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AAR
Main Report

HURRICANE KATRINA
AFTER ACTION REVIEW

Prepared for

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Terrorism Preparedness and Emergency Response

February 1, 2006

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EXECUTIVE SUMMARY

Hurricane Katrina was one of the strongest storms to impact the coast of the United States during the last 100 years, causing widespread devastation along the central Gulf Coast states of the U.S. Cities such as New Orleans, Louisiana, Mobile, Alabama, and Gulfport, Mississippi bore the brunt of Katrina's force. To review the successes and areas for improvement, CDC convened a multi-disciplinary, multi-CC/O After Action Report Workgroup.

Framework

The AAR team was asked to identify strengths and opportunities for the improvement of CDC's all-hazards preparedness and response investments relative to our Hurricane Katrina response so immediate steps could be taken to improve performance.

Interviews were conducted with members of CDC staff, the Federal Emergency Management Agency, the National Emergency Management Association, Public Health agencies, private sector organizations, international observers (World Health Organization and Pan American Health Organization), and other interested parties. Processes and procedures were identified, reviewed and mapped as a baseline for CDC's emergency response activities. Emergency response documentation, previous AARs, and other relevant information were also obtained and reviewed. Data from each of these inputs were analyzed accordingly; common themes were identified; conclusions and recommendations were then determined.

Strengths

There were several factors that contributed to CDC's ability to respond to Hurricane Katrina in an effective and coordinated manner:

- The overall "can-do" attitude of CDC leadership and staff enabled the Agency to provide needed assistance and strategic leadership during and after the crisis.
- SNS demonstrated ingenuity and entrepreneurial behavior in rapidly developing and deploying Federal Medical Contingency Stations (FMCS) and working with states to address medication needs of evacuees with chronic illness.
- CDC took on a leadership role in a multi-agency, multi-sector effort to reconstitute the New Orleans Public Health and Medical care system.
- Field teams were deployed with the necessary equipment in a timely and efficient manner. Once personnel were notified of their deployment, they were able to quickly obtain required equipment.
- CDC staff placed in the Joint Field Office (JFO) and in other EOCs expedited the DEOC response to requests for assistance from the states. The DEOC was able to prepare in advance for requests for assistance from the states.
- Liaisons from the Red Cross were stationed in the DEOC to provide real-time interaction between the agencies.
- Disaster Response representatives from WHO and PAHO met with CDC Senior Leadership to provide perspectives on humanitarian emergencies and to begin to establish an ongoing relationship with CDC

- CDC Environmental Health field teams provided support to state and local communities on a multitude of issues including: re-entry and re-occupation guidance for the residents of affected areas; building and home assessments; solid waste disposal; water; wastewater; mold; chemical and other substance exposure; shelter sanitation and safety; and food safety.
- CDC deployed multi-disciplinary, multi-CC/O 'Public Health in a Box' teams to mega-shelters in Texas to provide support and technical assistance to local health departments.
- Logistic Support Staff and Resilience officers deployed to provide direct support to CDC field staff.

Areas for Improvement

While a number of factors were highlighted as being strengths, there are several issues that worked against the ability to provide an orchestrated and efficient response. The following items fall under the following five broad categories and represent the key findings and recommendations that are discussed in detail within the body of this document:

Mission Objectives and Deployment Assignment: Clear mission objectives were not established for the CDC response to Hurricane Katrina. An Incident Action Plan (IAP) was not implemented for this response which led to confusion about mission objectives among CDC responders. An emphasis on pre-deployment planning in a number of areas, including deployment of personnel and coordination with external agencies, would have proven beneficial.

Organizational Structure and Incident Command System: The organizational structure within the DEOC changed after the response started. This impacted lines of authority, reporting, communication channels, information exchange, and adherence to Standard Operating Procedures (SOP). Depending on the area of focus, SOPs did not exist, were in draft form, or were in conflict with other organizations' SOPs. Due to the scale and duration of the Katrina response, the ability to staff the DEOC and deployment teams and to track these resources proved to be an unprecedented challenge. Resilience issues were discussed by many respondents. The roles of the Senior Management Official (SMO), DEOC staff, and Office of Force Readiness and Deployment (OFRD) need to be more clearly defined and communicated.

Information Flow and Management: Stakeholders found communicating with CDC difficult because the protocol was not made clear to them nor were they aware of the resources and services CDC could provide.

Public Health Practice: The need was identified for federal agencies to plan with state and local officials how they would meet short-to-intermediate term needs of incoming evacuees and conversely, how they would serve their "expatriate" citizens in other states. Another need identified was to address the expanding role of SNS in providing chronic and emergency medical supplies and equipment.

Training and Exercises: A need for greater awareness of basic knowledge concerning emergency response operations exists among CDC staff. This was the first deployment for 51% of 421 CDC survey respondents. CDC needs to conduct regular agency-wide emergency response exercises that include all CC/Os not only DEO and select SMEs.

This document and its appendices provide additional detail around the aforementioned strengths and areas for improvement. It should also be noted that other AARs are being prepared in response to Hurricane Katrina. This report does not include the findings from those reports.

1. BACKGROUND

Hurricane Katrina was the eleventh named tropical storm, fourth hurricane, third major hurricane, and first Category 5 hurricane of the 2005 Atlantic hurricane season. It was the third most powerful storm of the season, behind Hurricane Wilma and Hurricane Rita, and the sixth-strongest storm ever recorded in the Atlantic basin. It first made landfall as a Category 1 hurricane just north of Miami, Florida on August 25, 2005, then again on August 29 along the Central Gulf Coast near Buras-Triumph, Louisiana as a Category 3 storm. Its storm surge soon breached the levee system that protected New Orleans from Lake Pontchartrain and the Mississippi River. Most of the city was subsequently flooded mainly by water from the lake. Heavy damage was also inflicted onto the coasts of Mississippi and Alabama, causing Katrina to become the most destructive and costly natural disaster in the history of the United States.

As of this writing, the official death toll now stands at 1,325, the third highest in U.S. history (behind the Galveston Hurricane of 1900 and the Okeechobee Hurricane of 1928). The damage is estimated to range from $80 to $130 billion which is at least double the cost of the previously most expensive Hurricane, Andrew (1992). Well over one million people were displaced, creating a humanitarian crisis on a scale unseen in the U.S. since the Great Depression.

Federal disaster declarations blanketed 90,000 square miles of the United States, an area almost as large as the United Kingdom. The hurricane left an estimated five million people without power. On September 3, 2005, Homeland Security Secretary Michael Chertoff described the aftermath of Hurricane Katrina as "probably the worst catastrophe, or set of catastrophes" in the country's history, referring to the hurricane itself plus the flooding of New Orleans. Effects from the storm were far reaching: Loss of life, flooding, impact to the oil and travel industries, and power outages.

As of December 12, 2005, CDC had deployed 766 responders to Louisiana, Mississippi and Alabama in response to the devastation and disaster left in Hurricane Katrina's wake. *A detailed timeline can be found in Appendix P.* CDC's DEOC moved from Watch and Alert Modes to Response Mode in order to support these teams and individuals in the affected areas. During the response, CDC worked with a number of federal, state and local agencies. In an effort to identify successes and areas for improvement, the Coordinating Office for Terrorism Preparedness and Emergency Response (COTPER) in partnership with the other CC/Os, began the After Action Review (AAR) process.

An AAR is a discussion of a project or an activity that enables the individuals involved to learn for themselves what happened, why it happened, what went well, what needs improvement and what lessons can be learned from the experience. The AAR is a professional discussion that includes the participants and focuses directly on tasks and goals. It is not a critique. In fact, it has several advantages over a critique:

- It does not judge success or failure.
- It attempts to discover why things happened.
- It focuses directly on the tasks and goals that were to be accomplished.
- It encourages employees to surface important lessons in the discussion.

2. SCOPE & OBJECTIVES

To collect the necessary data for the AAR, COTPER formed a Hurricane Katrina After Action Working Group. The purpose of the workgroup was to put in place a collaborative process and cross-agency team from which CDC could identify and learn from what went well to what needs further improvement. Objectives of the team were as follows:

- To conduct rapid assessments to identify key issues, areas for improvement and initiate response.
- To identify response strengths to institutionalize successful actions.
- To include external and internal reviews to improve identification and anticipation of key issues and recommendations.
- To report for internal agency awareness.
- To use existing evaluation metrics and data where possible.

The process was designed to become a model that could lead to CDC's capability to address issues during a response and to create process and system changes. The lessons learned from this activity will inform and improve the Agency's understanding of the process behind public health emergency response, as well as the strategies and tactics employed before, during, and after an event.

As mentioned in the Executive Summary, a cross-agency, multi-discipline team was formed to complete the work, and several working teams that included BearingPoint support, were established. Below is a list of the team members and organizations represented.

COTPER	CCID	CCEHIP
• Steven Bridges (OD)	• Sherrie Bruce (DBRP)	• Dan Holcomb (ATSDR)
• Harold Fenner (DSLR)	• Hobo King (NCID)	• Richard Klomp (NCIPC)
• Curtis Mast (DSNS)	• Linda Neff (NIP)	• Cyndi Billing (EEHS)
• Clint Mathews (DEO)	• Joe Posid (BPRP)	• Debra Townes (EEHS)
• John Maynard (DSLR)	• Kim Dills (NIP)	• Angela Weber (OTPER)
• Stephan Reissman (OD)		• Don Reissman (NCIPC)
• Carol Simon (DSLR)	FMO	• Ed Shanley (OTPER)
• Janet Smith (DEO)	• David Baden	
• Sheila Stevens (OD)		NIOSH
	OSI	• Jennifer Hornsby Myers
	• David Bell	

3. APPROACH

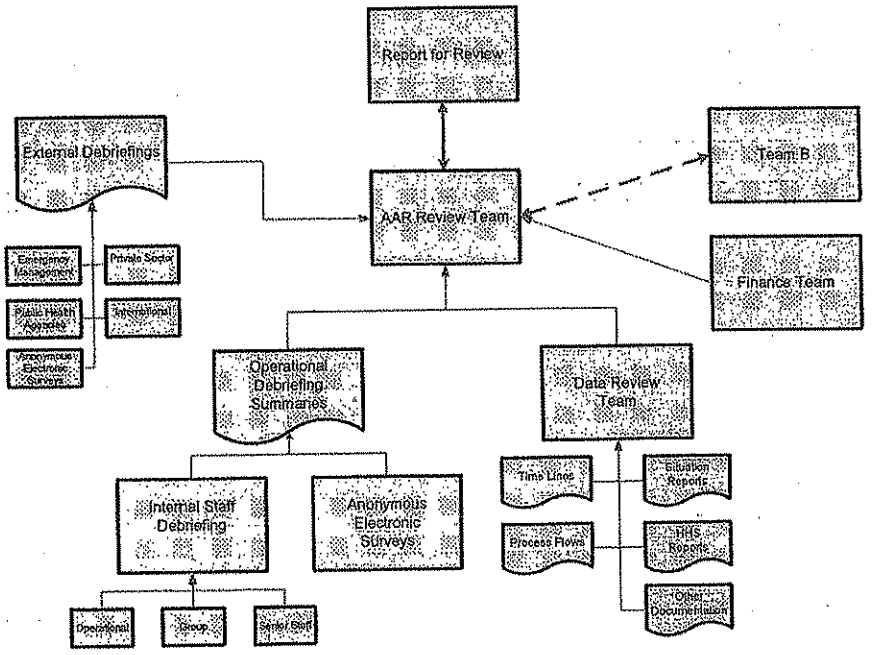
Data Gathering and Analysis

Interviews were conducted with members of CDC staff (*Appendix I*), the Federal Emergency Management Agency (*Appendix E*), the National Emergency Management Association (*Appendix E*), Public Health agencies (*Appendix L*), private sector organizations (*Appendix H*), International Observers – WHO and PAHO (*Appendix D*), and other interested parties. Anonymous online surveys were completed with CDC personnel and with a wide variety of other organizations: Federal, State and Local Governments; community organizations; faith-based organizations; public, university and community hospitals; state universities and educational institutions; and the Department of Defense (*Appendix J, K, M*). Processes and procedures were identified, reviewed, and mapped as a baseline for CDC's

emergency response activities prior to the event. Emergency response documentation, situation reports, process flows, timelines, meeting minutes, other AARs, and other relevant information were obtained and reviewed (*Appendix N*) to determine the processes and procedures executed during the event. Other appendices include the organizational structure charts from the DEOC (*Appendix A*), the Emergency Communication System (ECS) AAR (*Appendix Q*).

Figure 1: AAR Data Collection Map

AAR DATA COLLECTION



Data were collected and analyzed accordingly. Qualitative and quantitative analyses were conducted where appropriate, and where possible. Data were then coded to produce cross-tabs and frequency tables for further analysis. Common themes were identified with the objective of recognizing the operational strengths and improvement opportunities of CDC's response effort. Conclusions and recommendations were then determined, and the results summarized in a format that can be easily understood and implemented through a Corrective Action Plan (CAP) and Registry which is discussed in later in the 'Next Steps' section.

Limitations

It is important to note the research team did not have access to the senior health officials within the states, and therefore, interviews were not conducted to gather their input first-hand.

4. RESULTS

Strengths

- The overall "can-do" attitude of CDC leadership and staff enabled the Agency to provide needed assistance and strategic leadership during and after the crisis.
- SNS demonstrated ingenuity and entrepreneurial behavior in rapidly developing and deploying Federal Medical Contingency Stations (FMCS) and working with states to address medication needs of evacuees with chronic illness.
- CDC took on a leadership role in a multi-agency, multi-sector effort to reconstitute the New Orleans Public Health and Medical care system.
- Field teams were deployed with the necessary equipment in a timely and efficient manner. Once personnel were notified of their deployment, they were able to quickly obtain required equipment. (*Appendix N)*
- CDC staff placed in the Joint Field Office (JFO) and in other EOCs expedited the DEOC response to requests for assistance from the states. The DEOC was able to prepare in advance for requests for assistance from the states. (*Appendix N)*
- Liaisons from the Red Cross were stationed in the DEOC to provide real-time interaction between the agencies.
- Disaster Response representatives from WHO and PAHO met with CDC Senior Leadership to provide perspectives on humanitarian emergencies and to begin to establish an ongoing relationship with CDC
- The information technology support staff responded to requests timely and efficiently during the response. Personnel in the DEOC and the field were confident that IT requests would be efficiently addressed. (*Appendix N)*
- CDC Environmental Health field teams provided support to state and local communities on a multitude of issues including: re-entry and re-occupation guidance for the residents of affected areas; building and home assessments; solid waste disposal; water; wastewater; mold; chemical and other substance exposure; shelter sanitation and safety; and food safety.
- CDC deployed multi-disciplinary, multi-CC/O 'Public Health in a Box' teams to mega-shelters in Texas to provide support and technical assistance to local health departments.
- Logistic Support Staff and Resilience officers deployed to provide direct support to CDC field staff.

Areas for Improvement

While a number of factors were highlighted as being strengths, they were countered by several issues that worked against the ability to provide an orchestrated and efficient response. The following items represent the key findings and recommendations:

Issue 1: Mission Objectives and Deployment Assignments	
Contributing Factors	
CDC mission objectives were not clearly defined and/or communicated to CDC Responders.	Clear mission objectives were not established for the CDC response to Hurricane Katrina. An Incident Action Plan (IAP) was not implemented for this response which led to confusion about mission objectives among CDC responders. While the responders defaulted to what they believed to be the right course of action, a formal IAP process was not followed that would have supported an understanding of Agency and HHS objectives. The lack of a clear and publicized IAP impacts managements' ability to lead in the most efficient and effective manner. Success or failure of any response depends, in part, on having and communicating the mission and objectives to staff and that they understanding the plans, processes, policies and procedures in place to support the mission. CDC leadership can make a significant step toward ensuring mission clarity through the use of Incident Action Planning.
CDC staff deployment assignments were made without following the established Action Request Form (ARF) and Mission Assignment (MA) process.	CDC personnel were deployed to the field prior to the Action Request Form (ARF) process being completed. Additionally some personnel were not deployed in response to a specific Mission Assignment (MA). In certain cases, deployed CDC personnel were sent home by the affected states because they were not responding to a specific state request. Working within the ARF/MA process must be balanced with CDC's need to rapidly deploy staff.
The role of EMAC in providing support to Public Health activities was not clearly defined.	EMAC (Emergency Management Assistance Compact) was used by several states during Hurricane Katrina. The use of EMAC by states has the potential to alter the types of requests for help that CDC receives from states, as well as how states interact and provide mutual aid. States using EMAC can request and receive direct assistance (practitioner support, supplies, etc.) from states without contacting CDC. This may return CDC to the traditional role of provider of Technical Assistance and National Public Health coordination. EMAC representatives reported they were not aware of the resources and services CDC provides.
Better coordination between CDC and the PHS Office of Force Readiness and Deployment (OFRD) was needed.	Both CDC and the PHS Office of Force Readiness and Deployment (OFRD) were selecting staff for deployment from the same pool of Public Health Service (PHS) Officers. It was reported that in some cases medical officers deployed through OFRD were filling non-clinical roles while they could have been deployed by CDC to provide Public Health support.

Corrective Action Plan

1. Standardize the Incident Action Planning (IAP) process and implement during all responses.
2. Ensure key support personnel in the Division of Emergency Operations (DEO) and Centers, Institutes, and Office (CIO) are familiar with the IAP process so that they can support Agency leadership during an event.
3. Ensure coordination between OFRD and CDC to determine priority needs and availability of PHS personnel during a response so that a balance is maintained between clinical needs and public health requirements.
4. Work with DHS and HHS to identify changes that can be implemented to the ARF/MA process that can accelerate response support. One solution is the development of a series of pre-scripted MAs that can be "turned-on" in case of emergency.
5. Form a workgroup consisting of representatives from CDC, other HHS Operating Divisions (OpDivs), ASTHO, CSTE, NACCHO, APHL, NEHA, and the National Emergency Management Association (NEMA – the host organization for EMAC activities) to address public health mutual aid needs and processes for emergency response. This will include developing a process that defines how State Health Departments would use EMAC and how CDC is incorporated into requests for mutual aid resources.

Issue 2: Organizational Structure and Incident Command System	
Contributing Factors	
The change in the Incident Command System organizational structure during the event led to confusion and response inefficiencies.	The Incident Command System (ICS) organizational structure within the Director's Emergency Operations Center (DEOC) changed a few days after the response started. This impacted lines of authority, reporting, communications channels, and information exchange. Changes made were not in compliance with existing operational procedures. Individuals involved in the response were confused as to their mission and tasks as the organizational structure changed. The ICS change led to a breakdown in communication within the DEOC and among field teams contributing to deployed personnel either reverting to previously known patterns for communications and/or the mass dissemination of information to individuals. This resulted in overloaded email in-boxes, and in some instances, the delay of critical decisions or approvals for necessary actions.
There was a lack of awareness of the Incident Command Structure and emergency response processes.	Staff (deployed both to the DEOC and to the field) reported a lack of awareness of the overall ICS Structure and National Response Plan (NRP) as well as emergency response processes. This resulted in CDC personnel being unaware of existing emergency response Standard Operating Procedures (SOPs), chain of command, information flow and the organizational structure while in response mode.
Detailed SOPs should be developed and disseminated to all individuals identified as potential emergency responders.	CDC SOPs were found to be in various states of availability: Non-existent, not complete, in draft form, complete but not current, or in conflict with similar SOPs. SOPs reviewed did not provide procedural or task-based guidance for the DEOC teams or the deployment teams. Some individuals interviewed were not aware that SOPs existed. Furthermore, new teams formed during the response did not have SOPs for procedural guidance. Because some SOPs were outdated or in "Draft" form, they were not executed. Individuals unfamiliar with prior response operations were not given the operating procedures or briefed on the overall emergency response process.
The role of the SMO needs to be clearly defined and articulated.	The Senior Management Official (SMO) works directly with state health commissioners, local health authorities and others to implement the Portfolio Management Project within each state. The role of the SMO in an emergency situation premiered during Hurricane Katrina and needs to be clearly articulated in the CDC Response Plan. The SMO needs to be tightly integrated with the Incident Management Structure.
CDC capacity to support more than one catastrophic event at a time needs to be evaluated.	One of the private sector companies interviewed expressed concern for CDC's ability to respond if Hurricane Rita had been as devastating as Hurricane Katrina. CDC leadership expressed similar concern during the response as to the implications for CDC workforce in continual or simultaneous emergencies and developed a plan for such an occurrence.
DEOC needs to improve its capacity to rapidly and accurately identify personnel for deployments and to track personnel deployed to the field.	The current Resource Tracking System (RTS) does not provide detailed information that is required by the deployment team. Personnel were often deployed to fill roles that were outside of their area of expertise. Manual spreadsheets were used to track deployed staff and reconciling these were time consuming. Various Emergency Coordinators relied on their own collegial relationships to fill rosters for appropriate responses to deployment requests. By establishing a centralized and detailed resource tracking tool that lists all deployable personnel, their updated qualifications, and contact information, the availability of deployment personnel can be more effectively managed. This system should also provide functionality to track deployed personnel. Additionally there is a need to develop force protection strategies for CDC deployed field staff and permanent field assignees so that relocation of personnel in an affected area is possible. Note: It has been reported that the Preparedness Workforce Management System (PWMS) will be replacing RTS, and will draw its data from CDC Neighborhood. As a windows-based system, it will be more user-friendly than RTS, so creating teams and tracking personnel should be easier with RTS. However, as with RTS, the data is only as good as individual CDC staff enters into CDC Neighborhood. It is planned for an Administrator function that will let Supervisors check to see that their staff have updated data in CDC Neighborhood, but the enforcement mechanism to ensure accurate data is

	put into Neighborhood has not been determined.
CDC should consider deploying administrative support staff in addition to SMEs.	While SMEs are briefed to expect and anticipate a wide range of activities, including non-scientific support activities, the SME depth in many of CDC's areas of expertise is limited. Deployment of support staff can keep SMEs focused on critical tasks and provide SMEs down-time rather than time taking on mundane tasks.
The Financial Management Office and the Procurement and Grants Office need a policy to address surges in workloads and certain CDC contractor policies.	The volume of deployed personnel overwhelmed the ability of the Financial Management Office (FMO) to process travel vouchers in a timely manner when deployed personnel returned from the field. Some deployed staff did not have government credit cards. A number of the responders that were deployed were not CDC personnel; they were contractors to CDC. Contractors cannot travel on government orders; they must coordinate their own travel through their contracting firms. There is not an enterprise solution to address the contractor issue.
Conditions leading to the change in alert status from Response to Recovery were not clearly understood.	There were no clearly defined activities or events that determined when the DEOC moved from Response to Recovery alert status. Additionally, current SOPs do not address the recovery phase of a response. In the final stages of the Katrina response, responders reported that CDC's level of involvement was not clearly communicated to personnel. As a result, deployed individuals felt that focus was diverted from the response, and they did not feel that they received the full mission support
Responder resilience was a concern.	Responder resilience issues were identified by survey respondents. Resilience is a continuous process and needs to be addressed before, during, and after a response. This represents a shift in CDC Culture and organizational dynamics to recognize the impact of response on overall agency operations and performance, not only on those that deploy. Changes in incident management command structure are needed to enable full situational awareness, feedback, and guidance in matters pertaining to agency response and resilience. Additionally, several respondents expressed a need for better screening of deployable staff (suitability for disaster work), better tasking and mission preparedness, and time off or counseling upon return home as well as the need for a phase-in period upon their return to their regular work assignments. Respondents also identified the need for the agency to more consistently recognize the contributions of employees (both field and DEOC) after a response.

Corrective Action Plan

1. Finalize CDC SOPs for emergency response:
   Address overall response plans as well as agent or event specific annexes. Ensure that all plans are consistent with the National Incident Management System (NIMS) and NRP. SOPs should offer procedural guidance for all individual teams involved in an emergency response. This expansion should include a standard organizational structure, roles and responsibilities for teams supporting the emergency response, staffing requirements and skill sets necessary to perform the functions of each team, procedures for identifying, tracking, and rotating resources, internal and external communication and information flow plans, standard reporting templates and forms for capturing and disseminating information, procedural check lists, standard task lists and action item tracking, logistical team operational guidelines, field team equipment guidelines, and training requirements for response personnel. Ensure SOPs have appropriate linkage with HHS and NRP to ensure response integration between CDC and other response partners.
2. Develop SOP addressing contingency planning for emerging secondary or tertiary events. These second event scenarios should be incorporated into CDC drills and exercises. Include consideration of viability of and process for utilizing outside experts to provide surge capacity.
3. Formalize the role of the SMOs in emergency preparedness and response activities.
4. Establish SOPs and policies for the SMOs that are consistent between state and local authorities and mandates (such as information sharing, data collection and logistical issues).
5. Identify organizational processes for response coordination in those states that do not have an assigned SMO.
6. Include administrative support staff into the planning process for deployment.

7. Clearly identify, review, and adapt (if needed and feasible) contractor travel and expense reimbursement policies for emergency response operations.
8. Develop an SOP that permits FMO to quickly increase personnel and resources to support travel and reimbursements. (If necessary, communicate to deployed personnel that unusually large deployments often result in delayed reimbursement.)
9. Work with US Bank to develop a formal agreement ensuring that those who do not get reimbursed in a timely fashion do not have to pay interest on the government credit card.
10. Maintain a supply of unassigned government credit cards and develop a process to rapidly issue government credit cards for staff that do not have them.
11. Develop criteria to determine activation and deactivation of the DEOC and at what point response coordination is handed over to the Lead CIO for recovery activities.
12. Implement CDC-wide Responder Resilience Plan. This includes ongoing activities pre-, during, and post-deployment
13. Incorporate the Senior Resilience Officer as part of the Incident Commanders General Staff (as part of a "Health, Safety, and Resilience Advisory Team" function)
14. Develop a CDC-wide policy for timely recognition of service for deployments (including service in DEOC).

Issue 3: Information Flow and Management	
Contributing Factors	
The internal information flow and management processes were not clearly defined. Daily task lists and supporting action items were not effectively managed.	Individuals involved in the response were unable to clearly define to whom or how information should be transferred internally. The event portal did not have a defined folder structure. Document clearance and version control became difficult and untimely because there were no specifications for the process within the SOPs. This deficiency resulted in mass emailing, incomplete communication loops, and loss of information. It was difficult for members of the response teams to know which tasks were being actively pursued, by whom, and when these tasks had been completed.
Preparing briefings for CDC leadership diverted time and resources from critical response activities.	Respondents reported that it seemed that much time and energy was devoted to developing reports in order to brief senior officials at CDC and in Washington. Activities in the DEOC appeared driven by the daily briefing schedule. The format and content of the Director's Daily Brief changed multiple times during the first several weeks of the event and key support staff was unsure what level of detail was required. Although a standardized briefing format was eventually adopted, its appropriateness remained in question since the material could not always be covered in the allotted time and could be covered through the use of a standardized IAP format.
A process for information and data sharing to internal and external partners should be established.	There was some confusion with the states as to what information could be shared with HHS, and at the same time, there was an expectation that CDC provided overall situational awareness to HHS, the White House and to other interested parties.
Communications with the field needs to be addressed.	In the days following the event, CDC personnel in the field had difficulty with voice, email, and data transmission among themselves, with local and state officials, and with the DEOC.
Partnerships with the Private Sector need to be strengthened.	The private sector (including non-governmental organizations, faith based organizations, profit/not for profit organizations, etc.) play an important role in disaster response. CDC should improve linkages with private sector agencies both for mutual support and for dissemination of risk communication messages.

Corrective Action Plan

1. Update information flow procedures to include information flow plans for DEOC teams, CDC field teams, external partners, and other federal agencies.
2. Update and utilize standard data collection forms.
3. Evaluate and consider the implementation of an Enterprise Content Management tool to maintain version control and access rights to documents relating to an emergency response.
4. Establish an archive for data, forms and samples of their use (such as rapid assessments and ARFs) for analysis and reference purposes.
5. Evaluate and consider implementing software such as the HHS Incident Command System (ICS) management software (WebEOC).
6. Ensure that there is a clear and consistent communication plan that incorporates all existing communications entities/networks (e.g. Epi-X, HAN, Clinician Information Lines, ECS, PCS).
7. Establish an accelerated clearance flow for emergency information and documents needed during an emergency event.
8. Meet with HHS, DHS, state and local health directors, emergency managers and others to establish requirements, policies and procedures for information collection, exchange and reporting for future events.
9. Re-evaluate all systems of surveillance and reporting for simplification to allow for centralized analysis for decision making.

10. Create a process for developing and teaching systems that will allow for data collating and analysis within the appropriate CIO.

11. Use standardized report forms (such as those from IAP format) to address briefings.

12. Agree to a standard frequency and level of detail necessary for reporting.

13. Ensure that information shared with anyone, internally or externally, is consistent between the Programs and DEOC.

14. Create a compendium of CDC's emergency response information into a Smart Book that can be stored on a CD or flash disk. Distribute the emergency response information to all local health officers in advance of an event as reference material.

15. Explore alternatives for communications between CDC and state, local and federal entities when local infrastructure is damaged or non-existent.

16. Convene a workgroup composed of the National Centers for Public Health Informatics (NCPHI), the Office of Government Commerce (OGC), and representatives from ASTHO and NACCHO to address the ramifications of CDC entering local IT support areas to use IT equipment and Local Area Networks (LANs) which are intact but where the evacuated owner is not available.

17. Establish, maintain and enhance linkages with the private sector (NGOs, faith based organizations, profit/not for profit organizations, etc.).

18. The National Center for Healthcare Marketing (NCHM) will identify a cadre of private-partnership SMEs who could be on-call for activation as the point of contact throughout a CDC response effort. Assign single point of contact in the DEOC for the private sector for each event.

19. Assign permanent response liaisons for CDC who can work with these private-partnership entities in non-emergency times. (NCHM has taken over this task and is working with the DEOC to develop protocols, job action sheets, and procedures.)

Issue 4: Public Health Practice Issues	
Contributing Factors	
Displaced populations had chronic medical conditions.	As CDC focused on public health issues, there did not seem to be an equivalent government effort focused on providing health care services, meeting medical needs and access to care by vulnerable populations. Shelters did not have the medications needed to treat exacerbations of chronic disease, which was a primary health problem. Not being able to provide the right medication to the right individuals can pose additional health risks and spread of disease. Proper coordination will ensure the right treatment for vulnerable populations.
Clarify public health's role in sheltering.	A CDC "home" or work group for domestic shelter issues should be established. In the areas impacted by the storm, the approach to shelter assessment, surveillance, data collection instruments, standards, etc. appeared to be taken from developing country situations where the main health issues are infectious, rather than chronic diseases.
Address the changing role of the Strategic National Stockpile (SNS).	During Katrina, SNS was called upon to deliver and lead the set-up of FMCS as well as procure and deliver medications for the chronically ill, a seeming expansion of their mission.

Corrective Action Plan

1. Develop standardized assessment tools, data collection instruments, and recommendations for shelters, their staff, and residents.
2. Identify methods for tracking of shelter locations
3. Address the expanding role of SNS in providing chronic and emergency medical supplies and equipment.
4. Establish a multi-agency workgroup comprised of agencies that provide chronic and emergency medical supplies and equipment (NDMS, Health Resources Services Administration (HRSA), state and local, etc.), who will work with the SNS to develop models to develop potential needs for beds, medications, supplies, etc.
5. Evaluate the process for allocating and configuring FMCS units to ensure federal and state expectations and needs are being addressed.
6. Establish a workgroup to address chronic and communicable disease issues that require routine therapy care for displaced populations, including shelter populations and evacuees in states other than the affected state (i.e., people in hotels in neighboring states).

Issue 5: Training and Exercises	
Contributing Factors	
Evaluate exercise needs and participation.	Many respondents observed that CDC should regularly conduct emergency response readiness exercises with federal, state and local partners, as well other public and private partner organizations. These exercises should include all CIOs and not be limited to DEO staff and select SMEs. As exercises are planned and conducted, evaluation procedures and corrective action planning should be included within the overall planning process.
Evaluate training needs.	CDC should conduct regularly scheduled emergency response readiness training with all appropriate parties. Annual mandatory training of all deployable CDC staff should address CDC's emergency response role during an event including ICS, NRP, and CDC's Response Plan. Functional roles in the response plan should be identified and personnel that could be called upon to fill such roles should be trained accordingly.
Establish a Credentialing System for CDC Responders	A Credentialing System for CDC responders needs to be developed and implemented. This system, similar to the Red Card system used by the US Forest Service, that identifies the responder's level of training and certification as well as their authorization to hold a particular position (or positions) in a response.

Corrective Action Plan

1. Conduct training for CDC and for state health departments on ARF/MA process to facilitate requests for CDC help.
2. Ensure that all CDC staff in leadership roles in a response has advanced Incident Management Training including IAP training. This includes training the support staff for CDC Senior Leadership.
3. Develop and deliver a mandatory training course for all deployable CDC staff that addresses CDC's emergency response role during an event.
4. Identify functional roles required in a response and identify suitable personnel that could fill such roles and train them accordingly. Ensure employees receive DEOC operational training prior to being assigned to the DEOC.
5. Ensure training to develop a cadre of deployable Resilience Officers for field teams.
6. Develop and implement a credentialing system for CDC responders.

5. NEXT STEPS: Implementing the Corrective Action Plan

As stated earlier, an AAR is a professional discussion that focuses directly on tasks and goals. It is not a critique; it does not judge success or failure; it attempts to discover why things happened; it focuses directly on the tasks and goals that were to be accomplished; and it encourages employees to surface important lessons in the discussion. The next step in this process is the implementation of the Corrective Action Plan (CAP)

The CAP and the associated CAP Registry is designed to allow the Senior Staff for the Coordinating Office for Terrorism Preparedness and Emergency Response (COTPER) to clearly identify the tasks and the 'owners' responsible for implementing the desired corrective actions. Action Items will be managed and tracked in the COTPER Action Item Registry, an electronic database that will maintain the status of all of CDC After Action Items. The intent of the registry is that it will maintain a cumulative record of all action items so that Agency improvement can be monitored over-time. This registry will begin with the Katrina response.

The process for developing this Corrective Action Plan (CAP) began with the findings from the Hurricane Katrina AAR. The consolidated list of findings was reviewed by the Corrective Action Plan Workgroup who determined what corrective actions were necessary. This included an explanation of the issue, contributing factors leading to the findings, recommendations, and an action lead.

The Corrective Action Plan Registry will reside with the Division of Emergency Operations (DEO). Action item owners will be responsible for providing progress updates – the frequency and method will be determined by the DEO. As improvements and changes are made, training, drills, and exercises will be developed by the DEO to test new procedures and processes and ensure that effective measures have been put in place. Periodic progress updates will also be provided to CDC Leadership.

As all action items cannot be addressed simultaneously, each of the item leads will need to prioritize their action items and incorporate a realistic timeline so that the items can be addressed in a sequential and realistic order. Additional steps that must be taken include; identifying a lead person to implement the items; providing training and/or exercise opportunities to familiarize staff on changes; providing feedback to CDC offices, leadership, and staff on the implementation of recommendations; and communication of any new structures, SOPs, etc.

These processes will enable CDC leadership to develop and implement the strategic steps necessary to ensure that the Agency is better prepared for any disaster response in the future.

6. CONCLUSION

Hurricane Katrina was one of the strongest storms to impact the coast of the United States during the last 100 years. It caused widespread devastation along the central Gulf Coast states with the brunt of the storm focused on New Orleans, LA, Mobile, AL, and Gulfport, MS. Never before has CDC, or any other federal agency, been challenged to respond to an event such as Katrina. Nevertheless, response plans were enacted and CDC's mission "to promote health and quality of life by preventing and controlling disease, injury, and disability" was put to the test.

This report identifies five broad areas for improvement: *Mission Objectives and Deployment Assignment; Organizational Structure and Incident Command System; Information Flow and Management; Public Health Practice Issue; and Training and Exercises.* These areas are not new areas to be targeted. Previous AARs have identified findings in the same areas; now is the time to implement plans to address these areas.

It is critical to note that while the responsibility for coordination of emergency response resides within COTPER, many of the issues identified fall under the broad category of 'systems integration' which requires CDC efforts to deliver technical assistance, public health practice, and science to be a coordinated multi-CC/O effort. Success in correcting the AAR's findings will rely on such a collaborative response.

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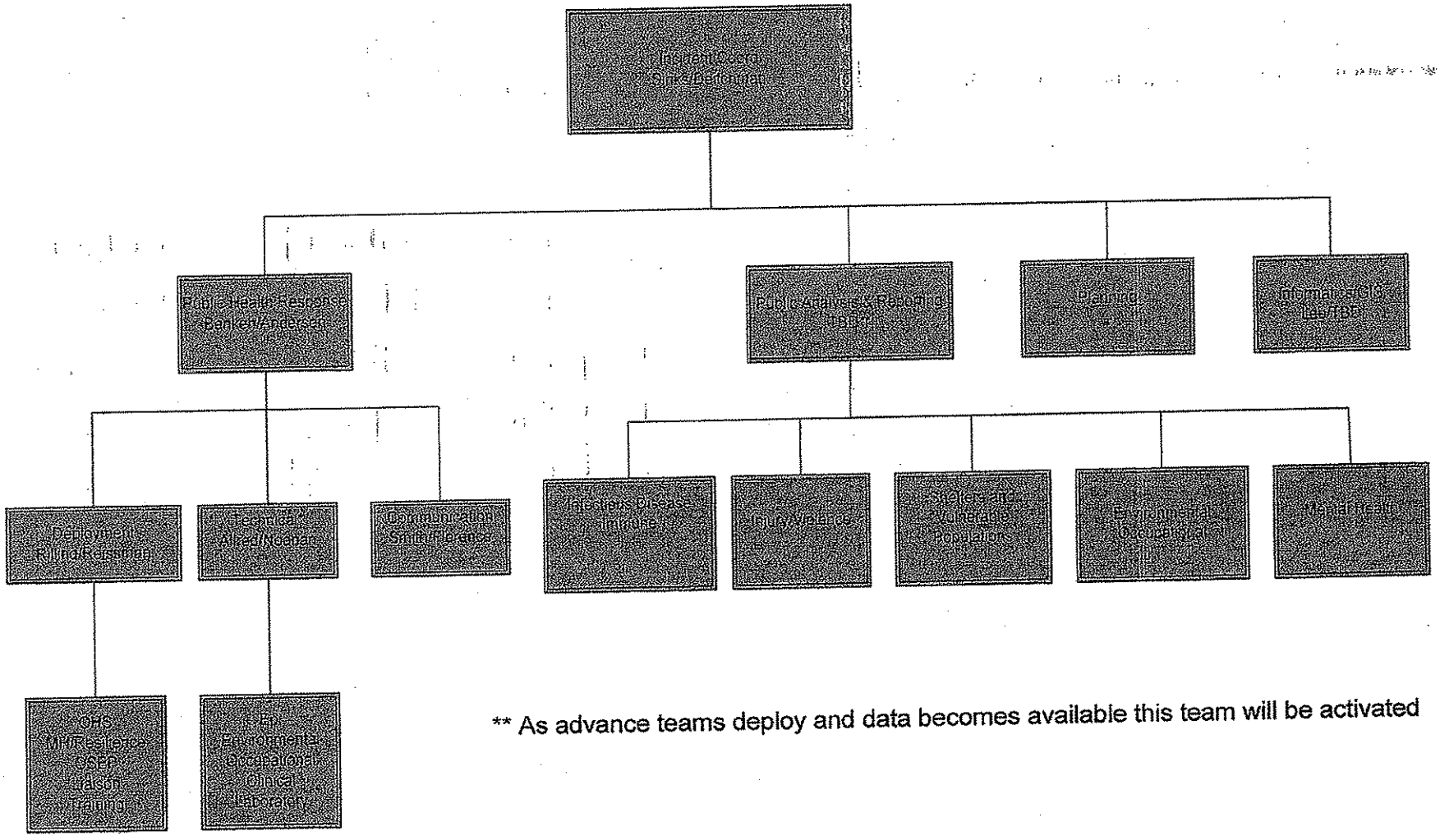
(of AAR)

Appendix A

Organizational Chart A and Chart B are examples of variations in the DEOC structure that were implemented during the Katrina response. These charts were posted on the event portal. The structure depicted in Chart A was implemented prior to the structure depicted in Chart B.

CHART A (1 0f 1)



** As advance teams deploy and data becomes available this team will be activated

*All CIOs play supportive role to technical activities

CHART B (1 0f 3)

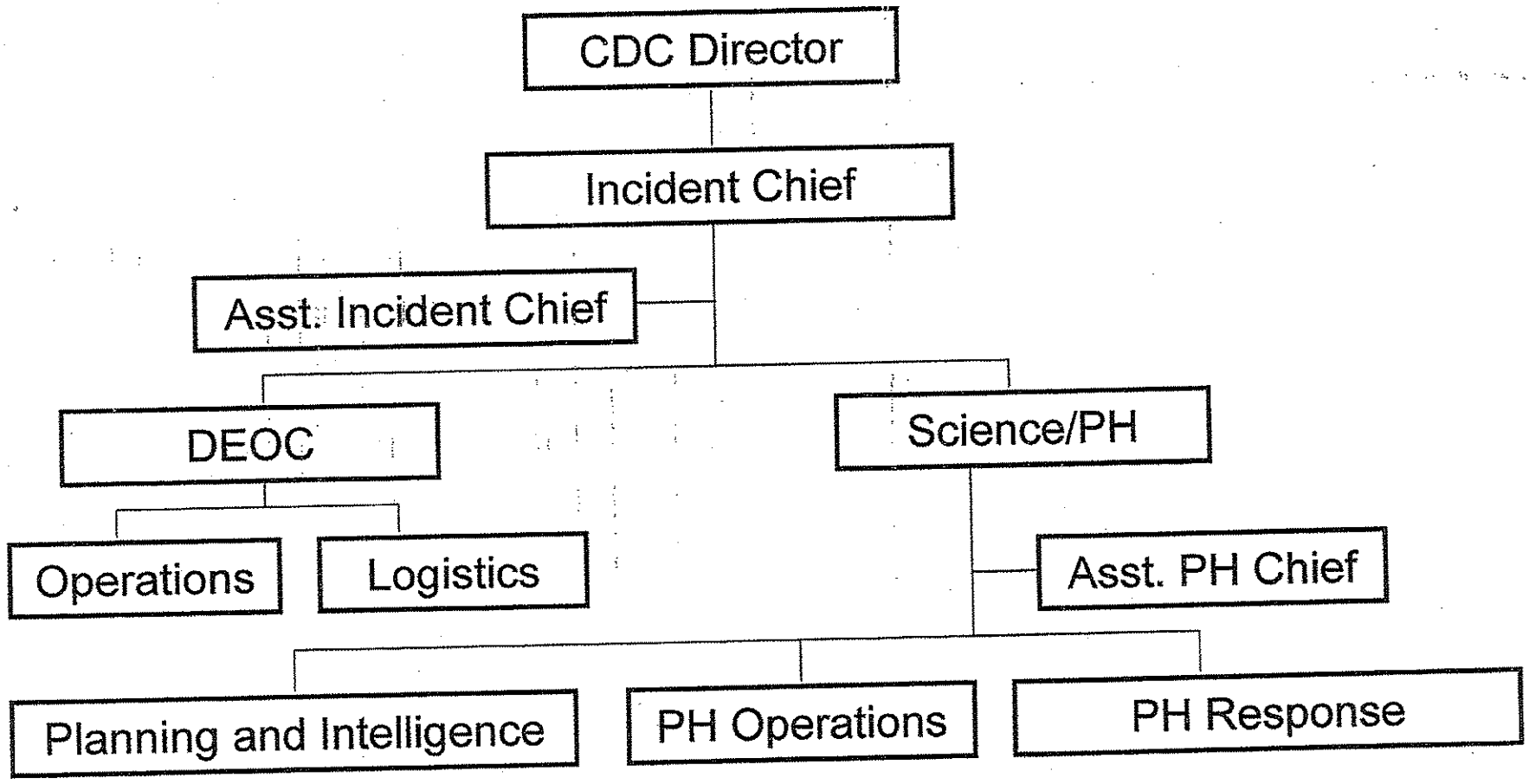

CDC Director
Incident Chief
Asst. Incident Chief
DEOC
Science/PH
Operations
Logistics
Asst. PH Chief
Planning and Intelligence
PH Operations
PH Response

CHART B (2 0f 3)

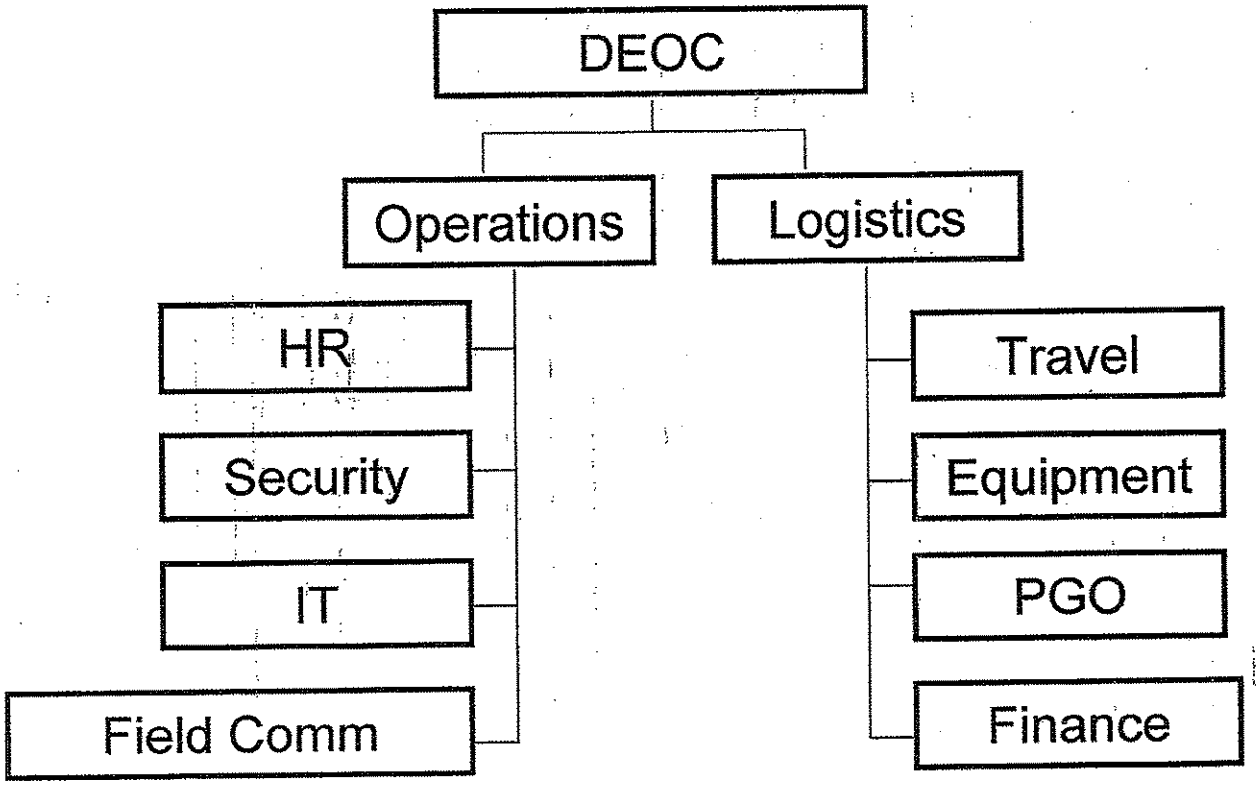
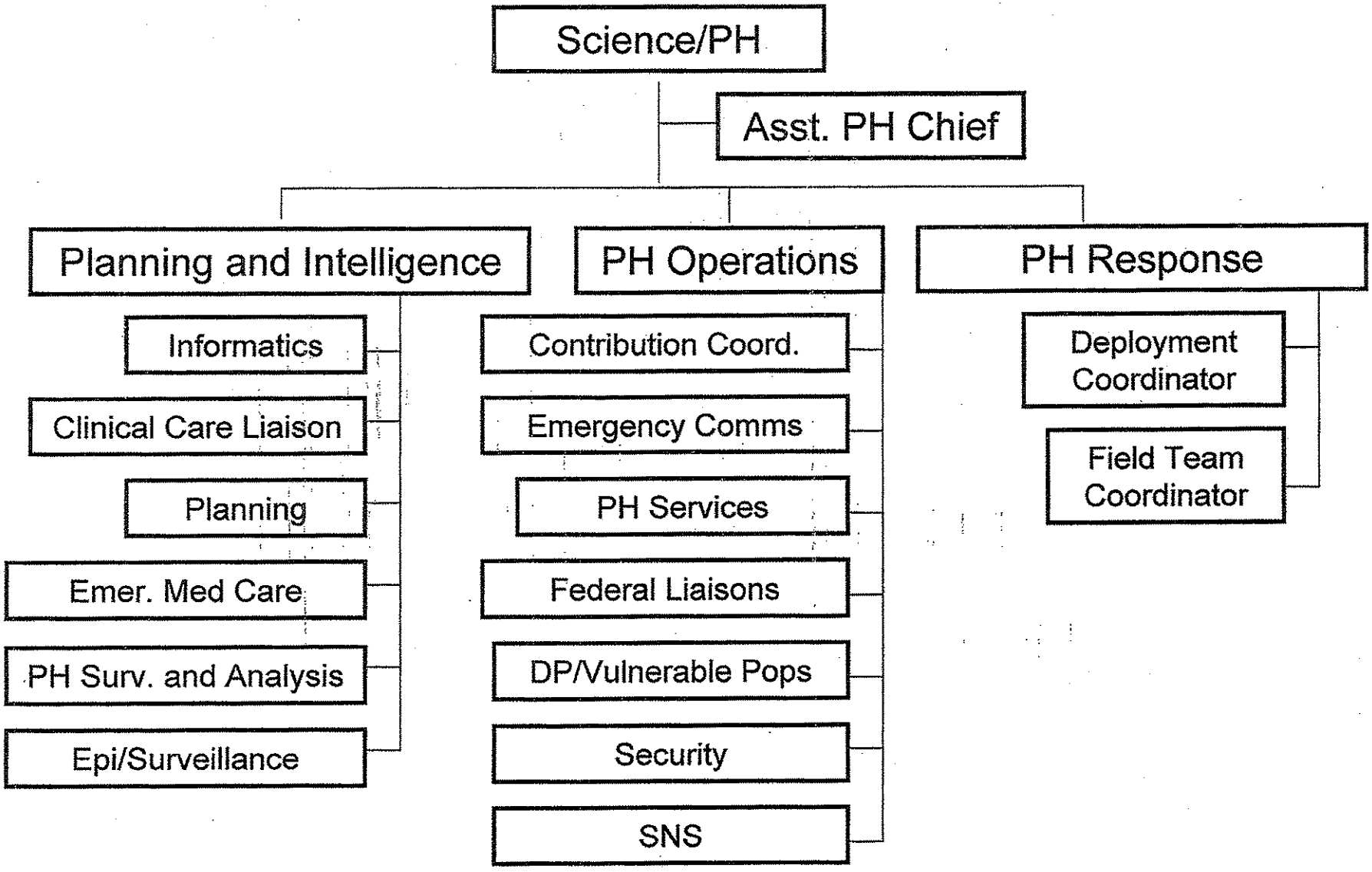

DEOC
Operations
Logistics
HR
Security
IT
Field Comm
Travel
Equipment
PGO
Finance

CHART B (3 0f 3)


Science/PH
Asst. PH Chief
Planning and Intelligence
PH Operations
PH Response
Informatics
Clinical Care Liaison
Planning
Emer. Med Care
PH Surv. and Analysis
Epi/Surveillance
Contribution Coord.
Emergency Comms
PH Services
Federal Liaisons
DP/Vulnerable Pops
Security
SNS
Deployment Coordinator
Field Team Coordinator

APPENDIX B
ORGANIZATIONS CONTACTED FOR IN-DEPTH TELEPHONE INTERVIEWS

Organization	Status
Completed	
Association of Public Health Laboratories (APHL)	Completed
Association of State & Territorial Health Officials (ASTHO)	Completed
FedEx	Completed
FEMA	Completed
GE Energy	Completed
Home Depot	Completed
Intercontinental Hotels	Completed
National Association of County & City Health Officials (NACCHO)	Completed
NEMA	Completed
Sprint	Completed
Wal-Mart	Completed
Contacted	
American Red Cross	Contacted
Council of State and Territorial Epidemiologists (CSTE)	Contacted
Emory School of Public Health	Contacted
National Environmental Health Association (NEHA)	Contacted
Declined	
The Kaiser Family Foundation	Declined

APPENDIX C
TEAM B DISCUSSION NOTES AND RECOMMENDATIONS

BACKGROUND

The original "Team B" was an experiment in competitive threat assessments that the CIA tried in 1976. Three "B" teams of "outside experts" were charged with coming up with innovative ways of dealing with the Russians during the Cold War. These teams challenged conventional or "in-house" wisdom of CIA analysts in their analysis of highly classified data used by the intelligence community to assess Soviet strategic forces in the yearly National Intelligence Estimates.

The Office of Strategy and Innovation's (OSI) Team B is somewhat of a different entity, charged with offering reasoned and researched counterpoints to proposed strategies, ideas, and propositions. By doing so, OSI staff hope to obliterate "the box" and offer CDC dynamic leadership in strategy and innovation to enable CDC to meet its overarching public health goals.

STRATEGIC

1. Need to address medical and public health needs of a "Diaspora" of evacuees who may not be able to return home for weeks to months

    a. This has strategic, operational, and tactical implications

    b. According to Red Cross liaison in the DEOC, the main healthcare challenge in shelters was to provide necessary ongoing care and medications for evacuees with chronic illnesses (e.g., hypertension, diabetes, heart disease, COPD/asthma, renal insufficiency, seizure disorders, cancer therapy, etc).

        i. Unlike overseas refugee situations where infectious diseases and malnutrition have been the top concerns.

        ii. Unlike previous US hurricane evacuations where evacuees were in shelters for very brief time periods.

    c. Need for all patients to have electronic medical records with web access from distant sites

    d. Need for states/localities to plan (with feds) how they would meet short to-intermediate term needs of incoming evacuees and conversely, how they would serve their "expatriate" citizens in other states.

    e. Other issues to be addressed include reconciling public health laws of different states, e.g. school immunization laws

2. Addressing health disparities issues is essential for national preparedness planning. Issues include:

a. Increased prevalence in some minority communities of certain chronic illnesses, including multiple and sub-optimally treated conditions, that may pose specific public health challenges during an emergency response

i. Less able to evacuate promptly

ii. Increased risk for adverse sequellae after evacuation.

1. Exacerbations of chronic diseases

2. Lower immunization rates may increase risk of certain vaccine-preventable diseases.

b. The legacy of distrust in some minority communities could complicate emergency responses. This will be especially problematic after events where rationing of countermeasures, ICU beds, etc. is predictable and public communications challenges will already be daunting (e.g. a severe influenza pandemic)

3. Preparedness planning should not be completely dependent on the ability of governments to respond effectively at the scene of an event within hours or even days post-event.

a. There may be unforeseen situations where response is delayed. Supplementary approaches should be considered (e.g., MedKit or other "pre-event deployment" programs).

OPERATIONAL

1. New solutions are needed to ensure communications and IT connectivity in the field after an event.

a. Problems were so pervasive that this could possibly also be considered a strategic issue. In the days following the event, CDC personnel in the field had difficulty with voice, email, and data transmission among themselves, with local, state officials and with the DEOC. In some cases, local health officers had no communication for days and were, therefore, isolated and unable even to assess the situation in their jurisdictions.

b. Need to ensure voice and data communications when land lines, cell phones, and blackberries do not work (because local infrastructure is not functional) or are overloaded.

i. May need communications alternatives using existing (e.g., high frequency "ham" radio?) or new technologies

ii. In some cases may need legal authority/capability to physically/ electronically enter local IT support areas and use IT equipment and LANs which are intact but the evacuated owner is not available.

iii. Review state coop agreement guidance and establish performance measures that ensure reliable communications during disasters

2. CDC representation in the ESF -8 structure required (requires?) clarification.

a. About 3 weeks into the response, a review of the ESF 8 organogram with locations of CDC assignees was requested to ensure that CDC had prompt access to important information. This soon evolved into a need for clarification of the CDC command structure in relation to the federal structure.

3. CDC internal response organogram requires review

   a. As one senior colleague said, "We built a Center in 4 days and then reorganized it." This required considerable senior staff time and energy during the first week of the response. The review should address why the pre-planned ICS structure apparently did not work optimally and the pros and cons of the structure it was replaced with, to optimize preparedness for the next event.

4. Implications for CDC workforce of continual or simultaneous emergencies.

   a. Need to regularize "emergency operations" into preparation, operations, and recovery phases.

   b. Need to develop criteria for withdrawal of CDC personnel from the field. When do recovery operations cease?

   c. A "second scenario" team worked on a strategy for a second simultaneous event, but answers to the tough questions appear unclear, e.g., where will the personnel surge capacity come from? What will CDC stop doing? When might CDC utilize outside experts?

      i. There appear to be no plans or mechanisms for CDC to rapidly utilize outside experts from partners/agencies with extensive experience to help CDC respond to an event or to backfill for CDC personnel who are deployed. Such mechanisms should be developed and exercised. Personnel might include EIS alumni (many of whom are in Commissioned Corps reserve), experts from partner organizations and foreign CDC-like agencies. CDC Foundation could possibly assist with some aspects.

5. Harmonization of surveillance and assessment activities across CDC and the government

   a. Need real time collection, transmittal of data, e.g., with handheld devices

6. Continuing monitoring of evacuees for health effects, including after return; voluntary registries, possibly with prospective specimen collection

TACTICAL

1. A CDC "home" or work group for domestic shelter issues should be established

   a. Approach to shelter assessment, surveillance, data collection instruments, standards, etc. appeared to be taken from developing country situations where the main health issues are infectious, rather than chronic diseases.

   b. Need pre-developed, standardized assessment tools, data collection instruments, and recommendations for shelters, their staff, and residents.

c. It was difficult to identify all the shelters.

d. Issue of shelters for persons with disabilities/special needs

2. The information flow process within the DEOC and to its customers should be reviewed.

   a. There was uncertainty regarding the information needed for the CDC Director updates and the most useful way to present it; e.g., format, level of detail, verbal vs. written; opportunities to speak with the field, etc. It might be well to review some archived update reports with the CDC Director to get her specific guidance re the optimal template for the future.

   b. Relationship between DEOC communications staff and MMWR articles/clearance/awareness could be solidified.

   c. Frequent rotation of DEOC staff has limitations. Much of the DEOC value is the presence of key people in one location. By the time I developed working relationships with people, they were gone; frequently I did not realize that or know who their replacements were. Three weeks into the response, when I wanted to seek input from team leaders, it was extremely difficult for DEOC staff to tell me who they currently were.

3. CDC personnel need training on ICS structure and roles of various components

   a. Targeted to audience, e.g., people likely to deploy vs. co-workers who have a more general need for this information.

4. Disasters in rural areas may need additional planning.

   a. Communications and supply problems magnified by distances.

   b. Many affected rural areas did not have facilities for billeting of CDC field staff. Travel between base camps and distant rural areas were a problem. May need to lease small aircraft to facilitate access and reduce travel time from base camps to distant rural areas

5. SNS Issues

   a. Emergency medical bed needs, distribution, and utilization

      i. CDC purchased additional medical beds to be prepared in case Rita caused more damage to hospitals than it did. It was discussed that bed requirements, as well as distribution and utilization of beds to date from the SNS may need to review. Comprehensive assessment of medical needs for ESF-8 will likely undertake at a higher level than CDC, we should anticipate it. The process for allocating FMCS beds needs further investigation to ensure federal and state expectations and needs are being addressed.

   b. Medications for chronic illnesses for evacuees.

   c. Burn unit capacity in the US

i. Apparently have 2800 beds, with 800 surge capacity. May need to be increased. Action Item: Closer contact with the national network of burn centers, to harmonize planning. Specifically, consider whether the blast/burn packs developed by the SNS should be used as backup for this network.

6. Impact of severe gasoline shortage on CDC field (and HQ) operations.

   a. Brought up in discussion, not entirely resolved.

7. CDC deployable laboratory capacity should be considered.

   a. There is a Team B concept paper on this.

APPENDIX D
DEBRIEFING WITH INTERNATIONAL OBSERVERS

ORGANIZATIONS INTERVIEWED:

- HHS/OS
- PAHO – CAREC
- PAHO – Washington
- WHO – Geneva

GENERAL COMMENTS

- Appreciation for welcome, hospitality, complete openness.
- DEOC is "awe-inspiring".
- Many problems in large-scale emergency response have not necessarily been solved elsewhere in the world, but surprised that they existed here also. Having enormous financial and technical resources, the US and CDC are held to a "higher standard".

RESPONSE ORGANIZATION AND STAFFING

- Seeming lack of command/control/coordination in the vast US federal response. Apparently little linkage between CDC and FEMA. Suggest need a stronger management team with greater authority. Even at CDC, "very many teams". "Must have been a challenge for CDC leadership to keep the big picture in view". CDC coordination with states appeared better with some states than others.
- Impressed that core CDC training enabled quick formation of teams, including with people from diverse CDC components, other states, etc. On the other hand, many of these people had little or no training/rehearsal/experience in emergency response.
- Efficient, professional, and focused CDC agenda for tasks at hand, but limited sense of what we were building toward in next week, month, 60-90 days.
- Much time and energy devoted to briefing senior officials at CDC and in Washington. Activities in the DEOC appeared driven by the daily briefing schedule. Briefings can provide useful stimuli to get data and make assessments but can also be just bureaucratic process.
- Task sharing worked well (shifts, reporting)
- Intrigued by the Team B concept "Don't lose sight of Team B idea".

FIELD ISSUES

- The disaster areas seemed unprepared to handle large amounts of donated supplies arriving from multiple sources. This is a common problem internationally, which PAHO and WHO could provide insight. For example, PAHO reportedly has a methodology, supported by software, to inventory arriving supplies. "This is a strategic, not just a tactical problem which is how it seemed to be handled." Requires dedicated personnel.
- PAHO also has specific experience and expertise to address predictable needs, e.g., to evaluate the impact of hurricanes on hospitals.
- CDC teams used shelter assessment surveys typically used for developing countries, not appropriate for US population.
- Shelters did not have the medications needed to treat exacerbations of chronic disease, which was the main health problem. (b)(2)
- CDC focused on public health issues, but there did not seem to be an equivalent government effort on health services provision, meeting medical needs, access to care by vulnerable populations
- Initially, took a long time to get data from the field. At one point, CDC had >200 people in the field, but little data.
- One person stated that there was a delay in getting health messages to the public in the affected areas.

INTERNATIONAL COLLABORATION

- US apparently had no mechanism to accept international assistance, of either technical experts or donations of aid.
- PAHO can assist in working with Latin American or Caribbean populations that have immigrated to the US, used to working with them.
- PAHO knows international experts who may be useful on particular topics.
- PAHO would very much like closer working relationships at technical level. "People in charge of disasters in the Americas and in the US do not know each other".

APPENDIX E
EMERGENCY MANAGEMENT ASSISTANCE COMPACT (EMAC) SURVEY RESULTS FROM INTERVIEWS WITH FEMA AND NEMA

BACKGROUND:

EMAC is an agreement that 49 of the 50 States of the United States have entered into to provide support and assistance during times of emergency. EMAC evolved from a regional concept of a few states helping each other as a result of the devastation caused by Hurricane Andrew in 1992 to a national compact of 49-states, Puerto Rico, the Virgin Islands and the District of Columbia in 2005. EMAC has an organizational structure and governance in place to ensure that Member States needs and expectations are met. Administration support for EMAC is provided by the National Emergency Management Association (NEMA). The EMAC Operations Subcommittee is a function of NEMA's Response and Recovery Committee. This committee is responsible for maintaining EMAC and ensuring that it is in state of readiness. The EMAC plan was developed in the mid 1990's and is updated after each major event. The plan has evolved over the years. The original development of the plan was based upon how the member states coordinated and responded to emergencies very similar to mutual aid agreements, now the plan is more formal and operational based.

Perspectives from Katrina/Rita: FEMA and NEMA provided feedback on the use of EMAC during their response to Hurricanes Katrina/Rita. The collective number of emergency management experience of the two organizations' representatives total well over 40 years.

EMAC was activated during the Nation's response to Hurricane Katrina to support the States of Louisiana, Mississippi and Texas. Thirty-one states sent public health and medical assistance to the three requesting states. The types of request received and filled included: medical personnel, ambulance services with personnel, environmental specialists, biomedical waste pickup, DMORT, newborn laboratory testing of samplings, medical flight teams and substance abuse consultants.

The two coordinating organizations, FEMA and NEMA, coordinated EMAC assistance, evacuee support, urban search and rescue, support to the national coordination group under EMAC, resource management and conflict resolution in resource management. Support was provided to the requesting states at least 24 hours before landfall. The EMAC coordinating team or A-Team is deployed to an affected state for the purpose of assisting the state in coordinating the provisions of assistance from one member state to another under the Compact.

The EMAC system was used extensively to fill the request of the three states affected by Hurricane Katrina/Rita. FEMA and NEMA both agreed that the EMAC system of deployment worked extremely well. Staff was sent to FEMA HQ to ensure efficient movement of staff and resources. The staff deployed reported receiving clear instructions before deployment and after reporting to their site of duty. The mission was clear and well thought out for each task and staff member. Over 2000 missions were filled with over 64,000 deployments under EMAC. The EMAC operations manual which contains the official policy and procedures for the implementation and administration of the compact and for conducting emergency response for member states pursuant to the Compact Articles was followed by the requesting states and the states deploying resources.

The EMAC A-Team members interacted with multiple agencies and every emergency support function listed in the National Response Plan including CDC under Emergency Support Function #8.

EMAC AND CDC

The EMAC coordinators requested information from CDC on several issues by calling into the EOC. They were told by State field staff that CDC could provide guidance on public health issues. They found communicating with CDC difficult because the communication protocol was not made clear to them, the structure for obtaining information from CDC was not clear and they were not aware of the resources and services CDC could provide.

NEMA and FEMA would like to see the CDC emergency response plan and partner with CDC in non-emergency times in order to work better together during an emergency. They see CDC has a valuable resource and support organization. They are very impressed with the CDC staff that was deployed and some they worked with from the DEOC. However, the general lack of knowledge concerning CDC's capabilities results in valuable resources to go unused.

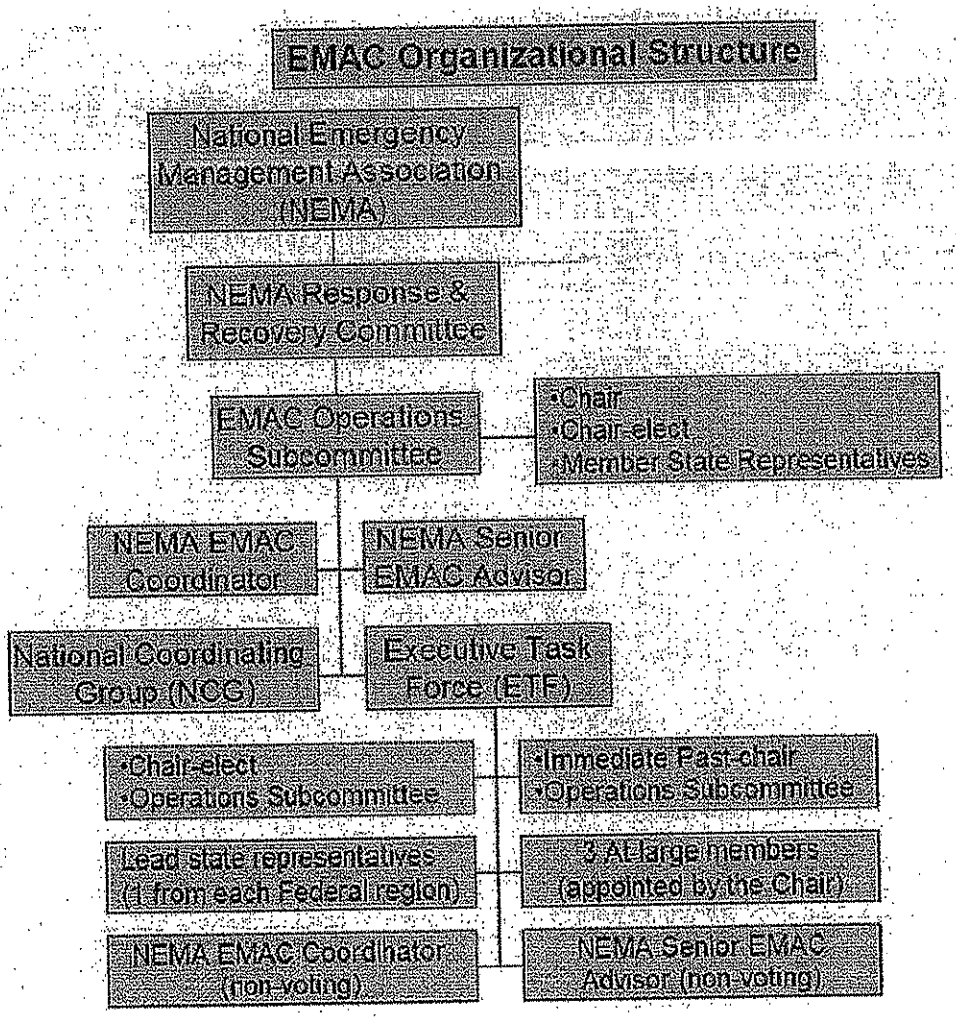
EMAC will be used in the future for all emergency responses. The coordinators are hoping all the member states will continue providing feedback and support for EMAC. Public Health was largely utilized in this response and they hope to continue using public health resources in the future.

RECOMMENDATION:

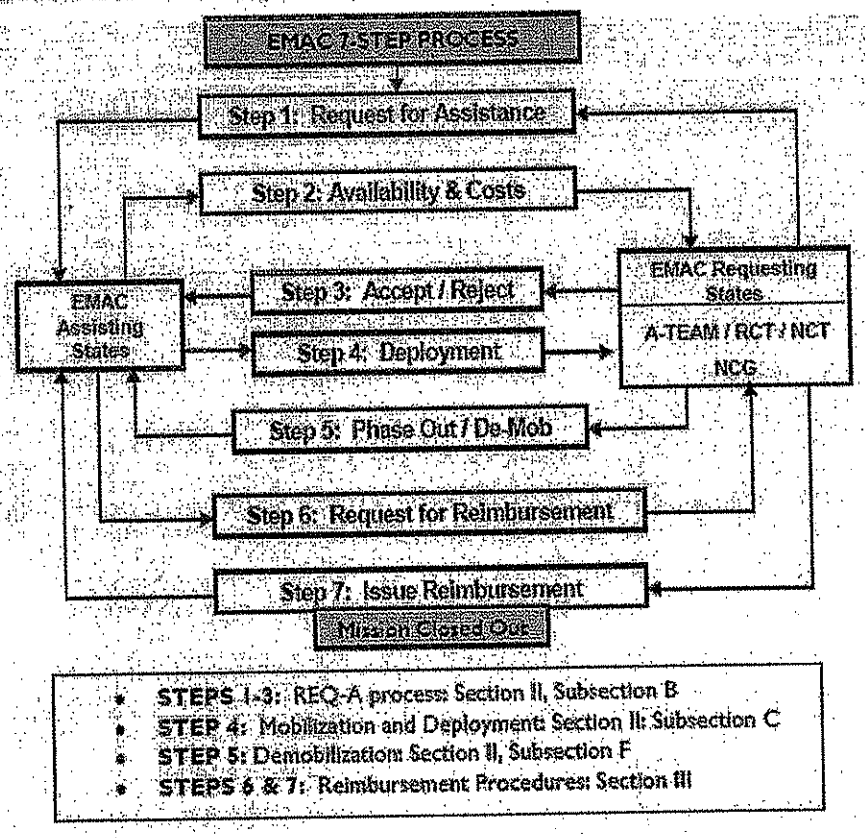
NEMA and FEMA recommend training sessions and workshops with CDC as a response agency to become familiar with CDC's capabilities and resources. Also, CDC should develop a comprehensive contact list, which includes available resources according to the area of expertise.

NEMA and FEMA have requested a copy of CDC's All-hazard Emergency Response Plan to better understand CDC's response role and to make better decisions on how to utilize CDC resources. NEMA has provided the EMAC operational plan to assist CDC in understanding the purpose and responsibilities of EMAC.

CDC should gain a better understanding of how EMAC works and encourage public health agencies to continue working within their emergency response communities to strength the public health response capabilities.


EMAC Organizational Structure
National Emergency Management Association (NEMA)
NEMA Response & Recovery Committee
EMAC Operations Subcommittee
•Chair
•Chair-elect
•Member State Representatives
NEMA EMAC Coordinator
NEMA Senior EMAC Advisor
National Coordinating Group (NCG)
Executive Task Force (ETF)
•Chair-elect
•Operations Subcommittee
•Immediate Past-chair
•Operations Subcommittee
Lead state representatives (1 from each Federal region)
3 At-large members (appointed by the Chair)
NEMA EMAC Coordinator (non-voting)
NEMA Senior EMAC Advisor (non-voting)

Standard Operating Procedures for requesting, providing, receiving, mobilizing and demobilizing EMAC assistance for purposes of accomplishing the first five-phases of the EMAC 7-step process as depicted below.



APPENDIX F
SUMMARY OF SMO MEETING NOTES

TRAINING

Before

- Need to develop a training plan to have people ready for support in the beginning of an event.
- Begin preparing people who will be going in the field this year and train others to fill open positions.
- Require orientation before being deployed for emergency event.
- Fully prepare people in the briefing before deployment on mental and physical issues that may arise during the emergency event.

During

- Once on the ground, there should be a briefing/orientation to provide an overview of the required roles/responsibilities and issues unique to the area of deployment.
- Important for CDC employees to know the ARF/MA process so requests for support can be made and the needs in the areas can be met.

After

- Get everyone trained on the lessons learned.
- Trainings should be flexible.

MANAGEMENT & LEADERSHIP

- Need to determine the field management structure so that incoming teams know their roles and responsibilities and who to report to.
- SMOs need better understanding of EMAC and what states participate in EMAC.
- Should try to use the same people, since they have the experience, as team leaders.

ORGANIZATIONAL STRUCTURE

- There should be a consistent structure for emergency response operations to dictate how SMO operates internally.
- There needs to be a defined structure in DEOC so that key points of contact may be known.
- A better understanding of our relationship with DHHS (particularly the SERT) is needed.

ROLES & RESPONSIBILITIES

- Need to define the SMO role, both for existing members and new members that join during the response event.
- People being deployed need proper orientation as to what their roles and responsibilities are (this includes SERT folks and EIS officers).
- Need clear delineation of POCs for SMOs.
- HHS should define what services the OFRD and CDC is responsible for to prevent duplication of efforts.

INFORMATION MANAGEMENT (COMMUNICATIONS)

- Need a negotiated tool for information collection between CDC and the States.
- A better understanding of management structure and POCs within DEOC is needed for clearer communication.
- Need feedback and confirmation of order from the SOC on ARF/MAs, to prevent duplication of efforts.
- Information given to States must be consistent between the Programs and DEOC.
- There should be agreements with the States as to what information can be shared with HHS.
- Disconnects in information gathering and dissemination should be addressed as these could have serious implications during responses (e.g., the daily Enterprise Communication report).
- There were some internal disconnects in AR regarding deployment.
- DEOC had a problem locating staff to advise them of deployment and were asking SMO for contact information.
- The view from inside the state and SMOs is how CDC supports the state. The other side of that is when CDC sends Epis, there is an expectation that data will flow. No matter what services are being provided, we have to plan for that and think that through.

- There is an expectation that CDC provides overall situational awareness to HHS, the White House and other interested parties.
- We have to have the expectation that data will flow and how do we make that happen?

STAFFING

- Not every state has a big enough portfolio to require one SMO, but maybe groups of states can share one SMO.
- Coordination between CDC and OFRD assignments was an issue - this needs to be clearly defined in the SERT description.
- Better communication regarding staff OFRD was deploying is needed.
- Need to clear the issue between HHS and CDC, where OFRD was not utilizing skill sets effectively (some medical officers were filling a logistics role.)
- Need to have a couple hundred people pre-identified that can deploy when needed (one suggestion is to have pre-packaged teams.)
- Need to define the role of Epi-Aids during emergency response.
- Resources should not be sent unless requested by the State thru the SMOs.
- Need to plan for 1st response rotation to last more than 2 weeks (3-4 weeks suggested).
- When there is an issue in Florida where the state is getting ready to respond, OFRD staff should not be pulled out of Florida to somewhere else to respond, especially when these folks are critical.
- Have to understand that if there is not an immediate need to have someone there, OFRD staff should be available to deploy in order to help with their promotional potential.
- It is a matter of courtesy, supervisors know when their staff deploy and they should let the SMOs know when essential people are being pulled out of the state for other requirements.
- SMOs need to have a plan to explain how they will interact with State during emergency events, when they need staff to be brought in, and prepare team modules.

STANDARD OPERATING PROCEDURES

- Solidify standard operating procedures that can be used in future emergency response events and include a management structure.

- Need just one reporting requirement that can fulfill both CDC and HHS needs.

GENERAL

- Pre-planning is very crucial. During pre-planning efforts, knowing the resources available in the DEOC and CDC would be very beneficial.
- Should consider the plan to send a team to prepare for hurricane season in Florida, Mississippi and Louisiana.
- Need to think about if/how things would change for a Pandemic Flu incident.
- One of the issues is also not necessarily all the calls received, but many of the calls received from CIOs that had various interests in the response and may not have been in sync with the DEOC (EIS deployments, scientific research, etc.).
- There should be guidance on EMAC.
- Need to look at resilience issues, there needs a balance of resilience team calling staff and the team leader or deputy needs to be doing the evaluation and staying in contact with the Resilience team.
- Need to leverage the CDC people with experience in emergency events during planning and how they fit in the structure.

APPENDIX G
NOTES FROM REGION 4 AND 6
PREPAREDNESS DIRECTORS HURRICANE AFTER ACTION MEETING

PRIORITY ISSUES TO WORK ON FOLLOWING THE HURRICANES (AS IDENTIFIED BY PARTICIPANTS):

- Mutual aid
- Facility management
- Environmental restoration (water, food, etc.)
- Information Management
- Communications
- Repatriation of evacuees
- Primary care planning

OBSERVATIONS ON THE ROLE OF PUBLIC HEALTH IN THE RESPONSE

- So many response issues can eventually lead to health risks that public health is often forced to take on responsibilities beyond its normal scope.
- Emergency management agencies were good at respecting role of public health agencies, but often expected too much of them.
- Public health was forced to take a greater role in medical command and control than had been anticipated in plans.
- There needs to be a better understanding of the different role of public health in different states in order to better be able to assist one another during emergencies.

EMERGENCY MANAGEMENT ASSISTANCE COMPACT (EMAC) OBSERVATIONS

- Resource typing is a major need.
- Florida notified other states before storms that they would need nurses through EMAC, so the credentialing process could be initiated before the disaster hit. This saved much time.

- The Emergency System for the Advance Registration of Volunteer Health Professionals (ESAR-VHP) did not work in Texas. Almost no volunteers who had been pre-credentialed were available to be used. Almost all volunteers had to be identified and credentialed on a just-in-time basis.
- Reimbursement for EMAC deployments is not fast enough. The requesting state must wait to be reimbursed by FEMA before they reimburse the donating state.
- Volunteer teams must be self-sufficient (food, water, fuel, communications, etc.) or they will be a burden on the state receiving their assistance. Florida teams had a re-supply chain stretching back to their own state in order to keep teams self-sufficient. Non self-sufficient teams often did more harm than good.
- Some governors sent assets to the Gulf Coast based on a verbal governor-to-governor agreement, and never coordinated the delivery with EMAC. This created major legal and logistical difficulties for both the donating and receiving states. The participants stated that governors should be made better informed about EMAC.
- States vary in where they assign the coordination of health and medical volunteers within their response plans. Some house it under Emergency Support Function #8 (ESF-8) with the other health and medical response issues, but other house it under the ESF for volunteer coordination.

ROLE OF THE FEDERAL GOVERNMENT IN THE RESPONSE

- Federal liaison can be very helpful in navigating the system, but federal representatives also caused many coordination challenges.
- There is a need to have the "right combination" of federal staff, so that they are helpful and do not end up just getting in the way.
- There should be a better system for credentialing federal staff within the disaster area and command centers.
- Turnover of federal staff was so frequent that state staff felt they were constantly training and re-training their federal liaisons.
- It would be helpful for states to have more training opportunities with federal agencies in the "off-season," before a hurricane or other disaster hits.
- Florida requires all federal staff to integrate fully into the state Incident Command System (ICS), and leave their federal identity at the door.
- They stated this expectation at the beginning, and found that most federal staff accepted this without complaint.
- National Disaster Medical System (NDMS) issues:
- It is helpful to pre-stage NDMS assets before hurricane hits.

- NDMS is required to leave an area in which they may be in harm's way, so they had to evacuate many areas of Louisiana before Rita hit. This caused major gaps in the state's ability to respond to both emergencies.
- There were many federal requests for information from multiple sources. These requests should be better coordinated. It would be helpful to have pre-defined data sets that would be requested, so that states can plan to be able to provide this.
- There were many levels of bureaucracy that needed to be navigated for states to get vaccine. This was a major problem identified by Louisiana.
- Faith-based groups took on an extremely important role in the response, but they could not be supported by responders because FEMA reimbursement did not extend to them.
- Secretary's Emergency Response Team (SERT) was a valuable federal asset to help states expedite requests for federal assistance.

ENVIRONMENTAL HEALTH ISSUES

Food Safety

- It was difficult to control food safety, due to power outages and need to feed large numbers of volunteers. Many of the feeding stations for volunteers used unsafe food handling practices.
- Mississippi sent an environmental hygienist to visit every volunteer camp at least once a day.
- Katrina revealed serious legal gaps in food safety.
- Mississippi could not shut down food service operations for volunteers for safety reasons, because their authority was limited to operations that sell food. Mississippi representatives noted that this and other legal gaps arose because the state had not adopted an Emergency Health Powers Act.
- Food codes and other regulations vary from state to state, so some sort of legal training would be helpful for out of state volunteers.

Mosquito Control

- Mosquito control was important issue in Mississippi. CDC provided traps, and Department of Defense provided insecticide spraying. It worked very well.

Health Care Delivery Issues

- Many participants expressed the need for regionally standardized patient tracking systems.
- The participants from Louisiana's hospital preparedness group estimated that it would take 6-8 years for the health care delivery system in Louisiana to be restored to its pre-Katrina capacity.

As for pandemic flu planning, they said that it is important to prepare in a uniform way across state borders, so that the public in all states feels that they are being treated fairly.

Given the dialogue during the Katrina response about disparities in protection, they seem to be very focused on this issue in their planning considerations. For example, they are sensitive to the public perceiving that a nearby state is doing more to stockpile antivirals, masks, etc. They asked that ASTHO consider how CDC might be helpful in promoting more standardization in pandemic preparedness activities across states.

APPENDIX H
PRIVATE SECTOR INTERVIEWS
SUMMARY OF KEY DISCUSSION POINTS

As part of the Hurricane Katrina Working Group data collection effort, seven private sector companies were identified as candidates to be interviewed. In working with the National Center for Health Marketing (NCHM), the AAR Team was provided the names of individuals to contact from the following organizations:

- American Red Cross
- FedEx
- GE Energy
- Intercontinental Hotels
- Sprint
- The Home Depot
- Wal-Mart

Titles of those interviewed included (b)(2)
(b)(2)

Interviews were completed with all companies except for the American Red Cross. During the course of the interviews, the following questions were posed:

- What assistance did you request from the CDC?
- Did you get what you needed?
- In terms of emergency response, what went well and what did not?
- What suggestions do you have for future responses?
- Is there anything in your company's response plan that you think the CDC could learn from?
- What type of projects or collaboration events would you like to see in the future coming from the CDC in working with members of the private sector?

Below is a summary of the responses.

What assistance did you request from the CDC?

While each company had specific information needs, most questions asked of the CDC focused on the safety precautions required and immunizations needed for their employees entering the flooded areas impacted by the event. Risk of exposure and overall employee health and safety were the major concerns expressed by those interviewed.

Did you get what you needed?

Most information requests were answered and information was provided to companies in a timely and accurate manner. Most interviewees stated that the response was "superb" and that information provided was "more than expected."

However, two companies indicated they did not get what they needed when they needed it, and it took from three to five days to obtain the requested information. These two companies stated this was "not acceptable". One company indicated that the CDC "moves at the speed of government" but must move at the "speed of business" in order to further the relationships with members of the private sector.

In terms of emergency response, what went well and what did not?

As stated earlier most companies interviewed were pleased with their interaction with the CDC. They had no major complaints or concerns, and did not have suggestions for improvement.

After several unsuccessful attempts to make contact with and obtain information from the CDC, one company was forced to turn to other contacts within the agency in order to solicit help. While this enabled the company to start getting answers to their questions, it was not enough. In another situation, the Assistant Secretary for the Department of Health and Human Services was contacted and asked for assistance. Once HHS intervened, a single point of contact for the CDC was immediately established, and the problems previously encountered began to disappear.

One company wanted the CDC to send someone to their emergency operations center for the duration of the storm (at their expense) and gave the option of sending an employee to the CDC's EOC. This request was rejected. A company plane was on standby and was willing to provide the transportation under either scenario.

General Comments

Overall, companies were pleased with the working relationship they have with the CDC. Comments indicated the relationship was "superb" and "helpful" and that the relationship with the private sector had improved at "light speeds" over the last three years. It was noted that the CDC was the "best of the Federal agencies" based on their years of experience, their ability to protect the public and to fight disease – other agencies could learn from the CDC. Each of the companies interviewed expressed their appreciation for the CDC making this contact and that the CDC should continue to reach out to the private sector and to strengthen this collaborative working relationship.

Those interviewed indicated they rely on the CDC website as a primary source for information. One company indicated it visits the website daily and that it depends on the periodic email briefings as a main

outlet for information exchange. Pandemic planning is going very well. It was noted that the checklists that have been provided are helpful; companies do not have to "re-invent the wheel" or worry about additional content for their intranet sites when they have partners such as the CDC to turn to.

What suggestions do you have for future responses?

- The CDC should continue to reach out to the private sector as the relationships between the two can be and are mutually beneficial.
- Periodic meetings with the private sector – particularly with those companies that are first responders – should be established.
- It was suggested that the CDC assigned an "account manager" or single point of contact for the larger private sector companies so that during an event, they have someone to turn to.
- Contact lists should be provided to each other: The CDC should provide a list of all key contacts and telephone numbers to members of the private sector and the private sector should reciprocate.
- The CDC should be more flexible and willing to take risks in providing information to members of the private sector. It would be more favorable to provide what information was known with conditions and caveats attached rather than withholding and delaying the release of information.
- When an event like Hurricane Katrina is imminent, the CDC should reach out to the private sector first rather than them having to wait and/or reach out to the CDC. An "alert conference call" or event briefing was suggested.
- One company indicated that it is aware that CDC distributes information to industry associations (National Trucking Association, Air Transportation Association). While this is a good practice that should continue, CDC should also send information directly to the companies as well. Industry associations can become an additional filter to receiving timely and sufficient information.

Is there anything in your company's response plan that you think the CDC could learn from?

- One company has documented emergency processes from previous disasters and used those processes to create a "playbook" for personnel on the ground.
- It was stated that in order to be successful, businesses must be skilled at contingency planning. While having documented response ***plans*** and supporting processes and procedures, the ***processes*** surrounding the execution of the plans is what is most important. Companies must be flexible and agile to be effective responders.

- This company uses a "contingency process" to manage crisis situations. The phrase "contingency process" describes the need to have the flexibility to overcome unforeseen obstacles. Set "plans" cannot cover every possible situation that might arise during a crisis. Additionally, "plans" are based on too many assumptions. If your employees have a "contingency process" in place, they will be able to adjust to the changes to events during the crisis. To create effective processes, an organization must "know itself." After evaluating your own organization, the organization can take an emergency situation and start developing a contingency process. The next step is deciding how the process would work in different circumstances ("what if scenarios"). Once contingency processes are identified, they must be documented so that it can be distributed to others.
- One company uses data from previous hurricanes to plan its emergency responses. It is very important to gather data as events happen. This information allows decision makers to forecast the needs of an affected region for the first 24, 48, or 72 hours after the hurricane or any other disaster. This data is then used to better plan on what materials, goods or services should be in place before and after a natural disaster occurs.

What type of projects or collaboration events would you like to see in the future coming from the CDC in working with members of the private sector?

- One company stated that it would like to see CDC develop a proactive system for contacting critical industries with relevant information during emergency situations. This is not an impossible request because the Department of Homeland Security (DHS) has established a system of contacting private sector companies during emergencies. The DHS contacts these businesses as well as operating a 24-hour call center. This call center is available if the companies need up-to-date information about the emergency situation.
- Another company indicated they are willing to pay for a direct video link to the CDC's DEOC for better collaboration. The CDC declined. This company commented how important it is for the watch officer to understand the needs of the private sector during events such as Katrina.
- Continued partnerships and planning on pandemics was requested by nearly all companies interviewed. Each company that mentioned pandemics indicated they have been very pleased with the work they have seen coming from the CDC around this subject matter.

APPENDIX I
BUSINESS PARTNER INTERVIEW
DISCUSSION GUIDE
NOVEMBER 23, 2005

INTERVIEW PURPOSE

- To learn how business partners (private sector [PS], healthcare sector [HS], public health organizations [PHO], and FEMA and NEMA [EMAC]) responded to Hurricanes Katrina and/or Rita.
- To identify business partners' best practices with respect to emergency response.
- To identify ways that CDC can improve their response based on business partners' experiences.
- To identify ways to increase the partnership opportunities for CDC and business partners on future emergency responses.

Note to interviewers: *Answers to questions may vary depending on the organization and its response to Hurricanes Katrina/Rita. Direct-providing agencies may be able to answer the questions as written, but professional organizations and EMAC organizations may have had a different role and may respond differently. Be prepared to adjust your questions accordingly.*

INTRODUCTION

My name is ___, and I work for BearingPoint, an independent research and consulting firm. We are conducting discussions on behalf of the Centers for Disease Control. CDC is currently conducting an After Action Review to assess their response to Hurricanes Katrina and Rita. As part of the assessment, they are looking to learn from [the _____ efforts], such as those from your organization, as well as learn about your emergency response capabilities with the possibility of partnering with you on future emergency response efforts. You are being asked to participate in this discussion because CDC has identified your organization as one with exemplary emergency response experience; CDC would like to learn from your efforts.

The first thing I need to find out is whether I'm talking to the right person in your organization.

In this interview, we want to talk to the person or group of people who is responsible for overseeing relief efforts when your organization responds to emergencies. In your organization, is that you or is the work divided up among more than one person?

[If multiple people identified] Do you think you are able to speak for your team or would you prefer to include others on this call?

Do you have time to talk today or do we need to set up a time when I can call you back?

[IF NO, SET UP INTERVIEW TIME]

[IF YES, CONTINUE]

Thank you for agreeing to speak with me. We appreciate your help. We expect to be talking for about thirty minutes.

Do you have any questions before we get started?

RESEARCH QUESTIONS

About the Respondent – Ask ALL [PS, HS, PHO, EMAC]

- Before we get started, can you tell me more about what your role is at your organization?
  - What are your responsibilities and major activities?
  - How long have you been working in emergency response? How many emergencies have you responded to?
  - *Probe to determine if responsibilities include emergency response and planning or if this job duty was added due to recent emergencies, such as Hurricanes Katrina and Rita.*

Responses to Katrina and/or Rita – Ask ALL [PS, HS, PHO, EMAC]

- Did your organization respond to Hurricanes Katrina and/or Rita? **If yes:** I'd like to ask you a few questions about your response. **If no:** Skip section.
  - In what way did your organization respond to Hurricanes Katrina and/or Rita?
  - How did your organization decide to take this course of action?
  - Who did the planning and implementation of your response?
  - How quickly was your response implemented?
  - What were your specific activities and duties during the response? *Probe: Overall management? Coordination activities? Communication activities? Other?*
  - What worked well in your response?
  - What did not work well?
  - Based on this response, what, if anything, will you do different during your next emergency response?

General Questions about Emergency Response Plans/Systems

Emergency Response Plan – Ask ALL [PS, HS, PHO, EMAC]

- Does your organization have an emergency response plan that guides your responses? **If yes:** I'd like to ask you a few questions about your plan. **If no:** Skip section.
  - How did you create it? *Probe: Did you base your plan on someone else's existing plan? If so, whose plan? What changes did you make to adapt it to your organization?*
  - When did you create it? What, if any, changes have you made to it? *Probe: How often do you make changes?*

- In your opinion, what are the best parts of your emergency response plan? *Probe: Why do you say that?*
- In your opinion, what parts of your plan need improvement? *Probe: Why do you say that? How are you planning to improve it?*
- Based on your experience with Hurricanes Katrina/Rita, do you think your organization will change their emergency response plans or consider preparing to offer additional resources in future responses? *Probe: How will you change your plan? What additional resources will you offer?*
- Are you willing to share your emergency response plan with CDC? **If yes:** Please send a copy to me at [insert email or postal address].

General Partnerships – Ask ALL [PS, HS, PHO, EMAC]

- During your response [If participant did not respond to Katrina/Rita: During typical responses] did you partner or interact with any government agencies or other organizations? *Probe: Which agencies/ organizations?*
  - Are there any organizations that you prefer to work with? Why?
  - Are there any organizations that you prefer NOT to work with? Why?

Working with CDC – Ask ALL [PS, HS, PHO, EMAC]

- How aware are you of the capabilities of the CDC with regard to emergency response? Do you have a positive or negative opinion of these efforts? Why?
- [If participant responded to Katrina/Rita] Did you work with CDC during this response? **If yes:** Tell me about that experience. **If no:** Skip section.
  - How was the relationship between your organization and CDC formed? *Probe: CDC requested assistance from my organization; My organization offered assistance to CDC; A third party brought us together; "Unwritten rule", etc.*
  - Which departments in your organization worked with CDC?
  - In what way did you work with CDC? *Probe: Did you work with deployed CDC staff in the field? CDC staff not in the field (Atlanta based)? Did you advise CDC? Did CDC advise you?*
  - What was your experience in working with CDC during this response? *Probe: What worked well? What challenges did you encounter while working with CDC? What areas, if any, do you think CDC could improve on?*
- [If respondent did not work with CDC during Katrina/Rita or did not respond to Katrina/Rita] Have you worked with CDC in the past? **If yes:** Tell me about that experience. **If no:** Skip section.

- How was the relationship between your organization and CDC formed? *Probe: CDC requested assistance from my organization; My organization offered assistance to CDC; A third party brought us together; "Unwritten rule", etc.*
- Which departments in your organization worked with CDC?
- In what way did you work with CDC? *Probe: Did you work with deployed CDC staff in the field? CDC staff not in the field (Atlanta based)? Did you advise CDC? Did CDC advise you?*
- What was your experience in working with CDC during that response? *Probe: What worked well? What challenges did you encounter while working with CDC? What areas, if any, do you think CDC could improve on?*

Recommendations for CDC – Ask ALL [PS, HS, PHO, EMAC]

- [If applicable] Based on your previous experience with CDC, what, if any, recommendations do you have for them to improve their response?
- From your perspective, what are some things CDC can learn from *your* response that they could use to improve future responses to emergencies?
  - Are there any practices from your emergency response plan that you think CDC could adopt? If so, which ones?
- In your opinion, do you see any opportunities for CDC to partner with your organization in future responses? If so, how? If not, why?
  - How can CDC better serve your organization in future responses? – Ask [HS], [PHO], [EMAC] only, NOT [PS].

<u>Questions about EMAC</u> – Ask [EMAC] only

I have some additional questions for you about public health assistance requested under the Emergency Management Assistance Compact (EMAC).

- Which states requested public health help under EMAC?
- Which states sent public health help under EMAC?
- What type of public health assistance was requested? Please describe the type of personnel (nurses, doctors, graduate students, etc.) obtained as well as the activities conducted. Examples of activities:
  - Overall management
  - Coordination activities
  - Communication activities
  - Clean-up activities

- Provision of medical care
- Provision of veterinary care
- Provision of mortuary activities
- Provision of public health laboratory services; **if yes,** please describe (water/well testing, chemical testing, etc.).
- Provision of pharmaceutical supplies and vaccines; **if yes,** please describe (next nearest neighbor stockpile, national pharmaceutical stockpile, etc.)
- Provision of vaccination services
- Surveillance and hazard assessment and/or rapid needs assessment

- Was this public health assistance helpful? Did it meet the expectations of those requesting it? *Probe: What worked well? What didn't work?*
- Did your jurisdiction conduct any "just in time" training about EMAC for the staff who responded? **If yes,** please describe the target audience and type of training.
- Were there any problems with the credentialing of public health staff?
- What other challenges/problems were encountered using EMAC?
- Did your jurisdiction put any follow-up mechanisms in place? **If yes,** please describe any of these plans in relation to:
  - Tracking costs
  - Continuing communications
  - Providing after-action feedback to host areas
  - Continuing working relationships between public health and emergency management that were started as a result of EMAC
- Based on your experience during the Hurricane Katrina/Rita response, how would you use EMAC for public health in the future?

CONCLUDING THOUGHTS

- Is there anything else you'd like to share with us?
- Are there any other individuals that you work with that you think we should speak with?

- Thank you. Your feedback has been very helpful. We appreciate you taking the time to share your thoughts and opinions with us.

APPENDIX J
ONLINE SURVEY TOOL

BearingPoint
1676 International Drive
McLean, VA 22102-4828
Tel: +1.703.747.3000
Fax: +1.703.747.8500
www.bearingpoint.com

[Date]

Dear [Respondent]:

CDC is interested in finding out how well they performed during the responses to Hurricanes Katrina and Rita. CDC wants to identify not only the success stories that often go untold, but also any gaps, needs, and performance areas they can improve for future events.

As part of this process, BearingPoint, an independent consulting firm, is conducting an agency-wide After Action Review and will provide the results to CDC. **You are being asked to participate in this review because, during the responses to Hurricanes Katrina and Rita, you either worked directly with CDC staff, such as requested resources or asked questions, or had CDC staff working in your organization.** Your interaction with CDC and unique perspective will give us valuable insights to help us completely assess CDC's performance.

We understand that you are busy, but we hope you can take a few moments out of your day to share your thoughts with us. The review should take approximately 20 minutes to complete. Please respond on or before December 7, 2005 so CDC can begin improving its performance as soon as possible. **Even if you think you had little interaction with CDC, your feedback will be helpful.**

We prefer you provide your answers online by clicking on the following link: www.insertlink.com

Should you have any questions about the survey or prefer to answer questions over the phone, please call or email one of the following BearingPoint team members:

- (b)(2)
-

Thank you in advance for your participation and assistance.
Sincerely,

(b)(4)
BearingPoint Project Manager

Part 1: About You

We are interested in learning about the types of people, organizations, and departments that interacted with CDC during the response to Hurricanes Katrina and Rita.

Q1 What is your current title?

_____

Q2 What is the name of your organization?

_____

Q3 What best describes your organization type? **(Check all that apply.)**

a. Federal Government
b. State Government
c. Local Government
d. Community organization
e. Faith-based organization
f. Private Sector
g. Other (Please specify: _____)

Q4 What is the name of your department within your organization? **(If you do not have a department, please type n/a.)**

_____

Q5 What best describes the type of work your department does? **(Check all that apply.)**

a. Environmental Health/ Sanitation
b. Emergency Management
c. Occupational Health
d. Lab
e. STD
f. TB
g. Mental Health
h. Not Sure
i. Not applicable
j. Other (Please specify: _____)

Q6 Not including Hurricanes Katrina and Rita, how many emergencies have you responded to?

a. None **(Go to Q8)**
b. 2 or less emergencies
c. 3 to 8 emergencies

d. 9 or more emergencies

IF Q6 = b, c, or d (prior experience), answer Q7

Q7 Did you work or interact with CDC during any of these?
a. Yes
b. No
c. Not Sure

Q8 We would like to know about your role in the response to Hurricanes Katrina and/or Rita. Please answer the following questions:

a. What was your primary location during the response? (e.g., the Superdome in New Orleans, LA)
_____

b. What were your primary job functions and duties during the response? (e.g., veterinary care)
_____

c. What, if any, organization did you report to during your response efforts? (e.g., local health department or private health agency)
_____

d. Please provide any additional information you wish to share about your role in the response:
_____

Part 2: Interacting with CDC

We are interested in learning more about your interactions with CDC and/or their staff.

Q9 Did you or your team work or interact in any way with CDC during your response to Hurricanes Katrina and/or Rita?

a. Yes
b. No **(Terminate)**
c. Not sure **(Terminate)**

Q10 Please list all other organizations you worked with during your response to Hurricanes Katrina and/or Rita.

_____
_____
_____
_____

The following questions are about your experience working **with CDC**. Even if you worked with CDC in a limited manner, please answer these questions based on your experience **with CDC**.

Q11 How did CDC staff work with you or your team? **(Check all that apply.)**

a. CDC staff acted in an advisory role **in the field.**
b. CDC staff worked side-by-side providing the same services as my team **in the field.**
c. Atlanta-based CDC staff acted in an advisory role.
d. Other (Please specify: _____)

Q12 In what ways did CDC and/or their staff (both those working with you in the field and/or Atlanta-based) contribute to the success of your goals and objectives? **Please provide specific examples.**

_____
_____
_____
_____

On a scale of 1 to 5, with 1 being extremely dissatisfied and 5 being extremely satisified:

Q13 Overall, how satisfied were you or your team with your interaction with CDC and/or their staff?

1	2	3	4	5	10
extremely dissatisfied				extremely satisfied	not applicable

Q14 What challenges did you encounter with respect to your interactions with CDC and/or their staff? **Please provide specific examples.**

_____
_____
_____
_____

Part 3: Requesting Assistance from CDC

We are interested in gathering feedback about the process of requesting services, staff, supplies, information, etc., from CDC.

Q15 During the response to Hurricanes Katrina and/or Rita, did you or your team request support, such as advice or resources, from CDC?

a. Yes
b. No **(Go to Part 4)**
c. Not sure **(Go to Part 4)**

The following questions relate to the process of requesting assistance from CDC. At any time, if you do not feel that you have the knowledge to answer the question, please choose the "I do not know" answer.

Q16 How did your team initially request support from CDC? **(Check all that apply.)**

a. By phone (calling someone in leadership at CDC)
b. Electronically (sending an email to the CDC EOC mailbox)
c. In person (through a field office or asking someone in the field)
d. Other (Please specify: _____)
e. I do not know

On a scale of 1 to 5, with 1 being strongly disagree and 5 being strongly agree:

Q17 It was easy to seek support from CDC.

1	2	3	4	5	10
strongly disagree				strongly agree	I do not know

Q18 CDC responded to my team's request for assistance in a **timely manner**.

1	2	3	4	5	10
strongly disagree				strongly agree	I do not know

Q19 The **type** of resources/information/advice we received from CDC matched our request for assistance.

1	2	3	4	5	10
strongly disagree				strongly agree	I do not know

Q20 What could CDC have done differently or better to provide you with the **type** of resources/information/advice you requested from CDC?

_____

Q21 The **amount** of resources/information/advice we received from CDC matched our request for assistance.

1	2	3	4	5	10
strongly disagree				strongly agree	I do not know

Part 4: Emergency Response Systems

We are also interested in learning more about your team's emergency response systems.

On a scale of 1 to 5, with 1 being not at all familiar and 5 being extremely familiar:

Q22 How familiar are you with the National Incident Management System (NIMS)?

1	2	3	4	5
not at all familiar				extremely familiar

Q23 How familiar are you with the Incident Command System (ICS)?

1	2	3	4	5
not at all familiar				extremely familiar

As you may know, NIMS is the National Incident Management System (NIMS), which was developed by the Secretary of Homeland Security at the request of the President. It integrates effective practices in emergency preparedness and response into a comprehensive national framework for incident management that enables responders at all levels to work together more effectively to manage domestic incidents. ICS is a standard incident management organization with five functional areas – command, operations, planning, logistics, and finance/administration – for management of all major incidents. To ensure further coordination, and during incidents involving multiple jurisdictions or agencies, the principle of unified command has been universally incorporated into NIMS.

Q24 What, if any, types of standard systems does your organization utilize? **(Check all that apply.)**

a. National Incident Management System (NIMS)
b. Incident Command System (ICS)
c. Other (Please specify: _____)
d. Not sure
e. Not applicable

Q25 Based on your experience with the CDC, was their response in accordance with the principles of NIMS?

a. Yes
b. No
c. Not sure
d. Not applicable

Part 5: Recommendations and Conclusions

We are interested in learning about specific recommendations you have for CDC to improve their response and interaction with you in future emergencies.

On a scale of 1 to 5, with 1 being strongly disagree and 5 being strongly agree:

Q26 Based on my interaction with CDC during Hurricanes Katrina and/or Rita, I look forward to working with CDC again as part of another emergency response.

1	2	3	4	5
strongly disagree				strongly agree

Q27 Please provide your specific recommendations to CDC that may improve their response to future incidents.

_____
_____
_____
_____
_____

Q28 Please provide any additional information you wish to share about your recent experience with CDC.

_____
_____
_____
_____
_____

Part 6: Thank you

Your feedback has been very helpful. We appreciate you taking the time to share your thoughts and opinions with us.

Q29 If you are willing to speak further with BearingPoint or CDC staff should we have additional questions, please provide your contact information:

Name: _____
Phone Number: _____
Email Address: _____

APPENDIX K
INTERNAL SURVEY
FINDINGS AND RECOMMENDATIONS

METHODOLOGY

The online survey instrument used was developed in house by CDC staff. A web link to complete the survey was made available to CDC staff deployed in response to hurricanes Katrina and/or Rita. Respondents completed the survey online as well as by phone participation.

The research team coded the open-ended survey responses using consistent and comprehensive coding categories. In order to provide concrete recommendations for CDC, the research team coded responses according to three time periods: Pre-Deployment, Deployment, and Post-Deployment. Survey data was analyzed using descriptive statistics. The results in this document discuss high-level key themes that emerged from the analysis.

Results in percentage discussed do not, in all instances, add up to 100 % for the following reasons:

- Participants often chose multiple options for a particular question.
- The focus of reported results were the key trends that emerged from the data and do not include necessarily include all responses.

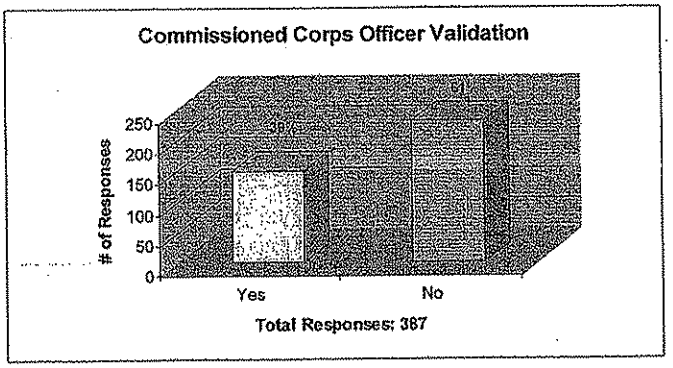
FINDINGS

Respondents' Characteristics

This section summarizes respondents' characteristics.

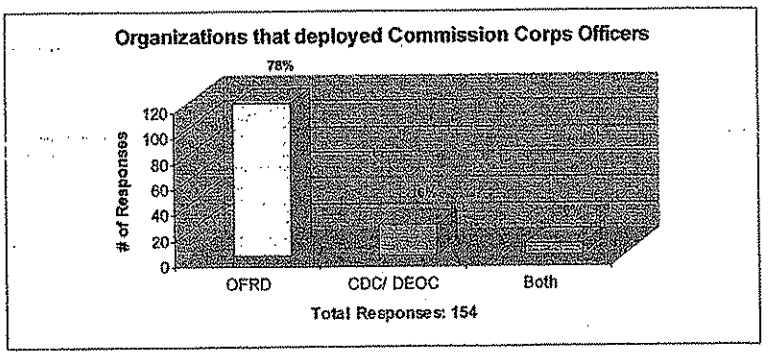
Employment Status:

- Over a third (39%) of the respondents were Commissioned Corps Officers.
- Most respondents (61%) were non-Commissioned Corps Officers.



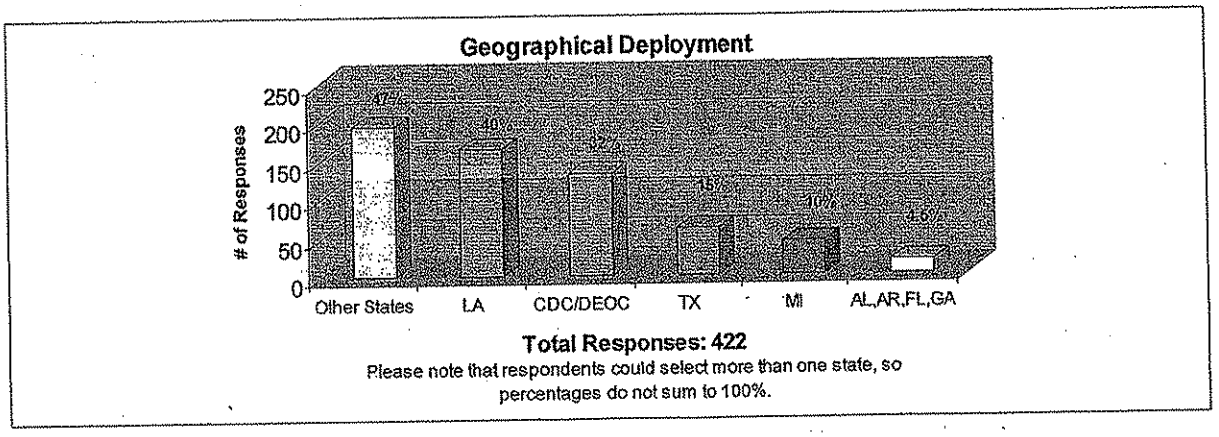
Commissioned Officer:

- Most of the Commissioned Corps Officers (78%) were deployed only by CDC's Director's Emergency Operations Center (DEOC).
- 16% of Commissioned Corps Officers were deployed only by the Commissioned Corps' Office of Force readiness and Deployment.
- Both the above offices deployed about 6% of Commissioned Corps Officers.



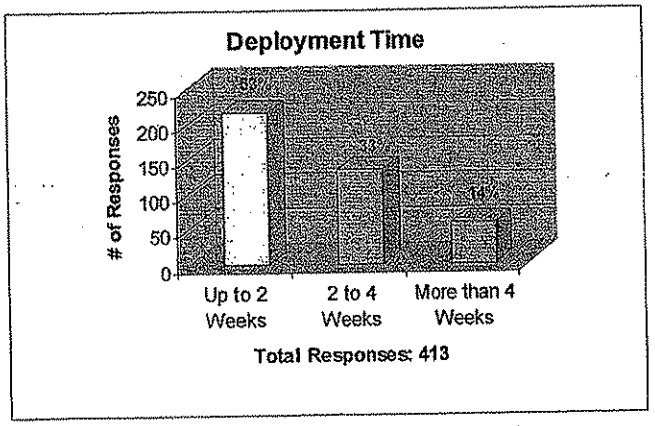
Place of Deployment:

- 40% of the respondents were deployed in Louisiana.
- 32% of the respondents were deployed at CDC headquarters.
- 15% of the respondents were deployed in Texas.
- 10% of the respondents were deployed in Mississippi.
- 5% of the respondents were deployed in Alabama, Arkansas, Florida and Georgia.
- 47% of the respondents were deployed in other states.



Length of Deployment:

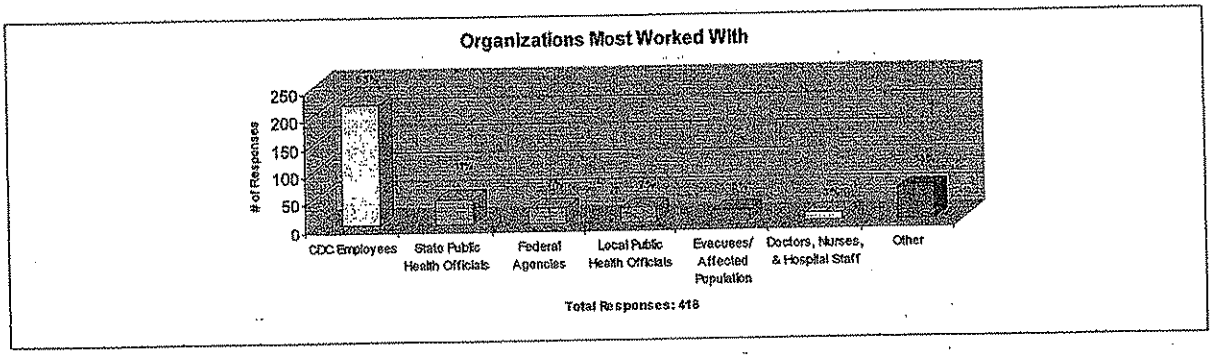
- More than half the respondents (53%) were deployed for a period of up to 2 weeks.
- 33% of respondents were deployed for a period of between 2 and 4 weeks.
- Approximately 14% of respondents were deployed for more than 4 weeks.



Partners & Coworkers:

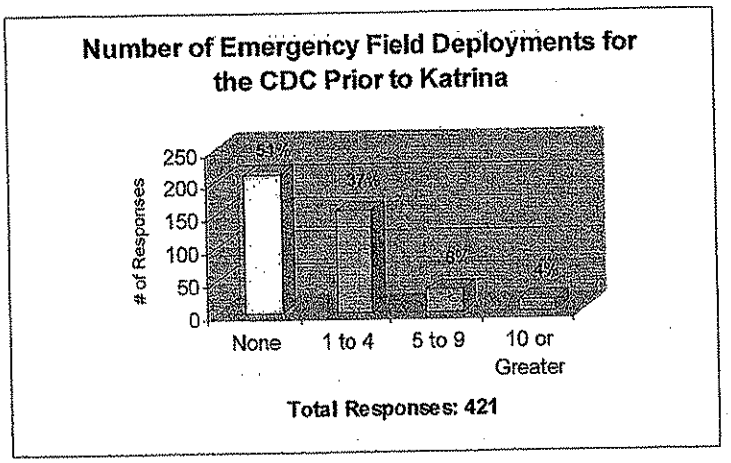
- Over half the respondents (53%) worked primarily with CDC employees.
- About 11% of the respondents worked with state public health officials.
- Approximately 7% of the respondents worked with federal agencies.
- Over 7% of the respondents worked with local public health officials.
- About 5% of the respondents worked with evacuees and affected populations.
- Only 3% of the respondents worked with doctors, nurses and hospital staff.

- Less than 2% of the respondents worked with volunteers, non-government/faith based organizations and IT/informatics/data collection staff.
- An additional 12 % worked with other partners not listed above.



Emergency Disaster Field Deployment Experience

- This was the first CDC emergency field deployment for approximately half the respondents in this study.
- More than one third of the respondents had limited previous experience participating in CDC field deployments for disasters, responding to between 1-4 emergencies on behalf of CDC.
- Nearly 8% of the respondents had participated in 5 to 9 emergency CDC field deployments for disasters and only 4% of the respondents had participated in more than 10.



Pre-deployment Findings

- Logistics was a consistent issue for respondents in the predeployment phase.
    - 6% indicated logistical issues were a problem. These problems included:

- Internal communication with the DEOC and CDC

"...when I was called for help, I received 5 separate requests to be on 5 different teams. There didn't seem to be any communication among the developing teams on who was being called. Also, I was left an emergency message on my phone to call the DEOC, and when I called back, no one knew who called me, what I was being called for, etc. It was very disorganized and didn't reflect well..."

"Knowing better when your deployment is beginning and ending...when you are coming and going was confusing. There should be someone you can call to ask that information and who actually knows the answer — we need leadership and established policies, procedures, and mechanisms that people can rely on so we are all on the same page."

- Communication with external agencies

"...pre-deployment clarity of lines of authority among multiple state and federal agencies..."

- Arranging for travel and accommodations

" Better travel arrangements, I had a rental car "reservation" but not at the airport. Less overall confusion about travel and accommodations. Felt very lucky about accommodations because one team member with ties to Louisiana found hotel rooms for the whole team. This team member had been in dorms, but those were in poor conditions. So, this team member decided to locate hotel rooms for the whole team!"

- Procedures

- 5% of the respondents indicated that having more logistical support in the predeployment phase would have been helpful.
- In response to additional personal support that CDC could provide, 8% of the respondents requested assistance with logistical issues.
  - Almost 80% of the respondents who specify this as an issue were *not* part of the Commissioned Officer Corps.

Deployment Findings

- There were many issues in the deployment phase that were problematic for respondents. These included understanding logistics, allocation of resources and equipment, and staff recognition.
- Respondents identified logistical issues as problematic in almost all of the open-ended questions.
  - 31% identified general problems in logistics.
  - 17% indicated that they could have used logistical support.

- 34% noted that team functioning could have been improved by improving logistical support.
- In response to additional professional support that CDC could provide, 22% of the respondents requested assistance with logistical issues.
  - Nearly 70% of these respondents were *not* commissioned officers.

- Resources and Equipment were also identified as a problematic issue in the deployment phase.
  - This issue included a number of items such as:
    - Tangible equipment

      "Resources to get [tasks] done- I eventually got a cell phone but the blackberry would have been helpful; if I had known ahead of time how important my computer was going to be I would have brought my laptop."

      "Phones that worked and had been actually tested before giving them out to the team. Higher-profile, 4-wheel drive vehicles were needed; the "soccer mom" mini vans that CDC provided were not appropriate for getting around in the conditions."

    - Office space
    - Security and Safety
    - Personnel

      "There needs to be 1 to 2 trained data managers per surveillance team to collate, write SAS code, design databases that function in the field. We could not get MS Access database to work, so we used Epi-Info. Need more balanced team leads...we had some team leaders with master level leading PhD and MDs....I am not for sure if this is appropriate for surveillance."

      "Because of the shortage of staff available to assist in the DEOC (understandable due to so many required deployments), I feel that I had to work so many hours that my family/friend relationships were slightly strained and my daily work got behind (kind of stressful). Had more personnel been available to support the mission, I don't think I would have had this challenge."

  - 17% of the respondents identified resources and equipment as a problem encountered either personally or as a team.

- Personal value and recognition was also an issue for many respondents in the deployment phase.
  - This included feeling valued and recognized, as well as expressing a need for time off or counseling upon return home.

"I think the leaders need to allow officers some time off to decompress and get some personal things done. I worked 12-hour days 7 days a week for 13 days straight before I got 1/2 a day off. I took a

nap. I think people were tired and a little rest earlier in the deployment would have increased productivity and commitment."

"Time away from the task at hand - an hour or so a day even during meals just to maintain some sense of normalcy and to debrief after an emotional taxing day. We were with team members the majority of the time and there was little to no time to debrief privately, which I would have valued. I think that it would need to be explicitly stated that this was ok."

"Provide opportunities to meditate to distress during the day. Often we went non-stop and worked through the lunch hour. A break to settle the mind or exercise would have made us all more efficient (in my opinion)."

- 15% of respondents identified this as an issue on which they wanted additional help.
- 24% identified this as an issue with which they could use additional professional support.
- In response to additional professional support that CDC could provide, 24% of the respondents requested additional personal value and recognition.

Post Deployment Findings

- The most frequent response in the post deployment phase was the indication that the deployment was a positive experience.
  - Over 20% indicated that the deployment experience was positive or a good experience.

"The people on the ground were great... friendly, generally helpful, and very little "attitude." I appreciated that."

"I found this to be a personally motivating and inspiring experiencing and had little if any stress associated with my role or the situation in Baton Rouge."

"I felt fairly well-supported professionally: I had access to e-mail, I had access to the network drives for other projects. And they're working now on getting us the awards and ribbons, etc. that we need from this for our professional work. So, that went pretty well overall."

"I think it was outstanding. My leadership here gave me every resource and every opportunity to assist. They were fantastic and are continuing to offer me opportunities to learn and grow in these opportunities should I be needed again."

"I feel that I received the best professional support possible. Of particular note is the support that I received from my center, division, and branch. They deserve recognition for their efforts and support."

- Some respondents, however, requested additional emotional support upon return home.

"Feeling disconnected in body after not having a lot of sleep. Allow staff time to get back to normal. Mini debriefing upon return. A welcome back. Recognition that I would not be "reprimanded".

RECOMMENDATIONS

Pre-deployment Planning

- Since logistics and coordination were consistently cited as a challenge during the pre deployment phase, an emphasis on pre deployment planning in the following areas will be beneficial:
    - Compiling procedures for efficient deployment including appropriate deployment notification
    - Improving communication with external agencies to jointly plan resources mobilization
    - Streamlining CDC and DEOC communication for better efficiency

Assessment of Pre-deployment procedures

- Respondents in this study who were not from the Commissioned Officer Corps appeared to have felt less supported by pre deployment logistics. An assessment of pre deployment processes and procedures used for Commissioned Officer Corps and those not in that status would provide baseline information against which to evaluate this finding.
- CDC should consider providing similar pre-deployment procedures for both types of respondents, and/or additional support for non-Commissioned Officer Corps to meet their needs.

Deployment Logistics

- Professional support during deployment should focus on the following areas:
    - Sufficient equipment and resources (tangible equipment, office space, security and safety)
    - Dissemination of information and effective resource management

- Staff support and recognition (providing time off, counseling, making people feel valued)
- Procedures to address special issues among non commissioned officers

Post Deployment Procedures

- Provide deployed staff with additional time off upon return home.
- Provide deployed staff with counseling and/or mental health support upon return home.
- Recognize and validate deployed staff upon return home.

APPENDIX L
EXTERNAL INTERVIEWS
FINDINGS AND RECOMMENDATIONS

INTRODUCTION

The research team contacted five public health organizations and two private health organizations that partnered with CDC during the responses to Hurricanes Katrina and/or Rita, and conducted three in-depth interviews (IDIs) with employees at the public organizations. CDC provided a list of suggested contacts (See Appendix B for a list of organizations). Despite many attempts at contacting all requested individuals, the team was able to schedule interviews with only three individuals. Interviews were conducted in December 2005 and were guided by an interview protocol (see Appendix I for a copy of the interview protocol).

FINDINGS

Reaction to CDC's interaction with partner organizations was quite positive. One participant indicated that CDC supported response efforts well and did not attempt to take over the existing structure. An interviewee from the Association of Public Health Laboratories (APHL) said that CDC's response effort was "wonderful." The contact explained that CDC quickly determined a leader to serve as their organization's point of contact and communicated this contact information efficiently. This led to a very organized response in which everyone knew where to go for information and allowed APHL to provide CDC an overview of local public health lab conditions. All interviewees said that they looked forward to working with CDC on future disaster responses.

Though they appreciated CDC's assistance in the disaster response, several interviewees suggested further improvements for CDC's future response efforts. One area for potential improvement involves CDC educating itself before future disaster responses. One respondent from the National Association of County and City Health Officials (NACCHO) suggested that CDC did not fully understand the public health landscape of the areas affected by the hurricanes, which left these CDC employees at a disadvantage to help with the public health response after the disaster. This lack of information also made it difficult for CDC to contribute meaningfully to the public health system rebuilding effort.

Another respondent, from the Association of State and Territorial Health Officials (ASTHO), indicated that CDC needs further education on the Emergency Management Assistance Compact (EMAC) and its processes. This respondent said that CDC requested that ASTHO create a list of volunteers able to respond to the Gulf Coast area without realizing that states prefer to use EMAC to identify volunteers. "CDC wasn't fully familiar with all of the operational elements of EMAC and how states have been conditioned to work within the EMAC. CDC was lacking a full understanding of EMAC." However, this respondent said that CDC did allow ASTHO to explain and inform them of the EMAC processes and procedures.

Finally, respondents suggested that CDC take inventory of its capabilities in providing aid during disasters and consider its vision for disaster assistance. The NACCHO respondent suggested that people in local health systems assume that as a large entity, CDC can offer a large and authoritative response to disasters. "Locals have the feeling that when an emergency occurs, CDC has a 'magic army' to release, and CDC is perpetuating this notion." The respondent suggested that CDC coordinate better with local health departments to explain the capabilities that CDC

could offer, taking into consideration that CDC's assistance is a supplement to existing resources instead of assuming leadership.

Once CDC has a better understanding of their own capabilities and services they can offer to partners, respondents suggested that CDC work with local health departments, especially in large cities, to communicate which services are appropriate and to develop a game plan for possible disasters. The ASTHO respondent suggested the development of a "play book" that CDC can use when it positions itself as a helper to partner organizations as well as better integrate into the overall national response.

RECOMMENDATIONS

- Prepare briefings about the local public health landscape of respective disaster areas that can be distributed to all CDC responders before responding to disaster areas.
- Provide education to all responders about EMAC and other emergency response protocols well before disasters; provide a refresher to these responders before being deployed.
- Work with state and local public health officials, especially in large cities with well-developed public health systems, and partner organizations to develop a playbook of emergency response services that CDC can offer. This playbook could outline appropriate services and/or equipment that CDC could provide that would be appropriate for various disasters and locales.
- After this playbook has been developed, a list of capabilities should be communicated to local health departments and partner organizations, both in advance of disasters and as soon as a disaster has been declared.

APPENDIX M
EXTERNAL SURVEY
FINDINGS AND RECOMMENDATIONS

METHODOLOGY

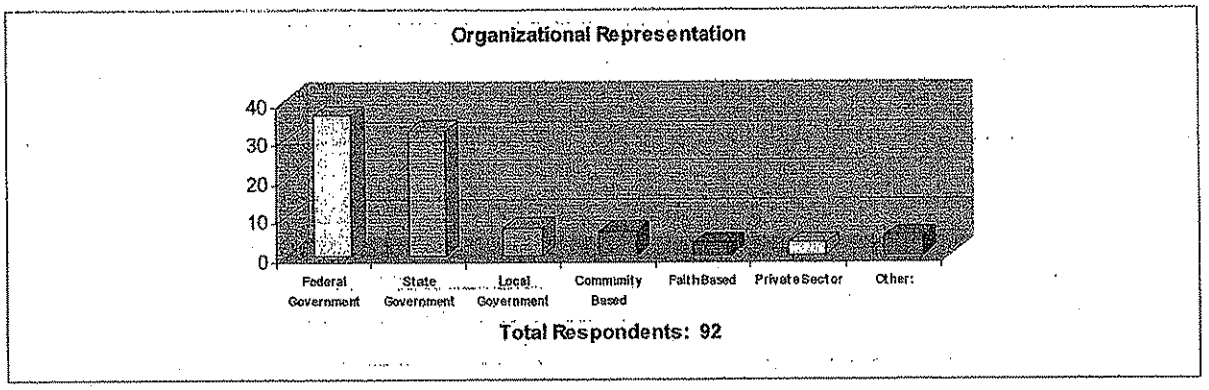
The research team conducted a survey of people at external organizations who interacted with CDC as a part of their organization's response to Hurricanes Katrina and/or Rita. The survey instrument content was developed based on the following research objectives:

- Identify successes and lessons learned in the responses to Katrina and Rita.
- Identify areas for improvement for future responses.
- Identify Best Practices among all sectors in emergency response

The survey was created using an online survey tool at www.surveymonkey.com. The first draft version of the instrument was cognitively pretested with two respondents (via telephone). The research team emailed the instrument to the respondents and the respondents completed the survey prior to the telephone call. Based on the feedback of the pretest, and CDC staff comments, the survey instrument was revised and cognitively pretested with an additional two respondents (via telephone). The final survey was then posted online and respondents were invited to participate from November 21, 2005 to December 8, 2005. The CDC team compiled the sample, including name and email address (169 pieces), and provided it to the research team; the majority of the sample came from CDC contacts in Louisiana. In addition to the sample provided to the research team, the CDC team sent the weblink for the survey to SMO contacts for various states and the SMOs distributed the weblink to their contacts. It is unknown how many respondents were invited to participate based on an invitation from a SMO. The research team sent two email reminders to respondents who had not yet participated, one on the 8th day of the survey and one 3 days prior to the close of the survey. In total, 92 respondents completed the survey, which is a response rate of 54%, assuming the total sample was 169 pieces.

RESPONDENT INFORMATION

92 respondents from a wide variety of organizations completed the survey



- Federal Government (n=36, 39%), State Government (n=29, 32%), Local Government (n=7, 8%), Community Organization (n=6, 7%), Faith-based Organization (n=3, 3%), Private Sector (n=3, 3%), Other (n=15, 16%)
  - Other included:
    - Community hospitals, state universities/educational institutions, military

- Sample of Organization Names:
  - Military, Air Force, Army Corps, National Guard
  - OSHA
  - Louisiana Public Health Institute, Office of Public Health
  - LSU Law and Public Health
  - Medical Center of Louisiana
  - Arkansas Dept. of Health and Human Services

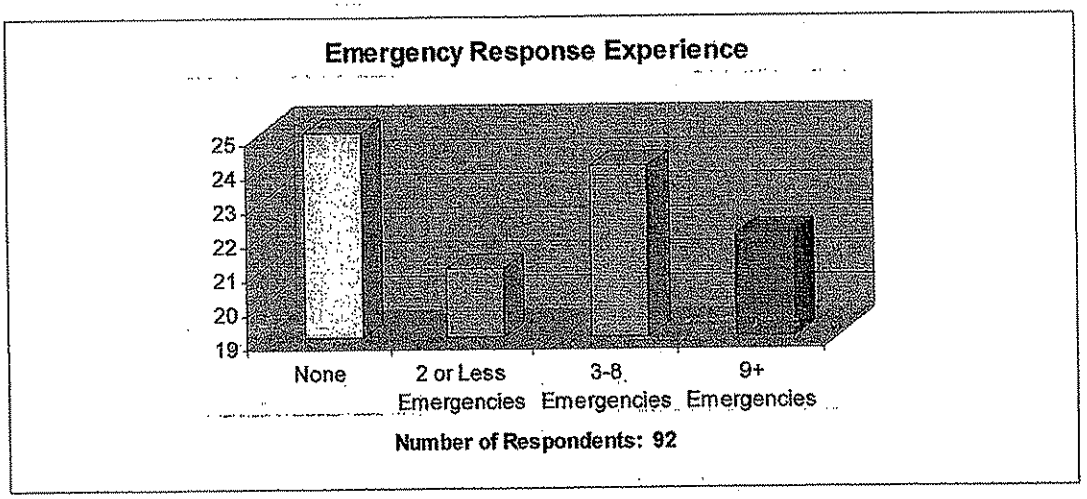
Respondents hold a wide variety of titles and job functions within their organizations

- Job Title
  - RN
  - CEO
  - M.D.
  - Director
  - Epidemiologist
  - Industrial Hygienist
  - Commander

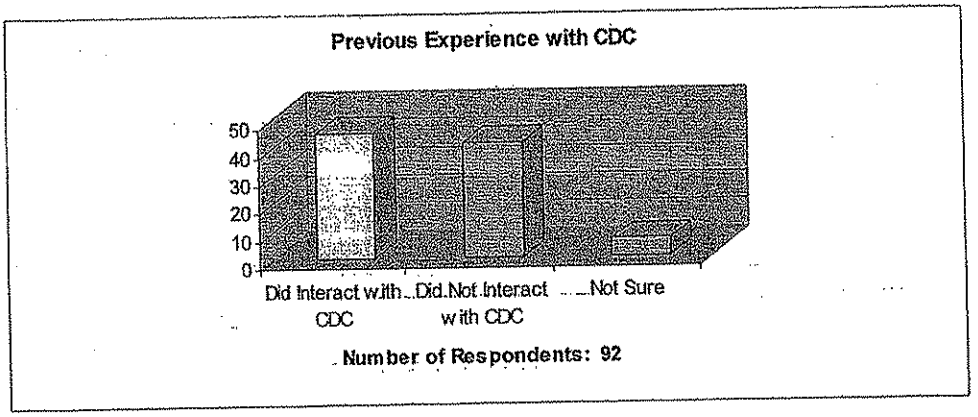
- Department type and name
  - Infectious disease epidemiology
  - Emergency Room

- OSHA
- Office of Performance Review
- Infection Control
- Environmental Health
- Dermatology
- Other:
  - Infectious disease/control
  - Public Health
  - Immunizations
  - Epidemiology
  - Medical Care/Hospital/Clinical Medicine
  - Law Enforcement
  - Health and Safety

Respondents have a wide variety of emergency response experience and experience working with CDC in these responses



- None (n=25, 27%), 2 or less emergencies (n=21, 23%), 3-8 emergencies (n=24, 26%), 9+ emergencies (n=22, 24%)



- Did interact with CDC (n=35, n=49%), Did not interact with CDC (n=32, 44%), Not sure (n=5, 7%)

Most of the 92 respondents were located in Louisiana during their response to Hurricanes Katrina and/or Rita.

Although respondents were primarily located in Louisiana, many were located in other states. Within each state there were a number of sites where respondents were based. Example include:

- Louisiana: New Orleans Airport, Superdome, various hospitals, central office in Baton Rouge, City of New Orleans Emergency Operations Center, various elementary, high school, and colleges, Zephyr Field, River Walk, Convention Center, Baton Rouge Joint Field Office.
- Arkansas: Northeast Regional Health Office at Batesville, AR, Division of Health in Little Rock, Arkansas, Little Rock Emergency Operations Center
- Mississippi: Gulfport, Mississippi Department of Health Emergency Operations Center
- Texas: Joint Field Office in Austin, Texas State Operations Center; Texas DSHS Emergency Support Center.

The roles of respondents varied greatly during their response to Hurricanes Katrina and/or Rita.

Respondents roles varied greatly, however included many of the following activities:

- Public Health Activities: Infectious disease surveillance, Coordinating lab responses, communicable disease control, immunizations
- Medical Care: Emergency response medical care, nursing care, patient care, casualty triage, search and rescue operations
- Environmental and Rebuilding Activities: Environmental assessments, geospacial support, sewage assessments
- Health and Safety of Response Workers: Response worker immunizations, response worker safety, public health force health protection.
- Operations and Logistics: Administration, operations, logistics, command center, incident command, long-term planning

GLOBAL FINDINGS

The global findings for this report are divided into the following sections:

- Respondents' interaction with CDC
- Respondents' experiences requesting support from CDC
- Respondents' familiarity with NIMS and ICS
- Respondents' satisfaction with CDC and their suggested recommendations for improvement

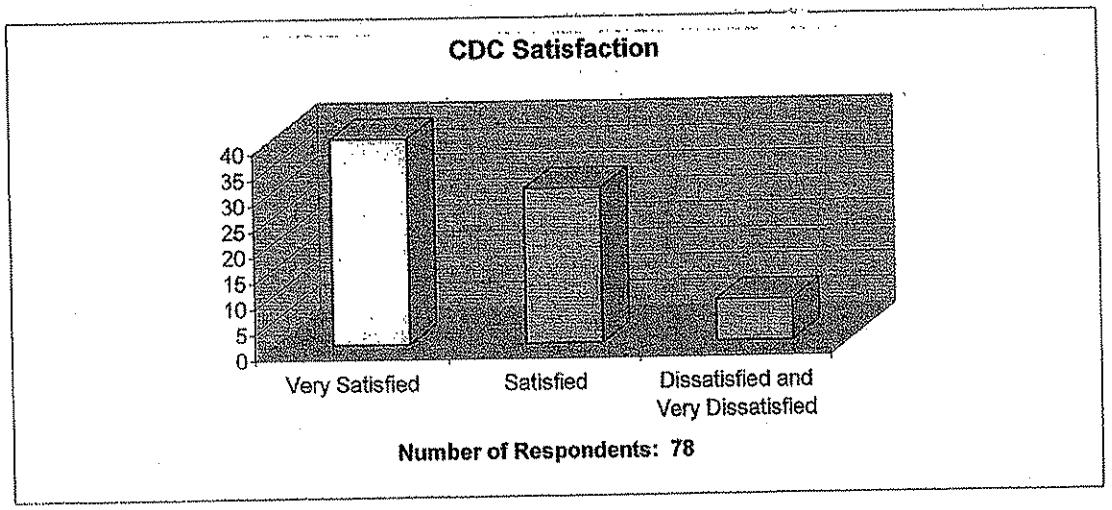
This report represents a high-level overview of the results from the survey. The project team will update this report at a later date once further statistical analysis is conducted.

Interaction with CDC

89% of respondents interacted with CDC in some way and of those who did, interaction types differed. Some respondents interacted in multiple ways

- CDC staff acted in an advisory role IN THE FIELD (n=41, 51%)
- CDC staff worked side-by-side providing the same services as my team IN THE FIELD (n=30, 38%)
- Atlanta-based CDC staff acted in an advisory role. (n=25, 31%)
- Other (n=33, 41%)
  - CDC epidemiologists working onsite with me
  - Provided up to date information/daily briefings
  - Collection of medical data
  - Provided force protection

75% of respondents were satisfied with their interaction with CDC



- Very satisfied (n=35, 43%), 32% Satisfied (n=26, 32%), Neutral (n=13, 16%), Dissatisfied (n=5, 6% and very dissatisfied (n=2, 3%)

The response to Katrina/Rita involved multiple organizations, including CDC. Respondents indicated they worked with a variety of organizations, including:

- Red Cross, CDC, HHS, DHH, EPA, DEQ, Army, FEMA, Navy, Air Force, Faith-based Organizations, National Guard, DOD, OPH, USPHS, USEPA, FDA, and Coast Guard.

Most respondents indicated that CDC was instrumental in their successes

Many of those who responded to this question indicated that the CDC played a key role in their success, however respondents differed in the role that CDC played in their organization's response. The following four areas were most prominent in the responses.

- Manpower: Providing staff such as nurses and epidemiologists, as well as staffing support.
- Planning: The planning skills and frameworks provided as part of operations, unit planning, and rebuilding.
- Knowledge and Communications: The knowledge and talent of deployed CDC staff, as well as the communication skills and vehicles such as daily briefings, sharing information, dashboard communication tool, intelligence data, and technical expertise.
- Leadership: Strong leaders with a clear understanding of policies and procedures.

A few respondents reported no challenges to working with CDC

- "None, no challenges come to mind, they were excellent"

Others indicated a few challenges related to communications, deployed staff assignments, and bureaucracy

Many of those who responded to this question indicated that there were some significant challenges in their work with CDC. The following four areas were most prominent in the responses.

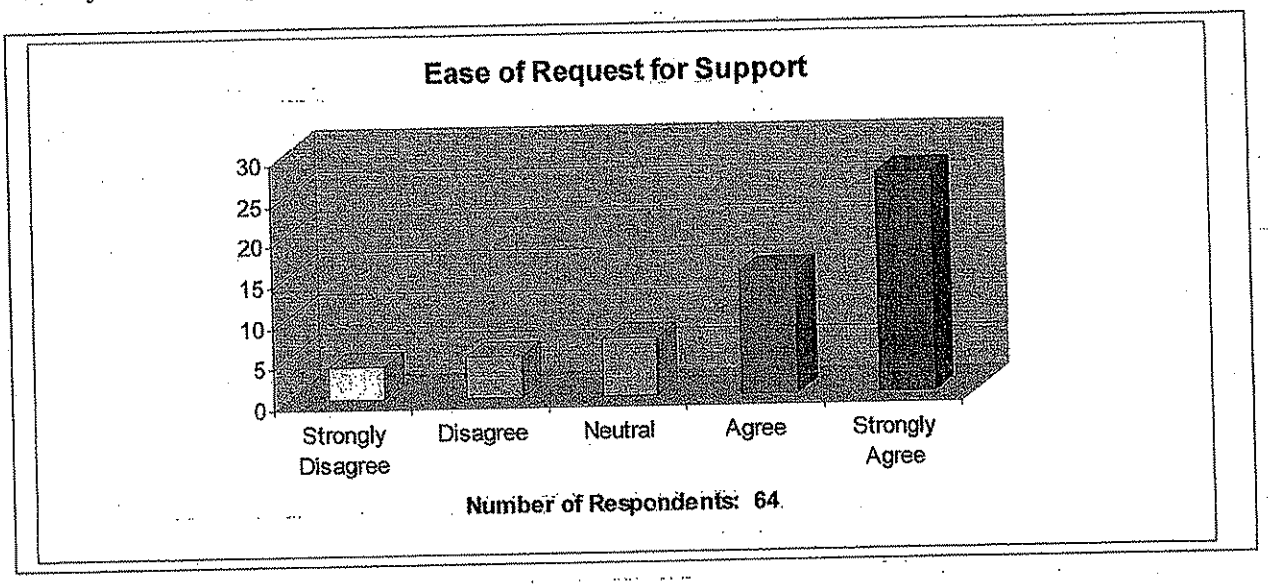
- Communications: Challenges arising from lack of coordination in the field expertise and inability to rely on high tech communication tools such as email.
- Staff Assignments: CDC staff came and went with no consistency. These changes in assigned staff to the state made continuity difficult, hindered accurate scheduling because it was difficult to know who was there day to day, and prevented effective relationship building. These short, typically two week, rotations made it difficult to keep people up to speed and prevented effective communications because the CDC contact people continuously changed.
- Paperwork: The forms CDC asked people to complete were lengthy, cumbersome and respondents didn't have time to fill out all the paperwork CDC required.

Requesting Assistance from CDC

70% of respondents indicated that they requested support, such as advice or resources, from CDC, and most of those respondents (63%) requested this support from CDC in person through a field office or deployed staff member. Many respondents had used multiple methods to request support, so percentages do not sum 100%.

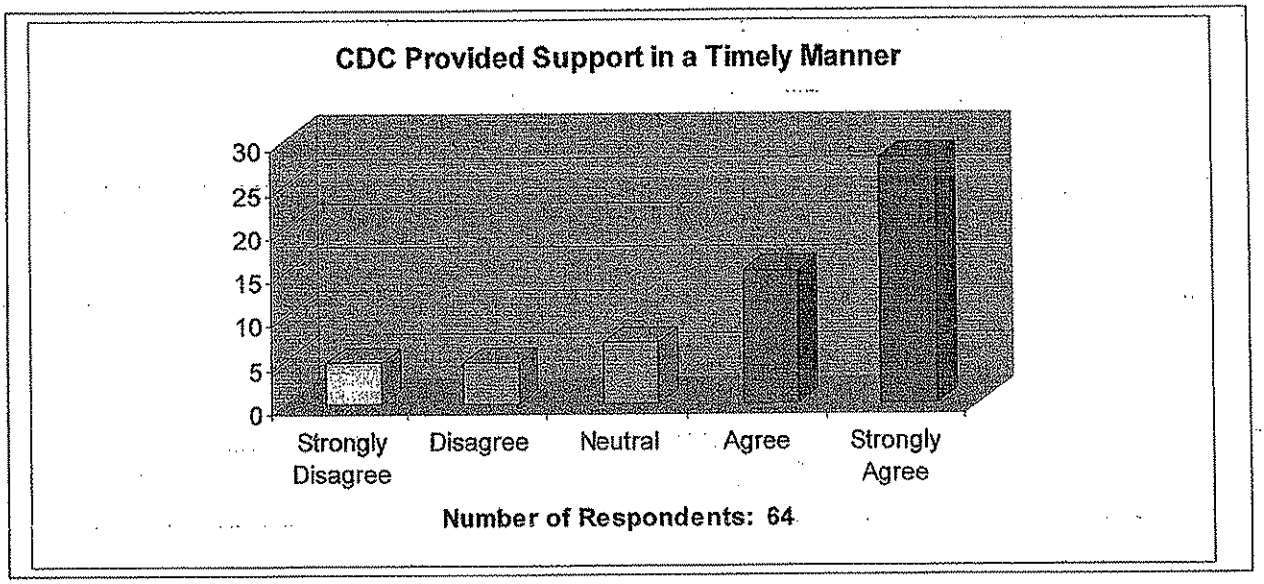
- By phone (calling someone in leadership at CDC) (n=24, 44%)
- Electronically (sending an email to the CDC EOC mailbox) (n=12, 22%)
- In person (through a field office or asking someone in the field) (n=35, 64%)
- I do not know (n=7, 13%)
- Other (n=5, 9%)

Most of those who requested CDC support indicated it was easy to do so



- Strongly disagree (n=3, 5%), disagree (n=4, 7%), neutral (n=7, 13%), agree (n=13, 24%), strongly agree (n=23, 42%), Don't know (n=5, 9%)

68% of respondents indicated receiving their support in a timely manner



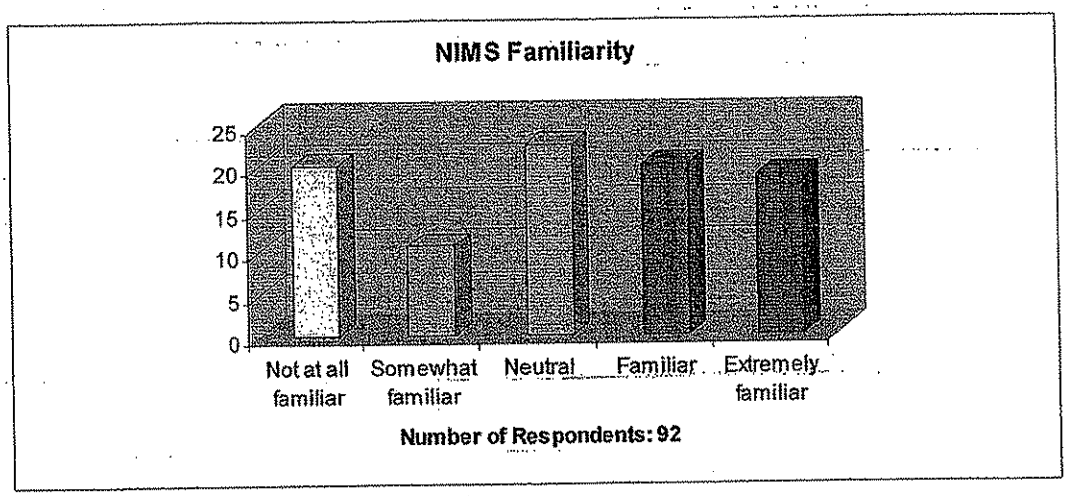
- Strongly disagree (n=4, 7%), disagree (n=4, 7%), neutral (n=6, 11%), agree (n=13, 24%), strongly agree (n=24, 44%), Don't know (n=4, 7%)

Some respondents had suggestions for what CDC could have done differently to respond to the request for support

- Provided nursing support earlier/our greatest need for help was within the first 48 hours, CDC was not available then
- Decrease the formal paperwork that needed to be completed
- Have one constant field leader from CDC/ Too many people coming in and out, it was unclear as to whom to report to.

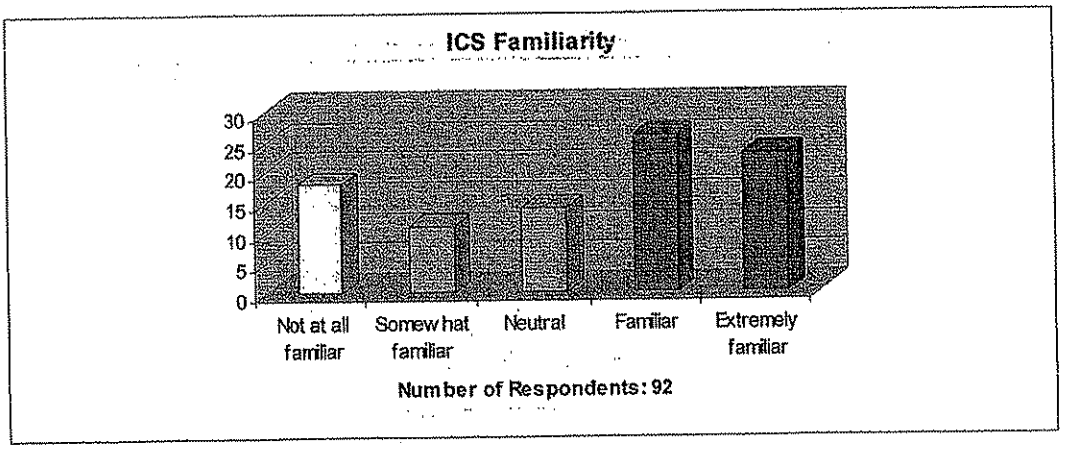
Familiarity with NIMS and ICS

Respondents range in their familiarity with the National Incident Management System (NIMS)



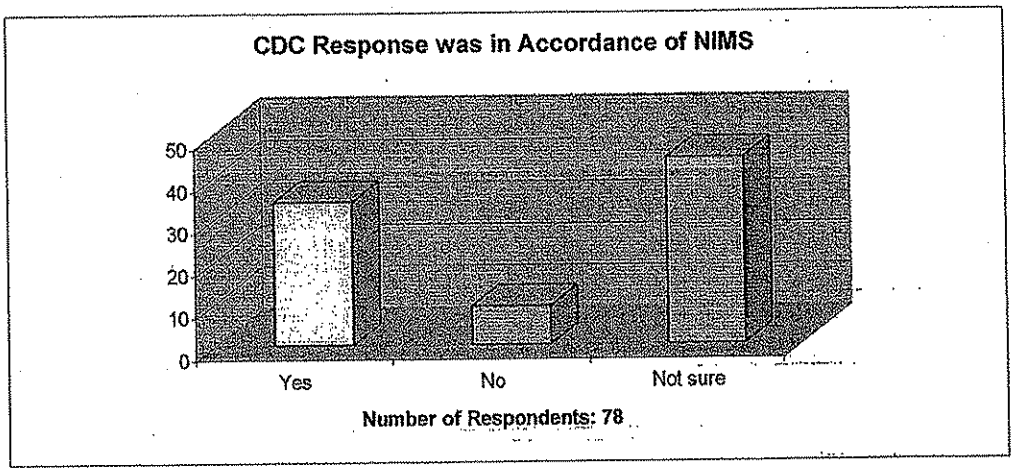
- Not at all familiar (n=17, 22%), Somewhat familiar (n=9, 12%), Neutral (n=19, 24%), Familiar (n=17, 22%), Extremely familiar (n=16, 20%)

Respondents range in their familiarity with the Incident Command System (ICS)



- Not at all familiar (n=15, 19%), Somewhat familiar (n=9, 12%), Neutral (n=12, 15%), Familiar (n=22, 28%), Extremely familiar (n=20, 26%)

It was unclear to many if the CDC response was in accordance with the principles of NIMS



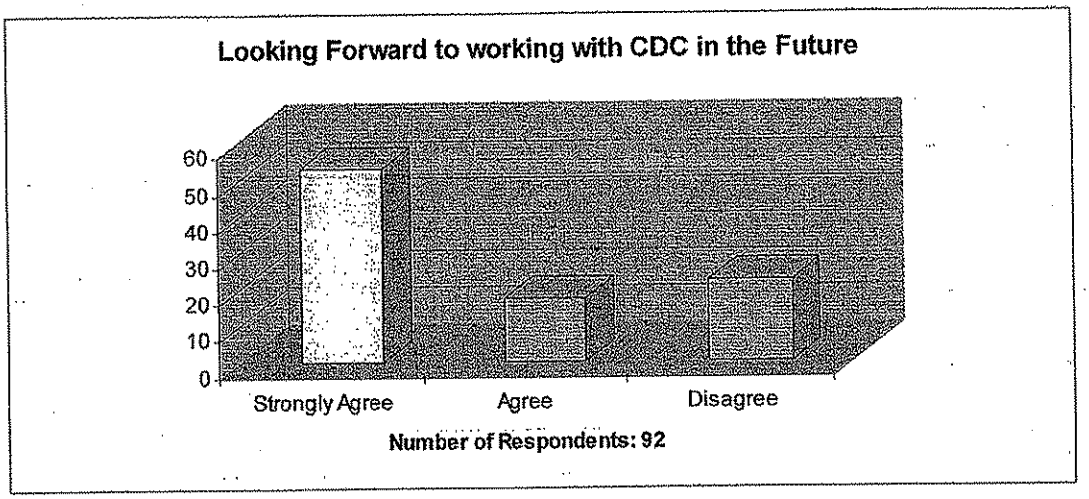
- Yes (n=29, 37%), No (n=7, 9%), Not sure/ Not applicable (n=42, 54%)

Satisfaction with CDC and Recommendations for Improvement

Respondents offered a variety of answers to the open-ended questions that ended the survey. Many comments offered thanks and praise for CDC staff, some offered criticisms of individual events and leadership decisions, and others offered suggestions for improving response coordination for future events. Themes and demonstrative comments drawn from survey responses are provided below.

Overall most respondents had high praises and compliments for CDC during their response to Hurricanes Katrina and Rita and looked forward to working with CDC again.

76% of respondents look forward to working with CDC again as part of an emergency response



- Strongly agree (n=45, 58%), Agree (n=14, 18%), Neutral (n=12, 15%), Disagree (n=4, 5%), Strongly disagree (n=3, 4%)

Many respondents had compliments for CDC. Respondents felt that CDC staff was capable, competent and cooperative. Selected respondent comments include:

- "Overall, our experience with CDC was very favorable. It enable us to more quickly assess and meet the needs of evacuees despite some nursing care shortages we were experiencing."
- "Great people in your organization—every one of them.... (They were) very serious and well informed, had great interpersonal skills, and were very dedicated to their jobs. I really looked forward to seeing them come by each day. (I) can't say enough good things about them."
- "I was impressed. The CDC was very professional and knowledgeable. Thanks for the help. We look forward to working along side of you in the future."
- "Overall, I think the CDC did a very good job of bringing support and equipment to Texas. This was an extremely difficult operation on a scale we have never had to deal with at the state level. Their expertise was invaluable."
- "The on-site CDC staff were superb in my opinion."

Several respondents offered feedback related to CDC's on-site leadership. Selected comments include:

- "Personally I am sorely disappointed in CDC's response. Their response has provided me the opportunity to evaluate their role and its applicability to healthcare facilities. We were involved in a catastrophic

situation which no-one, not even CDC had experienced before. We all were caught unprepared, yet I didn't feel like those of us who know the local environment and healthcare situation were included in any of the CDC actions. We had to spend a lot of unnecessary time catering to there requests, along with completing our routine tasks. Too many chiefs.... It's easy to toss around, "I'm with the CDC or I'm following orders of CDC." If CDC is the designated leader, than they need to stand up and act like a leader."

- "Individuals from CDC seemed sincere and wanted to help. This raised hopes for aid that never came down to our level. The reason that this aid never came was never explained."

- "I experienced one incident where I was sharing with a CPT in US Public Health Services my perceived need to use "real people" language with the returning locals who were coming to the Health and Human Services desk because they were not familiar with ESF 8 or ICS or NIMS. Despite my conversation with him, he proceeded to overwhelm the city staff with his need to use official jargon and acronyms. I felt this was inappropriate and did little to empower city staff to feel they could do the job before them."

- "Our hospital was closed due to damages from Rita. I am still not sure who gave the authority to reopen our hospital.... I still have questions that have not been answered. I can not find another hospital where they took over the hospital. We are still struggling to recover from the method in which Hurricane Rita was handled. The overall process has not been a good experience."

Many respondents suggested recommendations for improvement. These ranged from addressing communications concerns, providing adequate information about available services, coordinating the CDC's effort to the need on the ground, improving evaluation, and making better staffing assignment decisions. Selected quotes are offered below:

Improve and enhance the communications efforts across the participating Federal agencies

- "Better integration, communication, collaboration, and coordination with DHS, DOD, and other HHS activities before, during and after the incident. (For example, this survey should be integrated with DHS, DOD and HHS, etc.)"

- "I think it would be very helpful to do some homework prior to the next event to get more familiar with what each other do, our forms, and what information needs to be collected. We can then build it into a daily report on patients and team members that can be given by all teams in the field and it would be in a standard reporting format for the CDC representative when they need it."

- "Pre-Disaster meetings, perhaps on an annual basis to review the various groups responsible for disaster assistance and specifically the CDC role and what to expect. Develop pre-disaster communications including email, listservs, etc., for key hospital participants (including medical staff) to be in communications with CDC. (I) would also like to (see) streamline communications with a well organized agency—one stop shopping—that could be in communications with us before and after a disaster. With DMATs, Public Health Service, Armed Forces, CDC, etc., (it's) very confusing and sometimes counterproductive."

- "The role of CDC needs to be clearly identified and how they relate to FEMA."

- "(I) would recommend that a CDC PIO make contact with a Joint Information Center and provide contact information in order to package information as part of the overall campaign."

Improve communications / coordination between CDC and local staff

- "Again we appreciate all that the CDC did for us during Katrina. Arkansas kept its EOC operational 24/7 for 7 days then 12 hr/day for 2 weeks then 8 hrs/day for 1 week. During the first week we fully staffed our EOC. CDC people were excellent, including the wonderful nurses, physicians, and epi's. As incident commander, (I would like to) develop better communications with CDC."

- "A more unified approach was needed. The hospital group met in Jefferson Parrish daily with a conference call option. For a couple of weeks this meeting conflicted with the daily briefing at the Emergency Operations Center."

- "While we were able to handle any paperwork issues, the Atlanta staff were not really able to help us fill in gaps. For example, we are having trouble reassembling the instructors for our professional education series to be broadcast around the state. It would have been very helpful if the CDC could have provided us with some "experts" to conduct the three 90 minute sessions."

- "CDC staffers should be clear up-front about what expectations are reasonable. Further, when they say "efforts should be led locally," they should let locals lead—particularly when it comes to advancing ideas about necessary projects and activities and then requesting funds for those."

- "(1) Provide cell numbers to reach them, (2), knowing where they are located and when they will arrive, (3) CDC should have GIS capabilities in the field."

- "(1) One lead person consistently interacting with any one field team. (2) Limit the size of the groups in the field. (3) Respect the professionals in the field. They may know a lot more than the CDC people do. (4) If asked for information that the CDC has or can provide, give it to them. The field people are the ones doing the work."

Assign staffers to longer engagements / make smarter staffing assignments. Examples of comments related to staffing challenges include:

- "Having staff members assigned for a longer time period would have been quite helpful. The change in staff members was challenging."

- "In a situation like Katrina, longer rotation periods would be useful."

- "Limit the number of personnel at meetings. Have team leaders get information and relay it to other members. When you have a large group of people in a meeting and they are all contributing something, it makes for a long meeting."

- "On-the-scene, competent disaster response personnel would be nice. Anybody can come in at 7-10 days later with some response. CDC can not react quickly enough for a disaster. It seems best able to respond slowly to infectious disease after a local disaster has already occurred."

- "Additional logistical personnel were needed. Perhaps in the deployment of a large number of individuals, dropship CDC's personal "readi-paks" to a centralized location so that each individual does not have to transport into and out-of disaster site."

Providing on-site personnel with a listing or accounting of CDC services that are available. For example, survey respondents offered the following comments regarding understanding what CDC could and would provide:

- "Offer and spell out what is available to the states in technical assistance earlier in the response period."

- "Perhaps to initiate an offer to help, listing what type of services are available. However, we obtained CDC's help through our organization's CDC representative so he may have been aware of the help available and just didn't think we needed it any sooner. In retrospect, we could have used the nurses' expertise much earlier in the response."

Enhancing on the ground evaluation capabilities. Several respondents suggested that steps could be taken to allow for better real-time evaluation. Comments included:

- "Drop in someone who can observe how the states operate during a disaster, an unbiased observer who does not necessarily grade but can offer objective positive comments to the state post disaster so that we can improve. As an example is that the only team from the CDC that gave us a feedback on a live exercise that we conducted were those from the CDC in their Public Health Grand Rounds featuring Arkansas in the Flu Vaccine Shortage(2004). We liked this because we can refer back to their archived grand rounds. This is the only objective archived history we have and it's stored in the Public Health Grand Rounds—fortunately."

- "Share back with the care providers the results of your surveys."

Coordinating the effort to the most pressing need. Several survey respondents felt that some of the CDC efforts did not address the most immediate needs on the ground. Some comments like this include:

- "In an emergency you actually need to provide supplies and services. Collecting data and preparing the daily dashboards need to be done after the fact. We are still in the middle of the response to Katrina/Rita/Wilma and I am being requested to answer a survey as if the event is over."

- "The leaders need to forget about photo opportunities and communicate with local healthcare providers. We know our population and we also know and have a system to monitor what is being seen in our facilities. Ask first."

- "As emergency care facilities become available in an area ensure all agencies are aware of where emergency care can be provided in the event emergency care is required by a responder/worker. When asked, this information was provided immediately at the JFO, but I'm not certain how many other agencies or field personnel knew of this information."

- "CDC deployed highly educated and experienced field personnel. When field personnel wanted to take a course of action and the options were reviewed by the Atlanta based personnel, the Atlanta personnel took too long to review proposed courses of action. Streamline the "vetting" process."

- "CDC should not contact people down the chain of command if they are not going to be able to help those people or respond to those people directly. It raises false hopes of aid that is not going to come."

FURTHER ANALYSIS

The research team will continue to analyze the data from this survey with a focus on conducting cross tabulations and identifying segment-specific recommendations. The team will submit an addendum to this report that includes these new findings, if any, and the subsequent recommendations.

APPENDIX N
DATA REVIEW TEAM
FINAL AAR REPORT

HURRICANE KATRINA AFTER ACTION REPORT – DATA REVIEW TEAM

Prepared for:

Hurricane Katrina After Action Report Team

December 15, 2005

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EXECUTIVE SUMMARY

Introduction

As Hurricane Katrina grew to a Category 4 storm and its threat to the gulf coast region of the United States worsened, the Centers for Disease Control and Prevention (CDC) activated the Director's Emergency Operation Center (DEOC) and formed a task force to prepare for the impending damage and provide support in the aftermath of the storm. Realizing the magnitude of CDC's response efforts, Dr. Julie Gerberding, CDC Director, asked the Coordinating Office for Terrorism Preparedness and Emergency Response to conduct an in-depth After Action Review (AAR) to identify both successes and opportunities for improvement so that rapid and lasting steps could be taken to improve performance in future responses. Following this request, COTPER formed a cross-agency, multi-discipline workgroup to develop and execute a plan for the Report. As a part of the AAR process, CDC leadership was interested in gaining a better understanding of the processes and procedures followed by the DEOC during the response, comparing these to an established baseline of processes and procedures in place prior to the activation of the Center and identifying gaps as well as areas for process improvement. To manage this portion of the AAR and conduct the required analysis, a Data Review Team, led by (b)(2),(b)(6) (COTPER) was established with support from BearingPoint, a global management and technology consulting firm.

Framework

In providing support for the AAR Workgroup, the CDC emergency response documentation that was provided by CDC Data Review Team Leader, (b)(2),(b)(6) was reviewed. Critical processes and procedures included in this documentation were identified and mapped as a baseline for CDC's emergency response activities. In addition to the identified emergency response documentation, a group of selected CDC AARs was reviewed to determine if previous lessons learned and recommendations had been implemented in current DEOC operations. A series of interviews with select CDC personnel was conducted to capture the actual processes and procedures followed during the Katrina response. Following the interview and document review phase, a qualitative analysis was conducted with the objective of identifying the operational strengths and improvement opportunities of CDC's response effort, as well as any operational gaps in the response. This report represents findings, a detailed gap analysis, and recommendations for improvement. The findings will contribute to the development of the Corrective Action Plan.

Summary of Key Findings and Recommendations

There were several factors that contributed to the DEOC's ability to respond to the event in an effective manner. Despite the perceived disorder associated with the response to the largest natural disaster to ever hit the United States, the overall "can-do" attitude of the CDC leadership and staff enabled the agency and the DEOC to provide needed assistance. In addition to the prevalent spirit of volunteerism among the staff, the response benefited from a wealth of experience among those working in the DEOC and deployed to the field. These factors were countered by several issues that worked against the ability to provide an orchestrated, timely, and efficient response. The following items represent the key findings and recommendations that are discussed in detail within the body of this document:

- **Organizational Structure** - The organizational structure within the DEOC changed after the response started. This impacted lines of authority, reporting, communication channels, information exchange, and adherence to SOPs. To operate with efficiency and effectiveness, CDC leadership must agree to and follow an established organizational structure within DEOC and embrace the corresponding SOPs, lines of authority, communication, and information flow processes.

- **Standard Operation Procedures** - The detailed SOPs required to support a response need to be developed beyond a "Draft" edition. Until the organizational structure is agreed upon for an "all hazards" response within the DEOC, it is difficult to identify which SOPs are necessary for a comprehensive response to an incident. When the structure is established, the detailed SOPs will provide procedural guidance for all individuals involved in an emergency response.

- **Information Management** - The management of information associated with the Katrina response was improperly maintained due to procedural gaps. There were problems related to the location of information, forms to capture information, and the coordination of input and release of documents. The DEOC should implement an Enterprise Content Management (ECM) tool, which will provide a structure to house information so that it can be easily accessed and archived.

- **Staffing** - The ability to staff the DEOC and deployment teams and track these resources proved to be an unprecedented challenge due to the scale and duration of the Katrina response. The existing processes for rostering and tracking deployed staff lacks the scalability to effectively respond to an event of this magnitude. The existing Resource Tracking System (RTS) should be reviewed for its capabilities in consideration of the development of the new resource system. A system should be developed to deploy and track resources, that is scalable, accessible, and accurate. It should be able to identify personnel based on their training and expertise.

- **Training** - Based on the data gathered and analyzed, a need for a greater awareness of basic knowledge concerning emergency response operations exists among the CDC staff. This finding identifies a need for establishing a core training program that provides a basic understanding of emergency response and DEOC operations. In addition to core emergency response training, certain key leadership positions within the DEOC incident response organizational structure should be created and the appropriate staff to fill the roles identified. Standard skill sets, including prior emergency response experience and a leadership and management curriculum should be developed for the new organizational structure.

The detailed observations from the data review were rolled-up to key findings that impact operational performance during an emergency response. They include strengths and weaknesses shared by the Hurricane Katrina emergency responders.

BACKGROUND

On August 29, 2005 Hurricane Katrina, a dangerous category 4 hurricane, made landfall in Plaquemines Parish, Louisiana. Within hours, the storm surge breached the levee system that protected New Orleans from Lake Pontchartrain and the Mississippi River. Most of the city was subsequently flooded. The hurricane storm effects inflicted heavy damage on the coasts of Louisiana, Mississippi and Alabama. It was estimated that nearly one million people were displaced. As a result, federal disaster declarations blanketed 90,000 square miles. As of December 11, 2005 the Associated Press reported approximately 1,300 casualties and The National Center for Missing Adults reported over 4,800 people unaccounted for. As of December 12, 2005, in response to the devastation and disaster left in Hurricane Katrina's wake, the CDC deployed 766 responders to Louisiana, Mississippi and Alabama. A detailed timeline can be found in Appendix H. The CDC's DEOC moved from Watch and Alert Modes to Response Mode to support these teams and individuals in the affected areas. During the response the CDC worked with a number of federal, state and local agencies to achieve their missions. In an effort to identify successes and areas of improvement, Dr. Julie Gerberding, CDC Director, asked COTPER to develop an AAR.

SCOPE & OBJECTIVES

The Data Review Team was engaged, under the direction of (b)(2),(b)(6) to review processes, technology, and infrastructure utilized prior to and during the Hurricane Katrina response. The information captured through the data review was analyzed to identify procedural gaps that existed between the Standard Operating Procedures (SOPs) and the processes followed during the Hurricane Katrina Response. Based on the analysis of the collected information, key findings and process improvement recommendations were identified and prioritized.

APPROACH

The Data Review Team focused on four key areas during the data review: CDC standard emergency response operating procedures, Katrina response procedures, variations between the two sets of processes and recommendations for operational improvement. The overall approach for the team was executed in the following three phases:

- Data Gathering: This involved the compilation of the emergency response procedures listed in standardized reports, Emergency Operating Plans (EOPs), and SOPs. Subsequently the data review team met with 44 CDC emergency response participants in order to document the emergency response procedures followed during Hurricane Katrina. Details can be found in Appendices D & E. Throughout the project the team collected reports and documents from individuals and performed a review of the Director's Emergency Operations Center (DEOC) intranet web portal to better understand the flow of information before and during the response. A complete list of all of the reports and documents utilized in the creation of our findings can be found in Appendix A.

- Data Analysis: After all the necessary information was gathered from the identified sources, the team performed a review of the processes, technology, and infrastructure utilized prior to and during

the Hurricane Katrina Response to identify procedural gaps. Details can be found in Appendix B. The review included team discussions of data from interviews, standard and ad hoc reports, and organizational structures. Key findings were identified and categorized based upon prior AAR groupings and CDC established decision tiers; strategic, operational and tactical.

- Reporting: Based upon the understanding of the CDC's emergency response role outlined in the EOPs and SOPs, and the information gathered in the interviews and report reviews, observations, and recommendations were documented. Details can be found in Appendix F.

FINDINGS & RECOMMENDATIONS

During the data review process there were areas of operational strength identified. Responders felt confident in the conduct of the following areas:

- The information technology support staff responded to requests timely and efficiently during the response. Personnel in the DEOC and the field were confident that IT requests would be efficiently addressed.
- Field teams were deployed with the necessary equipment in a timely and efficient manner. Once personnel were notified of their deployment, they were able to quickly obtain required equipment.
- CDC staffed in the Joint Field Office (JFO) expedited the DEOC response to requests for assistance from the states. The DEOC was able to prepare in advance for requests for assistance from the states.

The following areas of operational improvement were identified during the response.

Organizational Structure

Finding: 1	Changes in the DEOC organizational structure created operational confusion during the response.		
Reference	CDC EOP – Draft		Finding Type: Strategic
Condition	Standard	Impact	Recommendation
Changes to the response plan were implemented during the response that did not follow the operating procedures or operations from previous responses.	The organizational structure and operating procedures should govern the response operations. Operational guidelines and tasks should be supported by the SOPs, which provide guidance to individuals participating in any response.	Individuals involved in the response were unable to apply the procedures to the changing organizational structures and team reorganizations. gf	A Response Plan, which includes the organizational structure and chain of command, should be established prior to an event. The implemented organizational structure should be validated and briefed to CDC staff. Once this has been accomplished, all efforts should be taken to ensure that the plan does not change during the response.

Finding: 2	Clear lines for communications, information exchange, and lines of authority were not maintained throughout the response, which resulted in inconsistent information requests and inefficient internal communications. Details can be found in Appendix C.		
Reference:	DEOC Hurricane Response Plan Organizational Chart for DEOC	Finding Type:	Operational
Condition	Standard	Impact	Recommendation
Changes in organizational structure within the DEOC led to confusion regarding requests for information and reporting structures. The lack of knowledge regarding channels of communication resulted in a breakdown of communication within the DEOC and among field teams.	CDC leadership should establish the organizational structure, appropriate channels for communications, information requirements, and expected reports.	The following information was communicated inaccurately: correct lines of authority; the organizational structure in the DEOC; the appropriate e-mail box for posting information; and the correct reporting channels for vital information from the deployed CDC staff. Deployed personnel either reverted to previously known patterns for communications or mass dissemination of information to numerous individuals. This resulted in overloaded mailboxes, and in some instances, the delay of decisions or approvals for necessary actions.	When an incident response begins, the established organizational structure within the DEOC should be maintained, and the resulting lines of authority, lines of communication, and information flow should be published in order to be understood by all personnel and agencies involved with the response. When this is established, and the appropriate SOPs are developed, CDC should develop a core list of Essential Elements of Information (EEI) for various hazards, and include this in the DEOC SOP.

Standard Operation Procedures

Finding: 4	The CDC emergency response policies should be expanded to foster cooperative interagency emergency response relationships within Department of Health and Human Services (HHS), other federal agencies, and the individual states.		
References	CDC EOP—Draft	Finding Type	Strategic
Condition	**Standard**	**Impact**	**Recommendation**
Despite published Emergency Support Function (ESF) definitions of lead and support roles, there was minimal coordination among HHS Operational Division (OPDIV) leadership and other federal agencies with regards to reporting criteria and sharing of information. State emergency management assets, capabilities, and competencies were not fully taken into consideration prior to CDC deployments.	The National Response Plan (NRP) documents the established lead and supporting roles for each ESF. This structure should facilitate interagency coordination and communications.	Unnecessary duplication of effort, ineffective responses to requests for assistance, unnecessary burdens to accommodate Federal assets in the field, as well as inconsistent data capture and reporting occurred.	Develop, document and communicate emergency response policies and procedures to establish ongoing communications, build trust, coordinate capabilities, and maintain cooperative working relationships within HHS, other federal agencies and among the individual states.

Finding: 4	Detailed SOPs should be developed and disseminated to all individuals identified as potential emergency responders.		
Reference	CDC EOP – Draft CDC EOP Annex J – Natural Disasters DEOC Hurricane Response Plan DEOC Task Force SOP		Finding Type: Operational
Condition	**Standard**	**Impact**	**Recommendation**
The CDC SOPs did not provide detailed procedural or task-based guidance for the DEOC teams or the deployment teams. The majority of the individuals interviewed were not aware that SOPs existed. Furthermore, new teams formed during the response did not have SOPs for procedural guidance. Some SOPs were outdated or existed in "Draft" form. Individuals not familiar with prior response operations were not given the operating procedures or briefed on the overall emergency response process.	All processes within an emergency response plans should be governed by approved and published SOPs.	Emergency response teams operated without approved guidelines. This created confusion, information loss, and duplication of efforts.	The current set of SOPs should be expanded to offer procedural guidance for all individual teams involved in an emergency response. This expansion should include a standard organizational structure; roles and responsibilities for teams supporting the emergency response; staffing requirements and skill sets necessary to perform the functions of each team; procedures for identifying, tracking, and rotating resources; internal and external communication and information flow plans; logistical team operational guidelines; field team equipment guidelines; and training requirements for response personnel. All SOPs should be updated and finalized.

Information Management

Finding: 5	The information management processes were not clearly defined. Details can be found in Appendix G & K.		
Reference:	CDC EOP – Draft		Finding Type: Operational
Condition	**Standard**	**Impact**	**Recommendation**
Individuals involved in the response were unable to clearly define to whom or how information should be transferred. The event portal did not have a defined folder structure.	The information management process should be documented in the emergency response SOPs, along with defined folder structures, and distributed to all emergency responders.	Document clearance and version control became difficult and untimely because there were no specifications for the process within the SOPs. This deficiency resulted in mass emailing, incomplete communication loops, and loss of information.	Information flow procedures should include information flow plans for DEOC teams, CDC teams operating outside the DEOC, field teams, external partners, and other federal agencies, as well as standard data collection forms. Additionally, EEI, format, and distribution lists for daily reports should be standardized. This will prevent mass e-mailings, inconsistent information, and the potential loss of information. CDC should consider an Enterprise Content Management tool to maintain version control and access rights to documents relating to an emergency response.

Finding 6	Daily tasks lists and supporting action items were not effectively managed.		
Reference	Not referenced in SOPs.		Finding Type: Operational
Condition	Standard	Impact	Recommendation
It was difficult for members of the response teams to know which tasks were being actively pursued, by whom, and when these tasks had been completed.	Daily task lists should be managed during an emergency response.	Duplication of effort of some tasks or failure to recognize an outstanding action item occurred.	The DEOC should implement the HHS Incident Command System management software (WebEOC) for all future emergency responses. This system would be a central clearinghouse for action item tracking that is web based for easy access from CDC or remote locations. This would ensure that all assigned tasks are effectively tracked and followed through to completion or resolution.

Staffing

Finding 7	CDC staff deployment assignments were made without following the established Action Request Form (ARF)/ Mission Assignment (MA) process.		
Reference	CDC EOP – Draft		Finding Type: Operational
Condition	Standard	Impact	Recommendation
There were instances of CDC leadership deploying personnel prior to the ARF process being completed. Some personnel were not deployed in response to a specific MA.	States submit an ARF, which when validated, results in an approved MA. CDC staff are deployed in response to the approved MA.	Deployed CDC personnel were refused by affected and sent home because they were not responding to a specific state request.	Follow the established ARF and MA processes to completion prior to deploying assets to the field.

Finding: 8	Enhancements should be made to the RTS database to improve the DEOCs ability to identify personnel for deployments, as well as for tracking personnel in the field. Details can be found in Appendix I.		
Reference	CDC EOP – Draft CDC EOP Annex J- Natural Disasters DEOC Hurricane Response Plan		Finding Type: Operational
Condition	**Standard**	**Impact**	**Recommendation**
There is no mandate to keep resource profiles current and valid. Security restrictions prevent supervisors from accessing profiles and making necessary updates such as current deployment status. The RTS database does not provide detailed information that is required by the deployment team.	A resource tracking database should be maintained on a regular basis and updated throughout the course of an event.	Personnel were often deployed to fill roles that were outside of their area of expertise. Manual spreadsheets were used to track deployed staff and reconciling these was time consuming. Various Emergency Coordinators relied on their own collegial relationships to fill rosters for appropriate responses to deployment requests. RTS was not a reliable tool for located deployed resources. Daily deployment statistics did not accurately account for resources in the field.	Establish a centralized and detailed resource tracking tool that lists all deployable personnel, their updated qualifications, and contact information. This system should also provide functionality to track deployed personnel. A required biannual update of each profile should be completed and include a mandatory supervisor approval.

Finding: 9	Additional personnel were needed to assist with support functions.		
Reference	CDC EOP – Draft		Finding Type: Operational
Condition	**Standard**	**Impact**	**Recommendation**
Deployed personnel completed necessary support and administrative duties in addition to their assigned mission tasks.	Each deployed team should have adequate staff / support to complete administrative functions of the mission. Team members should be informed of their administrative responsibilities during the response.	Having deployed personnel responsible for completing administrative tasks, such as copies of communications and resolving technical issues, diverted their attention from the mission.	An administrative resource should be designated for each deployed team to ensure that they are adequately staffed to complete all technical and administrative duties.

Finding: 10	Deployment equipment was not appropriately managed. Details can be found in Appendix J.		
Reference	DEOC Hurricane Response Plan		Finding Type: Operational
Condition	**Standard**	**Impact**	**Recommendation**
Deployed personnel experienced difficulties in transporting both personal gear and CDC equipment to the field.	Regional logistical supports offices should be established after an event to minimize the amount of equipment with which deployed personnel travel.	Deployed personnel were burdened with having to transport personal belongings and CDC equipment. Deployed personnel did not want to travel with equipment; therefore it was left in the field.	Establish a regional support office to issue and receive equipment from personnel deploying to the region.

Finding: 11	Financial Management Office was unable to process the volume of response related personnel reimbursements in a timely manner.		
Reference	DEOC Hurricane Response Plan		Finding Type: Tactical
Condition	Standard	Impact	Recommendation
The volume of deployed personnel overwhelmed the ability of the Financial Management Office to process travel vouchers in a timely manner when deployed personnel returned from the field.	Financial Management Office should have a surge capacity plan to address timely reimbursement of expenses.	Deployed personnel were not provided reimbursements for related expenses in a timely manner. Personnel were hesitant to use personal funds for field needs.	Address the need for surge-capacity to enable timely support for large deployments. Communicate to deployed personnel that unusually large deployments often result in delayed reimbursements.

Finding: 12	There were unclear Hurricane Katrina response activation and deactivation dates.		
Reference	CDC EOP – Draft		Finding Type: Tactical
Condition	Standard	Impact	Recommendation
There were no clearly defined activities or events that determined when DEOC response modes changed. Additionally, the response modes listed in the SOPs did not address the recovery phase of a response.	Response modes and response mode criteria should be defined in the SOPs.	In the final stages of the response, CDC's level of involvement was not clearly communicated to personnel. As a result, focus was diverted from the response and deployed individuals did not feel that they received the full mission support.	The SOPs should be expanded to define the criteria and initiation process for the DEOC modes of emergency response. They should also be updated to include a recovery response mode.

Training

Finding: 13	Emergency response training was inadequate.		
Reference	CDC EOP – Draft DEOC Task Force SOP CDC EOP Annex J – Natural Disasters DEOC Hurricane Response Plan		Finding Type: Operational
Condition	Standard	Impact	Recommendation
There was a lack of awareness of the ICS and emergency response processes. The CDC personnel were not aware of a leadership training programs for the development of potential leaders.	All CDC personnel should have training on CDC's emergency response role as well as ICS.	CDC personnel were unaware of existing emergency response SOPs. Untrained personnel in the field and the DEOC experienced an initial learning curve, which impacted their effectiveness during the response. Leadership roles were not filled with qualified personnel throughout the course of the event.	There should be an annual training course for all response personnel that introduces CDC's emergency response role during an event. Training should include ICS and all of CDC's emergency response plans. Prior to being assigned to the DEOC all employees should receive DEOC operational training. Functional and systems training should also be addressed. Create an emergency leadership and management curriculum for potential response leaders.

Finding: 14	Emergency Response readiness was not regularly tested for efficiency.		
Reference	Not referenced in SOPs.		Finding Type: Operational
Condition	Standard	Impact	Recommendation
The CDC does not conduct regular emergency response exercises.	Emergency Response readiness exercises which involve the response plans and SOPs should be conducted and evaluated regularly by the CDC.	The CDC had difficulty establishing basic response infrastructure with the states because readiness exercises had not been performed.	The CDC should conduct regularly scheduled emergency response readiness exercises. Review and analyze the exercise, and create a corrective action plan if necessary.

CONCLUSION

While the Hurricane Katrina responders interviewed provided feedback for process improvement, the consensus among all interviewees was that the overall CDC response was handled well. They felt strongly that the states were satisfied with the support that they received from the CDC.

The goal of the information captured within this document is to provide information and recommendations that can used to improve the overall operational performance of the CDC's emergency response procedures. The recommendations and findings should be incorporated into a corrective action plan and managed accordingly. The recommendations included within the corrective action plan should include the necessary process improvement actions steps, the responsible process owner and a detailed project plan with milestones and due dates.

NEXT STEPS

After the CDC Director has received briefings on the findings and recommendations from the main Katrina Response AAR effort, it is critical that a process be developed that will establish a corrective action plan to implement selected AAR recommendations. The following are some key future activities that if implemented will enable the CDC and the DEOC to be better prepared to respond to the next disaster:

1. The CDC Executive Leadership Board should ensure that a corrective action plan is developed, executed and managed. Steps to convert the AAR to a corrective action plan include establishing a time line for completion of recommendations; identifying the responsible Coordinating Centers/Offices to implement the recommendations; managing the periodic meetings and reports to leadership to monitor the implementation; providing feedback to CDC offices and staff on the implementation of recommendations; and communication of any new structures / SOPs, etc. This would be a Continuous Process Improvement Program to implement accepted recommendations from the final Katrina AAR.

2. Develop an emergency response training curriculum for CDC personnel that provides a Basic Course (Core of knowledge that anyone who works at CDC needs to know), an Advanced Course (personnel that will probably spend a career at CDC need to have additional training, and skills to be able to respond to incidents / emergencies, and assume leadership roles) and a form of Public Health certification that coincides with this training. Include training for functional roles and systems. Also, the emergency response curriculum should include specific leadership training to establish a cadre of trained personnel who are able to respond to emergency situations in the future. These courses would be directed and developed by the division responsible for training and they would be available on the internet as appropriate, and included in human resources system (mandatory training for select individuals) as appropriate (for both civilians, and uniformed PHS personnel).

3. Review the RTS system for adequacy in being able to keep track of people, competencies, skill sets, and account for personnel during deployments. Review the requirements of the system and assess its capabilities.

4. Consider the development of a PDA, Laptop, or Tablet PC based system that provides standardized survey instruments (surveillance tools to be used by Public Health Personnel , state, local, and federal agencies) that can be easily populated, downloaded, and sent to the DEOC or the HHS Secretary's Operations Center (SOC) for reporting purposes. This system could be used to establish a field medical record for displaced personnel, evacuees from hospitals, nursing homes, shelter residents, special need personnel, etc. If developed correctly, data from this system would have the ability to be downloaded, sent to state health personnel, or hospital agencies, etc. Other uses of such a system could include the monitoring of CDC deployed personnel, tracking health risk analysis for deployed personnel, tracking immunizations for deployed personnel, determining those individuals who can not be deployed due to conditions that preclude field deployment (uncontrolled diabetes, asthma, etc.), etc. It could also be utilized for post deployment health monitoring, and it could keep track of personnel debriefings.

5. Implement a document management system such as Documentum to assist with information flow within the DEOC. This system should include content management capabilities, email management, work flow and performance management.

As mentioned above, these items can assist the CDC Leadership to develop the strategic steps to ensure that the Agency is better prepared for any future disaster response.

APPENDIX

APPENDIX O
DEO LOGISTICS HOTWASH
BUILDING 19 AUDITORIUM B
FRIDAY, NOVEMBER 18, 2005
7:30 AM

FINANCE PROCESS

Mission Assignment – CDC makes the MA process different than if we were the parent organization. HHS wants conversations on changing this process. The whole MA process HHS-wide needs review.

There is no guarantee for reimbursement until FEMA signs the MA.

Process:

- State will request something (person, equipment) via ARF
- Send through FEMA bureaucracy (assign ARF to HHS- gives HHS money)
- Send through HHS bureaucracy (assign ARF to CDC- very controlling on what they wanted to give for specific reasons, needed to validate what DEO was doing, example being why there were different cost estimates than FEMA- knowing who provided cost estimates for what would make things easier)
- HHS would get the money and transfer it under the MA to CDC so it would show up in CDC's bank account. It is strange for FEMA because FEMA will get billed now on the same MA for multiple parts of HHS and it is hard for them to reconcile (SAMHSA, CDC, HHS, etc.).

FEMA does pre-scripted MAs. It would be worth our effort to meet with FEMA MA folks and develop pre-scripted MAs. They have done this with other agencies.

The things FEMA doesn't want to pay for are research missions- that is not what Stafford Act is for.

Now DEO needs to go to FEMA and say that if DEO is going to be one for the medical resupply for the nation, then it as to be understood. If these things are pre-scripted, as soon as it happens the MA can be cut and DEO can receive the money fast. There are times when there was not enough money that day to do what needed to be done but would end up with it before the end of fiscal year.

HHS/CDC roles are changing on how to deploy resources- how can DEO work with FEMA on their longstanding MA process to make it easier on procurement and payment processes?

CDC workgroup put FPAT written procedures in place approved by (b)(2),(b)(6) - need to revisit and make sure all are still applicable. Can add a little more detail to them.

FPAT was not activated/deactivated too soon or too late. Having FMO assistance on site was very beneficial.

PGO did a good job of making sure their leadership knew what it meant from a procurement perspective. FMO did not have it as good- timing was bad (during closeout) and FMO leadership did not understand what it meant to support the DEOC as fully as the DEOC was supported. There were leadership, management and financial tracking aspects present in the DEOC. FMO does not have the amount of personnel needed to support emergency operations (contrast to PGO).

DEO has been doing a lot of the same things throughout different events, but at a smaller scale less help was needed. In an event this scale, FMO presence (at least 2 people) is needed.

Make sure the FMO is fully capable in every aspect from leadership to budget to accounts payable- everyone needs to understand. FMO was not as prepared as they should have been.

Process for filling requests:

- Locals say what they need
- Goes to state- CDC person acts as liaison to FEMA
- FEMA gives info to HHS
- HHS gives info to CDC
- CDC will do cost estimates and fill the request

Question: When do we act?

CDC tradition plays a lot in this- if states request CDC presence, CDC will show up. Throw that into the MA process and it complicates things. There was no MA for two weeks but DEO responded, and will always respond in this manner.

Once FMO knows there is a MA whether HHS has sent the money or not, there is a formal agreement between FEMA and HHS to transfer dollars. That is where the action can formally take place. There is no black and white line- depends on where DEO is. Points to getting pre-scripted MAs so DEO can just go and make sure to have enough money under the MA.

How concerned should DEO be if the MA is signed but don't see any money? If that was the only MA for the response, be concerned. If it is one of 50, probably shouldn't be that concerned.

Problems with ARF/MA from ARF/MA Desk Perspective:

DEO received stuff from HHS missing FEMA information and would have to send it back to get the FEMA information. If HHS info, FEMA info and signature was not there, it sat there until those things were filled unless leadership came to us and demanded that it be filled right then without the missing information.

Got the missing information by calling the SERT, SOC, whoever was available on that could get the information. There was no set process. Once an ARF was received, it was tied to a MA by linking them together, and then looked for numbers and signatures. DEO would not move it beforehand.

There are three signators:

- State
- Sr. response official for the state (EMA director, etc.)- overseer of all things to prevent duplication
- FEMA Field Office. Once they sign it, it goes from being state funded to federal funded.

CDC is going to show up regardless. What happens is that it puts a little glitch in things because it gets outside the system.

Problem: people bypass the set processes in place.

Issue is to put better processes in place than we had this time.

Fact of the matter is that DEO will always send people down range without being asked as long as Dr. Gerberding is in charge. Experience and training all come in to play here. Next time the first person down range will have more information than they had before today.

It was something to see the lack of processes in place at the CDC. Seemed like an incredible struggle and should be much easier to get federal-federal mutual aid.

DEO is working to come up with a permanent incident management structure that can handle large-scale events- have assigned desks and procedures to follow.

Procurement is different for the stockpile. There was no real sense of financial awareness. They procure through interagency agreement with the VA. It is positive because the VA has the tradition of doing these types of procurement. It does not make sense to do everything through the VA- example being vaccine. VFC program lies within the CDC. The mechanism makes a big difference. FMO, PGO and SNS have met to discuss, but it needs to be better coordinated. They get MAs the same way CDC gets MAs. SNS will respond quicker than any part of this agency- that is their core mission.

There has not been set up any sort of contingency funds for emergency funding at CDC. The Director has a discretionary fund, but it is not used for this kind of thing. Terrorism funds are core program dollars- funding places across CDC including COTPER and the DEOC. Every dollar held back for emergencies is a dollar kept from a program.

When events occur, CDC will have people going forward because we have established relationships with the public health community. This is different than assistance provided during Presidential declarations- public health has to be proactive and can't wait for a Stafford Act.

DEO has to be prepared to operate independently. The operational component is that once the FEMA component stands up, they expect DEO to fill into their structure though it is already running down the pike doing things- need to be able to plug into FEMA's system while maintaining own operation.

Once the SMOs begin operating in every state, they should be working side by side with the State PH officer, and once things happen, the SMO becomes liaison to FEMA. Need a junior person well versed in emergency response operations to represent the SMO in the ERT-A.

PROCUREMENT

This has been a test. Two years ago, CDC had no process at all for emergency operations. There was no proactive behavior- people went out in the field using personal credit cards. Hundreds of thousands of dollars were spent that cannot recouped. Procurement was not involved half the time. When the terrorism team came together, it was because of that. Up to that point, there had not been a lot of emphasis on global or national emergencies.

From the observation of procurement, when we defined emergency events,

- Dr. Gerberding would call the event,
- DEO would stand up the FPAT, and
- A cadre of folks stood up in PGO.
- FMO gives PGO a CAN and tells them to move forward
- A buyer is put out there

DEO never had to go on site until Katrina. DEO did a remarkable job considering what had to be met in a short period of time. Recognizing the many layers of government encountered, the only thing Procurement wants to know during the event is does DEO have the money?

DEO needs to know that it is the type of procurement that could be defended should there be a need to defend it later. There were only 2 requirements that came through that PGO had concerns with. Have to think when it is an emergency, are the items being bought something to support that person in the field? The process written 2 years ago with the FPAT premise must remain.

FEMA has a scripted plan. There is a need to prescript. This has been a great opportunity to prepare. The big one is yet to come.

PGO management was extremely supportive- had a great team of people yet it was a skeletal crew. Need to establish identified personnel and tweak processes (communication between DEOC and PGO is excellent). Finance Procurement and DEOC Logistics merged together wonderfully. There are a lot of lessons to be learned and there was confusion at times when something was needed. Always have to work under regulations- the OIG will always come back. Can this procurement be defended? Needed 48 vehicles out the door in 2 hours and OIG wants to know why it wasn't competed. There was no time for competition. Need to refine the process to make it work but it will always go back to - Dr. Gerberding will stand DEO up and will have to move out the door without ARFs and MAs. It comes back to being able to explain the process and someone in procurement has to track every dollar- have got to be accountable. At this point in time, there has not been 1 thing bought that PGO has gone to the carpet for with OIG. DEO's documentation is the best they've seen.

Staff went out and stood in line at (b)(2) (HHS allowed them to go out and procure items without competition- even though they issued a waiver, they forgot they did that and the OIG was not aware). Have to

remember that when this is over, someone will be pointing the finger. Even though there was a waiver, DEO also called other stores to document prices. All emails for every action were kept. Approx. 87% of the buys were competed.

There was no process in logistics to track procurements. Sometimes it was hard to figure out what things belonged to whom.

DEO needs a requisition process in place- someone is working with NCPHI. They created an automated system to track antiviral requests from the states. Using that to track requisitions when they come into the DEOC. There will be one position in logistics that does nothing but track requisitions/requests. Have to have a process to go to someone for approval and have people sign off on requisitions and then track it to completion so when someone needs to know whom the widgets belong to, the requisition person can tell her.

There were many occasions where requirements were not completely defined to PGO. One situation where an arrangement was made with (b)(2) to do work ahead of FEMAs, then no one showed up to pick the stuff up for 2 days- it was embarrassing. How can this be fixed? Manpower? Processes need to be determined- who needs to pick this stuff up? As requirements increase, we have to trigger surge personnel.

There was liability attached to PGO folks picking up stuff and people could've gotten hurt- there was a lot of flack from PGO leadership. PGO would need more contracting officers put in to ramp up. Have to be able to rotate people and not burn them out- for 15 days, ran 3 contracting officers. Rita had no backup at all. This is a resource issue for PGO.

Truly believe that the people on the procurement side that should be part of an emergency response cadre should be people that volunteer, people that have been trained and people that have the experience. Should always keep the doors open for new people, but there is an error in judgment to assume that you can tell anyone to do emergency response work.

PGO is carrying what they do for DEO (getting things smoothly and quickly) outside emergency response and getting great results.

People in the field truly appreciate the work FPAT does. They are far from communication and support, but know they are being taken care of.

DEO has tremendous collateral in the business community as long as it is kept up (be timely picking things up, pay on time, etc.). Businesses offered all kinds of discounts. Saved over a half million dollars.

Issue: PGO left the DEOC and it was hard to find out who was on call. This was a very small problem, less than 1% of the time

PGO has a calendar that designates an on-call contracting officer 24-7. After a while, people were hard to find. There was a change during surge period, the calendar that identified contracting officers, as things started to wind down, management shifted. Moving management to the branches was one of the changes. The management response for the DEOC went to the branch chiefs. Branch chiefs would send emails identifying on-call contracting officers and phones were not manned (including on-call cell phones)

All requests have got to come into the logistics section in the DEOC. HHS calls SNS directly, then CDC gets the MA- it is very possible that things were purchased twice and there were cases where PGO purchased things that

would have been better purchased by the SNS. FMO, PGO, SNS. Requisiton Coordinator will be in the room to receive requests and determine who needs to make what purchases and there will be people for on-scene discussion. It should be "this should be purchased by CDC'" or "this should be purchased by VA". This cost-tracking spreadsheet that PGO did, if you look at the dollar amount and the whole amount we spent, it probably made up a quarter of the purchases. The 4 fists were done by the stockpile from the VA.

Should have PGO be the liaison to VA rather than SNS- would be better between contracting officers so they can speak the same language. May also benefit to have a VA contracting person in the DEOC during these size responses.

Who is going to make it clear to HHS not to go straight to stockpile? SNS will have to push back to HHS and tell them to go through the DEOC. Culture has to be changed. PGO doesn't purchase without (b)(2) signature.

SUPPORTING FIELD STAFF

Process: once a group of people are IDd to deploy, DEO has pre-identified equipment that will go with them.

Once people were ready to go out, logistics would get a heads up on the number of people and equipment they would need. Made sure each team had 1-2 satellite phones.

At the deployment briefing, they were told to go to Bldg (b)(2) to get equipment. Selective personnel would also get laptops and other common equipment. All persons got cell phones. Also provided vehicles with GPS.

They signed for the equipment, sometimes also provided safety briefs. Anything they needed that they didn't receive was either procured by IST in the field or shipped from Atlanta. DEO made sure DEOC IT would bring laptops to Bldg (b)(2) ready with login credentials.

Once people came to pick up equipment, they were asking a lot of questions and it slowed us up. Some people were going out without instructions for using laptops, cell phones, etc. because they didn't have time. Laminated cards were created to go out with deployers with support information in the field. Also had DEOC contact information on the card. Tried to give them as much information as possible.

Once people got out there with laptops, they didn't have anything to print to. PGO was procuring a lot of printers. There were cases when printers had to be procured on this end and shipped to the field.

The initiative to stock Bldg (b)(2) through (b)(2) was a lifesaver.

Suggestion- create field gear boxes, there are different needs for different people. Training is needed.

Having someone on the ground is instrumental in getting things done. Need to consider: need to have a center that when we go, we can support the actual response. As they go all over the state, they need a central place to get support from logistics. If they had a facility where they could coordinate, it would be a safer operation.

Need a concept where DEO moves in, stage and brief people, and PGO send equipment to a central location. SMO feels that the deployment briefing they receive in Atlanta is not sufficient.

Need to bring everyone to one place to receive them, stage them, get their equipment and mission, and then be integrated into the operations in the field.

Need to get the IST in the field early with equipment and if people come in to a staging area and see a friendly face.

Log can issue equipment and SMOs can brief them at the staging area. IST on the ground would decide how to get folks from the staging area to their location.

PHAs can contact IST to procure equipment with IMPACT cards and if the request is too big, could work with contract officer at the staging area.

When it is time for deployers to leave, they go to staging and turn in their equipment and go home without carrying all that equipment.

Need a person at the staging area working operations and being responsible for knowing where people are. People would feel more comfortable knowing someone is looking out for them, and the DEOC would know where folks were all the time. DEO kind of used this model during Katrina with staff in Baton Rouge. Also would help save equipment, as people just left it in the states because they didn't want to carry it back to Atlanta.

Proposal would be very manpower-intensive. Could possibly use SNS staff as surge support.

Need to get this thing set up prior to events. Because DEO couldn't get people to New Orleans, they were being set up in Baton Rouge. DEO would bring them in, bed them down in the tent area in Baton Rouge, meet them in the morning, explain the situation to them and take them down into New Orleans. Also did this through the HHS command vehicle.

If a federal contracting officer was brought to the field, there would have been much more spending power to acquire space.

Moral of the story- needs to be set up prior to the event.

Serious breakdown at the state level- could not get (b)(2) trucks in to deliver pharmaceuticals and supplies. Had to get special LA permits to get certain trucks through. When it got to warehouses, there was no one from the state there to pick it up. Some of those supplies had shelf lives and expired waiting for someone to do something with them.

(b)(2)

SMOs would like to have someone come in and set up the infrastructure for them during emergency responses.

As (b)(2) went around to get hotels, FEMA had a contracting officer doing it. DEO needs a contract officer to go out as well.

Early on, DEO staff member identified resources needed and were procured by the contract officer team. During this event, all resources were there. There were times when it ran short because the teams going out weren't sure what they needed. Resources were depleted. Priority of support needs to be identified. DEO cannot give every single person a blackberry. It got to a point where the staff member had to prioritize who needed a blackberry. Because the staff member didn't know what missions people were going on, they could not effectively advise people on what equipment they needed. The staff member did need some additional manpower and was burned out by week 2.

A lot of the manpower requirements and intensity in the first week was getting Bldg 11 setup and functional. Bldg 11 is always going to be the support area so it never has to be set up again.

Would change IT support- need an IT person or team to co-locate with DEO. It got to the point that IT support had become very thin due to competing priorities. Logistics also needs administrative support. Need admin and IT embedded in the logistics function including IST.

If there is a concept like this, it will affect the bottom line and save the CDC lots of money because there will be people on the ground advising PGO what needs to be bought.

If PGO could give staff members a quick class on what could be purchased with what funds (bottled water, meals, etc.). Everyone that gets an IMPACT card goes to training for authorized purchases.

Staffing Infrastructure- what did DEO use to meet the staffing needs for this hurricane season?

FMO and PGO were represented in the DEOC as well as a SNS liaison. There were 2 people in there and 1 travel person.

DEO had the right people in the room for the most part except for the requisition process. Not knowing whether or not DEO would be able to deploy the IST, those folks were filling in. Did not have a good staffing plan when going in- it was hit or miss. Did not worry about Bldg 11 staffing, but staffing in the DEOC was a challenge because of a lack of personnel.

When we do have an event, there is a bigger requirement for staff. Have to come up with a surge capacity and personnel staffing plan, whether using volunteers or SNS folks. Maybe DEO can hire local folks in the field to do transportation, as they know the area.

PGO could put a contract in at the staging area for transportation.

There are options for staffing that we can look at for non-technical support.

Procurement needed additional staffing as well. FMO was also staffed thin- a group of 2-3 people that would come answer the phone in the DEOC and help where they could. They were not comfortable answering the kinds of questions that they were being asked.

There were enough technical people to handle it. But you lose that technical expertise when they are called on to do things that everyone else is able to do (pick things up, move vehicles, etc.). Need to look more at that.

PGO supports an on-ground contracting officer in the field.

Hurricanes happen the same times during the year- need to plan accordingly. A staffing plan needs to be in effect that considers all issues (spanning fiscal year, etc.)

VOUCHERS

The voucher process has faults. People that deploy to New Orleans deserve to get reimbursed hassle-free as soon as possible. However, there are laws and regulations in place that have to be considered.

Process:

- Did the mission spreadsheet
- (b)(2) (b)(6 sent it to travel
- Travel decides if it should be handled in the DEOC or Bldg (b)(2) (travel orders)
- Based on the spreadsheet, orders are processed

Ran into major problems with the CAN

CDC just implemented a new financial mgt. system- this was the first time DEO opened the new year with this management system and all anticipated questions were not considered (at the end of the fiscal year, the mgt. system closed all the CANs). Hope this is better next year as FMO is aware of all the issues surrounding CANs covering fiscal years.

Voucher process gets people paid- some of the problems are internal-

Have to go back and forth working with DBS in different locations in order to get vouchers approved. Once approved, they could go to FMO.

This is not COTPER travel, it is CDC travel- why DBS has to be in the approval chain for the voucher is unknown- it is not their money.

One person in DBS was given hundreds of vouchers to review and vouchers over 2,500 takes up to 30 days.

People were not getting their email once their vouchers were certified. Now we have a lot of people that have been certified that still have not received their reimbursement. Logistics has to be able to give them status until they're certified- once certified, it is between the traveler and FMO.

If DBS is going to be in the approval chain, they need to be in the same room with the voucher preparer and FMO to make things more efficient.

Up to this point, all travel orders and vouchers have been handled within DEO. One of the things log has tried to do is get the traveler to sit with the voucher preparer when they return. Some folks don't think this is necessary. If the traveler would do that, a large percentage of the misunderstandings could be taken care of.

When DEO realized this was going to be a catastrophic event, it had a pool of volunteers that came in to support. A travel person was there to answer all travel related questions. Problem with volunteers is that when trained travel preparers was asked for DEO had to sort through those folks to come up with a decent pool, but their CIO would only let them stay for a few weeks. This caused loss of continuity. Had people doing travel orders and all the sudden the 1st wave of people that went out came in and was submitting vouchers. You may have someone doing orders that is also doing vouchers.

FMO needs to run the voucher process. There needs to be a distinct line between the travel order and travel voucher processes. Voucher process is 2-3 week gear up time- won't be needed until couple of weeks into event. Travel needs to fall into the DEOC team. The Voucher team needs to be led by FMO. This will be the way it is done for

major events from now on. One of our challenges has to be getting a pool of volunteers whose leadership will approve them being part of response operations and train them.

The initial travel team should come from COTPER- it should be COTPER travel staff initially to do travel for the first 3-4 days until volunteers can be brought in. At that point, COTPER staff could be weeded out.

People are going to have to be able to commit for longer than 2 weeks, more like 2 months.

Big thing- people deserve to get paid. We have to come up with a better way to get vouchers through the system.

Have to have teams to do travel and vouchers. FMO needs to lead voucher process- this will be a resource issue for FMO. DEO needs a commitment from the agency to get volunteers that can be kept for long periods of time. Someone from FMO should be communicating US Bank so they are not hounding the traveler.

The voucher process is the hardest. If the Help Desk could keep people informed, it would be helpful- don't blow people off. Send out emails to everyone and keep them in the loop- let them know it is being worked and that US Bank has been contacted and that it will not affect people's credit.

Vouchers are a serious problem. A lot of it is an education process for (b)(2), (b)(6) and those folks- it is the nature of the emergency response business. Things may not be quite within regulations, but a memo should be able to be written, it is obvious that staff is not trying to rip off the government.

ACTION ITEMS FOR FMO:

Contact US Bank and let them know that over 700 people have been traveled, most of the vouchers are in audit, and that there are a lot of people who will not be able to make their payment when it comes in.

Ask FMO to send an email to travelers that explains the problem with CANs and tells what FMO has done to remedy the problem.

A contracting officer is going to be thinking "FTE" for the most part when people deploy. When people are put in the field by CIOs and people pay their own expenses because they are contractors and/or fellows and do not know the process. Whether people are FTE or Contractors must be identified up front.

Contractor deployers are also a big issue- FMO tried to be consistent this year and have their contract travel them where they could. Problem with that is that there may have been 20 different contractors on 20 different contracts and people are working outside their contracts.

DEO are deploying folks other than CDC FTEs and they are just not paid the same- this dramatically affects the way DEO travels people. May be resolved by meeting with contract companies and establishing contracts to be used in the case of deployments. FEMA will reimburse for many of these deployments, but the way it has been set up, it is not easy- need an enterprise-wide solution.

DEO has to have a group that is focused and dedicated to emergency support. Management will have to be the ones to stand up and support it- identify people out of FMO that will be responsible for vouchers and identify contractors that can deploy during emergencies.

DEO went down this road with GSA- they will not relax the regulations in order to travel contractors.

Need a group to look at this problem- a group will be pulled together to examine the processes in place to travel contractors and to come up with a better mechanism of traveling contractors.

There was never a good place to answer the question of "who is out there right now." Hope this is solved through close coordination with the deployment coordination desk and the tracking staff. Staging area process will assist with this as well. Will also assist travel preparers because if people have to go to a staging area, everyone goes to the same place.

Initially, the travel people can expect to work 24/7 with a couple hours notice. Unsure of why people need to move quickly as DEO are not first responders. DEO can expect to travel people every day during the first week. Soon after, there has to be a normal deployment schedule. It has to be a disciplined system. The Deployment Coordination Desk and Mission Information Sheet was because of being hammered about short notice deployments. People were showing up at airports several times per day and made it difficult to get people where they needed to go (only had two staff members to get them around).

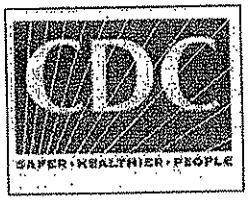
Maybe DEO should designate certain cadres of people that can do short notice deployments. Cannot do this without training and psychological conditioning. Can be done, but it has to be a part of our job. Pick people in advance, get CIO approval and train/condition them for this. Could have blanket travel orders and go-kits in order to meet the requirements so all people have to do is grab the kit and go out the door.

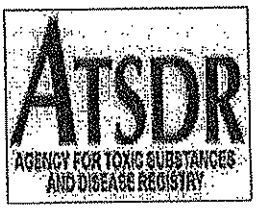
Created a deployment website- and need to advertise this website and make people go to it. A lot of this information could be put on the website and people can see it before they deploy. Need to continue to refine the website in order to make it useful for deploying staff.

PERSONAL SAFETY IN THE FIELD

For international deployments, staff has cards to evacuate injured/sick staff (CDC will be responsible for returning this person in the event of injury or illness). Need a medical evacuation component in the AAR. Could be a medical process in place in the field to include medical and mental health. CDC needs to consider that when hundreds of people in the field, there needs to be a medical infrastructure to support them.

APPENDIX P





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CDC Timeline: Hurricanes Katrina & Rita

As of 11/16/2005

CDC Event Timeline:

8/25/2005	
	CDC DEOC monitoring Tropical Storm Katrina (FL).
	HHS anticipates a FEMA Mission Assignment for participation in the Florida Rapid Needs Assessment Team.
	CDC Director approved moving DEOC status from ALERT to RESPONSE. DEO Task Force members identified & notified.
	Eye of storm passing north of Miami w/ 90+ mph winds, now near Opa-Locka. 3 deaths reported.
8/26/2005	
	Rostering CDC personnel, to be on call and or deploy as early as 29 Aug 05.
	Two NCEH individuals identified for departure on 8/27/2005.
	An activation letter has been issued from FEMA Region IV authorizing pre-declaration activities including the RRCC and the ERT-A's and RNA's in AL and FL.
	HHS authorizes the deployment of 2 CDC personnel to Ft. Walton Beach, FL to participate in the Florida and Alabama Rapid Needs Assessment Teams in response to Hurricane Katrina.
8/27/2005	
	HHS has an "activation declaration" letter signed by the FEMA Ops Chief authorizing one person for a RNA and a member for the ERT-A, both to FL. NCEH will launch deployment to fulfill the requirement.
	DHHS conducted a conference call with OPDIVs. HHS Incident Management team is hosting a 4 p.m. conference call to discuss Hurricane Katrina preparation activities and support.
	SNS has taken all necessary actions to protect its assets relative to Hurricane Katrina making landfall in the next 36 hrs.
	Hurricane Katrina identified as a Category 3 storm with a possible upgrade to Cat 4 or 5 by Monday morning.
	SOC is standing up 8/28 at 0700.
	HHS has requested four liaison officers (LNOs) to serve on an HHS SERT.
	Received SERT on-call roster and ensured that CDC personnel were on it and 4 CDC

	employees receive mission orders to serve as SERT augmentees.
	4 CDC personnel deployed to FEMA Reg 4 RRCC ESF-8 desk
8/28/2005	
	Request to identify 4 personnel (2 to MS, 2 to LA).
	CDC Executive Staff briefed
	Katrina passes over South Florida as Cat 1, re-emerges in Gulf as Cat 3; expected to go to Cat 4 overnight, anticipated to strengthen to a Cat 5
	Received Mission Orders from SOC: • 1 staff member for Rapid Needs Assessment to Houston • 2 staff members for Rapid Needs Assessment for Meridan, MS Naval Air Station
	HHS requested 1 staff member in Houston for follow-up in LA
	SNS tasked by Asst. Sec. Simonson for deployment of material to the Superdome shelter in New Orleans (50 medical providers to Superdome)
	SNS verified FEMA staging area
	(b)(2) put on hold by HHS pending destination.
	Request to deploy 9 CDC officials to Jackson, MS from HHS
8/29/2005	
	1am CDT - Center of Katrina about 135 miles south-southeast of New Orleans; wind gusts of 101 mph reported in Southwest LA
	CDC Foundation Credit card policy reviewed
	3am CDT- Center of Katrina 110 miles south-southeast of New Orleans
	DSNS- update; DEOC surveying hospitals & working with hospital associations to assess medical/hospital supply needs
	Mobile, New Orleans, Gulfport, and Ft. Walton Beach airports close
	8:30am update for Dr. Gerberding
	Guidance for Hurricane Katrina Team Leads released.
	9:30am – Katrina officially Cat 4; sustained winds of 145 mph
	Tasking from HHS for immediate acquirement of 1000 beds (5000 bed goal); ship to Camp Beauregard
	Pensacola and Baton Rouge airports close.
	DEOC contacts CDC colleagues stationed in LA, MS, & AL for assistance needed in pre-and post-event Katrina
	Deployment website on EOC portal is made available
	11:00am- Katrina is Cat 3 35 miles east-northeast of New Orleans
	3pm – Internal Conference call
	HHS will work with SNS to identify priority items for formulary
	"Incident action plan" form created
	HHS requests Support Agencies to identify personnel to staff mobile hospital
	From media: State of Emergency declared by President for MS, LA, and AL
	CDC alerted to work with U.S. Coast Guard and Environmental Protection Agency on potential large scale hazmat incidents due to oil and chemical industry in threat area
	HHS activates all Commissioned Corps Officers; sends out list of those meeting basic training requirement for review and approval
8/30/2005	
	Hurricane Katrina Fact Sheets sent for reproduction and distribution
	FMCS trucks en route to Louisiana
	Permission requested from CDC to deploy a team of approximately 16 people to set-up the FMCSs that have already been shipped, plus those that will follow-on.
	The VA is rapidly working to acquire all material requirements for an additional four FMCS Type IIIs (HHS funding provided). CDC's PGO will assist with any problematic procurements
	SOC has received an ARF to identify 20 mental health professionals to support mental health

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	and grief counseling to victims of Hurricane Katrina
	Personnel selected for deployment to the LA Department of Health in Baton Rouge, LA, pending final MA
	Request authority to deploy an additional 16 people, as follows: • 2 - Team (b)(2),(b)(6) TARU members that did not deploy with the initial TARU Team. Increasing support requirements within LA is driving this need for (b)(2),(b)(6) to round out (b)(2),(b)(6) TARU. • 12 - People to set-up the FMCSs that are enroute or that subsequently flow into LA. 2 - of this team are part of the DSNS, 10 are Seven Trees contractors who supported prototype testing of the FMCS and have excellent knowledge of these facilities. • 2 - members of the DEOC's Incident Support Communications Team plus their communications package to support the communications needs of the FMCS set-up team
	On-site assessment of the LSU location for the FMCS is not acceptable
	All communications along the coastline of the hurricane hit areas are down. Only a few select individuals have stated that they have any cell phone signal at all. Recommend sending satellite phones and Local Area Networks as the main method of communication while deployed in these areas.
	Hurricane Katrina made landfall over Louisiana and the Golf Coast as a Category 4 storm Monday morning.
	Incident Support Team (IST) communication, arrival in Baton Rouge, LSU campus
8/31/2005	
	Katrina has been downgraded to a tropical storm but the threat of heavy rain and tornadoes continues in storm's path
	70 patients currently being evacuation from Tulane to LSU FMCS site
	Emergency situation; PMAC is in dire need of pain meds
	38 US Public Health Service Officers (doctors and nurses) to Jackson, Mississippi for deployment
	HHS has 217 US Public Health Service officers on stand-by for deployment to support medical response in Louisiana, Mississippi and other Gulf states.
	CDC has 30 staff members deployed, with group of 7 OFRD standing by
	DSNS will investigate availability of snake anti-venom and calcium gluconate for potential hydofluric acid exposure (exposure could occur from release of chemical from local chemical plants).
	Veterinary/animal issues identified ▪ carcass disposal ▪ manure lagoon overflow ▪ bites ▪ stings ▪ animal control ▪ zoonotic disease transmission or injuries related to contact with rodents, reptiles, pets, livestock and wild animals
	3000 additional FMCS beds have been purchased; (b)(2) warehouse at 1330hrs EST with an ETA of 0105hrs with FMCS product; (b)(2) Log requested (b)(2) (b)(2) and hold; Letter of passage was provided to truck drivers to expedite movement of materiel in the region.
	Science working with logistics on list of pharmaceutical/medical supplies sent from Mississippi, and is waiting for approval from HHS for procurement. ATSDR recommended snake anti-venom and calcium gluconate (for HF) amounts to Louisiana to assist in requisitioning these materials.
	TARU augmentation personnel for Team (b)(2),(b)(6) have arrived in Jackson, MS, and are preparing to link up in Baton Rouge. TARU Team is approved and preparing to deploy to

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	Jackson and Magee, MS. The US Marshals Service personnel will split time between these two cities.
	Incident Command systems being set up around Mobile, AL; 8 assessment teams being deployed in Mississippi and Alabama
	Gulf ports are closed; Port of NO closed
	140,000 homes flooded (New Orleans); 20,000 people for FEMA to evacuate from the Superdome
	Louisiana Update: • Flooding continues within the city of New Orleans and local officials estimate the flooding will continue for the next 24 to 48 hours. The Superdome is being evacuated to the Houston Astrodome by State, local and Federal assets. No casualty reports have been announced by the State yet.
9/1/2005	
	Activated the CDC Humanitarian Assistance Team.
	OSEP is activating the Humanitarian Assistance Team (HAT) for tracking and reporting CDC staff.
	CDC requested to provide 7 OFRD personnel to support the Federal Medical Contingency beds being deployed to LA.
	Received ARF requesting 5 cases of feeding tubes for E. Jefferson Hospital, Metairie, LA.
	As of 11 p.m. EDT, With maximum sustained winds of 25 mph and gusts to 40 mph., Katrina has moved into Canada. Katrina is still producing heavy rain along and to the north of its path while thunderstorms with torrential downpours and gusty winds are occurring to the south across New England.
	Storm Katrina has completely dissipated in the affected area. There are no current weather affects remaining in place. A Public Health Emergency has been declared by the Secretary of Health and Human Services and remains in effect for the entire region.
	FDA ready to fill MA for 35 sanitarians. Awaiting State determination of where to send sanitarians (I.e. Jackson, Hattiesburg or other) for HHS to secure billeting.
	Medication request for Superdome in transit by air; ETA at LA RSS is 0900 (EDT); Seven FMCS trucks completed delivery to Baton Rouge (PMAC); Deployment of TARU team to Mississippi; 20 personnel deployed: 11 in LA; 9 in MS; 4 requests for supplies approved (in procurement process); awaiting approval for 1 MS supply request and 1 LA; continue procurement for 1,000 FMCS Type III; Initiating additional 3,000 FMCS bed purchase to bring total to 5,000 beds.
	Supplies being sent by air to Baton Rouge in support of (b)(2),(b)(6) (Superdome) list; ETA to RSS 0900 (EDT)
	CDC National Immunization Program received a request for 8000 doses of Td vaccine from (b)(2),(b)(6) with the Mississippi Immunization program. (b)(2),(b)(6)
	Request granted for use of CDC aircraft to deliver requested vaccines to Mississippi. Attempted to deliver them by ground but the National Guard would not let them into Mississippi.
	Organize the deployment of 10 allotments of FMCS by COB tomorrow.
	DSNS is tasked to immediately ship 25 ventilators from DSNS assets to New Orleans Airport to enable patient evacuation. Approved.
	CDC aircraft delivering 8010 doses of TD (Tetanus) vaccine to MS Dept of Health.
	Procured 18 SUV's for deployable CDC personnel. In the process of procuring an additional 95 vehicles to be used by deployable CDC personnel. Delivered 8,000 doses of TD (Tetanus) vaccine to the Mississippi Department of Health. Procured required field survival gear to support upcoming deployments. Items include back packs, sleeping bags, sleeping mats, mosquito nets, tents, first aid kits, ponchos, etc.
	Governor Rick Perry of Texas sent a request to Pres Bush today for a disaster declaration in Texas - based in the influx of evacuees from states affected by Hurricane Katrina.

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09/02/2005	
	Plan to send the NARC package of the PPG for MS via (b)(3):b(3)
	Mississippi has requested SNS Push Package. It is expected to arrive at the (b)(3):b(3) at approximately 06:30 Friday 9/2/05.
	Louisiana: 28 vents arrived at 0112 EDT at the New Orleans airport 2 September (turned over to DMAT). Deployed Special Needs Supply Request List 1 of narcotics delivered on 2 September at 0444 EDT in Baton Rouge on (b)(3):b(3) Insulin shipped from vendor arrived in Baton Rouge at 0444 EDT as part of the VMI Supply List (b)(3):b(3) FMCS).
	Mississippi: Deployed 12-hr Push Package to Mississippi 2 September at (b)(3):b(3) estimated arrival time in Magee, MS is 0700 CDT.
	FMCS: 4 complete 250-bed (1,000) FMCS Type III sets have been delivered to Baton Rouge 2,500 additional beds will be deployed to MS, LA, and FL on 2 Septemb (b)(6) (b)(6) additional DSNS personnel awaiting deployment to support the FMCS. US Marshals are escorting Push Package to MS, and (b)(6) additional US Marshals en route to Magee, MS to provide additional security.
	The Push Package has arrived and we have requested OS permission to release
	As of 0817 CST the Push Package has been unloaded and the items discussed previously have been signed over to the state.
	EPA Region VI will be collecting water samples in New Orleans. EPA will be asking the CDC to evaluate the results in a fast turn around.
	Texas update: 32 shelters opened statewide; handling about 8,000 people. Houston is handling about 15,000 people. It is anticipated that about 25,000 individuals will be going to San Antonio It is anticipated that 25,000 individuals will be going to Reunion Center/Dallas. There is a need for DSHS (Dept of State Health Services) to provide medical support for all of these areas. There are about 600,000 people being evacuated from New Orleans.
	Received a request by ESF8 in Dentin, TX (Region 6) to provide a public health liaison ASAP
	The CDC Foundation has received a $2 million contribution to its' Emergency Preparedness and Response Fund from Kaiser Permanente in support of the public health response to Hurricane Katrina.
	Report from the Texas State Health Emer Support Center: -Presidential Declaration for Texas reportedly has been exercised by the White House -As of 2pm Astrodome sanitation issues are prominent - medical system established at Houston Reliant center (same complex) seeing more complicated medical conditions in recent arrivals from New Orleans. -Texas State Health working through Merck/Pfizer (who have promised to open their formularies) and retail pharmacies for significant donations of maintenance-type medications via drop off shipments- to the Houston/San Antonio/Dallas relief sites. -Massive number of buses with evacuees approaching Texas via I-20 and I-10 corridors - little communication received from SOC Louisiana to allow tracking and preparations.
	DSNS will deploy 20 members, Anticipate Sun/Monday departure, Require the full field survival equipment support pk.
	DSNS has requested PGO assistance with the procurement of disposable bed sheets and pillow cases for the 4 - 250 bed FMCS locations. Request PGO assist with location of products, source of supply, and procurement options.
	Health and Human Services Emergency Operations Center for ESF-8 The Arkansas Department

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	of Health and Social Services (DHSS) Health Division opened its Emergency Operations Center on 9-1-05 to support the Arkansas Department of Emergency Management's state Emergency Operations Center.
09/03/2005	
	FMCS delivered to Eglin AFB, Florida; England Airpark in LA; and two locations in Meridian, MS before 0600EDT on 9/3/05. DSNS has 12 open product requests and 5 closed product requests as of 0600 EDT 3 September. 90K Tetanus /Diptheria, 22K Hep A, and 35K Hep B to arrive in Baton Rouge, LA by 0630 EDT 3 September. 00 vials of insulin to arrive in LA by 1600 EDT 3 September.
	Literature on disaster epidemiology sent out to team leads
	Literature on hurricane disaster sent to Clinicians
	Infection Control Guidance for Community Shelters Following Disasters, How to Protect Yourself and Others from Electrical Hazards, and Protect Your Health and Safety After Hurricanes printed and shipped to impacted area
	Pre-deployment briefing at 5pm in Auditorium B.
	CDC Foundation received $2 million; resources needed include basic needs for newborns, Epipens, wheelchairs, hearing aids, and glasses.
	Quest Laboratories offers to provide services for lost lab assets.
	Identifies that mosquito control facilities/infrastructure for MS are gone.
	Mission statement for liaisons and PHAs disseminated.
	Deployable Epi list sent out.
	Medical Officers for FMCS are requested.
	CDC teams deployed to Houston and Dallas.
9/4/2005	
	Needs assessment required of shelters outside of effected zones
	40 cases of diarrhea among children and vomiting at the Dallas Convention Center
	LA requested deployment of 28 ventilators from the SNS. Prior to the hurricane we had (b)(2) (b)(2) We deployed 28 to the New Orleans Airport to support patient evacuation
	Request for a veterinarian to perform rapid triage of pets being brought by evacuees.
	Request for mosquito abatement assistance in Alabama including pre, post environmental assessment
	6 cases of an outbreak of diarrhea illness at the Cajun Dome in Lafayette, LA.
	Request for mosquito control assistance in MS.
9/5/2005	
	Request for vector control in New Orleans (voiced concern at highest level that the mosquito larvae ready to emerge into mosquitoes)
	Preliminary Hospital Report completed on 4 out of 9 hospitals
9/6/2005	
	14 person team to San Antonio TX. Multi-discipline public health staff to be dispatched to assist DSHS.
	Request 16 mental health specialists for Arkansas: • 2 Psychologists • 4 Chaplain/Social Workers • 6 Social Workers • 4 Mental Health Workers
9/7/2005	
	61 boxes of medical supplies were shipped from (b)(2) to NOLA
	Need for tetanus shots and rumor there are 50 sites across the State distributing the vaccine
	4 cases of CO poisoning have been treated at Jefferson Medical Center in Harvey, LA

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	SNS is working action to coordinate diesel/gasoline and chlorine supplies to CDC and EPA staffs working in LA.
	FMCS beds at England Airpark, La. may be re-established in nearby community center as "special needs" shelters. (300 beds will be used for shelters and 700 awaiting relocating.
	FBI LNO assigned to the DEOC.
9/8/2005	
	CDC Teams working diligently to get surveillance data in MS; transmission difficult from field due to damaged communication infrastructure.
	CDC's efforts to establish Kindred Hospital as a Federal Medical Rescue Center has been deemed a priority effort.
	Liaison personnel from the WHO and American Red Cross are now assigned to the DEOC.
	ARF/MA Request from LA DOH for pharmaceuticals and supplies to conduct immunizations in shelters.
9/9/2005	
	Medication or Product delivered: • 30,000 needles intended for Tetanus delivered to MS (b)(2),(b)(6) • 5,600 needles intended for Tetanus delivered to MS
	Immunization activities at the evacuee center in TX expected to start in the next 1-2 days. Hepatitis A, MMR and varicella vaccines will be provided
9/10/2005	
	Guidance for Hand Hygiene distributed to shelters
	SNS formulating plan for recovery and return of SNS supplies from FMCS
	Health and Safety manual for Hurricane Relief Workers shipped to Alexandria, LA.
	At this moment there are no new suspect cases of WNV.
9/11/2005	
	Distributed an assortment of informational material to Home Depot, Lowe's and Consumer Product Safety Commission on dangers associated with improper use of portable generators. Preparing to distribute similar material on use of pressure washers.
	Collaborating with DMORTs, state medical examiners and coroners to establish routine mortality surveillance. LA has confirmed 197 deaths and MS 149.
	Efforts are underway in the next 10 days to develop a plan of action to begin rebuilding the PH infrastructure in NO.
	SMOs in TX and AR reporting shelter populations still significant but generally decreasing.
9/12/2005	
	The Louis Armstrong New Orleans International Airport has set 9/13/05 as the date to re-open the airport to scheduled passenger air service. Cargo flights have resumed.
	MEMA has rejected the request to send NIOSH staff into MS. (b)(2),(b)(6) has recalled the team.
	Emergency response in Alabama has not involved public health and no needs are reported from the JFO. DSLR is obtaining information from the state health department.
	Staggered rotations of Baton Rouge and N.O. teams to begin this week.
	Sent health and welfare message to CDC personnel in the Carolinas anticipating Hurricane Ophelia reaching landfall on Wednesday.
	CDC Public Health Rapid Response Teams will be returning from the field this weekend. The current plan is that 2 to 3 staff will remain in Dallas and San Antonio.
	CDC-W had an inquiry from the House Committee on Transportation and Infrastructure, Subcommittee on Water Resources and Environment, minority side, about what ATSDR (1) is doing currently, (2) might be doing in the immediate future concerning draining the city, and (3) might be doing in the long term concerning the potential health impacts resulting from Superfund sites affected by Katrina.
9/13/2005	
	Cluster of 30 adults and children at an evacuation center in Dallas with skin abscesses, culture positive for methicillin-resistant *Staphylococcus aureus*.

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	NCID will draft a letter response to EPA, stating our recommendations on pathogen testing of water.
9/14/2005	
	CDC personnel deployed to Dobbins ARB notified that FEMA will be closing down activities at that site.
	Capturing health data on evacuees prior to their return into the community
	All SE LA mosquito control districts resumed activity except New Orleans
	No major increases in proportion of gastroenteritis, acute respiratory illness, fever or injuries – 9174 patient visits to 13 facilities
	N.O. hospitals becoming operational
9/15/2005	
	Local, state and federal agencies want information to assist with planning for the needs of evacuees and to target needed programs. 11 CDC staff deployed - CDC to conduct 2 surveys with state and local partners ▪ The Behavioral Migration Survey - measures which communications methods are accessed by evacuees, factors which may guide future migration choices and plans for relocation. ▪ Mental Health Survey - measures risk factors for psychosocial morbidity. Will produce an estimate of nonspecific causes of psychiatric morbidity, which can be compared to reference populations to establish the relative psychiatric health of evacuees.
	EPA sampling shows hydrocarbons are present in sludge
	Communications New Focus of News Media Stories: ▪ High risk groups get first priority for flu vaccines ▪ Amount of flu vaccines available ▪ Flu shot recommendations
9/16/2005	
	ARF received from TX for 20 CDC personnel to conduct Rapid Behavioral Assessment among evacuees
	OFRD will be deploying Commissioned Corps officers to support the mass immunization campaign in LA. Planning is being coordinated with NIP.
	As of September 16, there are 846 reported Hurricane Katrina-related deaths. In the past 24 hours, 92 new deaths were recorded, including 84 in LA, 6 in TX and 2 in GA.
	CDC is developing draft guidance with Occupation Health and Safety and Mental Health Resilience for post-deployment screening of responders. This guidance was developed at the request of HHS. The draft will be submitted this morning to OSHA, which oversees the worker safety and health Emergency Support Function annex, for that agency's review and to discuss appropriate distribution.
	CDC is developing "Recommendations for Personal Protective Equipment for General Public Conducting Cleaning Operations following Hurricane Katrina". It is presently being reviewed and clearance for posting is expected today.
9/17/2005	
	Suspected cases of TB ▪ Only 1 case currently under evaluation - evacuated from NO Dome; chest X-ray c/w TB and +PPD ▪ Patients receiving treatment
	5 Varicella cases reported in MS ▪ 2 isolated adult cases not in ECs (Hancock and Jackson counties) ▪ 3 pediatric cases in EC in Harrison county ▪ MS officials working with CDC on testing, vaccination, prophylaxis and management
	Developing draft guidance with OHS and Mental Resilience on post-deployment screening of emergency response personnel; will share draft guidance with Forecasting Team. Completed draft being shared with OSHA for review and discussing distribution strategies.
	ECS developed/disseminated low literacy messages for evacuees in centers on the following

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	topics: ▪ Managing diabetes ▪ Managing hypertension ▪ Recognize and treat head lice ▪ Parenting under stress ▪ Preventing sexual violence ▪ Stress and relationships ▪ Preventing suicide
	Injury prevention video PSAs produced and shipped for dissemination for broadcast to 100 ECs
	Influenza vaccine messages to be produced and disseminated 9/19
	PHS Team New Orleans identified the following issues critical to rebuilding health care delivery infrastructure in NO: ▪ Re-establishment of hospital capabilities in Orleans, Jefferson, and St. Bernard Parishes ▪ Staffing requirements of Tenet facilities in Jefferson Parish ▪ Re-establishing Charity Hospital as a functioning medical resource ▪ Requirements to bring on line the 10 remaining hospitals in the NO area ▪ Establishment of a forward DHHS Command Center at Kindred Hospital ▪ Mental health and suicide prevention services to public workers providing rescue and recovery services
9/18/2005	
	Approximately 100,000 carbon monoxide poisoning prevention flyers on the safe use of generators, pressure washers and other gasoline powered equipment provided by CDC Atlanta are available at re-entry checkpoints for returning LA residents are now available
	EPA has agreed to conduct TAGA (Trace Atmospheric Gas Analyzer) analysis at CDC-requested locations. Air monitoring from the Kenner sampling station indicates pollutants are well within standards for those contaminates measures. The EPA has two mobile laboratories analyzing the air quality throughout the greater NO area. CDC is working with the EPA toxicologists to assess health risks, if any.
	EPA analysis of sludge indicates elevated levels of metals and e-coli and low levels of VOCs and SVOCs.
	The total number of people in shelters has decreased to 108,696 from a high in the past week of over 200,000.
	In MS, 5 varicella cases have been reported, 3 of them pediatric cases in a shelter located in a Harrison County where 2 pregnant women are present. Testing and vaccination offered to pregnant women; one who is titer-negative refused vaccine for family and treatment for self. CDC team recommended removal of family refusing vaccination from shelter. Active surveillance in Harrison County to continue.
9/19/2005	
	CDC has deployed 380 personnel to support Hurricane Katrina Recovery Operations. There are 171 personnel currently deployed, 1 deployment over the past 24 hours and 18 pending deployments. Of the 171 currently deployed and depending on Hurricane Rita's track, potential impact for CDC personnel from Rita is 125. (Includes Southern LA and S. MS.) **ALL DEPLOYMENTS TO THE GULF AREA ARE ON HOLD PENDING DEVELOPMENT OF HURRICANE RITA..**
	Total of 935 Hurricane Katrina-associated deaths reported in states affected by the hurricane and those housing evacuees.
	New Orleans area has been closed by the mayor; there are no check points; safety is a major concern and will increase as more people return. New Orleans has some running water but it is not potable, the sewers are not functional, and the power is still out in major portions of the city.
	CDC Greater New Orleans Public Health Support Team (GNOPHST) NIOSH component investigated reports of increased carbon monoxide (CO) in Charity hospital and provided recommendations to the DoD unit at Charity hospital regarding work in confined spaces.

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	The first available data from the post-spray surveillance in Mississippi indicates that in 10 sites monitored in Harrison County there was an average 91% reduction in total mosquito density from pre-spray population.
	The CDC TB team is working with State Health Departments to locate persons from LA on TB treatment to assure continued therapy. To date, 70 of 142 persons on the treatment list have been identified.
	Received ARF to support New Orleans Convention Center triage point with emergency room capability with ancillary services, equipment and staff.
	Rapidly decreasing populations in evacuation centers are leading to closure of centers, and discontinuation of surveillance.
9/20/2005	
	DEOC and SNS participated in conference call with City of Galveston, TX, who is preparing to execute mandatory evacuation of the city. Focus of call was on requirements to evacuate U. of TX Medical Branch, with a total patient count of 136, majority of which will require ground transport or air ambulance. No requirements identified for CDC at this time. Anticipate FMCS request, and SMO TX is working closely with HHS SERT leader on other anticipated actions.
	CDC is developing a multi-chapter document to provided needed information on mold and human health to CDC Leadership, Federal, state and local partners, and the public.
	HHS establishing SERT in Austin, TX. CDC notified by OFRD of requirement of 12 CDC personnel, movement expected in next 36 hours.
9/21/2005	
	CDC will remain in place in New Orleans for 21st, but are anticipating to move to Baton Rouge area by 22nd.
	10 CDC personnel assigned to Houston and Harris County areas of TX are evacuating to multiple locations further inland.
	As of 21 September, Public Health Analysis and Reporting team received report of 1001 Katrina-associated death in states directly affected by the hurricane and those housing evacuees. 94% of death occurred in LA, MS, FL and AL.
	Post-Deployment screening guidance developed and cleared by NIOSH and provided to PSH for review. Posted on CDC website for interim guidance.
	Post-disaster restaurant opening inspections continue in 6 coastal counties of MS. 582 establishments have been cleared to open.
9/22/2005	
	CDC actions, based on discussion with State of TX (SMO and Deputy Commissioner of Health), ▪ Shipped one 250 bed FMCS out overnight with an estimated ETA of 1300 EDT 22 Sep 05, destination Bryan/College Station (60 miles North of Houston). ▪ 250 FMS Thursday morning (ETA of 0800, 23 Sep 05), ▪ 500 bed FMS on Friday (ETA 1400, 23 Sep 05). The total number of beds to be shipped to Austin (staging point) is 1000. All ETAs are EDT and shipments are contingent on trucking availability. Action Request Form (ARF) was received and signed by TX
	SMO, LA has relocated all CDC personnel out of N.O. to the Baton Rouge area. SMO will continue to monitor Rita and make adjustments, to include releasing personnel to drive further north, as Rita approaches.
	NIP is providing technical assistance to Region 6 states for assistance with generating ARFs for vaccine requests. Expect to provide similar assistance if needed during Hurricane Rita.
	The Office of Enterprise Communication will initiate a new work group to develop and implement a communications plan and strategy for engaging people impacted by Hurricane Katrina in support of their safe re-entry into their communities.
	The ESF-8 EOC operated by the Arkansas Department of Health and Human Services in support of the Arkansas Department of Emergency Management has scaled back to minimum

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	operations for the next 24-48 hours.
	Epi team has been assessing health care services on the coast of MS. In terms of infrastructure and medical/mental health, the greatest needs were determined to be in two Hancock county towns, Pearlington and Ansley. These areas have been decimated to the extent that organized habitation will be impossible for months, if not years.
	RITA
	Two 500 bed FMS units for possible deployment to the Houston, Texas area are being configured and will be loaded as trucks become available. The current guidance is deployment after landfall.
	Hurricane Rita remains a Cat 4 hurricane with winds of 140 mph and gusts up to 175 mph. Landfall forecast near the Texas- Louisiana border late today or tonight.
	All 85 CDC staff members in LA have either moved to the Baton Rouge area or returned to Atlanta. (b)(2),(b)(6) is developing plans to return to LA once Hurricane Rita has passed.
	Report from Texas indicates that ongoing preparation related to Hurricane Rita (landfall Friday night/Saturday morning) including: ▪ Request for 1000 FMCS beds with the first 250 in Bryan/College Station, TX, with the second 250 beds arriving this morning and the remainder to arrive today. ▪ Communications with the impact area includes a) contacting SMOs and CDC teams, b) assessing HF radio network, and c) providing wireless modems and laptops to support Dallas County Health Department for early response to Hurricane Rita.
	CDC web site has been re-designed to serve the needs of both Katrina and Rita.
9/23/2005	
	KATRINA
	Total number evacuated from TX has been less than anticipated. 390 of 4000 anticipated have been flown to Arkansas.
	CDC, in collaboration with state health departments and manufacturers, continues to monitor vaccine supply and demand. Doses of vaccine have been distributed in accordance with the interim recommendations in Louisiana, Mississippi, and Texas. At this time, the needs appear to have been met, although needs assessments are continuously updated.
	Sanofi Pasteur has offered to donate 200,000 doses of influenza vaccine. These doses are currently being allocated to states, based on need. To date, over 120,000 doses have been distributed among 17 states with displaced persons.
	RITA
	(b)(3):b(3) contacted representatives from (b)(3):b(3) (b)(3):b(3) as well as (b)(3):b(3), which are in the projected path of Hurricane Rita to assess the extent of preparedness (b)(3):b(3) has undertaken to address the security and safety concerns potentially created by sustaining loss of electrical power or structural damage. There does not appear to be any cause for concern at this time.
	The CDC Greater New Orleans Public Health Support Team (GNOPHST) has evacuated to Baton Rouge where they will continue planning and operations pending resolution of Hurricane Rita.
	1,000 FMCS beds delivered to Texas to date with 500 in College Station and 500 at Camp Mabry in Austin. Another 1,000 beds are prepared for deployment post-landfall.
9/24/2005	
	KATRINA
	Document posted to website: NIOSH Interim Recommendations for the Cleaning and Remediation of Flood-Contaminated HVAC Systesm: A Guide for Building Owners and Managers
	Document posted to website: Safe Use of "Tanker" Water for Dialysis
	Katrina response operations disrupted due to Rita landfall.
	RITA

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	Rita made landfall as a Category 3 Hurricane at approximately 0230 CDT
	SNS FMCS trucks staged at various locations, awaiting mission assignments
9/25/2005	
	KATRINA
	HHS Hurricane Katrina recovery operations will now continue, with focus of: ▪ assessing public health and medical needs ▪ augmenting medical care in affected hospitals and shelters ▪ finding housing for health care workers ▪ providing human services for evacuee populations ▪ mass fatality management ▪ mental health support ▪ data collection
	ECS Summary: ▪ completion of Louisiana DHH/SAMHSA/CDC Mental health flyer for shelters (including local hotline numbers for evacuees) ▪ shipment of Mental Health Flyers (1,000) and Dual Sided Cards (100,000) to FEMA JFO Baton Rouge LA
	Hospitals in 11 states continue to update their status daily through the CIDS. Several hospitals in the Houston area re-opened today after closing yesterday in anticipation of Hurricane Rita. Some hospitals in the Dallas/ East Texas area are only partially open.
	RITA
	No deaths directly resulting from the hurricane have been reported
	Initial assessments: ▪ 1.1 million are without power in Texas. ▪ USCG reports no signs of major pollution cases. ▪ No signs of significant damage to petro-chemical facilities. ▪ American Red Cross reports 297,749 evacuees housed in "transient accommodations" (hotels, motels, etc.). (Based on FEMA's 25 Sep 05 Report).
	A public health emergency was declared by the Department of Health and Human Services (DHHS) Secretary Leavitt for Texas and Louisiana.
	Update from ERT-A , LNO National Medical Assessment Team in Austin, TX: ▪ Assisted on a Air Assessment Team now with Ground Assessment Team in Livingston TX ▪ Assisted in bringing Community Medical Center (Livingston, TX) up and running. They have working generator and fuel. ▪ Livingston, TX hit hard with water overflowing. No gasoline for cars. Cars lining streets and local highways out of fuel. Sporadic power availability throughout town. ▪ Assisted in getting local nursing home running with generator power and fuel in Corrigan TX. ▪ City of Houston in good shape, very little damage visible.
	The 2 FMCSs currently being held in Austin will be re-deployed. 1 will go to the Brown Convention Center in Houston and 1 will go to a location TBA in Beaumont. The VA will staff both shelters.
9/26/2005	
	KATRINA
	The CDC aircraft will deploy to transport 12 CDC staff members to Baton Rouge for the purpose of providing continued response and recovery related to Hurricane Katrina. There will also be two OSEP members on board to conduct a security assessment at Kindred Hospital.
	Members from the epidemiology/surveillance team of the CDC Greater New Orleans Public Health Support Team (GNOPHST) have returned to LA and reinitiated planning actions in New Orleans.
	RITA
	Texas SMO has worked with CDC DEOC to identify 50 personnel to populate CDC Public

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	Health Response teams. The missions will include environmental health assessment (communities and shelters), epidemiology surveillance and infectious disease control at shelters.
	CDC SMO TX visited JFO Austin for individual discussions with staff from HHS SERT and other agencies involved in staging base camps for relief worker housing in Beaumont, Texas.
	CDC Field Team worked with Texas DSHS State Epidemiologist and staff to plan for rapid health assessments in affected communities and shelter assessments in major general population shelters under utilization for Rita evacuees.
9/27/2005	
	KATRINA
	City of New Orleans has reinitiated their re-entry plan.
	1159 Hurricane Katrina-associated deaths in both states directly affected by the hurricane and those housing evacuees.
	Surveillance for influenza in affected states has been ongoing since the beginning of August. Of the total number of specimens (AL 130, LA 48, MS 2, TX 114), only 1 was positive for influenza A from TX.
	Louisiana reporting a 4% increase in fully open hospitals. In Texas, there is slow movement from closed to partially open, and partially open to fully open in Houston, San Antonio, and Dallas. In the hardest hit counties in East Texas Emergency Departments continue to remain closed.
	HHS directed the following Federal Medical Stations (FMS) actions: ▪ Deployment of 250 beds from Camp Mabry to Waco, TX ▪ Deployment of 250 beds from Houston to Marlin, TX ▪ Deployment of 1000 beds from (b)(2),(b)(6) to Camp Mabry ▪ Deployment of FMCS personnel (b)(2),(b)(6) from (b)(2),(b)(6) to Waco, TX
	RITA
	A federal disaster has been declared for the Texas counties of Chambers, Galveston, Hardin, Jasper, Jefferson, Liberty, Newton, Orange, and Tyler.
	Five Texas counties are without water service and 582,000 customers are without electrical power. The power grid in the 3-county area around Beaumont, TX is severely damaged with a much longer term evacuee management scenario than originally planned.
	(b)(3):b(3) areas in the path of Hurricane Rita were contacted to ascertain their status. All were reported to be secure and items accounted for.
	CDC Ft. Collins is providing advice to the Air Force regarding scheduling of possible mosquito abatement spraying in the newly flooded areas from Hurricane Rita.
9/28/2005	
	CDC / EPA, LA and MS DOH held a press conference on mold issues, environmental health assets, and CDC work in the field.
	HAN advisory distributed on "Instructions for Identifying and Protecting Displaced Children."
	KATRINA
	FDA/Center for Biologic Evaluation and Research (CBER) working with CDC to monitor & track any shortages associated with globulin products and vaccines. CBER is working with Interagency Task Force on Blood Supply & Availability to monitor blood supply in impacted areas. No urgent needs identified at this time.
	CBER reports adequate supplies of Tetanus Toxoid are available
	CDC is collaborating with EPA HQ to develop debris removal plan and air exposure guidelines.
	Reports of rabies exposure and concerns regarding post-exposure treatment have come from relief workers who have been working with animal rescue vicinity of N.O. An EPI – AID team deployed by ground. SMO LA is aware and will monitor.
	RITA
	The Critical Infrastructure Data System (CIDS) daily update reports two hospitals south of Houston (Lake Jackson and Galveston) are now open. In the hardest hit counties in East Texas Emergency Departments continue to remain closed. In the Houston area several emergency

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	departments are now open, along with one along the coast in Galveston.
	CDC Response Team leadership met with San Antonio Metro Health staff to review all outstanding issues in transitioning evacuee public health activities fully to Metro health. Immunization issues have been transitioned fully to SA Metro Health staff.
9/29/2005	
	All commercial airports in the region, except Beaumont, TX, and Lake Charles, LA, are handling commercial traffic.
	SNS is filling supply requests for Blue Med in Mississippi; the Algiers Clinic in New Orleans, and the YMCA Shelter in LA. SNS has deployed 2,000 Federal Medical Shelter beds to TX.
	KATRINA
	Public health missions have resumed in the greater New Orleans area, including school assessments, food and restaurant assessments, public health essential services, and hospital recovery planning. SERT-LA is working with the State on short and long-term recovery planning for the State's health sector.
	The USNS Comfort has been approved by Secretary of Defense to deploy to New Orleans for 2 weeks as a tertiary referral center.
	After confirming with CDC and HHS Inspector General (IG) staff in NO, OSEP recommends the following enhancements for NO security requirements: ▪ Recommend 24/7 coverage at Kindred Hospital: (b)(2) CDC personnel are receiving an informal security brief/threat assessment from the HHS IG during daily meetings.
	The City of N.O. has established a goal to have all water systems and wastewater systems functional and safe in 52 days
	The Kindred ITSO and DEO Incident Support Team IT/Communications team has updated its assessment and accomplished numerous goals for establishing IT infrastructure at Kindred and remaining goals should be completed by early October
	ATSDR assisted the MSDH in assessing food safety, and developing work and safety plans for entry and disposal of food, including decontamination in schools being used as shelters.
	CDC is collaborating and providing technical assistance where needed in areas of: • water safety/sanitation • surveillance of injuries • debris removal
	RITA
	STRATEGIC ISSUES WORKING • Biomonitoring recommendations/policies/decisions • Short and long term expectations to decrease current activity levels in the affected areas from CDC perspective • Lessons learned organizational development for permanent staffing. • Evaluating Incident Management control structure and training internal to CDC and externally. Evaluating embedding CDC structure into ESF # 8 nodes • Electronic surveillance and commonality across all agencies and care sites. (Hospitals, clinics, shelters etc) • Grant guidance/performance measures for communications equipment. • Shelter guidelines in collaboration with HRSA, SAMHSA, Red Cross. • Collaboration with EPA on environmental guidance. • Workers safety for federal and non-federal personnel. • Role and functions of SMO's in relationship to state preparedness and response. • Planning for second and third events.

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APPENDIX P

9/30/2005	
	CDC developing a biomonitoring plan for worker and community concern regarding the need for biological monitoring to evaluate exposure to contaminants.
	West Nile Virus (WNV) Case patient reports increased in MS (25) compared to LA (0) and AL (1).
	NEW STORM DEVELOPING: Tropical Depression (TD) 19 (As of: 11 PM EDT FRI SEP 30 2005) The center of TD 19 located about 660 miles west-southwest of the Cape Verde Islands, drifting NW, and this general motion is expected to continue for the next 24 hours. Maximum sustained winds are near 35 mph. Some strengthening is forecast during the next 24 hours, and the TD could become a Tropical Storm on Saturday 8 October.
	Community Health Education Team hosted a conference call with all deployed health education and communication staff. Discussion focused on development and distribution of CDC resources and materials.
	KATRINA
	Epi/surveillance team recruiting an additional DMAT in St. Bernard Parish and Touro Hospital in Orleans Parish and expanding surveillance system by adding several additional hospitals and facilities. From September 8th, 2005 through September 27th, 2005 a total of 8,928 illnesses or injuries have been recorded at participating facilities. 25.4% of patients presenting to hospitals had a chief complaint of injury, 98% of which were unintentional. Most of the unintentional injuries are due to falls (23%), insect stings, cuts, and blunt trauma. 3% of all reported hospital visits are for violence-related injuries.
	New Orleans PH/Injury: The Medical Group Commander at the Naval Air Station at Belle Chase has requested CDC to provide weapon safety flyers. CDC staff discussed this request internally and is not able to meet his request. Follow up will take place
	RITA
	Key public health concerns in southeast TX include: • extreme environmental conditions • inadequate medical services • premature re-entry of clients into an inadequate public health infrastructure • need for boiling precautions due to poor water pressure • lack of potable water • briefing shelters on typical infectious disease concerns and methods of infection control.
10/01/2005	
	CDC- multi-CIO workgroup is developing a document to provide information about the potential impact of mold on human health.
	CDC Website hits: 43,542. Top interests include: • Mold • environmental concerns • infectious diseases • immunizations • CDC's hurricane report.
	Activities in Lake Charles, LA include CDC staffer working with the medical officer on EH issues to identify gaps in current public health activities.
	SMO TX is currently in vicinity of Beaumont working with city and county health officials in developing plan for recovery of public health system.
	SMO in TX has asked for supplemental CO poisoning prevention messages in TX where cases continue to occur.
	Several occupational safety and health documents currently under development to protect

	response and recovery workers
	An EPA-CDC joint document addressing the environmental health concerns around repopulating New Orleans is being reviewed.
10/02/2005	
	Environmental Issues: • Questions are being raised on why federal workers are operating in PPE but residents are being allowed back into the city with no protection; awaiting contractor air sampling results to determine whether PPE levels could be lowered. Action will be passed to ECS and Public Health Services desk to address. • OSHA, CDC and EPA developed a guidance document for inspection teams who will enter into buildings that had previously been flooded.
	Orleans Parish is scheduled to begin repopulation today for business owners over the next 96 hours. Reentry will be allowed into homes, businesses, and industrial areas.
	Fort Collins confirms there is no increase in WNV cases in affected LA parishes post-Katrina.
	CDC environmental health team participated in a meeting with EPA, DEQ, SWBNO, LA DHSS/OPH, FDA, and hotel staff to discuss the problems of tanker trucks hauling drinking water to several of the downtown hotels.
10/03/2005	
	Arrangements are being made to receive a daily feed of electronic reportable disease surveillance data from the State of LA
	Environmental health (EH) officers are inspecting schools in Jefferson Parish LA for health and safety issues for reopening schools.
	A total of 10 new nonfatal carbon monoxide poisonings were reported in TX.
	Katrina logistics and the VA continue to work the issue of vans or other vehicles to serve as mobile primary care centers.
10/04/2005	
	The USNS Comfort is positioned pier side at the 9th Ward Pier in New Orleans, LA, until October 11 and is staffed for 250 beds.
	Top CDC Hurricane Katrina/Rita-related Web Interests: • Mold • Immunizations • Infectious Diseases • Environmental Concerns • Mental Health
	Findings for epi-aid team who deployed to LA to investigate potential rabies exposures and prophylaxis in animal rescue workers in Louisiana: • The team queried the hospital- and clinic-based surveillance system. Found 19 confirmed animal bites, and 100 visits coded bite or sting, some of which are likely to be animal bites. The team also visited one of the unofficial animal shelters and the FL-1 DMAT in St. Bernard Parish to investigate animal bites and procedures for follow-up. They plan to contact remaining medical treatment sites where animal bites have been reported to determine if post-exposure rabies vaccinations have been administered.
	The Air Force Aerial Spray Wing has initiated operations in Beauregard Parish spray blocks. Isolated rain showers forced termination of spraying with both blocks nearly complete. Operations will continue in Beauregard Parish weather permitting
	2,000 multi-message posters and 7,000 flyers were printed and distributed to food establishments, gathering places, gas stations, mail distribution sites, etc. Topics included: food safety, water safety, CO poisoning prevention, heat related illness prevention, and dog bite prevention.
	News Release – EPA and the Louisiana Department of Health and Hospitals (LDHH), along with other federal, state and local public health officials, issued a

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	news release urging owners and managers of New Orleans-area restaurants and hotels to ensure that drinking water provided for customers is purchased only from reputable experienced vendors. Federal officials have become aware of several instances of drinking water vendors bypassing established safeguards and using inappropriate vehicles to deliver water to customers, potentially exposing both residents and responders to water contaminated with unhealthy bacteria or chemicals. http://www.dhh.louisiana.gov/news.asp?ID=145&Detail=693
	From 9-8-05 to 10-4-05, a total of 14,675 illnesses or injuries have been recorded
10/05/2005	
	New CDC web postings: Spanish Translation of "Protect Yourself From Chemicals Released During a Natural Disaster"
	Lack of power in 17 parishes and the movement of special needs populations remains a primary concern.
	The State is working towards getting back to regular PH business by Friday, 10/7/05. CDC staff is working with the State to assess their needs and anticipates completion by Friday.
	DMORT would like CDC to support a mission of collating data stream with info from State, Military, DMORT and other sources and to produce a GIS map of the data that might be useful for epi research, documentation of the response etc.
	Staffing update: • LA Regional Epi team will finish up their mission within week. • Epi- aid team pulling out of LA within week • Immunization team will work through the month. • TB management is staying back to assist the state
	CDC has been asked to assist in providing information to public health officials and shelter operators to determine the appropriate timing for the return of these vulnerable citizens. Special needs populations in the shelters will need longer term support prior to returning home as Health Department Services upon which they rely are not yet available.
	Communications is exploring the use of billboards in Texas along routes of retuning displaced populations to post CDC health messages.
	CDC staff met with Regional and City Environmental Health Directors to discuss plans for CDC environmental health personnel to transition out of New Orleans.
	NIOSH staff conducted personal breathing-zone air monitoring on landfill workers for total and respirable particulates, crystalline silica, and several elements. A NIOSH medical officer also interviewed landfill workers.
	CDC Field staff participated in a mold presentation to the Principal Federal Official (PFO) group located at the N.O. Convention Center.
	NIOSH and OSHA representatives reviewed the worker S&H training program, PPE usage, industrial hygiene sampling, and toured hurricane damaged areas in Lakeside, Lakeview, and City Park areas.
10/06/2005	
	Four New Documents and Health Messages on CDC Website: 3 safety messages and one vaccine message.
	Special needs shelter population in decreasing
	Lake Charles Public Health Lab is operational. The New Orleans Public Health Lab will not have power for an additional 8 months and no work will take place in the building for additional 24 months.
	The Greater New Orleans Metro Area (GNOMA) physicians' group is drafting a digest to assist local clinicians with pertinent medical recovery information. The draft will be vetted through CDC representatives to GNOMA to ensure accuracy prior to release.
	Security continues to be a high priority due to the previous civilian unrest at some venues. This will remain as a "Critical Issue". Safety for all our personnel is our primary goal.
	CDC team met with the coordinators of the Greater New Orleans Ryan White Title 1 grant and received information on status of the program, developed a list of critical needs and identified

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	several action items that the evaluation team could act on to aid this program.
	CDC ATSDR, EPA and Federal Occupational Health are providing consultations to FEMA on lead and asbestos issues related to building inspections.
	CDC mental health field team members: o Assisted local mental health providers obtain clinic space on the east bank. o Are investigating the status of EMTALA under disaster and emergency situations. o Made changes to assessment tool to reflect a general assessment rather than one focused on mental health. o Conducted background literature reviews to assist in the development of strategies for re-establishing community
	The SERT is working with the state on a demobilization plan for the ongoing pharmacy, medical, and dental missions and with Centers for Medicare and Medicaid Services (CMS) to enroll residents in health benefits program for which they are eligible.
	The SERT is working with FOH, FEMA and the state on a plan for providing flu vaccinations to base camps.
	SNS continues to re-supply the Blu-Med mobile hospital.
	CDC Environmental Health/Surveillance Team met with local firemen and distributed posters and flyers related to the dangers of lake water and eating dead fish.
	The CDC Lab team: • participating in planning meeting to address issue of rebuilding public health laboratory capacity • Newborn screening activities ongoing • Team members plan to contact labor and delivery units and hospital laboratories in the next few days to address issues with newborn screening tests • identifying private laboratories in the area that continue to have capacity to test for reportable diseases in Louisiana • determining the appropriate specimen submission mechanism in coordination with the manager of the regional laboratory in Shreveport
	Occupational Health Team: • Participated in panel discussion at the City of NO "Kick Off" Business Meeting • presented information on mold hazards and mold remediation • plan to conference with local landlords to discuss mold remediation
10/07/2005	
	Public health missions in support of MS include: • operating mobile medical and dental clinics • providing medical staff augmentation to shelters • addressing food safety issues The Secretary's Emergency Response Team continues to work with MS DoH on transition/recovery plan
	CDC continues to assist the State of Texas with rapid needs assessments at hospital facilities.
	Top CDC Web Interests: • Mold • Immunizations • Infectious Diseases • Environmental Concerns • Mental Health
	6 New Documents and Updated Health Messages on CDC Website
	The boil water advisory has been lifted for some areas in NO
	A CDC mold team was deployed to NO to assess exposure to mold and damp indoor spaces and related health effects
	CDC is reviewing a proposal to vaccinate relief workers for influenza who are camp residents.

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	If approved, program will begin Oct. 24th. The plan calls for: • FEMA and MS DOH will provide vaccines • Nasal vaccination for persons in camps < 50 years of age and inject able vaccine for those 50 or older or who are excluded from receiving nasal vaccine. • After 11/1/05, all persons arriving at resident camps will have to receive vaccination before arrival. • Vaccinations expected to be completed in 1 – 2 weeks.
10/08/2005	
	LOPHEST (Environmental Support Team) is reviewing the draft air-monitoring plan to identify potential public health concerns that may be presented by the community during debris removal and reduction.
	SNS filling Blu-Med re-supply requests from MS are ongoing with 3 Pharmacy Lines ordered
	Currently there is no exit strategy for the FMS shelters. The State of TX indicates that FMS shelters could remain open for as long as 4 months.
	CDC in New Orleans is attempting to collect information about existing mental health services in New Orleans and the surrounding areas.
	All CDC personnel supporting relief efforts in TX, including OFRD, have returned to home stations.
	The USNS Comfort (Mercy Class Hospital Ship) redeployed to home station at 0830
10/09/2005	
	Potable water and electricity are now available in parts of New Orleans, but sewage remains an issue that will hamper the reopening of area hospitals and ambulatory services.
	Water in New Orleans has been declared to be potable and the "boil order" has been lifted.
	Temporary and mobile health facilities are needed for unmet primary care needs in New Orleans. Additional mobile clinic vans will be needed for the hardest hit regions.
	CDC is facilitating the distribution of OSHA injury prevention flyers covering carbon monoxide, ladder/roof safety, electricity, driving safety, chainsaw safety, and mental health. These were provided to 5 regional offices of the LA DoH and Hospitals. There were 18,000 flyers in English, 5,000 in Spanish, and 700 in Vietnamese.
	OSHA Field staff has asked CDC to enhance current CDC injury information for falls to be used for intervention purposes.
	The GNOPHST met with EISOs and the NIOSH Team to plan for an MMWR on injuries seen from the surveillance system to focus on unintentional injuries, violence, and worker-related injuries.
	The GNOPHST reviewed PSAs already cleared by CDC communications staff on violence and gave to communications staff in the field for use on local radio and TV stations in the greater NO area. The violence PSAs were on child maltreatment, domestic violence, and suicide.
	CDC Filling Blu-Med re-supply request from Mississippi ongoing with 3 Pharmacy Lines ordered.
10/10/2005	
	The GNOPHST has requested EARS (Early Aberration Reporting System, a CDC syndrome surveillance product) to be implemented in New Orleans hospitals. An EARS staff request has been sent to CDC DEOC and staff are expected to arrive on October 11.
	The GNOPHST has met with CDC leadership staff to discuss plan for transitioning injury prevention activities to the State Health Department and local partners
	The CDC Environmental Health Team is assisting in re-inspecting hotels that have reconnected to the municipal water system to ensure that they are properly reconnected and that potential cross-connections or backflows that could contaminate the water system do not exist.
	Over 94 percent of the customers have had power restored in Texas
	4 carbon monoxide poisonings were reported through the Toxic Exposure Surveillance System: • 2 in TX • 1 in MS

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	• 1 in AL CDC NO team is working on plans to conduct additional medical record abstraction for these patients to gain more detailed information on the circumstances surrounding the incidents and the treatment these patients received
10/11/2005	
	All AL shelters are projected to be closed by COB October 14 and evacuees transitioned to temporary housing.
	The CDC Transition plan for LA states that the "response phase" took place between Aug. 27th and Oct. 3. Current efforts taking place between Oct. 3 - 31 are focused on "recovery phase". Operations and capacity are currently being scaled back throughout October. State officials discontinued weekend work schedules, and are acting only on emergency issues. Federal operations and staffing were stabilized or stood down for intervals for the first time. State officials will continue limited presence in the EOC during the work week, and will return to routine schedules where possible. By month's end, anticipate withdrawal to routine offices/schedules.
	CDC is implementing a transition plan for sustaining appropriate level of capacity throughout the recovery phase at four defined levels of responsibility. • Rebuilding phase will take place between Nov. 1 and Dec. 31. • Initial rebuilding phase will require negotiated staffing commitments by CDC at state & city level during transition to long term rebuilding and ongoing operations phases. • FEMA / SERT will convert activities to long term management. • CDC program functions and staff will be replaced by state and city staff, or discontinued.
	CDC plans to transition to electronic surveillance using EARS (Early Aberration Reporting System), a CDC syndrome surveillance product, in NO hospitals.
10/12/2005	
	A post-deployment health screening of returning internal CDC deployers has been started through a survey from the CDC Office of Health and Safety.
	New CDC Web Postings: • Updated: Questions and Answers About Immunization Recommendations Following Hurricane Katrina • Updated: Interim Guidelines for Animal Health and Control of Disease Transmission in Pet Shelters • New: Resuming safe operation of building water systems—risk of Legionnaires' disease
	A program is in place for pharmacies to provide medications to those who are "shelter-eligible" from the hurricanes and who do not have public or private insurance. The LA program operates through the LA Board of Pharmacy; FEMA has agreed to reimburse eligible recipients. Not all pharmacies have this information in their electronic systems; CDC HQ and field staff are working with the LA SERT and corporate partners to resolve this problem.
	The CDC Field Team for occupational health issues made recommendations on dust suppression & personal protective equipment at a debris transfer and separation site in Orleans Parish in response to concerns about asbestos exposure. It anticipates performing additional air sampling for asbestos and metals.
	EPA has provided ATSDR and the Environmental Health group with copies of the Air Monitoring and Contingency Plan for HK Debris and the Demolition Activities in LA and the Regional Air Monitoring Plan for HK in LA which is part of the Overview Plan for Ambient Air Monitoring after Hurricane Katrina for review
10/13/2005	
	New CDC Web Postings: • New: Hurricane Katrina Flyer: "Wash Your Hands: After a disaster, staying clean can be hard to do..." • Updated: Questions and Answers About Immunization Recommendations Following Hurricane Katrina

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	• Updated: Interim Guidelines for Animal Health and Control of Disease Transmission in Pet Shelters • New: Flyer: What shots do I need when I come home to New Orleans? • New: Flyer: Get Rid of Mold • New: Flyer: Clean With Bleach • New: Flyer: Get Rid of Cleaning Products and Other Chemicals • New: Spanish translation of "What you need to know if you are pregnant or might be pregnant" • New: Laotian Translation of "Stressed? Sad? Some stress is normal." • New: Laotian Translation of "Drive Safely"
	Most Popular CDC Web Interests • Mold • Infectious diseases • Spanish translations • Environmental concerns • Floods
	The CDC GNOPHST prepared a message on the current capacity and contact information for the LA public health laboratories for distribution to 376 CLIA (Clinical Laboratory Improvement Amendments)-certified laboratories and for posting on public health websites
	The CDC GNOPHST provided a CDC spokesperson for a WWL-Radio segment on rodent and vector control.
	LA DOH has put in a FEMA request for 125,000 Inactivated Influenza vaccines for distribution to all acute care hospitals for healthcare employees to prevent outbreaks in the State's health care system.
	CDC NCIPC developed fact sheets on high pressure injection injuries (pressure washing), one for the public and one for health care practitioners.
	As of 13 October, Executive Summary reporting ceased. CDC continues to monitor and prepare resources for potential support to Hurricane recovery operations. Deployment data, as of 11/15/2005: • 13 CDC personnel currently deployed for Katrina • 745 CDC personnel have completed deployments

ABBREVIATIONS

ARC.....**American Red Cross**
ARF.....**Action Request Form**
ATSDR.....**Agency for Toxic Substances and Disease Registry**
CDC.....**Centers for Disease Control and Prevention**
DEOC.....**Directors Emergency Operations Center**
DHHS or HHS..... **Department of Health and Human Services**
EHHE.....**NCEH Division of Environmental Hazards and Health Effects**
EPA.....**Environmental Protection Agency**
FCMS.....**Federal Medical Contingency Station**
GNOPHST.....**Greater New Orleans Public Health Support Team**
HAN.....**Health Alert Network**
HSB.....**NCEH Health Studies Branch**
MA.....**Mission Assignment**
NCEH.....**National Center for Environmental Health**

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NCHM.....National Center for Health Marketing
NCID.....National Center for Infectious Diseases
NO.....New Orelans
OC.....Office of Communications
PMAC.....Pete Maravich Assembly Center
SMO.....Senior Management Official
SNS.....Strategic National Stockpile
SCC.....Secretary's Command Center

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APPENDIX Q
EMERGENCY COMMUNICATION SYSTEM (ECS)
HURRICANE KATRINA AAR
12/22/05

SUMMARY OF ECS RESPONSE ACTIVITIES	
August 25-October 31	
Epi-X reports posted:	123
Contributors:	18 states and 2 counties (DC, LA)
HAN reports:	5
August 29-Current	
Hurricane Website page views:	3,167,450
COCA Website page views:	62,767
Hard copies printed and shipped:	Tens of thousands
Public hotline calls:	1,333 (through 11/1/05)
COCA conference calls:	1,002 participants in total, 2 calls
Public hotline e-mails:	544 (though 11/1/05)
Press office calls:	398
Calls to Clinician Information Line:	292
Documents submitted for clearance:	285
Clinician Registry and COCA e-mails:	220
Congressional inquiry responses:	46, 90% were final and cleared in 24 hours
Translated materials:	40 to 6 languages
ECS Center/Office collaborations:	10
(OEC, NCEH/ATSDR, NCIPC, NCHM, NCCDPHP, NCID, NIP, NCHSTP, COTPER, NIOSH)	
Also, prepared responses for 3 Congressional hearings with 100% completed in time.	

ITEM 1 PROJECT ASSIGNMENTS, ROLES/RESPONSIBILITIES OF ECS AND ECS TEAMS

Successes

ECS team structure: The CDC's Emergency Communication System (ECS) is comprised of 11 teams with resources and networks to provide emergency information through key channels to multiple audiences. Experience and recent use of ECS teams with other emergencies and exercises enabled CDC to quickly implement a comprehensive communication response. The overall CDC communication response went well. CDC was able to rapidly and accurately develop and disseminate communication messages on a wide-range of topics in a short timeframe.

Hurricane Website: Named the primary health and safety web lane for federal Hurricane information. This was a success in many ways. First, this was an overall success for all federal websites as it helped

consistency and coordination of content regarding health and safety. Other federal agencies with health and safety information sent their links to CDC for inclusion on its website. When inconsistencies between agency content were identified, there was an opportunity to discuss and select the primary content that should be used. Second, CDC was clearly identified as a primary resource for health content. Other web content coordinators were impressed by the volume and quality of CDC content on Hurricanes, as well as, its website design and content presentation. Third, as the health and safety lane for the federal government, CDC received an increased volume of traffic to its website. This increased CDC's opportunity to reach a broader audience with its health messages.

Communication staff deployments: The Community Health Education Team (CHET) and Media Team are the 2 primary teams within the ECS 11-team structure involved in deploying staff to affected communities. By far, the response to hurricane Katrina marked the largest number of surge-capacity communication staff deployed through these teams. Having and maintaining contact with CDC health communication and education staff deployed to affected communities provided ECS the ability to access and respond to real-time assessment data of diverse communication needs. This facilitated the ability for ECS to quickly identify and adapt materials to specific community needs, such as converting various messages into formats and tools that were more accessible to target audiences. For example, the development of mental health cards with graphics simple language targeting both male and female audiences, carbon monoxide door hangers and stickers, and hand washing stickers. These materials were then printed and shipped to deployed communication staff for distribution at the grass-roots level.

Public affairs: The press office calls received at headquarters and out in the field led to major national, international and regional news placement of CDC's efforts during Katrina, often told by our scientists in the field and very positive. In addition, a 5-page media strategy plan was developed early on that identified media communication objectives, key spokespeople, likely media interests, and major media activities helped foster common understanding among those involved in the hurricane response efforts as well as guide media-related activities and decisions.

Katrina Daily Updates: Having the Office of Enterprise Communication (OEC) physically represented in the Emergency Communication Coordination Center (EC3) room and integrated with ECS was extremely valuable in establishing an infrastructure for identifying key, daily communication issues and talking points and distributing this information broadly through both internal and external partnerships. This serves as a model for timely, comprehensive, seamless, and effective emergency communications efforts through development, clearance, posting and dissemination.

Challenges

Communications overload: Due to the considerable volume of communication requests, communication personnel with ECS/emergency response experience rapidly became scarce. ECS was able to identify and draw on assistance offered by a generous number of communication staff from Centers; however many of them had little knowledge of ECS, DEOC, or emergency response. Providing orientation to these programs/processes in the midst of an enormous event was not conducive to effective communication response.

Leadership briefings: Although OEC participated in the leadership briefings and provided updates to ECS, as the lead entity for emergency communication responses, ECS participation in Leadership briefings is essential.

Organizational structure: Confusion about incident management/command structure and responsibilities between HHS and CDC and other federal agencies caused some confusion and delay in CDC's communication response.

Actions/Recommendations

Establish mandatory, annual training for all CDC personnel: Work with DEOC to integrate ECS training as a component of mandatory training related to DEOC and general emergency response processes (i.e., ICS, NRP, NIMS), including roles in incident command/management as well as specific events -- between emergencies.

Increase surge capacity: Continue and improve cooperation from Centers to be able to get more communications surge staff in and faster. Develop a roster of qualified personnel from Centers with needed skill sets who can deploy to the field or to the DEOC in emergencies. Conduct regular (at least annual) training with these identified staff to enhance their readiness for response.

Assure ECS Director or appropriate designee is included as a participant in leadership briefings.

ITEM 2 ECS PROJECT REQUEST AND TRACKING PROCESS

Successes

Pre-established, centralized ECS team mailboxes: The ECS Web Team and Information Management Team (IMT) had established, accessible, and centralized mailboxes for Website and clearance requests that were exceptionally helpful in managing and streamlining the inflow of requests. The mailboxes served as a central repository for all requests related to Website postings and document development/clearance. The staff members of these two ECS teams had their corresponding mailbox installed on their personal desktops so they could also access the mailbox from remote locations via Citgo/Citrix. This was a huge improvement from previous emergency responses in which requests were not centralized in one shared, accessible location.

Congressional inquiry assignment: Assigning an ECS person to serve as the POC to manage the clearance process for all Congressional inquiries was very helpful in meeting the requirement to have a cleared, final response within 24 hours of receiving the request.

Challenges

DEOC mailboxes: Having a centralized means of communicating with the various DEOC desk teams is helpful and necessary. However, the desk team mailbox system was not efficient for several reasons including: mailboxes could only be accessed from DEOC computers (not from Blackberry or off-site); messages often were sent to both individual mailboxes and the desk team mailboxes, which complicated the ability to track and follow communication requests; and, individual and desk team mailboxes could not be used simultaneously and required logging in and out to switch between mailboxes, which was cumbersome and time consuming.

Systemized tracking process: ECS activated a systemized process to track and centralize project requests, but the length of the response and number of Centers involved indicated that a more versatile tracking system is necessary.

Actions/Recommendations

For the short-term, refine the functionality of the clearance mailbox to improve process of triaging tasks and assuring complete follow-through on projects.
For the long-term, establish a versatile, user-friendly database to enter and track all project requests. ECS recently hired a computer programmer. One of the projects assigned to this position is the design a Web based relational database tracking system that will automate as much of the project tracking process as possible to efficiently handle the large number of communication requests that a wide scale emergency generates. Plans are to begin the database development in January 2006.
It would be helpful if DEOC had a pre-established mechanism for centralizing communications across teams that is more flexible and accessible than the mailbox system (something web-based?) and that remains somewhat constant so staff can become familiar with the system and tailor it to team needs.

ITEM 3 CLEARANCE PROCESS

Successes

Number of cleared documents: Processed more documents successfully through clearance than any previous emergency (more than 250 documents).
ECS had the highest ratio of cleared vs. uncleared documents (i.e., removed from clearance, refused clearance by one or more Centers) than any previous emergency (89.5% of documents cleared for use).
24 hour turn around: During Katrina, ECS learned that Dr. Gerberding established a 24-hour turn around time for final, cleared responses Congressional inquiries. ECS was able to complete the clearance process for Congressional inquiries more rapidly than any previous emergency event, completing 90% of the request with final, cleared responses within 24 hours.
Seamless integration of OEC functions: Successfully integrated Office of Enterprise Communication functions with ECS functions by having OEC physically represented in the EC3 DEOC room to work with ECS staff to develop, clear, and disseminate daily updates. These updates were cleared for dissemination in approximately 30 minutes each day.

Challenges

Volume of requests: Such a huge volume of documents stretched the limits of our manually monitored clearance system.
24 hour turn-around for Congressional inquiries: Moving Congressional inquiries through clearance at such a rapid rate strained SMEs and communication staff. At issue here is that in any emergency our SMEs and communication staff are very limited. The decision to respond to a Congressional inquiry, participate in an essential leadership meeting, or provide expertise for pressing public health issues becomes, then, a dilemma.

Actions/Recommendations

Finalize and widely distribute a document outlining emergency response clearance procedures for general documents, Congressional correspondence, controlled correspondence, and MMWR articles. Rapid clearance would be greatly facilitated by a consistent organizational structure in DEOC for every event (ICS) and would provide ECS with a direct line to the incident manager to promote buy-in and adherence to clearance procedures. This is very important because event after event, involvement in the clearance

process from various staff across the Centers increases more and more, which often results in the need to discuss and negotiate various steps in the midst of the event. Although some negotiation will likely always be required, having a direct line to the incident manager puts more strength behind established processes and will minimize unnecessary interference in the clearance procedures.
Establish a versatile, user-friendly database to automate as much of the clearance process as possible. ECS recently hired a computer programmer. One of the assignments for this position is to design a Web based relational database clearance tracking system to efficiently manage the large number of documents that a wide scale emergency generates. Plans are to begin the database development in January 2006.
Systematically detail policy specialists to ECS from the various Centers to assist with clearance of policy related matters to reduce the amount of time required from SMEs and communicators to respond and clear Congressional inquiries.

ITEM 4 DEPLOYMENT PROCESS

Successes

ECS worked closely with the deployment desk to coordinate deployment requests for communication staff, ranging from health educators, communication specialists, to public affairs staff.
Deployed staff proved to be a great asset for the communication response and provided a variety of support and assistance at the community level.
Reinstituted a "lifeline system" for deployed communication staff by assigning an individual in the field to someone at CDC to augment communication and assure deployed staff had a contact person at CDC to provide any needed assistance throughout the deployment.
Developed deployment briefing kit to as a means of rapidly orienting communication staff to emergency communication responses processes, procedures and available resources.

Challenges

With numerous deployments, it was extremely difficult to determine which communication staff was deployed and to what location.
Unclear and inconsistent debriefing process, which challenges the ability to identify lessons learned and continuously improve deployment processes.
Communications overload: Due to the considerable volume of deployment requests, communication personnel with ECS/emergency response field experience rapidly became scarce. ECS was able to identify and draw on assistance offered by a generous number of volunteers, however many of them had little knowledge of ECS, DEOC, or emergency communication response.
Initial deployed staff received a more comprehensive, general deployment orientation and instruction on what to expect. However, the succeeding waves of deployed staff often did not receive any such preparation or guidelines on the conditions of living.

Actions/Recommendations

Increase interactions and coordination between ECS and DEOC, possibly by through cross-participation in all-hands meetings. This will help to assure ECS and DEOC are in the loop/involved in key developments, such as organizational structure changes, processes, development of training programs, etc.

Provide routine training programs for ECS surge capacity. Develop a roster of qualified personnel from Centers with needed skill sets who can deploy to the field or to the DEOC in emergencies. Conduct regular (at least annual) training with these identified staff to enhance their readiness for response.
Staff exchange program: Establish a communication staff exchange between ECS and Centers to facilitate collaboration during emergencies and to share best practices of emergency communication. While on exchange, staff members would have a mentor to assist in their cross-training and would serve in 2 month rotations. Participants would receive ECS certification through the Office of Work Force and Career Development and be placed on a roster of staff that is trained deployable as needed during emergencies.
Establish ECS training program: Work with DEOC to integrate ECS training as a component of mandatory training related to DEOC and general emergency response processes (i.e., ICS, NRP, NIMS), including roles in incident command/management as well as specific events -- between emergencies. Ideally this type of training would be web-based and in both a quick and extended version.
Efforts should unite with the Deployment Desk to establish a relationship in which ECS pre-selects, qualifies and trains communication staff going out to the field. ECS should also provide a list to the deployment desk of communication staff qualified for potential deployment in advance of requests. These efforts should also be coordinated through the ECS roster that is included in the Resource Tracking System. Also, a deployment tracking system should be developed/improved to allow ECS to distinguish deployed communication staff and their location/function. This will assist ECS with "lifeline" system to establish and maintain direct contact with deployed communications staff.

ITEM 5 EQUIPMENT, SUPPLIES, RESOURCES

Successes

The Emergency Communication Coordination Center (EC3) room in the DEOC is a critical asset for receiving, coordinating, and responding to communication requests. This room serves as the "hub" for all CDC communications during an emergency response. Not only does it provide direct access between communication staff and other key personnel involved in the response (e.g. SME's, incident manager, duty officer, operations, logistics) but it also serves as a central area for communication coordination across Centers (e.g. Lead Center ADCSs, OEC staff, and media staff).
The overflow room in (b)(2) was exceptionally helpful in being able to coordinate communication across all of the ECS teams and a large volume of communication surge capacity staff. During an emergency response, time, equipment, and proximity to key staff are imperative to effective emergency communications. This room accommodated all of these needs because it was in close proximity to the ECS offices and the EC3/DEOC. Also, it was set-up with several workstations and desktops.

Challenges

(b)(2) was set-up with computers but not phone lines which made it difficult to reach staff working in that room.
Staffing schedule: With DEOC operating hours covering 6:30 AM-10PM, 6-7 days/week, ECS had to establish a separate schedule to assure staff had a minimum of 2 days off/week. Although we established a 2-track schedule (Sunday-Thursday and Tuesday-Saturday) this became confusing for staff.

Actions/Recommendations
Have a designated "overflow" room identified and ready for rapid set-up of both phone lines and computers in advance of an emergency (this room could be a room that normally functions as a conference room during non-emergencies
Work with DEOC to establish a clear rotational schedule that is consistently implemented during responses that provides appropriate duty hour coverage but allows for 2 consecutive days off (preferably providing at least one weekend day off).

ITEM 6 EXIT STRATEGY

Successes
For the first time, ECS implemented a "transition strategy" with involved Centers to facilitate the process of shifting from response to recovery activities
ECS recently developed a tiered response plan for ECS level of involvement needed and was able to pilot it during the 2006 hurricane season.

Challenges
It is unclear if DEOC/ECS is still activated for this response.
Although DEOC remained activated for the response, many desk teams began disassembling independently. This particularly complicated clearance procedures since the desk teams were involved in the clearance process.

Actions/Recommendations
Refine ECS tiered response plan based on lessons learned during Katrina.
Refine and further develop "transition strategy" process.
It would be helpful if DEOC established an exit strategy or plan in advance of activation to assure there is a clear, unified, and definite approach to de-activation and transitioning from response to recovery.

APPENDIX R
FINANCE

The table below is a summary of the financial status of Hurricanes Katrina and Rita as of December 8, 2005. The table reflects the total dollars available, total dollars committed, and the future needs. As of this date, approximately $800,000 remains available.

Hurricanes Katrina and Rita Financial Picture

Hurricanes Katrina and Rita – Current Financial Picture as of 12/08/05 (Estimated future needs reflect a small few items over the next few months)		
Categories	Dollars Committed (Millions)	Estimated Future Needs (Millions)
Commitment & Needs		
SNS Materials		
FMCS, Including Beds for Hurricane Katrina and Rita	$13.5	$13.5
Medical Re-Supply/Vaccine and Re-Stocking SNS Inventory	$42.6	$43.4
DEOC Coordinated Logistics		
Travel and Ground Support	$1.6	$1.6
Equipment, Supplies, Etc.	$2.4	$2.4
CDC/SNS Airplane Contracts (20 Flights (8 DEOC, 12 SNS))	$1.8	$1.8
Labor Estimate (HQ and Deployed)	$4.0	$4.0
Sub-Total - Commitment and Needs	$65.9	$65.7
Total Available Funds		
FEMA Mission Assignments - Katrina	$64.2	
FEMA Mission Assignments - Rita	$8.7	
FEMA Mission Assignments - Wilma	$0.8	
Sub-Total - Available Funds	$73.7	$73.7
Remaining Funds - All Hurricane Responses	$7.8	$7.0

FYI: HURRICANE KATRINA CCID AFTER ACTION REPORT 1/31/06 → Copy to (b)(2),(b)(6)

RECOMMENDATIONS	PROJECT SOURCE		
	CCID	Katrina	Both
CCID needs to coordinate with DEOC to develop, communicate and socialize ***plan(s)*** for how to respond to events in which CCID will be the lead and in events in which they will be a participant.			X
COTPER should develop a project management approach to the oversight of plan development. Assign a portfolio of plans to a dedicated person and apply best practices in project management.	X		
CCID should work with DEOC to develop more structured and defined response ***processes***.			X
A structured ***staff*** identification for mission assignments, teams, and roles in the DEOC should be developed and utilized to maximize CCIDs capacity and capability during a response.		X	
CCID should establish a ***training*** program in conjunction with DEOC that focuses on developing initial response leadership capabilities and incorporating broad emergency response training to a few dedicated emergency response delegates.		X	
BPRP should establish a Planning and Preparedness Office and matrix the Director and the Office lead to COTPER	X		
COTPER should host a series of 5 Full Day Coordination Workshops to define roles, responsibilities, and processes with BPRP, NCEH, and other internal stakeholders and formalize these operating concepts into MOA's signed by the CC Directors	X		
BPRP should be renamed and formalize its role as a cross-cutting resource for CCID and work with NC and Division Directors to define its CCID-facing responsibilities. BPRP should work in an integral fashion within NC4.	X		
BPRP should be relocated to space shared with COTPER or assign space for a subset of BPRP staff.			
BPRP and COTPER should consider cross-details to build a cadre of staff with an understanding of the functions of both organizations	X		
BPRP and COTPER should establish an internal communications model with clearly defined recurring meeting calendars, inclusion of BPRP leadership in standing COTPER meetings, and role-to-role communications protocols	X		
CCID and COTPER Directors should agree to a set of internal performance measures for the organizations aimed at coordination and hold Division leadership accountable for achieving these	X		

Appendix S

Discussion Document

CCID Hurricane Katrina After Action Response Assessment

Project Update

Atlanta, GA
January 5, 2006

This document is confidential and is intended solely for the use and information of the client to whom it is addressed.

CDC

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Contents

- Approach
- Summary Findings
- Observations and Analysis
- Recommendations

Booz Allen was asked by CCID to assess its response to Hurricane Katrina in an effort to enhance its emergency response capability and capacity

CCID Hurricane After Action Assessment Charter

Goals and Objectives

- Develop an assessment of the CDC CCID response to Hurricane Katrina
- Present recommendation to Director and Chief Management Officer of CCID

Key Issues

- Communication challenges affected the efficiency and effectiveness of CCID's response to Katrina
- Inadequate training of response personnel negatively impacted CCID Katrina response
- Katrina responder selection process selected less qualified responders than were required
- The response structure and process was inadequate or inappropriate to meet the response demands of Hurricane Katrina

Assumptions

- Details of the existing plans and recent activities can be ascertained through review of documents and/or personnel interviews
- Access to key personnel at the Coordinating Center and CIO level will be granted

Project Scope

In Scope:

- Assessment of Hurricane Katrina Response
  - Review of existing plans (esp. those existing prior to Katrina)
  - Review of response activity to Katrina
  - Analyses of gap between plan and actual response
- Team will complete the study in approximately 4-5 weeks and present findings

Out of Scope:

- Team will not develop alternative response plans
- Team will not develop an implementation plan for integrating findings of assessment
- Team did not focus on COTPER and BPRP role/mission clarification

Projected Milestones - Timeline

Project Start	11/07/05
Preliminary Findings	12/16/05
Final Deliverable	01/05/06

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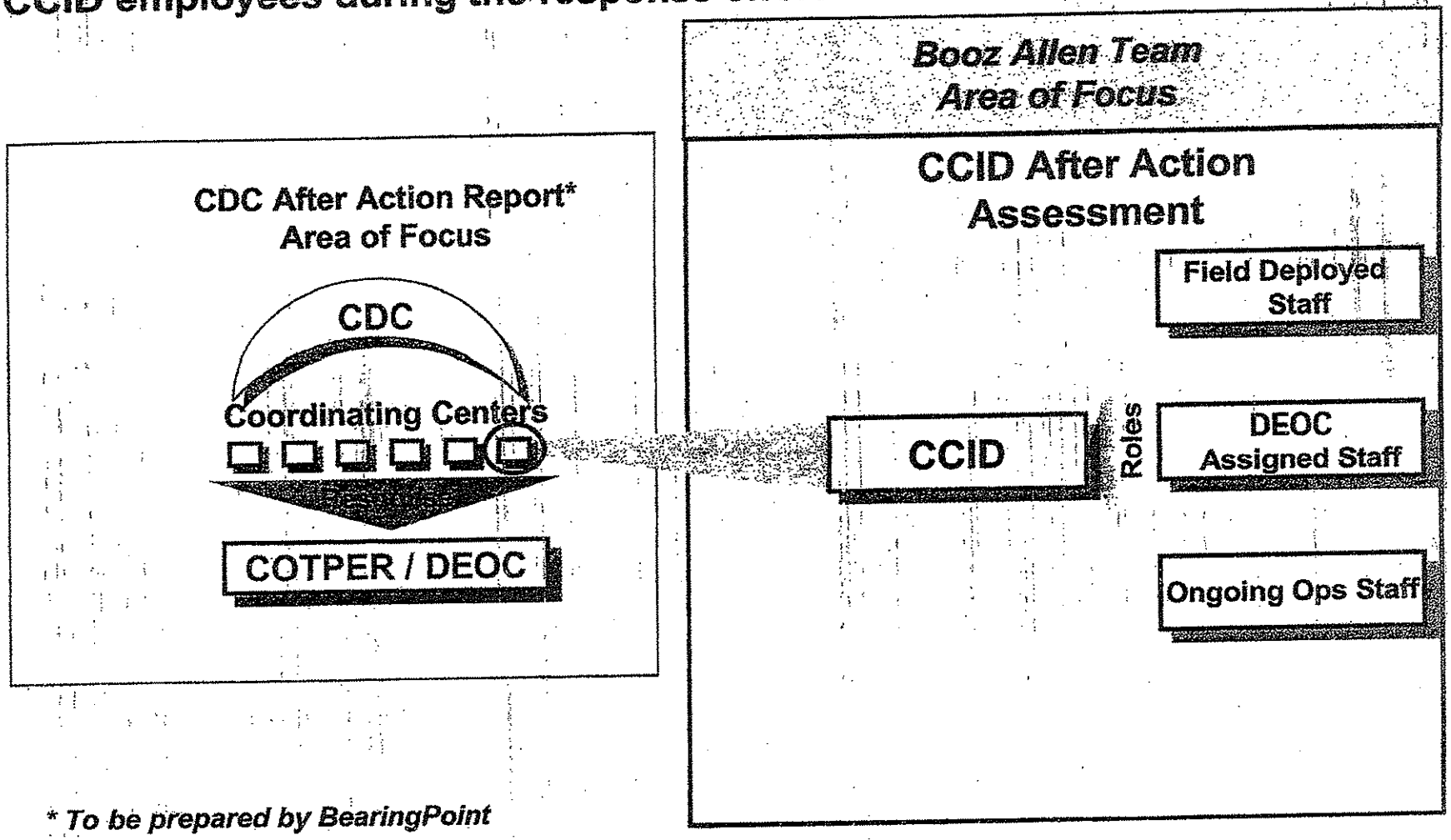
The project focus was on the performance of the three distinct roles filled by CCID employees during the response effort



** To be prepared by BearingPoint*

The project proceeded in four phases, with an interim and final deliverable summarizing progress and results

Project Plan

	Key Activities	Date (Week Ending)							
		Nov 11th	Nov 18th	Nov 25th	Dec 2nd	Dec 9th	Dec 16th	Dec 22nd	Jan 6th
Phase 1 Kick-off and Plan Task	Prepare charter								
	Establish points of contact								
	Interview key stakeholders (Lynda Neff and Stephen Reissman)								
	Identify key issues, hypothesis & questions								
	Finalize work plan								
Phase 2 Conduct Assessment	Develop Analytical Approach								
	Define Evaluation Criteria								
	Conduct interviews								
	Evaluate artifacts (forms, plans, guidelines, etc.)								
Phase 3 Data Analysis	Analyze Data								
	Establish final assessment framework								
	Present preliminary findings to CCID								
Phase 4 Prepare Final Assessment	Incorporate feedback from pre-deliverable meeting								
	Complete Final Deliverable								

★ Interim Deliverable ✧ Final Deliverable

We are Here

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Booz Allen identified a set of project questions, developed hypotheses and gathered data to evaluate our hypotheses

Project Questions

- Were plans for handling a response properly documented and communicated prior to and during the response?
- Was the response structure and process adequate and/or appropriate for tasks related to the Hurricane Katrina response?
- Was the responder selection process effective in identifying the most qualified responders?
- Were CCID employees adequately trained to take on the various roles required during the response?

Hypotheses

- There are documented and well communicated response plans at the CIO level
- CCID personnel roles in the DEOC are well documented, clearly communicated and effective during the response
- Emergency Response plans are synchronized at the coordinating center level
- The overall CCID response structure is designed to be cooperative and complementary to the DEOC response structure
- Roles & responsibilities of responders were documented and understood
- Emergency coordinators had specific, uniform and well integrated set of tasks during the response
- Responders were selected using a centralized database containing detailed information on skills, experience and availability
- Responders had the support, resources and information needed to effectively perform their duties
- CCID staff received formal emergency response training

Project Approach

- Interviews
  - Conducted eleven interviews with key members of CCID and other centers involved in the response
  - Questioned two CDC subject matter experts (b)(2),(b)(6) and (b)(2),(b)(6)
  - Questioned Emergency Response subject matter expert (Keith Hansen)
- Document Review
  - 2005 Hurricane Season Response Operations Plan (CDC and ATSDR)
  - National Response Plan (Department of Homeland Security)
  - Hurricane Katrina After Action Study Plan* (BearingPoint)
- Portal Review
  - DEOC Portal

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Key stakeholders were interviewed to understand the response effort

Structured Interview Participants

Name	Organization	Job Title
(b)(6)	NIP	(b)(6)
	NCID	
	NCIP/OD	
	NCID	Public Health Advisor
	NIP	Public Health Advisor
	COTPER	Public Health Advisor
	NCID	Medical Epidemiologist
	NCHSTP	Medical Officer/OD
	DEO/COTPER	Lead Emergency Response Specialist
	NCEH/ATSDR	Public Health Advisor
	NIP/OD	Public Health Advisor

The structured interviews started with a base set of questions but also included specific questions tailored to the interviewee

Structured Interview Guide

ILLUSTRATIVE

Introduction

As you are aware, CCID is conducting an after action assessment of our response to Hurricane Katrina in order to identify opportunities to improve our capacity and capability to respond to disasters of this magnitude or greater. Our partner Booz Allen Hamilton has been asked to facilitate this process. The effort will include comprehensive stakeholder interviews to capture a broad perspective on CCID's role in the response.

Through a series of preliminary interviews, you have been identified as a key stakeholder. Consequently, Booz Allen would like to ask you some general questions about your experiences during the response. These questions will relate to mission and role, command and control, operations, communications, etc. and will serve as the starting point for the discussion. The information you will provide during the interview will be strictly confidential. We encourage you to share your thoughts, insights and ideas for improving our response capabilities.

Over the next few days, you will receive a call from one of the Booz Allen consultants requesting an interview. Please make every effort to fit them into your schedule. They would like to wrap up their interviews by the first week of December if possible.

The Booz Allen consultants working on this project are (b)(2),(b)(4),(b)(6
(b)(2),(b)(4),(b)(6)
(b)(2),(b)(4),(b)(6) nd Keith Hansen

Your assistance and input is critical to our analysis and very much appreciated. If you have any questions or concerns please feel free to contact me.

ILLUSTRATIVE

Questions

- Name/Organization
- Title/Roles/Responsibilities

Mission & Role and Training

1. What is CCIDs (the broad organization) mission in responding to a natural disaster?
2. What was CCIDs and your role in the Katrina response?
3. What was your role?
4. Are the mission and role clearly defined?
5. Were those involved in the response plans identified and trained prior to the event?

Command and Control

1. Who led the response?
2. Were there any strategic or tactical command centers established? If so who was present within the centers?
3. Did you receive periodic briefings, updates or tactical adjustments?
4. Did you have access to leaders when needed?

Operations and Resources

1. How were responders identified/chosen?
2. How where you notified to respond?

Communications

1. Describe the main methods and types of communication?

Public Relations

1. Was public relations a part of your response?

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The Booz Allen team believes that unclear roles and responsibilities, combined with a culture of crisis negatively impacted CCIDs and COTPERs ability to respond effectively

Unclear Roles and Responsibilities

- No clear responsibility for who is in charge of developing and updating a coordinated response plan
- Lack of clarity regarding leadership roles
- Limited coordination regarding the integration of all response agencies
- Ambiguity regarding the mission and goals of the response
- Lack of clarity regarding content, frequency, and mode of training

Primary Response Issues

Planning

Processes

Staffing

Training

Culture of Crisis

- Decision-makers depend on knowledge gained from experience, rather than recognized best practices for emergency response that are perhaps more relevant ways of engaging problems
- Fewer sources of information are sought, and those that are pursued are used to support existing policy choices
- Authority is increasingly centralized, and pushed up the organizational ladder with the belief that the chances of error or loss is minimized
- The desire grows for more formal processes and greater standardization of procedures as organizational members seek security in the "known" and "knowable"

Fractured Response

Ownership ambiguity over critical roles and responsibilities between CCID and COTPER resulted in an "everyone is responsible, no one is accountable" scenario

Roles and Resp

Some roles are assumed by owner, while others are ascribed to the other

CCID Roles

- Technical Approach
- Field Science
- State and local Public Health Interaction

Agency Alert

- Response planning
- Command and control
- Response operations
- Mission definition
- Goal setting
- Training
- Inter/intra-agency communication

COTPER Roles

- Logistical Support
- Communications
- Administration
- Infrastructure

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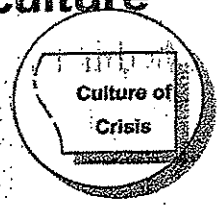
In examining the data, the Booz Allen team found the source of the culture of crisis lies within organizational members and groups



CCID can mitigate the negative impact fostered by a culture of crisis by focusing on the sources

Sources for a culture of crisis

- Information insufficiencies
- Confusion
- Incapacity for rapid response
- Desire to avoid blame
- Misallocation of attention between internal and external environments
- Fear and anxiety
- Arousal and stress

Crisis Event Occurs

Culture of Crisis

- Decision-makers depend on knowledge gained from experience, rather than recognized best practices for emergency response that are perhaps more relevant ways of engaging problems
- Fewer sources of information are sought, and those that are pursued are used to support existing policy choices
- Authority is increasingly centralized, and pushed up the organizational ladder with the belief that the chances of error or loss is minimized
- The desire grows for more formal processes and greater standardization of procedures as organizational members seek security in the "known" and "knowable"

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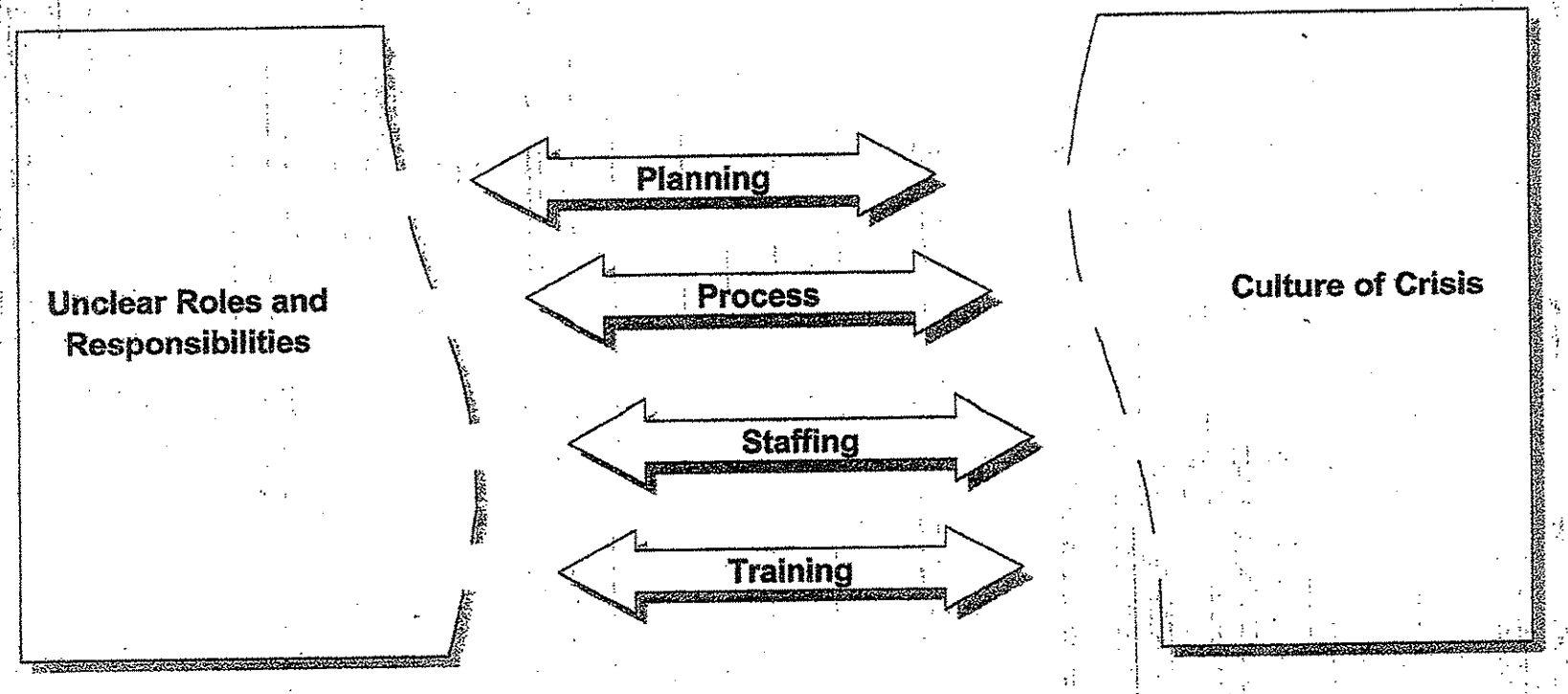
Although many issues contributed to the Ambiguous Roles and the Culture of Crisis environment, the Booz Allen team focused on four primary issues that interacted with both areas of concern



Attending to these issues will enable CCID and COTPER to leverage their collective capabilities and capacities during any response

Contents

- Approach
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There were several areas where the response was effective…but over-reliance on these strengths have the potential to negatively impact response efforts

Strengths

- Smart dedicated staff, with past experience in staffing emergency responses
- Effective improvisation in the field in terms of accommodations, communication and supporting establishment of local public health infrastructure
- Forward thinking leadership, anticipating the need to reach out to local communities thus establishing trusted relationships before they also became necessary ones
- Responsive to question and request that were both tactically and politically motivated

Over-reliance on these inherent strengths will result in…

Potential Impact

- Heroic responses that burn out staff
- The creation of individual, rather than formal plans, carrying critical emergency response best practice information
- Poor risk management in a response
- Spending energy and time on activities that have relatively low impact on the response outcome
- This kind of thinking should be codified in a formal plan, and not ad hoc
- Efforts that take away from maintaining critical on-going operations

In the following analysis, we rationalize the selection of our four primary areas of concern

Emergency Response "plans" appeared to be culturally embedded in the form of institutional knowledge and not captured in a well documented plan

Planning

- **Issues**
  - There is no formal (written) plan that has been socialized within the CDC and across cooperating agencies
  - Roles and responsibilities for individuals, groups and organizations were vague and seem to shift frequently
  - There was a lack of clarity regarding who was in charge, especially at the onset of the response

Some comments heard around Planning (paraphrased)

- *"There should be a plan to support the mission, there was no mission, there was no plan".*
- *"Everyone looked at their own piece, no one managed the event."*
- *"We should work with other agencies ahead of time to figure out the coordination issues*
- *"There was a lot of improvisation once they got out there"*
- *"You really never know who is in charge – some people think they are, but they really aren't"*

Process

Staffing

Training

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Processes supporting the response need to be optimized, standardized, integrated, documented and communicated to response personnel

Planning

Process

- **Issues**
  - Communication, both internal and external; and regarding content and media was unclear and irregular
  - Mission assignment process needs updating
  - Commission core engagement in the response needs to be made clearer
  - Deployment processes are unclear and lead to confusion, wasted energy, and lost time
  - Learning (documented) from failures and successes is not institutionalized
  - There needs to be contingency planning as part of the response

Some comments heard around Process (paraphrased)

- *"Getting clearance to share information from NCID was cumbersome"*
- *"It took a week to determine who was out there and how to communicate with them."*
- *"Commission Core sometimes conflicted on whether to follow the orders of the General Surgeon or the CDC"*
- *"There is a personnel tracking system, but information is not maintained"*
- *"Knowledge is not fed back into formalized plans.."*

Staffing

Training

Staffing decisions relied on institutional knowledge, relationships and limited employee data, resulting, too often, in suboptimal team formations

Planning

Process

Staffing

- **Issues**
  - The staffing process did not support the needs of the response
  - There are many questions regarding which skills are required on a team
  - Once personnel has been deployed, it is difficult to track them
  - Established staffing databases were ineffective because information was out-of-date and the majority of staff within the database were unqualified for deployment

Some comments heard around Staffing (paraphrased)

- *"The problem is not getting a list [of available personnel], the problem is maintaining it"*
- *"I was frustrated by people reaching into my area, grabbing people, and not telling me"*
- *"We need more managers, fewer scientists"*
- *"Identifying people who work well under pressure was a challenge"*
- *"There was no tracking system of employees initially, left hand did not know what the right was doing"*

Training

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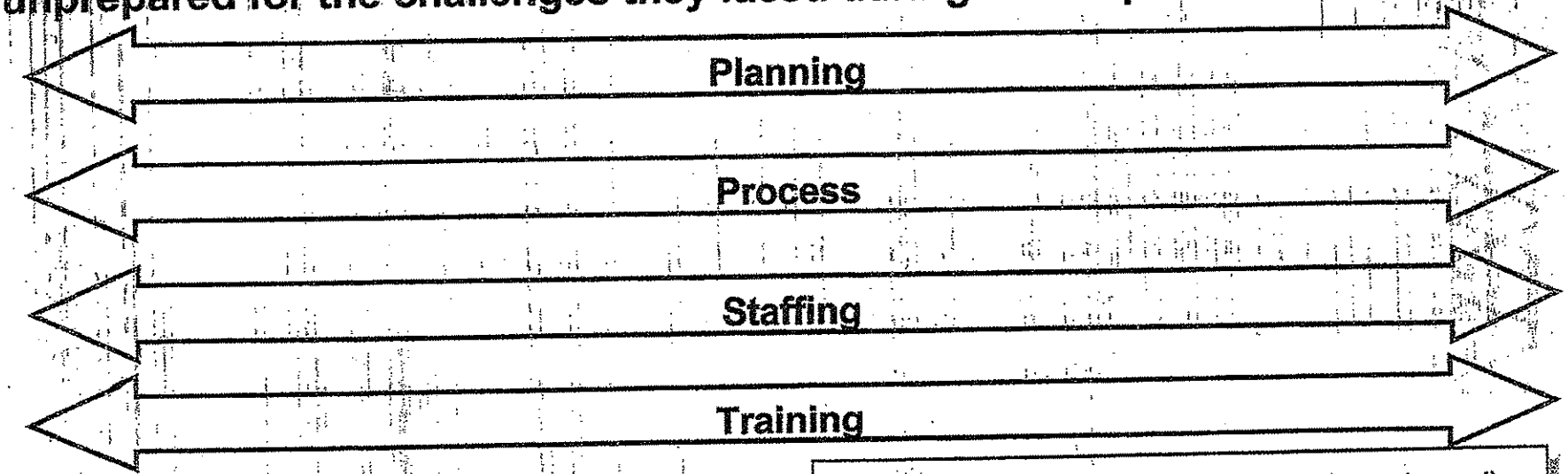
The level and type of emergency response training provided left some unprepared for the challenges they faced during the response

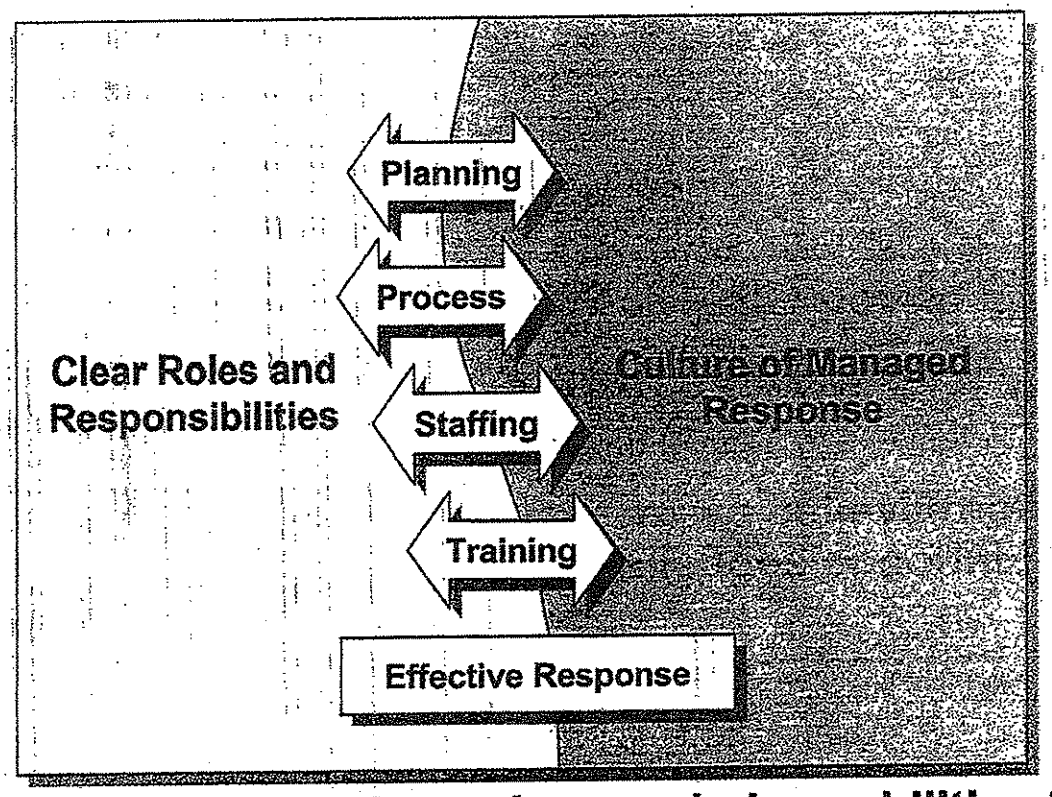


- **Issues**
  - There seems to be a gap in the ability of CIOs to effectively integrate the DEOC
  - There were questions about what ESF-8 means
  - Some attribute lack of effective coordination on infrequent and ineffective exercises
  - More training and coordination efforts among responding agencies should be taking place

Some comments heard around Training (paraphrased)

- *"DEOC should provide training, not NCID"*
- *"Rapid prep of what to expect in the DEOC – a briefing – a quick orientation [would have helped]"*
- *"I didn't know what ESF-8 meant"*
- *"[We] have not held mock exercises"*
- *"Working 'real events' is preferable to table top simulation – you learn more"*
- *"Staff is not oriented to the language of other agencies, centers, etc."*

By attending to these four areas of concern, we believe that CCID is presented an opportunity to overcome challenges encountered during its response to Hurricane Katrina...



...and realize improved capacity and expanded capabilities for future responses

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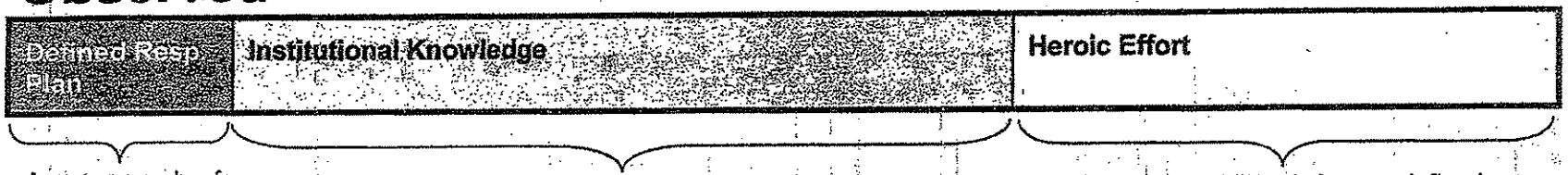
Contents

- Approach
- Summary findings
- Observations and Analysis
- Recommendations

Our recommendations are meant to redistribute and optimize the proportional elements of a response: defined response plan, institutional knowledge and heroic effort

Observed

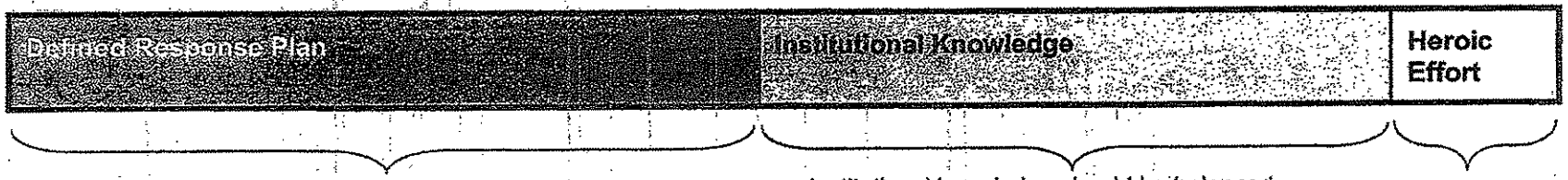


A response plan for Hurricanes did exist, but was not communicated prior to the response nor used during the response

Some responders and leaders of the response indicated, "We have responded to many emergencies, we know how to do this"

Without established plans or defined processes, responders improvised in designing many of the methods used during the response.

Recommended



A well-thought response plan, effective field tools and documented processes would prepare CCID to meet the demanding nature of an emergency

Institutional knowledge should be balanced with, and complimentary to, response processes. The response processes should leverage this knowledge through effective staff and capability management.

Heroic effort is always desired in an emergency but should be the exception rather than the rule

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Our analysis enabled us to identify four overarching recommendations for CCID to improve their emergency response capabilities and capacity

Recommendations

1) CCID needs to coordinate with DEOC to develop, communicate and socialize ***plan(s)*** for how to respond to events in which CCID will be the lead and in events in which they will be a participant. Plan(s) need to be developed or enhanced making clear what the overall mission of a response is going to be, who is in charge, succession plan for leadership, role and responsibilities for individuals and teams, and where response personnel can access plans as needed.
2) CCID should work with DEOC to develop more structured and defined response ***processes***. Processes regarding decision making, team socialization, continuous learning, communication, strategic planning, mission assignments, and deployment should be clearly articulated and integrated across and within response agencies. Our observation is there are *existing* technologies and processes at CDC that could be significantly leveraged to create greater capacity, and enhance response capability.
3) A structured ***staff*** identification for mission assignments, teams, and roles in the DEOC should be developed and utilized to maximize CCIDs capacity and capability during a response. We consistently heard that people were chosen for reasons other than the possession of skills required to meet the requirements of the assignment. We also heard that people were deployed without adequate emotional screening and people were placed in leadership roles who were not prepared to lead. Fortunately, CCID has a plethora of talented people. The challenge lies with getting the right people in the right place at the right time.
4) CCIDs should establish a ***training*** program in conjunction with DEOC that focuses on developing initial response leadership capabilities and incorporating broad emergency response training to a few dedicated emergency response delegates. The type of training that we recommend goes beyond table tops and scenario planning – the most effective way to mitigate again a culture of crisis is to stress the system ahead of time and allow the creative intelligence of your people to imagine emergency response solutions in a relatively open and safe exercise.

In order to be fully prepared during a response, CCID should define, develop, communicate and implement a response plan dependent on response role

Planning

CCID Role	Define	Develop	Communicate	Implement
Response Leader	• Define goals and objectives • Define overall roles and responsibilities of each section (i.e. operations) • Define specific organizational boxes CCID personnel would fill	• Develop a framework which is consistent with the incident command system	• Communicate the plan to CCID and non-CCID personnel • Explain plan changes and provide reasons to response personnel	• Activate the plan once placed in a lead role • Continually evaluate the plan during the response to identify and resolve weaknesses
Response Participant	• Define overall CCID role in the response • Define specific organizational positions CCID personnel should fill • Define issues CCID should own	• Develop a support network for CCID personnel to ensure goals and objectives are maintained	• Maintain open lines of communication between CCID and non-CCID personnel • Ensure personnel are aware of any plan changes	• Activate the plan once placed in a lead role • Continually evaluate the plan during the response to identify and resolve weaknesses

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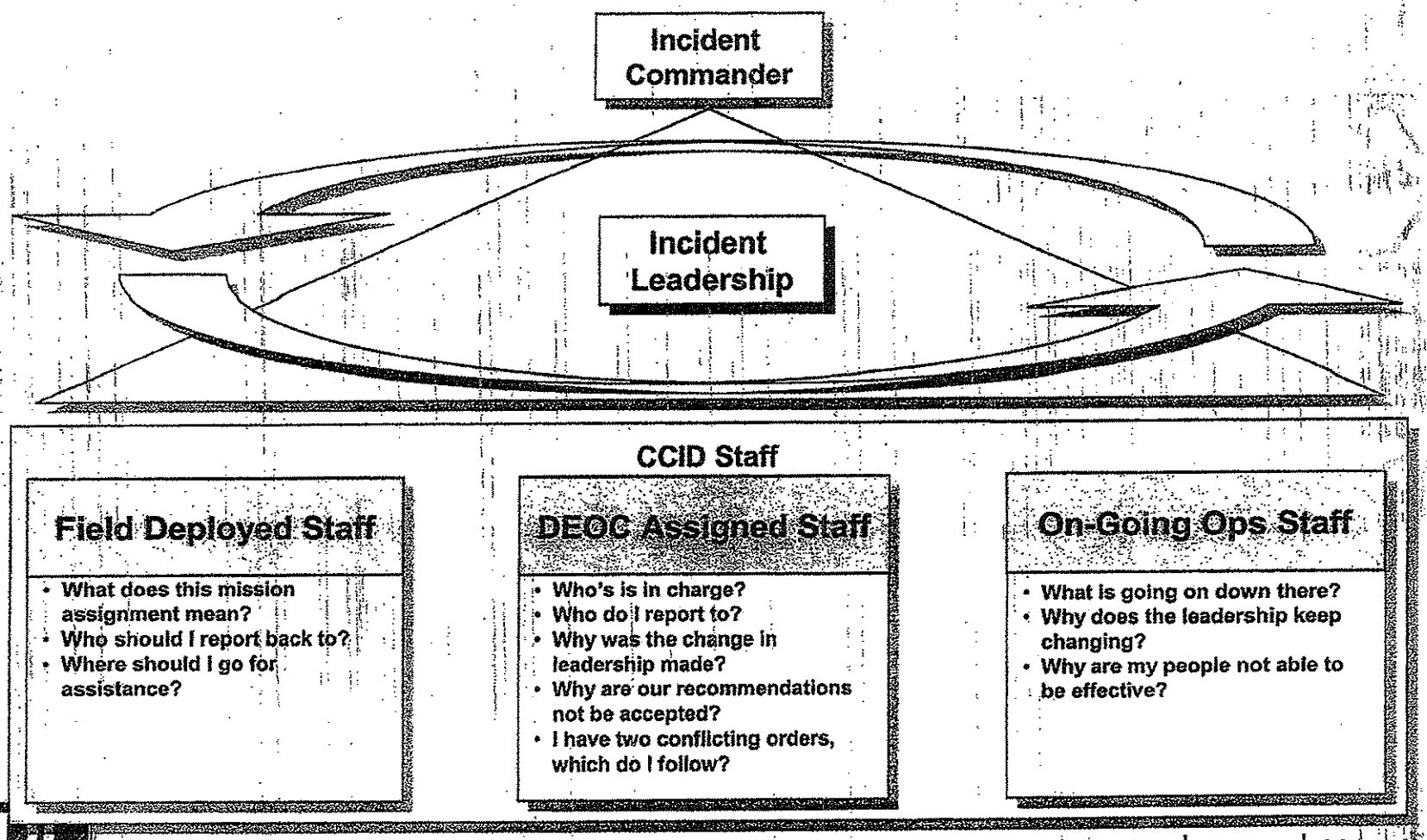
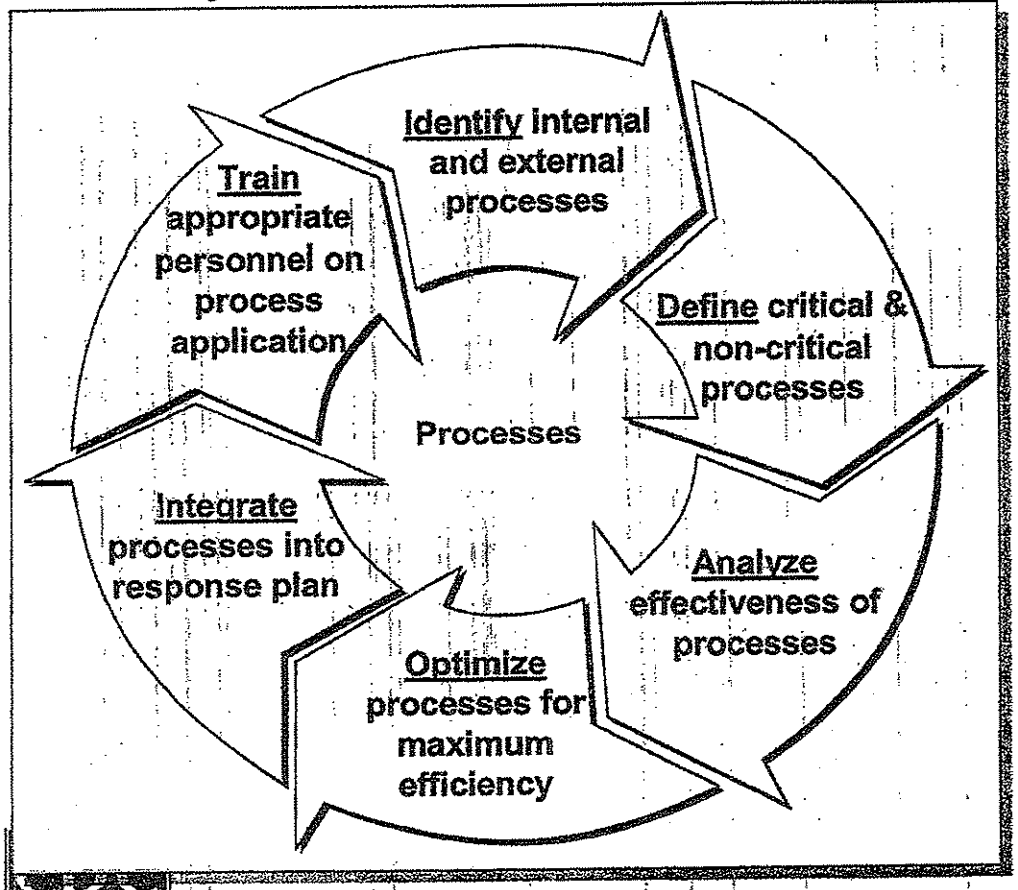
Planning Example: The lack of a well integrated plan and frequent changes in leadership negatively impacted the effectiveness of responders



CCID should use a structured approach of continuous improvement to ensure response processes are efficient and effective

Processes

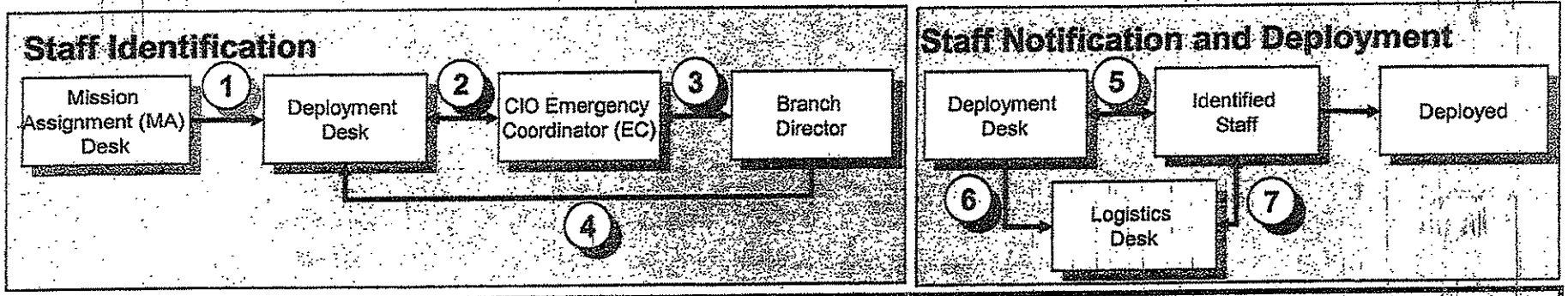
Cycle of Continuous Process Improvement



Benefits of utilizing the cycle

- The identification phase will uncover all processes and may reveal new processes that need to be developed
- Defining critical and non-critical processes will allow CCID to prioritize efforts
- By analyzing the effectiveness of each process, opportunities for improvement will be uncovered
- By optimizing processes, wasted effort and potential failure points are minimized
- Integration of processes into the response plan will ensure adoption during a response
- Finally, process training will ensure that proper procedures are followed

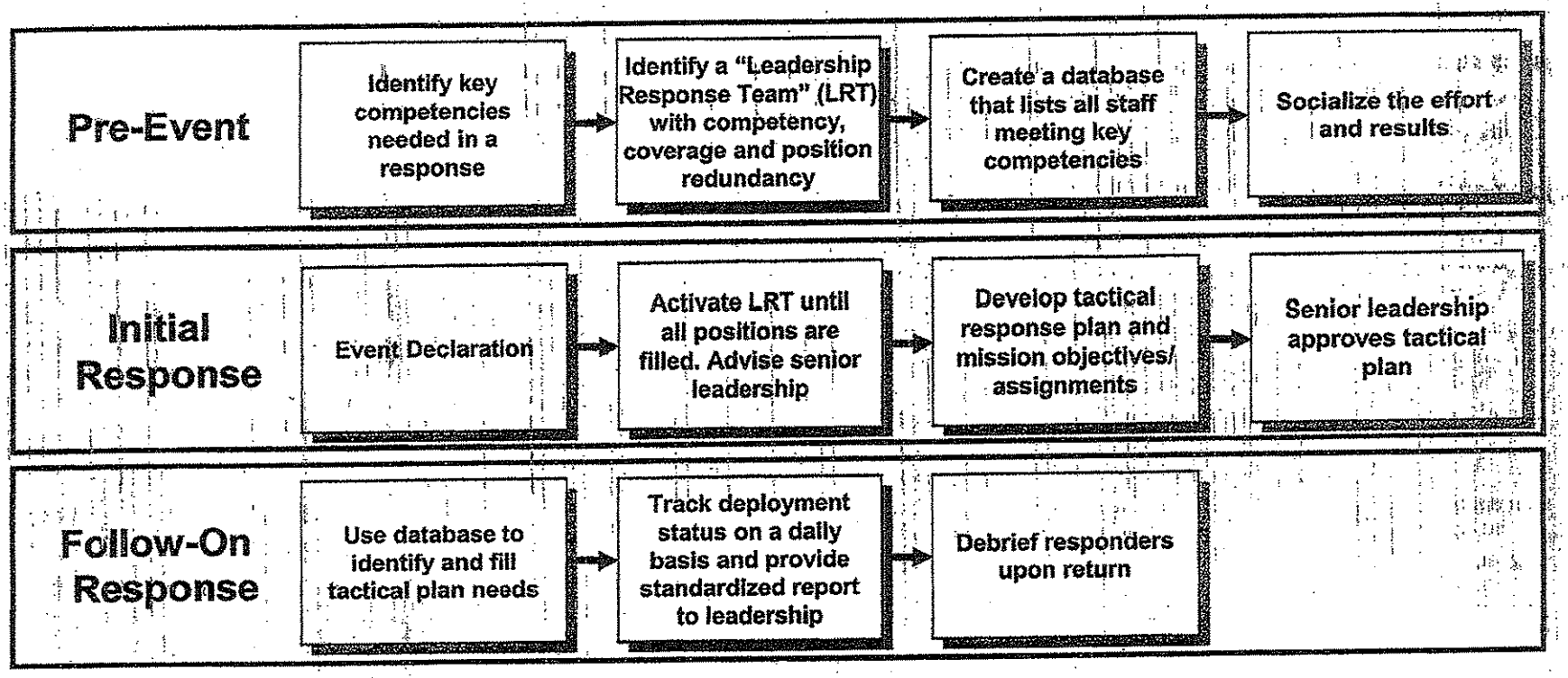
Process Example: The process used to identify CCID response staff relied on an inefficient use of e-mail, relationships and multiple touch points



Step	Description	Potential Failure Point	Potential Impact
1	Mission Assignment is passed to Deployment Desk	▸ Vague Mission Assignment	▸ Deployment without a clear mission
2	Deployment Desk contacts EC to identify staff	▸ Use of e-mail as communication tool ▸ Limited tracking ability ▸ Lack of an up to date list of qualified and available staff ▸ Only "known" individuals will be assigned team lead roles ▸ CIOs get to choose	▸ Can be deleted, ignored, or not read in a timely manner ▸ Unable to know status of request at any given time. ▸ "Scrambling for people" mentality ▸ Individual assigned a team lead position may not be the most qualified for the mission ▸ CIOs may only be willing to provide sub-par staff instead of their best and brightest
3	EC contacts appropriate CIO/Branch to identify staff		
4	CIO may communicate directly with Deployment Desk and provide a list of identified employees (will copy EC)		
5	Identified staff is contacted to inform them of deployment	▸ Staff member cannot be found ▸ Staff member has second thoughts	▸ Valuable time is lost in tracking down individual ▸ Process has to be repeated
6	Deployment Desk provides Logistics Desk with roster and MA	▸ Use of e-mail and limited tracking ability	▸ Can be deleted, ignored, or not read in a timely manner
7	Identified staff is contacted and deployment itinerary is provided	▸ Staff member cannot be found ▸ Staff member has second thoughts	▸ Valuable time is lost in tracking down individual ▸ Process has to be repeated

A structured staff identification and deployment strategy should be developed and utilized to maximize CCIDs capacity and capability during a response

Staffing



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CCIDs training program should focus on developing initial response leadership capabilities and incorporating broad emergency response training

Training

Pre-Event Training

Develop a focused training program to build necessary LRT skill sets → Conduct recurring response exercises with LRT to continually improve coordination → Develop a broad based awareness program for non-LRT staff

Post Event Debriefing

Capture experience and tools used, socialize lessons learned and incorporate into the formal training program → Conduct brown bag sessions to inform and educate deployed and non-deployed staff

Event Driven Resources & Materials*

Identify a DEOC operation advisor to brief responders

↓

Create and provide a responder deployment package

↓

Define a tactical support structure or assign a "Buddy" to each responder to ensure non-operational needs are met

* Developed pre-event, tailored and used during event

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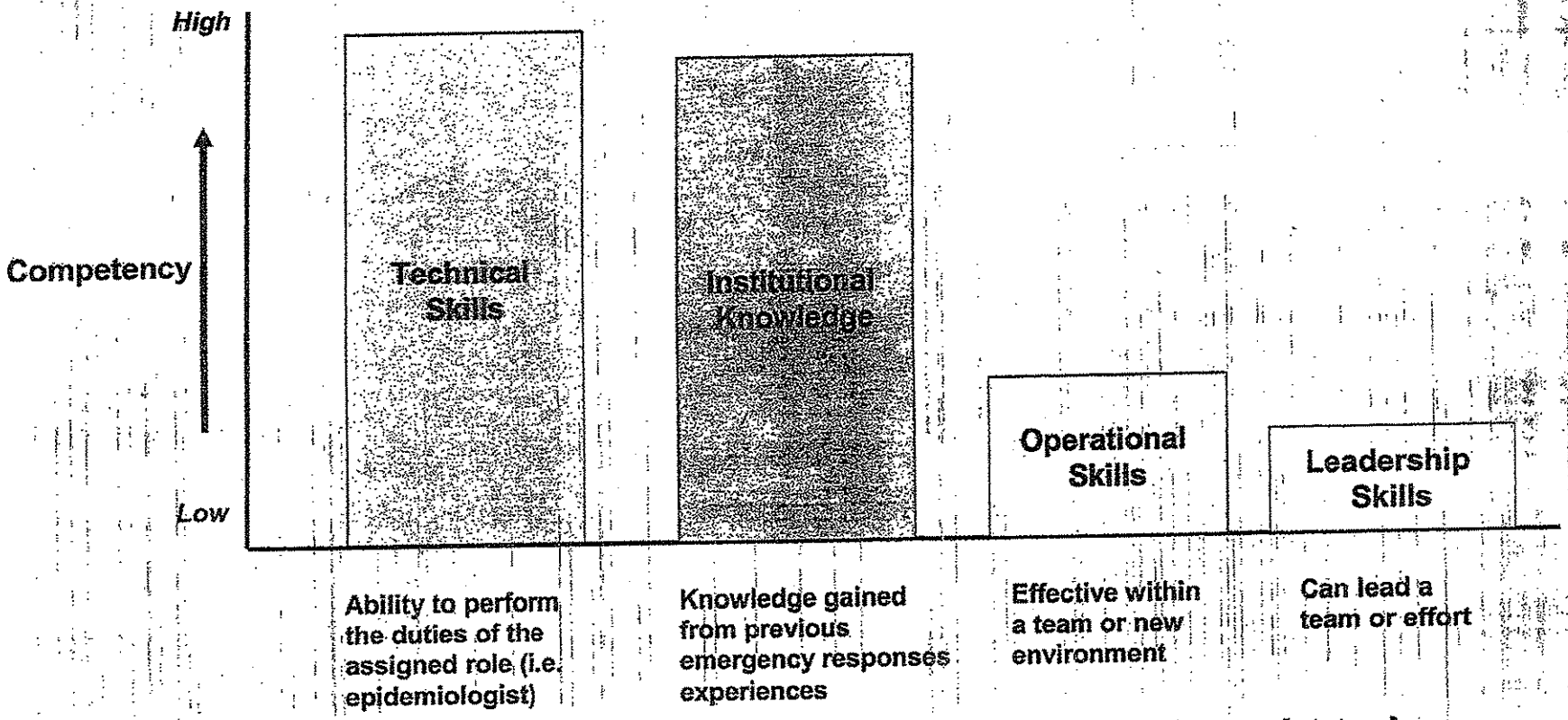
Training Example: Responders typically possessed adequate technical skill and institutional knowledge and limited operational and leadership skills



Leadership and operational skills are often *assumed* or thought to be developed through simulations and table top exercises

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Although we recommend simulations and table-top exercises, the training strategy for response should also include adult developmental methods that encourage risk taking and learning from one another

Training and Planning

- Simulations
  - These require participants to assume roles against an event and play out the strengths and weaknesses of the response under a pressured environment with formalized learning taking place after the event
- Table-top exercises
  - These typically present a scenario and allow people to discuss their reactions and learn from their mistakes

Recommendation:

CCID and COTPER should conduct a **developmental training** exercise applying Adult Learning Theories that are:

- Similar to a simulation in that participants are put into a realistic environment under a likely-to-occur scenario
- Similar to a table-top exercise in that participants are allowed to ask questions about what they are doing and information exchange is encouraged

Note: This type of Development Training is designed with anticipated "learning sessions" during the response activities to formalize the information for participants. This approach allows participants to provide feedback to each organizational unit to begin root cause analysis of cultural barriers, plan weaknesses, participant's skills, etc.

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DSNS Input to the CDC Hurricane Katrina/Rita AAR

DSNS Successes

- Rapid response of the DSNS to support critical needs in Louisiana and Mississippi.
- DSNS ability to effect immediate growth of FMCS from a prototype to operational capability.
- DSNS ability to rapidly create and implement a medical logistics system to replace the destroyed medical supply infrastructure in two states.
- The DSNS Coordination Center organization, processes, functions and flexibility enabled seamless SNS operations in this quickly evolving rapid response situation.
- Great team of professionals and a successful training and exercise program granted the ability to adjust to a demanding response effort.

DSNS Lessons Learned

- Coordination
  - Standard forms and methodology for medical logistics requests need to be established
  - A standard approval process regarding state requests for critical medical products needs to be modified from FEMA's current mission assignment methodology
  - Key federal partners must coordinate a more efficient and consistent methodology in the deployment of Federal Medical Contingency Stations (FMCS)

- Federal Medical Contingency Station (FMCS)
  - Additional warehouse space for production and storage is needed
  - FMCS deployment teams need to be formalized
  - Biohazard waste guidelines for the FMCS need to be established
  - Consistent criteria for the support of FMCS sites needs to be determined
  - Ensure that DEA licensed personnel are available when deploying FMCS

- Logistics
  - Establish critical prime vendor surge capability
  - An "all-hazards" response will require changes in staffing and in resources for procurement and sustainment initiatives
  - Line item accountability and tracking of materiel throughout the supply chain is critical, especially to state/local officials

- Response
  - Redundancy is a critical part of planning and preparedness
    - RSS sites
    - Communications systems
    - Staffing
  - Every circumstance is different
    - Focus on systems and procedures
    - Be flexible and adaptable

DSNS Corrective Actions

- Coordination
  - Work with COTPER to create an interagency working group to address standardization of the support request and request approval process.

- Federal Medical Contingency Stations (FMCS)
  - Work with COTPER to formalize the FMCS capability requirements.
  - Obtain necessary warehouse facilities to house the capabilities created during the Katrina/Rita response.

- Logistics
  - Formalize Prime Vendor processes established during the Katrina/Rita response.
  - Develop and configure medical supply packages targeted to a natural disaster response.

- Response
  - Continue to refine, train and exercise the systems and processes that were so successful during the Katrina/Rita response.
  - Examine DSNS Response Operations as necessary to support refinements in DEOC response management.

Supporting Documentation

Appendices A-K
(of Appendix N)

APPENDIX A

Hurricane Katrina Data Review Reference Documents

- CDC Emergency Operating System (EOS) – 2003
- CDC Emergency Operations Plan (EOP) DRAFT – 2005
- COTPER Preparedness Goals and Objectives – FY 2006
- CDC EOP Draft and Annex J – Natural Disasters – 2004
- DEOC Hurricane Response Plan – 2005
- DEOC Task Force Daily Checklist(s) – 2005
- DEOC Task Force Standard Operating Procedures (SOP) – 2005
- National Response Plan (NRP) - 2004
- The National Incident Management System - 2004
- The Incident Command System Training Document
- Hurricane Charley / Frances / Ivan After Action Report
- Project MedKit After Action Report
- Operation Earthquake (Tsunami) After Action Report
- Existing Emergency Response Process Flows
- Overview of Director's Critical Information Requirements (DCIR) and Essential Elements of Information (EEI) – 2005
- DEOC Handbook 03-01-05
- SITREP Flow Process
- SMO Meeting Notes
- Logistics Hotwash Notes
- Portal Documentation:
    - Organizational Charts
    - Hurricane Katrina Timeline

Appendix B

Coordinating Office for Terrorism Preparedness & Emergency Response

Hurricane Katrina After Action Report Workgroup

Data Review Team

Emergency Response Process Flows

GAP ANALYSIS

December 15, 2005

Introduction & Table of Contents

The purpose of this document is to present the results of BearingPoint's Gap Analysis, which compares the initial review of the key Emergency Response documents and standard procedures established by CDC prior to the Hurricane Katrina Response effort with information collected from interviews with CDC personnel regarding their experiences during the actual response. Detailed below is the table of contents to guide you through the document.

- Project Approach (page 2)
- Standard Emergency Response Procedures (page 3)

CDC Emergency Operations Plan (EOP) – DRAFT

- Response Process Flows (page 4)
- Structure (page 7)

CDC Task Force Standard Operating Procedures (SOP) – 2005

- Response Process Flows (page 14)
- Structure (page 15)

CDC EOP DRAFT and Annex J – Natural Disasters – 2004

- Response Process Flows (page 16)
- Structure (page 19)

DEOC Hurricane Response Plan – 2005

- Response Process Flows (page 29)
- Structure (page 30)

Gap Analysis Legend

GAP ANALYSIS

Gap Indicator

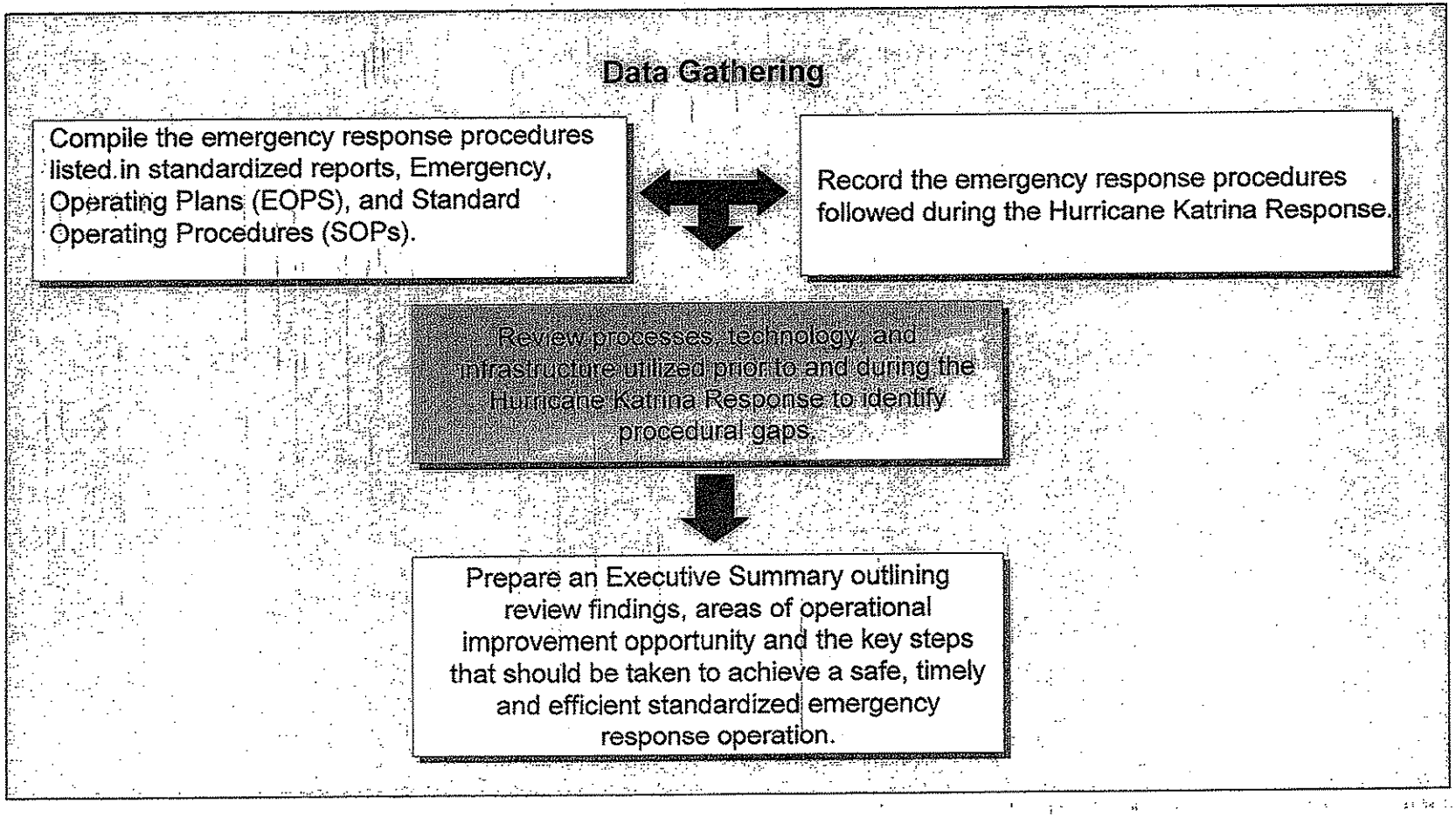
- Specifies the location of a gap in the identified process

Supporting detail field

- Provides a detailed explanation of the identified process gap
- Each supporting detail is numbered and corresponds to its numbered gap indicator
- Each supporting detail is followed by a specific reference to APPENDIX F – Detailed Observations.doc

Project Approach

To date, the BearingPoint preparatory work has focused on the collection and review of EOPs and SOPs. This deliverable represents the mapping of selected emergency response procedures as depicted in the highlighted box below.



Standard Emergency Response Procedures

BearingPoint reviewed identified documents and developed mappings of key process flows from the standard emergency response processes and procedures. The process flows were developed from the below checked documents. Although all documents have been reviewed, these items were used as the focus for emergency response processes and procedures. The remaining documents' content will be used as appropriate during the analysis phase.

Emergency Operation Resources

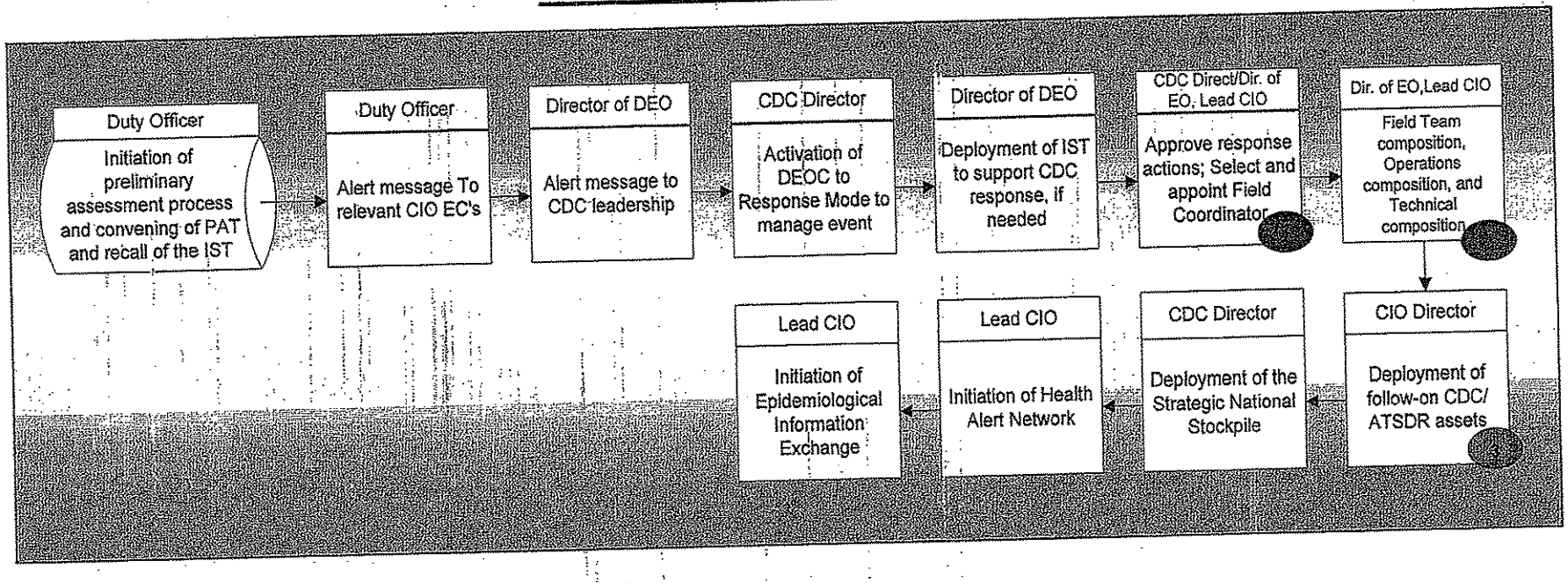
- CDC Emergency Operating System (EOS) – 2003
- CDC Emergency Operations Plan (EOP) DRAFT – 2005
- COTPER Preparedness Goals and Objectives – FY 2006
- CDC EOP Draft and Annex J – Natural Disasters – 2004
- DEOC Hurricane Response Plan – 2005
- DEOC Task Force Daily Checklist(s) – 2005
- DEOC Task Force Standard Operating Procedures (SOP) – 2005
- Portal Documentation
- National Response Plan (NRP) - 2004
- The National Incident Management System - 2004
- The Incident Command System Training Document
- Prior Response After Actions Reports (AARs)
- Existing Emergency Response Process Flows
- Overview of Director's Critical Information Requirements (DCIR) and Essential Elements of Information (EEI) – 2005

CDC Emergency Operations Plan (EOP) -- Draft

Emergency Response Management

The following diagrams represent critical processes described in the CDC Emergency Operations Plan (EOP) – Draft.

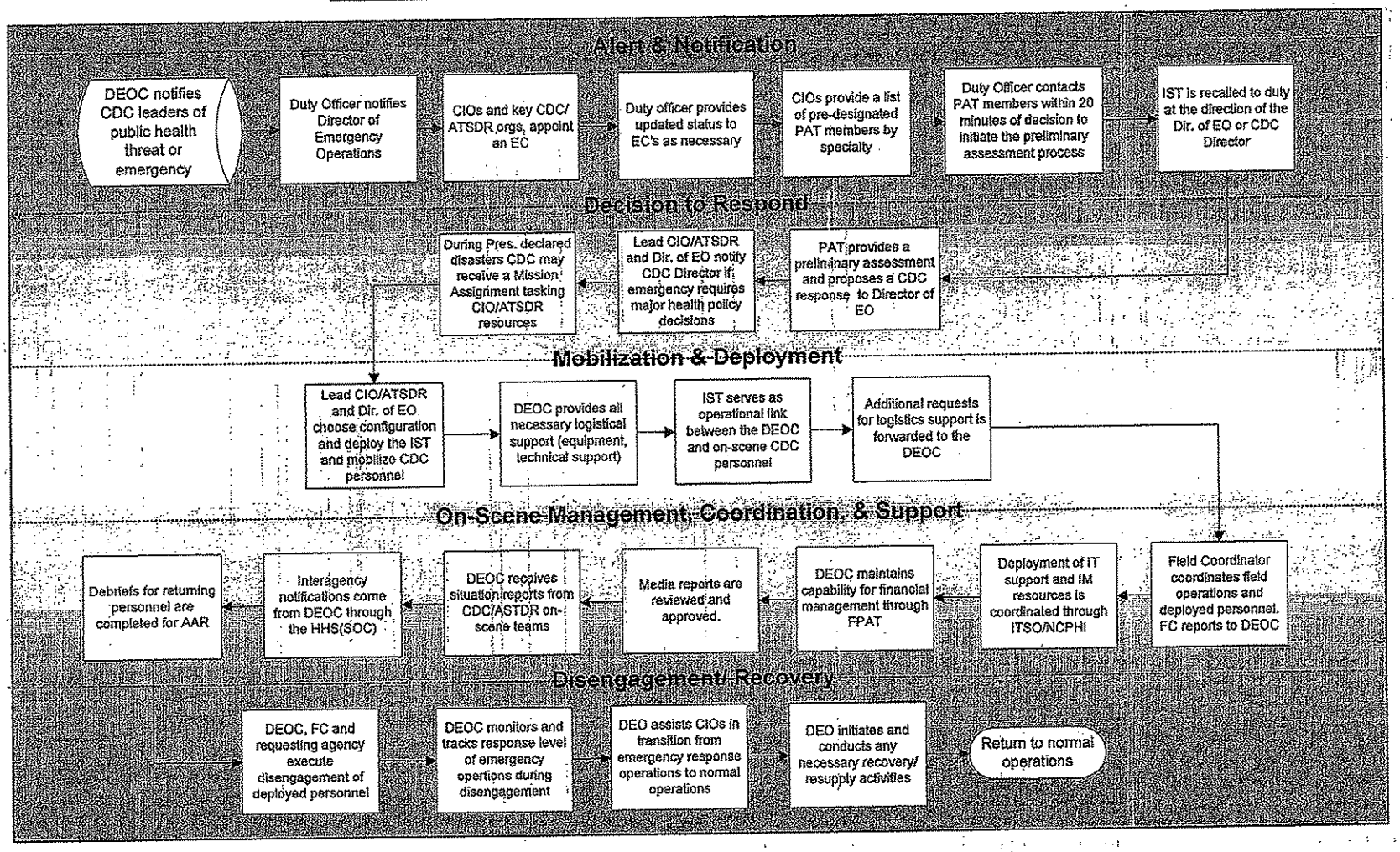
Information Process Flow



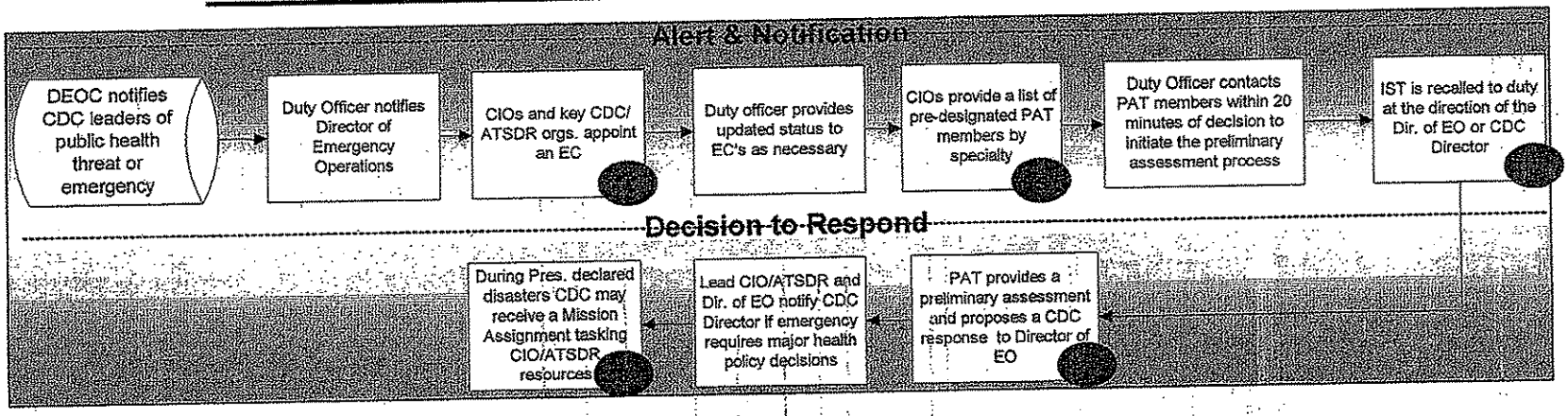
GAP ANALYSIS

1. With the addition of the Sr. Management Official (SMO) role, the Field Coordinator's communication process is not clearly defined. (Observation 23)
2. No standard process or tool for development of each team. Resources should be deployed appropriately according to their skill sets, background, training, and expertise. (Observation 28)
3. Due to the size of the incident and the pressure to respond, the deployment process broke down. (Observation 7)

Decisions and Information Process Flow



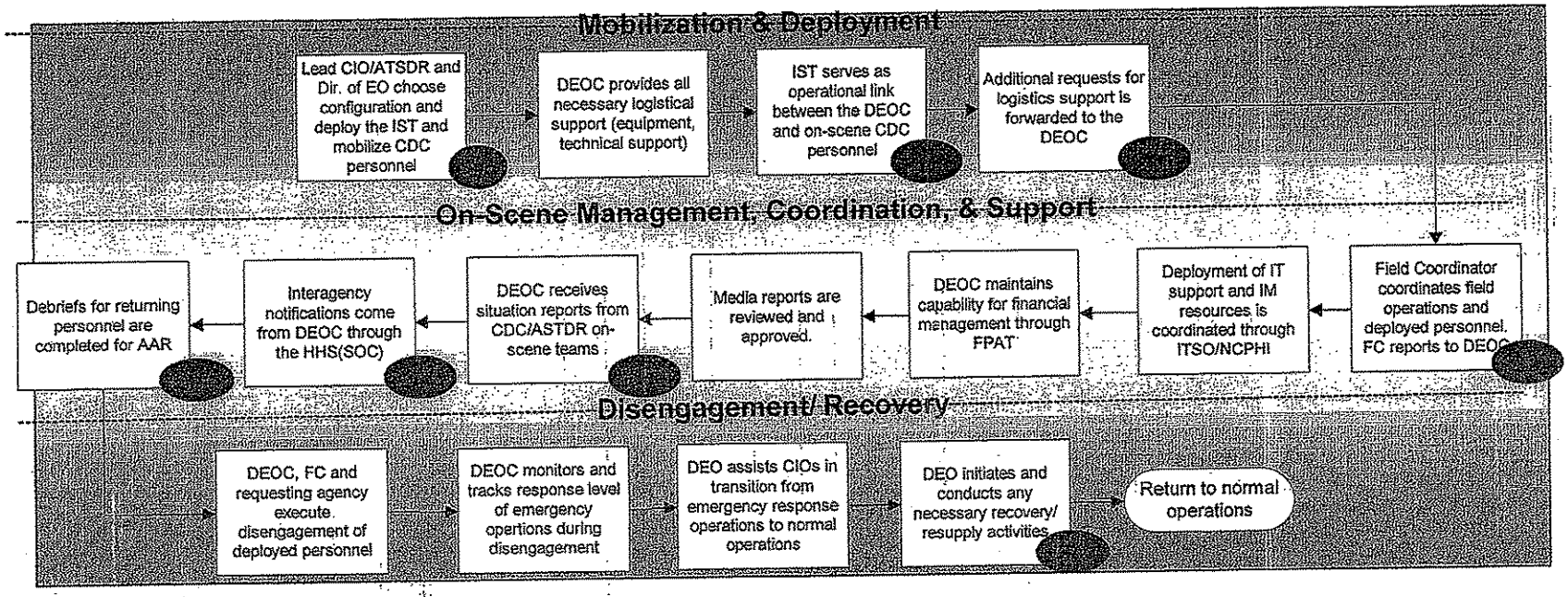
Decisions and Information Process Flow—Gap Analysis



GAP ANALYSIS

4. Some EC's were taken out of Command/ Coordination role and deployed to the field. (Observation 34)
5. No CDC specific, pre-designated Preliminary Assessment Team (PAT) was deployed. (Observation 24)
6. Incident Support Team (IST) was not clearly defined as an active deployed unit. (Observation 1)
7. Coordinating response efforts with State partners is not included in the documentation. (Observation 23)
8. Approved missions and job role definitions were not clearly communicated to deployed personnel. (Observation 10)

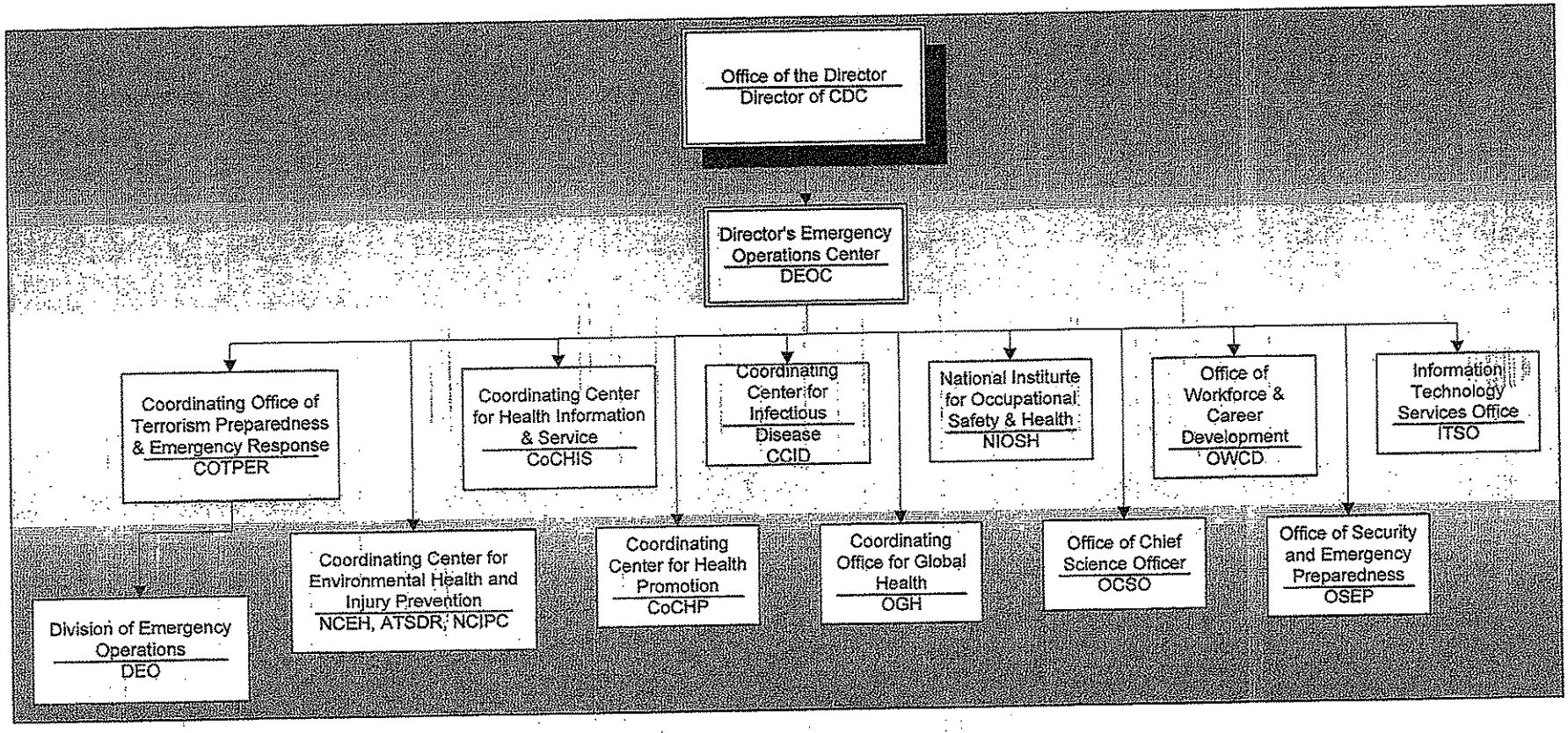
Decisions and Information Process Flow—Gap Analysis



GAP ANALYSIS

9. Deployment of CDC personnel was handled by deployment team not CIO and Director of EO. (Observation 3)
10. No standard communication/notification process for tracking and monitoring deployed staff. (Observation 28)
11. Need standardized process for how logistics information is communicated. (Observation 8)
12. On scene management process varied with the addition of the SMO role. (Observation 9)
13. No consistent process or format was established for daily SITREP reports. (Observation 12)
14. Interagency notification process was not standardized. (Observation 24)
15. Debriefs were not consistently conducted. (Observation 15)
16. CDC has no formalized emergency response recovery policies and procedures. (Observation 10)

Organization Chart



Decision Tiers

Strategic Decisions

- Led by CDC Director
- Pertain to planning and directions of large scale operations that lead to mobilization and management of CDC response resource
- Occurs outside of EOC to include the Director and a few select advisors

Operations Decisions Group

- Led by Designated Senior CIO Leads
- Decisions that pertain to the process or manner of operating the emergency response system
- Occurs outside of EOC and may include a large number of Senior CDC Staff

Tactical Decisions Group

- Led by EOC Director
- Decisions that pertain to the front line maneuvering/ mobilization of resources needed to achieve mission specific goals
- Occurs within the EOC and includes EOC Management

Gap Analysis
17. Decision Tiers were not consistent during the response as a result of changes in Leadership. (Observation 1)

Information Flow

Strategic Tier

- Led by CDC Director
- Briefed daily on the nature of the event by the Leads of the Operations Decision Group and the Response Oversight Team. Briefing consists of:
  - Update of CDC's response efforts
  - Identification of critical decisions needed from the strategic Decisions Group

Operations Tier

- Led by Designated Senior CIO Leads
- Meets on daily basis to be briefed by the EOC Director and CIO Incident Manager to review CDC's response efforts and identify where decisions are needed to improve efficiencies

Tactical Tier

- Led by EOC Director
- Prepares daily situation report that captures the daily activities of the EOC
- Report is elevated to all tiers of the EOC decision model and will provide the basis of the daily briefing for the operations tier

Gap Analysis
18. Brief/ de-brief procedures were not clearly communicated or adhered to with regards to information exchange during shift changes. (Observation 21)

DEOC Responsibilities

- Facilitates interaction and coordination between CDC/ATSDR staff and on-scene assets, Federal agencies, and state and local public health professionals.
- Serves as the information link required for establishing and maintaining Hotline operations. Emergency Communications System plays an integral part in all updates, briefings, and summaries given by the DEOC, and is expected to serve as the informational link between the DEOC and the Public Response/Inquiry Hotline and other audiences.
- Serves as the focal point for quality improvement and quality assurance of emergency response system activities for CDC/ATSDR.
- Operates 24 hours-a-day/7-days-a-week in one of three modes:
  - Watch
  - Alert
  - Response

Gap Analysis
19. During organizational restructuring, the command and information channels became unclear. (Observation 15)
20. Communications with Federal, State and local agencies need to be enhanced. (Observation 24)

DEOC Modes of Operations

Watch Mode

- Maintains pubic health situational awareness while planning, preparing, and training for contingencies
- 2-3 person staff/, 24-hours a day/7 days a week

Alert Mode

- Increased level of awareness, increased contact with external agencies, event specific planning and initial response activities
- IST recalled for potential deployment

Response Mode

- Fully engaged in providing operational support and planning
- DEO Task Force is established
- IST is deployed

Note: The number of staff in DEOC will depend on the mode in which the DEOC is operating. Staffing requirements can change upon the discretion of the Director of Emergency Operations.

Gap Analysis
21. DEOC Task Force was not established during event. (Observation 6)

ESF Listings

ESF	Title	HHS Role
3	Public Works and Engineering	Support DoD
5	Information and Planning	Support FEMA's Information and Planning Section
6	Mass Care	Support American Red Cross
9	Urban Search & Rescue	Support FEMA
10	Hazardous Materials	Support to US Environmental Protection Agency
11	Food	Support USDA

Activation of the Federal Response Plan

CDC/ATSDR may be required to assist HHS in fulfilling the following roles and responsibilities:

- Provide leadership in directing, coordinating, and integrating overall Federal efforts to provide medical and public health assistance to the affected area
- Assist with staffing of the HHS Secretary's Command Center as necessary to support the emergency response operations
- Direct the activation and deployment of health/medical personnel, equipment, and supplies in response to requests for Federal health/medical assistance
- Coordinate the evacuation of patients from the disaster area when evacuation is deemed appropriate by state authorities
- Coordinate the provision of definitive health care through NDMS
- Provide human services assistance under the direction of the HHS Regional Director
- Support IST

Gap Analysis
22. Coordination of efforts between all HHS agencies is needed to reduce duplication of efforts. (Observation 24)

Emergency Support Function #8:
Public Health and Medical Service

Health Surveillance:

- Assist in establishing surveillance systems to monitor the general population and special high-risk population segments
- Carry out field studies and investigations
- Monitor injury and disease patterns and potential disease outbreaks
- Provide technical assistance and consultations on disease and injury prevention and precautions

Worker Health/Safety:

- Assist in monitoring the health and well being of emergency workers
- Perform field investigations and studies addressing worker health and safety issues
- Provide technical assistance and consultation on worker health and safety measures and precautions

Radiological/Chemical/Biological Hazards Consultation:

- Assist in assessing health and medical effects of radiological, chemical, and biological exposures on the general population and on high-risk population groups
- Conduct field investigations, including collection and analysis of relevant samples
- Advise on protective actions related to direct human and animal exposure, and on indirect exposure through radiologically, chemically, or biologically contaminated food, drugs, water supply, and other media
- Provide technical assistance and consultation on medical treatment and decontamination of radiologically, chemically, or biologically injured/contaminated victims

Public Health Information:

- Assist by providing public health, disease, and injury prevention information that can be transmitted to members of the general public who are located in or near areas affected by a major disaster or emergency

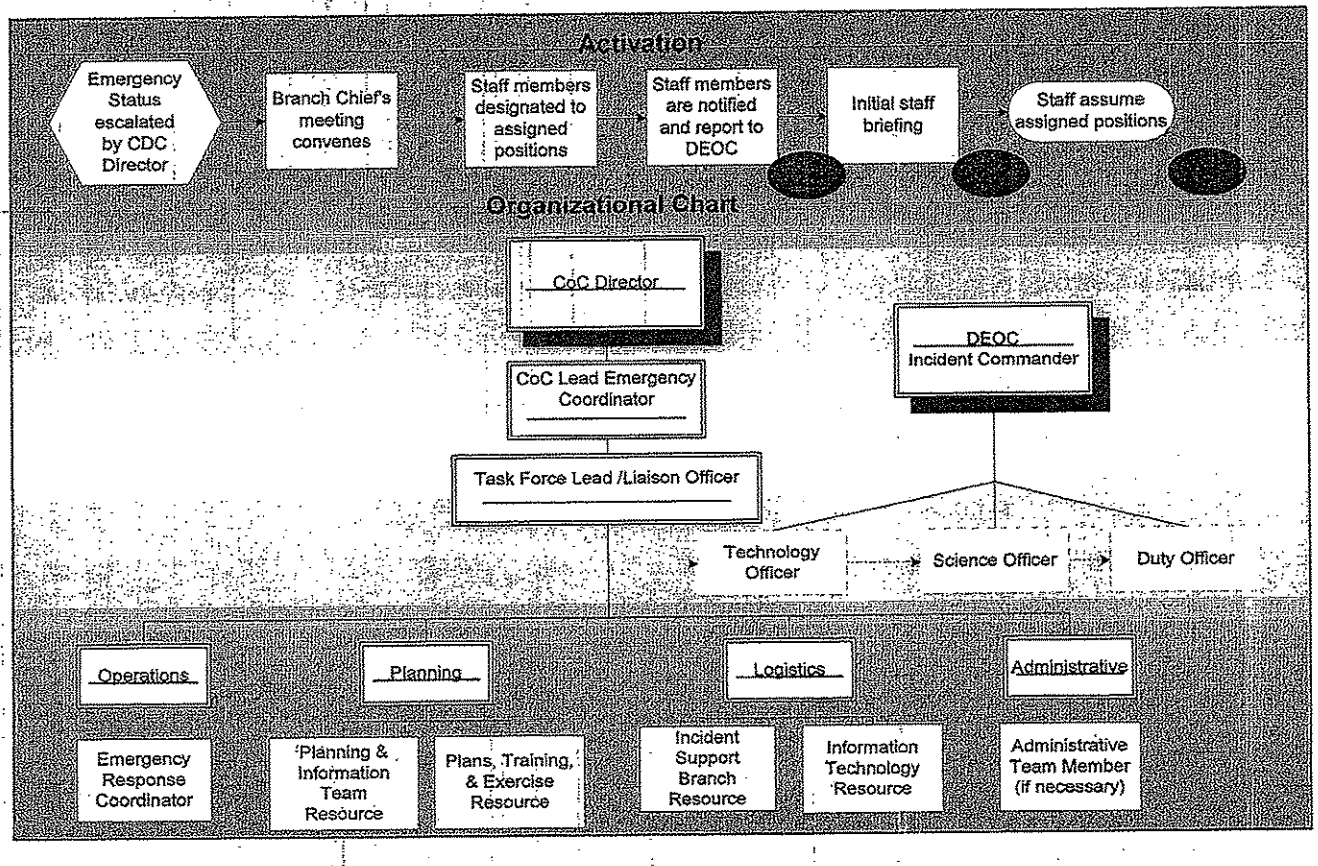
Vector Control:

- Assist in assessing the threat of vector-borne diseases following a major disaster or emergency
- Conduct field investigations, including the collection and laboratory analysis of relevant samples
- Provide vector control equipment and supplies, provide technical assistance and consultation on protective actions regarding vector-borne diseases, and provide technical assistance and consultation on medical treatment of victims of vector-borne diseases

DEOC Task Force Standard Operating Procedure – 2005

Process Flow

The following diagrams represent critical processes described in the DEOC Task Force Standard Operating Procedure – 2005.



Gap Analysis

23. Inconsistent Notification process. (Observation 17)
24. Briefings not conducted for transitioning teams. (Observation 21)
25. Assignment of staff changed due to the duration of the response. (Observation 15)

DEOC Task Force Standard Operating Procedure – 2005

Summary

Task Force Mission:

- Maintain continuity with day-to-day operations, including information flow and task completion

Goals:

- Manage the DEOC portal (http://eocportal)
- Manage permissions on the event data share drive
- Coordinate staff rhythm
- Coordinate meeting schedules and reserve conference rooms
- Coordinate video teleconferences, bridge calls and visual displays
- Manage the daily task list
- Coordinate the input to and release of documents (e.g., Executive Summary, Daily Summary, Situation Reports, meeting minutes etc.) as tasked by the CoC EC.
- Keep the Duty Officer informed
- Manage the event mail box
- Help gather call data
- Facilitate acquisition and display of map data, as required
- Maintain activities calendar
- Acquire Logistical support – Travel, Supplies, Communications, etc.
- Provide IT support to DEOC participants
- Maintain Event Time Line
- Maintain Daily Operations Log
- Initiate AAR development

Activation:

- DEOC staffing levels determined by Emergency Status (Watch, Alert, Response)
- Task Force operates under Incident Command System (ICS) concept employing Command, Operations, Logistics, Planning, & Administrative functions

DEOC Task Force Standard Operating Procedure – 2005

Summary

Goals:

- Manage the DEOC portal (http://eocportal)
- Manage permissions on the event data share drive
- Coordinate staff rhythm
- Coordinate meeting schedules and reserve conference rooms
- Coordinate video teleconferences, bridge calls and visual displays
- Manage the daily task list
- Coordinate the input to and release of documents (e.g., Executive Summary, Daily Summary, Situation Reports, meeting minutes etc.) as tasked by the CoC EC.
- Keep the Duty Officer informed
- Manage the event mail box
- Help gather call data
- Facilitate acquisition and display of map data, as required
- Maintain activities calendar
- Acquire Logistical support – Travel, Supplies, Communications, etc.
- Provide IT support to DEOC participants
- Maintain Event Time Line
- Maintain Daily Operations Log
- Initiate AAR development

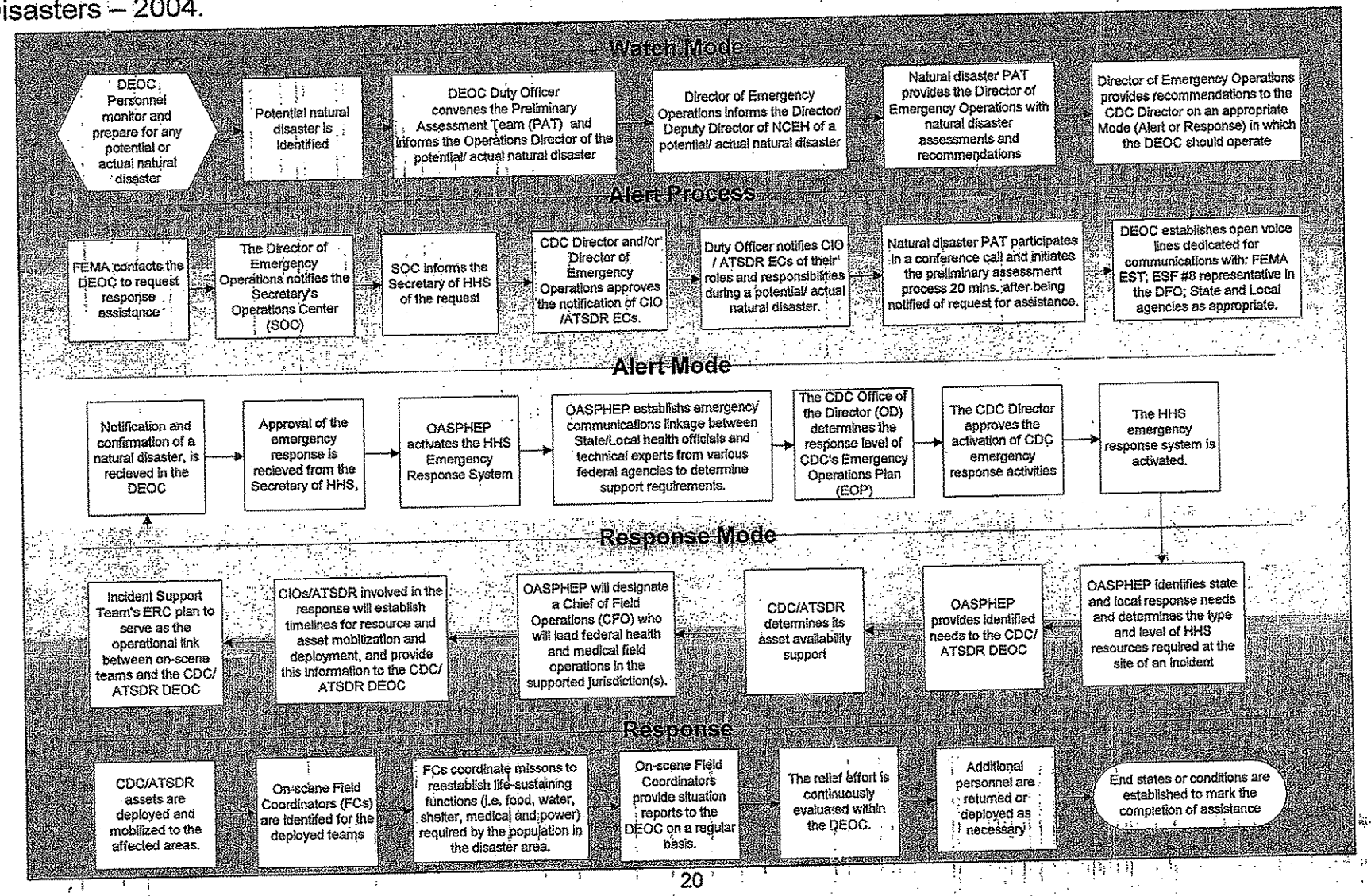
Gap Analysis

26. DEOC portal was not managed. (Observation 11)
27. Team briefings were not coordinated. (Observation 21)
28. Event mailbox was not managed. (Observation 11)

CDC EOP Draft Annex J – Natural Disasters – 2004

Concept of Operations Process Flow

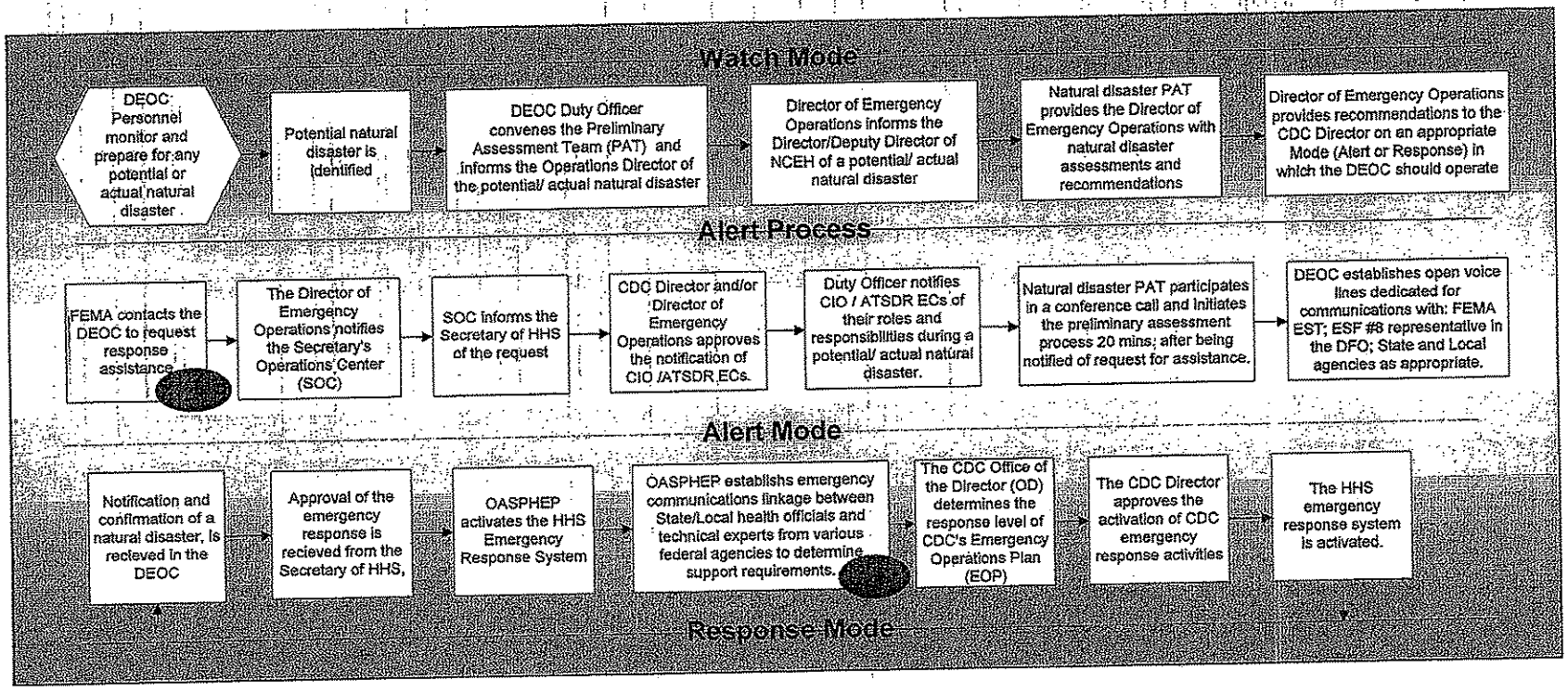
The following diagrams represent critical processes described in the CDC EOP Draft Annex J – Natural Disasters – 2004.



CDC EOP Draft Annex J – Natural Disasters – 2004

Concept of Operations Process Flow

CDC EOP Draft Annex J – Natural Disasters – 2004 Gap Analysis.



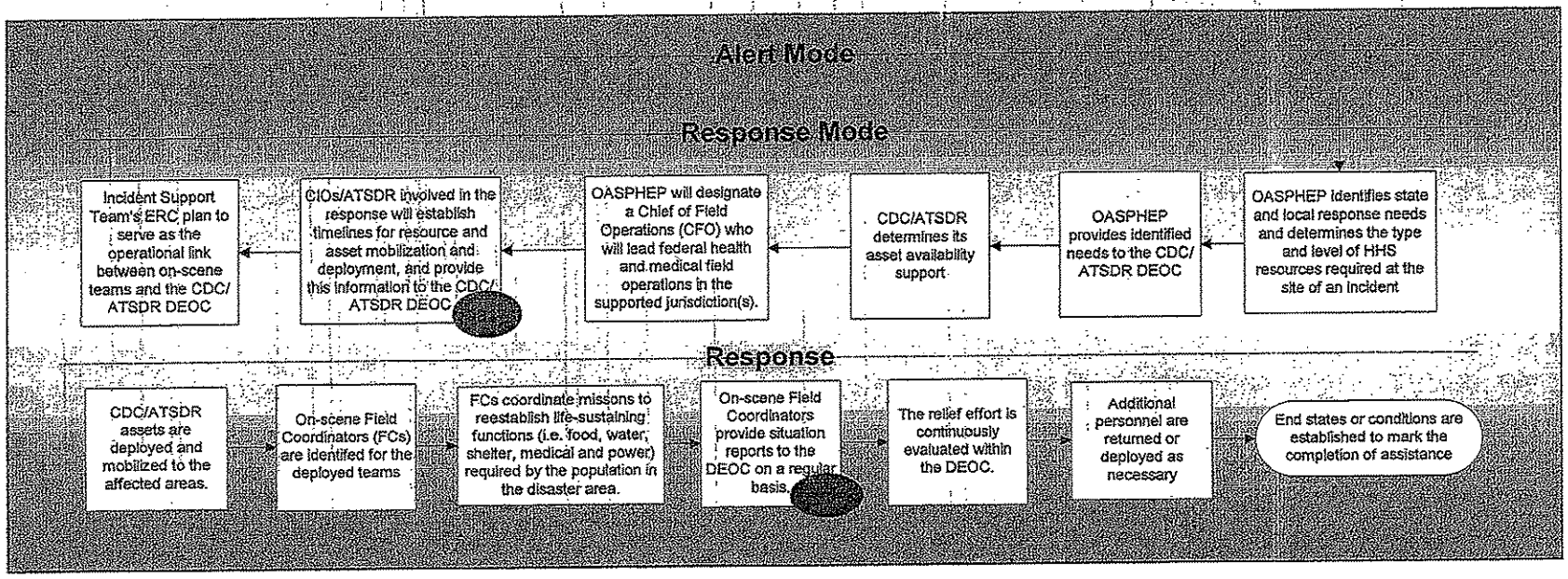
Gap Analysis

29. Resources were deployed by the Director prior to receipt of requests, and requests were received from various sources, other than FEMA. (Observation 2)
30. An effective link was not established between state and local officials. (Observation 23)

CDC EOP Draft Annex J – Natural Disasters – 2004

Concept of Operations Process Flow

CDC EOP Draft Annex J – Natural Disasters – 2004 Gap Analysis.



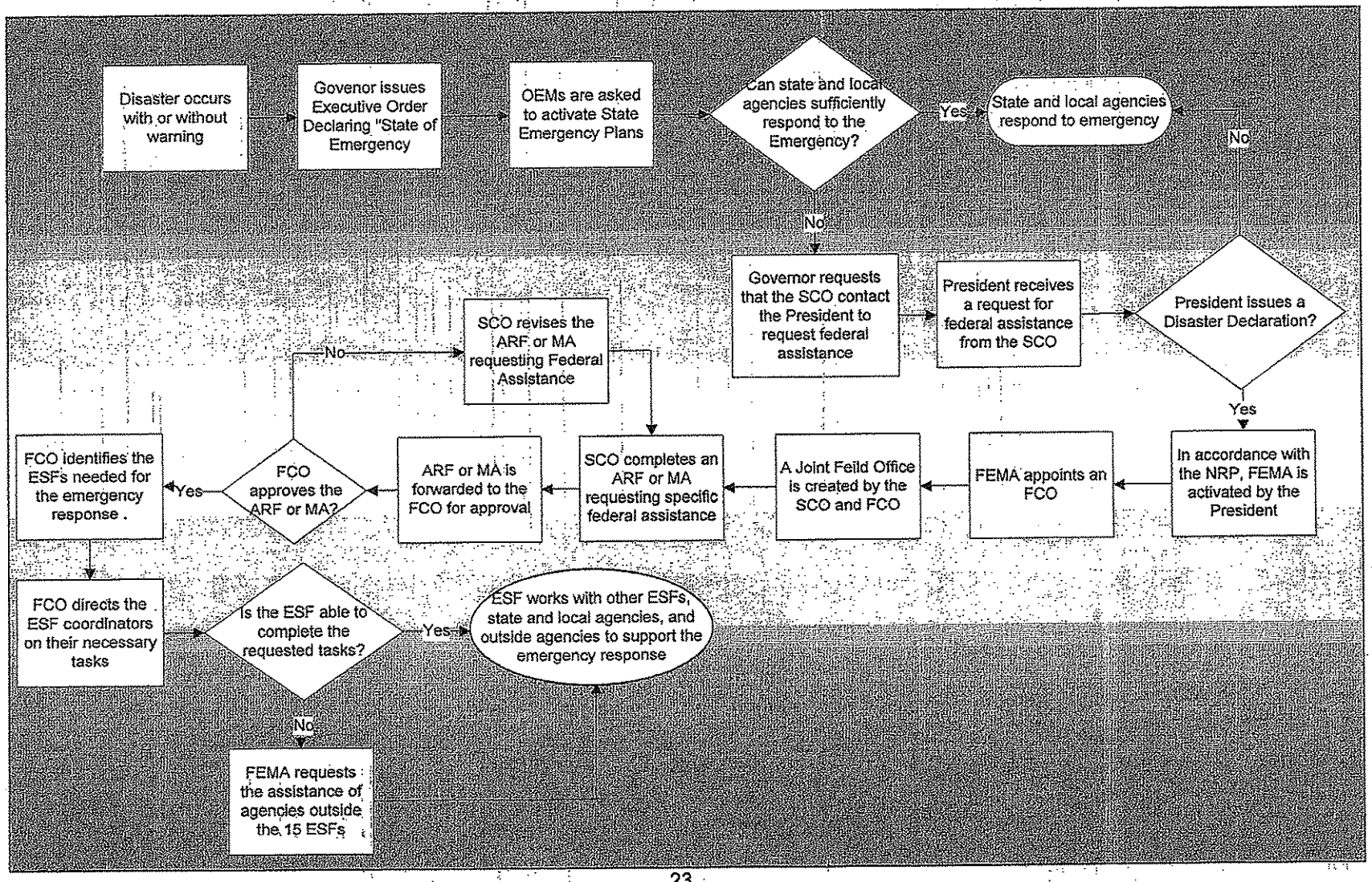
Gap Analysis

31. Resource tracking system does not provide reliable information. (Observation 27)
32. SITREP process is not standardized. (Observation 13)

CDC EOP Draft Annex J – Natural Disasters – 2004

Concept of Operations Process Flow

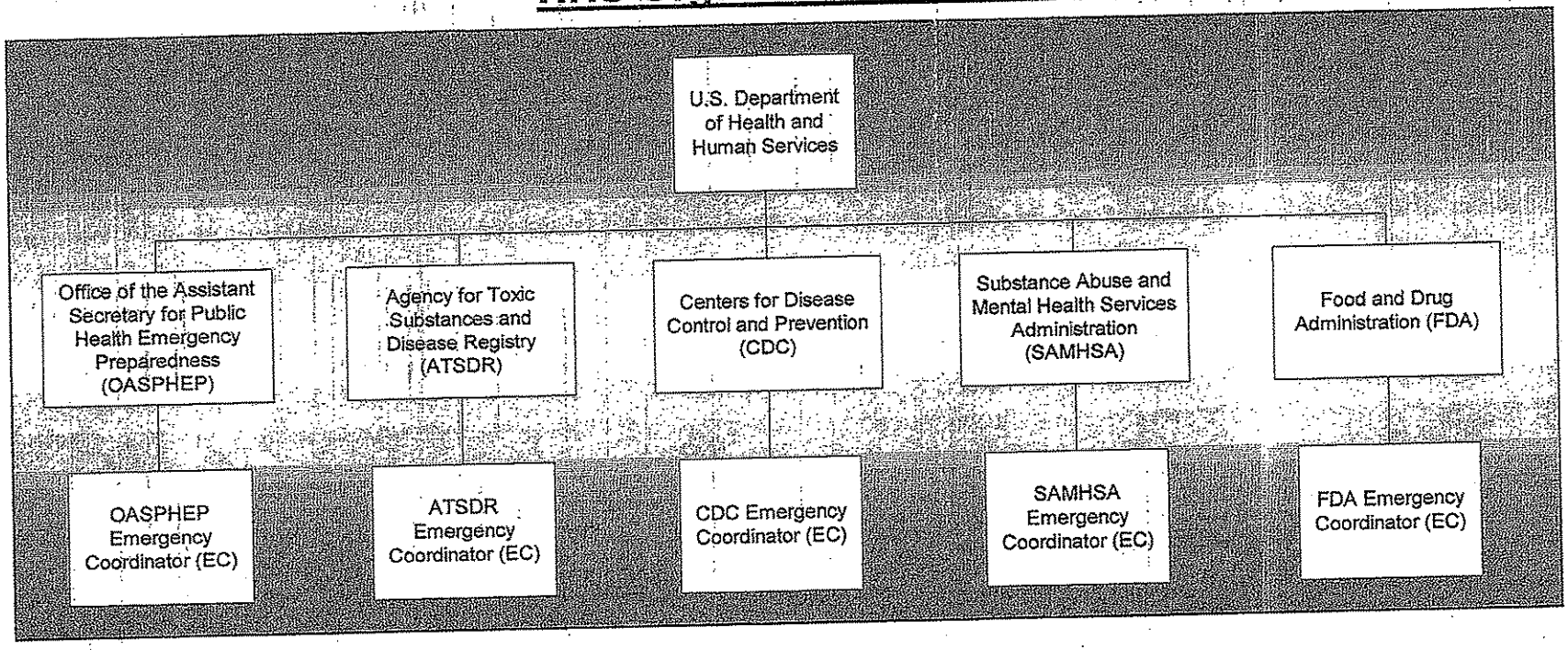
General Response Process Flow



CDC EOP Draft Annex J – Natural Disasters – 2004

Concept of Operations Process Flow

HHS Organizational Chart



CDC EOP Draft Annex J – Natural Disasters – 2004

Concept of Operations

Responsibility Summary

Federal Emergency Management Agency:

- Act as the primary coordinating agency for disaster response and recovery operations
- Conduct initial emergency response notification, activation, mobilization, deployment, staffing, and facility setup
- Provide support for logistics management, communications and information technology; financial management, community relations, congressional affairs, public information, and other outreach; and information collection, analysis, and dissemination

Health and Human Services (HHS):

- Provide representation on the Emergency Support Team (EST) once activated

Emergency Support Team (EST):

- Provide interagency resource coordination to the NRCC, IIMGG, FCO, RRCC, ERT, and ESFs and coordinates deployment of personnel and resources in support of field operations

Director's Emergency Operations Center:

- Operation center for all planning, coordination, and communication activities associated with emergency response activities
- Host the initial natural disaster planning and coordination teams meetings

CDC EOP Draft Annex J – Natural Disasters – 2004

Concept of Operations

Responsibility Summary

Director of Emergency Operations:

- In consultation with appropriate CIOs/ATSDR, provide a recommendation to the Director of the CDC on expanded DEOC staffing for planning and/or sustained operations

Division of Emergency Operations:

- Provide periodic updates on the situation to CDC leadership personnel and appropriate CIO/ATSDR Emergency Coordinators (ECs) until appropriate CIO/ATSDR representatives are present in the DEOC

Core Natural Disaster PAT:

- Consists of the Duty Officer, pre-designated representatives from the National Institute for Occupational Safety and Health (NIOSH) and the CDC Office of Communications (OC), and an Emergency Response Coordinator (ERC) on standby for deployment

CDC EOP Draft Annex J – Natural Disasters – 2004

Command and Control

Responsibility Summary

General State and Local Government Officials:

- Daily safety and security issues that impact their citizens' quality of life
- Primary planning of emergency preparedness and emergency responses

State Governor:

- Issue Executive Orders declaring "states of emergency"
- Ensure state agencies' plans of action in the event of disaster
- Order area evacuation
- Authorize the use of private property in emergency response
- Control access to the emergency disaster scene
- Activate into state active duty service the State National Guard

Office of Emergency Management (OEM):

- Coordinate emergency preparedness planning

State Coordinating Officer (SCO):

- Governor's representative
- Request federal assistance when deemed necessary by the Governor
- Exercise the governor's command and control throughout an emergency

CDC EOP Draft Annex J – Natural Disasters – 2004

Command and Control

Responsibility Summary

Assistance Request Form (ARF) or Mission Assignment (MA):

- The SCO request for Federal Assistance
- Cite the funding compensation for the agency providing the services

National Response Plan (NRP):

- Outline the planning assumptions, policies, concept of operations, organizational structures, and specific assignment responsibilities of the Federal Government Response to a national disaster

Federal Emergency Management Agency (FEMA):

- Lead the coordination of the Federal Government's agencies' emergency response to state and local authority requests for assistance

Federal Coordinating Officer (FCO):

- Provide overall direction to federal response agencies on behalf of the President
- Approve the ARF or MA and direct the appropriate Emergency Support Function (ESF) to arrange the support

Emergency Support Function (ESF):

- Offer specialty knowledge based on the type of emergency response
- Offer support to the FCO in the field

CDC EOP Draft Annex J – Natural Disasters – 2004

Emergency Support Function

Responsibility Summary

ESF Coordinator:

- ESF planning functions to support the mission and goals of the ESF

Primary ESF Agency:

- Lead other agencies that have been designated as support agencies for the ESF
- Task support agencies for support in an emergency response as needed
- Integrate federal fire, rescue and emergency medical responders arriving on scene into the local ICS structure

DHS/FEMA:

- Issue a mission assignment to task a primary agency for necessary work to be performed on a reimbursable basis
- In cases where required assistance is outside the scope of an ESF, FEMA may directly task any Federal agency to bring its resources to bear in the disaster operation

US Department of Health and Human Services (HHS)

- Coordinate federal public health and medical assistance to support state, local, and international health care delivery systems with patient care. They provide:
  - Medical Equipment and Supplies
  - Health Surveillance of the Affected Population and Impacted Area
- Manage the health consequences of environmental contamination
- Support or augment the following:
  - Pre-Hospital Care Services
  - Healthcare Facilities
  - Local Auxiliary Healthcare Facilities
- Assist the USDA with the inspection, production, processing, and storage of human food and animal feeds that may be used in interstate commerce to ensure the protection of public health
- Collect agricultural product samples to assess any contamination and make recommendations when necessary
- Provide worker health and safety guidance
- Provide public affairs and risk communication to the affected population(s)
- Provide crisis counseling assistance to victims in the affected geographic area(s)
- Provide guidance to state, local, and international health officials on disease control measures, epidemiological surveillance, and study of exposed populations

Gap Analysis

33. Emergency response communication and coordination processes between CDC and HHS are not clearly defined. (Observation 24)

HHS Operating Divisions (OPDIVs)

Office of the Assistant Secretary for Public Health Emergency Preparedness (OASPHEP):

- Provide federal health and medical response assets to support state and local health care providers and federal response workers in the event that their capabilities are overwhelmed

Agency for Toxic Substances and Disease Registry (ATSDR):

- Coordinate and work with federal, state, and local agencies and organizations to prevent exposure to hazardous substances

Centers for Disease Control and Prevention (CDC):

- Assess public health and medical effects of a natural disaster on the general population, response and recovery workers, and high-risk population groups

Food and Drug Administration (FDA):

- Assure the safety of foods and cosmetics, and the safety and efficacy of pharmaceuticals, biological products, and medical devices

Substance Abuse and Mental Health Services Administration (SAMHSA):

- Provide technical and operational services related to behavioral health

CDC EOP Draft Annex J – Natural Disasters – 2004

ESF #8

CDC Centers, Institutes, or Offices (CIO)/ ATSDR

- Provide timely assistance to federal, state, local and international agencies and organizations.
- Work together with respective components in a coordinated manner based upon their program roles, responsibilities, and missions.
- Contribute specialized expertise in accordance with their program roles, responsibilities, and missions as necessitated by the event.

Note: *By design, this plan does not identify CIO responsibility for specific tasks and areas during the response to a natural disaster. Because many CIOs possess specialized expertise in similar areas, the Director of Emergency Operations will identify public health response needs and task appropriate CIOs to provide specialized expertise in specific areas based upon the preliminary assessment and recommendation process.*

CDC EOP Draft Annex J – Natural Disasters – 2004

ESF #8

Specific CIO Responsibilities

Office of the Director:

- Advise ASH regarding declaration of health emergency or activation of Public Health Service (PHS) response plan after consulting with other appropriate agencies
- Designate PHS spokesperson
- Furnish health information to be provided to the public

National Center of Environmental Health (NCEH):

- Assume responsibility, within PHS, for coordinating PHS response to a natural disaster
- Develop, in cooperation with other PHS components, objectives for protecting the public, treating victims, and establishing public health controls and determine when those objectives have been achieved
- Estimate damages and casualties with the assistance of EPO, CEHIC, and CPS
- Assess need for medical assistance and necessary resources

Division of Emergency Operations:

- Alert other PHS components of an emergency
- Lead responsibility, within PHS, for managing the response to a natural disaster
- Conduct final evaluation, make recommendations, and write AAR

CDC EOP Draft Annex J – Natural Disasters – 2004

ESF #8

Specific CIO Responsibilities

Other CIOs:

- Establish public health surveillance systems (EPO, CPS, NCID)
- Help survey the status of the health care delivery system (CEHIC, EPO, CPS)
- Provide or help locate needed medical supplies (ERCG, OPS)
- Establish health surveillance of persons in evacuation centers (EPO, CPS, NCID)
- Provide technical assistance to State/local officials in establishing communicable and vector-borne disease controls, provide technical assistance in handling environmental health hazards (CEHIC, CID, CPS)

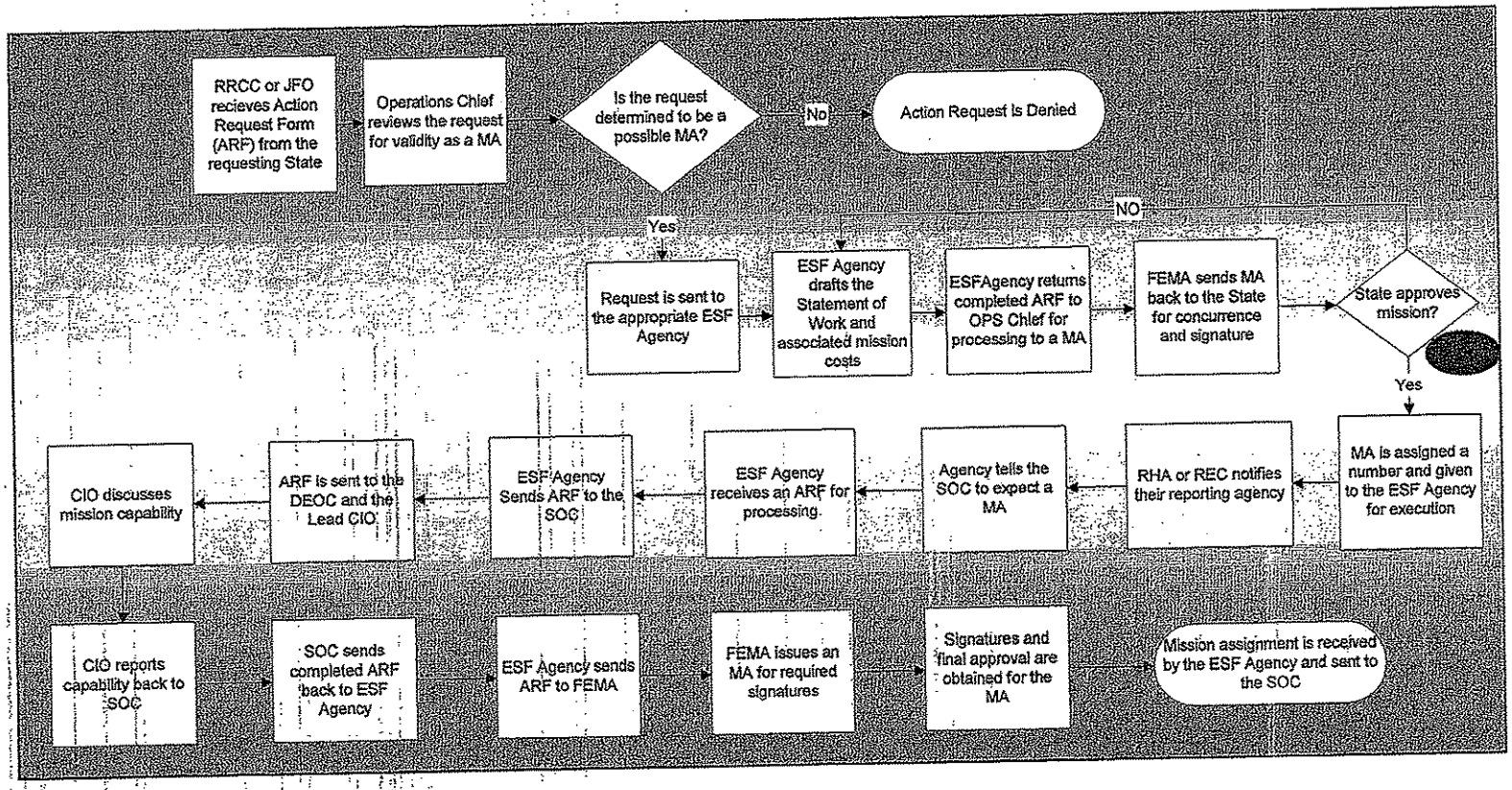
HHS Support for International Disasters:

- Work with the Foreign Emergency Support Team (FEST) during an international emergency response
- Advise and assist local Ambassadors and embassy personnel in dealing with crisis situations

DEOC Hurricane Response Plan – 2005

Action Request Form Process Flow

The following diagram represents critical processes described in the DEOC Hurricane Response Plan – 2005.



Gap Analysis

34. Missions were not always approved by state prior to personnel being deployed. (Observation 2)

DEOC Hurricane Response Plan – 2005

Hurricane Response Summary

The following slides represent critical functionalities described in the DEOC Hurricane Response Plan – 2005.

Emergency Support Functions Supported by the CDC:

- ESF 3 – Public Works & Engineering (U.S. Army Corps of Engineers)
- ESF 5 – Emergency Management (FEMA)
- ESF 6 – Mass Care, Housing, and Human Services (American Red Cross)
- ESF 8 – Public Health and Medical Services (DHHS)
- ESF 9 – Urban Search and Rescue (FEMA)
- ESF 10 – Oil and Hazardous Materials Response (EPA)
- ESF 12 – Long-term Community Recovery and Mitigation (DHHS)
- ESF 15 – External Affairs (FEMA)

CDC Hurricane Response Mission:

- Contribute to the response, mitigation of, and recovery from the public health consequences of a hurricane

CDC Hurricane Response Goals:

- Coordinate assignments and deploy CDC personnel and resources in a safe, timely, and informed manner
- Provide public health protection measure communications
- Emphasize CDC personnel safety in affected regions
- Protect CDC's operational reserve capacity

Gap Analysis

35. CDC lacks an effective tool to coordinate deployment teams consistently and in a timely and informed manner. (Observation 27)

DEOC Hurricane Response Plan – 2005

Hurricane Response Summary

CDC Director's Emergency Operations Center (DEOC):

- Monitor weather conditions in the Atlantic and Caribbean
- Track tropical depressions, tropical storms, and hurricanes
- Provide CDC senior leadership with operational information
- Serve as the site for, and support to, the CDC HRTF
- Coordinate all pre-deployment actions
- Maintain database of deployable personnel identified by CoCs and CIOs
- Coordinate travel and lodging for deployee
- Prepare and publish deployee travel orders
- Monitor deployed personnel status
- Provide services to all deploying personnel
  - Briefings
  - Training
  - Medical Screenings
  - Equipment
- Coordinate activities between CDC's deploying personnel and all other agencies
- Receive and track CDC assistance requests during the event
- Provide essential services to HRTF, including administrative, IT, communications, and VTC support, as well as working and meeting space
- Coordinate re-deployment of CDC staff and stand-down of the HRTF, including compilation of an After-Action Report (AAR)

Gap Analysis

36. RTS Database of CDC personnel is not maintained. (Observation 27)
37. CDC does not have an effective tool to track/ updated deployed personnel status. (Observation 27)
38. Regular training not provided for deployed personnel. (Observation 36)
39. No process for reconciling equipment upon return from deployment. (Observation 6)

DEOC Hurricane Response Plan – 2005

Hurricane Response Summary

The National Center for Environmental Health (NCEH):

- The lead for CDC activities during hurricane response and recovery operations

Coordinating Centers (CoC) and CIO's:

- Provide staff to serve as part of the HRTF
- Provide staff for deployment to affected areas in response to requests for assistance
- Determine availability of personnel for deployment and comply with pre-deployment processing schedule

Office of Health and Safety (OHS):

- Provide health screening and immunizations for deployees
- Provide "personal use" medical supplies for deployees

Coordinating Office of Terrorism Preparedness and Emergency Response (COTPER):

- Provide training to deploying personnel
- Provide TARU Teams and select medical supplies and equipment to affected areas

Gap Analysis

40. CIO's were hesitant to provide staff for deployment as length of event expanded. (Observation 17)
41. Pre-deployment process was not utilized. (Observation 7)

DEOC Hurricane Response Plan – 2005

Hurricane Response Summary

Financial Management Office (FMO):

- Provide financial assistance in managing the contingency Cost Accounting

Information Resource Management Office/Information Technology Services Office (IRMO/ITSO):

- Provide hardware and software support to deploying personnel

Procurement and Grants Office (PGO):

- Provide procurement assistance to LST in support of deployees

DEOC Hurricane Response Plan – 2005

Hurricane Response Summary

Action Planning Process:

- Performed during every emergency or disaster
- Planning coordination and support priorities are overseen by the DEO Planning and Information Section
- Planning involves all those who will use and implement the plan to minimize potential problems

Operational Period Planning Cycle – (O Period):

- Identify Priorities
  - Operational Period Planning Cycle begins with the development of the CDC Director and Lead CIO priorities
  - Ensure that response efforts are focused towards the resolution of high-interest concerns
- Actions
  - Developed to support the priorities
  - Designed to be achieved within the timeframe of the OPeriod and directly support the priority
- Priority Review
  - Review priorities submitted by each CIO
  - Confirm responsible lead
  - Confirm that the action does not conflict with any other actions or activities
  - Confirm that any required cross-functional support areas have been involved in coordination
  - Verify that the Action supports the Priority
  - Identify any critical issues or requirements
- Completed Action Plan
  - Distributed by 1600 daily

Gap Analysis

42. Incident Action plan process was abandoned early into the response. (Observation 15)

DEOC Hurricane Response Plan – 2005

Hurricane Response Logistics

The Logistics Support Team Leader:

- Assign a Task Force Logistics Officer to the hurricane task force to accomplish logistics functions

Task Force Logistics Officer:

- Act as the point of contact for all logistics requirements
- Coordinate efforts with the logistics team to provide the support and services requested
- Coordinate logistic action approvals for the Logistics Team Lead
- Assist with tracking all deployed personnel

The Logistics Support Team (LST):

- Distribute equipment, supplies, & reference material to all CDC responders
- Contact deployees to determine their logistics needs before deploying to the field

The Emergency Deployment Program (EDP):

- Enter volunteers into the RTS (Resource Tracking System) as requested from the task force logistics officer

Gap Analysis

43. Deployed personnel were not contacted prior to deployment to determine logistical needs. (Observation 37)
44. RTS tool does not provide sufficient functionality to track personnel status. (Observation 27)

DEOC Hurricane Response Plan – 2005

Hurricane Response Logistics

The IST (Incident Support Team):

- Provide onsite logistics, communications, and informatics, in support of the CDC stated emergency response objectives
- Deploy Equipment
  - InmarSat (satellite phones)
  - Laptop computers
  - High Frequency Radios
  - Portable Generator
  - Cellular Telephones
  - Emergency Management Software
  - Iridium telephones, to include secure capability
  - Office supplies and other items as required
- Establish a base of operations to support the CDC responders in the field
- Provide a LAN (local area network) and transmit data
- Establish redundant communications systems between any CDC responders, the base of operations, and the DEOC

The LST/Travel:

- Coordinate travel orders for all CDC responders for Hurricane Response operations

Questions regarding this document should be directed to:

(b)(2),(b)(6)

(b)(2),(b)(6)

BearingPoint
Public Services & Healthcare Consulting
115 Perimeter Center Place, NE, South Terraces #380
Atlanta, GA 30346

Appendix C

Organizational Chart A and Chart B are examples of variations in the DEOC structure that were implemented during the Katrina response. These charts were posted on the event portal. The structure depicted in Chart A was implemented prior to the structure depicted in Chart B.

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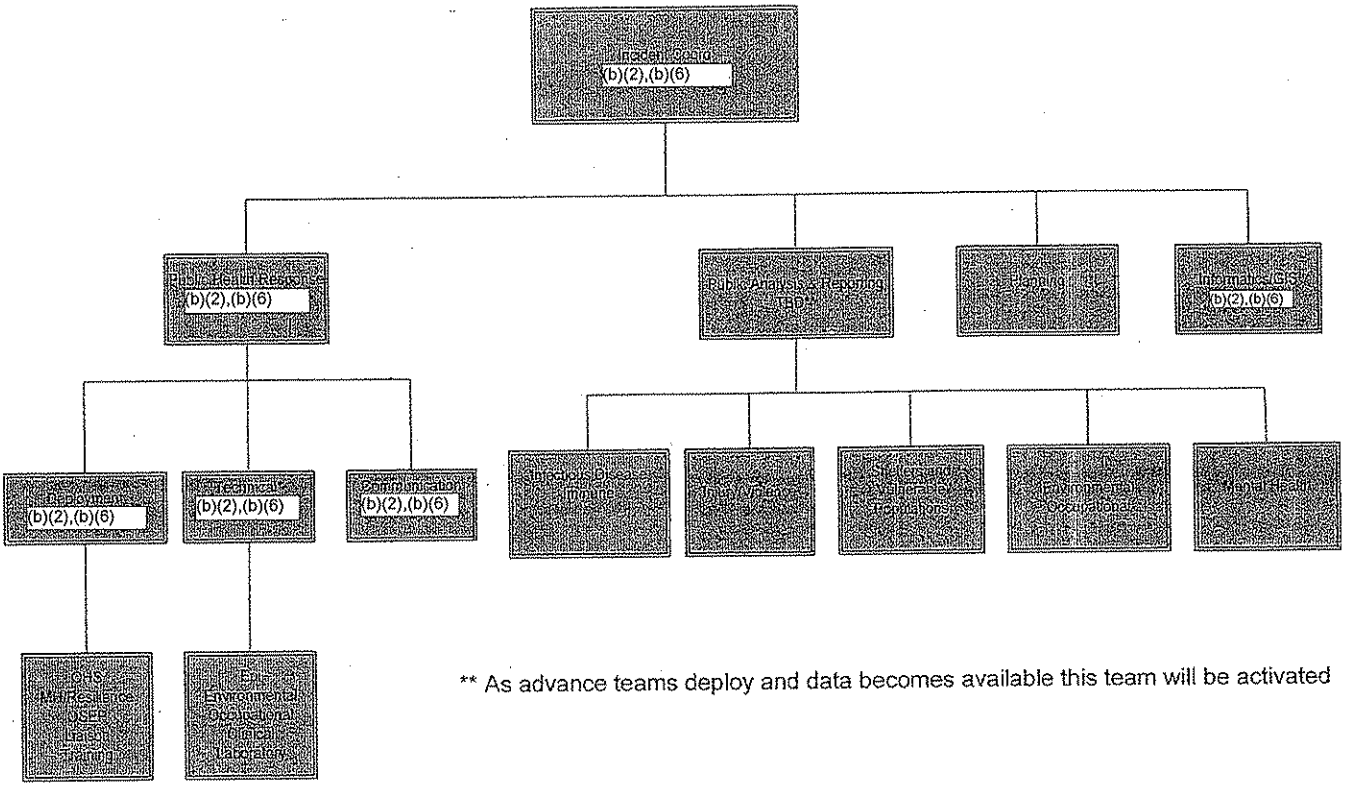
CHART A (1 0f 1)



** As advance teams deploy and data becomes available this team will be activated

*All CIOs play supportive role to technical activities

CHART B (1 0f 3)

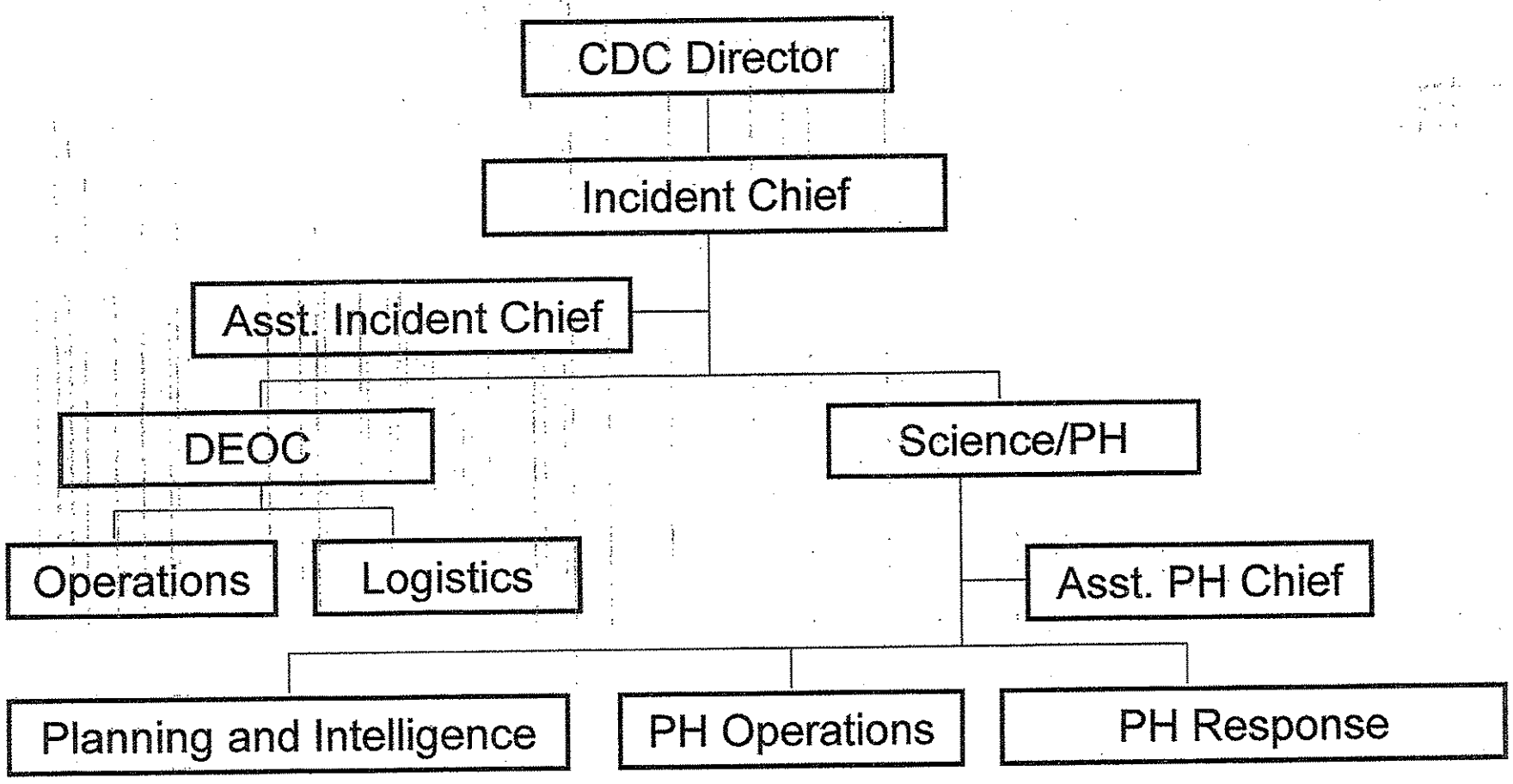

CDC Director
Incident Chief
Asst. Incident Chief
DEOC
Science/PH
Operations
Logistics
Asst. PH Chief
Planning and Intelligence
PH Operations
PH Response

CHART B (2 0f 3)

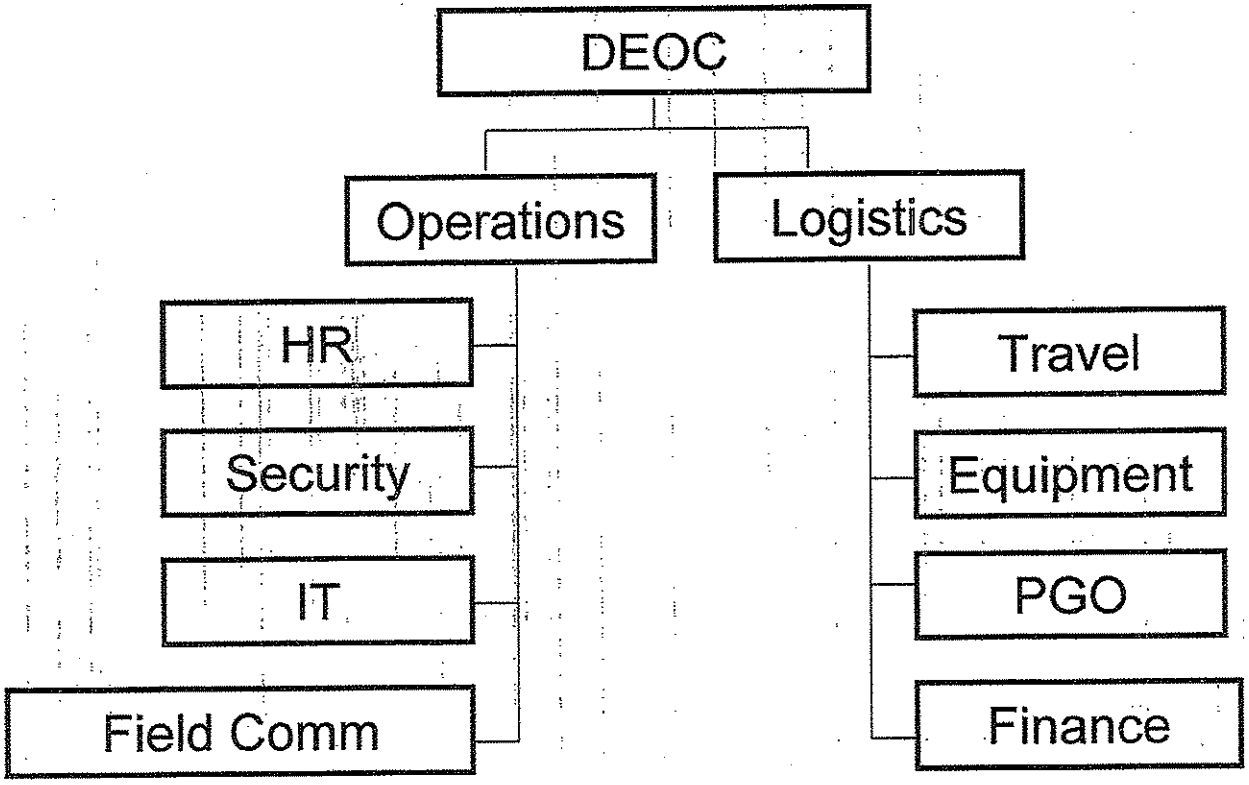
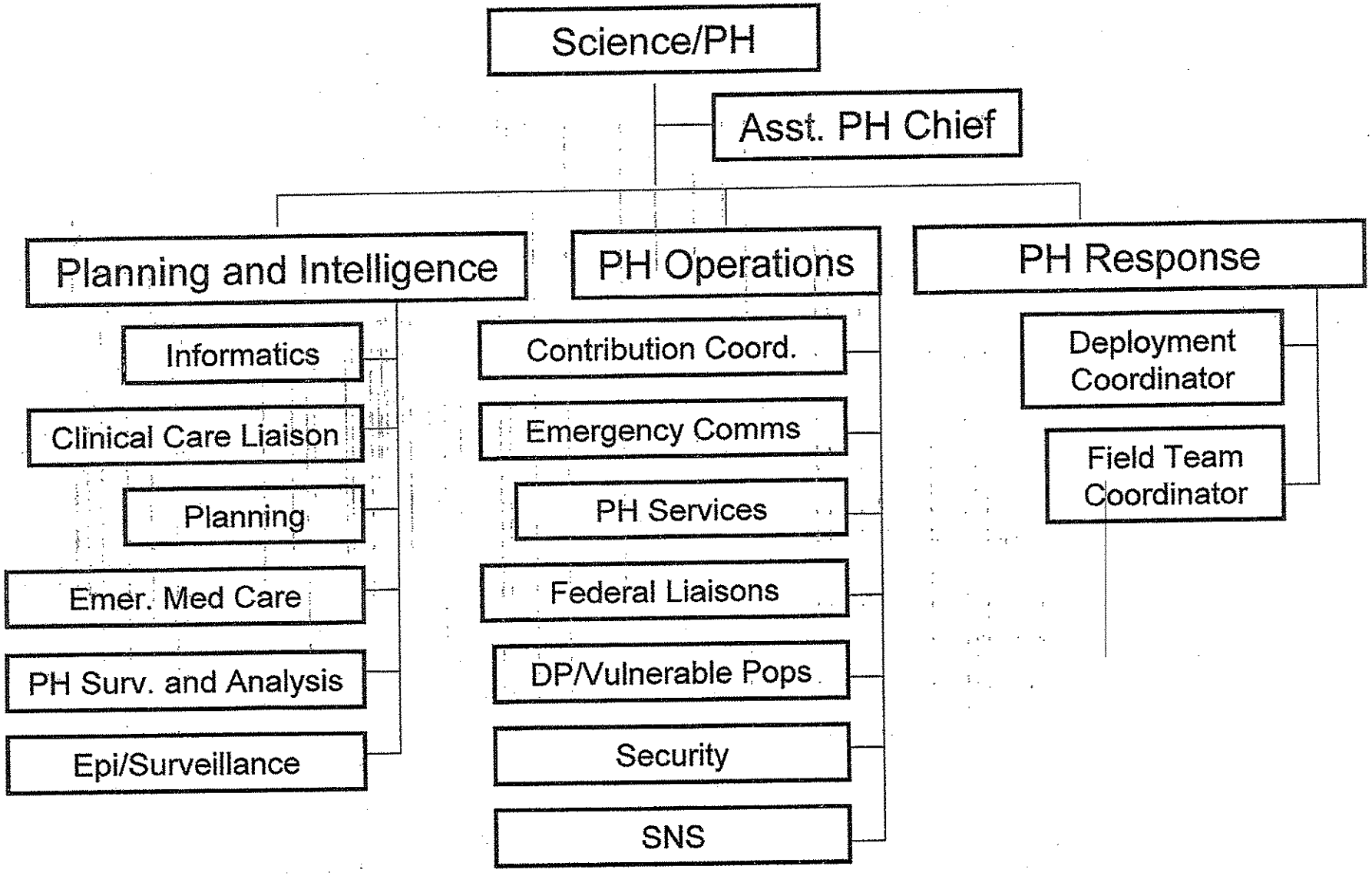

DEOC
Operations
Logistics
HR
Security
IT
Field Comm
Travel
Equipment
PGO
Finance

CHART B (3 0f 3)


Science/PH
Asst. PH Chief
Planning and Intelligence
PH Operations
PH Response
Informatics
Clinical Care Liaison
Planning
Emer. Med Care
PH Surv. and Analysis
Epi/Surveillance
Contribution Coord.
Emergency Comms
PH Services
Federal Liaisons
DP/Vulnerable Pops
Security
SNS
Deployment Coordinator
Field Team Coordinator

Appendix D
Hurricane Katrina Data Review Interviewee List

Interviewee	Katrina Response Role	Interview Date	Method of Interview
(b)(2),(b)(6)	Initial Incident Mgt. (also deployed- LA)	11/10/2005	In Person
	Deployment Coordination	11/9/2005	In Person
	GIS	11/8/2005	In Person
	(b)(2),(b)(6)	11/17/2005	In Person
	Commissioned Corps-Deployed	11/16/2005	In Person
	Federal Liaison Team	11/8/2005	In person
	Deployed- San Antonio	11/15/2005	In Person
	(b)(2),(b)(6)	11/17/2005	In Person
	Initial Incident Mgt	11/9/2005	In Person
	MH/Resilience Team (also deployed)	11/14/2005	In Person
	Initial Incident Mgt (also deployed staff)	11/16/2005	In Person
	Strategic National Stockpile	11/8/2005	In Person
	Epi/Surveillance and Assessment Team	11/17/2005	In Person
	(b)(2),(b)(6) (also deployed)	11/17/2005	In Person
	Surveillance Team	11/15/2005	In Person
	(b)(2),(b)(6)	11/9/2005	In Person
	Humanitarian Assistance	11/14/2005	In Person
	Commissioned Corps Liaison	11/15/2005	In Person
	Planning/Forecasting (Initial Incident Mgt)	11/8/2005	In person
	Deployed- Baton Rouge	11/8/2005	In person
	(b)(2),(b)(6)	11/14/2005	In Person
	Infectious Disease (also Deployment Coord.)	11/9/2005	In Person
	DEOC IT	11/14/2005	In Person
	Co-Lead for Emergency Communication System	11/14/2005	In Person
	Occupational Health Team	11/15/2005	In Person
	Clinical/Medical	11/15/2005	Phone
	Shelters/Vulnerable Populations	11/10/2005	Phone
	Planning/Forecasting	11/22/2005	In Person
	Informatics	11/16/2005	In Person
	Deployed- LA	11/22/2005	Phone
	DEOC Leadership	11/16/2005	In Person
	DEOC Leadership	11/10/2005	In Person
	Deployed- FL, MS, and LA	11/16/2005	In Person
	Incident Management	11/10/2005	In Person
	Deployment Coordination	11/16/2005	In Person
	Situation Report Team	11/9/2005	In Person
	ECS	11/22/2005	Phone
	Deployed- New Orleans	11/9/2005	Phone
	Action Request Forms/Mission Assignments	11/15/2005	In Person
	Logistics Team Lead	11/16/2005	In Person
	Epidemiologist	11/10/2005	In Person
	Incident Commander	11/10/2005	In Person
	(b)(2),(b)(6) (deployed)	11/14/2005	In Person
	Displaced Persons Team	11/16/2005	In Person

Appendix E

Coordinating Office for Terrorism Preparedness & Emergency Response

Hurricane Katrina After Action Report Workgroup

Data Review Team

Interview Survey Tool Preview

Katrina Response Process

Interview Survey Preview Screen Shots

Your information will be treated as anonymous unless you specifically indicate otherwise.

*** 1. Please indicate your preference:**
(Note: Individuals' names will never be used)

- Certain identifying details may be used with my responses (EX: job role/ title/ function)
- I prefer to remain Anonymous

Survey Instrument for AAR Data Review Team Interviews II Exit this su

2. Emergency Response

(A) This survey is designed as a tool to gather information about individuals' roles, responsibilities, & assignments SPECIFICALLY during the CDC response to Hurricane KATRINA.
(B) Please note that for open-ended questions your response must be limited to 5000 characters or less.
(C) Plese answer ALL of the questions.

*** 2. Name (for survey admin purposes only)**

*** 3. Which functional team were you a part of?**

- Command
- Planning
- Operations
- Logistics
- Administrative/ Finance
- Other (please specify)

Katrina Response Process
Interview Survey Preview Screen Shots

4. What specific roles did you fill in the DEOC?

Primary
Secondary
Tertiary
Additional

*** 5. Which of the following best describes your current occupation?(select all that apply)**

- Health Director/Deputy Health Director
- Other Administrator/Manager/ Supervisor Environmental Health Specialist/Sanitarian
- Epidemiologist/Statistician
- Health Educator
- Public Health Nurse
- Public Information/ Media Officer
- Emergency Management
- Lab
- Other (please specify)

*** 6. Which best describes your emergency response experience?**

- No experience
- Limited experience (1 year or less; or two emergencies)
- Moderate experience (1-5 years, multiple and various types of emergencies)
- Extensive experience (5-20+ years, with multiple and various types of emergencies)
- Other (please specify)

Katrina Response Process

Interview Survey Preview Screen Shots

Survey Instrument for AAR Data Review Team Interviews II Exit this su

3. Katrina Response - Notification

Please describe the process through which you were notified to report to the DEOC to assist in the response effort.

*** 7. When were you notified that you were expected to report to the DEOC to assist with the Katrina response effort and when were you expected to report on-site?**

*** 8. How were you notified?**

- in-person
- phone call
- via email
- Other (please specify)

*** 9. Please explain how you knew where to report?**

Katrina Response Process

Interview Survey Preview Screen Shots

*** 10. Please explain how you knew who to report to upon arrival?**

*** 11. Upon arrival, how did you determine what your job role was going to be?**

Survey Instrument for AAR Data Review Team Interviews II Exit this su

4. Katrina Response: Assignment

Please describe the process through which you were assigned a role in the DEOC.

*** 12. Who assigned you your job role?**

- Task Force Leader
- Branch Chief
- Duty Officer
- Team Lead
- Other (please specify)

Katrina Response Process
Interview Survey Preview Screen Shots

* 13. Was the person who assigned you your job role the same person to whom you directly reported?

- Yes
- No

* 14. What kind of on-site training was received or required upon arrival?

* 15. Please explain how your job role was defined for you?

* 16. Please explain how job role expectations and responsibilities were defined for you?

Katrina Response Process

Interview Survey Preview Screen Shots

Survey Instrument for AAR Data Review Team Interviews II Exit this s

5. Katrina Response: Environment

Please describe your working environment during the response.

*** 17. Please describe your team's role during the event?**

*** 18. Did your team's function have operational plans included in the CDC SOPs or another response document? If so, please identify your source.**

*** 19. Please describe, whether or not, the team had an established role protocols or SOPs in the existing plans?**

Katrina Response Process
Interview Survey Preview Screen Shots

20. If so, how closely did you follow these plans?

* 21. Please explain, wether or not, you found that you needed to deviate from the existing plans?

22. If you did deviate from the existing plans, please explain why?

Katrina Response Process
Interview Survey Preview Screen Shots

23. If you did deviate from the existing plans, please explain if your change improved the process?

24. Would you suggest this change be added to the existing plan?

*** 25. Did you have daily operational objectives?**

- Yes
- No

26. If you responded "Yes," how closely did you follow these objectives?

Katrina Response Process

Interview Survey Preview Screen Shots

*** 27. What would you change about your team's functions during the event?**

*** 28. What needs did your team have?***

*** 29. What training did your team need?***

Katrina Response Process

Interview Survey Preview Screen Shots

Survey Instrument for AAR Data Review Team Interviews II

Exit this

6. Katrina Response Tasks

Please describe the process you used to perform your assigned tasks.

*** 30. What was the nature of the function with which you were tasked?**

- Filling out a pre-existing document
- Creating a custom report
- Verbalize communications received to team members/ leadership
- Record/ track/ sort data for analysis
- Monitor incoming communications – inbox, telephone
- Other (please specify)

*** 31. Please explain how you decided what your tasks were for the operational period?**

Katrina Response Process

Interview Survey Preview Screen Shots

*** 32. With regards to your job role during the response, describe from whom you received information ?**

*** 33. Please describe your communication process, specific to your receiving information. Was it effective?**

*** 34. Please describe how often you received communication during the response.**

Katrina Response Process
Interview Survey Preview Screen Shots

* 35. Please describe how you processed the information that was received.

* 36. To whom did you deliver information during the response?

* 37. Please describe your communication process, specific to your delivering information. Was it effective?

Katrina Response Process

Interview Survey Preview Screen Shots

Survey Instrument for AAR Data Review Team Interviews II Exit this survey

7. Katrina Response: DEOC Operations

Please describe where your role fit into the CDC's overall response process and how your/ your team's efforts contributed to the achievement of the response objectives.

*** 38. What value did your efforts add to the response effort?**

*** 39. How were your team's processes interdependent with other teams' processes?**

Survey Instrument for AAR Data Review Team Interviews II Exit this survey

8. Thank You!

We very much appreciate you taking time out of your busy schedule to help us assess the CDC's response effort to Hurricane Katrina.

Thank You!

APPENDIX F
DETAILED OBSERVATIONS

Organizational Structure – Leadership

This category of observations is part of the overall category of observations "Organizational Structure". Separate sections will address Policy / Process and Mission, but they are all closely related. Many of the observations identified under this topic represent the issues resulting from the changes in the organizational structure of the DEOC (Incident Command Structure) during the early Katrina response phase, and the resulting confusion as to who was in charge of what, and who was making decisions based on the particular organizational structure.

Observation 1: Organizational structure.

Discussion:
The organizational structure within the DEOC changed several times during the early stages of the response. These changes impacted leadership structure, the chain or lines of command, and communication channels, which contributed to the sense of confusion, both within the DEOC and for the deployed CDC personnel.

Recommendation:
The executive leadership of CDC should establish an organizational structure for the DEOC that will best support the CDC mission and then validate the structure through a series of exercises. Once this is done, the DEOC Standard Operating Procedures (SOP) should be finalized.

Standard / Linked Process: CDC Emergency Operating Plan (EOP) Draft and Annex J- Natural Disasters-2004

Observation 2: Staff deployment assignments and the ARF-MA process.

Discussion:
When people were tasked to report in response to a Mission Assignment, the ARF process for approval should verify with the state and other government agencies that it is a legitimate need and that the role is defined prior to the team or individual presenting to the effected area. There were instances of leadership deploying teams of individuals prior to the ARF process being completed. In some instances this resulted in the states turning back CDC assistance, or teams / individuals not being utilized. In some instances, this process the deployed personnel were faced with issues related to the depletion of resources that could have been used in other locations.

Recommendation:
CDC leadership should address the need to pre-position people and equipment prior to the receipt, or in anticipation of the receipt, of an approved ARF- MA. A thorough review of this issue may result in establishing a procedure for the Incident Commander to deploy assets based on certain criteria. Such a process should be included in the DEOC SOP. Another aspect of the ARF process is that due to the numerous steps, approval signatures, impact on funding / reimbursement, and the direct application to support needed by states, the entire process should be reviewed by all applicable federal agencies to

determine if it can be accomplished in a more efficient manner. It is recommended that state input be solicited concerning this process before finalizing any changes.

Standard/ Linked Process: CDC (EOP) DRAFT- 2005

Observation 3: Consistent and efficient operations.

Discussion:
Frequent changes in the DEOC organizational structure contributed to confusion and the need for more consistency in the execution of key responsibilities. The duration and intensity of the response also challenged the number of personnel available to be able to place experienced and trained people in key positions to cover all required shifts. People assumed the required leadership roles while working with the deployment process.

Recommendation:
This observation can be resolved by implementing the recommendation in Observation I above. A strong organizational structure and chain of command that is established prior to an event and is adhered to throughout an event leads to more efficient and effective operations. The implemented organizational structure should be briefed to CDC staff and exercised regularly.

Standard/ Linked Process: CDC (EOP) DRAFT- 2005

Observation 4: Different EEI lists (Essential Elements of Information).

Discussion:
Interviews disclosed that EEI requirements collected from the field were changed based on the changing organizational structure. This resulted in frustration for the personnel in the field who were involved with collecting EEI as well as confusion within the DEOC for the teams compiling and analyzing the reported EEI.

Recommendation:
Based upon the CDC's previous experience with responding to natural and man-made disasters, a core set of EEI for various incidents should be developed and included in the SOPs. Modifications to the initial core list can then be made as the response situation and field observations dictate. The decision to make modifications to the list should be based upon an identified need and approved based upon established procedures. This should be developed and included in the DEOC SOP.

Standard/ Linked Process: CDC (EOP) DRAFT-2005

Observation 5: Mobilization of EIS Fellows.

Discussion:
The confusion associated with the initial response / reaction to Katrina, the media attention, and the desire to 'do something' resulted in some personnel deploying without an assigned mission. This situation was further complicated by changing the organizational structure within the DEOC after the response was initiated.

Recommendation:
Although the desire to provide immediate assistance in the time of a catastrophic incident is understandable, it is better to clarify Mission Assignments prior to deploying resources. As stated earlier, it is important to not change the established organizational structure for a response, which in turn identifies the incident leadership, after the response has been initiated.

Standard/ Linked Process: CDC Emergency Operation Plan (EOP) DRAFT- 2005

Organizational Structure – Policy and Process

The observations within this category reference a comparison of the Standard Organizational Policy and Process to the Organizational Policy and Process utilized during the Hurricane Katrina Response. The observations were compiled from the comments captured during the interviews of the key response individuals and document analysis and compared to the Standard Operating Procedures listed in the document appendices.

Observation 6: Standard Operating Procedures - I.

Discussion:

Based on the analysis of the procedures in place and the activities that were executed during the Hurricane Katrina Response, gaps exist within the SOPs. Although there were SOPs for the CDC's role in emergency response, the majority of the individuals that were interviewed were not aware that these documents were available. In many cases people requested such documents during the response and were told that they were not available or that they did not exist. Individuals who were aware that such documents exist did not feel that they appropriately detailed the procedures for operations to the extent that made them a valuable asset. During the review of the procedural processes followed during the Hurricane Katrina Response, a comparison was made between the SOPs provided as key documents for the process to the operations performed during Hurricane Katrina. The observations concur with the assessments of the responders. The SOPs currently available offer an overview of the CDCs operations with other agencies and their role in responses under ESF 8. They offer general operational guidelines and timelines for an emergency response; however, these documents do not offer detailed procedural or task-based guidance for the DEOC teams or the various deployment teams that ultimately form the emergency response.

Recommendation:

The current set of SOPs must be expanded to offer procedural guidance for all individuals involved in an emergency response. This expansion should include the following:

- The organizational structure necessary to ensure that the CDC successfully fulfills their role under the National Response Plan while accomplishing their mission and operating under the overall CDC Preparedness Goals. The procedures should provide a standard organizational structure for all teams and/or individuals participating in the response.
- Outlined roles and responsibilities of the teams operating within the DEOC, teams supporting the emergency response not located within the DEOC, and teams deployed to the field. Detailed roles and responsibilities not only offer daily operating procedures for the members of each team, but also act as a catalyst in cross-team communication by creating a reference of team functions.

- Staffing requirements and skills sets necessary to perform the functions of each team. The processes for the identification and tracking of resources and staff rotation schedules should be outlined within the procedures.
- Internal and External communication and information flow plans that support the informational demands and overall operational activities of the emergency response. These plans should address the relationship between the CDC and other government agencies. These plans should be detailed yet flexible to ensure a complete communication loop and information transfer throughout the response.
- Logistical team guidelines that offer procedural-based responsibilities for operations and provide equipment guidelines to ensure teams are deployed in a timely and prepared manner. Beyond deployee welfare, these guidelines should address the procedures required for timely expense reimbursement.
- Training requirements for all individuals that may potentially participate in a response. These requirements should list the minimum requirements for an emergency responder as well as specialized skilled-based training requirements. The procedures should define the enforcement process necessary to ensure that people meet all of the response training requirements prior to an event.

Response plans should be developed and / or finalized for various types of incidents. These plans should incorporate all the areas listed above for the specific event for which it is developed.

It was noted that some of the SOPs are currently in DRAFT format. These documents should be finalized.

All SOPs should be maintained within the DEOC. Updates should be made to the procedures as necessary and approved in accordance with CDC document approval process.

Standard / Linked Process:

CDC EOP – Draft
CDC EOP Annex J – Natural Disasters
DEOC Hurricane Response Plan
DEOC Task Force Standard Operating Procedures (SOP)

All of the Standard Operating Procedures available address the areas listed above; however, they only offer a framework of information for emergency response. They do not offer detailed directions that can be followed as procedural guidelines.

Observation 7: Standard Operating Procedures - II.

Discussion:

The lack of continuity throughout the response made it difficult to follow the SOPs. Individuals involved in the response were unable to apply the procedures to the changing organizational structures and team reorganizations. Staff rotations also created confusion. Individuals not familiar with prior response operations were not given the operating procedures or briefed on the overall emergency response process. Changes to the response plan were implemented during the response that did not follow the operating procedures or operations from previous responses. The Incident Command structure did not appear to be

followed throughout the response nor was the Infectious Disease model, previously used with success, followed.

Recommendation:

The organizational structure and operating procedures should govern the response operations. The Response Plan that will govern the emergency operations at the CDC should be decided upon and the supporting organizational structure should be put in place. Once this has been accomplished, operational guidelines and tasks should be supported by the SOPs, which provide guidance to individuals participating in any response. All efforts should be taken to ensure that the response plan does not change during a response.

Staff familiar with emergency response operations (particularly COTPER Division of Emergency Operations staff) should be embedded within the DEOC teams. Further, deploying experienced staff whenever possible to provide assistance to inexperienced staff should also be considered.

Standard / Linked Process: CDC EOP – Draft

Observation 8: Communication plans and information flow.

Discussion:

Through discussions with individuals and review of the information flow during Hurricane Katrina, it was noted that communications were inadequate during the response. Although the standard operating procedures identify the need for daily briefings and information updates, the individuals involved within the response were unable to clearly define to whom or how the information should be transferred. Changes to the organizational structure during the response further complicated their ability to ensure that information and data were being transferred to the appropriate individuals in a timely manner. Document clearance became difficult and untimely because there were no specifications for the process within the standard operating procedures. These deficiencies resulted in mass emailing, incomplete communication loops, and loss of information.

Recommendation:

During a response, it is necessary to ensure that the communication process is clearly defined for all parties involved. This information should be documented in the emergency response standard operating procedures and distributed to all emergency responders. The procedures should include communication plans for DEOC teams, CDC teams operating outside the DEOC, field teams, external partners, and other federal agencies. Additionally, the format and distribution lists for daily reports should be specified to prevent mass mailings and the potential loss of information due to a lack of formalized information transfer or information "overload" as a result of unmanageable volumes of data. The standard operating procedures should also include the guidelines for external communications and document clearance.

Standard / Linked Process:

CDC Emergency Operations Plan (EOP) – Draft

Observation 9: New emergency response roles and teams.

Discussion:

During the Hurricane Katrina Response, additional emergency response roles and teams were formed to address some operational gaps. Although these functions were essential to the operational success of the response, the individuals asked to fill these roles and form these teams were not provided direction for their mission. It was the responsibility of the team to develop standards for operations. Due to the urgency of the response and the lack of time available to develop these standards, they were not formally documented. For example, the roles of the Senior Management Officials (SMOs) were not clearly defined in the current operating procedures. This led to confusion related to their involvement in the state leadership team. Similarly, SMOs that were not members of the state leadership team experienced communication difficulties because of their unfamiliarity with the state processes and team members.

Recommendation:

All personnel operating within the DEOC or associated with any aspect of an emergency response should have standard operating procedures to reference. The functions of the new role or teams should be included in the overall Emergency Response Operating Procedures to ensure that all responders are aware of their responsibilities in order to reduce any duplication of effort. The detailed operational standards of the roles and teams should also be recorded to ensure that procedural guidelines and tasks are documented for anyone responsible for operating in the new team roles. The role of the SMOs needs to be clearly defined within the operating procedures. Furthermore, their involvement with the state leadership team should be mandatory to ensure the appropriate procedures are followed for need assessments and requests within the states.

Standard / Linked Process:

Because the teams were created during the Hurricane Katrina Response, their functions were not included in the Standard Operating Procedures that were reviewed during the document review process.

Organizational Structure – Mission

The observations within this category address the Missions that the CDC followed throughout the Hurricane Katrina event. The numerous changes in the Organizational Structure of the DEOC during the event made the ability to communicate a clear and consistent mission to all teams especially complex.

Observation 10: Mission.

Discussion:

The lack of clear or defined missions led to confusion among teams. Several Team Leads were tasked with creating their team's mission. Consequently, this led to some teams having duplicate missions while others had necessary missions excluded.

Tasks were assigned to the teams which did not pertain to the assigned mission. This resulted in an unclear definition of roles and responsibilities among responders. CDC personnel were instructed to deploy to affected states prior to a requested mission from the states being assigned. The lack of pre-assigned missions led to some deployed CDC personnel being refused by the states. CDC employees were often

deployed in without all details in place. This potential lack of direction proved to be a hindrance in the overall response from teams in the DEOC as well as by teams that were deployed in the field in various states.

Recommendation:

The CDC should outline its overall mission for Emergency Responses and provide this to the response team upon being deployed to the DEOC or the field.

Standard teams outlined in the SOPs should be established in the DEOC. Their mission and responsibilities should be clearly outlined in the DEOC's SOPs. Policies and procedures should be created that outline how teams are established and how their missions are determined. No teams should be deployed without a request from a states accompanied by a clear mission.

Standard / Linked Process: ESF #8, DEOC SOP

Information Flow

This category of observations relates to the management of information during the response to Hurricane Katrina. It addresses issues related to the location of information, forms to capture information and the coordination of input and release of documents. These observations were compiled from the comments captured during the interviews of the key response individuals as well as from an inventory of the DEOC portal.

Observation 11: DEOC intranet portal.

Discussion:

Throughout CDC's response to Hurricane Katrina, the DEOC portal housed all important reports and information developed by response teams, states and other agencies; however, the portal did not have a defined folder structure. While a folder structure exists on the portal, an individual, in many cases, placed documents in any folder that seemed appropriate while other individuals would place the same document in a different folder. For example, after taking an inventory of all files housed in the portal, it was determined that the folder named "Reports by Date" did not contain all reports produced each day; however, daily reports found in this folder could be found in other folders.

Permissions on the event data shared drive (the portal) were not tightly controlled. Everyone involved in the response had access to the portal, which caused an issue pertaining to version control and the misplacement of documents in folders. Through the inventory of the portal, it was discovered that there were several versions of the same document located in various folders. This made it difficult for staff to determine which version was most accurate.

Recommendation:

An Enterprise Content Management (ECM) tool (such as Documentum) provides the version control and access rights required for ensuring effective management of information. Through a single platform, ECM enables individuals to collaboratively create, store, manage, and archive information. An ECM solution would create a strategic advantage for the DEOC by providing a structure to house information so that it can easily be retrieved, while maintaining version control. Policies for granting permission to DEOC portal

should also be reviewed. It is recommended that a smaller number of response personnel be granted read/write permission to the portal. This would eliminate most document misplacement and version control issues.

Standard / Linked Process: There is no standard or process linked to this observation.

Observation 12: No standard forms for data collection.

Discussion:

Throughout CDC's response to Hurricane Katrina, forms used to collect information repeatedly changed making it difficult for teams to provide consistent information in a timely manner. This further hindered consistent report development for DEOC, COTPER and CDC Leadership. It should also be noted that each state and/or agency had its own format for Situational Reports thus making the aggregation and analysis of the data complex.

Recommendation:

Standard data collection forms are recommended for response teams, states and other agencies. All finalized forms, with examples and instructions on how to complete each, should be archived in the DEOC portal for easy access and reference. It is also recommended that each team be given a 'firefly' that contains every form to be completed during a response. This would ensure each team had all required forms that need to be completed daily, weekly, etc. Additionally, during a response, one individual should be designated as the point of contact for each team who is responsible for information requests.

Standard / Linked Process: There is no standard or process linked to this observation.

Observation 13: Flow of information.

Discussion:

During Hurricane Katrina, data was supplied by different sources at different times; requests were approved at random. At the beginning of the response, all information was cleared through a subject matter expert (SME) at the in document clearance. However, after the reorganization of the DEOC during the response, locating a SME to approve information was determined to be difficult. Compiling reports such as the Daily Director's briefing was disorganized – information was received from different various sources at different times. On occasion, there were contradictory reports and mismatched daily statistics.

Recommendation:

A formal process needs to be developed to explain the necessary steps for the production of each standard report. The process would designate which teams need to deliver what specific information and when. It would also include a formal process on the clearance of information and the chains of approval the information must go through until it is approved to be incorporated in a report. Additionally, the process would designate who the report is to be delivered to and the specific times.

Standard / Linked Process: There is no standard or process linked to this observation.

Observation 14: Management of daily tasks and action items.

Discussion:

The absence of a tracking tool to manage action items made it difficult for members of the response teams to know which tasks were being actively pursued and by whom and when these tasks had been completed. As a result, duplication of effort of some tasks or failure to recognize an outstanding action item occurred.

Recommendation:

To help eliminate this issue, the DEOC should implement the HHS Incident Command System management software (WebEOC) for all future emergency responses. This system would be a central clearinghouse for action item tracking that is web based for easy access from CDC or remote locations. This would ensure that all assigned tasks are completed.

Standard / Linked Process: There is no standard or process linked to this observation.

Communications – Internal

This category of observations has aspects of internal communication channels both within the DEOC and within the CDC itself. This category may reference "communications" or "information" channels interchangeably. Some of the observations describe the results of multiple changes in the organizational structure of the DEOC and the resulting confusion of information channels (i.e., what reports were to be sent and what reports were to be received and by whom. Some of the identified issues may have factors that pertain to more than one category of observations.

Observation 15: Clear lines for communications.

Discussion:

The changes to the DEOC organizational structure after the response started and after CDC teams were deployed resulted in communications channel gaps among different agencies, within the DEOC, and for teams deployed to the field. The ability to provide updated information on to all concerned parties was challenged. This resulted in the following information being communicated inaccurately: Correct lines of authority; the organizational structure in the DEOC; the appropriate e-mail box for posting information; and the correct reporting channels for vital information from the deployed CDC staff. Changes in organizational structure within the DEOC led to confusion for the field teams reporting structures and the lack of communications channel knowledge resulted in unclear information channels for receiving data. CDC and deployed staff were frustrated by not knowing to whom vital information was to be provided. This caused them to either revert to previously known patterns for communications or mass dissemination of information to numerous individuals. This resulted in overloaded mailboxes, and in some instances, the delay of decisions or approvals for necessary actions. Initially the ITSO staff was asked to set up an email box system to facilitate communications. This was initially successful; however, changes to the organizational structure within the DEOC required mailbox changes. These changes resulted in additional confusion and miscommunications. Besides the numerous changes in structure that impacted communications and information exchange, the situation was further exacerbated by the sheer volume of communications; information, data requests, and reporting that accompanied this event. This made it difficult to cope with information management. Interviews determined that when questions were raised to the DEOC, there was not always someone identified to triage issues and disperse them to the appropriate

teams / subject matter experts. Internal CDC and DEOC communications were confusing or inadequate because of the organizational structure changes. People were unclear where information needed to be directed and the communication between the teams in the field was inadequate. Teams were unaware of what other teams were doing. There may be instances where different teams from the CDC may be able to combine resources and become more efficient, or provide technical expertise or equipment that meets the needs of another team. In these situations the ability to communicate is important and the knowledge of who is in the field and how to contact them is essential to providing the needed assistance.

Recommendation:
When an incident response begins, the established organizational structure within the DEOC should be maintained, and the resulting lines of authority, lines of communication, and information flow should be published in order to be understood by all individuals or agencies involved with the response. The publication of lines of authority and communication, along with contact data (e-mail addresses, URLs, and telephone numbers) should be a priority for the DEOC staff when the decision is made to move to "response" mode. This publication is dependent on an "approved" organizational structure and the identified lines of authority and communication. This information should be reviewed for accuracy and updated with current information by Division of Emergency Operations (DEO) staff. It should be provided to all deployed CDC staff as part of "pre-deployment" processing. When finalizing the organizational structure and SOPs, the help desk responsibilities should be included. One responsibility that should be included is the "Watch Officer/ Desk". This position should be staffed by those experienced in CDC emergency response operations. Responsibilities of this position should be communicated internally within DEOC, within CDC, and externally to organizations that are interacting with the DEOC. The role of the SMO is important to the coordination of CDC support communication in the field. They should be responsible establishing communication channels, and contact information and protocols. Information needs to be provided to all concerned.

Standard/ Linked Process: DEOC Hurricane Response Plan and Organizational Chart for DEOC

Observation 16: Emergency Operations Plans.

Discussion:
The CDC Emergency Operations Plan (EOP) is a 2005 Draft, while Annex J - Natural Disasters, is dated 2004. The basic document and associated annexes with different years can cause confusion to the user. Current draft documents have good information but because they are in "Draft" form, they provide opportunity for doubt and confusion as to what is the latest edition and which version contains the approved organizational charts, chains of command, reporting channels, check lists, etc.

Recommendation:
Recommendations from previous After Action Reports (AAR) suggest having established effective dates on all documents. This recommendation continues to hold true and should be implemented at the earliest time possible. Updating the appropriate documents/processes allows the organization to become better prepared to respond to the next disaster. Periodic feedback should be provided to all employees as to the process for implementing recommendations. This feedback can create employee buy-in and the understanding that the AAR process can be followed through to implementation.

Standard/ Linked Process: CDC EOP Draft and Annex J- Natural Disasters, 2004

Observation 17: Communication with CIOs.

Discussion:
In the early stages of the response, the deployment team process of identifying individual members for teams was met with resistance by some CIOs. The internal communication from the top levels of CDC leadership to the various CIOs did not appear to have been distributed as needed may have been overlooked by some of the impacted agencies/ branches within CDC. Early messages from top leadership to CIOs would have assisted team leads in the process of filling team roles.

Recommendation:
CDC leadership can facilitate the process of identifying appropriate people to staff the teams (both for DEOC staffing and external deployments) by emphasizing the importance of the CDC response effort early in the process. This may be done using several venues: In person meeting with CIO leaders, conference calls, and e-mails. There is a need for this internal communication to be repeated during the early stages of a response to ensure that all CIOs understand the need for expediting support for teams both within the DEOC and in the field. Another recommendation to facilitate the staffing of the DEOC as well as teams to be deployed is to use a system to assign individuals such as an alert roster. Further, the identification of back-up teams would strengthen the process. In order to be equitable in these assignments, the system may require individuals to be on the primary team for an established period of time, (i.e., six months at a time or six months every other incident.) The intent is to have a system that shares the likelihood of being deployed among those who are eligible.

Standard/ Linked Process:
CDC Emergency Operations Plan (EOP) DRAFT, 2005
(Decisions and Information Process Flow)

Observation 18: Handling of information requests.

Discussion:
As leadership positions and DEOC structure changed, requests for information also changed. The changes in requests for information appeared to have been in response to requests from outside agencies (i.e., FEMA or HHS) but did not appear to have been communicated adequately. This often resulted in a reluctance to provide the requested information or confusion as to what information was needed. This was perceived as inconsistent communications or the appearance that communication was often dependent on leadership versus system and procedures. This situation was created as a result of the changes in organizational structure and changes of the DEOC Incident Manager.

Recommendation:
This observation is consistent with the need to establish an organizational structure and appropriate channels for communications and information requirements as well as expected reports. When this is established and the appropriate SOPs are developed it may be appropriate to develop a core list of EEI (Essential Elements of Information) for various hazards, and include this in the DEOC SOP. This would help to standardize the communications expectations and remove it from the influence of personalities.

Standard/ Linked Process:
CDC Emergency Operations Plan (EOP) DRAFT, 2005

Observation 19: The OFRD process.

Discussion:
Initially the OFRD deployment process for PHS officials that were also CDC staff members was not communicated within the CDC and the DEOC. An attempt was made to have this process take place within the DEOC so that the communication concerning the tasking/ deployment of the uniformed PHS officers could be provided to the affected CIOs.

Recommendation:
CDC, HHS, and PHS command and control, or human resources, need to develop a process for the deployment of these officers that is not disruptive to the CDC's ability to respond and track the deployment of their staff. The system needs to have some form of communication that is visible and concurrent for all impacted agencies (both prior to deployment and upon their return).

Standard/ Linked Process:
There is no standard or process linked to this observation.

Observation 20: Prioritization of strategic, tactical, and operational issues.

Discussion:
If the daily briefings are to be utilized for decision making it would be beneficial to provide/categorize information into the various tiers: strategic, operational, and tactical.

Recommendation:
If not already standardized, the format for daily/periodic briefings to be provided to CDC leadership during an incident response mode should be established and included in the DEOC SOP. This format should provide for the different categories of information/decisions.
Standard/ Linked Process:
CDC EOP DRAFT- 2005
(Decision Tiers)

Observation 21: "Hand Off" between shifts.

Discussion:
Communications internal to DEOC and shift changes did not appear to have included all key personnel. When a transition between shifts is not provided, the next shift may be in a reactive mode instead of proactively accomplishing or following up on priority items.

Recommendation:
The DEOC SOP should include shift change protocol for key personnel and action desks/teams. These protocols should include what items need to be covered and the methodology for transition (notebook/duty log entries, e-mail posting, verbal communication, and/or white board comments).

Standard/ Linked Process:
CDC EOP DRAFT- 2005

Observation 22: Activation and deactivation dates.

Discussion:
There was some confusion as to when the DEOC mode went from "Alert" to "Response" mode, and when it changed to deactivation.

Recommendation:
It may be difficult to identify a "trigger" mechanism that signals when the DEOC activity goes from one mode to another, but the communication of a change should be sent out within the DEOC to all CDC CIOs and all appropriate activities interacting with the DEOC. It is also important to realize that certain parts of the response (CDC elements) may change response modes while others will continue to actively respond and as such the communication of what is happening is an important part of the DEOC response. Additionally, a recovery mode should be added as an additional response mode. The levels of activation and the process that initiates these different levels need to be defined in the EOP and DEOC SOP.

Standard/ Linked Process:
CDC EOP DRAFT- 2005

External Communications/ Interagency Coordination

Communication channels were not clear during the Katrina response. Specifically, breakdowns were noted between the DEOC and deployed teams, CDC and other HHS Operations Divisions (OPDIVs), as well as CDC and various State officials. This category addresses the efficiency and effectiveness of communications between CDC and Katrina response partners, as well as the policies and procedures that provide guidance for these interactions.

Observation 23: Cooperative relationships with State Public Health Officials and/or Emergency Responders.

Discussion:
Communication with individual States was not as clear and consistent as needed, resulting in inefficient emergency response coordination. State emergency management assets, capabilities, and competencies may not be fully taken into consideration prior to CDC missions/deployments. This can lead to unnecessary duplication of effort, ineffective responses to requests for assistance, unnecessary burdens to accommodate Federal assets in the field, as well as inconsistent data capture and reporting.

Recommendation:
Create and publish emergency preparedness policies and procedures to establish ongoing communications, build trust, coordinate capabilities, and maintain cooperative working relationships with State officials. These policies and procedures may include cooperative training on the ARF/ MA process, recurring emergency management leadership (State and Federal), strategy planning, and a continuing communication plan to promote awareness of CDC emergency response capabilities. Where policies and procedures currently exist, they should be strengthened and made known to the CDC response community for situational awareness. Where Senior Management Officials (SMO) are in place, they function as members of the state leadership team and become a natural point leader in the state.

Standard/ Linked Process:
CDC Emergency Operations Plan—Draft

Observation 24: Communication between HHS OPDIVs.

Discussion:
Coordination and communication between the CDC and HHS during the response was not effective. There was little or no coordination of missions across the various HHS OPDIVs. Despite published Emergency Support Function definitions of lead and support roles, there was minimal coordination among OPDIV leadership with regards to reporting criteria and sharing of information.

Recommendation:
Create and publish emergency response policies and procedures that address the establishment of direct communications among HHS OPDIV leadership for strategic coordination of efforts. These policies and procedures may include definitions of Liaison Officers' roles and responsibilities specifically related to inter-OPDIV coordination, and should be shared with HHS OPDIVs in order to solicit feedback and support.

Standard/ Linked Process:
CDC EOP—Draft

Observation 25: ARF/ MA process.

Discussion:
The ARF/ MA process facilitates the appropriate responses to States' requests for emergency assistance. Certain skills and knowledge are required for the process to provide the most optimal results. A lack of these particular skills and knowledge, combined with obsolete and impractical technical requirements, led to breakdowns in the process and/or circumvention of the process. For example, if an approved ARF/ MA uses the term "technical assistance," that request is 100% funded by FEMA. However, if the term "work" is used instead it results in a cost-share with the State and FEMA. Technicalities like this lead to breakdowns in the process. Additionally, resources were deployed to the field without a formal request from the State. Existing policies and procedures define CDC's emergency response role specifically to assist States when formally requested. There are cultural challenges within the CDC that blur this response role definition.

Recommendation:
Refine the existing ARF/ MA process to encourage compliance and efficiency. Analyze the potential benefits of available technologies, like Blackberries, to process, track, and archive requests. Combined with a secure electronic signature mechanism across all agencies involved, a careful analysis may enhance the manual bureaucratic processes currently in place.

Standard/ Linked Process:
DEOC Hurricane Response Plan—2005

Observation 26: DEOC and CDC field assets.

Discussion:
There are no formalized communications processes or procedures to connect field teams with DEOC points of contact.

Recommendation:

Create and publish standard processes and procedures to facilitate the exchange of information between the DEOC and field assets. These processes and procedures may include standard titles for DEOC staff for reporting consistency purposes amidst shift changes and a standard mailbox for all related communications to be sent, accessed, and archived.

Standard/ Linked Process:
CDC EOP—Draft; DEOC Task Force Standard Operating Procedure—2005

Staffing

The scale and scope of the Hurricane Katrina response posed an unprecedented challenge to those tasked with responding to emergency assistance requests. The existing processes for rostering and tracking deployed staff lacked the scalability to effectively respond to an event of this magnitude. The observations in this category represent the issues present during the response. These issues include the staff skill utilization, employee work rotations and staffing needs for operational information capture and administrative roles in the field.

Observation 27: Resource Tracking System (RTS).

Discussion:
RTS is ineffective as a rostering tool for emergency deployments for several reasons: There is no mandate to keep resource profiles current; the database does not provide detailed information required by deployment teams; No protocols or standards exist for supervisors to validate profile data; Security restrictions prevent supervisors from accessing profiles to make pertinent updates. The various Emergency Coordinators relied on collegial relationships to fill rosters for appropriate responses to deployment requests. Despite these cooperative efforts, many deployed resources filled roles unrelated to their area of expertise.

Recommendation:
Create and publish policies and procedures that establish a centralized database to maintain a comprehensive, current, and detailed dataset for all CDC resources. These policies and procedures may include a mandate for regular profile updates by each resource, mandatory supervisor approval, and an approved security hierarchy to ensure timely and appropriate access during emergencies. This database may also provide functionality to generate all necessary emails/instructions for various aspects of deployment.

Standard/ Linked Process:
CDC EOP—Draft

Observation 28: Tracking deployed resources.

Discussion:
CDC processes that relied on Resource Tracking System (RTS) for tracking deployed resources could be improved. Any functionality that RTS has to track status of resources was not utilized. Excel spreadsheets were manually created and managed during the response to account for this lacking functionality. Policies and procedures were created specifically for this manual process, but there is no protocol to archive these documents for future reference. Daily reconciliation of these spreadsheets was time consuming and inaccurate.

Recommendation:
Create and publish policies and procedures that establish and require the use of a scalable, accessible, and accurate deployed resource tracking tool. This will likely require an analysis of RTS to determine the extent of its capabilities. These policies and procedures must reach beyond the physical tracking tool to address mandatory communications between deployed resources and the DEOC, as well as coordination with Commissioned Corps deployments. This tool may provide a report-in function – a place where team leads could log in a daily update or, if the update is called in, the desk officer could log the update.

Standard/ Linked Process:
CDC Emergency Operations Plan—Draft

Observation 29: Management of resource skills and utilization.

Discussion:

The assessment of resource skills is an important part of the staffing decisions and organizational structure creation during an emergency response. Teams appeared to have been created based on availability without regard to area of specialty or expertise. Additionally, Team Lead roles appeared to have been inadequately staffed either on the grounds of experience or availability.

Recommendation:

All deployable recourses should be listed within the Resource Tracking System (RTS). Resource skills and personal information should be updated within the RTS at least biannually to ensure accurate identification of teams and role coordination during a response.

Each role within the standard organizational structure should have predetermined skill sets. These skills should mirror the necessary skills required to adequately function in the assigned role. When possible, predetermined responders should be identified for roles. This identification further eliminates the possibility of inappropriate use of resources. Additionally, response plans should be written to include potential deployment teams and should also have identified skill sets for each role within these teams. Team leaders should possess not only the skills necessary to complete the mission, but should also have prior deployment experience. Preferably, these individuals would have acted in a team leadership role previously.

At the time of a response, roles within the standard organization structure and response roles should be identified through the RTS and filled according to the predetermined skill needs. The Team Lead role should be the first role identified for each mission.

In the event that ad hoc roles or teams arise during a response, the Team Leader should be responsible for developing the resource requirement and necessary corresponding skill sets for each role according to the team mission. These team requirements should be forwarded to the deployment team to ensure that they can identify and coordinate the necessary team members with the appropriate skill sets for a mission. This information should also be shared with the DEO Plans, Training and Exercise Team for inclusion in response plan revisions.

Standard / Linked Process:

CDC EOP – Draft

CDC EOP Annex J – Natural Disasters
DEOC Hurricane Response Plan

Observation 30: Employee work rotations.

Discussion:

During the Hurricane Katrina Response bimonthly rotations were recommended but were not enforced. During our interviews, it was reported that people worked longer than the designated two-week period in many cases. It was also noted that many roles required individuals to work shifts of 10 – 15 hours. In some cases individuals worked 24 hours or longer continuously with only necessary breaks. This behavior occurred because of employee dedication but also because of responsibility hand-off fears. People stated that they did not feel comfortable handing off their responsibilities to anyone else at the shift change because they feared informational transfer gaps. In some cases, rotation schedules did not allow for resource overlap and therefore created fragmented resource coverage and information hand-off.

Recommendation:

Employee burnout results in inefficiencies and dangerous working environments. Burnout should be avoided by enforcing bimonthly rotation of all response roles. Additionally, daily schedules should be created that include overlapping shifts hours, with predetermined staggered employee breaks. Each shift change should begin with a briefing of the prior shift activities and next steps and tasks for the upcoming shift.

The Team Leaders should be responsible for working with their team to develop shift rotations and break schedules. They should also be responsible for ensuring that each team member works no more than the designated shifts hours and take breaks as outlined in the schedule. They should be responsible for facilitating the transfer of information and ensuring the completion of assigned tasks. Team Leaders should also lead by example by adhering to the rotation and break schedules outlined for the team members.

These responsibilities should all be outlined in the SOPs and clearly explained during initial team orientations.

Standard / Linked Process:

Team rotations and employee schedules are not defined in any of the SOPs

Observation 31: Support staff needed.

Discussion:

Teams deployed to the affected areas felt burdened with activities outside their missions such as administrative duties and media relations. In most cases the administrative duties they undertook were necessary support activities to their missions such as making copies of communications or resolving technical issues with equipment such as laptops. The teams also found that media relations must be maintained to ensure that the CDCs involvement in the response was not portrayed inappropriately or negatively to the public. The completion of these activities required that time, focus and energy be shifted from the response mission.

Recommendation:

Deployed teams should be adequately staffed to handle all requirements defined by the mission. The addition of an administrative assistant to field teams either individually or regionally would help relieve some of the activities that prevent field team experts from performing the tasks associated with the mission. These individuals would be responsible for maintaining open communication with the DEOC, the SMO, and state and local agencies as well as developing positive relationships with media to ensure the CDC image remains positive in the public eye.

These responsibilities should all be outlined in the SOPs and clearly explained during initial team orientations.

Standard / Linked Process:

The use of administrative personnel in a field capacity is not defined in any of the SOPs.

Observation 32: Operational information capture.

Discussion:

Each AAR requires large amounts of employee time to collect, analyze, and compile the operational information and data of the response. In most cases, the person responsible for completing the AAR has competing priorities because of normal daily duties. Efficiencies in the capture of the information could be obtained by having system engineers located in the DEOC during the response to appropriately monitor and capture the operational information of the response as it is occurring.

Recommendation:

System engineering students from Georgia Tech should be utilized in the capture of operational information during the response. They should work directly with all of the teams to ensure that they completely and accurately capture all operational activities that occur during the response. This information includes, but is not limited to organizational charts with individual names, emails, reports, forms, ARFs and corresponding missions, team operations, deployment lists, field team situation reports, response statistics, etc.

Standard / Linked Process:

CDC EOP – Draft

Training and Exercise

The observations within this category address the training needs based on interviews with personnel that were directly involved in the Hurricane Katrina response. The observations recommend that knowledge of Emergency Procedures prior to an event as well as the need for continuous Emergency Response training and exercises would allow for a more prepared response team. The identification and training of leadership roles during a response is also key to a successful emergency response.

Observation 33: Awareness of the existence of SOPs.

Discussion:

Some deployed personnel did not have complete knowledge of the Federal System or the CDC's designated role during an Emergency Response. Requiring an emergency management system training for CDC personnel outside of COTPER could be beneficial. Employees that were informed they would be deployed often did not receive any Emergency Response training prior to their assignment or deployment. During the response assignments were repeatedly changed and personnel were often not assigned to roles based on their defined skill set or previous training.

Recommendation:

An annual standard training course should be created for all CDC employees that introduces the CDC's Emergency Response Role during an Event. This training should include all of the CDC's Emergency Response Plans and the Incident Command Structure. This training should also indicate where staff can locate additional Emergency Response information when needed. All employees being assigned to the DEOC should receive a specific DEOC operational training course that outlines operations according to the DEOC policies and procedures and commonly used reports and terminology. CDC should prepare operational and executive levels of training to ensure that all employees are trained appropriately.

Standard / Linked Process:

There is no standard or process linked to this observation.

Observation 34: Training curriculum needed.

Discussion:

In order to effectively orchestrate an emergency response, all key leaders must have a thorough knowledge and understanding of all standard policies and procedures. During the event, key leadership roles were often developed as the event progressed. Team Leaders often gained emergency response knowledge from their fellow counterparts.

Recommendation:

CDC should create comprehensive training programs to address the roles and responsibilities for the lead positions within the DEOC. This training should include a review of all approved SOPs that are used during an Event as well as the Incident Command System.

In order for SMO's to have a complete understanding of the operational procedures during a response in the DEOC, they should observe the DEOC during at least one event that they are not directly involved in the response.

Standard / Linked Process:

CDC EOP
CDC EOP Annex J-Natural Disasters
DEOC Task Force SOP

Observation 35: Emergency Response readiness is not tested regularly for efficiency.

Discussion:

Presently there are no standard requirements for States to test their readiness plans in the event that they need to implement an emergency response. Money has been designated to the states for emergency preparedness, although the effectiveness of state developed plans has not been tracked.

The CDC does not currently conduct any regular Emergency Response exercises.

Recommendation:

CDC needs to conduct scheduled Emergency Readiness exercises throughout the year. These exercises should allow for all of the procedures during an Emergency Response to be utilized. Upon completion of the Readiness Exercise there should be a team designated to review the observations and create a corrective action plan. It is imperative that the CDC develop stronger relationships with State agencies prior to an event. These relationships will allow the CDC to help ensure that state readiness plans are effective. Building a strong relationship will also assist the communications efforts between the CDC and the state during an event.

Standard / Linked Process:

There is no standard or process linked to this observation.

Observation 36: Experienced personnel needed for deployment.

Discussion:

Due to the unexpected length of the Hurricane Katrina Event, it became difficult to find qualified personnel who were willing and available to participate in the response. Many of the Center Directors were resistant to allowing additional staff to respond to the event due to the amount of their staff that were already involved. Team Leaders often found it challenging to staff needed positions on their team.

Due to the lack of available responders, many personnel were working longer hours and were deployed for greater lengths of time than expected. Upon returning from participating in the response, many CDC employees found that their routine CDC responsibilities were not being completed.

Recommendation:

The Centers should identify a core group of personnel who will receive detailed Emergency Response training prior to an event. These pre-identified responders will understand their designated roles in the CDC's response to an emergency. These employees should be trained and available to begin a response at any time.

There needs to be a list of trained employees available to join each of the standard Response Teams be updated and kept in the DEOC. This list should include potential first and second wave responders. Upon disengagement of a response, all personnel involved should be debriefed on the lessons learned that are identified in the After Action Report.

Standard / Linked Process:

CDC EOP
DEOC Task Force SOP
CDC EOP Annex J- Natural Disasters

Logistics

This category of observations relates to CDC's ability to deploy people to the field in a timely manner, with the appropriate equipment to sustain them and to enable them to communicate as needed. It also addresses the aspect of reimbursement of expenses for deployed personnel. Given the unprecedented number of people who actually deployed to the field, and the numerous, dispersed locations for deployments, the issues related to logistical support for deployed personnel were relatively minor in comparison to the expressed satisfaction for the provided support.

A separate DEO Logistics Hotwash (AAR) was conducted and the notes from that meeting can be found in the Appendix.

Observation 37: Logistics and "rapid needs assessment team".

Discussion:
There is a need to deploy a logistical element with rapid needs assessment teams from CDC to each impacted area that is expected to have deployed CDC personnel. This will enable the team to provide a list of logistical needs for deploying personnel. Event planning and forecasting did not seem to occur within the logistical element. Individuals interviewed believed that strike teams (or rapid needs assessment teams) should be available to go to the affected areas at the beginning of the response to assess the situation so they can give direction that will enable the teams to be prepared prior to deployment. They also believed that relationships need to be developed with the other HHS operational divisions (OPDIVs) to coordinate this effort. The absence of a "rapid needs assessment" capability can result in a slower or ineffective response. The planning for the provision of such a capability is necessary to guide CDC's response to an incident.

Recommendation:

Use of the Plans, Training and Exercise Team within the Department of Emergency Operations may provide a more focused and efficient response to future incidents. This cell should have a logistics component and it should be included in all DEOC SOPs.

Standard/ Linked Process:
There is no standard or process linked to this observation.

Observation 38: Identify trained volunteers.

Discussion:
The nature of Katrina and the CDC response resulted in the use of many more people than previous hurricane responses. The CDC staff was quick to respond to staffing needs as volunteers, but there was an initial learning curve for individuals doing a job for the first time. This also applied to the logistical support team.

Recommendation:
It is appropriate that all areas that provide support during an incident response, and especially those areas that rely on "volunteer" labor, have a list of trained volunteers, and a process to train and add people to the list.

Standard/ Linked Process:
DEOC Hurricane Response Plan- 2005

Observation 39: Deployment of ITSO personnel.

Discussion:
The ability to respond and provide needed IT support to deployed CDC resources was difficult, both on campus and to deployed areas.

Recommendation:
ITSO regional support should be provided in CDC regional locations where field teams are present. This can be accomplished by providing a support package with the deployed SMO.

Standard/ Linked Process:
DEOC Hurricane Response Plan- 2005

Observation 40: Reimbursement of expenses.

Discussion:
The volume of people deploying appeared to have overwhelmed the ability of the Financial Management Office to service those deploying and quickly process the travel vouchers when they returned from the field.

Recommendation:
The Financial Management Office should address the need for surge-capacity that would enable them to provide timely support when a large number of people are deploying and/or returning during a short time period. It should also be communicated to deployed personnel that due to the unusually large volume of

deployments that the processing time for travel vouchers may be longer than normal. The CDC should also consider providing controlled government credit cards for deployed CDC Staff.

Standard/ Linked Process:
DEOC Hurricane Response Plan- 2005

Observation 41: Travel and equipment.

Discussion:
Although the equipping of deploying CDC personnel prior to their deployment was efficient, it did present difficulties for some individuals who had to carry personal gear as well as CDC equipment. The experience of individuals deployed may have further complicated this issue. Individuals who have experienced many deployments are used to packing for the field and handling of extra equipment.

Recommendation:
The logistics support team should review their procedures for support of large responses to see if it is feasible to establish a regional support office that would issue and receive equipment from people once they deploy to the region. This should be established early on during a response to better support deployed staff. This concept should be tested in a training exercise to see if it provides the anticipated benefits.

Standard/ Linked Process:
DEOC Hurricane Response Plan- 2005

Observation 42: Family contact.

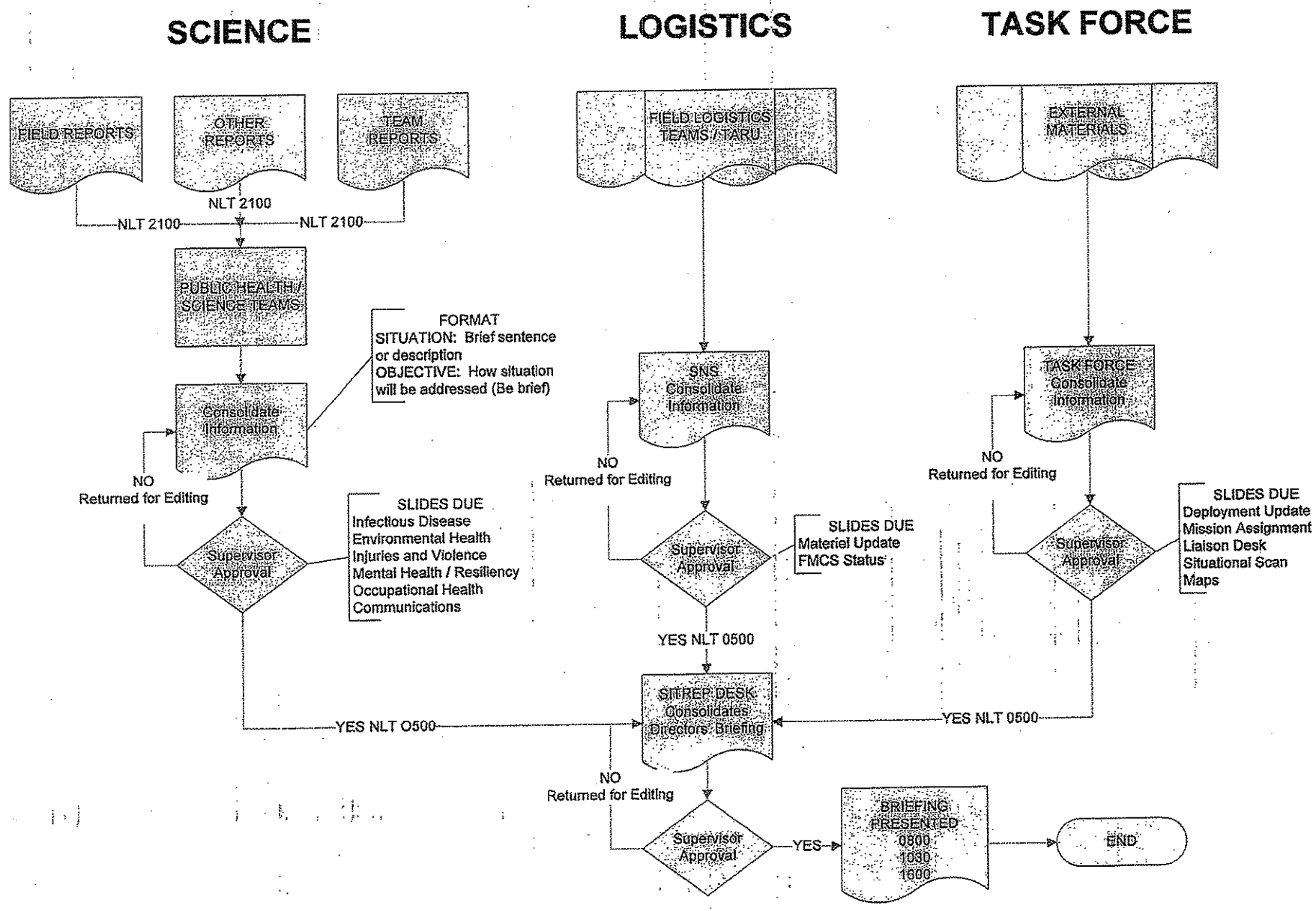
Discussion:
Deployed CDC staff who were responding to a state's request for assistance did not always have the ability to contact their families.

Recommendation:
A CDC- wide policy for the tracking of deployed personnel and the periodic contacting of those individuals to determine any support needs to include periodic information to the family on the health and welfare of their deployed family member. This system should be part of all SOP activities within CDC and could be initiated during a deployment readiness processing system (or pre-deployment processing). This system should ensure that there are no duplicate contacts being made, as these could become disruptive to the accomplishment of support response activities.

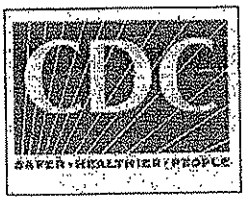
Standard/ Linked Process:
DEOC Hurricane Response Plan- 2005

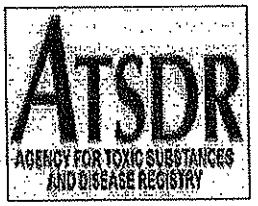
SITREP FLOW PROCESS

Appendix G



Appendix H





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CDC Timeline: Hurricanes Katrina & Rita

As of 11/16/2005

CDC Event Timeline:

8/25/2005	
	CDC DEOC monitoring Tropical Storm Katrina (FL).
	HHS anticipates a FEMA Mission Assignment for participation in the Florida Rapid Needs Assessment Team.
	CDC Director approved moving DEOC status from ALERT to RESPONSE. DEO Task Force members identified & notified.
	Eye of storm passing north of Miami w/ 90+ mph winds, now near Opa-Locka. 3 deaths reported.
8/26/2005	
	Rostering CDC personnel, to be on call and or deploy as early as 29 Aug 05.
	Two NCEH individuals identified for departure on 8/27/2005.
	An activation letter has been issued from FEMA Region IV authorizing pre-declaration activities including the RRCC and the ERT-A's and RNA's in AL and FL.
	HHS authorizes the deployment of 2 CDC personnel to Ft. Walton Beach, FL to participate in the Florida and Alabama Rapid Needs Assessment Teams in response to Hurricane Katrina.
8/27/2005	
	HHS has an "activation declaration" letter signed by the FEMA Ops Chief authorizing one person for a RNA and a member for the ERT-A, both to FL. NCEH will launch deployment to fulfill the requirement.
	DHHS conducted a conference call with OPDIVs. HHS Incident Management team is hosting a 4 p.m. conference call to discuss Hurricane Katrina preparation activities and support.
	SNS has taken all necessary actions to protect its assets relative to Hurricane Katrina making landfall in the next 36 hrs.
	Hurricane Katrina identified as a Category 3 storm with a possible upgrade to Cat 4 or 5 by Monday morning.
	SOC is standing up 8/28 at 0700.
	HHS has requested four liaison officers (LNOs) to serve on an HHS SERT.
	Received SERT on-call roster and ensured that CDC personnel were on it and 4 CDC employees receive mission orders to serve as SERT augmentees.

	4 CDC personnel deployed to FEMA Reg 4 RRCC ESF-8 desk
8/28/2005	
	Request to identify 4 personnel (2 to MS, 2 to LA).
	CDC Executive Staff briefed
	Katrina passes over South Florida as Cat 1, re-emerges in Gulf as Cat 3; expected to go to Cat 4 overnight, anticipated to strengthen to a Cat 5
	Received Mission Orders from SOC: • 1 staff member for Rapid Needs Assessment to Houston • 2 staff members for Rapid Needs Assessment for Meridan, MS Naval Air Station
	HHS requested 1 staff member in Houston for follow-up in LA
	SNS tasked by Asst. Sec. Simonson for deployment of material to the Superdome shelter in New Orleans (50 medical providers to Superdome)
	SNS verified FEMA staging area
	(b)(2) put on hold by HHS pending destination.
	Request to deploy 9 CDC officials to Jackson, MS from HHS
8/29/2005	
	1am CDT - Center of Katrina about 135 miles south-southeast of New Orleans; wind gusts of 101 mph reported in Southwest LA
	CDC Foundation Credit card policy reviewed
	3am CDT- Center of Katrina 110 miles south-southeast of New Orleans
	DSNS- update; DEOC surveying hospitals & working with hospital associations to assess medical/hospital supply needs
	Mobile, New Orleans, Gulfport, and Ft. Walton Beach airports close
	8:30am update for Dr. Gerberding
	Guidance for Hurricane Katrina Team Leads released.
	9:30am – Katrina officially Cat 4; sustained winds of 145 mph
	Tasking from HHS for immediate acquirement of 1000 beds (5000 bed goal); ship to Camp Beauregard
	Pensacola and Baton Rouge airports close.
	DEOC contacts CDC colleagues stationed in LA, MS, & AL for assistance needed in pre-and post-event Katrina
	Deployment website on EOC portal is made available
	11:00am- Katrina is Cat 3 35 miles east-northeast of New Orleans
	3pm – Internal Conference call
	HHS will work with SNS to identify priority items for formulary
	"Incident action plan" form created
	HHS requests Support Agencies to identify personnel to staff mobile hospital
	From media: State of Emergency declared by President for MS, LA, and AL
	CDC alerted to work with U.S. Coast Guard and Environmental Protection Agency on potential large scale hazmat incidents due to oil and chemical industry in threat area
	HHS activates all Commissioned Corps Officers; sends out list of those meeting basic training requirement for review and approval
8/30/2005	
	Hurricane Katrina Fact Sheets sent for reproduction and distribution
	FMCS trucks en route to Louisiana
	Permission requested from CDC to deploy a team of approximately 16 people to set-up the FMCSs that have already been shipped, plus those that will follow-on.
	The VA is rapidly working to acquire all material requirements for an additional four FMCS Type IIIs (HHS funding provided). CDC's PGO will assist with any problematic procurements
	SOC has received an ARF to identify 20 mental health professionals to support mental health and grief counseling to victims of Hurricane Katrina

	Personnel selected for deployment to the LA Department of Health in Baton Rouge, LA. pending final MA
	Request authority to deploy an additional 16 people, as follows: • 2 - Team Dulin TARU members that did not deploy with the initial TARU Team. Increasing support requirements within LA is driving this need for Dulin to round out her TARU. • 12 - People to set-up the FMCSs that are enroute or that subsequently flow into LA. 2 - of this team are part of the DSNS, 10 are Seven Trees contractors who supported prototype testing of the FMCS and have excellent knowledge of these facilities. • 2 - members of the DEOC's Incident Support Communications Team plus their communications package to support the communications needs of the FMCS set-up team
	On-site assessment of the LSU location for the FMCS is not acceptable
	All communications along the coastline of the hurricane hit areas are down. Only a few select individuals have stated that they have any cell phone signal at all. Recommend sending satellite phones and Local Area Networks as the main method of communication while deployed in these areas.
	Hurricane Katrina made landfall over Louisiana and the Golf Coast as a Category 4 storm Monday morning.
	Incident Support Team (IST) communication, arrival in Baton Rouge, LSU campus
8/31/2005	
	Katrina has been downgraded to a tropical storm but the threat of heavy rain and tornadoes continues in storm's path
	70 patients currently being evacuation from Tulane to LSU FMCS site
	Emergency situation; PMAC is in dire need of pain meds
	38 US Public Health Service Officers (doctors and nurses) to Jackson, Mississippi for deployment
	HHS has 217 US Public Health Service officers on stand-by for deployment to support medical response in Louisiana, Mississippi and other Gulf states.
	CDC has 30 staff members deployed, with group of 7 OFRD standing by
	DSNS will investigate availability of snake anti-venom and calcium gluconate for potential hydofluric acid exposure (exposure could occur from release of chemical from local chemical plants).
	Veterinary/animal issues identified ▪ carcass disposal ▪ manure lagoon overflow ▪ bites ▪ stings ▪ animal control ▪ zoonotic disease transmission or injuries related to contact with rodents, reptiles, pets, livestock and wild animals
	3000 additional FMCS beds have been purchased; (b)(2) warehouse at 1330hrs EST with an ETA of 0105hrs with FMCS product; (b)(2) Log requested (b)(2) go to (b)(2) and hold; Letter of passage was provided to truck drivers to expedite movement of materiel in the region.
	Science working with logistics on list of pharmaceutical/medical supplies sent from Mississippi, and is waiting for approval from HHS for procurement. ATSDR recommended snake anti-venom and calcium gluconate (for HF) amounts to Louisiana to assist in requisitioning these materials.
	TARU augmentation personnel for Team (b)(2) have arrived in Jackson, MS, and are preparing to link up in Baton Rouge. TARU Team (b)(2) is approved and preparing to deploy to Jackson and Magee, MS. The US Marshals Service personnel will split time between these two

	cities.
	Incident Command systems being set up around Mobile, AL; 8 assessment teams being deployed in Mississippi and Alabama
	Gulf ports are closed; Port of NO closed
	140,000 homes flooded (New Orleans); 20,000 people for FEMA to evacuate from the Superdome
	Louisiana Update: • Flooding continues within the city of New Orleans and local officials estimate the flooding will continue for the next 24 to 48 hours. The Superdome is being evacuated to the Houston Astrodome by State, local and Federal assets. No casualty reports have been announced by the State yet.
9/1/2005	
	Activated the CDC Humanitarian Assistance Team
	OSEP is activating the Humanitarian Assistance Team (HAT) for tracking and reporting CDC staff.
	CDC requested to provide 7 OFRD personnel to support the Federal Medical Contingency beds being deployed to LA.
	Received ARF requesting 5 cases of feeding tubes for E. Jefferson Hospital, Metairie, LA.
	As of 11 p.m. EDT, With maximum sustained winds of 25 mph and gusts to 40 mph., Katrina has moved into Canada. Katrina is still producing heavy rain along and to the north of its path while thunderstorms with torrential downpours and gusty winds are occurring to the south across New England.
	Storm Katrina has completely dissipated in the affected area. There are no current weather affects remaining in place. A Public Health Emergency has been declared by the Secretary of Health and Human Services and remains in effect for the entire region.
	FDA ready to fill MA for 35 sanitarians. Awaiting State determination of where to send sanitarians (I.e. Jackson, Hattiesburg or other) for HHS to secure billeting.
	Medication request for Superdome in transit by air; ETA at LA RSS is 0900 (EDT); Seven FMCS trucks completed delivery to Baton Rouge (PMAC); Deployment of TARU team to Mississippi; 20 personnel deployed: 11 in LA; 9 in MS; 4 requests for supplies approved (in procurement process); awaiting approval for 1 MS supply request and 1 LA; continue procurement for 1,000 FMCS Type III; Initiating additional 3,000 FMCS bed purchase to bring total to 5,000 beds.
	Supplies being sent by air to Baton Rouge in support of Jean Bennet (Superdome) list; ETA to RSS 0900 (EDT)
	CDC National Immunization Program received a request for 8000 doses of Td vaccine from Joy Sennett with the Mississippi Immunization program.
	Request granted for use of CDC aircraft to deliver requested vaccines to Mississippi. Attempted to deliver them by ground but the National Guard would not let them into Mississippi.
	Organize the deployment of 10 allotments of FMCS by COB tomorrow.
	DSNS is tasked to immediately ship 25 ventilators from DSNS assets to New Orleans Airport to enable patient evacuation. Approved.
	CDC aircraft delivering 8010 doses of TD (Tetanus) vaccine to MS Dept of Health.
	Procured 18 SUV's for deployable CDC personnel. In the process of procuring an additional 95 vehicles to be used by deployable CDC personnel. Delivered 8,000 doses of TD (Tetanus) vaccine to the Mississippi Department of Health. Procured required field survival gear to support upcoming deployments. Items include back packs, sleeping bags, sleeping mats, mosquito nets, tents, first aid kits, ponchos, etc.
	Governor Rick Perry of Texas sent a request to Pres Bush today for a disaster declaration in Texas - based in the influx of evacuees from states affected by Hurricane Katrina.

09/02/2005	
	Plan to send the NARC package of the PPG for MS via (b)(2)
	Mississippi has requested SNS Push Package. It is expected to arrive at the (b)(2) at approximately 06:30 Friday 9/2/05.
	Louisiana: 28 vents arrived at 0112 EDT at the New Orleans airport 2 September (turned over to DMAT). Deployed Special Needs Supply Request List 1 of narcotics delivered on 2 September at 0444 EDT in Baton Rouge on (b)(2) Insulin shipped from vendor arrived in Baton Rouge at 0444 EDT as part of the VMI Supply List (Jean Bennett-FMCS).
	Mississippi: Deployed 12-hr Push Package to Mississippi 2 September at (b)(2) estimated arrival time in Magee, MS is 0700 CDT.
	FMCS: 4 complete 250-bed (1,000) FMCS Type III sets have been delivered to Baton Rouge 2,500 additional beds will be deployed to MS, LA, and FL on 2 September. 6 additional DSNS personnel awaiting deployment to support the FMCS, 2 US Marshals are escorting Push Package to MS, and 10 additional US Marshals en route to Magee, MS to provide additional security.
	The Push Package has arrived and we have requested OS permission to release
	As of 0817 CST the Push Package has been unloaded and the items discussed previously have been signed over to the state.
	EPA Region VI will be collecting water samples in New Orleans. EPA will be asking the CDC to evaluate the results in a fast turn around.
	Texas update: 32 shelters opened statewide; handling about 8,000 people. Houston is handling about 15,000 people. It is anticipated that about 25,000 individuals will be going to San Antonio It is anticipated that 25,000 individuals will be going to Reunion Center/Dallas. There is a need for DSHS (Dept of State Health Services) to provide medical support for all of these areas. There are about 600,000 people being evacuated from New Orleans.
	Received a request by ESF8 in Dentin, TX (Region 6) to provide a public health liaison ASAP
	The CDC Foundation has received a $2 million contribution to its' Emergency Preparedness and Response Fund from Kaiser Permanente in support of the public health response to Hurricane Katrina.
	Report from the Texas State Health Emer Support Center: -Presidential Declaration for Texas reportedly has been exercised by the White House -As of 2pm Astrodome sanitation issues are prominent - medical system established at Houston Reliant center (same complex) seeing more complicated medical conditions in recent arrivals from New Orleans. -Texas State Health working through Merck/Pfizer (who have promised to open their formularies) and retail pharmacies for significant donations of maintenance-type medications via drop off shipments- to the Houston/San Antonio/Dallas relief sites. -Massive number of buses with evacuees approaching Texas via I-20 and I-10 corridors - little communication received from SOC Louisiana to allow tracking and preparations.
	DSNS will deploy 20 members, Anticipate Sun/Monday departure, Require the full field survival equipment support pk.
	DSNS has requested PGO assistance with the procurement of disposable bed sheets and pillow cases for the 4 - 250 bed FMCS locations. Request PGO assist with location of products, source of supply, and procurement options.
	Health and Human Services Emergency Operations Center for ESF-8 The Arkansas Department

	of Health and Social Services (DHSS) Health Division opened its Emergency Operations Center on 9-1-05 to support the Arkansas Department of Emergency Management's state Emergency Operations Center.
09/03/2005	
	FMCS delivered to Eglin AFB, Florida; England Airpark in LA; and two locations in Meridian, MS before 0600EDT on 9/3/05. DSNS has 12 open product requests and 5 closed product requests as of 0600 EDT 3 September. 90K Tetanus /Diptheria, 22K Hep A, and 35K Hep B to arrive in Baton Rouge, LA by 0630 EDT 3 September. 00 vials of insulin to arrive in LA by 1600 EDT 3 September.
	Literature on disaster epidemiology sent out to team leads
	Literature on hurricane disaster sent to Clinicians
	Infection Control Guidance for Community Shelters Following Disasters, How to Protect Yourself and Others from Electrical Hazards, and Protect Your Health and Safety After Hurricanes printed and shipped to impacted area
	Pre-deployment briefing at 5pm in Auditorium B.
	CDC Foundation received $2 million; resources needed include basic needs for newborns, Epipens, wheelchairs, hearing aids, and glasses.
	Quest Laboratories offers to provide services for lost lab assets.
	Identifies that mosquito control facilities/infrastructure for MS are gone.
	Mission statement for liaisons and PHAs disseminated.
	Deployable Epi list sent out.
	Medical Officers for FMCS are requested.
	CDC teams deployed to Houston and Dallas.
9/4/2005	
	Needs assessment required of shelters outside of effected zones
	40 cases of diarrhea among children and vomiting at the Dallas Convention Center
	LA requested deployment of 28 ventilators from the SNS. Prior to the hurricane we had 4000 vents. We deployed 28 to the New Orleans Airport to support patient evacuation
	Request for a veterinarian to perform rapid triage of pets being brought by evacuees.
	Request for mosquito abatement assistance in Alabama including pre, post environmental assessment
	6 cases of an outbreak of diarrhea illness at the Cajun Dome in Lafayette, LA.
	Request for mosquito control assistance in MS.
9/5/2005	
	Request for vector control in New Orleans (voiced concern at highest level that the mosquito larvae ready to emerge into mosquitoes)
	Preliminary Hospital Report completed on 4 out of 9 hospitals
9/6/2005	
	14 person team to San Antonio TX. Multi-discipline public health staff to be dispatched to assist DSHS.
	Request 16 mental health specialists for Arkansas: • 2 Psychologists • 4 Chaplain/Social Workers • 6 Social Workers • 4 Mental Health Workers
9/7/2005	
	61 boxes of medical supplies were shipped from Supreme Medical Supply Company via UPS to NOLA
	Need for tetanus shots and rumor there are 50 sites across the State distributing the vaccine

	4 cases of CO poisoning have been treated at Jefferson Medical Center in Harvey, LA
	SNS is working action to coordinate diesel/gasoline and chlorine supplies to CDC and EPA staffs working in LA.
	FMCS beds at England Airpark, La. may be re-established in nearby community center as "special needs" shelters. (300 beds will be used for shelters and 700 awaiting relocating.
	FBI LNO assigned to the DEOC.
9/8/2005	
	CDC Teams working diligently to get surveillance data in MS; transmission difficult from field due to damaged communication infrastructure.
	CDC's efforts to establish Kindred Hospital as a Federal Medical Rescue Center has been deemed a priority effort.
	Liaison personnel from the WHO and American Red Cross are now assigned to the DEOC.
	ARF/MA Request from LA DOH for pharmaceuticals and supplies to conduct immunizations in shelters.
9/9/2005	
	Medication or Product delivered: • 30,000 needles intended for Tetanus delivered to MS (b)(2),(b)(6) • 5,600 needles intended for Tetanus delivered to MS
	Immunization activities at the evacuee center in TX expected to start in the next 1-2 days. Hepatitis A, MMR and varicella vaccines will be provided
9/10/2005	
	Guidance for Hand Hygiene distributed to shelters
	SNS formulating plan for recovery and return of SNS supplies from FMCS
	Health and Safety manual for Hurricane Relief Workers shipped to Alexandria, LA.
	At this moment there are no new suspect cases of WNV.
9/11/2005	
	Distributed an assortment of informational material to Home Depot, Lowe's and Consumer Product Safety Commission on dangers associated with improper use of portable generators. Preparing to distribute similar material on use of pressure washers.
	Collaborating with DMORTs, state medical examiners and coroners to establish routine mortality surveillance. LA has confirmed 197 deaths and MS 149.
	Efforts are underway in the next 10 days to develop a plan of action to begin rebuilding the PH infrastructure in NO.
	SMOs in TX and AR reporting shelter populations still significant but generally decreasing.
9/12/2005	
	The Louis Armstrong New Orleans International Airport has set 9/13/05 as the date to re-open the airport to scheduled passenger air service. Cargo flights have resumed.
	MEMA has rejected the request to send NIOSH staff into MS. (b)(2),(b)(6) has recalled the team.
	Emergency response in Alabama has not involved public health and no needs are reported from the JFO. DSLR is obtaining information from the state health department.
	Staggered rotations of Baton Rouge and N.O. teams to begin this week.
	Sent health and welfare message to CDC personnel in the Carolinas anticipating Hurricane Ophelia reaching landfall on Wednesday.
	CDC Public Health Rapid Response Teams will be returning from the field this weekend. The current plan is that 2 to 3 staff will remain in Dallas and San Antonio.
	CDC-W had an inquiry from the House Committee on Transportation and Infrastructure, Subcommittee on Water Resources and Environment, minority side, about what ATSDR (1) is doing currently, (2) might be doing in the immediate future concerning draining the city, and (3) might be doing in the long term concerning the potential health impacts resulting from Superfund sites affected by Katrina.

Appendix H

9/13/2005	
	Cluster of 30 adults and children at an evacuation center in Dallas with skin abscesses, culture positive for methicillin-resistant *Staphylococcus aureus*.
	NCID will draft a letter response to EPA, stating our recommendations on pathogen testing of water.
9/14/2005	
	CDC personnel deployed to Dobbins ARB notified that FEMA will be closing down activities at that site.
	Capturing health data on evacuees prior to their return into the community
	All SE LA mosquito control districts resumed activity except New Orleans
	No major increases in proportion of gastroenteritis, acute respiratory illness, fever or injuries – 9174 patient visits to 13 facilities
	N.O. hospitals becoming operational
9/15/2005	
	Local, state and federal agencies want information to assist with planning for the needs of evacuees and to target needed programs. 11 CDC staff deployed - CDC to conduct 2 surveys with state and local partners ▪ The Behavioral Migration Survey - measures which communications methods are accessed by evacuees, factors which may guide future migration choices and plans for relocation. ▪ Mental Health Survey - measures risk factors for psychosocial morbidity. Will produce an estimate of nonspecific causes of psychiatric morbidity, which can be compared to reference populations to establish the relative psychiatric health of evacuees.
	EPA sampling shows hydrocarbons are present in sludge
	Communications New Focus of News Media Stories: ▪ High risk groups get first priority for flu vaccines ▪ Amount of flu vaccines available ▪ Flu shot recommendations
9/16/2005	
	ARF received from TX for 20 CDC personnel to conduct Rapid Behavioral Assessment among evacuees
	OFRD will be deploying Commissioned Corps officers to support the mass immunization campaign in LA. Planning is being coordinated with NIP.
	As of September 16, there are 846 reported Hurricane Katrina-related deaths. In the past 24 hours, 92 new deaths were recorded, including 84 in LA, 6 in TX and 2 in GA.
	CDC is developing draft guidance with Occupation Health and Safety and Mental Health Resilience for post-deployment screening of responders. This guidance was developed at the request of HHS. The draft will be submitted this morning to OSHA, which oversees the worker safety and health Emergency Support Function annex, for that agency's review and to discuss appropriate distribution.
	CDC is developing "Recommendations for Personal Protective Equipment for General Public Conducting Cleaning Operations following Hurricane Katrina". It is presently being reviewed and clearance for posting is expected today.
9/17/2005	
	Suspected cases of TB ▪ Only 1 case currently under evaluation - evacuated from NO Dome; chest X-ray c/w TB and +PPD ▪ Patients receiving treatment
	5 Varicella cases reported in MS ▪ 2 isolated adult cases not in ECs (Hancock and Jackson counties) ▪ 3 pediatric cases in EC in Harrison county ▪ MS officials working with CDC on testing, vaccination, prophylaxis and management

	Developing draft guidance with OHS and Mental Resilience on post-deployment screening of emergency response personnel; will share draft guidance with Forecasting Team. Completed draft being shared with OSHA for review and discussing distribution strategies.
	ECS developed/disseminated low literacy messages for evacuees in centers on the following topics: ▪ Managing diabetes ▪ Managing hypertension ▪ Recognize and treat head lice ▪ Parenting under stress ▪ Preventing sexual violence ▪ Stress and relationships ▪ Preventing suicide
	Injury prevention video PSAs produced and shipped for dissemination for broadcast to 100 ECs
	Influenza vaccine messages to be produced and disseminated 9/19.
	PHS Team New Orleans identified the following issues critical to rebuilding health care delivery infrastructure in NO: ▪ Re-establishment of hospital capabilities in Orleans, Jefferson, and St. Bernard Parishes ▪ Staffing requirements of Tenet facilities in Jefferson Parish ▪ Re-establishing Charity Hospital as a functioning medical resource ▪ Requirements to bring on line the 10 remaining hospitals in the NO area ▪ Establishment of a forward DHHS Command Center at Kindred Hospital ▪ Mental health and suicide prevention services to public workers providing rescue and recovery services
9/18/2005	
	Approximately 100,000 carbon monoxide poisoning prevention flyers on the safe use of generators, pressure washers and other gasoline powered equipment provided by CDC Atlanta are available at re-entry checkpoints for returning LA residents are now available
	EPA has agreed to conduct TAGA (Trace Atmospheric Gas Analyzer) analysis at CDC-requested locations. Air monitoring from the Kenner sampling station indicates pollutants are well within standards for those contaminates measures. The EPA has two mobile laboratories analyzing the air quality throughout the greater NO area. CDC is working with the EPA toxicologists to assess health risks, if any.
	EPA analysis of sludge indicates elevated levels of metals and e-coli and low levels of VOCs and SVOCs.
	The total number of people in shelters has decreased to 108,696 from a high in the past week of over 200,000.
	In MS, 5 varicella cases have been reported, 3 of them pediatric cases in a shelter located in a Harrison County where 2 pregnant women are present. Testing and vaccination offered to pregnant women; one who is titer-negative refused vaccine for family and treatment for self. CDC team recommended removal of family refusing vaccination from shelter. Active surveillance in Harrison County to continue.
9/19/2005	
	CDC has deployed 380 personnel to support Hurricane Katrina Recovery Operations. There are 171 personnel currently deployed, 1 deployment over the past 24 hours and 18 pending deployments. Of the 171 currently deployed and depending on Hurricane Rita's track, potential impact for CDC personnel from Rita is 125. (Includes Southern LA and S. MS.) **ALL DEPLOYMENTS TO THE GULF AREA ARE ON HOLD PENDING DEVELOPMENT OF HURRICANE RITA..**
	Total of 935 Hurricane Katrina-associated deaths reported in states affected by the hurricane and those housing evacuees.
	New Orleans area has been closed by the mayor; there are no check points; safety is a major concern and will increase as more people return. New Orleans has some running water but it is

	not potable; the sewers are not functional, and the power is still out in major portions of the city.
	CDC Greater New Orleans Public Health Support Team (GNOPHST) NIOSH component investigated reports of increased carbon monoxide (CO) in Charity hospital and provided recommendations to the DoD unit at Charity hospital regarding work in confined spaces.
	The first available data from the post-spray surveillance in Mississippi indicates that in 10 sites monitored in Harrison County there was an average 91% reduction in total mosquito density from pre-spray population.
	The CDC TB team is working with State Health Departments to locate persons from LA on TB treatment to assure continued therapy. To date, 70 of 142 persons on the treatment list have been identified.
	Received ARF to support New Orleans Convention Center triage point with emergency room capability with ancillary services, equipment and staff.
	Rapidly decreasing populations in evacuation centers are leading to closure of centers, and discontinuation of surveillance.
9/20/2005	
	DEOC and SNS participated in conference call with City of Galveston, TX, who is preparing to execute mandatory evacuation of the city. Focus of call was on requirements to evacuate U. of TX Medical Branch, with a total patient count of 136, majority of which will require ground transport or air ambulance. No requirements identified for CDC at this time. Anticipate FMCS request, and SMO TX is working closely with HHS SERT leader on other anticipated actions.
	CDC is developing a multi-chapter document to provided needed information on mold and human health to CDC Leadership, Federal, state and local partners, and the public.
	HHS establishing SERT in Austin, TX. CDC notified by OFRD of requirement of 12 CDC personnel, movement expected in next 36 hours.
9/21/2005	
	CDC will remain in place in New Orleans for 21st, but are anticipating to move to Baton Rouge area by 22nd.
	10 CDC personnel assigned to Houston and Harris County areas of TX are evacuating to multiple locations further inland.
	As of 21 September, Public Health Analysis and Reporting team received report of 1001 Katrina-associated death in states directly affected by the hurricane and those housing evacuees. 94% of death occurred in LA, MS, FL and AL.
	Post-Deployment screening guidance developed and cleared by NIOSH and provided to PSH for review. Posted on CDC website for interim guidance.
	Post-disaster restaurant opening inspections continue in 6 coastal counties of MS. 582 establishments have been cleared to open.
9/22/2005	
	CDC actions, based on discussion with State of TX (SMO and Deputy Commissioner of Health), ▪ Shipped one 250 bed FMCS out overnight with an estimated ETA of 1300 EDT 22 Sep 05, destination Bryan/College Station (60 miles North of Houston). ▪ 250 FMS Thursday morning (ETA of 0800, 23 Sep 05), ▪ 500 bed FMS on Friday (ETA 1400, 23 Sep 05). The total number of beds to be shipped to Austin (staging point) is 1000. All ETAs are EDT and shipments are contingent on trucking availability. Action Request Form (ARF) was received and signed by TX
	SMO, LA has relocated all CDC personnel out of N.O. to the Baton Rouge area. SMO will continue to monitor Rita and make adjustments, to include releasing personnel to drive further north, as Rita approaches.
	NIP is providing technical assistance to Region 6 states for assistance with generating ARFs for vaccine requests. Expect to provide similar assistance if needed during Hurricane Rita.
	The Office of Enterprise Communication will initiate a new work group to develop and

	implement a communications plan and strategy for engaging people impacted by Hurricane Katrina in support of their safe re-entry into their communities.
	The ESF-8 EOC operated by the Arkansas Department of Health and Human Services in support of the Arkansas Department of Emergency Management has scaled back to minimum operations for the next 24-48 hours.
	Epi team has been assessing health care services on the coast of MS. In terms of infrastructure and medical/mental health, the greatest needs were determined to be in two Hancock county towns, Pearlington and Ansley. These areas have been decimated to the extent that organized habitation will be impossible for months, if not years.
	RITA
	Two 500 bed FMS units for possible deployment to the Houston, Texas area are being configured and will be loaded as trucks become available. The current guidance is deployment after landfall.
	Hurricane Rita remains a Cat 4 hurricane with winds of 140 mph and gusts up to 175 mph. Landfall forecast near the Texas- Louisiana border late today or tonight.
	All 85 CDC staff members in LA have either moved to the Baton Rouge area or returned to Atlanta. Tim Baker is developing plans to return to LA once Hurricane Rita has passed.
	Report from Texas indicates that ongoing preparation related to Hurricane Rita (landfall Friday night/Saturday morning) including: ▪ Request for 1000 FMCS beds with the first 250 in Bryan/College Station, TX, with the second 250 beds arriving this morning and the remainder to arrive today. ▪ Communications with the impact area includes a) contacting SMOs and CDC teams, b) assessing HF radio network, and c) providing wireless modems and laptops to support Dallas County Health Department for early response to Hurricane Rita.
	CDC web site has been re-designed to serve the needs of both Katrina and Rita.
9/23/2005	
	KATRINA
	Total number evacuated from TX has been less than anticipated. 390 of 4000 anticipated have been flown to Arkansas.
	CDC, in collaboration with state health departments and manufacturers, continues to monitor vaccine supply and demand. Doses of vaccine have been distributed in accordance with the interim recommendations in Louisiana, Mississippi, and Texas. At this time, the needs appear to have been met, although needs assessments are continuously updated.
	Sanofi Pasteur has offered to donate 200,000 doses of influenza vaccine. These doses are currently being allocated to states, based on need. To date, over 120,000 doses have been distributed among 17 states with displaced persons.
	RITA
	The CDC Select Agent Program contacted representatives from (b)(2),(b)(3):b(3) (b)(2),(b)(3):b(3) (b)(2),(b)(3):b(3) There does not appear to be any cause for concern at this time.
	The CDC Greater New Orleans Public Health Support Team (GNOPHST) has evacuated to Baton Rouge where they will continue planning and operations pending resolution of Hurricane Rita.
	1,000 FMCS beds delivered to Texas to date with 500 in College Station and 500 at Camp Mabry in Austin. Another 1,000 beds are prepared for deployment post-landfall.
9/24/2005	
	KATRINA
	Document posted to website: NIOSH Interim Recommendations for the Cleaning and Remediation of Flood-Contaminated HVAC Systesm: A Guide for Building Owners and

	Managers
	Document posted to website: Safe Use of "Tanker" Water for Dialysis
	Katrina response operations disrupted due to Rita landfall.
	RITA
	Rita made landfall as a Category 3 Hurricane at approximately 0230 CDT
	SNS FMCS trucks staged at various locations, awaiting mission assignments
9/25/2005	
	KATRINA
	HHS Hurricane Katrina recovery operations will now continue, with focus of: ▪ assessing public health and medical needs ▪ augmenting medical care in affected hospitals and shelters ▪ finding housing for health care workers ▪ providing human services for evacuee populations ▪ mass fatality management ▪ mental health support ▪ data collection
	ECS Summary: ▪ completion of Louisiana DHH/SAMHSA/CDC Mental health flyer for shelters (including local hotline numbers for evacuees) ▪ shipment of Mental Health Flyers (1,000) and Dual Sided Cards (100,000) to FEMA JFO Baton Rouge LA
	Hospitals in 11 states continue to update their status daily through the CIDS. Several hospitals in the Houston area re-opened today after closing yesterday in anticipation of Hurricane Rita. Some hospitals in the Dallas/ East Texas area are only partially open.
	RITA
	No deaths directly resulting from the hurricane have been reported
	Initial assessments: ▪ 1.1 million are without power in Texas. ▪ USCG reports no signs of major pollution cases. ▪ No signs of significant damage to petro-chemical facilities. ▪ American Red Cross reports 297,749 evacuees housed in "transient accommodations" (hotels, motels, etc.). (Based on FEMA's 25 Sep 05 Report).
	A public health emergency was declared by the Department of Health and Human Services (DHHS) Secretary Leavitt for Texas and Louisiana.
	Update from ERT-A , LNO National Medical Assessment Team in Austin, TX: ▪ Assisted on a Air Assessment Team now with Ground Assessment Team in Livingston TX ▪ Assisted in bringing Community Medical Center (Livingston, TX) up and running. They have working generator and fuel. ▪ Livingston, TX hit hard with water overflowing. No gasoline for cars. Cars lining streets and local highways out of fuel. Sporadic power availability throughout town. ▪ Assisted in getting local nursing home running with generator power and fuel in Corrigan TX. ▪ City of Houston in good shape, very little damage visible.
	The 2 FMCSs currently being held in Austin will be re-deployed. 1 will go to the Brown Convention Center in Houston and 1 will go to a location TBA in Beaumont. The VA will staff both shelters.
9/26/2005	
	KATRINA
	The CDC aircraft will deploy to transport 12 CDC staff members to Baton Rouge for the purpose of providing continued response and recovery related to Hurricane Katrina. There will also be two OSEP members on board to conduct a security assessment at Kindred Hospital.
	Members from the epidemiology/surveillance team of the CDC Greater New Orleans Public

	Health Support Team (GNOPHST) have returned to LA and reinitiated planning actions in New Orleans.
	RITA
	Texas SMO has worked with CDC DEOC to identify 50 personnel to populate CDC Public Health Response teams. The missions will include environmental health assessment (communities and shelters), epidemiology surveillance and infectious disease control at shelters.
	CDC SMO TX visited JFO Austin for individual discussions with staff from HHS SERT and other agencies involved in staging base camps for relief worker housing in Beaumont, Texas.
	CDC Field Team worked with Texas DSHS State Epidemiologist and staff to plan for rapid health assessments in affected communities and shelter assessments in major general population shelters under utilization for Rita evacuees.
9/27/2005	
	KATRINA
	City of New Orleans has reinitiated their re-entry plan.
	1159 Hurricane Katrina-associated deaths in both states directly affected by the hurricane and those housing evacuees.
	Surveillance for influenza in affected states has been ongoing since the beginning of August. Of the total number of specimens (AL 130, LA 48, MS 2, TX 114), only 1 was positive for influenza A from TX.
	Louisiana reporting a 4% increase in fully open hospitals. In Texas, there is slow movement from closed to partially open, and partially open to fully open in Houston, San Antonio, and Dallas. In the hardest hit counties in East Texas Emergency Departments continue to remain closed.
	HHS directed the following Federal Medical Stations (FMS) actions: ▪ Deployment of 250 beds from Camp Mabry to Waco, TX ▪ Deployment of 250 beds from Houston to Marlin, TX ▪ Deployment of 1000 beds from (b)(2),(b)(3):b(3) to Camp Mabry ▪ Deployment of FMCS personnel (Hand, Lange, Walker) from (b)(2),(b)(3):b(3) to Waco, TX
	RITA
	A federal disaster has been declared for the Texas counties of Chambers, Galveston, Hardin, Jasper, Jefferson, Liberty, Newton, Orange, and Tyler.
	Five Texas counties are without water service and 582,000 customers are without electrical power. The power grid in the 3-county area around Beaumont, TX is severely damaged with a much longer term evacuee management scenario than originally planned.
	Select Agent-registered laboratories in (b)(2),(b)(3):b(3) areas in the path of Hurricane Rita were contacted to ascertain their status. All were reported to be secure and items accounted for.
	CDC Ft. Collins is providing advice to the Air Force regarding scheduling of possible mosquito abatement spraying in the newly flooded areas from Hurricane Rita.
9/28/2005	
	CDC / EPA, LA and MS DOH held a press conference on mold issues, environmental health assets, and CDC work in the field.
	HAN advisory distributed on "Instructions for Identifying and Protecting Displaced Children."
	KATRINA
	FDA/Center for Biologic Evaluation and Research (CBER) working with CDC to monitor & track any shortages associated with globulin products and vaccines. CBER is working with Interagency Task Force on Blood Supply & Availability to monitor blood supply in impacted areas. No urgent needs identified at this time.
	CBER reports adequate supplies of Tetanus Toxoid are available
	CDC is collaborating with EPA HQ to develop debris removal plan and air exposure guidelines.
	Reports of rabies exposure and concerns regarding post-exposure treatment have come from relief workers who have been working with animal rescue vicinity of N.O. An EPI – AID team

	deployed by ground. SMO LA is aware and will monitor.
	RITA
	The Critical Infrastructure Data System (CIDS) daily update reports two hospitals south of Houston (Lake Jackson and Galveston) are now open. In the hardest hit counties in East Texas Emergency Departments continue to remain closed. In the Houston area several emergency departments are now open, along with one along the coast in Galveston.
	CDC Response Team leadership met with San Antonio Metro Health staff to review all outstanding issues in transitioning evacuee public health activities fully to Metro health. Immunization issues have been transitioned fully to SA Metro Health staff.
9/29/2005	
	All commercial airports in the region, except Beaumont, TX, and Lake Charles, LA, are handling commercial traffic.
	SNS is filling supply requests for Blue Med in Mississippi; the Algiers Clinic in New Orleans, and the YMCA Shelter in LA. SNS has deployed 2,000 Federal Medical Shelter beds to TX.
	KATRINA
	Public health missions have resumed in the greater New Orleans area, including school assessments, food and restaurant assessments, public health essential services, and hospital recovery planning. SERT-LA is working with the State on short and long-term recovery planning for the State's health sector.
	The USNS Comfort has been approved by Secretary of Defense to deploy to New Orleans for 2 weeks as a tertiary referral center.

	After confirming with CDC and HHS Inspector General (IG) staff in NO, OSEP recommends the following enhancements for NO security requirements:
	▪ Recommend 24/7 coverage at Kindred Hospital:
	  ▪ 2 security guards per shift for three 8 hour shifts
	  ▪ Recommend nightly coverage at the Drury Hotel
	  ▪ 2 security guards from 7pm to 7am
	CDC personnel are receiving an informal security brief/threat assessment from the HHS IG during daily meetings.

	The City of N.O. has established a goal to have all water systems and wastewater systems functional and safe in 52 days
	The Kindred ITSO and DEO Incident Support Team IT/Communications team has updated its assessment and accomplished numerous goals for establishing IT infrastructure at Kindred and remaining goals should be completed by early October
	ATSDR assisted the MSDH in assessing food safety, and developing work and safety plans for entry and disposal of food, including decontamination in schools being used as shelters.
	CDC is collaborating and providing technical assistance where needed in areas of: • water safety/sanitation • surveillance of injuries • debris removal
	RITA
	STRATEGIC ISSUES WORKING • Biomonitoring recommendations/policies/decisions • Short and long term expectations to decrease current activity levels in the affected areas from CDC perspective • Lessons learned organizational development for permanent staffing. • Evaluating Incident Management control structure and training internal to CDC and externally. Evaluating embedding CDC structure into ESF # 8 nodes • Electronic surveillance and commonality across all agencies and care sites. (Hospitals, clinics, shelters etc) • Grant guidance/performance measures for communications equipment.

	• Shelter guidelines in collaboration with HRSA, SAMHSA, Red Cross. • Collaboration with EPA on environmental guidance. • Workers safety for federal and non-federal personnel. • Role and functions of SMO's in relationship to state preparedness and response. • Planning for second and third events.
9/30/2005	
	CDC developing a biomonitoring plan for worker and community concern regarding the need for biological monitoring to evaluate exposure to contaminants.
	West Nile Virus (WNV) Case patient reports increased in MS (25) compared to LA (0) and AL (1).
	NEW STORM DEVELOPING: Tropical Depression (TD) 19 (As of: 11 PM EDT FRI SEP 30 2005) The center of TD 19 located about 660 miles west-southwest of the Cape Verde Islands, drifting NW, and this general motion is expected to continue for the next 24 hours. Maximum sustained winds are near 35 mph. Some strengthening is forecast during the next 24 hours, and the TD could become a Tropical Storm on Saturday 8 October.
	Community Health Education Team hosted a conference call with all deployed health education and communication staff. Discussion focused on development and distribution of CDC resources and materials.
	KATRINA
	Epi/surveillance team recruiting an additional DMAT in St. Bernard Parish and Touro Hospital in Orleans Parish and expanding surveillance system by adding several additional hospitals and facilities. From September 8th, 2005 through September 27th, 2005 a total of 8,928 illnesses or injuries have been recorded at participating facilities. 25.4% of patients presenting to hospitals had a chief complaint of injury, 98% of which were unintentional. Most of the unintentional injuries are due to falls (23%), insect stings, cuts, and blunt trauma. 3% of all reported hospital visits are for violence-related injuries.
	New Orleans PH/Injury: The Medical Group Commander at the Naval Air Station at Belle Chase has requested CDC to provide weapon safety flyers. CDC staff discussed this request internally and is not able to meet his request. Follow up will take place
	RITA
	Key public health concerns in southeast TX include: • extreme environmental conditions • inadequate medical services • premature re-entry of clients into an inadequate public health infrastructure • need for boiling precautions due to poor water pressure • lack of potable water • briefing shelters on typical infectious disease concerns and methods of infection control.
10/01/2005	
	CDC- multi-CIO workgroup is developing a document to provide information about the potential impact of mold on human health.
	CDC Website hits: 43,542. Top interests include: • Mold • environmental concerns • infectious diseases • immunizations • CDC's hurricane report.
	Activities in Lake Charles, LA include CDC staffer working with the medical officer on EH issues to identify gaps in current public health activities.
	SMO TX is currently in vicinity of Beaumont working with city and county health officials in

	developing plan for recovery of public health system.
	SMO in TX has asked for supplemental CO poisoning prevention messages in TX where cases continue to occur.
	Several occupational safety and health documents currently under development to protect response and recovery workers
	An EPA-CDC joint document addressing the environmental health concerns around repopulating New Orleans is being reviewed.
10/02/2005	
	Environmental Issues: • Questions are being raised on why federal workers are operating in PPE but residents are being allowed back into the city with no protection; awaiting contractor air sampling results to determine whether PPE levels could be lowered. Action will be passed to ECS and Public Health Services desk to address. • OSHA, CDC and EPA developed a guidance document for inspection teams who will enter into buildings that had previously been flooded.
	Orleans Parish is scheduled to begin repopulation today for business owners over the next 96 hours. Reentry will be allowed into homes, businesses, and industrial areas.
	Fort Collins confirms there is no increase in WNV cases in affected LA parishes post-Katrina.
	CDC environmental health team participated in a meeting with EPA, DEQ, SWBNO, LA DHSS/OPH, FDA, and hotel staff to discuss the problems of tanker trucks hauling drinking water to several of the downtown hotels.
10/03/2005	
	Arrangements are being made to receive a daily feed of electronic reportable disease surveillance data from the State of LA
	Environmental health (EH) officers are inspecting schools in Jefferson Parish LA for health and safety issues for reopening schools.
	A total of 10 new nonfatal carbon monoxide poisonings were reported in TX.
	Katrina logistics and the VA continue to work the issue of vans or other vehicles to serve as mobile primary care centers.
10/04/2005	
	The USNS Comfort is positioned pier side at the 9th Ward Pier in New Orleans, LA, until October 11 and is staffed for 250 beds.
	Top CDC Hurricane Katrina/Rita-related Web Interests: • Mold • Immunizations • Infectious Diseases • Environmental Concerns • Mental Health
	Findings for epi-aid team who deployed to LA to investigate potential rabies exposures and prophylaxis in animal rescue workers in Louisiana: • The team queried the hospital- and clinic-based surveillance system. Found 19 confirmed animal bites, and 100 visits coded bite or sting, some of which are likely to be animal bites. The team also visited one of the unofficial animal shelters and the FL-1 DMAT in St. Bernard Parish to investigate animal bites and procedures for follow-up. They plan to contact remaining medical treatment sites where animal bites have been reported to determine if post-exposure rabies vaccinations have been administered.
	The Air Force Aerial Spray Wing has initiated operations in Beauregard Parish spray blocks. Isolated rain showers forced termination of spraying with both blocks nearly complete. Operations will continue in Beauregard Parish weather permitting
	2,000 multi-message posters and 7,000 flyers were printed and distributed to food establishments, gathering places, gas stations, mail distribution sites, etc. Topics included: food

	safety, water safety, CO poisoning prevention, heat related illness prevention, and dog bite prevention.
	News Release – EPA and the Louisiana Department of Health and Hospitals (LDHH), along with other federal, state and local public health officials, issued a news release urging owners and managers of New Orleans-area restaurants and hotels to ensure that drinking water provided for customers is purchased only from reputable experienced vendors. Federal officials have become aware of several instances of drinking water vendors bypassing established safeguards and using inappropriate vehicles to deliver water to customers, potentially exposing both residents and responders to water contaminated with unhealthy bacteria or chemicals. http://www.dhh.louisiana.gov/news.asp?ID=145&Detail=693
	From 9-8-05 to 10-4-05, a total of 14,675 illnesses or injuries have been recorded
10/05/2005	
	New CDC web postings: Spanish Translation of "Protect Yourself From Chemicals Released During a Natural Disaster"
	Lack of power in 17 parishes and the movement of special needs populations remains a primary concern.
	The State is working towards getting back to regular PH business by Friday, 10/7/05. CDC staff is working with the State to assess their needs and anticipates completion by Friday.
	DMORT would like CDC to support a mission of collating data stream with info from State, Military, DMORT and other sources and to produce a GIS map of the data that might be useful for epi research, documentation of the response etc.
	Staffing update: • LA Regional Epi team will finish up their mission within week. • Epi- aid team pulling out of LA within week • Immunization team will work through the month. • TB management is staying back to assist the state
	CDC has been asked to assist in providing information to public health officials and shelter operators to determine the appropriate timing for the return of these vulnerable citizens. Special needs populations in the shelters will need longer term support prior to returning home as Health Department Services upon which they rely are not yet available.
	Communications is exploring the use of billboards in Texas along routes of retuning displaced populations to post CDC health messages.
	CDC staff met with Regional and City Environmental Health Directors to discuss plans for CDC environmental health personnel to transition out of New Orleans.
	NIOSH staff conducted personal breathing-zone air monitoring on landfill workers for total and respirable particulates, crystalline silica, and several elements. A NIOSH medical officer also interviewed landfill workers.
	CDC Field staff participated in a mold presentation to the Principal Federal Official (PFO) group located at the N.O. Convention Center.
	NIOSH and OSHA representatives reviewed the worker S&H training program, PPE usage, industrial hygiene sampling, and toured hurricane damaged areas in Lakeside, Lakeview, and City Park areas.
10/06/2005	
	Four New Documents and Health Messages on CDC Website: 3 safety messages and one vaccine message.
	Special needs shelter population in decreasing
	Lake Charles Public Health Lab is operational. The New Orleans Public Health Lab will not have power for an additional 8 months and no work will take place in the building for additional 24 months.
	The Greater New Orleans Metro Area (GNOMA) physicians' group is drafting a digest to assist

	local clinicians with pertinent medical recovery information. The draft will be vetted through CDC representatives to GNOMA to ensure accuracy prior to release.
	Security continues to be a high priority due to the previous civilian unrest at some venues. This will remain as a "Critical Issue". Safety for all our personnel is our primary goal.
	CDC team met with the coordinators of the Greater New Orleans Ryan White Title 1 grant and received information on status of the program, developed a list of critical needs and identified several action items that the evaluation team could act on to aid this program.
	CDC-ATSDR, EPA and Federal Occupational Health are providing consultations to FEMA on lead and asbestos issues related to building inspections.
	CDC mental health field team members: o Assisted local mental health providers obtain clinic space on the east bank. o Are investigating the status of EMTALA under disaster and emergency situations. o Made changes to assessment tool to reflect a general assessment rather than one focused on mental health. o Conducted background literature reviews to assist in the development of strategies for re-establishing community
	The SERT is working with the state on a demobilization plan for the ongoing pharmacy, medical, and dental missions and with Centers for Medicare and Medicaid Services (CMS) to enroll residents in health benefits program for which they are eligible.
	The SERT is working with FOH, FEMA and the state on a plan for providing flu vaccinations to base camps.
	SNS continues to re-supply the Blu-Med mobile hospital.
	CDC Environmental Health/Surveillance Team met with local firemen and distributed posters and flyers related to the dangers of lake water and eating dead fish.
	The CDC Lab team: • participating in planning meeting to address issue of rebuilding public health laboratory capacity • Newborn screening activities ongoing • Team members plan to contact labor and delivery units and hospital laboratories in the next few days to address issues with newborn screening tests • identifying private laboratories in the area that continue to have capacity to test for reportable diseases in Louisiana • determining the appropriate specimen submission mechanism in coordination with the manager of the regional laboratory in Shreveport
	Occupational Health Team: • Participated in panel discussion at the City of NO "Kick Off" Business Meeting • presented information on mold hazards and mold remediation • plan to conference with local landlords to discuss mold remediation
10/07/2005	
	Public health missions in support of MS include: • operating mobile medical and dental clinics • providing medical staff augmentation to shelters • addressing food safety issues The Secretary's Emergency Response Team continues to work with MS DoH on transition/recovery plan
	CDC continues to assist the State of Texas with rapid needs assessments at hospital facilities.
	Top CDC Web Interests: • Mold • Immunizations • Infectious Diseases • Environmental Concerns

	• Mental Health
	6 New Documents and Updated Health Messages on CDC Website
	The boil water advisory has been lifted for some areas in NO
	A CDC mold team was deployed to NO to assess exposure to mold and damp indoor spaces and related health effects
	CDC is reviewing a proposal to vaccinate relief workers for influenza who are camp residents. If approved, program will begin Oct. 24th. The plan calls for: • FEMA and MS DOH will provide vaccines • Nasal vaccination for persons in camps < 50 years of age and inject able vaccine for those 50 or older or who are excluded from receiving nasal vaccine. • After 11/1/05, all persons arriving at resident camps will have to receive vaccination before arrival. • Vaccinations expected to be completed in 1 – 2 weeks.
10/08/2005	
	LOPHEST (Environmental Support Team) is reviewing the draft air-monitoring plan to identify potential public health concerns that may be presented by the community during debris removal and reduction.
	SNS filling Blu-Med re-supply requests from MS are ongoing with 3 Pharmacy Lines ordered
	Currently there is no exit strategy for the FMS shelters. The State of TX indicates that FMS shelters could remain open for as long as 4 months.
	CDC in New Orleans is attempting to collect information about existing mental health services in New Orleans and the surrounding areas.
	All CDC personnel supporting relief efforts in TX, including OFRD, have returned to home stations.
	The USNS Comfort (Mercy Class Hospital Ship) redeployed to home station at 0830
10/09/2005	
	Potable water and electricity are now available in parts of New Orleans, but sewage remains an issue that will hamper the reopening of area hospitals and ambulatory services.
	Water in New Orleans has been declared to be potable and the "boil order" has been lifted.
	Temporary and mobile health facilities are needed for unmet primary care needs in New Orleans. Additional mobile clinic vans will be needed for the hardest hit regions.
	CDC is facilitating the distribution of OSHA injury prevention flyers covering carbon monoxide, ladder/roof safety, electricity, driving safety, chainsaw safety, and mental health. These were provided to 5 regional offices of the LA DoH and Hospitals. There were 18,000 flyers in English, 5,000 in Spanish, and 700 in Vietnamese.
	OSHA Field staff has asked CDC to enhance current CDC injury information for falls to be used for intervention purposes.
	The GNOPHST met with EISOs and the NIOSH Team to plan for an MMWR on injuries seen from the surveillance system to focus on unintentional injuries, violence, and worker-related injuries.
	The GNOPHST reviewed PSAs already cleared by CDC communications staff on violence and gave to communications staff in the field for use on local radio and TV stations in the greater NO area. The violence PSAs were on child maltreatment, domestic violence, and suicide.
	CDC Filling Blu-Med re-supply request from Mississippi ongoing with 3 Pharmacy Lines ordered.
10/10/2005	
	The GNOPHST has requested EARS (Early Aberration Reporting System, a CDC syndrome surveillance product) to be implemented in New Orleans hospitals. An EARS staff request has been sent to CDC DEOC and staff are expected to arrive on October 11.
	The GNOPHST has met with CDC leadership staff to discuss plan for transitioning injury prevention activities to the State Health Department and local partners

	The CDC Environmental Health Team is assisting in re-inspecting hotels that have reconnected to the municipal water system to ensure that they are properly reconnected and that potential cross-connections or backflows that could contaminate the water system do not exist.
	Over 94 percent of the customers have had power restored in Texas
	4 carbon monoxide poisonings were reported through the Toxic Exposure Surveillance System: • 2 in TX • 1 in MS • 1 in AL CDC NO team is working on plans to conduct additional medical record abstraction for these patients to gain more detailed information on the circumstances surrounding the incidents and the treatment these patients received
10/11/2005	
	All AL shelters are projected to be closed by COB October 14 and evacuees transitioned to temporary housing.
	The CDC Transition plan for LA states that the "response phase" took place between Aug. 27th and Oct. 3. Current efforts taking place between Oct. 3 - 31 are focused on "recovery phase". Operations and capacity are currently being scaled back throughout October. State officials discontinued weekend work schedules, and are acting only on emergency issues. Federal operations and staffing were stabilized or stood down for intervals for the first time. State officials will continue limited presence in the EOC during the work week, and will return to routine schedules where possible. By month's end, anticipate withdrawal to routine offices/schedules.
	CDC is implementing a transition plan for sustaining appropriate level of capacity throughout the recovery phase at four defined levels of responsibility. • Rebuilding phase will take place between Nov. 1 and Dec. 31. • Initial rebuilding phase will require negotiated staffing commitments by CDC at state & city level during transition to long term rebuilding and ongoing operations phases. • FEMA / SERT will convert activities to long term management. • CDC program functions and staff will be replaced by state and city staff, or discontinued.
	CDC plans to transition to electronic surveillance using EARS (Early Aberration Reporting System), a CDC syndrome surveillance product, in NO hospitals.
10/12/2005	
	A post-deployment health screening of returning internal CDC deployers has been started through a survey from the CDC Office of Health and Safety.
	New CDC Web Postings: • Updated: Questions and Answers About Immunization Recommendations Following Hurricane Katrina • Updated: Interim Guidelines for Animal Health and Control of Disease Transmission in Pet Shelters • New: Resuming safe operation of building water systems—risk of Legionnaires' disease
	A program is in place for pharmacies to provide medications to those who are "shelter-eligible" from the hurricanes and who do not have public or private insurance. The LA program operates through the LA Board of Pharmacy; FEMA has agreed to reimburse eligible recipients. Not all pharmacies have this information in their electronic systems; CDC HQ and field staff are working with the LA SERT and corporate partners to resolve this problem.
	The CDC Field Team for occupational health issues made recommendations on dust suppression & personal protective equipment at a debris transfer and separation site in Orleans Parish in response to concerns about asbestos exposure. It anticipates performing additional air sampling for asbestos and metals.
	EPA has provided ATSDR and the Environmental Health group with copies of the Air Monitoring and Contingency Plan for HK Debris and the Demolition Activities in LA and the

	Regional Air Monitoring Plan for HK in LA which is part of the Overview Plan for Ambient Air Monitoring after Hurricane Katrina for review
10/13/2005	
	New CDC Web Postings: • New: Hurricane Katrina Flyer: "Wash Your Hands: After a disaster, staying clean can be hard to do..." • Updated: Questions and Answers About Immunization Recommendations Following Hurricane Katrina • Updated: Interim Guidelines for Animal Health and Control of Disease Transmission in Pet Shelters • New: Flyer: What shots do I need when I come home to New Orleans? • New: Flyer: Get Rid of Mold • New: Flyer: Clean With Bleach • New: Flyer: Get Rid of Cleaning Products and Other Chemicals • New: Spanish translation of "What you need to know if you are pregnant or might be pregnant" • New: Laotian Translation of "Stressed? Sad? Some stress is normal." • New: Laotian Translation of "Drive Safely"
	Most Popular CDC Web Interests • Mold • Infectious diseases • Spanish translations • Environmental concerns • Floods
	The CDC GNOPHST prepared a message on the current capacity and contact information for the LA public health laboratories for distribution to 376 CLIA (Clinical Laboratory Improvement Amendments)-certified laboratories and for posting on public health websites
	The CDC GNOPHST provided a CDC spokesperson for a WWL-Radio segment on rodent and vector control.
	LA DOH has put in a FEMA request for 125,000 Inactivated Influenza vaccines for distribution to all acute care hospitals for healthcare employees to prevent outbreaks in the State's health care system.
	CDC NCIPC developed fact sheets on high pressure injection injuries (pressure washing), one for the public and one for health care practitioners.
	As of 13 October, Executive Summary reporting ceased. CDC continues to monitor and prepare resources for potential support to Hurricane recovery operations. Deployment data, as of 11/15/2005: • 13 CDC personnel currently deployed for Katrina • 745 CDC personnel have completed deployments

ABBREVIATIONS

ARC.....American Red Cross
ARF.....Action Request Form
ATSDR.....Agency for Toxic Substances and Disease Registry
CDC.....Centers for Disease Control and Prevention
DEOC.....Directors Emergency Operations Center
DHHS or HHS..... Department of Health and Human Services
EHHE.....NCEH Division of Environmental Hazards and Health Effects
EPA.....Environmental Protection Agency
FCMS.....Federal Medical Contingency Station
GNOPHST.....Greater New Orleans Public Health Support Team
HAN.....Health Alert Network
HSB.....NCEH Health Studies Branch
MA.....Mission Assignment
NCEH.....National Center for Environmental Health
NCHM.....National Center for Health Marketing
NCID.....National Center for Infectious Diseases
NO.....New Orelans
OC.....Office of Communications
PMAC.....Pete Maravich Assembly Center
SMO.....Senior Management Official
SNS.....Strategic National Stockpile
SCC.....Secretary's Command Center

APPENDIX I
SMO MEETING – DEOC EXECUTIVE CONFERENCE ROOM
NOVEMBER 9, 2005

- A SMO liaison was used during the Wilma response as a POC for SMOs in the field in order to facilitate requests for support.
- How can the permanent management structure initiated by SMOs during Katrina for SMOs be used during any event?
  - The management structure needs to be captured for development of a SOP.
- There are CDC assignees at the states and a plan is being developed to bring them up to speed- more training is needed to get them in a position to support in the beginning of the event. Problem: those folks were already engaged.
- Need to define the SMO role. There are different aspects: some SMOs are members of the state leadership team that is part of their job and will become a natural point leader in the state.
  - Where there are no SMOs as members of the state leadership team, new people come on, but these people do not know the players and roles in this position.
  - People dropped into this position will need training to accomplish their missions.
- Not every state has a big enough portfolio to require one SMO, but maybe groups of states can share one SMO. VT, ME and NH could not support a full time person individually, but could support one together. Need to consider options for these states as part of further planning efforts (2007 planning).
- Need to bring the people that will be in the field this year up to speed and identify people that can be dropped in and trained to work those roles where there isn't someone right now.
- The role of the SMO during emergencies in the states is being addressed and a paper is being developed with hopes that it will become a policy memo.
- Big picture items: getting everyone trained on the lessons learned and solidifying standard operating procedures that can be followed in consecutive events.
- The new Wilma structure will hopefully support the need for consistency during response operations.
  - Need to decide how to operate internally.
- Should not get to next hurricane season without a negotiated tool for information collection between CDC and the states.
- SMOs are in conversations on putting someone down in FL with Kristin to help plan for next year.
- One of the observations is that this shouldn't be reinvented every time. During this response, SMOs did not carry out an established plan.
- This response was viewed as an accelerated learning opportunity. If the health commissioner and others in TX were asked which federal agency responded the best, they would likely say CDC. The staff deployments were on the ground within 24-48 hours. Requests of teams were met.
- It was hard to understand the architecture in the DEOC. Because there was a shifting playing field particularly in the first 5-6 days, it was the proliferation of desks and contact points that was confusing and challenging.
- One of the issues is also not necessarily all the calls received, but many of the calls received from CIOs that had various interests in the response and may not have been in sync with the DEOC (EIS deployments, scientific research, etc.).
- The people that were deployed to TX lacked proper orientation to what they were getting into. They were ready to go 100%, but many of them lacked knowledge of their roles and responsibilities. Beyond

understanding their role and charge, many of them lacked proper clothing and supplies (some wore open-toed shoes). Had to figure out how to overcome that and it took time..

- Under Rita, having people come through one single point in TX (Austin) and having the opportunity to brief incoming staff with consistent messages regarding roles and responsibilities helped. Unsure if people should be oriented before leaving or when they get in the field. Giving them a quick overview of the TX health system was beneficial- it may need to be a hybrid model with briefing on the pre-and post-deployment end.
- Need to have an ongoing training program for CDC staff that may deploy. Need a method to orient people on the ground as well as prior to deployment.
- There is a tremendous amount of pre-planning that can occur. The plan had been to send a team down to go prepare for hurricane season in Florida. This should be implemented for Florida, Mississippi and Louisiana.
- Knowledge learned in the down season during the pre-planning is very beneficial, particularly the availability of CDC resources positioned in Atlanta.
- During an event, the field management structure may take some time to develop and may not be prepared to brief incoming staff regarding their roles and responsibilities.
    - Teams were frustrated because they were collecting information and did not have anyone to give the information to.
    - There were a number of conflicts regarding EMAC and teams doing the same kinds of work- it takes a while for that level of organization to take place. SMOs need better understanding of EMAC and what states participate in EMAC.
- It is important for CDC employees to know the ARF/MA process so requests for support can be made and needs in the areas can be met. Not so many assessments- give people more support (water, etc.).
- SMOs need to push back to Dr. Gerberding as she is the one that wants people to be on the ground quickly.
    - Need the SMOs to explain how they will work in the states during events and explain how they need staff to be brought in as far as how long they need before teams are sent.
    - Need team modules so there is a pre-defined Epi and Communications team. Make sure there is competent housing, transportation, communication, etc. May only be hours difference. When people show up not knowing what to do, they may do the wrong thing.
- It is not clear how to work together at the HHS level. Need to have a better understanding of how to work with the Department (particularly the SERT).
    - Need a correct model of interaction between CDC, HHS and the SERT.
- Communications into DEOC was extremely frustrating, particularly lack of communication and not knowing who to talk to in order to get things. It was unclear as to who was in charge in the DEOC at any given time.
- Coordination between CDC and OFRD assignments was an issue. People would show up and say they're from CDC, but they were actually from OFRD.
    - This needs to be very well defined in the SERT description. One of the training issues is that when they go out on OFRD deployment, they are not CDC staff.
- Finding out who OFRD was deploying was an uphill battle.
    - There is an obligation to know the whereabouts of the CDC staff in order to make sure they're safe and not out alone.
- Loopback from the SOC on ARF/MAs was missing- there were 2 glaring situations where things went to the SOC and were lost. Another situation where it went to the SOC and was filled by both OFRD and CDC. Has to be some kind of confirmation to know that things are being filled and not duplicated.
    - Part of this is HHS defining who does what. There should be defined services OFRD and CDC provide so there is not a situation where the same MA is filled by both OFRD and CDC.

- People with the skill sets needed were not utilized effectively because they were on OFRD deployment and told they could not be used. There were medical officers that were filling a logistics role.
  - This is an issue between HHS and CDC- medical officers should be deployed as medical officers, not logistics staff.
- All SMOs were trying to get in touch with the top person- however it ends up, with Katrina, had problems identifying a POC. Problem, top box takes it back down to the POC and it may have been held up for hours because of responsibilities the top person has.
- Need guidance on EMAC. They do well and have defined availability of state resources as a proactive approach. LA backed away from EMAC.
  - EMAC is just now developing the public health side.
- AR had a lot of folks. Primary mission was to take care of evacuees (approx. 75,000). When the AR SMO called in for help, DEOC did not know the availability of his resources and were making decisions based on wrong information.
- Categorical program people in AR were talking back to Atlanta's program people, and they were not getting the same information that was coming out of the DEOC.
- There were some internal disconnects in AR regarding deployment.
  - DEOC had a problem locating staff to advise them of deployment and were asking SMO for contact information.
- Information management was a challenge.
- The view from inside the state and SMOs is how to support the state. The other side of that is when CDC sends Epis; there is an expectation that data will flow. No matter what services are being provided, there has to be a plan for that and think that through.
  - There is an expectation that CDC provides overall situational awareness to HHS, the White House and other interested parties.
  - Have to have the expectation that data will flow and how to make that happen?
- The Atlanta staff tried very hard to make sure that any information used was appropriate- information was withheld from HHS because of the uncertainty of how the information would be used.
  - Need agreements with the states as to what information can be shared.
- The Enterprise Communication report that went out daily did not reflect the data that states were sending in.
- DEOC has situational analysis, epi data and environmental data as well as implicational data. At least for the 1st 10 days, that was not married up very well.
- There is a lot of jewel information that comes in that may be asked about but need the high points that can be reviewed quickly before meetings. That is what made the notebooks beneficial.
- May be good for SMOs that are not involved in an emergency to come to the DEOC and observe how things work in order to understand the pressures that the Atlanta staff is under.
- Need just one reporting requirement that can fulfill both CDC and HHS needs, not several different reporting requirements.
- There was an incredible difference between Dennis and Wilma. Working through Dennis provided insight into who to go to in order to get what. During Wilma, the FL SMO felt incredible support- it was much more service oriented, people knew what to expect ahead of time.
- Coming to the DEOC during Wilma was enlightening- finding out some of the resources that were available. Would be very beneficial to hear during pre-planning efforts.
- The improvement through the 3 storms this season has been incredible.
- There was some criticism about FL pushing back during Katrina but not during Wilma.

- Some sort of pre-briefing of expectations, come to state in single location and be prepared to brief them when they get there is what is needed for deployed staff.
- Part of the training should be flexibility. Missions may change. Hotel may be closed.
- Some of the people that deployed were not mentally and physically prepared to deploy (can't take the heat, the walking, etc.). Need to make sure people are prepared to face the elements.
    - There were 2 incidents of mental stress.
    - Need to look at resilience issues and do not have to drive the staff crazy (ex: resilience team contacting them every day to make sure they're ok). People were being called every day by the resilience teams.
    - Team leader or deputy needs to be doing the evaluation and staying in contact with the Resilience team. People should be able to default by saying "I am fine and will call you if I start to experience any of these symptoms."
    - With the massive deployments, the Occupational Health Team did not have time nor resources to do all of the pre-screenings.
- With teams of 20 or more, it is better to work logistics in the field. People should have to go through orientation before they deploy.
- Need to have a couple hundred people pre-identified that can deploy when needed.
- When thinking about planning, think about the CDC people who do this as a normal occurrence and how they have to fit in this structure as well.
- Throw the SERT folks into the equation as when determining the roles and communication process for the SMOs.
- Need to make sure that EIS officers know that they are not out there to have a wonderful EIS experience, but they will be faced with a lot of ambiguity.
    - Need to discuss their training- outbreak management may be different under emergency response circumstances.
    - People need to understand that they are there to do work, not to look around and see all there is to see.
    - There seems to be a disconnect between the EIS officer program, Doug Hamilton and the DEOC. Had some issues with some of the EIS officers in terms of them not appreciating what they were doing.
- When there is an issue in Florida where the state is getting ready to respond, OFRD staff should not be pulled out of Florida to somewhere else to respond, especially when these folks are critical.
    - Have to understand that if there is not an immediate need to have someone there, OFRD staff should be available to deploy in order to help with their promotional potential.
    - It is a matter of courtesy- supervisors know when their staff deploy and they should let the SMOs know when essential people are being pulled out of the state for other requirements.
- There were Epi Aids initiated through the back doors- during response, there should never be Epi-Aids initiated. These people appear to states as more CDC staff coming in.
    - Epi-Aids during responses can be easier to initiate, but they need to be more integrated into the response activities.
- Need to think about if/how things would change for a Pandemic Flu incident.
- Disconnects in information gathering and dissemination should be addressed as these could have serious implications during responses.
- From the Ops, Log and CIO perspective- SMO work was amazing.
- Pre-packaged teams are a good idea.
- SMOs need copies of ARFs/MAs that they can initiate in the field.

- Should try to use the same people as team leaders--senior people that have done this type of work before.
- Need to plan for 1st response rotation to last more than 2 weeks (3-4 weeks suggested).
- It is the role of the SMOs to support and define what the State needs and don't need from CDC. Resources should not be sent unless requested by the State thru the SMOs.

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    - The management structure needs to be captured for development of a SOP.
- There are CDC assignees at the states and a plan is being developed to bring them up to speed- more training is needed to get them in a position to support in the beginning of the event. Problem: those folks were already engaged.
- Need to define the SMO role. There are different aspects: some SMOs are members of the state leadership team that is part of their job and will become a natural point leader in the state.
    - Where there are no SMOs as members of the state leadership team, new people come on, but these people do not know the players and roles in this position.
    - People dropped into this position will need training to accomplish their missions.
- Not every state has a big enough portfolio to require one SMO, but maybe groups of states can share one SMO. VT, ME and NH could not support a full time person individually, but could support one together. Need to consider options for these states as part of further planning efforts (2007 planning).
- Need to bring the people that will be in the field this year up to speed and identify people that can be dropped in and trained to work those roles where there isn't someone right now.
- The role of the SMO during emergencies in the states is being addressed and a paper is being developed with hopes that it will become a policy memo.
- Big picture items: getting everyone trained on the lessons learned and solidifying standard operating procedures that can be followed in consecutive events.
- The new Wilma structure will hopefully support the need for consistency during response operations.
    - Need to decide how to operate internally.
- Should not get to next hurricane season without a negotiated tool for information collection between CDC and the states.
- SMOs are in conversations on putting someone down in FL with Kristin to help plan for next year.
- One of the observations is that this shouldn't be reinvented every time. During this response, SMOs did not carry out an established plan.
- This response was viewed as an accelerated learning opportunity. If the health commissioner and others in TX were asked which federal agency responded the best, they would likely say CDC. The staff deployments were on the ground within 24-48 hours. Requests of teams were met.
- It was hard to understand the architecture in the DEOC. Because there was a shifting playing field particularly in the first 5-6 days, it was the proliferation of desks and contact points that was confusing and challenging.
- One of the issues is also not necessarily all the calls received, but many of the calls received from CIOs that had various interests in the response and may not have been in sync with the DEOC (EIS deployments, scientific research, etc.).
- The people that were deployed to TX lacked proper orientation to what they were getting into. They were ready to go 100%, but many of them lacked knowledge of their roles and responsibilities. Beyond

understanding their role and charge, many of them lacked proper clothing and supplies (some wore open-toed shoes). Had to figure out how to overcome that and it took time.

- Under Rita, having people come through one single point in TX (Austin) and having the opportunity to brief incoming staff with consistent messages regarding roles and responsibilities helped. Unsure if people should be oriented before leaving or when they get in the field. Giving them a quick overview of the TX health system was beneficial- it may need to be a hybrid model with briefing on the pre-and post-deployment end.
- Need to have an ongoing training program for CDC staff that may deploy. Need a method to orient people on the ground as well as prior to deployment.
- There is a tremendous amount of pre-planning that can occur. The plan had been to send a team down to go prepare for hurricane season in Florida. This should be implemented for Florida, Mississippi and Louisiana.
- Knowledge learned in the down season during the pre-planning is very beneficial, particularly the availability of CDC resources positioned in Atlanta.
- During an event, the field management structure may take some time to develop and may not be prepared to brief incoming staff regarding their roles and responsibilities.
    - Teams were frustrated because they were collecting information and did not have anyone to give the information to.
    - There were a number of conflicts regarding EMAC and teams doing the same kinds of work- it takes a while for that level of organization to take place. SMOs need better understanding of EMAC and what states participate in EMAC.
- It is important for CDC employees to know the ARF/MA process so requests for support can be made and needs in the areas can be met. Not so many assessments- give people more support (water, etc.).
- SMOs need to push back to Dr. Gerberding as she is the one that wants people to be on the ground quickly.
    - Need the SMOs to explain how they will work in the states during events and explain how they need staff to be brought in as far as how long they need before teams are sent.
    - Need team modules so there is a pre-defined Epi and Communications team. Make sure there is competent housing, transportation, communication, etc. May only be hours difference. When people show up not knowing what to do, they may do the wrong thing.
- It is not clear how to work together at the HHS level. Need to have a better understanding of how to work with the Department (particularly the SERT).
    - Need a correct model of interaction between CDC, HHS and the SERT.
- Communications into DEOC was extremely frustrating, particularly lack of communication and not knowing who to talk to in order to get things. It was unclear as to who was in charge in the DEOC at any given time.
- Coordination between CDC and OFRD assignments was an issue. People would show up and say they're from CDC, but they were actually from OFRD.
    - This needs to be very well defined in the SERT description. One of the training issues is that when they go out on OFRD deployment, they are not CDC staff.
- Finding out who OFRD was deploying was an uphill battle.
    - There is an obligation to know the whereabouts of the CDC staff in order to make sure they're safe and not out alone.
- Loopback from the SOC on ARF/MAs was missing- there were 2 glaring situations where things went to the SOC and were lost. Another situation where it went to the SOC and was filled by both OFRD and CDC. Has to be some kind of confirmation to know that things are being filled and not duplicated.
    - Part of this is HHS defining who does what. There should be defined services OFRD and CDC provide so there is not a situation where the same MA is filled by both OFRD and CDC.

- People with the skill sets needed were not utilized effectively because they were on OFRD deployment and told they could not be used. There were medical officers that were filling a logistics role.
  - This is an issue between HHS and CDC- medical officers should be deployed as medical officers, not logistics staff.
- All SMOs were trying to get in touch with the top person- however it ends up, with Katrina, had problems identifying a POC. Problem, top box takes it back down to the POC and it may have been held up for hours because of responsibilities the top person has.
- Need guidance on EMAC. They do well and have defined availability of state resources as a proactive approach. LA backed away from EMAC.
  - EMAC is just now developing the public health side.
- AR had a lot of folks. Primary mission was to take care of evacuees (approx. 75,000). When the AR SMO called in for help, DEOC did not know the availability of his resources and were making decisions based on wrong information.
- Categorical program people in AR were talking back to Atlanta's program people, and they were not getting the same information that was coming out of the DEOC.
- There were some internal disconnects in AR regarding deployment.
  - DEOC had a problem locating staff to advise them of deployment and were asking SMO for contact information.
- Information management was a challenge.
- The view from inside the state and SMOs is how to support the state. The other side of that is when CDC sends Epis; there is an expectation that data will flow. No matter what services are being provided, there has to be a plan for that and think that through.
  - There is an expectation that CDC provides overall situational awareness to HHS, the White House and other interested parties.
  - Have to have the expectation that data will flow and how to make that happen?
- The Atlanta staff tried very hard to make sure that any information used was appropriate- information was withheld from HHS because of the uncertainty of how the information would be used.
  - Need agreements with the states as to what information can be shared.
- The Enterprise Communication report that went out daily did not reflect the data that states were sending in.
- DEOC has situational analysis, epi data and environmental data as well as implicational data. At least for the 1st 10 days, that was not married up very well.
- There is a lot of jewel information that comes in that may be asked about but need the high points that can be reviewed quickly before meetings. That is what made the notebooks beneficial.
- May be good for SMOs that are not involved in an emergency to come to the DEOC and observe how things work in order to understand the pressures that the Atlanta staff is under.
- Need just one reporting requirement that can fulfill both CDC and HHS needs, not several different reporting requirements.
- There was an incredible difference between Dennis and Wilma. Working through Dennis provided insight into who to go to in order to get what. During Wilma, the FL SMO felt incredible support- it was much more service oriented, people knew what to expect ahead of time.
- Coming to the DEOC during Wilma was enlightening- finding out some of the resources that were available. Would be very beneficial to hear during pre-planning efforts.
- The improvement through the 3 storms this season has been incredible.
- There was some criticism about FL pushing back during Katrina but not during Wilma.

- Some sort of pre-briefing of expectations, come to state in single location and be prepared to brief them when they get there is what is needed for deployed staff.
- Part of the training should be flexibility. Missions may change. Hotel may be closed.
- Some of the people that deployed were not mentally and physically prepared to deploy (can't take the heat, the walking, etc.). Need to make sure people are prepared to face the elements.
    - There were 2 incidents of mental stress.
    - Need to look at resilience issues and do not have to drive the staff crazy (ex: resilience team contacting them every day to make sure they're ok). People were being called every day by the resilience teams.
    - Team leader or deputy needs to be doing the evaluation and staying in contact with the Resilience team. People should be able to default by saying "I am fine and will call you if I start to experience any of these symptoms."
    - With the massive deployments, the Occupational Health Team did not have time nor resources to do all of the pre-screenings.
- With teams of 20 or more, it is better to work logistics in the field. People should have to go through orientation before they deploy.
- Need to have a couple hundred people pre-identified that can deploy when needed.
- When thinking about planning, think about the CDC people who do this as a normal occurrence and how they have to fit in this structure as well.
- Throw the SERT folks into the equation as when determining the roles and communication process for the SMOs.
- Need to make sure that EIS officers know that they are not out there to have a wonderful EIS experience, but they will be faced with a lot of ambiguity.
    - Need to discuss their training- outbreak management may be different under emergency response circumstances.
    - People need to understand that they are there to do work, not to look around and see all there is to see.
    - There seems to be a disconnect between the EIS officer program, Doug Hamilton and the DEOC. Had some issues with some of the EIS officers in terms of them not appreciating what they were doing.
- When there is an issue in Florida where the state is getting ready to respond, OFRD staff should not be pulled out of Florida to somewhere else to respond, especially when these folks are critical.
    - Have to understand that if there is not an immediate need to have someone there, OFRD staff should be available to deploy in order to help with their promotional potential.
    - It is a matter of courtesy- supervisors know when their staff deploy and they should let the SMOs know when essential people are being pulled out of the state for other requirements.
- There were Epi Aids initiated through the back doors- during response, there should never be Epi-Aids initiated. These people appear to states as more CDC staff coming in.
    - Epi-Aids during responses can be easier to initiate, but they need to be more integrated into the response activities.
- Need to think about if/how things would change for a Pandemic Flu incident.
- Disconnects in information gathering and dissemination should be addressed as these could have serious implications during responses.
- From the Ops, Log and CIO perspective- SMO work was amazing.
- Pre-packaged teams are a good idea.
- SMOs need copies of ARFs/MAs that they can initiate in the field.

- Should try to use the same people as team leaders- senior people that have done this type of work before.
- Need to plan for 1st response rotation to last more than 2 weeks (3-4 weeks suggested).
- It is the role of the SMOs to support and define what the State needs and don't need from CDC. Resources should not be sent unless requested by the State thru the SMOs.

APPENDIX J
DEO LOGISTICS HOTWASH
BUILDING 19 AUDITORIUM B
FRIDAY, NOVEMBER 18, 2005
7:30 AM

FINANCE PROCESS

Mission Assignment – CDC makes the MA process different than if we were the parent organization. HHS wants conversations on changing this process. The whole MA process HHS-wide needs review.

There is no guarantee for reimbursement until FEMA signs the MA.

Process:

- State will request something (person, equipment) via ARF
- Send through FEMA bureaucracy (assign ARF to HHS- gives HHS money)
- Send through HHS bureaucracy (assign ARF to CDC- very controlling on what they wanted to give for specific reasons, needed to validate what DEO was doing, example being why there were different cost estimates than FEMA- knowing who provided cost estimates for what would make things easier)
- HHS would get the money and transfer it under the MA to CDC so it would show up in CDC's bank account. It is strange for FEMA because FEMA will get billed now on the same MA for multiple parts of HHS and it is hard for them to reconcile (SAMHSA, CDC, HHS, etc.).

FEMA does pre-scripted MAs. It would be worth our effort to meet with FEMA MA folks and develop pre-scripted MAs. They have done this with other agencies.

The things FEMA doesn't want to pay for are research missions- that is not what Stafford Act is for.

Now DEO needs to go to FEMA and say that if DEO is going to be one for the medical resupply for the nation, then it as to be understood. If these things are pre-scripted, as soon as it happens the MA can be cut and DEO can receive the money fast. There are times when there was not enough money that day to do what needed to be done but would end up with it before the end of fiscal year.

HHS/CDC roles are changing on how to deploy resources- how can DEO work with FEMA on their longstanding MA process to make it easier on procurement and payment processes?

CDC workgroup put FPAT written procedures in place approved by (b)(2),(b)(6) - need to revisit and make sure all are still applicable. Can add a little more detail to them.

FPAT was not activated/deactivated too soon or too late. Having FMO assistance on site was very beneficial.

PGO did a good job of making sure their leadership knew what it meant from a procurement perspective. FMO did not have it as good- timing was bad (during closeout) and FMO leadership did not understand what it meant to support the DEOC as fully as the DEOC was supported. There were leadership, management and financial tracking aspects present in the DEOC. FMO does not have the amount of personnel needed to support emergency operations (contrast to PGO).

DEO has been doing a lot of the same things throughout different events, but at a smaller scale less help was needed. In an event this scale, FMO presence (at least 2 people) is needed.

Make sure the FMO is fully capable in every aspect from leadership to budget to accounts payable- everyone needs to understand. FMO was not as prepared as they should have been.

Process for filling requests:

- Locals say what they need
- Goes to state- CDC person acts as liaison to FEMA
- FEMA gives info to HHS
- HHS gives info to CDC
- CDC will do cost estimates and fill the request

Question: When do we act?

CDC tradition plays a lot in this- if states request CDC presence, CDC will show up. Throw that into the MA process and it complicates things. There was no MA for two weeks but DEO responded, and will always respond in this manner.

Once FMO knows there is a MA wheth er HHS has sent the money or not, there is a formal agreement between FEMA and HHS to transfer dollars. That is where the action can formally take place. There is no black and white line- depends on where DEO is. Points to getting pre-scripted MAs so DEO can just go and make sure to have enough money under the MA.

How concerned should DEO be if the MA is signed but don't see any money? If that was the only MA for the response, be concerned. If it is one of 50, probably shouldn't be that concerned.

Problems with ARF/MA from ARF/MA Desk Perspective:

DEO received stuff from HHS missing FEMA information and would have to send it back to get the FEMA information. If HHS info, FEMA info and signature was not there, it sat there until those things were filled unless leadership came to us and demanded that it be filled right then without the missing information.

Got the missing information by calling the SERT, SOC, whoever was available on that could get the information. There was no set process. Once an ARF was received, it was tied to a MA by linking them together, and then looked for numbers and signatures. DEO would not move it beforehand.

There are three signators:

- State
- Sr. response official for the state (EMA director, etc.)- overseer of all things to prevent duplication
- FEMA Field Office. Once they sign it, it goes from being state funded to federal funded.

CDC is going to show up regardless. What happens is that it puts a little glitch in things because it gets outside the system.

Problem: people bypass the set processes in place.

Issue is to put better processes in place than we had this time.

Fact of the matter is that DEO will always send people down range without being asked as long as Dr. Gerberding is in charge. Experience and training all come in to play here. Next time the first person down range will have more information than they had before today.

It was something to see the lack of processes in place at the CDC. Seemed like an incredible struggle and should be much easier to get federal-federal mutual aid.

DEO is working to come up with a permanent incident management structure that can handle large-scale events- have assigned desks and procedures to follow.

Procurement is different for the stockpile. There was no real sense of financial awareness. They procure through interagency agreement with the VA. It is positive because the VA has the tradition of doing these types of procurement. It does not make sense to do everything through the VA- example being vaccine. VFC program lies within the CDC. The mechanism makes a big difference. FMO, PGO and SNS have met to discuss, but it needs to be better coordinated. They get MAs the same way CDC gets MAs. SNS will respond quicker than any part of this agency- that is their core mission.

There has not been set up any sort of contingency funds for emergency funding at CDC. The Director has a discretionary fund, but it is not used for this kind of thing. Terrorism funds are core program dollars- funding places across CDC including COTPER and the DEOC. Every dollar held back for emergencies is a dollar kept from a program.

When events occur, CDC will have people going forward because we have established relationships with the public health community. This is different than assistance provided during Presidential declarations- public health has to be proactive and can't wait for a Stafford Act.

DEO has to be prepared to operate independently. The operational component is that once the FEMA component stands up, they expect DEO to fill into their structure though it is already running down the pike doing things- need to be able to plug into FEMA's system while maintaining own operation.

Once the SMOs begin operating in every state, they should be working side by side with the State PH officer, and once things happen, the SMO becomes liaison to FEMA. Need a junior person well versed in emergency response operations to represent the SMO in the ERT-A.

PROCUREMENT

This has been a test. Two years ago, CDC had no process at all for emergency operations. There was no proactive behavior- people went out in the field using personal credit cards. Hundreds of thousands of dollars were spent that cannot recouped. Procurement was not involved half the time. When the terrorism team came together, it was because of that. Up to that point, there had not been a lot of emphasis on global or national emergencies.

From the observation of procurement, when we defined emergency events,

- Dr. Gerberding would call the event,
- DEO would stand up the FPAT, and
- A cadre of folks stood up in PGO.
- FMO gives PGO a CAN and tells them to move forward
- A buyer is put out there

DEO never had to go on site until Katrina. DEO did a remarkable job considering what had to be met in a short period of time. Recognizing the many layers of government encountered, the only thing Procurement wants to know during the event is does DEO have the money?

DEO needs to know that it is the type of procurement that could be defended should there be a need to defend it later. There were only 2 requirements that came through that PGO had concerns with. Have to think when it is an emergency, are the items being bought something to support that person in the field? The process written 2 years ago with the FPAT premise must remain.

FEMA has a scripted plan. There is a need to prescript. This has been a great opportunity to prepare. The big one is yet to come.

PGO management was extremely supportive- had a great team of people yet it was a skeletal crew. Need to establish identified personnel and tweak processes (communication between DEOC and PGO is excellent). Finance Procurement and DEOC Logistics merged together wonderfully. There are a lot of lessons to be learned and there was confusion at times when something was needed. Always have to work under regulations- the OIG will always come back. Can this procurement be defended? Needed 48 vehicles out the door in 2 hours and OIG wants to know why it wasn't competed. There was no time for competition. Need to refine the process to make it work but it will always go back to - Dr. Gerberding will stand DEO up and will have to move out the door without ARFs and MAs. It comes back to being able to explain the process and someone in procurement has to track every dollar- have got to be accountable. At this point in time, there has not been 1 thing bought that PGO has gone to the carpet for with OIG. DEO's documentation is the best they've seen.

Staff went out and stood in line at (b)(2) (HHS allowed them to go out and procure items without competition- even though they issued a waiver, they forgot they did that and the OIG was not aware). Have to

remember that when this is over, someone will be pointing the finger. Even though there was a waiver, DEO also called other stores to document prices. All emails for every action were kept. Approx. 87% of the buys were competed.

There was no process in logistics to track procurements. Sometimes it was hard to figure out what things belonged to whom.

DEO needs a requisition process in place- someone is working with NCPHI. They created an automated system to track antiviral requests from the states. Using that to track requisitions when they come into the DEOC. There will be one position in logistics that does nothing but track requisitions/requests. Have to have a process to go to someone for approval and have people sign off on requisitions and then track it to completion so when someone needs to know whom the widgets belong to, the requisition person can tell her.

There were many occasions where requirements were not completely defined to PGO. One situation where an arrangement was made with (b)(2) to do work ahead of FEMAs, then no one showed up to pick the stuff up for 2 days- it was embarrassing. How can this be fixed? Manpower? Processes need to be determined- who needs to pick this stuff up? As requirements increase, we have to trigger surge personnel.

There was liability attached to PGO folks picking up stuff and people could've gotten hurt- there was a lot of flack from PGO leadership. PGO would need more contracting officers put in to ramp up. Have to be able to rotate people and not burn them out- for 15 days, ran 3 contracting officers. Rita had no backup at all. This is a resource issue for PGO.

Truly believe that the people on the procurement side that should be part of an emergency response cadre should be people that volunteer, people that have been trained and people that have the experience. Should always keep the doors open for new people, but there is an error in judgment to assume that you can tell anyone to do emergency response work.

PGO is carrying what they do for DEO (getting things smoothly and quickly) outside emergency response and getting great results.

People in the field truly appreciate the work FPAT does. They are far from communication and support, but know they are being taken care of.

DEO has tremendous collateral in the business community as long as it is kept up (be timely picking things up, pay on time, etc.). Businesses offered all kinds of discounts. Saved over a half million dollars.

Issue: PGO left the DEOC and it was hard to find out who was on call. This was a very small problem, less than 1% of the time

PGO has a calendar that designates an on-call contracting officer 24-7. After a while, people were hard to find. There was a change during surge period, the calendar that identified contracting officers, as things started to wind down, management shifted. Moving management to the branches was one of the changes. The management response for the DEOC went to the branch chiefs. Branch chiefs would send emails identifying on-call contracting officers and phones were not manned (including on-call cell phones)

All requests have got to come into the logistics section in the DEOC. HHS calls SNS directly, then CDC gets the MA- it is very possible that things were purchased twice and there were cases where PGO purchased things that

would have been better purchased by the SNS. FMO, PGO, SNS. Requisiton Coordinator will be in the room to receive requests and determine who needs to make what purchases and there will be people for on-scene discussion. It should be "this should be purchased by CDC"' or "this should be purchased by VA". This cost-tracking spreadsheet that PGO did, if you look at the dollar amount and the whole amount we spent, it probably made up a quarter of the purchases. The 4 fists were done by the stockpile from the VA.

Should have PGO be the liaison to VA rather than SNS- would be better between contracting officers so they can speak the same language. May also benefit to have a VA contracting person in the DEOC during these size responses.

Who is going to make it clear to HHS not to go straight to stockpile? SNS will have to push back to HHS and tell them to go through the DEOC. Culture has to be changed. PGO doesn't purchase without (b)(2),(b)(6) signature.

SUPPORTING FIELD STAFF

Process: once a group of people are IDd to deploy, DEO has pre-identified equipment that will go with them.

Once people were ready to go out, logistics would get a heads up on the number of people and equipment they would need. Made sure each team had 1-2 satellite phones.

At the deployment briefing, they were told to go to Bldg (b)(2),(b)(6) to get equipment. Selective personnel would also get laptops and other common equipment. All persons got cell phones. Also provided vehicles with GPS.

They signed for the equipment, sometimes also provided safety briefs. Anything they needed that they didn't receive was either procured by IST in the field or shipped from Atlanta. DEO made sure DEOC IT would bring laptops to Bldg (b)(2),(b)(6) ready with login credentials.

Once people came to pick up equipment, they were asking a lot of questions and it slowed us up. Some people were going out without instructions for using laptops, cell phones, etc. because they didn't have time. Laminated cards were created to go out with deployers with support information in the field. Also had DEOC contact information on the card. Tried to give them as much information as possible.

Once people got out there with laptops, they didn't have anything to print to. PGO was procuring a lot of printers. There were cases when printers had to be procured on this end and shipped to the field.

The initiative to stock Bldg (b)(2),(b)(6) through (b)(2) was a lifesaver.

Suggestion- create field gear boxes, there are different needs for different people. Training is needed.

Having someone on the ground is instrumental in getting things done. Need to consider: need to have a center that when we go, we can support the actual response. As they go all over the state, they need a central place to get support from logistics. If they had a facility where they could coordinate, it would be a safer operation.

Need a concept where DEO moves in, stage and brief people, and PGO send equipment to a central location. SMO feels that the deployment briefing they receive in Atlanta is not sufficient.

Need to bring everyone to one place to receive them, stage them, get their equipment and mission, and then be integrated into the operations in the field.

Need to get the IST in the field early with equipment and if people come in to a staging area and see a friendly face.

Log can issue equipment and SMOs can brief them at the staging area. IST on the ground would decide how to get folks from the staging area to their location.

PHAs can contact IST to procure equipment with IMPACT cards and if the request is too big, could work with contract officer at the staging area.

When it is time for deployers to leave, they go to staging and turn in their equipment and go home without carrying all that equipment.

Need a person at the staging area working operations and being responsible for knowing where people are. People would feel more comfortable knowing someone is looking out for them, and the DEOC would know where folks were all the time. DEO kind of used this model during Katrina with staff in Baton Rouge. Also would help save equipment, as people just left it in the states because they didn't want to carry it back to Atlanta.

Proposal would be very manpower-intensive. Could possibly use SNS staff as surge support.

Need to get this thing set up prior to events. Because DEO couldn't get people to New Orleans, they were being set up in Baton Rouge. DEO would bring them in, bed them down in the tent area in Baton Rouge, meet them in the morning, explain the situation to them and take them down into New Orleans. Also did this through the HHS command vehicle.

If a federal contracting officer was brought to the field, there would have been much more spending power to acquire space.

Moral of the story- needs to be set up prior to the event.

Serious breakdown at the state level- could not get (b)(2) and (b)(2) trucks in to deliver pharmaceuticals and supplies. Had to get special LA permits to get certain trucks through. When it got to warehouses, there was no one from the state there to pick it up. Some of those supplies had shelf lives and expired waiting for someone to do something with them.

The staging areas could be worked with SNS, as they will likely be involved in hurricanes and they already have procedures in place with states to ensure the safety of federal assets deployed to the states.

SMOs would like to have someone come in and set up the infrastructure for them during emergency responses.

As Mark went around to get hotels, FEMA had a contracting officer doing it. DEO needs a contract officer to go out as well.

Early on, DEO staff member identified resources needed and were procured by the contract officer team. During this event, all resources were there. There were times when it ran short because the teams going out weren't sure what they needed. Resources were depleted. Priority of support needs to be identified. DEO cannot give every single person a blackberry. It got to a point where the staff member had to prioritize who needed a blackberry. Because the staff member didn't know what missions people were going on, they could not effectively advise people on what equipment they needed. The staff member did need some additional manpower and was burned out by week 2.

A lot of the manpower requirements and intensity in the first week was getting Bldg (b)(2) setup and functional. Bldg (b)(2) is always going to be the support area so it never has to be set up again.

Would change IT support- need an IT person or team to co-locate with DEO. It got to the point that IT support had become very thin due to competing priorities. Logistics also needs administrative support. Need admin and IT embedded in the logistics function including IST.

If there is a concept like this, it will affect the bottom line and save the CDC lots of money because there will be people on the ground advising PGO what needs to be bought.

If PGO could give staff members a quick class on what could be purchased with what funds (bottled water, meals, etc.). Everyone that gets an IMPACT card goes to training for authorized purchases.

Staffing Infrastructure- what did DEO use to meet the staffing needs for this hurricane season?

FMO and PGO were represented in the DEOC as well as a SNS liaison. There were 2 people in there and 1 travel person.

DEO had the right people in the room for the most part except for the requisition process. Not knowing whether or not DEO would be able to deploy the IST, those folks were filling in. Did not have a good staffing plan when going in- it was hit or miss. Did not worry about Bldg (b)(2) staffing, but staffing in the DEOC was a challenge because of a lack of personnel.

When we do have an event, there is a bigger requirement for staff. Have to come up with a surge capacity and personnel staffing plan, whether using volunteers or SNS folks. Maybe DEO can hire local folks in the field to do transportation, as they know the area.

PGO could put a contract in at the staging area for transportation.

There are options for staffing that we can look at for non-technical support.

Procurement needed additional staffing as well. FMO was also staffed thin- a group of 2-3 people that would come answer the phone in the DEOC and help where they could. They were not comfortable answering the kinds of questions that they were being asked.

There were enough technical people to handle it. But you lose that technical expertise when they are called on to do things that everyone else is able to do (pick things up, move vehicles, etc.). Need to look more at that.

PGO supports an on-ground contracting officer in the field.

Hurricanes happen the same times during the year- need to plan accordingly. A staffing plan needs to be in effect that considers all issues (spanning fiscal year, etc.)

VOUCHERS

The voucher process has faults. People that deploy to New Orleans deserve to get reimbursed hassle-free as soon as possible. However, there are laws and regulations in place that have to be considered.

Process:

- Did the mission spreadsheet
- (b)(2),(b)(6 sent it to travel
- Travel decides if it should be handled in the DEOC or Bldg (b)(2),(b)(6 (travel orders)
- Based on the spreadsheet, orders are processed

Ran into major problems with the CAN

CDC just implemented a new financial mgt. system- this was the first time DEO opened the new year with this management system and all anticipated questions were not considered (at the end of the fiscal year, the mgt. system closed all the CANs). Hope this is better next year as FMO is aware of all the issues surrounding CANs covering fiscal years.

Voucher process gets people paid- some of the problems are internal-

Have to go back and forth working with DBS in different locations in order to get vouchers approved. Once approved, they could go to FMO.

This is not COTPER travel, it is CDC travel- why DBS has to be in the approval chain for the voucher is unknown- it is not their money.

One person in DBS was given hundreds of vouchers to review and vouchers over 2,500 takes up to 30 days.

People were not getting their email once their vouchers were certified. Now we have a lot of people that have been certified that still have not received their reimbursement. Logistics has to be able to give them status until they're certified- once certified, it is between the traveler and FMO.

If DBS is going to be in the approval chain, they need to be in the same room with the voucher preparer and FMO to make things more efficient.

Up to this point, all travel orders and vouchers have been handled within DEO. One of the things log has tried to do is get the traveler to sit with the voucher preparer when they return. Some folks don't think this is necessary. If the traveler would do that, a large percentage of the misunderstandings could be taken care of.

When DEO realized this was going to be a catastrophic event, it had a pool of volunteers that came in to support. A travel person was there to answer all travel related questions. Problem with volunteers is that when trained travel preparers was asked for DEO had to sort through those folks to come up with a decent pool, but their CIO would only let them stay for a few weeks. This caused loss of continuity. Had people doing travel orders and all the sudden the 1st wave of people that went out came in and was submitting vouchers. You may have someone doing orders that is also doing vouchers.

FMO needs to run the voucher process. There needs to be a distinct line between the travel order and travel voucher processes. Voucher process is 2-3 week gear up time- won't be needed until couple of weeks into event. Travel needs to fall into the DEOC team. The Voucher team needs to be led by FMO. This will be the way it is done for

major events from now on. One of our challenges has to be getting a pool of volunteers whose leadership will approve them being part of response operations and train them.

The initial travel team should come from COTPER- it should be COTPER travel staff initially to do travel for the first 3-4 days until volunteers can be brought in. At that point, COTPER staff could be weeded out.

People are going to have to be able to commit for longer than 2 weeks, more like 2 months.

Big thing- people deserve to get paid. We have to come up with a better way to get vouchers through the system.

Have to have teams to do travel and vouchers. FMO needs to lead voucher process- this will be a resource issue for FMO. DEO needs a commitment from the agency to get volunteers that can be kept for long periods of time. Someone from FMO should be communicating US Bank so they are not hounding the traveler.

The voucher process is the hardest. If the Help Desk could keep people informed, it would be helpful- don't blow people off. Send out emails to everyone and keep them in the loop- let them know it is being worked and that US Bank has been contacted and that it will not affect people's credit.

Vouchers are a serious problem. A lot of it is an education process for Edna and those folks- it is the nature of the emergency response business. Things may not be quite within regulations, but a memo should be able to be written, it is obvious that staff is not trying to rip off the government.

ACTION ITEMS FOR FMO:

Contact (b)(2) and let them know that over 700 people have been traveled, most of the vouchers are in audit, and that there are a lot of people who will not be able to make their payment when it comes in.

Ask FMO to send an email to travelers that explains the problem with CANs and tells what FMO has done to remedy the problem.

A contracting officer is going to be thinking "FTE" for the most part when people deploy. When people are put in the field by CIOs and people pay their own expenses because they are contractors and/or fellows and do not know the process. Whether people are FTE or Contractors must be identified up front.

Contractor deployers are also a big issue- FMO tried to be consistent this year and have their contract travel them where they could. Problem with that is that there may have been 20 different contractors on 20 different contracts and people are working outside their contracts.

DEO are deploying folks other than CDC FTEs and they are just not paid the same- this dramatically affects the way DEO travels people. May be resolved by meeting with contract companies and establishing contracts to be used in the case of deployments. FEMA will reimburse for many of these deployments, but the way it has been set up, it is not easy- need an enterprise-wide solution.

DEO has to have a group that is focused and dedicated to emergency support. Management will have to be the ones to stand up and support it- identify people out of FMO that will be responsible for vouchers and identify contractors that can deploy during emergencies.

DEO went down this road with GSA- they will not relax the regulations in order to travel contractors.

Need a group to look at this problem- a group will be pulled together to examine the processes in place to travel contractors and to come up with a better mechanism of traveling contractors.

There was never a good place to answer the question of "who is out there right now." Hope this is solved through close coordination with the deployment coordination desk and the tracking staff. Staging area process will assist with this as well. Will also assist travel preparers because if people have to go to a staging area, everyone goes to the same place.

Initially, the travel people can expect to work 24/7 with a couple hours notice. Unsure of why people need to move quickly as DEO are not first responders. DEO can expect to travel people every day during the first week. Soon after, there has to be a normal deployment schedule. It has to be a disciplined system. The Deployment Coordination Desk and Mission Information Sheet was because of being hammered about short notice deployments. People were showing up at airports several times per day and made it difficult to get people where they needed to go (only had two staff members to get them around).

Maybe DEO should designate certain cadres of people that can do short notice deployments. Cannot do this without training and psychological conditioning. Can be done, but it has to be a part of our job. Pick people in advance, get CIO approval and train/condition them for this. Could have blanket travel orders and go-kits in order to meet the requirements so all people have to do is grab the kit and go out the door.

Created a deployment website- and need to advertise this website and make people go to it. A lot of this information could be put on the website and people can see it before they deploy. Need to continue to refine the website in order to make it useful for deploying staff.

PERSONAL SAFETY IN THE FIELD

For international deployments, staff has cards to evacuate injured/sick staff (CDC will be responsible for returning this person in the event of injury or illness). Need a medical evacuation component in the AAR. Could be a medical process in place in the field to include medical and mental health. CDC needs to consider that when hundreds of people in the field, there needs to be a medical infrastructure to support them.

Appendix K
Data Review Team
DSOC Portal: Hurricane Katrina Information Inventory

Location	Report Name	Total Count	Report Date	Written By	Written For	User Template	In "Reports by Date"?	Description of Use	Additional Notes
HHS Reports Folder	HD04 SITREP07	1	10/11/05			yes	no	This is a situation report; assessment by ESF#8 on current situation, critical issues and accomplishments related to Katrina.	HHS Reports/IFO Folder
HHS Reports Folder	AL-1605-IAP-10032005	2	10/03/05	(b)(2)		yes	yes	Hurricane Katrina Action Plan; includes information on incident objectives, organization assignment list, assignment list, incident communications plan, medical plan, and Multi-State Joint Field Office Coordination Group (organization chart).	
HHS Reports Folder	ARC - Daily Case Statistics 8 Oct 05	1	10/08/05	b)(2)		no		Small indicating daily case statistics (cases open today and cases open cumulative).	HHS Reports/Flash Reports Folder
HHS Reports Folder	Blood Supply Update 9-3-05 1700	1	09/03/05			no	yes	Update of blood supply for Louisiana and Mississippi.	Appears to be a series of emails.
HHS Reports Folder	Copy of Hurricane Katrina Hospital Bed Availability Report	1	09/03/05			yes	no	Report of available hospital beds by specialty (Adult Med, ICU/CCU, Acute Psych Psys, etc.) in Regions 1-6. Also reports Available Vents (Adult and Ped) and Special Needs Shelterees (Nursing Homes, LTAC, SNLT, and CORNU).	
HHS Reports Folder	Copy of Nursing Home Status 1700 9-2-05	1	09/03/05			no	yes	No real identifying information, but appears to be a list of area nursing homes and a count of evacuated residents (or the status of impending evacuation).	
HHS Reports Folder	Flash Report 12 Hurricane Katrina 0200 2 Sept	04	09/02/05		Department of HHS	yes	yes	Incident Update for HHS Headquarters including notes on federal involvements, ESF#8 resource status reports, NDMS status of engaged teams, and incident objectives for Mississippi, Alabama and Louisiana.	HHS Reports/Flash Reports Folder
HHS Reports Folder	HHS - Unified Incident Mgmt - FINAL	1				no	no	Provides basic information on the concept of operations for the Emergency Support Function #8 Emergency Coordinating Center.	
HHS Reports Folder	HK NDMS ASSETS 10 04 10001	1	10/04/05			no	no	NDMS Response Status Report for Regions 4 and 6.	
HHS Reports Folder	HSOC Spot Report 42	7	09/01/05			yes	no	Evacuation of evacuees arriving at the Houston Astrodome from New Orleans.	HHS Reports/HSOC AL SPOT REP folder
HHS Reports Folder	Katrina_HHS_ESF8_02 Sept_1630 (2)	1	09/02/05			no	no	No real identifying information; appears to be minutes from a conference call, listing information about Louisiana, Mississippi, Region 6, Region 4 and Miscellaneous Items.	
HHS Reports Folder	LA-1605-DR LA-1607-DR-SITREP30	2	10/03/05			yes	no	Situation Report for Louisiana; indicates designated parishes, casualties, severity of impact on jurisdictions, etc.	HHS Reports/IFO Folder
HHS Reports Folder	NDMS Report 10-03	1	10/03/05		AST - Command Staff	yes	no	This is a situation report; assessment by AST-New Orleans on current situation, critical issues and accomplishments related to Katrina.	
HHS Reports Folder	Public Health Emergency Declaration Authorities	1	?			no	no	Copy from the Department of Health and Human Services; lists format for a Secretarial Declaration of a Public Health Emergency.	
HHS Reports Folder	SAMHSA Hurricane Katrina Update	1	09/04/05			no	yes	Details SAMHSA highlights (mental health and substance abuse station assignments, SAMHSA Emergency Response Center, counseling program, assessment team, consultant deployment, etc.), pending logistics (future deployments, etc.), long-term issues requiring attention, specific challenges (e.g. stigma, civilian clinical/drug team, etc.), etc.	HHS Reports/SAMHSA folder
HHS Reports Folder	SO Briefing Katrina and Rita Dol 3 (b)	2	10/03/05			no	no	Daily update from DOS on Katrina/Rita response. Highlights deployment activity for Houston, San Antonio, New Orleans, Baton Rouge, Alexandria (LA), Memphis. Also addresses mental health, medical reserve corps, DMORT operations and the disabled population in Louisiana.	
ICS and IAP Forms Folder	HD04 IAP 10-4-05 1_1	3	10/04/05			yes	no	Incident Action Plan for 10/04/2005 to 10/06/2005.	HHS Reports/IAP Folder
ICS and IAP Forms Folder	Action Planning worksheet 1600 10-05-05	1	10/03/05			yes	no	Identifies needs of the remaining shelter population, the transition of displaced Alabamians and shelter populations to displaced housing, noise about leaving New Orleans area, maintenance of community relations, execution of DRC strategy and development and conclusion of contractor workshop.	Appears to be notes for a conference call between Federal and State (Alabama) Emergency Management Agencies. Conference Call Line – 800-457-0783 (b)(6)
ICS and IAP Forms Folder	IAP 2_Sept_Strikt2	4	09/02/05			no	no	Incident Action Plan and Situational Summary detailing incident objectives, weather, casualty reports, safety and ESF#8 issues, HHS issues, potential resources, shift "to do" lists, etc. for Louisiana, Mississippi, and Alabama.	
ICS and IAP Forms Folder	ICS IAP Forms 2C_aug 10	2	08/01/05			yes	no	Provides basic information regarding the incident situation and the resources allocated to the incident.	
RTS Driven Reports Folder	AK_Hurricane_Kat_CIO	1	?				no	Indicates the CDC's Response to Hurricane Katrina for CIO.	

Appendix K
Data Review Team
DSDC Portal: Hurricane Katrina Information Inventory

Location	Report Name	Total Count	Report Date	Written By	Written For	Uses Template	In "Reports by Date"?	Description of Use	Additional Notes
SIT REP Folder	09-25-05 Katrina IOR-Region-4-INCIDE	1	09/25/05			yes	no	Initial operating report for Tropical Storm Katrina, indicating Key Personnel, RRCC Region Location, RRCC Activation Level, and EOF's and DOE Activations.	
SIT REP Folder	09-29-05 ERT-A Sitrep	10	09/29/05			no	no	Details current status and potential resource requests for area during time of storm landfall	
SIT REP Folder	09-02-05 Situational Report - Dr. G	1	09/02/05	Julie Gerberding		no	no	General report of situation in Mississippi and Louisiana.	
SIT REP Folder	09-02-05 ENS Hurricane Katrina Sit Rep 6 (2)	4	09/02/05	(b)(2),(b)(6)		no	no	Division of Strategic National Stockpile Situation Report 6; Indicates significant events in the last/next 24 hours, logistics and communications related to 9/2/05 Katrina assessment.	SIT REP/ENS Folder
SIT REP Folder	ACF - Separate Benefits Data by State 100305	1	10/03/05	Administration of Children and Families?		yes	yes	"Internal Document" Evacuee benefits data report (child care, child support, foster care, Head Start, TANF, etc.)	
SIT REP Folder	AL-1605-IAP-10032005	1	10/04/05	(b)(2),(b)(6)		yes	no	This is a situation report; incident objectives, incident communication plan, organization assignment list, as well as an organizational chart of the Multi-State Joint Field Office Coordination Group.	A cover letter for this report is in the "Reports By Date" folder.
SIT REP Folder	AR Daily Shelter Disease Report 100305	1	10/03/05			yes	yes	Daily shelter disease/outbreak (fever, cough, rash, ER admitance, etc.) surveillance report for Arkansas.	
SIT REP Folder	AR-SHD SITREP 10-03-05	1	10/03/05			yes	no	Daily Situation Report; provides a summary of Mission/Operational Activities/Objectives, report of EMO activities, and report of completed CDC Field Team Activities.	
SIT REP Folder	CDC SitRep Katrina 33	2	09/30/05			yes	no	Information on the Administrator and Deputy Administrator's assessment of Katrina damage; basic information on fuel motors, mobile labs, national priorities for drinking water assessment and sediment/sediment sampling.	SIT REP/FPA Folder
SIT REP Folder	FINAL SITREP 10_3	9	10/03/05	SERT-Baton Rouge Reporting link		no	no	Situation Report for Hurricanes Katrina/Rita detailing current situation, critical issues, accomplishments, and changes in resource requirements. Also details local area reports for Calcasieu, Hospitals, Nursing Homes, Clinics, Shelters, Environmental Health, Mental Health, Animal Care, CDC Ops, DOD Ops, NOAA Ops, OSHA, Logistics, Planning, and Finance and Administration.	
SIT REP Folder	FMS SERep 09Oct05/0200	1	10/03/05	(b)(2),(b)(6)		no	no	Situation Report 9 for the Federal Medical Center (Texas); provides background/current situation, operation status/notice (short- and long-term operations plan), and points of contact.	SIT REP/FMS Folder
SIT REP Folder	Greater New Orleans PHS Team 07 Oct 05 CDC SITREP (data as of COB 06 Oct 05)	3	10/06/05			no	no	Details current status, critical issues, accomplishments and changes in personnel/assigned resources for CDC Operations as of COB 06 Oct 2005.	
SIT REP Folder	LOPH EST Sit Rep 10-03-05	1	10/06/05	LA-OPH Environmental Support Team		yes	no	Report from Louisiana Office of Public Health Environmental Support Team, priority outlining current situation, critical issues, accomplishments, discussion items, planned activities, resources assigned , mental health report, and additional information.	
SIT REP Folder	Geneva#1_100305	1	11/03/05			no	no	Hurricane Katrina, The Public Health Response. Synopsis of the public health response to Hurricane Katrina from 08/29-9/3/05.	
SIT REP Folder	ENS sitrep 10-04-05 0500	1	10/04/05			no	no	Outlines current status, critical issues and accomplishments of the following shelters: Alexandria Special Needs Shelter, LSU Field House Special Needs Shelter, Region 7 Special Needs Shelter, Region 6 Special Needs Shelter, Lafayette Special Needs Shelter, and Calcasieu Shelter.	
SIT REP Folder	Status Update 09-30-05	42	09/30/05	(b)(2),(b)(6)		yes	no	Status update for the following: Liaison Team/Field Staff Management, Communication Team, Medical Team, Surveillance/Epidemiology/Assessment Team, GIS Team, Laboratory Team, Occupational Health Team, Infectious Disease, ENS, Injury Team, Planning/Forecasting Team, and DEO Task Force.	SIT REP/CDC Status Updates Folder
Situational Awareness Folder	Blood Supply Update 9-2-05 1700	1	09/02/05			no	yes	Update of blood supply for Louisiana and Mississippi.	Appears to be a series of emails.
Situational Awareness Folder	FW OEM Gets Report of Children in Flood Areas - Joint Statement from AAP and PDHSW	1	10/10/05			no	yes	Blackberry Message; subject: FYI on Clinician Recommendations Regarding Return of Children to Areas Impacted by Flooding and/or Hurricanes.	
Situational Awareness Folder	HC KATRINA DAMAGE UPDATE 0Sep	5	09/04/05			yes	no	Update on damage for Mississippi, Louisiana and Alabama (injuries, deaths, environmental and infectious hazards, etc.).	
Situational Awareness Folder	Hurricane Katrina Hospital Engineering Assessment Team (HEAT) Report	1	09/06/05			yes	no	Update on capability/capacity of area hospitals, including hospital deficiencies as proximity to coast.	
Situational Awareness Folder	Hurricane Katrina Hospital Update 9/05 500 pm CST	2	09/06/05	(b)(2),(b)(6)		no	yes	Has a logo at top of page, but no template. Outlines status of 29 area hospitals; brief list of needs for Crowley Memorial Hospital; brief mention of health status report; advertisement for Planning 2.0 software (mapping and reporting software for the health care industry).	
Situational Awareness Folder	Infrastructure DAMAGE REPORT	1	09/01/05			no	no	Summary of infrastructure damage for New Orleans, Mississippi, Alabama, and information concerning Air Transportation and Hospital Infrastructures.	
Team Reports Folder	093005 1	2	09/30/05			no	no	Hurricane Katrina Daily Team Report, CHIT, Indicates actions taken today, actions to be taken (next 1-3 days), accomplishments, and key contacts inside for the CHIT team. Appears incomplete.	Team Reports/Emergency_Communications Folder
Team Reports Folder	10.01.05TabV-13.DES.ECS	4	10/01/05			no	no	Powerpoint Slide summarizing the ECS Summary Report of new communications strategies for the CDC (as assessed by the Harvard School of Public Health).	Team Reports/Emergency_Communications Folder
Team Reports Folder	10.01.05TAB22summary ECS	1	10/01/05			no	yes	ECS Summary Report of new communications strategies for the CDC (as assessed by the Harvard School of Public Health).	Team Reports/Emergency_Communications Folder
Team Reports Folder	10.1ECS TAB4 PH Response Team Reports ESC	7	10/01/05			no	yes	Report of significant accomplishments of the Communications/Emergency Communications Branch. Also indicates information about the CDC Website and Actions in Progress.	Team Reports/Emergency_Communications Folder

Appendix K
Data Review Table
DEOC Portal: Hurricane Katrina Information Inventory

Location	Report Name	Total Count	Report Date	Written By	Written For	Uses Template	In "Reports by Date"?	Description of Use	Additional Notes
Team Reports Folder	9-2-2005 (Hurricane Katrina Daily Report_Medical Team)	5	09/02/05	(b)(2),(b)(6)		no	no	Details current and future actions for clinical team.	Team Reports/Clinical_Care_Liaison Folder (in email format)
Team Reports Folder	CDC SITUATION REPORT Oct 2	1	10/02/05			no	no	This is a situation report; assessment and notes on current situation, critical issues and accomplishments related to Katrina.	Team Reports/Deployment Coordination Folder
Team Reports Folder	Communication Activity Hurricane Katrina 09/2005	1	09/20/05			no	no	Details the following: Leadership Communication Activities, Clinician Outreach and Communication Activity (CDCA), Community Health Education Team Report, EpiX activities, Information Management Team Report, Public Health Workforce Team Report, and Public Response Hotline Team Report.	Team Reports/Emergency_Communications Folder
Team Reports Folder	Daily report 09/17/05	15	09/17/05			no	no	Katrina daily report for Communications/Emergency Communications Branch; outlines significant accomplishments and actions in progress.	Team Reports/Emergency_Communications Folder
Team Reports Folder	DoD Daily Report_1 Sep 05	5	09/01/05	(b)(2),(b)(6)	CDC Emergency Operations Center	no	no	Daily report for Hurricane Katrina, indicating the following: Significant actions or status changes since previous report, Current DoD assets in place/response capacity, Outstanding requests for DoD assistance, and National Guard mission overview.	Team Reports/Federal Liaison/DoD Folder
Team Reports Folder	FW Team Mission Statements	1	09/01/05		Distribution List: EOC Hurricane 2005	no	no	This is an email, indicating the mission of the Communication Team.	Team Reports/Emergency_Communications Folder
Team Reports Folder	FW Web Team report 29 Aug	1	09/29/05		Distribution List: EOC Hurricane 2005	no	no	This is an emailed situation report from the Web Team, indicating significant developments, ongoing and future activities, and an updated chart of the web activity on hurricane sites this month (August) compared to last month (July).	Team Reports/Emergency_Communications Folder
Team Reports Folder	GIS Team Daily Report 8_30	24	08/30/05			no	no	Details current and future actions for GIS team.	Team Reports/Informatics-GIS Team/GIS Team Folder
Team Reports Folder	Hurricane Daily Team Report Form	1	?			no	no	Blank Daily Team Report Form for the Katrina response.	
Team Reports Folder	Hurricane PVD Update 10052005 (Site Changes) (WNV)	1	10/06/05			no	yes	Graphs of presumptively viremic blood donors by state (LA, MS, TX, AL).	
Team Reports Folder	ICS_202_083005_0900 Objective 8	1	08/30/05	(b)(2),(b)(3)		yes	no	Lists objectives for the Hurricane Katrina incident, as well as a weather forecast for 30 Aug 05.	
Team Reports Folder	Intelligence-Planning Team Daily Report (9-3-05)	9	09/03/05			no	no	Texas submission of report on response to issues (issues: infectious diseases, environmental health, mental health, occupational safety, injury/violence prevention, other).	Team Reports/Intelligence Planning Folder
Team Reports Folder	Katrina short term health care issues ?	1	09/11/05			no	yes	Narrative of critical issues related to Hurricane Katrina from the Centers for Medicare and Medicaid Services.	Team Reports/Vulnerable_Populations Folder
Team Reports Folder	LST_083005	1	08/30/05	(b)(2),(b)(6)		no	no	Email of task submission in support of objective 2 (f), as requested in a Leadership Team Meeting.	Team Reports/OCD Folder
Team Reports Folder	Medical Team Daily 9_1_05 Confidential	4	09/01/05			no	no	Details current and future actions for clinical team.	Team Reports/Clinical_Care_Liaison Folder
Team Reports Folder	Mission statement-communication team	1	09/01/05	(b)(2),(b)(6)	Distribution List: EOC Hurricane 2005	no	no	This is an email, indicating the mission of the DEOC Communication Team.	Team Reports/Emergency_Communications Folder
Team Reports Folder	Planning-Forecasting Team Daily Report (8-30-05)	4	08/30/05			no	no	Includes current actions taken, as well as short- (1-3 days) long-term actions and key contacts.	Team Reports/Planning/Planning-Forecasting Team Folder
Team Reports Folder	RE American Red Cross Disaster Operations Report for the Hurricane Katrina 09 12 05 PM	1	09/12/05	(b)(2),(b)(6)		no	yes	This is an email with an attached spreadsheet of ARC and non ARC shelter data.	
Team Reports Folder	WNV – Hurricane Case-report Update 100605	3	10/06/05			no	no	Chartographs indicating cases of West Nile Virus in Alabama, Louisiana, Texas and Mississippi.	
Travel Reports Folder	09-05-05 Inserts, State	101	09/05/05			yes	no	HHS/Executive Travel Order Forms for deployed personal; each indicates the purpose of travel, accounting information, travel itinerary, hotel reservation information for persons deployed for Katrina relief.	Travel Reports/Travel_orders (mm-dd-yy LName, FName) Folder
Travel Reports Folder	CDC Logistics Team Travel Report, 9-10-05	7	09/10/05			no	yes	Travel list for approx. 198 persons of the CDC Logistics Team deployed to Louisiana, Georgia, Texas, Alabama, West Virginia, Mississippi, Arkansas, and Washington, D.C.	
FEMA folder	FEMA-3212-EM-LA & FEMA-1603-DR-LA	38	9/5/2005			yes	no		
FEMA folder	FEMA-1604-DR-MS – SITREP #22	38	8/29/2005			yes	no		
Field Reports	Tool for Surveillance Among Facilities Housing Hurricane Katrina Evacuees	1	09/12/2005	(b)(2),(b)(6)		yes	yes		
DoD Daily Reports	DoD daily report #3 2 Sep 05	7	9/2/2005		CDC Emergency Operations Center	no	no	memo for CDC EOC	Daily Reports/DoD Daily Reports
FDA	FDA Situation Report #6	2	9/2/2005			no	no	Describes all encounters FDA has had with other organizations on 9/2/05	External Agency Reports/FDA
EPA	EOC SitRep Katrina 40	9	10/12/2005			no	no	EOC Special Situation Report #40 regarding Hurricane Katrina and Rita	External Agency Reports/EPA
Military	NORTHCOM Daily Report 09/06/05	1	9/5/2005			no	yes	The intent of this report is to provide a summary of information relevant to the homeland defense (HLD) and defense support to civil authorities (DSCA) missions.	External Agency Reports/Military
DoD Daily Reports	DoD Daily report from CDC 12 Sep 05	7	09/12/05	(b)(2),(b)(6)	CDC Emergency Operations Center	no	yes	Report describes significant actions or status changes since previous report and Outlined DoD assets in place/response capacity.	Daily Reports/DoD Daily Reports
ARC	American Red Cross Hur Katrina Ops Report 09 30 05 #10	137	09/30/05			no	no	American Red Cross Hurricane Katrina Post- and Pre-Landfall Report #10 (Update as of 11am 09/30/05)	External Agency Reports/ARC
DOT	9-31-2005 DOT Katrina Situational Report 10	2	09/31/05			no	no	US Department of Transportation situation report for Hurricane Katrina as of 09/31/05. Report gives preliminary status, alarm status and transportation sector impacts.	External Agency Reports/DOT
HRSA	09-01-05 HRSA SitRep	1	09/01/05		(b)(2),(b)(6)	no	no	Report provides information on status of health centers in affected areas as of 09/01/05.	External Agency Reports/HRSA
FL State Emergency Response Team	8/29/2005 FL SERep Katrina #12	2	08/29/05	Florida Division of Emergency Management		yes	no	Report provides information on current situation, weather summary, contacts/areas, county actions, state actions, executive orders, federal declaration, personnel deployments and SERT reports.	External Agency Reports/State Reports/FL State Emergency Response Team

Appendix K
Data Review Team
DEOC Portal: Hurricane Katrina Information Inventory

Location	Report Name	Total Count	Report Date	Written By	Written For	Uses Template	Is "Reports by Date"?	Description of Use	Additional Notes
MS Emergency Management	09-01-05 MS MEMA SitRep #24	2	09/01/05	The Mississippi Emergency Management Agency		yes	no	Report provides information on current situation, weather summary, county actions, state actions, emergency declarations, and EEOC reports.	External Agency Reports/State Reports/MS Emergency Management Agency
AR DHHS	09-05-05 Arkansas DHHS EOC SITREP #2		09/06/05	Arkansas DHHS Emergency Operation Center		no	no	gives updated report on Katrina evacuees in Arkansas	External Agency Reports/State Reports/AR DHHS
Field Reports	SitRep #21 9-31-05	24	09/07/05	Greater New Orleans Public Health Support Team		yes	no	provides information on the health and well-being of the public health support team.	
DOT	DOT Situation Report 17-11am Sunday 4 Sept (final)	1	09/04/05	(b)(2),(b)(6)		yes	no	describes DOT relief and recovery efforts, transportation updates etc.	External Agency Reports/DOT
EPA	EOC SitRep Katrina 33	11	09/09/05			yes	no	gives updated report on EPA response efforts to Katrina	External Agency Reports/EPA
EPA	EOC SitRep Katrina 35	11	10/04/05			yes	no	gives updated report on EPA response efforts to Katrina	External Agency Reports/EPA
EPA	EOC SitRep Katrina 37	11	10/06/05			yes	no	gives updated report on EPA response efforts to Katrina	External Agency Reports/EPA
EPA	EOC SitRep Katrina 39	11	10/11/05			yes	no	gives updated report on EPA response efforts to Katrina	External Agency Reports/EPA
EPA	EOC SitRep Katrina 40	11	10/12/05			yes	no	gives updated report on EPA response efforts to Katrina	External Agency Reports/EPA
FDA	09-30-05 FDA SITREP #1	4	09/30/05			no	no	provides update on Katrina as of Aug 29th 6am	External Agency Reports/FDA
ARC	American Red Cross Disaster Ops Summary 11 04 05 Report #115		11/04/05			yes	yes	This report consists of important statistical information and facts from all major ongoing relief operations, and is posted daily whenever the Disaster Operations Center (DOC) is activated.	External Agency Reports/ARC
ARC	American Red Cross Hur Katrina-Rita Ops Report 10 14 05 #95.pdf	137	10/14/05			yes	yes	This report consists of important statistical information and facts from all major ongoing relief operations, and is posted daily whenever the Disaster Operations Center (DOC) is activated.	External Agency Reports/ARC
DOE	09-01-05 DOE Katrina SITREP #14	137	09/01/05			yes	yes	This report consists of important information from the office of electricity delivery and energy reliability and the US department of energy. It provides updated reports of the states, cities, and number of people that are still without electricity and other sources of energy.	External Agency Reports/DOE
LA. Dept. Environmental Quality	EmergencyDeclarations(2) LA.pdf	2	09/30/05	(b)(2),(b)(6		no	no	this report is the LA state declaration of emergency and administrative order	External Agency Reports/State Reports/LA Dept. Environmental Quality
MS. Dept of Health	Katrina Recovery S. MS DOH	1	09/06/05			yes	no	Hurricane Katrina situation report in MS: describes current needs and operational objectives in the state.	External Agency Reports/State Reports/ MS Dept. of Health
MS Emergency Management Agency	Katrina MS 050905 0000-0600 hrs #33	1	09/05/05			yes	yes	describes current situation, weather summary, and county actions in MS.	External Agency Reports/ State Reports/ MS Emergency Management Agency
Veterans Affairs Issues	Specific Department of Veterans Affairs Issues	1	09/09/05	(b)(2),(b)(6)		no	no	report is actually an e-mail containing "bullets that are affecting health and medical"	External Agency Reports/Veterans Affairs Issues
FEMA folder	09-27-05 Fed Logistics Mobilization and Staging areas	38	09/27/05	(b)(2),(b)(6)		no	no	document is a map highlighting the points in AL, MS, LA, and FL where FEMA had mobilization and staging areas as of 09-27	
Field Reports	09-08-05 SITREP, Radiff	1	09/08/05		EOC IST; EOC Hurricane 2005	no	no	document is an e-mail from the incident support team.	
FEMA folder	FEDERAL OVERSIGHT RESPONSE-31 Aug 05	1	09/13/05	Dept. of Homeland Security		no	no	Report describes federal government's response to Katrina as of Aug. 31, 05	
DRAFT folder	TEXSUM 10 17 2005	12	10/17/05			no	no	Draft is an up to date description of all responses to Katrina in all states involved	Executive Summary/DRAFT
Field Reports	09-09-05 CDC Public Health Nurses Duty Location Data	1	09/09/05			no	no	Report provides duty location and lodging data for Public Health nurses (4)	
Field Reports	09-09-05 DphNrsInSanAntnTX091005	3	09/09/05			yes	no	provides all information on health and wellbeing of those at the Austin Convention center. Goes into detail about symptoms, care provided etc.	