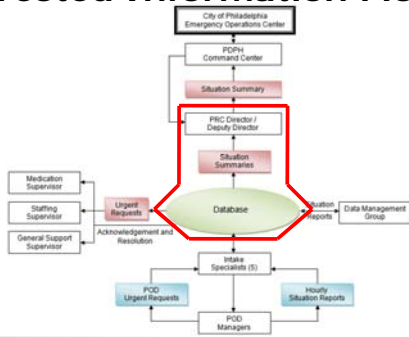
- Intake Specialist monitors overall line list for urgent requests flagged as "resolved"
- Reads report from Supervisor
- Calls POD Manager back with "resolution"

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Tested Information Flow



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Tested Information Flow

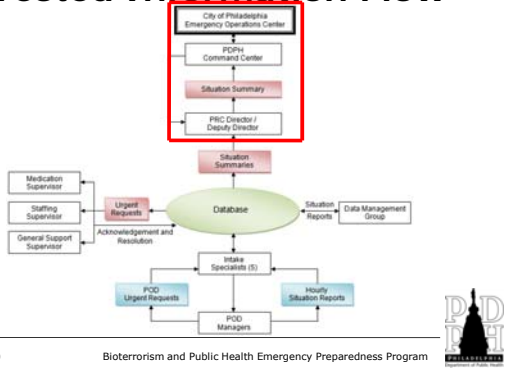
- Upper management reviews overall line list
- If urgent requests remained "unresolved" for too long, follow up with Supervisor
- Prepare situation summary for Health Command Center

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Tested Information Flow



Tested Information Flow

- Upper management communicates situation summary with Health Command Center
- Any urgent requests that require extra-agency requests are forwarded to EOC



Exercise Lessons Learned

- No one tracked urgent requests through to delivery
- No data entry validation
- Burden overwhelming
 - Dual entry paper and computer
 - Too much paper lead to lost information
- Power outage issues
 - Identified the need to operate without power



Information Management

- Access database
- Developed in-house
- Run over local network
- Entry forms for each station in Support Center
- Automatic tally/reporting
- Minute-by-minute master record

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Database Capabilities

- Screens tailored to each position
- Line lists of urgent issues, filtered by type of need
- Line graphs of medication supply at each POD
- Snapshots of current POD situations
 - Number of medications
 - Outstanding urgent issues

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Information Management Outcomes

- All situation reports and urgent requests entered for 10 of 40 PODs
- Of 58 situation reports entered:
 - 1 incorrect medication supply
 - 2 missing drug delivery count
 - 1 incorrect forms supply

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Information Management Outcomes

- 58 situation reports entered
 - 80 expected
 - Both reports submitted: 50 (25 PODs)
 - One report submitted: 8 PODs
 - No reports submitted: 7 PODs

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Information Management Outcomes

- 21 urgent requests entered
 - 38 expected
 - including automatic below threshold counts of medications and forms
 - 15 completed with response back to POD
 - Median response: 28 minutes; range 11-64 minutes

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Information Management Lessons Learned

- Incorporate data validation limits on entered values
- Close windows when task is completed
- Track overdue situation reports

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Information Management

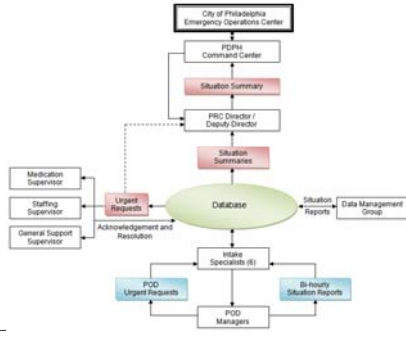
- Database demonstration

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Revised Information Flow

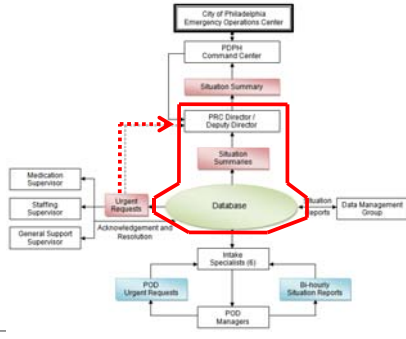


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Revised Information Flow



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Revised Information Flow

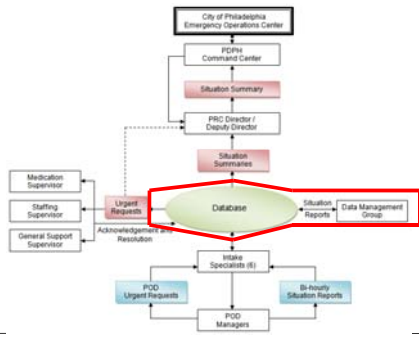
- Deputy Director is responsible for tracking all urgent requests through to completion
- Completion ≠ “resolved”
- Completion = delivered, fixed
- Revised paper system
 - Use database on laptops, print requests on battery-powered printers during power outage

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Revised Information Flow



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Revised Information Flow

- Data Management team reviews data input continuously
 - Graph slopes of medication supply
 - Random spot checks

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Information Flow

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POD Resource Center COMMUNICATIONS SYSTEMS

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Communications Systems



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Communications Systems

- Five modalities
 - Email
 - Voice over Internet Protocol (VoIP)
 - Portable 800 MHz public safety radio
 - City of Philadelphia
 - Commonwealth of Pennsylvania
 - Fax
 - Secure online discussion forum

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Communications Systems

- Email
 - Web-based individual accounts
 - Need to distribute addresses prior to exercise
 - Written record of all communications
- Voice over Internet Protocol (VoIP)
 - City-based system installed on laptops
 - Need to distribute numbers prior to exercise

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Communications Systems

- 800 MHz radio
 - Plan to distribute to PODs
 - Each Intake Specialist had a unique talkgroup
- Fax
 - Data Management Support collects faxes on a regular schedule
 - Fax template form distributed to "POD Managers" prior to exercise

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Communications Systems

- Online discussion forum
 - Secure Phila.gov website
 - Set up explicitly for this exercise
 - Usernames and passwords distributed prior to exercise
 - Written record of all communications

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Communications Systems

- Intake Specialists trained on each
- Received one-page "cheatsheets"



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Communications Systems

Questions?

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POD Resource Center
**JUST-IN-TIME TRAINING &
FACILITIES**

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Just-in-time Training

- ~30 minutes
- Situation report
- Overview of Resource Center
- Introduction to roles
- Specialized database training
- Equipment training

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Command Center Facility

- Held in large multi-use room on site
- Limited electronic and communications capabilities
- Last minute push to get phone lines and network connectivity

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Just-in-time Training & Facilities

- Questions?

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POD Resource Center
THANK YOU!

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