HOAC

HEALTH OFFICERS ASSOCIATION
OF CALIFORNIA

EMERGENCY PREPAREDNESS IN CALIFORNIA'S LOCAL HEALTH DEPARTMENTS

FINAL ASSESSMENT REPORT

Prepared for the California Department of Health Services (CDHS)

By the Health Officers Association of California

2007

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PUBLIC HEALTH EMERGENCY PREPAREDNESS IN CALIFORNIA'S LOCAL HEALTH DEPARTMENTS

"There's a margin of error in day-to-day public health that we can't afford to have in these emergency preparedness issues." -- Northern California Local Health Officer

INTRODUCTION AND BACKGROUND

Fifty-eight counties and three cities in California have a local health department (LHD) whose residents count on it for protection from a wide range of health threats and dangers—from preventing and fighting epidemics and the spread of disease to protecting the community from environmental hazards to responding to disasters.

While responding to emergencies such as communicable disease outbreaks has been a traditional responsibility of LHDs, the scope and detail of public health emergency preparedness has grown. It now encompasses a broader involvement and responsibility for medical-health disaster planning involving hospitals, clinics and emergency medical systems. The scope of planning has also grown from a single issue approach (bioterrorism) to an all hazards approach that has created or strengthened partnerships with local emergency managers and law enforcement to address medical-health response to threats beyond biological agents, including chemicals and natural disasters.

The most significant source of new funding allocated to LHDs for many years is the large amount of federal funding invested in emergency preparedness since 9/11. Prior to such funding the infrastructure of public health in California had essentially eroded. However, relative to the magnitude of need in a state of the size and complexity of California the funding level continues to be inadequate.

Diverse and unique geographic, political, commercial and social characteristics of California elevate its susceptibility for both natural and human-made emergencies. It is therefore critical that all California LHDs be well prepared to respond to any type of disaster. The rapidity and robustness of the response will be key factors in determining its after effects and the number of lives saved.

This report, which is necessarily comprehensive because of the breadth and complexity of the issues, summarizes the results from emergency preparedness assessments conducted in 51 of the state's 61 LHDs. (An additional 5 LHDs were assessed after the original due date for the final report, and their results could not be added.) LHDs included in this report were assessed between November 8, 2005 and October 26, 2006. The total project period, which included planning, developing the assessment instrument and process and preparing the final report, was April 2005 – April 2007. The work was performed by the Health Officers Association of California (HOAC) under contract to the California Department of Health Services (CDHS), and was a collaborative project of CDHS, California Conference of Local Health Officers (CCLHO) and County Health Executives Association of California (CHEAC) which constituted the Steering Committee for this project.

The primary purpose of the project was to assess public health emergency preparedness in each LHD relative to specific federal and state funding guidance and identify areas needing improvement. While the findings represent a point-in-time analysis for each LHD assessed, and may not be reflective of current preparedness efforts, the recommendations are expected to guide the State in

allocating resources and identifying areas where additional training and other LHD support is needed. Until this project, no independent statewide assessment of LHDs' readiness to respond to a disaster event had been undertaken. The assessment represents a critical piece of work that has the ability to influence future emergency preparedness endeavors at both the state and local levels.

METHODS

A structured assessment instrument, keyed to the Centers for Disease Control and Prevention (CDC) and Health Resources and Services Administration (HRSA) 2005-06 Guidance, was developed and revised after review by a Technical Advisory Committee (appointed by the Steering Committee) and approved by the Steering Committee. The Steering Committee believed it was important that neither the tool nor the process be perceived as an inventory check-list or audit but as an examination of the extent of LHD capacity and progress in preparedness. In addition to structured assessment area questions drawn from the Guidance goals and outcomes, the tool included performance indicators and a 4-point scoring rubric (from minimally to well-prepared) for quantifying the results. Teams of 3-4 consultants from a small corps of expert public health professionals recruited for this project made 2-day site visits to the LHDs that volunteered to participate in the assessment. The assessment methods included utilizing the assessment tool to guide interviews with multiple levels of LHD staff, reviewing local preparedness-related documents, and directly observing. The assessment did not include any interviews or analysis of emergency preparedness leadership, guidance, management, or other types of control activities of state-level agencies such as CDHS, Department of Mental Health or Office of Emergency Services. An LHD-specific written report of findings and recommendations was prepared and sent to each participating LHD within 6-8 weeks of the site visit.

For this report, all project information and data were aggregated and scores analyzed and averaged. Draft versions of this report were reviewed and discussed by the Steering Committee, and the final report was approved for submission to CDHS. The conclusions, however, are those of the evaluators, based on the entirety of the findings from the structured assessment process.

KEY FINDINGS AND RECOMMENDATIONS

In total, 56 (92%) of California's 61 LHDs, representing over 97% of the state's population, volunteered to participate in the assessment project. These LHDs have come a long way in emergency preparedness since 9/11/01. The LHDs have used real events and numerous exercises to strengthen planning, implementing and evaluating the capacity to respond, and their many strengths are summarized below and described in detail in the full report. However, as the report also reveals, at the time of the assessment on average LHDs were scored as "partially prepared" on the scoring rubric–and still developing capacity–to perform many of the required critical tasks of the 2005/06 CDC/HRSA Goals and Outcomes. There are a number of reasons for the gaps and areas needing improvement as the full report also describes.

The recommendations, which are summarized below under the finding to which they are most closely related, and further detailed in Appendix 1, are driven by the entirety of the assessment process; some of the recommendations are directed to the LHDs and others to CDHS because of its leadership role. Although the recommendations have been prioritized at the request of the Steering Committee, the inter-relatedness and complexity of public health preparedness issues makes it difficult to truly rank them.

Each assessed LHD received its own report of specific findings and extensive recommendations. The summarized recommendations in this report come from the common findings and themes in the LHD-specific reports. They are likely to be applicable to many LHDs. Further, it is recognized that many LHDs have achieved competence in these areas, and many have begun to address these recommendations. It is suggested that LHD leadership and affiliate organizations review the

recommendations for relevance and order of priority consideration, and take the necessary steps for implementing them.

The State recommendations are directed to CDHS generally, not to any one program specifically, as coordination and commitment to resources needs to occur department-wide. It is recognized that CDHS has already begun to work on some of these issues. As a first step it is suggested that CDHS convene a workgroup that includes CDHS leads, affiliate organizations and LHD peers to reach agreement about the order of these priorities, and develop implementation plans so that jurisdictions can deploy resources to accomplish the mutually agreed-to priorities first.

Infrastructure Issues that Influence Preparedness

1. LHDs have major concerns about the sustainability of previous levels of bioterrorism and other emergency preparedness funding. The largest source of financial support for emergency preparedness comes from federal grants and contracts; almost no direct county General Funds support emergency preparedness programs, yet LHDs make incalculable investments in this program area through in-kind from existing non-grant supported staff, taking away from other core public health activities. If the state and federal preparedness funds are not sustained, the gains in emergency response capacity LHDs have made will rapidly erode. On average, emergency preparedness funding represents 4% of an LHD's total budget allocation; in the smallest counties these grants and contracts make up an average of 8%.

Recommendation	Directed to:	
	LHDs	CDHS
Establish sustainable funding sources that enable LHDs to meet CDC/ HRSA guidelines and adequately carry out the critical required task at a minimum performance level.		x

2. Despite 428 newly-created positions for emergency preparedness—and expanded job descriptions for many additional existing positions—LHDs have a thin line of public health staff to fulfill their mission of emergency response; some functions are only 1-person deep. In many LHDs, the knowledge base for emergency preparedness is centered in too few staff.

Recommendation	Directed to:	
	LHDs	CDHS
2.1 Ensure that all LHD responders have received basic ICS-100 and ICS-200 training as soon as possible; senior staff should work to complete ICS 300 and 400 level courses. Plan to accomplish additional training to include the IS 700 level programs for all senior and Department Operations Center (DOC) staff.	x	
2.2 Support regionally located training programs, starting with the following areas: chemical and radiological hazards components to expand basic preparation for both professional and support staff; GIS as a tool for surveillance and control of communicable diseases; basic epidemiology and disease investigation; and data analysis basics (e.g., Epi-Info, and/or CDC's Outbreak Management System, OMS) and additional regional Epi Exchange Forums.		x
2.3 Reinstate the state regional epidemiology programs which are critical to the ability of many, especially small, jurisdictions to benefit from regional surveillance and to have access to technical epidemiology resources.		x

3. In addition to training needs, recruitment (not necessarily retention) difficulties and anticipated retirements of senior-level staff were the most common workforce problems noted. The most difficult-to-recruit positions were nurses, cited by more than two-thirds (69%) of the LHDs, followed by epidemiologists and public health microbiologists.

Recommendation	Directed to: LHDs	Directed to: CDHS
3.1 Take the lead in developing standards and competencies for emergency preparedness for all nursing staff, and develop a training curriculum based on the competencies. Work with the Board of Registered Nursing to require a minimum number of hours of emergency preparedness training for every licensed RN in the State for each licensure period.		x

4. In counties where Environmental Health was not located within the LHD it was observed that roles and relationships between the two staffs were sometimes less clear, and the LHD's efforts for foodborne illness and zoonotic disease surveillance and investigation were generally weaker.

Recommendation	Directed to: LHDs	Directed to: CDHS
4.1 Establish written protocols for roles and responsibilities with Environmental Health—even when EH is under the LHD structure—during a foodborne or waterborne outbreak; establish the framework that delineates authority, response agreements and surge capacity including during deployment in an event.	X	
4.2 Foster a closer working relationship with the local veterinary community and consider including veterinarians in zoonotic surveillance.	x	

Areas of Relative Strength

5. The assessment scores provided a quantitative means of comparison for the 15 CDC Guidance Goals/Outcomes. Four of these areas were rated significantly higher, i.e., more prepared, than other areas: Information Collection & Threat Recognition (2A); Emergency Response Communications (6A); Emergency Public Communications (6B); and Isolation and Quarantine (6D). Recommendations for further strengthening these areas include the following.

Recommendation	Directed to: LHDs	Directed to: CDHS
5.1 Assure that the after-hours system for parties reporting an urgent referral or report regarding a CD or potential terrorist event operates efficiently 24/7/365. This would include contacts by other states or Mexico for LHDs that border those areas.	X	
5.2 Establish reverse 911-like capability as an adjunct means to communicate emergency information. Consider purchasing satellite phones to supplement 800 MHZ band radios.	x	
5.3 Continue discussion with CDC regarding the feasibility and true expectations of the federal requirement for LHDs to handle calls simultaneously from 1% of the jurisdiction's population. This is not a realistic goal.		x

5.4 Continue to develop solutions, including legislative remedies, which would establish more dependable telephone service and reliable 911 dispatch systems in remote rural counties.		x

6. The largest-counties population size group (9 LHDs in the counties with populations of >1M) had significantly higher preparedness scores than all of the other county-size groups, although individual well-prepared counties were found in every county size group. Because the largest counties represent the greatest percentage of the population, and the scores of these LHDs were significantly higher, California is actually more prepared than it appears from the averaged statewide scores; however, there are still gaps based on individual county threat assessments.

Recommendation	Directed to: LHDs	Directed to: CDHS
6.1 Review the Hazard Mitigation Plan and assess for potential threat impact on human health, with special consideration for lethality and large populations. Once the assessment is completed, develop specific risk reduction approaches for all identified major human health threats. After the Plan is completed share with all response partners.	x	
6.2 Where there are ports, meet with the Port Authority to discuss the coordination of surveillance and response planning and activities related to a bioterrorist or communicable disease event.	x	

7. Communicable Disease programs rely heavily on local public health laboratories for identifying threat agents, helping to determine their prevalence and deciding when an outbreak has ended. California now has a laboratory network with the testing capacity not only for molecular diagnostic and bioterrorism (BT) agents, but for many other public health diseases of significance such as West Nile Virus, Avian Influenza, and SARs.

Recommendation	Directed to: LHDs	Directed to: CDHS
7.1 Reestablish the State Laboratory training program to ensure that a sufficient number of trained microbiologists exist.		x
7.2 Establish a formal program within the State Laboratory to include implementation of rapid molecular techniques for emerging and re-emerging infectious disease agents at all local public health laboratories (PHLs). Provide funds for equipment and reagents leading to increased molecular testing capability for all local PHLs. A successful limited pilot for this type of program has been the State VRDL "Respiratory Virus Network."		x
7.3 Increase training with sentinel laboratories for BT rule-out testing, packaging and shipping procedures and collection requirements for both biological and chemical WMD agents.	x	
7.4 Expand the California local LRN Reference Public Health Laboratory (PHL) network so that a LRN Reference PHL is available in at least the three most populated counties in the state to increase capability to \ respond to bioterrorism events.		x

8. CAHAN (California Health Alert Network), which LHDs initially found difficult to navigate, is increasingly being utilized by LHDs though not to the capacity of the system.

Recommendation	Directed to: LHDs	CDHS
8.1 Expand CAHAN alerting to include all local hospitals, any Indian Health Clinics and other appropriate external partners. Drill CAHAN on a regular basis, and determine response rates and times to alerts and increase the rapidity of both.	X	
8.2 Continue to assess and improve CAHAN usability, involving representatives from local users groups, and streamline the process for adding new users. LHDs that do not utilize or fully utilize CAHAN should be strongly encouraged to do so.		x

9. Enhanced roles and responsibilities as well as funding for emergency preparedness has strengthened the public health infrastructure; the positive spill-over is especially noticeable in the areas of communicable disease control, epidemiology and risk communication. However, in some cases the increased responsibilities have resulted in decreased attention to routine disease control activities.

Recommendation	Directed to: LHDs	CDHS
9.1 Increase epidemiology capacity by increasing epidemiologist positions, providing basic disease investigation and fundamental epidemiology training to PHNs and LVNs working outside of CD areas, and creating epidemiology positions in hard-to-recruit locations that can be shared between two or more LHDs regionally.	x	
9.2 Pursue the development of electronic programs for disease reporting that could be utilized in the interim while the State completes implementation of Web CMR.	x	
9.3 Increase leadership activities with border states and Mexico regarding California's preparedness responsibilities for border issues such as surge planning, cross-border licensing and communicable disease reporting.		x
9.4 Develop or enhance GIS capacity in LHDs as an aid to communicable disease surveillance and control and health hazard location and identification.	x	

10. LHDs, and particularly local Health Officers, are increasingly visible in their communities and recognized by external partners for their role and expertise in emergency preparedness. Public Health has connected with a broader part of the emergency responder community than ever before, particularly local emergency managers. Relationships with local departments of mental health tend to be relatively limited, however.

Recommendation	Directed to: LHDs	CDHS
10.1 Increase efforts to more actively involve the mental health (MH) department in the LHD's preparedness activities. Ensure the availability of worker crisis counseling and mental health and substance abuse behavioral support, including situations involving isolation/quarantine and emergency public communications. Conduct a formal assessment of MH capacity to support an event and exercise to test the anticipated capacity.	x	

10.2 Work more closely with the State Department of Mental Health at the leadership level to increase the involvement of this important agency that is inadequately engaged now with local public health emergency preparedness efforts.		x

11. The *Local Health Officer Practice Guide for Communicable Disease Control in California,* produced by the Public Health Law workgroup under the leadership of the State CDHS, answers questions about a variety of legal authorities in California, including isolation and quarantine. This manual is widely read and referred to, and CDHS leadership has made a difference in familiarizing LHDs with these issues. Additional activities should be undertaken to improve practice in this area.

Recommendation	Directed to: LHDs	Directed to: CDHS
11.1 Pursue clarification with CDHS legal counsel regarding the local Health Officer authority to seize infectious materials pre-disease in order to prevent the occurrence/spread of a disease, and consider incorporating the findings into the local Health Officer authority.		x
11.2 Develop a basic data management system, considering a regional approach if appropriate, to address isolation and quarantine management and work toward PHIN compliance. Test the ability of the system to handle extensive data management needs in a large event; if it is not adequate, a surge plan for managing large numbers of the population should be developed.	x	
11.3 Obtain formal County Counsel support for local Health Officer authority to issue isolation and quarantine orders. Establish model legal orders if they are not in place.	x	
11.4 Involve law enforcement, mental health and medical services personnel in the isolation and quarantine plan that includes adverse treatment reaction management, medical services, psychosocial support and care and feeding.	x	

12. The LHDs found their LHD-specific report of findings and recommendations from this assessment process to be of value. As one example, CDHS noted that the assessed LHDs were referring to these reports when developing their emergency preparedness workplans for the 2006-07 grant year.

Recommendation	Directed to: LHDs	Directed to: CDHS
12.1 Give consideration to re-evaluating all LHDs periodically concerning capacity for emergency preparedness; using the results of this assessment as baseline data would allow progress to be noted.		x

Areas Where Improvements Are Needed

13. The lack of public health surge capacity is critical statewide; the estimated surge capacity statewide is only theoretical until it is called upon in a real event. The general nursing shortage is a particularly serious impediment to adequacy for this capacity.

Recommendation	Directed to: LHDs	Directed to: CDHS
13.1 Expand efforts to plan for scalable surge, including the use of Registered Environmental Health Specialists, and create, train and maintain a cadre of volunteers including medical and other health care professionals. Consider other support needs in planning for surge capacity such as personnel for electronic data entry to track affected persons in a large-scale event.	x	
13.2 Increase support for building surge capacity by supporting sufficient training for all local PHNs in all-hazards response, including SEMS, IC, Category A agent, chemical, biological, nuclear, radiological, and explosives; establishing a database of retired nurses, physicians and other healthcare workers who could be called upon as volunteers; and supporting greater involvement of Registered Environmental Health Specialists and Communicable Disease Investigators as additional local surge support. Provide legal guidance to LHDs regarding liability risk for workers in a surge capacity scenario.		x
13.3 Assist in hospital and provider surge by pursuing the development of a Cal Pen (California Preparedness Education Network) epidemiology training module, coordinating with large universities to provide Telemedicine training on infectious, chemical or radiological diseases or conditions, and assisting in the development of a web-based volunteer recruitment technology.		x
13.4 Develop an automated electronic solution to assist LHDs in maintaining accurate contact information for thousands of physicians and other medical providers in large jurisdictions; this is an overwhelming task for local staff to achieve on their own.		x

14. LHDs have made considerable progress in training and providing personal protective equipment (PPE) to their staff, especially those in communicable disease control, public health laboratory and environmental health (EH). However, in many instances they still need to extend training and fit testing of respirators to a broader group of staff who potentially could provide surge capacity during a disaster, especially nurses in public health programs other than CD control.

Recommendation	Directed to: LHDs	Directed to: CDHS
14.1 Significantly increase the number of LHD staff, particularly PHNs working in non-CD areas, who receive personal protective equipment (PPE) protection, training and fit testing so they will be adequately protected during an event needing expanded support. Provide sufficient fit-testing and refresher training to all designated staff to maintain essential support of the LHD. Provide more training in chemical and radiological hazards with special attention to WMD (weapons of mass destruction), and purchase and equip “Go Kits” with instructions regarding PPE use and other personal health and safety information.	x	

14.2 Assure that planning for worker safety during an emergency is a fully articulated element of LHD all hazard plans. This should include provision for LHD training and PPE, including N-95 respirators, for as many staff as possible. Just-in-time training would likely not be adequate in the event of a real or potential threat.		x

15. The LHDs have completed on average 70% *planning readiness* (average score of 50.7 of 72 points possible) based on the Strategic National Stockpile (SNS) Assessment Tool. [1] There was no significant difference in SNS planning readiness by county-size group. SNS Planning readiness must be distinguished from *operational* readiness, however. Of the 13 SNS Functional Areas, the two areas where improvement would most significantly affect overall preparedness are Dispensing Oral Meds (Area 11) and Exercises (Area 13).

Recommendation	Directed to:	
	LHDs	CDHS
15.1 Complete a Mass Prophylaxis Plan; if not already completed, make this a high priority. Exercise all mass prophylaxis and SNS functions and evaluate.	x	
15.2 Complete a drill involving mass prophylaxis and SNS functions if this has not occurred; evaluate the drill and implement corrective action, then repeat it to measure improvement.	x	
15.3 Develop a comprehensive training plan for the SNS function. Develop a registration and certification plan for supplemental staff and volunteers, and develop a credentialing plan.	x	
15.4 Complete a pharmaceutical inventory and purchase additional antibiotics as necessary to ensure adequacy of supplies to implement POD operations. Assess the need for a regional pharmaceutical cache and implement strategies accordingly.	x	
15.5 Consider strategically located Rapid Response Teams throughout the State that could assist local jurisdictions in their initial response efforts.		x

16. LHDs are dependent on the State for a portion of their SNS readiness responsibility. For example, the CDHS commitment to providing warehousing of SNS supplies and delivery to LHDs is a vital assumption in LHDs' SNS plans. At the time of this assessment, distribution sites in most counties had not been reviewed by the State SNS Coordinator.

Recommendation	Directed to:	
	LHDs	CDHS
16.1 Complete the review of SNS distribution sites using the Site Survey Tool.		x
16.2 Convene an SNS workgroup to identify legal issues/concerns and take the lead in resolving them; encourage a regional approach to SNS activities, especially in the smaller more rural counties; develop a statewide credentialing methodology for staff and volunteers; and develop a standard electronic inventory management system and distribute to counties.		x

[1] CDC assessed 4 California LHDs in 2006 using the same assessment instrument as was used in this assessment and gave lower scores than the results of this assessment.

17. With regard to capacity for dispensing mass therapeutics and/or vaccines, few LHDs have evaluated all of their planned POD (point of distribution) sites or have MOUs in place for them. Many have not conducted an exercise to activate multiple POD sites, obtained adequate POD supplies, updated pharmaceutical inventory of caches to ensure that all first responders can be protected, developed a staffing plan for 24/7 operations or developed MOUs with potential medical facilities that would be used for treatment centers. Limited staffing is one of the biggest challenges to operating multiple PODs.

Recommendation	Directed to:	
	LHDs	CDHS
17.1 Complete the evaluation of POD sites for mass prophylaxsis/vaccine. Pre-designate and pre-train leads in distribution operations, pre-train distribution site managers and back-up and develop a staffing plan for 24/7 operations. Just-in-time strategies may not be dependable.	x	
17.2 Take the lead in the development of standardized public information messages advising the public what to bring and what to do at a mass prophylaxis POD (Point of Distribution) site, standards and competencies for mass prophylaxis, and a standardized registration and certification plan for volunteer staff.		x
17.3 Consider strategically located Rapid Response Teams throughout the State that could assist local jurisdictions in their initial response efforts.		x

18. In many LHDs, the laboratory facility is dated, with many being more than 40 years old. These facilities may not meet current building codes or seismic standards, or have sufficient space or meet CDC safety guidelines for working with infectious agents, compromising the ability of the jurisdiction to respond adequately to many public health issues including emergency preparedness and response.

Recommendation	Directed to:	
	LHDs	CDHS
18.1 Take the lead by making available matching infrastructure funds to build new LHD PHL facilities. At a minimum, the funding plan should specifically ensure that every LRN reference laboratory has a safe and modern BSL-3 laboratory of sufficient size for working with infectious and bioterrorism agents.		x
18.2 Assess on a semi-annual basis LRN reference laboratories to ensure they meet the requirements of the grant and CDC safety requirements.		x

19. Adequate outbreak management data systems and patient contact tracking systems are not in place in most LHDs, and the majority of the current systems do not meet PHIN (Public Health Information Network) functional requirements. Most LHDs do not have modeling software and many do not have staff knowledgeable in the use of such software. Tracking of cases, exposures, adverse events and patient disposition is paper-based in most LHDs and probably not adequate to handle a large outbreak/event.

Recommendation	Directed to:	
	LHDs	CDHS
19.1 Pursue the development of electronic programs that could be utilized in the interim while the State completes implementation of Web CMR.	x	

19.2 Complete implementation of Web CMR on a timely basis.		x
19.3 Develop more robust electronic data management systems for disease surveillance, and for improving analysis and forecasting. Ensure that the systems can be used for long-term tracking of affected persons during a large-scale event. Consider electronic systems for trend analysis that will detect an increased disease spike in a timely fashion.	x	
19.4 Increase public health laboratory ability to reach full PHIN compliance in terms of electronic laboratory reporting and linkage with other public health programs in the area of outbreak management.	x	
19.5 Provide guidance and training for LHDs on appropriate database systems for long-term tracking of those affected by emergency events or disasters. Assure that all LHDs develop a written plan for the long-term tracking of patients and contacts in a large-scale event.		x
19.6 Take a leadership role, after evaluating systems that are currently available, in working with local staff to develop systems to help LHDs address Public Health Information Network (PHIN) Preparedness Functional Area requirements.		x
19.7 Complete and implement a statewide electronic laboratory reporting system.		x
19.8 Continue to assess and improve CAHAN usability, involving representatives from local users groups, and streamline the process for adding new users. LHDs that do not utilize or fully utilize CAHAN should be strongly encouraged to do so.		x

20. The statistical analysis showed the mean scores of CDC Goals 8 (Recover) and 9 (Improve), two of the newest Guidance areas, were significantly lower than those of all of the other preparedness areas. While LHDs have increasingly exercised and completed after action reports—important required critical tasks for these areas—some LHDs are deficient in following through in implementing the corrective actions they planned to undertake and in evaluating the improvements.

Recommendation	Directed to: LHDs	Directed to: CDHS
20.1 Develop a written Improvement Plan that includes a planning phase and development of an evaluation tool to help in developing post-event improvement exercises. The Plan should specify how and when to generate after action reports so that corrective actions will be developed and implemented in a timely fashion. The Plan should also have a matrix that identifies post-event tasks and how and when they will be accomplished.	x	
20.2 Develop an LHD pre-event recovery plan for the most expected emergency response hazards such as wildfires, floods, earthquakes, dam or levee failures and pandemic epidemic. The recovery plan should equate to potential scenarios identified in the LHD's vulnerability assessment. The use of the FEMA "Emergency Management Guide for Business and Industry" to develop a LHD recovery and relief plan is a tool that could help guide LHDs in this effort.	x	

20.3 Establish a working relationship with the business sector for joint planning, addressing the needs of special populations, economic forecasting and recovery, and ensure mutual understanding of commitments and available resources.	x	
20.4 Consider assisting LHDs in engaging the business community by hosting regional forums with the business sector and involving them in state level emergency planning activities.		x
20.5 Develop exercises to assess and document LHDs' ability to be physically present in the DOC and activate a fully functional operational area within the CDC Preparedness time targets. Participation in scalable exercises that address realistic scenarios for different counties should be required of all LHDs at least annually.		x
20.6 Identify jurisdictions where an enhanced electronic communication system between the DOC and the EOC would offer significant benefit and catalyze deployment through appropriate incentives.		x

21. Increased attention to and engagement with two particular groups is needed: special populations and tribal entities. Approximately half of the LHDs had difficulty involving Native American tribal entities in exercise planning and participation; in some cases invitations from the LHD were extended but not accepted by the tribe. LHDs are aware of the need to plan for special populations but have found it a challenge to develop realistic strategies.

Recommendation	Directed to:	
	LHDs	CDHS
21.1 Increase efforts to engage tribal entities, particularly at the leadership level, to participate in planning, exercises and agreements for surge capacity and, if applicable, POD (Point of Distribution) sites for mass therapeutics and/or vaccines.	x	
21.2 Increase planning efforts, particularly communication links, for special populations such as the homebound, frail elderly, physically and developmentally disabled, hearing- and visually-impaired, and individuals in skilled nursing facilities and other institutions. Additionally, include planning for fluctuating populations such as commuters, seasonal workers, part-time residents and tourists.	x	
21.3 Convene a workgroup to review and develop effective methodologies for communicating with special populations, and take the lead in developing some of the materials and strategies. For example, provide material on all Category A agents and fact sheets in all major languages for the primary antibiotics or vaccines that would be used in an event/outbreak.		x

22. Various administrative barriers related to the State were reported by some LHDs as "roadblocks" that affect their ability to meet preparedness goals. These included delays of State approvals of documents; inconsistencies in State staff interpretation of various contractual requirements; expectations of CDC and CDHS for all local health jurisdictions to achieve the same performance measures regardless of funding disparities; lack of already-developed and tested templates and model plans that LHDs could modify rather than try to re-create. LHDs also described various challenges associated with administering the local HRSA funds, most commonly in incurring administrative costs that exceeded the 10% administrative cost allowance.

Recommendation	Directed to:	
	LHDs	CDHS
22.1 Work to improve consistency of interpreting emergency preparedness policies across the CDHS, and efficiency in reviewing, approving and processing documents that give LHDs the authority to provide services and expend funds.		x
22.2 Develop a template LHDs could use to guide the development of a locally scalable plan of staff redeployment to emergency operations during a crisis of public health significance.		x
22.3 Develop model standards for the coordination of public health, hospitals and urgent care providers in the management of adverse reactions, or a matrix which defines the roles and responsibilities by type of agency or provider. Model policies and protocols and agreements would also be helpful with respect to the role of law enforcement and mental health and the care and treatment of individuals in isolation and quarantine.		x
22.4 Take the lead in developing, planning and offering repeat exercises that are manageable so LHDs can participate in re-test exercises to measure improvement. Consider whether smaller-scale exercises offered more often may be a better test to prepare LHDs for response than one large exercise annually, engaging in the discussion a local group representing LHDs, EMS, EH, MH, law enforcement, OES, fire and the Native American tribal entities.		x

INTRODUCTION

"Every LHD has to make strategic and tactical decisions about how to prioritize the use of its human and financial resources in emergencies and the greatest impact this will have on human health." -- Local Public Health Laboratory Director

Fifty-eight counties and three cities in California operate local health departments (LHDs) that provide a variety of public health services to their residents. Increasingly, the general mission of LHDs has been expanded to include greater roles and responsibilities related to emergency preparedness planning, coordination and response. While the general public has a responsibility to be prepared, they have come to expect and count on the public health system for protection from an ever-wider range of health threats and dangers by preventing and controlling epidemics, protecting communities from environmental hazards, and coordinating medical-health response during disasters.

Emergency preparedness and response is a fundamental component of the public health delivery system. It is dependent upon strategic partnerships between the state and local health jurisdictions, hospitals, community clinics and healthcare practitioners. Public health preparedness can be defined as having the systems, plans and resources in place that enable LHDs to address and adequately handle community health emergencies for which they would have a significant role, as well as emergencies arising from exposure to deliberate attacks or natural disasters. Protection of the state's population can best be met by a prepared and operationally ready infrastructure and a sufficiently and properly planned and integrated response.

While responding to emergencies such as communicable disease (CD) outbreaks has been a traditional responsibility of LHDs, new challenges have risen. The anthrax attacks of October 2001 propelled health departments nationwide into the forefront of bioterrorism preparedness and response. The scope and detail of public health emergency preparedness has continued to grow and now encompasses responsibility for medical-health disaster planning involving hospitals, clinics and emergency medical systems. The scope of planning has also grown from a single issue approach (bioterrorism) to an all hazards approach that has created or strengthened partnerships between LHDs and with local emergency managers and law enforcement to address medical-health response to threats beyond biological agents, including chemicals and natural disasters.

California is the most populous state in the nation and the sixth largest economy in the world. Diverse and unique geographic, environmental, commercial, industrial, transportation, political, demographic and social and other characteristics elevate the state's susceptibility to both natural and human-made emergencies. It is therefore critical that all California LHDs be well prepared to respond to any type of disaster—the rapidity and robustness of the response will be key factors in determining its after effects and the number of lives able to be saved.

Numerous distinctive attributes that raise California's susceptibility for emergencies include having:

- two of the nation's busiest international airports;
- the largest concrete-filled dam in the nation—and one of the largest in the world—whose reservoir supplies drinking water and recreation to thousands of residents and visitors;
- thousands of miles of waterway within the Sacramento – San Joaquin Delta that provides water throughout major portions of the state;
- the largest port in the United States and the third largest in the world;
- communities at high risk from tsunami-generating and other earthquake damage and landslides;
- a massive freeway system—including an interstate transportation artery from Canada to the Mexico border—used to transport all types of chemicals used in agriculture, industry and municipal water treatment, as well as other hazardous materials;
- major rail lines that run through the heart of nearly every city;
- rapid growth, particularly in semi-urban and urbanized areas;
- a weak and aging levee system susceptible during frequent severe flooding;
- world-renowned entertainment and communications industries;
- commuters that in many counties swell the daytime population as much as 40%-50%, and seasonal vacationers with a similar impact;
- a diverse population with unique challenges that include communicating across many languages.

Funding History

Large amounts of federal funding have been invested in the improvement of local public health preparedness in California over the last five years. Since 2002, all LHDs in California have been receiving federal funds allocated by the Department of Health Services (CDHS) to improve the capacity of each LHD to effectively respond to attacks with biological agents. In FY 2005-06, the fiscal period generally covered by this assessment project, the CDHS allocated to local jurisdictions $46,303,930 of the $67,437,021 CDC (Centers for Disease Control and Prevention) award, and $22,010,00 of the approximately $39,203,268 HRSA (Health Resources and Services Administration) funds awarded to California. [2] The CDC awards include the following: Base, Cities Readiness Initiative (CRI), Chemical Laboratory

[2] In addition, Los Angeles is one of four cities/counties in the U.S. that receive CDC and HRSA BT/emergency grant allocations directly from the federal government, not through their state's health department, though they coordinate and participate in state efforts.

and Pandemic Influenza. It should be noted that this has been the most significant new source of funding to be allocated to LHDs for many years. Prior to such funding, the infrastructure of public health in California had essentially eroded, and LHDs did not have the human or financial resources to meet increasing public health expectations or the demands of a rapidly-growing population. In many instances the emergency preparedness funds have allowed some LHDs to move into the 21st century with improved technology and communications equipment for this program area. But, there are still many unmet needs, especially in smaller and mid-sized jurisdictions, and the funding level continues to be inadequate relative to the magnitude of need in a state of the size, diversity and complexity of California.

Background

Until this project, no formal statewide assessment of California public health departments' readiness to respond to a disaster or bioterrorism event had been undertaken. While LHDs have used grant funding to increase capacity and conduct their own self-assessments, standardized, objective, external measurement of preparedness has not occurred. In April 2005, CDHS contracted with the Local Health Officers Association of California (HOAC) to assess the preparedness capacity of local jurisdictions in emergency readiness. The project was a collaborative venture between CDHS, the California Conference of Local Health Officers (CCLHO) and the County Health Executives Association of California (CHEAC), and the assessment was carried out under their joint governance. A Steering Committee of representatives from these organizations provided overall leadership, guidance and policy direction to the project, including review and approval of the assessment process and instrument. The Steering Committee reviewed multiple drafts of the final report and approved submission of this report to CDHS. The conclusions expressed in the report, however, are those of the evaluators based on the findings of this structured process.

Representative experts from local health departments—laboratory directors, public health nursing directors, EMS and OES coordinators, public information officers, epidemiologists, local Health Officers, BT/ Emergency Preparedness Coordinators—were appointed by the Steering Committee and served as a Technical Advisory Committee (TAC). The TAC reviewed drafts of the assessment instrument, provided valuable input about scientific and technical matters and offered suggestions about the assessment process.

In May 2005, the CDHS Director sent the LHDs a letter informing them of the project to conduct LHD emergency preparedness assessments and the high priority of this review in California's emergency preparedness efforts. While participation in the assessment process was voluntary, CDHS' letter and CDHS regional staff from the Emergency Preparedness Office encouraged LHDs to participate.

The California LHD assessment is characterized by at least four distinct features:

1. A uniform and structured assessment instrument with a quantifiable scoring system keyed specifically to the federal Guidance used by CDC and HRSA.
2. Utilization of external peer-experts with extensive, broad local public health experience for review and interviews with numerous staff at all levels of the organization.

3. Voluntary participation by LHDs in the assessments, conducted onsite over a 2-day period.

4. Issuance of individual, comprehensive LHD-specific reports of findings with scores and site-specific recommendations.

Purpose

The purpose of the project was to examine and describe the state of local public health emergency preparedness in California and progress in meeting federal standards.

The specific goals were to:

- Develop and administer a uniform, quantifiable assessment instrument and process consistent with CDC/HRSA Guidance and Benchmarks for measuring public health emergency preparedness capacity in LHDs.

- Conduct statewide onsite assessments of California LHDs to obtain a comprehensive picture of California's public health emergency preparedness.

- Identify common themes, trends, areas of strength, gaps and needed improvements, and training, leadership and other needs, and make recommendations relevant to LHDs and CDHS that could have implications for the allocation of state and federal resources.

- Provide onsite technical assistance (TA) during the assessment to local staff by public health experts that would further capacity-building of LHDs.

Organization of the Report

This report summarizes the key findings and suggestions from the peer-based site visit assessments conducted by this project in 51[3] of California's 61 local health jurisdictions between November 2005 and October 2006. The report is comprehensive as the spectrum of public health emergency preparedness issues is broad and complex.

The Findings section of the document is divided into six parts. Section I, *Selected Characteristics of the Participating LHDs*, includes a general description of certain organizational characteristics that are associated with or influence emergency preparedness. Section II, *Financial and Workforce Resources*, describes human resource and capital capacity of the assessed LHDs. Sections III and IV, *Key Overarching Strengths and Key Overarching Barriers to Meeting Preparedness Goals*, respectively, offer a brief summary of major challenges faced by LHDs and available assets that offer strength. Section V, *Analysis of FY 05/06 CDC/HRSA Performance Goals and Outcomes*, examines the relative ranking of the 15 performance areas. Finally, Section VI, *Outcome and Goal-Specific Strengths and Areas Needing Improvement*, supplements the statistical analysis of scores by examining more closely the common themes, trends, and strengths and weaknesses of each of the performance areas.

[3] In total, 56 (92%) of California's 61 LHDs agreed to participate and were assessed. However, the timeframe for data analysis for submission of the final report precluded inclusion of data from 5 of the LHDs.

Although the results of the assessment are presented in the aggregate for California, the overall findings together with each of the 56 individual LHD-specific reports produced by the project establish a baseline for individual LHDs to use as they continue to strengthen their public health emergency response capacity.

While the findings represent a point-in-time analysis of each assessed LHD and may not be reflective of current preparedness efforts, the recommendations are expected to guide CDHS in allocating resources and identifying areas where additional training and other support for local health jurisdictions is needed.

Acknowledgement

More than 700 public health, hospital, environmental health, behavioral health, law enforcement and emergency response personnel throughout California took time away from their normal busy work schedules to participate in emergency preparedness site visits. Their willingness to share with the site visit teams the significant progress that has been made in local public health emergency preparedness and also the areas still needing improvement is appreciated. Appreciation is also due to Public Health Foundation Enterprises, Inc. (PHFE) for their participation in the project. Their skillfulness in managing many of the administrative functions made it possible for HOAC to carry out the contract. Finally, appreciation is expressed to members of the Technical Advisory Committee who reviewed drafts of the assessment instrument as well as the assessment process and made many helpful comments that improved both.

METHODS

"Unless we identify something uniquely threatening, our day-to-day [emergency preparedness] activities are dictated by what we're funded for." -- Deputy Local Health Officer, mid-sized LHD

Overview

The conceptual framework for the assessment was based on the FY 2005/06 CDC/HRSA Guidance for public health emergency preparedness. This Guidance details public health emergency preparedness requirements for responding to bioterrorism and other public health emergency events. The Guidance represented a major new organization of public health emergency preparedness standards than in previous grant years, incorporating consistency with overall Homeland Security goals. The new federal requirements also reflected an expectation that previous years of funding should have achieved a level of planning that should now allow LHDs to shift to more specific operational requirements for response. The assessment of existing capacity was consistent with the progression in federal expectations.

Development and Structure of the Assessment Instrument

The 2005/06 federal framework consisted of *Goals* (selected from the overall federal Homeland Security preparedness goals that relate to public health response), *Outcomes* (descriptions of capabilities needed to respond to an event of significance), and *Required Critical Tasks* (functional, performance-based response activities CDHS and LHDs are expected to have or develop capacity to achieve.)

The assessment focused on examining LHD capacity to perform the CDC/HRSA-defined required critical tasks and benchmarks. Project consultants developed "assessment areas" for each of the 67 required critical tasks and benchmarks. Under each assessment area, questions were developed and indicators were identified for the expected types and levels of LHD planning, operational readiness and drill/exercise experience. The indicators, which were quantifiable measurements reflecting the critical success factors of the Guidance, included such things as number of staff trained, time between notification and required action, and completeness of documentation. The structured questions were developed as open-ended to facilitate a discussion between LHD staff and the assessment team member. The interview methodology to administer the assessment tool was viewed as critical in eliciting more information to support assessment area ratings and to create an environment where technical assistance would be provided. The Steering Committee believed it was important that neither the tool nor the process be perceived as an "inventory check-list" or "audit" but an examination of the extent of LHD capacity and progress in preparedness.

The following four-point measurement scale was developed and applied at the assessment area level:

4 = Well prepared (the LHD is prepared to fully perform the critical required task in this area)

3 = Prepared (the LHD is prepared to adequately perform the critical required task at a minimum performance level)

2 = Mostly prepared (the LHD is partially prepared to perform the critical required task and still developing capacity in this area)

1= Minimally prepared (the LHD is least prepared to perform the critical required task in this area)

Scores were assigned in whole and half point increments. Scores for all assessment areas within a critical task were summed and then averaged by the number of assessment areas to yield an average score for each of the required critical tasks. Quantifying assessment findings with a scoring system provided a consistent measure of LHD performance and relative relationships of LHD performance compared across LHDs. Because neither CDC/HRSA nor CDHS weighted the required critical tasks, the working assumption was that these critical tasks were equal; hence there was no relative weighting of scores.

The assessment instrument also identified documentation requirements (e.g., plans, protocols, call-down lists, after-action reports and other materials) for each Goals/Objective and these were reviewed by the site visit team. The materials furnished actual documentation of specific efforts by the LHD and provided more detailed information beyond the interview. Direct observation, not always easily quantifiable, such as assessing conditions of public health laboratories, was also used as a data collection method.

An integral part of readiness is the LHD's capacity to receive, store and deploy medical assets from the Strategic National Stockpile (SNS). The CDC had previously conducted assessments of states' readiness utilizing an assessment tool. At the instruction of CDHS, HOAC incorporated the CDC's SNS Program Assessment Tool for LHDs (July 2004 draft) into the California Public Health Emergency Preparedness assessment instrument without modification. The consultants utilized it for assessing local readiness to receive, distribute and dispense SNS assets in the event of an emergency.

The CDC SNS Program Assessment Tool uses the following scoring rubric:

CDC SNS Overall Rating Points

1. **Green** = 67-72
2. **Green** (-) = 61-66
3. **Amber** (+) = 55-60
4. **Amber** = 49-54
5. **Amber** (-) = 43-48
6. **Red** (+) = 37-42
7. **Red** = 0 – 36

The California Public Health Emergency Preparedness assessment instrument (see Appendix 4) is organized in three parts.

- Part I – the demographic, financial and other organizational information LHDs completed in advance of the site visit that was distributed to the consultant team prior to the visit and reviewed with the LHD on site.

- Part II – qualitative information that addresses the domains of leadership, management, planning and progress toward preparedness, and workforce issues; information about these issues was obtained onsite in interviews with key agency leaders and managers during the assessment visit.

- Part III – qualitative and quantitative factors and documentary evidence assessed and scored, organized in sections consistent with the 2005/06 CDC and applicable HRSA Preparedness Goals, Outcomes, and Required Critical Tasks and Benchmarks as described above.

Review, Approval and Application of the Assessment Instrument

The Technical Advisory Committee reviewed drafts of the assessment instrument, providing technical, scientific and practical input. The final instrument was submitted to and approved by the Steering Committee in October 2005.

The assessment instrument was evaluated for reliability using expert opinion from the field, project consultant expertise and experience, training to the instrument, and co-scoring at initial assessment visits. Prior to using the instrument at the first assessment, the team received training regarding use of the tool from the project's lead Subject Matter Expert (SME). The familiarity of the initial project consultants with the instrument from having developed it, combined with additional training in its application, was strengthened inter-rater reliability. As an added measure, the lead SME co-rated selected sections of the tool's outcome and critical task areas with other consultants at several site visits.

The paired-scored data were subjected to a simple statistical analysis to detect significant variances in rating scores between raters. Because the analysis suggested higher levels of variance among some raters, several actions were taken including providing additional training and co-rating during site visits to compare scores; re-composing site visit teams to maximize team members' areas of expertise; hiring additional consultants with specific expertise and providing training and co-rating. As an additional quality control measure, every individual LHD report was reviewed by the project director, project team leader and project lead SME with scoring adjustments made where necessary based on an additional in-depth review of the assessment findings.

Consultant Team

The assessment used a peer-review model. HOAC recruited an independent consultant team of experienced public health professionals representing technical, scientific and management expertise with a broad range of requisite skills in public health planning, policy, evaluation and emergency preparedness. All were senior level consultants with direct, recent experience managing and consulting in complex local public health programs in California, including communicable disease control, laboratory services, environmental health, communications and healthcare delivery systems. The consultants' content knowledge, as well as public health policy and professional leadership roles, familiarized them with the magnitude of the issues addressed by the Guidance. Each team assigned to a LHD site visit represented a balance of this expertise.

The Assessment Process

The first site visit occurred November 8-9, 2005 and the last site visit analyzed for this report took place October 25-26, 2006. An additional 5 LHDs were assessed afterwards with the last on January 10-11, 2007; the results of these 5 are not part of this report because of the timeframe required for analysis. The assessment process consisted of a 2-day, onsite, peer-based participatory evaluation. Consultant teams of 3-4 individuals were assigned to each site visit, with one consultant designated as Team Leader. All team members actively participated in the qualitative and quantitative portions of the assessment. A regional staff member from CDHS' Emergency Preparedness Office attended each site visit as an observer.

Pre-site visit materials were sent to the LHD about six weeks prior to the visit. The materials included detailed information for the LHD about the assessment and the Part I information (the Advance Data) the LHD was to complete and submit before the visit. The Advance Data was distributed to the site visit team for review prior to the visit. The site visit Team Leader contacted the LHD about a week before the assessment to confirm staff availability for interviews, discuss trip and onsite logistics, and answer questions. These pre-visit telephone calls were found to be extremely beneficial for preparing the LHD for the assessment.

An entrance meeting was held at the beginning of Day 1 for introductions, assurance that LHD staff understood the purpose and process, and to schedule the interviews.[4] LHDs were encouraged ahead of time to include external partners, such as their counterparts in the Department of Mental Health, and hospital, fire and safety personnel, in the interviews. LHD staff was also strongly encouraged to be candid with the site visit team about challenges as well as progress toward meeting preparedness goals as the assessment was conducted in the spirit of a participatory evaluation and not an audit or compliance monitoring; the use of public health peers as assessors facilitated such cooperation. Approximately 18-20 person-hours of structured staff interviews were conducted during each assessment, with additional time spent in reviewing the required documents. Direct observation, such as in assessing conditions of public health laboratories or an actual task, was also used as a means of evaluation. At the end of Day 2, the consultant team summarized highlights of the site visit

[4] Local staff was asked to plan ahead for who should be involved in interviews for each topical area covered by the assessment. Scheduling of interviews *at the time of the entrance meeting* was found to be the most efficient way to create the "real-time" 2-day schedule.

findings in an exit meeting with staff, sharing the key findings and recommendations. Approximately 6-8 weeks after the visit, a detailed written report of LHD-specific findings and recommendations was prepared and after a minimum of two levels of review/editing was transmitted electronically to the LHD. Because the information was considered sensitive and confidential, individual LHD reports were sent only to the LHD and CDHS by agreement of the Steering Committee.

Data Entry and Analysis

A coding scheme and Excel spreadsheet for data entry were created for the quantitative and qualitative data elements collected during the assessment. Data from individual LHD final reports were entered onto the spreadsheets on a continuous basis and cleaned prior to analysis. The quantitative data were analyzed using SPSS Version 14.0, and analyses agreed to by the Steering Committee were included in this report.

Limitations of the Data

There are several important limitations of this study. First, while certain characteristics as well as strengths and capacity deficits are common to all LHDs regardless of size and location, each California LHD is unique. Although the dataset in this report is large, reflecting 84% of the state's LHDs, and the findings are robust, the results may not be generalizable to the extent that the characteristics are different or the reasons for non-participation are important in the LHDs that did not volunteer to take part in the assessment.

Second, since the assessment process occurred over about a 12-month period, it is likely that LHDs increasingly became better prepared during that time, particularly in the newest Guidance areas. The scheduling of site visits was not random (e.g., counties with potential severe winters were visited when adverse weather conditions would not impact travel), and this analysis did not attempt to consider how much improvement was based on timing of participation.

Third, because the state and federal Guidance did not weight the performance requirements, and the assessment process was expected to parallel the Guidance, all of the findings and recommendations have the appearance of equivalent importance or urgency. Scores for the Critical Tasks within each Outcome/Goal were averaged on an equal-weight basis. Inherently, however, some issues will merit higher priority in addressing than others.

Fourth, this analysis looked at the performance of LHDs without regard to their size. Scores from all the participating jurisdictions—small, medium and large—were averaged together without being weighted on the basis of population.

Finally, this assessment did not include any interviews or analysis of emergency preparedness leadership, guidance, management, or other types of control activities of state-level agencies such as CDHS, Department of Mental Health or Office of Emergency Services. The consultants did not attempt to analyze or uncover potential gaps or deficiencies between those agencies. This report is based solely on the information available from LHDs which formed the basis for suggestions for improvement to CDHS.

FINDINGS

"We'll never be blamed for being too prepared in advance, but we sure will be blamed for being unprepared later." – Local Health Officer, southern California

This section of the report presents qualitative and quantitative findings organized into six areas: Selected Characteristics of Participating LHDs; Financial and Workforce Resources; Key Overarching Barriers to Improvement; Key Overarching Strengths; Statistical Analysis of Scores; and Narrative Descriptions of Strengths and Needed Improvements.

I. Selected Characteristics of Participating LHDs

"There's a myth that the small counties should be held to a different—i.e., lower—standard than the larger counties simply because of size and resource limitations. But we've seen the small counties 'out-prepare' the larger counties on a number of the CDC and HRSA performance areas." --Health Executive, small northern California county

County Population of the Sample

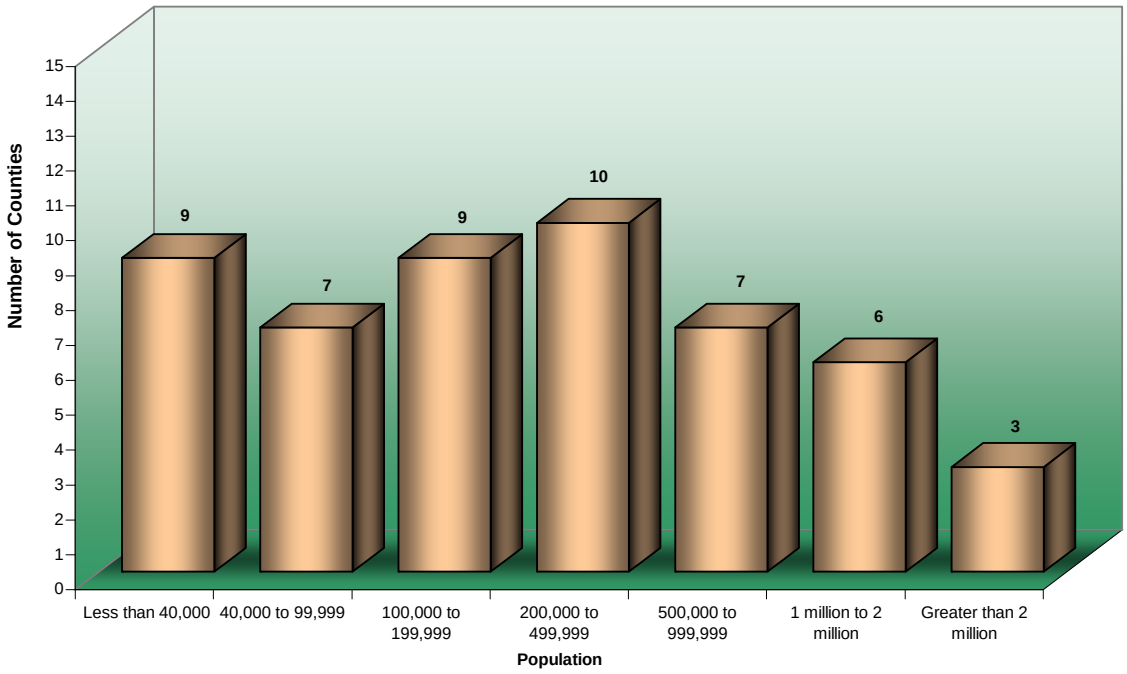
Fifty-six city and county local health departments volunteered for an assessment and five declined to participate. Of the 56 assessed LHDs, data from 51 were available for analysis at the time this report was written. California's estimated population of 37,172,015[5] broadly ranges from a low of 1,159 residents in Alpine County to almost 10.2 million in Los Angeles County. A total of 36.2 million Californians, or 97% of the state's population, is accounted for in the 51 analyzed LHDs. The population ranges of these LHDs are shown in Table 1 and Figure 1.

Table 1. Assessed LHDs' County Population Range

County Size Population	Number of LHDs	Smallest Population	Largest Population	Total Population	% of State's Population
Less than 40,000	9 (17.6%)	1,159	37,574	192,388	0.5
40,000 – 99,999	7 (13.7%)	45,819	91,450	478,533	1.3
100,000 – 199,999	9 (17.6%)	104,817	187,743	1,317,639	3.5
200,000 – 499,999	10 (19.6%)	210,554	486,114	3,478,418	9.4
500,000 – 999,999	7 (13.7%)	508,636	848,226	5,059,141	13.6
1,000,000 – 2,000,000	6 (11.8%)	1,020,898	1,900,000	9,479,039	25.5
Greater than 2,000,000	3 (5.9%)	3,000,000	10,174,823	16,174,823	43.5
TOTAL	**51**	**1,159**	**10,174,823**	**36,179,981**	**97.3**

[5] California Department of Finance, Demographic Unit. 2006 population projection.

Figure 1. Assessed LHDs' County Size Groupings



To answer questions about differences in emergency preparedness based on population size categories that were meaningful to the Steering Committee (e.g., are small, rural counties any less prepared than large, urban counties?), county-size categories were defined and utilized in the analysis. The population category sizes and definitions are shown in Table 2.

Table 2. County Population-Size Categories, Defined and Utilized for Analysis

Designation	Number of CA Counties with Designation	Description
"Contract" Counties	11	The small counties (population < 50,000) that participate in the Local Public Health Services Program by contracting with CDHS to provide state-employed environmental specialists and public health nurses who work in and for those counties. During the assessment period 11 counties were part of this group.
"<200K" Counties	35	Counties with populations <200,000 inclusive of the Contract Counties (CCs). The Contract Counties are a subset of these counties. Note: tables in this report make clear when CCs are included or excluded within this population-size category.
"200K-1M" Counties	15	Counties with a population between 200,000 and 1 million.
">1M" Counties	8	Counties with a population > 1 million.*

Note: the number of counties exceeds California's 58 counties because the Contract Counties are included in the first 2 categories.
* The 3 city health departments, which are located in the largest counties group, were analyzed as part of the "200K-1M" group because of their population size.

OES/CDHS Regional Designation

The Office of Emergency Services (OES) divides the state into 6 regions for emergency planning purposes (see map on next page). CDHS uses the same regional designations as OES for emergency preparedness county groupings. The regions in which there was less than full participation by LHDs were Regions III and V, representing far northern California and the Central San Joaquin Valley, respectively (Table 3).

Table 3. Participation and Location of All LHDs Assessed, by OES/CDHS Region

OES/CDHS Region	Number of Counties in Region	Number of LHDs that Participated*	% of Counties in Region Participating
I	5	7**	100%
II	16	17***	100%
III	13	10	77%
IV	11	11	100%
V	7	5	71%
VI	6	6	100%

*Total number of assessed LHDs regardless of inclusion in the analysis for this report.
**Includes two city health departments.
***Includes one city health department.

Selected Organizational Characteristics of the LHDs

There are various organizational models of public health services at the local level including stand-alone health departments and those organized under a health and human services agency. In addition to core public health services, such as communicable disease control and maternal child health, some LHDs also include animal control, Emergency Medical Services (EMS), Environmental Health (EH), and on occasion substance abuse/alcohol and drug programs. EH and EMS were organizationally part of the LHD in nearly half of the 51 LHDs assessed (Table 4). Only one of the LHDs included Mental Health within the LHD structure. Additionally, the majority of LHDs had a public health laboratory. Twenty-two (43%) of these laboratories reported being capable of providing their own BT (non routine) laboratory services while the remainder depended on BT-related lab services from other counties and/or CDHS.

Table 4. Selected Characteristics of LHDs (N=51)

BT Lab Services Provided Only by LHD (not others)?		EMS under LHD?		EH under LHD?	
Yes	No	Yes	No	Yes	No
43%	57%	51%	49%	49%	51%

Map 1. OES/CDHS Regional Designations for Emergency Preparedness

II. Financial and Workforce Resources

"What we [the small counties] don't have in resources we make up for in teamwork." — OES Coordinator, small rural county

Financial Resources

The primary source of funds available to the LHDs for emergency preparedness and response included the CDC BT grant allocation, followed by HRSA, State Homeland Security Grant Program, CRI (Cities Readiness Initiative) and UASI (Urban Area Security Initiative) funding. While not a source of direct funds, counties with an MMRS (Metropolitan Medical Response System) grant have engaged in additional planning. As the CDC and HRSA formula allocations to LHDs are population-based, local funding varies by population size. Emergency preparedness funds made up a greater proportion of the total LHD budget allocation in the smallest-size LHDs. On average, the emergency preparedness program represented 4% of the LHD total budget allocation (Table 5). While extreme percentages (a low of 1.2% in a mid-size county to a high of 48% in a very small county) skewed the range value, most of the LHD budgets for emergency preparedness clustered around the average. Inadequate funding for the level of expectations and uncertainties about sustaining emergency preparedness funding levels were the two most commonly-reported budget concerns of LHDs.

Table 5. Reported Average Total LHD Budget Allocation and Average Emergency Preparedness Budget, FY 05-06 (N=51)

County Designation	Average Total Budget	Average Emergency Preparedness Budget	Percentage of Total Budget for Emergency Preparedness
Contract Counties	$2,338,098	$197,624	8.5%
<200K Counties[1]	$11,326,859	$446,029	3.9%
200K-1M Counties	$62,861,199	$3,520,388	5.6%
>1M Counties	$231,138,942	$7,578,931	3.3%
All Counties	$67,384,023	$2,669,281	4.0%

[1]Includes Contract Counties

Per capita, fewer emergency preparedness dollars were available the larger the county in population size. In the Contract Counties, an average of $36.52 (minimum $3.82, maximum $228.79) was available per person while in the >1M counties the average dollar amount available per resident was $2.21 (minimum $1.77, maximum $3.52) (Table 6). For most of the counties, the per capita figure was between $1.13 and $16.47, followed by an increase to $46.01 (a mid-size county) and a large jump to $228.79 (a very small county). These two counties' extreme scores skewed the range value for their group.

Table 6. Per Capita Funds Available for Emergency Preparedness (N=51)

County Designation	Mean	SD	Median	Minimum	Maximum	Range*
Contract Counties	36.52	77.79	10.71	3.82	228.79	224.97
<200K Counties[1]	4.01	1.95	3.77	1.53	9.51	7.97
200K-1M Counties	6.65	11.11	3.06	1.13	46.01	44.88
>1M Counties	2.21	.58	1.88	1.77	3.52	1.75
All Counties	9.62	32.02	3.40	1.13	228.79	227.65

[1]Excludes Contract Counties

*Note: The "range" is the difference between the minimum and maximum figures (the largest and smallest data values). An extreme figure, which was the case for a few of the LHDs, can give a misleading picture of the distribution.

Many LHDs reported that a number of other LHD personnel supported by non-grant funds also participate in emergency planning activities at incalculable amounts of time. These staff resources are estimated to increase the average LHD costs related to emergency preparedness by 3%-5%.

HRSA Entity Challenges

Thirty-one (61%) of the analyzed LHDs reported that they were the direct recipients of HRSA funds. While not all LHDs described problems in managing or expending these dollars, about two-thirds did. Those LHDs reported that the primary challenge was too much responsibility without authority to influence or make needed improvements. For example, while the grant promoted interactions with hospitals, in many places it was initially difficult for LHDs to engage hospitals to participate in exercises or send their staff to trainings. The challenge of integrating HRSA requirements with the policies and procedures of private facilities, especially hospitals, and the difficulties in trying to influence hospitals' protocols, chiefly the management of the cache inventory, added to the LHD cost of administering the grant.

Delays in spending funds have largely been the result of two factors: delays in obtaining written agreements completed at all levels so that the grant year was essentially over by the time the funds were available; and delays in CDHS completing its direct purchases. Additionally, CDHS management of certain HRSA items has been viewed by some LHDs as inconsistent and seemingly uncertain in its guidance. For example, initially purchases of pharmaceuticals were required to be made according to the pre-designated stockpile contents. Later, there was an indication that purchases could be made according to locally-determined needs—however the purchase of antiviral medications was specifically prohibited. Despite the increase from 5% to 10% for administrative costs associated with the HRSA grant, some LHDs believe that administering this grant—and in a few cases the CDC BT grant as well—has consumed inordinate amounts of administrative time that in some respects, according to a few LHDs, largely negated the benefits of the financial resources it offered.

Human Resource and Workforce Issues

Experienced and knowledgeable public health leadership and a sufficient and adequately trained public health workforce is directly related to a LHD's capacity for emergency preparedness. Shortages in the public health infrastructure, which have been described elsewhere by HOAC[6] and well documented in the literature, an aging workforce, budget cuts and competition with community and healthcare organizations are largely responsible for the HR resource gaps, and these factors make it difficult for LHDs to recruit and retain qualified staff. As a result, LHDs, particularly smaller jurisdictions, have had difficulty in meeting the myriad public health requirements to ensure a trained and competent workforce for emergency preparedness. Moreover, the knowledge base for emergency preparedness in many LHDs resides in a limited number of staff, which could significantly impact the agency response if these individuals are unavailable in an emergency or leave the agency.

New Preparedness-Only Positions Created

LHDs used a combination of new personnel, consultants and existing staff who were reassigned to newly-created emergency preparedness positions to carry out only emergency preparedness activities. In some cases, back-filling the existing positions created a challenge for LHDs in other core areas, most notably public health nurses and public health microbiologists because of the overall shortage of these classifications. The LHDs varied considerably in the number of new grant-supported positions they created. The number of new positions was a direct function of funding based on county population size: larger counties added more new positions. Some LHDs assigned existing positions to emergency preparedness duties rather than create brand new positions due to concern about long-term stability of the federal funds, leaving other program areas short staffed.

A total of 428.4 new preparedness-only positions were reported to have been created by 48 of the LHDs (this information was not available for 3 of the assessed LHDs). The number of newly-created positions in these LHDs ranged from 0 to 171, with a mean of 8.9. Because the range in 47 of the 48 LHDs was between 0 and 33 new positions, the median value of 2.5 is therefore a better indication of how many positions were newly-created than the mean of 8.9 which is unduly affected by the very large value from one LHD (Table 7).

[6] *Public Health Assessment Project: Workforce and Financial Capacity to Deliver Selected Core Functions in California LHDs*. Final Report submitted to The California Wellness Foundation, Health Officers Association of California, May 2000.

Table 7. New Preparedness-Only Positions (N=48)

County Size Designation	Total # of New Positions
Contract Counties	6.0
<200K Counties (excludes Contract Counties)	36.5
200K-1M Counties	100.9
>1M Counties	285.0
Total	**428.4**

	Mean	*SD*	Min.	Max.	Median	Total
# of New Positions	8.9	25.12	0	171.00	2.5	428.4

In addition to staff funded from federal emergency preparedness funds, other staff in LHDs are working in emergency preparedness as part of their duties. When these existing staff have preparedness responsibilities added, generally their job descriptions are revised to reflect the new duties. Because LHD personnel supported by non-emergency preparedness grant funds also participate in emergency planning activities, gaining the true picture of LHD staffing related to this core area is complicated, and clearly LHDs expend a higher level of effort than the newly-created preparedness-only positions indicate.

Recruitment and Retention Challenges

While new monies have become available for emergency preparedness and response activities, and new positions have been created, recruitment difficulties have occurred in many of the same positions that challenge LHDs in filling FTEs (full-time equivalents) for general public health core functions. The positions most often described as difficult to recruit (though not necessarily retain) in general and for emergency preparedness specifically were public health and other nursing positions, cited by more than two-thirds (69%) of the LHDs. More than two-fifths (43%) of the LHDs also experienced problems in finding epidemiologists. Recruitment of microbiologists and Public Health Laboratory Directors was a problem for slightly more than one-quarter of the LHDs that operate a Public Health Laboratory (Table 8).

Table 8. Difficult to Recruit Positions Relevant to Preparedness Goals

	N of LHDs Reporting the Problem	% of LHDs Reporting the Problem
PHNs	35	68.6
Epidemiologists	22	43.1
Public Health Microbiologists*	14	27.5
Public Health Laboratory Directors*	14	27.5
Laboratory Positions, Not Specified*	3	5.9
BT / Emergency Coordinator	5	9.8
Assistant Local Health Officer	3	5.9
Registered Environmental Health Specialist	1	2.0

Note. Percentages are based on 51 LHDs assessed.
*Reported by LHDs with public health laboratories.

Anticipated retirements, vacancy and turnover rates and position reduction concerns from all LHD program areas were identified by a majority of the assessed LHDs. A high percentage of vacancies (defined as >12% unfilled positions) and loss of staff due to non-competitive salary structure were reported to be a problem by at least one-quarter of the assessed LHDs (Table 9). The vacancies in nursing positions are largely the result of the general shortage of nurses. The effect of having positions vacant—or the inability to create more positions—is that existing staff has had to take on additional responsibilities, sometimes at the expense of *both* emergency preparedness and other core public health functions. Many of the smaller LHDs reported retention problems with new graduates using the LHD as a training ground to gain experience and as a stepping stone to other LHDs or organizations with higher salaries and greater promotional opportunities. Some LHDs experienced turnover as a result of staff transitioning from the county to a state government job.

In general, emergency preparedness positions have experienced more stability than LHD positions as a whole. Hiring freezes, vacancies and turnover were reported as slightly less of a problem for these positions than for other positions in the LHD. This is not unexpected as emergency preparedness as a discrete program component within public health is fairly new, and funding and hiring for it have been a relatively high priority.

Table 9. Other LHD-Identified Recruitment/Retention Concerns

	n	**% of LHDs**
▪ Pending retirements (within 1-2 years) in key positions	15	29.4
▪ High percentage of unfilled positions (> 12% vacant)	12	23.5
▪ Non-competitive/low-salary scale	11	21.6
▪ High turnover rate (positions do not stay vacant but turn over frequently)	8	15.7
▪ Position cuts (mostly reabsorbed elsewhere)	6	11.8
▪ Hiring freeze/local policy for no-growth	3	5.9

Note. Percentages are based on 51 LHDs assessed.

Additionally, nearly one-third (29%) of the LHDs expressed concern about the impending retirements of senior level professional and management staff—many in the positions described above—and the impact that is expected to have for emergency preparedness and the LHD as a whole. Most LHDs have identified the need for succession planning and have begun to prepare for it by using reorganization to facilitate succession, supporting staff development for promotional opportunities within the LHD and cross training staff. However, these efforts may not be enough to counter the effects of the impending retirements.

Some of the LHDs also described efforts to retain personnel whose positions would be eliminated because of decreased emergency preparedness grant funding. Most expected to be successful in retaining staff in the emergency preparedness program or reassigning them to other non-emergency grant-supported program areas within the LHD.

There have been many benefits to public health in California associated with emerging preparedness roles for LHD staff. These have included:

- increased collaboration, communication and mutual commitments with a broad array of external partners;
- increased recognition of public health expertise by community agencies as well as the general public;
- more staff who are cross trained;
- staff working more regionally; and,
- LHDs becoming conscious of the advantages of a military-type operation and acculturating to an “incident command” approach in the way they work, improving efficiency and translating this benefit into other program areas—such as communicable disease control—to strengthen them.

III. Key Overarching Strengths/Assets

"When push comes to shove, the 'greatest good for the greatest number of people' becomes the byword." – PHN Supervisor, rural county

Notable strengths that give LHDs the capacity to meet preparedness goals are summarized below. These assets transcend all LHDs and are not content-specific or directly related to LHD size or location.

- LHDs, particularly Local Health Officers, are increasingly visible at the table and recognized by external partners and the general public for their role and expertise in emergency preparedness.
- LHD staff display an overall commitment and dedication to "get the job done" despite resource limitations or other obstacles.
- LHD size does not appear to be the decisive factor in level of preparedness or progress—it was observed that having a strong, highly engaged can-do individual in a leadership role, particularly one with competent management and technology skills, was one of the most crucial elements for success; this "catalyst effect" was apparent in LHDs of all sizes.
- In most of the LHDs assessed, staff relayed a strong sense of support from boards of supervisors and county administrators. In some counties, local leadership outside of the LHD had been described as "initially skeptical" but quickly won over with the need to reprioritize resources and elevate workforce efforts. Some members of the Board of Supervisors have gotten personally involved in emergency preparedness issues.
- The infusion of emergency preparedness funds has had a positive spillover effect on strengthening the LHDs' overall infrastructure and core functions, particularly in the communicable disease control, epidemiology and public health laboratory services areas.* LHDs commented that emergency preparedness efforts have also led to a more regional focus in the departments' other planning efforts.
- In building stronger emergency preparedness programs, engagement with other related departments of local government, particularly EH, EMS and animal control, has increased. Moreover, expansion of LHD responsibilities has been a catalyst for LHDs to connect with a broader part of the emergency preparedness community than ever before. LHDs have developed strong relationships with external partners, particularly local emergency managers.

* While the CD infrastructure has been strengthened, a few LHDs reported that increased preparedness responsibilities have resulted in decreased attention to day-to-day surveillance, investigation and control of routine diseases such as sexually-transmitted infections.

- In addition to effective overall community and advisory committee input, many LHDs identified participation in planning and exercising from faith communities, private non-profit and charitable organizations, hospitals, schools, regional planning groups and in some cases the private medical and veterinary communities.

- Epidemiologists have done an excellent job bringing LHDs forward in their disease surveillance and control efforts. Epidemiologists are being used on a regional basis.

- Communicable disease control and other primary emergency-preparedness program areas heavily rely on the expertise of LHD laboratories for identifying agents, determining how much of the agent exists, and deciding when the incident involving the agent has ended.

- California now has a laboratory network with the capacity for molecular diagnostics to identify not only agents of bioterrorism, but many other public health diseases of significance such as West Nile Virus, Avian Influenza and SARS.

- LHDs increasingly employ PIOs (Public Information Officers) who have been integral to the departments' success in internal communication and with community partners and the general public.

- LHDs, particularly in the smaller counties, have been creative in establishing regional relationships.

- LHDs have built strong working relationships with universities and national laboratories such as Lawrence Livermore Laboratory.

- Assessed LHDs recognize the value of the assessment and are referring to the assessment findings and recommendations in developing their 2006-07 emergency preparedness work plans.

IV. Key Overarching Barriers/Challenges To Meeting Preparedness Goals

"Things can look good on paper but we worry about how it's really going to work when we've got people living in cars and orchards and far into the hills." – PHN Supervisor, Central California coast

The general overarching challenges or "roadblocks" most commonly identified as contributing to the inability to meet preparedness goals are summarized below. These are administrative, structural, financial, attitudinal and other types of barriers that cross all areas of emergency preparedness and are not limited to the content-specific issues and concerns addressed in the Guidance, and are not dependent on LHD size or location.

- The expectations of CDC/HRSA and CDHS for all LHDs to achieve the same performance measures regardless of size, funding or perceived threat potential was a common concern expressed by many of the LHDs. These LHDs stressed that more concrete support was needed for smaller jurisdictions from both the CDC and CDHS to provide already-developed and tested templates and model plans which the LHDs could modify rather than trying to develop them. Some of the planning workload (e.g., developing a smallpox plan and a Pandemic Influenza plan) requires the same staff commitment and resources for small as for large counties.

- The federal requirements are so specific and the resources insufficient that in order to meet them LHDs feel they have to draw on the resources of other already under-funded public health programs.

- Sustainability of previous levels of BT and other emergency preparedness funding, including the inability to forward spend/roll over BT grant funds because of the federal schedule, was of major concern for many of the LHDs. The likely reason for the concern about roll-over was that LHDs were at the end of a 5-year grant cycle in August 2005.

- Several LHDs identified lack of coordination or support between the LHD and other departments under its agency—most commonly Mental Health—as a barrier to meeting emergency preparedness goals. Emergency planning involvement by mental/behavioral health departments has been limited in most counties.

- Anticipated problems in receiving mutual aid are a major concern in the event of something like a pandemic, according to many LHDs. The foundation of California's emergency planning and response is a statewide master mutual aid system which is designed to ensure that adequate resources, facilities and other support are provided to jurisdictions whenever their own resources prove to be inadequate to cope with a given situation.

- Estimating and planning for populations at risk is a challenging issue for LHDs. Daytime populations from large numbers of commuters in some areas can swell by 40%-50% (e.g., from 800,000 to 1.2 million in one county), impacting the availability of resources as well as increasing the risks related to spread of infectious and communicable diseases. Parents working in one county while their children attend school or day care in another county is not uncommon and presents a special challenge. Seasonal and tourist-related population expansions occur in many places as well and must be taken into consideration in planning efforts.

- There can be inconsistencies between public health emergency preparedness priorities and the priorities of key partners, such as hospitals, which create difficulty in resolving these differences.

- A number of the LHDs have expressed a great desire for help from CDHS in providing or maintaining the provision of *regionally*-based staff such as epidemiologists.

- Emergency preparedness is not considered a high priority for some residents and county administrators because they do not perceive of their county as being at high risk for a disaster or terrorist event.

- Physical barriers arising from geographical/topographical characteristics were specifically mentioned by staff from nearly half of the LHDs. Mountain passes that bisect counties, inadequate flood control where there are vulnerable rivers, lack of cell phone coverage, primary access routes via two major bridges, closures from avalanche-prone areas, and winding mountain roads that could result in traffic problems in a large evacuation or mass vaccination clinic were among the many examples cited.

V. Statistical Analysis of the CDC/HRSA Goal/Outcome Performance Areas

"We now have a clearer sense of the threat environment." -- Health Executive, Northern California LHD

This section of the report presents the results of the aggregated scoring of the 15 CDC/HRSA performance area Goals/Outcomes. The quantitative assessment data (scores) were subjected to standard statistical tests for analysis and were averaged relative to the 4-point rating scale utilized in the assessment. The scoring rubric supported the examination of the extent to which the specified preparedness criteria had been reached, as well as provided feedback to LHDs concerning how to improve their performances. When aggregated and analyzed for this statewide report, the quantitative data also provide a means of comparison and an identification of areas of relative strength and weakness.

These statistical data must be viewed in combination with the qualitative assessment findings (overarching and performance area-specific strengths and barriers/areas for improvement) in this report. Together they provide a comprehensive picture of California's local public health emergency preparedness relative to State and federal guidance.

Performance Area Differences

Composite means for the scores at the Goal/Outcome level are shown in Table 10 and Figure 2. A repeated measures analysis of variance on the overall average preparedness scores showed that there were significant differences among the Outcomes/Goals. Outcomes 2A (Information Collection & Threat Recognition), 6A (Emergency Response Communications), 6B (Emergency Public Communications), and 6D (Isolation & Quarantine) were the areas with the highest scores overall. These preparedness areas were significantly higher than Outcomes 6E (Mass Prophylaxis Vaccination), 6F (Medical & Public Health Surge), and 7A (Economic & Community Recovery), and Goals 8 (Recover) and 9 (Improve). Further, the scores of Goals 8 and 9 were significantly lower than those of virtually all of the other areas.*

The average scores at the Outcomes/Goals level ranged between a low of 2.14 (this was for Goal 9, Recover), and a high of 2.94 (for Outcome 2A, Information Collection & Threat Recognition). The overall mean for the 51 analyzed LHDs was 2.64. These highest-scoring areas, 2A, 6A, 6B and 6D, essentially reached the project-defined level of "prepared to adequately perform the critical required task at a minimum performance level" according to the scoring system utilized in the assessment.

* Note: The 2005-06 CDC/HRSA Outcomes/Goals and Critical Tasks are contained in the Tool in Appendix 4.

Table 10. Average Preparedness Scores of LHDs at the Outcome/Goal Level (N=51)

CDC/HRSA Performance Area	Mean	Median	*SD*	Range	Average Minimum	Average Maximum
1A: All Hazards Planning	2.76	2.75	.43	1.75	2.083	3.833
2A: Information Collection & Threat Recognition	2.94*	3.00	.44	1.83	2.000	3.833
2B: Hazard & Vulnerability Analysis	2.64	2.63	.45	1.88	1.750	3.625
3A: Laboratory Testing	2.61	2.50	.67	3.00	1.000	4.000
4A: Health Intelligence Integration & Analysis	2.66	2.58	.53	2.00	1.667	3.667
5A: Public Health Epi Investigation	2.75	2.88	.45	2.00	1.625	3.625
6A: Emergency Response Communications	2.92*	2.93	.41	2.00	1.643	3.643
6B: Emergency Public Communications	2.90*	2.93	.36	1.57	2.071	3.643
6C: Worker Health Safety	2.63	2.67	.66	2.67	1.333	4.000
6D: Isolation & Quarantine	2.85*	2.94	.38	1.81	1.813	3.625
6E: Mass Prophylaxis Vaccination	2.44	2.50	.52	2.17	1.500	3.667
6F: Medical & Public Health Surge	2.64	2.70	.49	1.90	1.600	3.500
7A: Economic & Community Recovery	2.43	2.50	.54	2.25	1.250	3.500
Goal 8: Recover	2.14*	2.17	.50	2.17	1.333	3.500
Goal 9: Improve	2.26*	2.13	.59	2.50	1.375	3.875

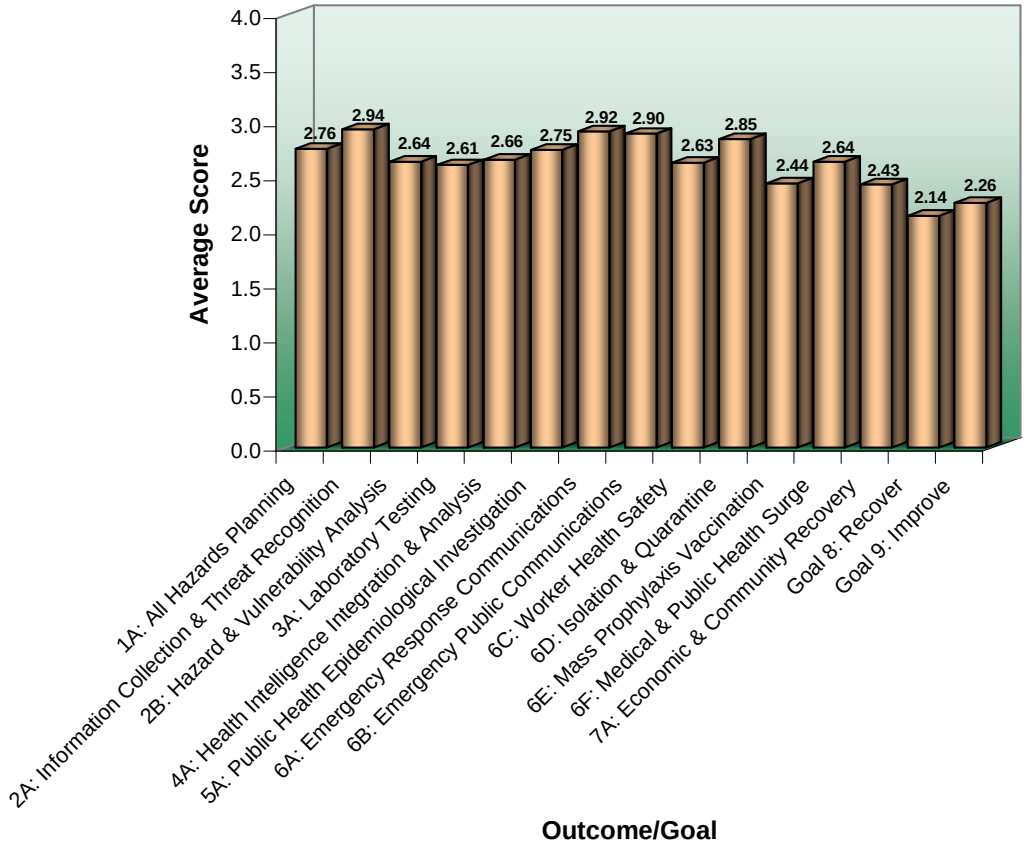
Mean scores are based on a 4-point rating scale where 1=minimally prepared, 2=mostly prepared, 3=prepared and 4=well prepared.

Note: The 2005-06 CDC/HRSA Outcomes/Goals and Critical Tasks are described in the Tool in Appendix 4.

Repeated measures ANOVA showed overall statistical differences, $F(8.36, 417.77) = 16.79$,

$*p < .05$ using the Greenhouse-Geisser correction for sphericity.

Figure 2. Preparedness Level for the 15 Outcome/Goal Areas (N=51)



Mean scores are based on a 4-point rating scale where 1=minimally prepared, 2=mostly prepared, 3=prepared and 4=well prepared.

Appendix 3 contains bar graphs for the Outcomes/Goals that display the aggregated scoring by *frequency distribution* (as opposed to the mean*)*. This is another way of presenting the data that may be of interest to readers. For example, for Outcome 1A (Appendix 2), it will be seen in the graph that about one-quarter (13, or 25.5%) of the LHDs scored an average of between 2.0 and 2.499, close to half (24, or 47%) of them scored an average of between 2.5 and 2.999, and so forth.

Under the CDC/HRSA Goals/Outcomes there are 67 Required Critical Tasks and benchmarks. The number of these tasks ranges from 3 to 8 under any one Goal or Outcome. Table 11 breaks the scoring data down to the Required Critical Task Level and shows the distribution of means for each of the tasks. (Tests for significance between the Required Critical Tasks were not performed.) As can be seen in the table, the task with the highest overall mean score is Critical Task 1 in Outcome 6B (Emergency Public Communication), with a mean score of 3.19 of 4.0 points possible. In some cases, there is as much as a 1-point difference in scores between the Tasks. For example, in Goal 9

(Improve), LHDs on average nearly reached a level of "prepared to adequately perform….at a minimum performance level" (the mean score was 2.84) for Critical Task 1, *Exercise plans to test horizontal and vertical integration with response partners at the federal, state, local, and tribal levels.* However, for Critical Task 4 under this same Goal, *Decrease the time needed to re-test areas requiring corrective action,* LHDs scored lower (mean of 1.81) and so were considered less prepared. In addition to the means, Table 11 also provides information on frequencies by scoring intervals. Again using Critical Task 1 under Goal 9 as an example, one can see from the table that 5 (9.8%) of the 51 LHDs scored at the lowest end of the 4-point preparedness scale and another 5 (9.8%) scored at the highest end.[7]

[7] Note: The 2005-06 CDC/HRSA Outcomes/Goals and Critical Tasks are described in the tool in Appendix 4.

Table 11. Average and Frequency Scores of LHDs at the Critical Task Level (N=51)

CDC/HRSA Performance Area		Mean Score	Number of Counties (%) Receiving Ratings of:			
			1.0 & 1.5	2.0 & 2.5	3.0 & 3.5	4.0
All Hazards Planning	Outcome 1A1	3.09	-	13 (25.5%)	29 (56.9%)	9 (17.6%)
	Outcome 1A2	2.89	-	21 (41.2%)	30 (58.8%)	-
	Outcome 1A3	2.42	10 (19.6%)	24 (47.1%)	16 (31.4%)	1 (2.0%)
	Outcome 1A4	3.06	1 (2.0%)	10 (19.6%)	35 (68.6%)	5 (9.8%)
	Outcome 1A5	2.87	-	22 (43.1%)	27 (52.9%)	2 (3.9%)
	Outcome 1A6	2.23	17 (33.3%)	25 (49.0%)	7 (13.7%)	2 (3.9%)
Info Collection / Threat Recognition	Outcome 2A1	2.98	-	16 (31.4%)	32 (62.7%)	3 (5.9%)
	Outcome 2A2	2.98	-	16 (31.4%)	34 (66.7%)	1 (2.0%)
	Outcome 2A3	2.86	-	22 (43.1%)	28 (54.9%)	1 (2.0%)
Hazard and Vulnerability Analysis	Outcome 2B1	2.55	5 (9.8%)	24 (47.1%)	22 (43.1%)	-
	Outcome 2B2	2.57	7 (13.7%)	24 (47.1%)	20 (39.2%)	-
	Outcome 2B3	2.72	1 (2.0%)	26 (51.0%)	22 (43.1%)	2 (3.9%)
	Outcome 2B4	2.73	-	22 (43.1%)	29 (56.9%)	-
Laboratory Testing	Outcome 3A1	2.63	6 (11.8%)	25 (49.0%)	17 (33.3%)	3 (5.9%)
	Outcome 3A2	2.60	6 (11.8%)	23 (45.1%)	19 (37.3%)	3 (5.9%)
Health Intelligence Integration	Outcome 4A1	2.78	6 (11.8%)	21 (41.2%)	19 (37.3%)	5 (9.8%)
	Outcome 4A2	2.73	6 (11.8%)	17 (33.3%)	27 (52.9%)	1 (2.0%)
	Outcome 4A3	2.52	3 (5.9%)	30 (58.8%)	18 (35.3%)	-
	Outcome 4A4	2.60	9 (17.6%)	17 (33.3%)	25 (49.0%)	-
	Outcome 4A5	2.97	-	14 (27.5%)	35 (68.6%)	2 (3.9%)
	Outcome 4A6	2.36	14 (27.5%)	18 (35.3%)	18 (35.3%)	1 (2.0%)
Public Health Epidemiological Investigation	Outcome 5A1	2.86	-	21 (41.2%)	28 (54.9%)	2 (3.9%)
	Outcome 5A2	2.98	2 (3.9%)	10 (19.6%)	37 (72.5%)	2 (3.9%)
	Outcome 5A3	2.88	1 (2.0%)	15 (29.4%)	34 (66.7%)	1 (2.0%)
	Outcome 5A4	2.28	12 (23.5%)	31 (60.8%)	7 (13.7%)	1 (2.0%)
Emergency Response Communications	Outcome 6A1	2.96	-	13 (25.5%)	36 (70.6%)	2 (3.9%)
	Outcome 6A2	3.07	-	10 (19.6%)	40 (78.4%)	1 (2.0%)
	Outcome 6A3	2.76	5 (9.8%)	16 (31.4%)	28 (54.9%)	2 (3.9%)
	Outcome 6A4	3.03	2 (3.9%)	11 (21.6%)	35 (68.6%)	3 (5.9%)
	Outcome 6A5	3.01	-	13 (25.5%)	36 (70.6%)	2 (3.9%)
	Outcome 6A6	2.75	13 (25.5%)	11 (21.6%)	16 (31.4%)	11 (21.6%)
	Outcome 6A7	2.85	1 (2.0%)	19 (37.3%)	30 (58.8%)	1 (2.0%)
Emergency Public Communications	Outcome 6B1	3.19	-	4 (7.8%)	42 (82.4%)	5 (9.8%)
	Outcome 6B2	3.01	-	14 (27.5%)	36 (70.6%)	1 (2.0%)
	Outcome 6B3	2.54	8 (15.7%)	22 (43.1%)	18 (35.3%)	3 (5.9%)
	Outcome 6B4	2.71	3 (5.9%)	22 (43.1%)	26 (51.0%)	-
	Outcome 6B5	3.00	-	10 (19.6%)	38 (74.5%)	3 (5.9%)
	Outcome 6B6	2.81	5 (9.8%)	15 (29.4%)	27 (52.9%)	4 (7.8%)
	Outcome 6B7	3.03	2 (3.9%)	8 (15.7%)	39 (76.5%)	2 (3.9%)
Worker Safety	Outcome 6C1	2.75	6 (11.8%)	14 (27.5%)	28 (54.9%)	3 (5.9%)
	Outcome 6C2	2.64	9 (17.6%)	17 (33.3%)	21 (41.2%)	4 (7.8%)
	Outcome 6C3	2.50	7 (13.7%)	26 (51.0%)	15 (29.4%)	3 (5.9%)
Isolation and Quarantine	Outcome 6D1	3.31	1 (2.0%)	6 (11.8%)	36 (70.6%)	8 (15.7%)
	Outcome 6D2	2.92	2 (3.9%)	15 (29.4%)	32 (62.7%)	2 (3.9%)
	Outcome 6D3	3.00	3 (5.9%)	10 (19.6%)	35 (68.6%)	3 (5.9%)
	Outcome 6D4	2.53	14 (27.5%)	13 (25.5%)	23 (45.1%)	1 (2.0%)
	Outcome 6D5	2.62	5 (9.8%)	26 (51.0%)	18 (35.3%)	2 (3.9%)
	Outcome 6D6	3.06	2 (3.9%)	8 (15.7%)	37 (72.5%)	4 (7.8%)
	Outcome 6D7	3.16	3 (3.9%)	5 (9.8%)	39 (76.5%)	5 (9.8%)
	Outcome 6D8	2.20	12 (23.5%)	31 (60.8%)	8 (15.7%)	-
Mass Prophylaxis Vaccination	Outcome 6E1	2.47	8 (15.7%)	23 (45.1%)	20 (39.2%)	-
	Outcome 6E2	2.46	5 (9.8%)	29 (56.9%)	16 (31.4%)	1 (2.0%)
	Outcome 6E3	2.40	5 (9.8%)	31 (60.8%)	15 (29.4%)	-
Medical and Public Health Surge	Outcome 6F1	2.69	3 (5.9%)	22 (43.1%)	26 (51.0%)	-
	Outcome 6F2	2.74	5 (9.8%)	15 (29.4%)	30 (58.8%)	1 (2.0%)
	Outcome 6F3	2.78	3 (5.9%)	19 (37.3%)	28 (54.9%)	1 (2.0%)
	Outcome 6F4	2.41	9 (17.6%)	24 (47.1%)	17 (33.3%)	1 (2.0%)
	Outcome 6F5	2.60	5 (9.8%)	23 (45.1%)	23 (45.1%)	-
Recover	Outcome 7A1	1.96	21 (41.2%)	24 (47.1%)	6 (11.8%)	-
	Outcome 7A2	2.90	4 (7.8%)	11 (21.6%)	35 (68.6%)	1 (2.0%)
Recover	Goal 8-1	1.87	25 (49.0%)	21 (41.2%)	5 (9.8%)	-
	Goal 8-2	1.89	24 (47.1%)	22 (43.1%)	5 (9.8%)	-
	Goal 8-3	2.67	6 (11.8%)	14 (27.5%)	30 (58.8%)	1 (2.0%)
Improve	Goal 9-1	2.84	5 (9.8%)	11 (21.6%)	30 (58.8%)	5 (9.8%)
	Goal 9-2	2.31	11 (21.6%)	25 (49.0%)	13 (25.5%)	2 (3.9%)
	Goal 9-3	2.07	21 (41.2%)	19 (37.3%)	10 (19.6%)	1 (2.0%)
	Goal 9-4	1.81	28 (54.9%)	19 (37.3%)	3 (5.9%)	1 (2.0%)

Mean scores are based on a 4-point rating scale where 1=minimally prepared, 2=mostly prepared, 3=prepared and 4=well prepared.
Note: The 2005-06 CDC/HRSA Outcomes/Goals and Critical Tasks are described in the Tool in Appendix 4.

Preparedness Differences Relative to County Population-Size Designations

To answer questions about preparedness levels between smaller and larger counties, the data were analyzed by county-size designations described above in Section I.

Since the statistical analysis required independent county-size groups, it first had to be determined if the Contract Counties were significantly different from the population-size county group into which they fell, i.e., the "<200K population-size counties." A multivariate analysis of variance indicated that because the two groups did not differ significantly from each other (Table 12) they could be combined and the analyses of the <200K counties could include the Contract Counties.

Table 12. LHDs' Preparedness Level by Smallest Counties Size Designation

	Contract Counties (*n* = 8)		**<200K Counties** (*excluding* Contract Counties) **(*n* = 18)**	
Outcome/Goal	***M***	***SD***	***M***	***SD***
1A: All Hazards Planning	2.52	.24	2.76	.36
2A: Information Collection & Threat Recognition	2.71	.43	2.87	.42
2B: Hazard & Vulnerability Analysis	2.23	.29	2.51	.37
3A: Laboratory Testing	2.13	.73	2.58	.48
4A: Health Intelligence Integration & Analysis	2.37	.52	2.49	.47
5A: Public Health Epidemiological Investigation	2.30	.35	2.67	.40
6A: Emergency Response Communications	2.74	.49	2.77	.26
6B: Emergency Public Communications	2.71	.35	2.76	.38
6C: Worker Health Safety	2.40	.60	2.48	.45
6D: Isolation & Quarantine	2.46	.33	2.81	.30
6E: Mass Prophylaxis Vaccination	2.52	.41	2.25	.49
6F: Medical & Public Health Surge	2.45	.57	2.48	.47
7A: Economic & Community Recovery	2.41	.19	2.41	.64
Goal 8: Recover	1.92	.35	2.12	.54
Goal 9: Improve	2.05	.38	2.19	.50

Means based on a 4-point rating scale where 1=minimally prepared, 2=mostly prepared, 3=prepared and 4=well prepared.
Note. The multivariate *F* ratio was not statistically significant, $F(15, 10) = 2.63$, $p > .05$.

Analysis of variance for LHD preparedness was performed using the county-size groups of <200K, 200K-1M, and >1M as the between-groups variable, and the 15 Outcomes/Goals as the within-subjects variable. The overall mean scores are shown in Table 13. The interaction effect was not significant (which indicates that the same pattern of differences across the groups held for each of the outcomes) but both main effects were statistically significant.

In comparing the counties of the different sizes to each other, the >1M counties had significantly higher preparedness scores than all of the other groups. No other differences between the groups were found. Because the largest counties represent the greatest percentage of the population and because their scores were higher, California is actually more prepared than it appears from the averaged scores, though there could still be gaps based on threat assessments.

Table 13. LHDs' Preparedness Level by All County Size Designations

Outcome/Goal	<200K Counties (*including* Contract Counties) (*n* = 26)		200K-1M Counties (*n* = 16)		>1M Counties (*n* = 9)	
	M	***SD***	***M***	***SD***	***M***	***SD***
1A: All Hazards Planning	2.69	.34	2.66	.35	3.16	.57
2A: Information Collection & Threat Recognition	2.82	.42	2.89	.38	3.39	.33
2B: Hazard & Vulnerability Analysis	2.43	.37	2.72	.44	3.11	.29
3A: Laboratory Testing	2.44	.59	2.61	.59	3.11	.82
4A: Health Intelligence Integration & Analysis	2.45	.48	2.71	.46	3.19	.39
5A: Public Health Epi Investigation	2.56	.42	2.86	.42	3.13	.32
6A: Emergency Response Communications	2.76	.34	2.96	.40	3.31	.35
6B: Emergency Public Communications	2.74	.36	2.92	.12	3.29	.33
6C: Worker Health Safety	2.46	.49	2.64	.75	3.13	.72
6D: Isolation & Quarantine	2.70	.34	2.90	.36	3.19	.24
6E: Mass Prophylaxis Vaccination	2.33	.47	2.46	.58	2.74	.46
6F: Medical & Public Health Surge	2.47	.49	2.66	.36	3.11	.40
7A: Economic & Community Recovery	2.40	.54	2.47	.63	2.44	.39
Goal 8: Recover	2.06	.49	2.14	.43	2.41	.61
Goal 9: Improve	2.15	.47	2.17	.58	2.74	.75

Mean scores are based on a 4-point rating scale where 1=minimally prepared, 2=mostly prepared, 3=prepared and 4=well prepared.

Note. The between subjects portion of the analysis revealed an overall statistically significant difference between the groups, $F(2, 48) = 16.33$, $p < .05$. The repeated measures portion of the ANOVA showed overall statistical differences between the 15 outcomes, $F(8.12, 389.60) = 15.27$, $p < .05$ using the Greenhouse-Geisser correction for sphericity.

Preparedness Relative to the Strategic National Stockpile (SNS)

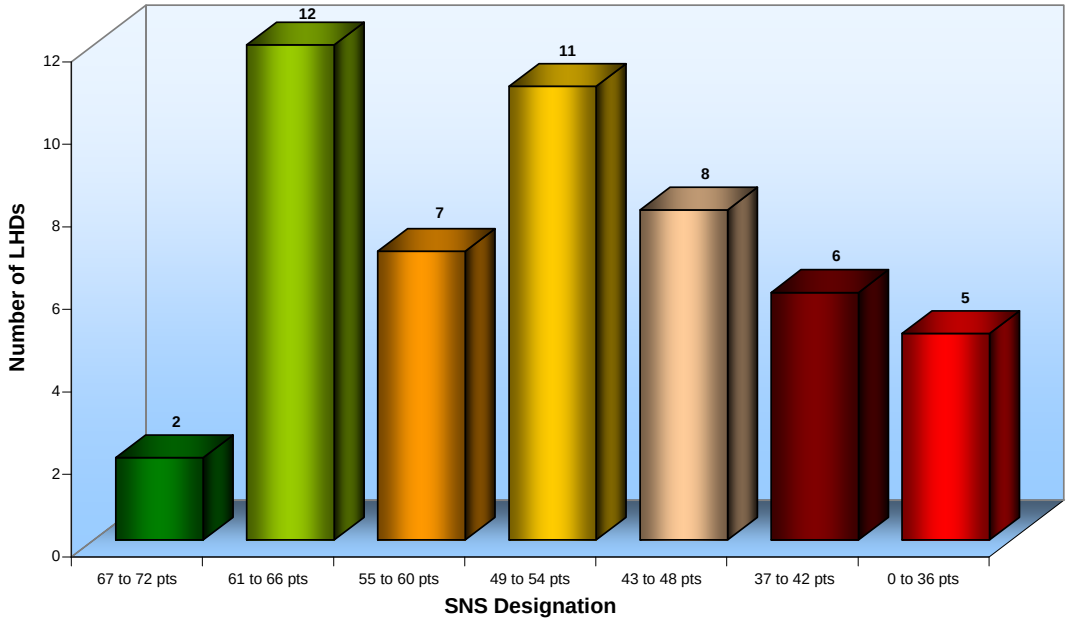
Scores from the CDC Strategic National Stockpile (SNS) Assessment Tool for LHDs, incorporated as part of the California Public Health Emergency Preparedness assessment at the request of CDHS, ranged from a low of 11 to a high of 69 out of 72 points possible.[8] With a mean of 50.7 points, the 51 analyzed LHDs have completed on average 70% of SNS readiness planning based on the CDC Tool. This average score equates to a CDC SNS planning readiness designation color of Amber (68% - 75%) on the CDC color rubric (see page 20 for a description). A one-way analysis of variance analyzing differences based on the county-size groups indicated that the groups did not differ significantly from one other (Table 14). Figure 3 displays the distribution of scores of all of the assessed LHDs by SNS point designation. SNS planning readiness must be distinguished from operational readiness, however, and a number of important SNS operational issues and concerns are described in the next section of this report.

Table 14. LHD SNS Average Scores (N=51)

County Size Designation	*n*	SNS *M*	*SD*
Contract Counties	8	52.11	17.88
<200K Counties (includes the Contract Counties)	26	49.95	13.71
200K-1M Counties	16	49.18	12.62
>1M Counties	9	55.71	7.41
All Counties	51	50.73	12.50

[8] CDC assessed 4 California LHDs in 2006 using the same assessment instrument as was used in this assessment and gave lower scores than the results of this assessment.

Figure 3. Distribution of LHDs by SNS Designation (N=51)
(CDC SNS Assessment Tool)



VI. CDC/HRSA Performance Area-Specific Strengths and Areas Needing Improvement

"There's a public health role in every emergency"—Local health official, Southern California

This section of the report supplements the quantitative findings from Section V with the more qualitative findings, and highlights the strengths and gaps relative to the 15 performance area Outcomes and Goals. The average score for each of the 15 areas is shown at the beginning of each area's findings. While some of the performance areas are relatively stronger than others, as evidenced by their significantly higher assessment scores, some level of improvement in meeting the requirements was shown in all areas of the Critical Tasks.

There are some obvious redundancies in the summary bullet points, but this was intentional to parallel the format of the CDC/HRSA Guidance. It will also be noticed that in some cases one element of a task is noted as a strength and another element as an area in need of improvement. This exemplifies the multifaceted nature of the issues and the relativity of strengths and weaknesses.

The findings have implications for both CDHS and LHD emergency preparedness program improvements, and suggestions for improvement for LHDs and CDHS related to these findings have been made in Appendix 1 in the report.

Outcome 1A: All Hazards Planning

The LHD will put into place emergency response plans, policies and procedures that identify, prioritize, and address all hazards across all functions. All plans are coordinated at all levels of government and address the mitigation of secondary and cascading emergencies.

CDC/HRSA Performance Area	Mean	Median	*SD*	Range	Average Minimum	Average Maximum
1A: All Hazards Planning	2.76	2.75	.43	1.75	2.083	3.833

CDC Required Critical Task 1: Support incident response operations according to all hazards plan.

Strengths:

- County Emergency Operations Plans (EOPs) in California have been developed using an all hazards approach. Many EOPs have been updated or are being updated since 2001 and contain all of the recommended components, including specific mention of biological, chemical and radiological terrorism, and specific annexes addressing public health emergencies such as pandemic influenza and other communicable disease outbreaks.
- LHDs have gained familiarity with their county's EOP. The EOPs provide for Departmental Operations Centers (DOC), and most LHDs have made provisions to provide for a DOC within the LHD.
- LHDs have increased their awareness of the Emergency Operations Center (EOC), its functions and the LHD role in the EOC if it is activated in an emergency.
- LHDs have developed a LHD-specific Emergency Response Plan for guiding its response to emergencies.
- All LHDs have knowledge of and are trained in the SEMS/NIMS model of emergency management, structure and function.
- LHD leadership staff has had some level of Incident Command (IC) training.
- LHDs understand the responsibilities and structure of the local Office of Emergency Services (OES) and have worked with OES staff. Additionally, most LHDs have included a comprehensive

team of local response partners in emergency response planning including OES, EMS, EH, law enforcement, fire and Native American tribal entities.

- Many LHDs have provided Disaster Service Worker (DSW) training, generally in the form of the video produced by Region II delineating DSW responsibilities; this provides the basics for LHD employee understanding of DSW responsibilities. DSW identification cards containing specific instructions and contact information for response during an emergency are available in an increasing number of LHDs.

Areas Needing Improvement:

- The assessed LHDs could benefit from further training in the SEMS/NIMS model of emergency management, structure and function, as this model is intended to standardize response to emergencies involving multiple jurisdictions or multiple agencies.

- LHDs could benefit from expanding higher level IC training to more staff than predominantly those in leadership positions.

- Not all of the LHDs have completed the IS 700 training and should do so as soon as possible.

- DSW identification cards containing specific instructions and contact information for response during an emergency should be considered for adoption in all LHDs.

- Local Health Officers do not have statewide authority to declare local health emergencies within their jurisdictions. Policy and practice changes should be made that give this authority and written statements should document in the EOPs assurance of such authority.[9]

- In counties or cities where ports exist, the LHDs should be working more closely with the local Port Authorities.

CDC Required Critical Task 2: Improve regional, jurisdictional and State all hazard plans (including those related to pandemic influenza) to support response operations in accordance with NIMS and the National Response Plan. (a) Increase participation in jurisdiction-wide self-assessment using the National Incident Management System Compliance Assessment Support Tool (NIMCAST); (b) Agency's Emergency Operations Center meets NIMS incident command structure requirements to perform core functions: coordination, communications, resource dispatch and tracking and information collection, analysis and dissemination.

Strengths:

- LHDs have completed or soon plan to complete the National Incident Management System Compliance Assessment Support Tool (NIMCAST) to guide LHD needs.

- In general, County EOCs meet NIMS incident command structure requirements to be able to perform the core functions of coordination, communications, resource dispatch and tracking and information collection, analysis and dissemination.

- LHDs have documented the time to contact sufficient employees to staff the DOC to be less than the target of 60 minutes. Depending on the event and physical infrastructure and traffic issues, many LHDs have demonstrated through real event or exercise the ability to have sufficient "first wave" staff in the DOC within the target of 90 minutes.

[9] During most of the assessment period Local Local Health Officers did not have authority to declare an emergency except if granted by the Board of Supervisors. On January 1, 2007, SB 1430 gave them that authority.

- LHDs have either submitted to CDHS a Pandemic Influenza Plan or are revising a Plan based on federal and state guidelines.

- Many LHDs have become involved in the planning efforts for Cities Readiness Initiatives (CRI), BioWatch programs, Department of Homeland Security Urban Area Security Initiative (UASI) planning and assessment activities, or Biohazard Detection Systems (BDS).

Areas Needing Improvement:

- Very few LHDs have exercised activating a fully functional operational area in order to assess and document the ability to activate within the 3-hour target. Consequently, there is concern about LHDs' ability to respond fully to a major event within the established timeframe.

- While Native American tribal entities have become involved in emergency planning and response efforts in some counties to some extent, this is one planning partner entity with whom many LHDs need to work more closely.

- LHDs need to review the results of the National Incident Management System Compliance Assessment Support Tool (NIMCAST) and then develop a plan to address deficiencies noted in the assessment. Not all LHD have written departmental Emergency Response plans that are totally compliant with NIMS incident command structure requirements. In order to be fully compliant, some LHDs still need to convert "SEMS language" to "NIMS language" and add some components of the EOC to fully meet NIMS incident command structure requirements to perform the core functions of coordination, communications, resource dispatch, tracking and information collection, and analysis and dissemination.

- Although there is generally a working relationship with respect to communicable disease follow-up between staff at the local levels, there is a need to better involve the state leaderships of California, Nevada, Oregon, and Arizona and the Mexican government in emergency planning efforts.

- Local Pandemic Influenza Plans in general need more work and have suffered from lack of clear direction from both the federal and state guidance.

CDC Required Critical Task 3: Increase the number of public health responders who are protected through Personal Protective Equipment (PPE), vaccination or prophylaxis. a) Have or have access to a system that maintains and tracks vaccination or prophylaxis status of public health responders in compliance with Public Health Information Network (PHIN) Preparedness Functional Area Countermeasure and Response Administration.

Strengths:

- Most LHDs have developed written policies for personal protective equipment (PPE). Many LHDs have completed extensive training and fit testing, especially for N-95 respirators.

- Some LHDs have developed systems that appear to be able to maintain and track vaccination or prophylaxis status of public health responders in compliance with Public Health Information Network (PHIN) Preparedness Functional Area Countermeasure and Response Administration requirements.

Areas Needing Improvement:

- Written PPE policies have not been developed in all LHDs. Additionally, many LHDs are yet to complete training and fit testing for PPE to protect LHD first responders.

- Not all of the LHDs with systems that are generally consistent with PHIN standards have databases or plans to develop databases that would be robust enough to maintain and track vaccination or prophylaxis status of public health responders at the level of PHIN compliance requirements. Access to a single statewide system that maintains and tracks vaccination or prophylaxis status of public health responders that is fully compliant with PHIN Preparedness Functional Area Countermeasure and Response Administration requirements would be advantageous but has not been developed.

CDC Required Critical Task 4: Increase and improve mutual aid agreements, as needed, to support NIMS-compliant public health response.

Strengths:

- LHDs have agreed to use the State Master Mutual Aid Agreement and work through the SEMS/NIMS system to request medical mutual aid. Some LHDs have developed other written agreements to assure cooperative relationships among partners during emergency events. LHD leaders understand the master mutual aid system and how to request aid for this purpose.

Areas Needing Improvement:

- Not all LHDs have developed written agreements with partner entities, such as law enforcement and Native American tribes, to assure coordinated response activities during emergency events. Establishing such assurance in advance is important in the event of an entire region being affected and the mutual aid system becoming overwhelmed.

CDC Required Critical Task 5: Increase all hazard incident management capability by conducting regional, jurisdictional and State training to: a) Include the Emergency Management Independent Study Program, IS 700, "National Incident Management System: An Introduction" in the training plan for all staff expected to report for duty following activation of the public health emergency response plan and/or staff who have emergency response roles documented in their job descriptions.

Strengths:

- All LHDs have identified LHD first responders and have made available appropriate training and exercises.

- Professional staff in LHDs have either completed or initiated a plan to complete the Emergency Management Independent Study Program, IS 700, "National Incident Management System: An Introduction."

- LHD leaders recognize the value of the SEMS model of emergency crisis management and have completed a great deal of SEMS/NIMS training. All professionals have at least a basic understanding of SEMS all hazard incident management and some level of SEMS training; the LHD leadership has knowledge of incident command responsibilities and has had some level of training.

- Partnering with OES has added much value to the LHD roles and responsibilities for emergency response to public health emergencies.

- Registered Environmental Health Specialists (REHS) in some jurisdictions provide a valuable resource for training related to chemical and radiological hazards.

Areas Needing Improvement:

- Many of the LHDs have yet to follow through with their plans to participate in the NIMCAST self assessment.

- While many LHDs have made Category A agent training available to all staff and some LHDs have made chemical and radiological hazards training available, there are still unmet training needs in the specific areas of chemical and radiological hazards response.

- REHS staff in many counties are not fully engaged in SEMS, IC, Category A agent, chemical and radiological hazard and epidemiological investigation training. These staff members are not invited in some jurisdictions and in others do not come to planning meetings. In some cases their roles and responsibilities vis-à-vis Public Health staff is unclear.

- In general, PHNs working in Communicable Disease Control have attended much more training in the all hazards response areas—including SEMS, IC, Category A agent, chemical and radiological hazards, and epidemiological investigation training—than PHNs in other LHD program areas such as Maternal Child Health and Family Health. For PHNs in these non-CD to be fully prepared to support the LHD mission during an emergency, they will need more training in these areas of preparedness. A CDC memo dated June 2, 2006 and sent to "Local Government Public Health Partners who receive CDC Categorical and Cooperative Agreement Funds" entitled *Supporting and Funding Emergency Preparedness and Response Activities* forwarded by CDHS on August 13, 2006 clarifies CDC's position regarding non-preparedness staff participating in preparedness activities. Staff (PHNs and others) whose positions are supported by CDC non-preparedness categorical grant funds can use up to 5% of their time to receive preparedness training or participate in emergency response exercises.

- All LHD staff, not just professional level staff, needs to complete the basic training Emergency Management Independent Study Program, IS 700, "National Incident Management System: An Introduction."

CDC Required Critical Task 6: Provide support for continuity of public health operations at regional, State, tribal, local government, and agency level.

Strengths:

- All LHDs are aware of the responsibility to provide for continuity of public health operations at regional, state, tribal, local government, and agency level.

- Many LHDs have either practical experience or have discussed how staff would be redeployed in a public health emergency and continue to provide minimum essential public health services, in which the LHD has sole responsibility, without jeopardizing the public's health.

Areas Needing Improvement:

- Few LHDs have developed a specific written plan that would clearly delineate the actions to be taken to provide for continuity of public health operations during an emergency. For the most part, these plans are not detailed in writing or formalized policies but "spur of the moment" intentions or decisions which need to be better thought out, fully developed and documented. Moreover, few LHDs have developed a plan for redeployment of staff to other emergency operation roles, particularly those based on the most- expected emergencies identified in the jurisdiction's all hazard mitigation plans.

Outcome 2A: Information Collection and Threat Recognition

Locally generated public health threat and other terrorism-related information is collected, identified, provided to appropriate analysis centers, and acted upon as appropriate.

CDC/HRSA Performance Area	Mean	Median	*SD*	Range	Average Minimum	Average Maximum
2A: Information Collection & Threat Recognition	2.94*	3.00	.44	1.83	2.000	3.833

CDC Required Critical Task 1: Increase the use of disease surveillance and early event detection systems. (a) Select conditions that require immediate reporting to the public health agency (at a minimum, Cat. A agents); (b) Develop and maintain systems to receive disease reports 24/7/365; (c) Have or have access to electronic applications in compliance with PHIN Preparedness Functional Area "Early Event Detection" to support (i) receipt of case or suspect case disease reports 24/7/365; (ii) reportable diseases surveillance; (iii) call triage of urgent reports to knowledgeable public health professionals; (iv) receipt of secondary use health-related data and monitoring of aberrations to normal data patterns; d) Develop and maintain protocols for the utilization of early event detection devices located in the community (e.g., BioWatch); e) Assess timeliness and completeness of disease surveillance systems annually.

Strengths:

- LHDs have distributed Category A agent and rash illness diagnostic and reporting information to local hospital emergency departments to enhance passive surveillance.
- After-hours emergency disease reporting systems are in place to ensure 24/7/365 reporting for early event detection.

Areas Needing Improvement:

- While providers have been informed of cite and fine laws and sanctions for non-compliance in reporting of required diseases, cite and fine laws rarely have been implemented by LHDs. In some cases, LHDs have to rely on laboratories to report diseases mandated for physician reporting. Many LHDs need to conduct formal assessment of disease reporting compliance, timeliness and completeness to help ensure provider reporting compliance.

- Many LHDs have done no formal evaluation of the timeliness of response to after-hours calls of disease reporting.

- All LHD staff that would be used in disease investigation needs further training in basic epidemiology.

- The management of disease data and trend analysis is performed manually in many jurisdictions sometimes resulting in inaccurate, inadequate and untimely data analysis.

CDC Required Critical Task 2: Increase sharing of health and intelligence information within and between regions and states with federal, local and tribal agencies. (a) Improve information sharing on suspected or confirmed cases of immediately notifiable conditions, including foodborne illness, among public health epidemiologists, clinicians, laboratory personnel, environmental health specialists, public health nurses, and staff of food safety programs. (b) Maintain secret and/or top secret security clearance for local health officials, preparedness directors, and preparedness coordinators to ensure access to sensitive information about the nature of health threats and intelligence information.

Strengths:

- CAHAN is increasingly being used by LHDs.

- Regional epidemiology programs provide regional disease surveillance to small LHDs—but this resource may become quickly overwhelmed in a large event.

- More LHDs now report they have systems and protocols in place for security of their buildings.

- EH and CD Control program staff are effectively collaborating on foodborne illness investigations, especially when the two programs are located within the LHD.

Areas Needing Improvement:

- CAHAN, which LHDs initially found difficult to navigate, or a similar regional alerting system is not being used to its full extent and should be applied by many more jurisdictions. Many LHDs do not use CAHAN as an alerting device to their department's first responders.

- In many jurisdictions, LHD disease incidence/trend information is not being shared with surrounding jurisdictions for regional surveillance purposes. In some LHDs in counties with significant tourism, systems are inadequate for surveillance of communicable disease outbreak when victims return to their own jurisdictions. Some LHDs are awaiting the roll-out of Web CMR, an electronic reporting system being worked on jointly by CDHS and LHDs, for the ability to share health and intelligence information, while other LHDs have moved forward in developing their own systems.

- Not all disease report-receiving systems (e.g., fax machines) provide security and confidentiality. FBI security clearances, which are needed for key local health officials and preparedness coordinators, have not been obtained in some LHDs. While there is an increased understanding of the need for building security, which some LHDs have acquired, not all LHDs have implemented this safety measure.

- Regional disease exchange forums have great value for LHD disease investigation and epidemiology staff, but participation is hampered by the need for some LHD staff to travel great distances or when weather conditions such as impassable mountain roads make it a challenge to attend.

- EH food programs and CD Control do not follow the same foodborne investigation procedures in some LHDs. Roles and responsibilities are not always clearly defined. There is a need for designation of a local lead (CD Control or EH) for these investigations and cooperation by both departments.

- Some LHDs do not utilize a formal statistical data analysis system to determine the food vehicle or etiologic agent of a foodborne illness outbreak. State public health officials are not always immediately notified when an outbreak is suspected. Immediate reporting of suspected foodborne illness outbreaks by LHDs would clearly aid regional and statewide surveillance of foodborne illness outbreaks.

- Access to Public Health Laboratory-generated test data for information sharing is limited due to inadequacies in the laboratory information systems (LIS) in some LHDs. For example, some epidemiologist staff are not allowed direct access to laboratory data.

CDC Required Critical Task 3: Decrease the time needed to disseminate timely and accurate national strategic and health threat intelligence. (a) Maintain continuous participation in CDC's Epidemic Information Exchange Program (Epi-X); b) Participate in the Electronic Foodborne Outbreak Reporting System (EFORS) by entering reports of foodborne outbreak investigations and monitor the quality, completeness or reports and time from onset of illnesses to report entry; c) Perform real-time subtyping of PulseNet tracked foodborne disease agents; submit the subtyping data and associated critical information (isolate identification, source of isolate, phenotype characteristics of the isolate, serotype, etc.) electronically to the national PulseNet database within 72 to 96 hours of receiving the isolate in the lab. D) Have or have access to a system for 24/7/365 notification/alerting of the public health emergency response system that can reach at least 90% of key stakeholders and is compliant with PHIN Preparedness Functional Area "Partner Communications and Alerting."

Strengths:

- There is increasingly wide use of Epi-X for regional surveillance.

- LHD participation in EFORS, by submission of CDC's EFORS outbreak investigation report form to the State, has increased.

- LHDs are participating in PulseNet through the use of local Public Health Laboratories submitting isolates to the State.

Areas Needing Improvement:

- Back-up Epi-X access is not provided in some jurisdictions which could jeopardize continuous participation in a program to disseminate national strategic and health threat intelligence.

- Most LHDs have not evaluated for timeliness and response capacity their system for 24/7/365 notification/alerting of at least 90% of the public health emergency response team and key stakeholders.

Outcome 2B: Hazard and Vulnerability Analysis

Jurisdiction-specific hazards are identified and assessed to enable appropriate protection, prevention and mitigation strategies so that the consequences of an incident are minimized.

CDC/HRSA Performance Area	Mean	Median	*SD*	Range	Average Minimum	Average Maximum
2B: Hazard & Vulnerability Analysis	2.64	2.63	.45	1.88	1.750	3.625

CDC Required Critical Task 1: Prioritize the hazards identified in the jurisdiction hazard/vulnerability assessment for potential impact on human health with special consideration for lethality of agents and large population exposures within 60 days of cooperative agreement award.

Strengths:

- Many LHDs have participated in the Homeland Security Credible Threat Analysis vulnerability assessments.
- A high percentage of LHDs are utilizing the chemical inventory data that are being maintained by local Certified Unified Program Agencies (CUPAs). CUPAs maintain extensive facility and chemical inventory data under the authority of the Hazardous Materials Management Program (HMMP) and the California Accidental Release Program (CalARP).

Areas Needing Improvement:

- Most jurisdictions have not conducted assessments of potential biological human health hazard sources.
- Hazard/vulnerability assessments prepared outside of the LHD often lack public health and human health focus. Many of the assessments lack details of potential terrorist targets and/or assessment of the potential for a large communicable disease event such as a pandemic. In general, the impact of threats on the basis of the size of the population impacted and the lethality of the hazard has not been assessed locally. A number of the local jurisdiction vulnerability assessments date back to 2002 and 2003, with some pre-dating 2001.
- More work needs to be accomplished between LHDs and all Port Authorities regarding vulnerability assessments in the areas of chemical, radiological and biological hazards.
- Locations for Strategic National Stockpile (SNS) Point of Distribution (PODs) sites are frequently not assessed from an all-hazards risk perspective.

CDC Required Critical Task 2: Decrease the time to intervention by the identification and determination of potential hazards and threats, including quality of mapping, modeling and forecasting.

Strengths:

- A growing number of LHDs are using Geographic Information Systems (GIS) and Global Positioning Systems (GPS) for mapping and modeling identified hazards and threats.

- LHDs are utilizing data in the California Accidental Release Program (CalARP) that requires risk assessment and modeling information be provided to CUPAs by facilities storing threshold quantities of acutely hazardous materials.

- HazMat Teams supporting LHDs are employing a variety of computer application software that is used for plume monitoring, modeling and tracking. Common examples include: CAMEO (Computer Aided Management of Emergency Operations); ALOHA (Aerial Locations of Hazardous Atmospheres); and MARPLOT (Mapping Application for Response Planning and Local Operational Tasks).

- While most threat and vulnerability assessments are conducted by public agencies, a number of LHDs are enlisting private sector participation, such as the Chamber of Commerce, in the threat assessment process.

- LHDs are collaborating with partner agencies with specialized expertise and equipment associated with air and water plume monitoring and modeling. These agencies include Air Districts, Regional Water Quality Control Boards, Agricultural Commissioners, the California Department of Forestry, CalTrans and the California Integrated Waste Management Board.

Areas Needing Improvement:

- LHDs that do not have EH programs integrated within their department frequently lack their own internal resources for performing hazard analysis and forecasting and may not have timely access to the EH staff who perform these functions.

- A number of LHDs have not been able to incorporate public health resources or areas of concern into countywide geographic information systems (GIS). Smaller and some medium-sized LHDs lack the resources to develop their own comprehensive GIS systems.

- The Department of Homeland Security BioWatch program (a CDC-led initiative of environmental sampling, monitoring biological pathogens) is currently operational in a limited but growing number of urban areas. Some LHDs indicate they have not had an opportunity to be active participants in the early planning and deployment of the monitoring programs, and this decreases their efficiency and efficacy as a response partner.

CDC Required Critical Task 3: Decrease human health threats associated with identified community risks and vulnerabilities (i.e., chemical plants, hazardous waste plants, retail establishments with chemical/pesticide supplies.)

Strengths:

- For a hazardous chemical release or other health threat, CAHAN is a widely-used method to alert public health and environmental health officials. LHDs have become active participants in the communication networks established by the multiple fire service entities in each jurisdiction.

- A growing number of jurisdictions have implemented or have plans to implement 'Reverse 911' systems countywide.

- Nearly all LHDs are utilizing the CUPA HMMP and CalARP facility inventory and contact information to facilitate communication for the prevention and mitigation of hazardous materials releases. A number of LHDs and CUPAs have encouraged and advised HazMat storage facilities to consider less hazardous alternatives. An example would be suggesting the use of liquid chlorine disinfection as an alternative to gaseous chlorine.

Areas Needing Improvement:

- LHDs are using risk assessments but mostly in an informal and inconsistent manner; there has been limited use of professionally-recognized risk assessment instruments.

- Direct rapid after-hours alert systems that allow the LHD to alert the public and medical and other practitioners are not yet in place for a number of LHDs.

- Very few LHDs have staff formally "on call" after hours. This is partially due to the expense of having to pay personnel for this level of 24/7/365 availability.

- While hazard source contact information is maintained within the jurisdiction, it is not always readily available to LHD officials in many jurisdictions.

CDC Required Critical Task 4: Through partners increase the capability to monitor movement of releases and formulate public health response and interventions based on dispersion and characteristics over time.

Strengths:

- A high percentage of LHDs have access to local or regional HazMat teams and/or HazMat mobile vans providing the ability to identify and track dispersed agents.

- CalTrans has the responsibility and works closely with local jurisdictions to handle hazardous materials spills that occur on state highways.

- A number of coastal LHDs have accessed NOAA (National Ocean and Atmospheric Agency) resources for Tsunami alerts and air plume modeling assistance.

- LHDs have established access to the specialized expertise available from nearby universities or national laboratories. Examples include the University of California, Lawrence Livermore Laboratory and Sandia National Laboratory.

Areas Needing Improvement:

- Very few LHDs have formalized agreements (MOUs, MOAs) ensuring partner availability and resource sharing. The smallest jurisdictions—which usually do not have a local HazMat team—must depend on outside resources that may take several hours to arrive, depending on road conditions.

- Many LHDs have experienced limited success in engaging local tribal entities in disaster planning and exercises. In about half of the cases the tribes have only partially participated when invited; in other cases the LHDs have not made adequate efforts to increase engagement of the tribes.

- Significant technical as well as CD expertise regarding biological hazards exists within the Public Health Laboratory; however, LHDs need to more fully engage these professionals during program planning efforts and emergency situations.

Outcome 3A: Laboratory Testing

Potential exposure and disease will be identified rapidly, reported to multiple locations immediately, and accurately confirmed to ensure appropriate preventive or curative countermeasures are implemented. Additionally, public health laboratory testing is coordinated with law enforcement and other appropriate agencies.

CDC/HRSA Performance Area	Mean	Median	*SD*	Range	Average Minimum	Average Maximum
3A: Laboratory Testing	2.61	2.50	.67	3.00	1.000	4.000

CDC Required Critical Task 1: Increase and maintain relevant laboratory support for identification of biological, chemical, radiological and nuclear agents in clinical (human and animal), environmental, and food specimens. a) Develop and maintain a database of all sentinel (biological)/Level Three (chemical) labs in the jurisdiction using the CDC-endorsed definition that includes: • Name • contact information• BioSafety Level • whether they are a health alert network partner • certification status • capability to rule-out Category A and B bioterrorism agents per State developed proficiency testing or College of American Pathologists (CAP) bioterrorism module proficiency testing • names and contact information for in-State and out-of-State reference labs used by each of the jurisdiction's sentinel/Level Three labs; b) Test the competency of a chemical terrorism laboratory coordinator and bioterrorism laboratory coordinator to advise on proper collection, packaging, labeling, shipping, and chain of custody of blood, urine and other clinical specimens; c) Test the ability of sentinel/Level Three labs to send specimens to a confirmatory Laboratory Response Network (LRN) laboratory on nights, weekends, and holidays; d) Package, label, ship, coordinate routing, and maintain chain-of-custody of clinical, environmental, and food specimens/samples to laboratories that can test for agents used in biological, chemical, and radiological terrorism; e) Continue to develop or enhance operational plans and procedures that include: • specimen/samples transport and handling • worker safety • appropriate Biosafety Level (BSL) working conditions for each threat agent • staffing and training of personnel • quality control and assurance • adherence to laboratory methods and procedures • proficiency testing to include routine practicing of LRN validated assays as well as participation in the LRN's proficiency testing program electronically through the LRN website • threat assessment in collaboration with local law enforcement and Federal Bureau of Investigations (FBI) to include screening for radiological, explosive and chemical risk of samples • intake and testing prioritization • secure storage of critical agents • appropriate levels of supplies and equipment needed to respond to bioterrorism events with a strong emphasis on surge capacities needed to effectively respond to a bioterrorism incident;. f) Ensure the availability of at least one operational Biosafety Level Three (BSL-3) facility in your jurisdiction for testing for biological agents. If not immediately possible, BSL-3 practices, as outlined in the CDC-NIH publication "Biosafety in Microbiological and Biomedical Laboratories, 4th Edition" (BMBL), should be used (see www.cdc.gov/od/ohs) or formal arrangements ((i.e., Memorandum of Understanding (MOU)) should be established with a neighboring jurisdiction to

provide this capacity; g) Ensure that laboratory registration, operations, safety, and security are consistent with both the minimum requirements set forth in Select Agent Regulation (42CFR 73) and the US Patriot Act of 2001 (P.L. 107-56) and subsequent updates; h) Ensure at least one public health laboratory in your jurisdiction has the appropriate instrumentation and appropriately trained staff to perform CDC developed and validated real-time rapid assays for nucleic acid amplification (Polymerase Chain Reaction, PCR) and antigen detection (Time-Resolved Fluorescence, TRF); i) Ensure the capacity for LRN-validated testing and reporting of Variola major, Vaccinia and Varicella viruses in human and environmental samples either in the public health laboratory or through agreements with other LRN laboratories.

Strengths:

- A quality laboratory system exists in local public health laboratories (PHL) in California. All laboratories that were assessed maintained current CLIA certification for human testing and passed the latest semi-annual CLIA/State inspection. A subset also maintains State Environmental Laboratory Accreditation Program (ELAP) certification for environmental testing and State approval for dairy foods testing.

- All local PHLs that participated in the College of American Pathologists LPS (bioterrorism) Proficiency Testing program have successfully passed the peer-based proficiency program.

- The fully-functioning LRN reference local PHLs have impressive capabilities to rapidly test for agents of bioterrorism utilizing CDC-provided LRN procedures and testing reagents. This provides California with robust bioterrorism testing capability that was not in existence in 2001.

- Three local PHLs are members of the CDC Pulse Net system for detecting food borne outbreaks and were able to respond to the 2006 *E. coli* O157:H7 food borne outbreak. While this is positive, overall food testing capability at the local level is still limited.

- Local LRN reference PHLs have worked in conjunction with the U.S. Postal Service (USPS) to put systems in place that allow the rapid confirmation of positive BDS (biological detection system) signals for anthrax contamination of mail.

- Local PHLs have at least basic capability of responding 24/7/365 for emergencies.

Areas Needing Improvement:

- In many LHDs the laboratory facility is more than 40 years old. These facilities may not meet current building codes or seismic standards, or have sufficient space or meet CDC safety guidelines for working with infectious agents. These situations compromise the ability of the jurisdiction to respond adequately to many public health issues including emergency preparedness and response. Many of the local LRN laboratories have a substandard BSL-3 laboratory (biosafety level 3 laboratory required to safely work with certain bioterrorism agents). This severely limits the ability for these first-line defense laboratories to implement required testing and respond to surge capacity testing needs and endangers laboratory personnel.

- HRSA Critical Benchmark 4-1 requires hospital laboratory personnel to have knowledge of screening specimens for potential bioterrorism agents and rapidly referring these specimens to LRN reference laboratories. This benchmark has been partially achieved. The level of knowledge in hospital laboratories has increased in the last 3 years, and most hospital laboratories have received at least some training and can package and forward biological or chemical specimens suspected of containing WMD agents. Optimal results for this benchmark

have been difficult to achieve in some areas due to the high number of hospitals that must be included, coordination and time required by both the reference LRN and sentinel PHLs, lack of funding and guidance for sentinel laboratories and the lack of time of hospital laboratory personnel to attend training sessions.

- While a geographically distributed network of local LRN reference laboratories exists to ensure bioterrorism testing is available statewide, and progress has been made in building out the LRN from 4 LRN Reference PHLs in 2001 to 14 today, it is apparent that up to 6 more LRN Reference PHLs are needed to place these laboratories in closer proximity to large population bases. In 1998, prior to the events of 2001 and due to limited resources, the State originally chose, as recommended by CDC, to establish LRN Reference laboratories based on a 1-hour time transit time to an LRN Reference laboratory from any nearby LHD. This has led to distribution of the Reference PHLs being independent of the population of the state, resulting in a situation where 3 of the largest 10 counties in the state do not have LRN reference PHL capability within their jurisdictions.

- Challenges for laboratories rated as partially prepared by this assessment include lack of sufficiently-trained personnel or appropriate BSL-3 containment laboratories to meet the requirements.

- Many laboratories have vacant public health microbiologist positions impacting their capability to perform testing. It is known that this problem will become worse as the older generation of microbiologists retires in the next 5 years. Sufficient public health microbiologists are not being trained at this time to replace current or future anticipated vacancies.

- One third of local PHLs now have only part-time laboratory directors. This is due to an insufficient number of individuals available who meet both State and CLIA standards. This situation is expected to worsen in the short term. Under state and federal law, the public health laboratory director, even one who is part time, is fully responsible for the quality of laboratory testing and any errors that occur. Effectively operating a public health laboratory with a part-time laboratory director requires a dedicated laboratory manager position and other quality and management measures to ensure that the quality of testing and emergency preparedness is not eroded.

- LHDs perceive that the CDHS planning and coordination of the LRN program is not sufficiently inclusive or communicative. This has led to frustration at the local level, lack of coordination in addressing major issues and confusion in preparing grant applications. No meetings are held with LRN reference or sentinel laboratories for coordinating activities, receiving updates of grant requirements, explaining program requirements or discussing technical testing matters. No local laboratory input is accepted into the State plan.

- CDC training for LRN tests is very limited. In addition, no laboratory training for LRN bioterrorism tests is available at the State laboratory. This prolongs the time necessary for local LRN reference laboratories to develop testing.

- Due to financial and administrative challenges, some local PHLs, including reference PHLs and a laboratory serving a population of over 1 million, are facing downsizing or elimination. Reduced capability at the local laboratory level will result in a lack of preparedness to address future bioterrorism and infectious disease emergencies.

CDC Required Critical Task 2: Increase the exchange of laboratory testing orders and results a) Monitor compliance with public health agency (or public health agency lab) policy on timeliness of reporting results from confirmatory LRN lab back to sending sentinel/Level Three lab (i.e., feedback and linking of results to relevant public health data) with a copy to CDC as appropriate b) Comply with PHIN Preparedness Functional Areas Connecting Laboratory Systems and Outbreak Management to enable: a) the linkage of laboratory orders and results from sentinel/Level Three and confirmatory LRN labs to relevant public health (epi) data and b) maintenance of chain of custody.

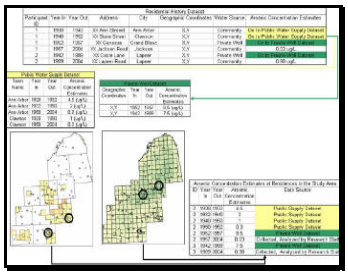
Strengths:

- Almost every county and city laboratory assessed operates a functioning LIS (Laboratory Information System). Many of these systems are being updated at this time. Almost all have the capability of being able to transmit test reports electronically.

- The LRN reference laboratories have implemented the required CDC *Results Messenger Version 2* software for electronic transmission of results to CDC.

Areas Needing Improvement:

- The State project to develop electronic laboratory reporting (ELR) has not produced a viable system. The administration and coordination of the project is not inclusive and does not include the end users (laboratories). Several counties have moved ahead and have local systems in place now. According to many LHDs, the State project should be halted at this time and a complete re-evaluation performed to determine how to move forward with the inclusion of county systems already in operation.



Outcome 4A: Health Intelligence Integration and Analysis

To produce timely, accurate, and actionable health intelligence or information in support of prevention, awareness, deterrence, response, and continuity planning operations.

CDC/HRSA Performance Area	Mean	Median	*SD*	Range	Average Minimum	Average Maximum
4A: Health Intelligence Integration & Analysis	2.66	2.58	.53	2.00	1.667	3.667

CDC Required Critical Task 1: Increase source and scope of health information.

Strengths:

- Active surveillance activities are in place in many LHDs; these include monitoring school-based absenteeism and pharmaceutical sales. There is also enhanced surveillance for rash illness and Category A agent diseases in local hospital emergency departments.
- Regional epidemiology programs are enhancing surveillance, especially in the smaller jurisdictions.
- BioWatch Advisory Committees are generally well-attended.

Areas Needing Improvement:

- Relatively few LHDs employ some sort of formal syndromic, i.e., hospital- or clinic-based, surveillance.
- The source and scope of health information relative to intelligence integration needs to be increased; for instance more BioWatch and BDS drills are needed.
- Electronic laboratory reporting is not in place, and few jurisdictions employ laboratory-based surveillance.

CDC Required Critical Task 2: Increase speed of evaluating, integrating, analyzing for, and interpreting health data to detect aberrations in normal data patterns.

Strengths:

- CD Control staff are aware of the importance of increased passive and active disease surveillance, and annual disease incidence reports are generally developed.

Areas Needing Improvement:

- GIS capacity, when available, is not commonly used as a disease surveillance and control tool.

- While disease incidence reports are developed, trend analysis is not routinely done in most LHDs, primarily because of inadequate staff capacity and lack of electronic data management systems. There is also a lack of sufficient staff training in the fundamentals of data analysis methods.

- Disease incidence and trend data are not frequently shared with surrounding LHDs or generally shared with the private medical community as an aid to regional and local surveillance, respectively. Reports are not developed for primary reporters showing comparison of their data with aggregated reporting data.

CDC Required Critical Task 3: Improve integration of existing health information systems, analysis, and distribution of information consistent with PHIN Preparedness Functional Area "Early Event Detection," including those systems used for identification and tracking of zoonotic diseases.

Strengths:

- There is increased awareness of the importance of information sharing for early event detection between CD Control and EH staff of both programs.

Areas Needing Improvement:

- Formal systems for PHIN Preparedness Area "Early Event Detection" are generally not in place.

- Local veterinarians are not always aware of and engaged with the LHD in zoonotic disease surveillance. Additionally, there is little local veterinarian representation on WNV Task Forces in many jurisdictions.

- Few local CD Control programs have the capacity to electronically access laboratory data which would be advantageous in integrating and distributing health information. Dedicated information technology staff for data management system development and maintenance, which is lacking in many LHDs, may be a contributing factor to this gap.

- Professional EH staff has generally not been recognized as disease investigation surge capacity.

- While staff generally has good working relationships, overall the system integration and/or information exchange among LHD programs such as CD Control, BT/emergency preparedness, epidemiology, EH and PHL needs to improve in many jurisdictions.

- Collaboration with tribal entities occurs primarily at the line staff level and not always at the policy or planning level. For example, where there are local Indian Health Clinics, typically the LHD interacts with them through the CD Control staff who work with clinic staff.

CDC Required Critical Task 4: Improve effectiveness of health intelligence and surveillance activities.

Strengths:

- Jurisdictions generally engage in exercises, tabletops, and drills as a means of identifying gaps and areas of improvement regarding preparedness and response activities. In many cases, influenza vaccine clinics are used as exercises.

Areas Needing Improvement:

- Formal evaluations of surveillance systems have rarely been conducted.

- The CD Control response to a BDS "hit" has not been drilled adequately.

- There is a failure to implement corrective action in a timely manner to address areas of improvement identified by exercises, tabletops, and drills. As a component of an improvement plan, LHDs include corrective action plans in their after action reports but frequently have not followed through to implement them.

CDC Required Critical Task 5: Improve reporting of suspicious symptoms, illnesses, or circumstances to the public health agency. (a) Maintain a system for 24/7/365 reporting cases, suspect cases, or unusual events consistent with PHIN Preparedness Functional Area "Early Event Detection (EED)."

Strengths:

- Most LHDs maintain comprehensive internal and external emergency call-down lists.

- LHDs typically have a structured system with identified authorities for activating the DOC and requesting EOC activation.

- There is improved reporting of suspicious symptoms, illnesses, or circumstances; compliance of laboratories with mandated disease reporting regulations is generally good. Additionally, LHDs have established close working relationships with local hospital infection control nurses. And, there is annual distribution of disease reporting mandates and procedures (as well as cite and fine laws) to medical providers and other practitioners.

Areas Needing Improvement:

- Tribal representatives are not typically included on the external call-down list.

- The response time to an after-hours call related to a suspected critical disease has not been tested and documented in many LHDs.

- In many LHDs there is failure to employ strategies to improve compliance with mandated disease reporting by physicians—for example, comparing lab reports with CMRs, drilling down for date of onset, date of diagnosis, date of reporting. Additionally, in many jurisdictions *formal* evaluations of mandated disease reporting compliance have not been conducted.

CDC Required Critical Task 6: Increase number of local sites using BioSense for early event detection.

Strengths:

- While it is the CDC's responsibility to increase the number of local BioSense sites, this hospital-based syndromic surveillance system is generally monitored by the LHD in counties where these sites exist.

Areas Needing Improvement:

- BioSense's relationship to and integration with LHD surveillance needs to be improved.

Outcome 5A: Public Health Epidemiological Investigation

Potential exposure and disease will be identified rapidly, reported to multiple locations immediately, investigated promptly, and accurately confirmed to ensure appropriate prevent or curative countermeasures are implemented. Additionally, public health epidemiological investigation will be coordinated with law enforcement and other appropriate agencies including tribal and federal agencies.

CDC/HRSA Performance Area	Mean	Median	*SD*	Range	Average Minimum	Average Maximum
5A: Public Health Epi Investigation	2.75	2.88	.45	2.00	1.625	3.625

CDC Required Critical Task 1: Increase the use of efficient surveillance and information systems to facilitate early detection and mitigation of disease.

Strengths:

- With reference to HRSA Critical Benchmark 4-2, local hospitals and LHDs participate together in annual Golden Guardian exercises. In addition, local hospitals participate with LHDs on HRSA local planning committees.
- Mandated disease reporting requirements and procedures are distributed to local hospitals and clinics, and local hospitals receive Category A agent and rash illness diagnostic information from LHDs.
- LHDs have developed Smallpox Response Plans and Pandemic Influenza Plans.

Areas Needing Improvement:

- A missing piece of most LHDs' disease surveillance activity is engagement of the Poison Control Centers.
- Despite LHDs' recognition of the importance of close working relationships with hospital infection control nurses and practitioners, disease *incidence and trend data* are not typically shared with hospitals and clinics.
- The response time for the initiation of an epidemiologic investigation has not been tested or documented in many jurisdictions.
- Procedures for dermatologic diagnostic consultation for smallpox have not been developed in many jurisdictions.

CDC Required Critical Task 2: Conduct epidemiological investigations and surveys as surveillance reports warrant.

Strengths:

- Increased capacity and infrastructure for emergency preparedness has had a positive spill-over effect in other LHD areas; BT/Emergency Preparedness Coordinators work closely with CD Control staff enhancing the capacities of both programs.
- Many LHDs have one or more trained epidemiologists on staff. Small counties benefit greatly by sharing an epidemiologist.
- LHD staff has received Incident Command Structure (ICS) training. Some LHD emergency responders are equipped with "Go Kits" containing PPE and other disease investigation equipment.

Areas Needing Improvement:

- In some LHDs, staff have not received recent BT agent training after the initial training post-9/11.
- Standardized, written jurisdiction-specific CD procedures are not in place in some LHDs.
- There are specific gaps in training. For example, not all disease investigation staff has received basic or fundamental training in epidemiology; not all disease investigation surge capacity staff has received formal disease investigation training; and most EH professional staff has not received disease investigation training to provide surge capacity.
- A number of smaller LHDs do not have ready access to epidemiological services and are not served by a regional epidemiologist.
- Formal MOUs with surrounding jurisdictions are not in place for regional epidemiologic surge capacity.

CDC Required Critical Task 3: Coordinate and direct public health surveillance and testing, immunizations, prophylaxis, isolation or quarantine for biological, chemical, nuclear, radiological, agricultural, and food threats.

Strengths:

- Local Health Officers have local support for the declaration of isolation and quarantine orders, and gained experience with isolation/quarantine orders when dealing with suspect SARS cases.
- A structure for DOC activation authority in the absence of the local Health Officer is several personnel deep in most LHDs.
- EH personnel are available to public health officials 24/7/365 even when the two programs are not integrated within the LHD.

- Jurisdictions participate in State-sponsored exercises; after action reports are routinely prepared following exercises.

Areas Needing Improvement:

- Quarantine orders have not been tested for legality and public support.
- 24/7/365 availability of the LRN Reference Laboratory has not been tested in all jurisdictions.
- After-action reports are not always developed for real events. Corrective action areas identified in the reports are not always addressed in a timely manner.
- While leadership, management and supervisory staff participate in exercises regarding CD events, there is a need for greater involvement of CD Control staff in most exercises.
- Even though there is a structure for DOC activation authority, formal agreement for a back-up Local Health Officer in his/her absence is lacking in some jurisdictions.

CDC Required Critical Task 4: Have or have access to a system for an outbreak management system that captures data related to cases, contacts, investigations, exposures, relationships and other relevant parameters compliant with PHIN Preparedness Functional Area "Outbreak Management".

Strengths:

- There is recognition of the need for an outbreak management system evidenced by the commitment of LHDs to use Web CMR when it is completed. In the interim, some LHDs have developed in-house and/or purchased electronic data management systems for outbreak management and are not waiting for Web CMR completion.

Areas Needing Improvement:

- The vast majority of LHDs do not have an electronic outbreak management system in place. Insufficient Information Technology support for development and maintenance of an electronic system is commonly a contributing factor.
- Epi-Info and similar programs are not in place and/or personnel are not proficient in their use.
- CD or Epi data management systems are not linked with laboratory systems in many jurisdictions.

Outcome 6A: Emergency Response Communications

A continuous flow of critical information is maintained among emergency responders, command posts, agencies, and government officials for the duration of the emergency response operation.

CDC/HRSA Performance Area	Mean	Median	*SD*	Range	Average Minimum	Average Maximum
6A: Emergency Response Communications	2.92*	2.93	.41	2.00	1.643	3.643

Critical Task 1: Decrease the time needed to communicate internal incident response information; a) Develop and maintain a system to collect, manage and coordinate information about the event and response activities including assignment of tasks, resource allocation, status of task performance, and barriers to task completion.

Strengths:

- During an emergency, LHDs activate a Department Operations Center (DOC) that interfaces with the County Emergency Operations Center (EOC). The DOC uses standard NIMS procedures which include the use of situation status reports. LHDs have gained DOC experience in functioning effectively under NIMS through a variety of drills, exercises and real events.

Areas Needing Improvement:

- Many LHDs rely upon oral communication via land telephone lines to maintain situational awareness between their DOC and EOC. While this can be effective, in a rapidly changing emergency with a myriad of actions occurring simultaneously, both the DOC and EOC would benefit from having a system (e.g., WebEOC, E-Team, or electronic whiteboards) for enhanced electronic communication that quickly or instantly conveys situational awareness in written form between them and among selected partners.

- Some DOCs are relatively small with minimal or basic communications capability.

- Project Collaboration Research Initiative (PCRI)[10] —a real-time state-of-the-art collaboration and conferencing system to improve coordinated, rapid response to threats within and among jurisdictions—needs further expansion to share its success.

[10] http://www.callhealthofficers.org/pcri.htm.

Critical Task 2: Establish and maintain response communications network. (Includes HRSA Benchmark 2-10: Communications and IT)

Strengths:

- With respect to HRSA Benchmark 2-10, nearly all LHDs have established effective communication networks with their response partners. CAHAN is typically used to accomplish this communications task; LHDs also use blast fax and telephone call-down lists.

- Regional systems, such as ReddiNet, link hospitals, ambulances and LHDs across jurisdictional lines.

- Several LHDs have already participated in PCRI.

Areas Needing Improvement:

- A challenge for many LHDs is to train and maintain skills among staff in operating back-up communications equipment during an emergency; some of this equipment, especially 2-way radios, is not used on a regular basis by LHD staff.

- PCRI needs to be expanded to more jurisdictions to reach its potential for improving coordinated, rapid response to threats.

Critical Task 3: Implement communications interoperability plans and procedures. (Includes HRSA Benchmark 2-10: Communications and IT)

Strengths:

- Establishing the goal of completing interoperability has been an important first step for moving LHDs in this direction; however at this time California LHDs are not very close to meeting this goal.

- State funding, including UASI and HRSA funds, to local agencies has been used effectively to improve the interoperability of radio communications in many jurisdictions.

Areas Needing Improvement:

- Optimizing the interoperability of radio equipment among all county emergency responders is a complex and costly undertaking. LHDs need to be included to a greater extent in countywide efforts. While a large proportion of jurisdictions has made considerable progress, a number remain constrained by budget limitations and local policies.

Critical Task 4: Ensure communications capability using a redundant system that does not rely on the same communications infrastructure as the primary system.(Includes HRSA Benchmark 2-10: Communications and IT)

Strengths:

- LHDs have been able to achieve the HRSA Benchmark 2-10 for this task. They have redundant communication systems in place, and much of this capacity has been acquired as a result of State funding to build capacity during the past few years. Primary communication methods are land lines, cell phones and email. Redundant communications include satellite phones, UHF or VHF radios, and ARES/RACES radios. In some jurisdictions, mobile emergency command

systems are available. Because of past grant funding, satellite phones are now on hand in almost every LHD and provide communication capability even in the most remote areas of a county.

Areas Needing Improvement:

- The assurance of ongoing support for maintenance of systems is unclear. In order to sustain the communications capability that has been achieved, it will be essential to continue investing in training and maintaining the equipment if readiness is not to erode. Budgets in some jurisdictions are not adequate to support this on an ongoing basis. Caches of communication equipment will not necessarily be functional unless there is a plan and funding for ongoing maintenance.

Critical Task 5: Increase the number of public health experts to support Incident Command (IC) or Unified Command (UC).

Strengths:

- Nearly all key LHD staff has participated in Incident Command System (ICS) training. In addition, LHDs have improved the training of public health officials and, as a result, have increased support to Incident Command during the past few years. LHDs are actively continuing training of their key leaders through completion of advanced ICS training, including Intermediate ICS (ICS-300) and Advanced ICS (ICS-400).

Areas Needing Improvement:

- When the local EOC is activated, top public health leadership at the EOC does not always have the necessary support staff available to them at the EOC. To provide adequate 24/7 coverage, support staff must be able to function in EOC/DOC positions.

Critical Task 6: Increase the use of tools to provide telecommunications and information technology to support public health response. A) Ensure that the public health agency has "essential service" designation from their telephone provider and cellular telephone provider. B) Ensure that the public health agency has priority restoration designation with from their telephone provider.

Strengths:

- A high proportion of LHDs report they have acquired Government Employee Telephone Service (GETS) cards which will provide access to an alternative telephone network during an emergency.

Areas Needing Improvement:

- In a few rural counties, telephone service equipment and lines have not been improved locally to the current standards that are generally available statewide. A serious consequence is that a singe break in the main telephone line that serves the county (e.g., caused by a backhoe accident in one county) leaves residents without telephone service outside their own local prefix. A major concern is that Emergency 911 service is also compromised. Outages in the past have lasted for two days.

Critical Task 7: Have or have access to a system for 24/7/365 notification/alerting of the public health emergency response system that can reach at least 90% of key stakeholders and is compliant with PHIN Preparedness Functional Area "Partner Communications and Alerting."

Strengths:

- CAHAN, a secure web-based system for 24/7/365 notification/alerting of the public health emergency response system, is widely used in California. Developed by CDHS, CAHAN has allowed the State and California's LHDs to meet the CDC preparedness standards in the PHIN Preparedness Functional Area "Partner Communications and Alerting." LHDs are continuing to expand the number of internal and external partners who are CAHAN users.

Areas Needing Improvement:

- CAHAN has been described by LHDs as not being sufficiently user-friendly. Although there have been improvements during the past year, continued responsiveness to LHD concerns and improvements are needed to expand its use statewide.

- Adding more CAHAN external users (e.g. physicians, community-based organizations, hospitals) by LHDs will enhance the reach and effectiveness of this important alerting tool. Further changes to enhance the ease of use for CAHAN users will be beneficial.

- Almost no LHDs have demonstrated the ability to reach 90% of key stakeholders to alert them about an emergency event. LHDs that have confirmed receipt of CAHAN alerts report confirmation rates of 50% - 70% when external partners are included in the alert. According to LHDs, many outside partners probably receive the alerts, but do not confirm receipt. Most LHDs also feel it is wise to avoid too many test alerts because it could induce a noncompliance effect among external partners.

- CAHAN reports provide feedback on the success rate of message receipt, but there is some concern about the accuracy of these reports. This issue is being addressed by CDHS.

Outcome 6B: Emergency Public Communications

The public is informed quickly and accurately, and updated consistently, about threats to their health, safety, and property and what protective measures they should take.

CDC/HRSA Performance Area	Mean	Median	*SD*	Range	Average Minimum	Average Maximum
6B: Emergency Public Communications	2.90*	2.93	.36	1.57	2.071	3.643

CDC Required Critical Task 1: Decrease time needed to provide specific incident information to the affected public, including populations with special needs such as non-English speaking persons, migrant workers, as well as those with disabilities, medical conditions, or other special health care needs, requiring attention; a) Advise public to be alert for clinical symptoms consistent with attack agent; b) Disseminate health and safety information to the public; c) Ensure that the Agency's public information line can simultaneously handle calls from at least 1% of the jurisdiction's population.

Strengths:

- Large and middle-sized LHDs tend to have a well-developed, comprehensive Crisis and Emergency Risk Communication Plan (CERC) containing necessary policies, procedures, checklists, templates and resource lists. Smaller LHDs tend to have basic CERC plans that are practical and developed for ease-of-use.

- Large and often middle-sized LHDs tend to have a public information officer (PIO) or a staff position dedicated to performing the functions of a PIO. All LHDs have a process to create public messages, one which utilizes staff with topic-specific expertise to craft appropriate and accurate messages.

- LHDs have benefited greatly from trainings in risk communication provided or organized by CDHS, as well as other experts who have been identified by LHDs themselves. For small LHDs the PIO manual template provided by the CDHS training was effective in rapidly providing a basic and consistent level of capability.

- LHDs have identified the principal languages in their jurisdiction for which translation is needed. Many LHDs have staff members and other resources that are able to translate the principal non-English languages needed. Staff resources for translation and interpreter services are supplemented by volunteers in an emergency, and by use of telephone-based services (e.g. Language Line).

Areas Needing Improvement:

- Smaller LHDs often must delegate PIO functions to a staff member whose principal responsibilities include managing other public health programs. While this can be effective, it needs to be properly supported by CERC training which does not always occur. Smaller jurisdictions may not have experienced back-up staff to handle risk communication, media relations, and spokesperson responsibilities.

- Almost no LHD is able to reach the goal of being able to simultaneously handle calls from at least 1% of the population. Based on feedback from LHDs, this is an unrealistic CDC goal at this time. However, many LHDs want to increase their ability to handle calls from the public during an emergency and are working to improve this capability. Use of other emergency phone banks (e.g., California Department of Forestry) may be a possible means of meeting this goal.

- Many LHDs indicate the need for additional State assistance to help translate materials into "second-tier" languages—languages spoken by a significant proportion of the population but spoken by fewer persons than the most needed languages.

CDC Required Critical Task 2: Improve the coordination, management and dissemination of public information.

Strengths:

- LHDs have a clearly established chain-of-command for developing and releasing public information. Line staff has received essential training required to work within established procedures and are aware of the need to refer media inquiries to appropriate, authorized individuals.

- A number of rural LHDs have established partnerships with volunteer fire agencies, post offices and general stores to help in outreaching to remote special populations.

- Many LHDs are utilizing community- and faith-based organizations to share information with special needs and hard-to-access populations.

- LHDs are familiar with their local media sources and the need of media to meet deadlines and have succinct information in layperson's language. LHDs have built or are working to build a strong foundation with media sources based on communication of normally-occurring public health issues (e.g., wildfires, local outbreaks, seasonal heat waves, and new diseases such as West Nile virus).

Areas Needing Improvement:

- A challenge for many LHDs is to reach its special populations, and LHDs are still working on ways to get information out to groups such as the homebound, developmentally disabled and hearing and vision impaired.

- Except in a few jurisdictions, expertise in risk communications is concentrated in one or two individuals. In many jurisdictions there is a large drop-off in risk communication expertise beyond the two most experienced individuals. In an event that requires around-the-clock emergency response, it would be difficult for most LHDs to sustain such a level of public information function.

- In medium-sized and small LHDs, those responsible for public information functions usually have other essential emergency roles to fulfill, and this tends to limit the ability to fulfill all of the PIO functions—especially during early phases of a crisis which can be more intense.

CDC Required Task 3: Decrease the time and increase the coordination between responders in issuing messages to those that are experiencing psychosocial consequences to an event.

Strengths:

- Some LHDs have worked with their local Mental Health (MH) or Behavioral Health Department in the development of messages to be released to the public to obtain their expertise in developing appropriate risk communication messages during an emergency.

Areas Needing Improvement:

- For the most part, MH staff has not been involved in planning efforts related to emergency preparedness. Few LHDs have had MH involvement during emergencies in reviewing public messages for psychosocial consequences.

- Many MH staff that are serving or may serve as resources in reviewing public messages before their release do not have training in risk communication.

CDC Required Task 4: Increase the frequency of emergency media briefings in conjunction with response partners via the jurisdiction's Joint Information Center (JIC), if applicable.

Strengths:

- During the past year, a number of LHDs have increased the frequency of media briefings and have performed exercises to gain experience. Relationships with PIOs from other agencies have been strengthened in many jurisdictions. A few jurisdictions have established a JIC (Joint Information Center) and have exercised this operation. This helps to cement the relationship between various agencies and their PIOs.

Areas Needing Improvement:

- Additional experience in functioning in the environment of a JIC is needed in almost every jurisdiction.

CDC Required Task 5: Decrease time needed to issue public warnings, instructions, and information updates in conjunction with response partners.

Strengths:

- LHDs maintain the ability to rapidly produce health messages when needed, and this is done on a regular basis as part of basic public health work. All LHDs can construct and issue press releases within a day, and almost all have experience of doing it when needed within a few hours.

- LHDs have developed public health websites as another means to bring information to the public. Many have re-designed their web site to enhance it as a source of public information during an emergency.

- The local Health Officer typically acts as a principal spokesperson for the LHD and is an authoritative and credible resource.

Areas Needing Improvement:

- During an emergency, the local Health Officer may be needed both to provide command and control in certain types of emergencies and also to serve as the official spokesperson. It can be challenging to fulfill both functions, and additional staff support to the local Health Officer is needed in some medium-sized and small LHDs.

CDC Required Task 6: Decrease time needed to disseminate domestic and international travel advisories.

Strengths:

- LHDs are able to issue domestic and international travel advisories to the general public via the media in a timely manner; however most would do this only if they thought it was necessary. Some LHDs have created a page in their website to post their own travel advisories, and also have linked their web site to CDC/State travel advisory sites.

CDC Required Task 7: Decrease the time needed to provide accurate and relevant public health and medical information to clinicians and other responders.

Strengths:

- LHDs have a system in place to create medical updates and provide them in a timely (usually within 3 hours) manner to clinicians in the community. They have identified physicians and other medical providers, and have the ability to contact them via blast fax, and increasingly by e-mail. The smallest counties, in particular, have established personal relationships with every primary care physician in the community.

Areas Needing Improvement:

- LHDs find it hard to obtain needed input from busy physicians in private practice who generally have little time to spend in working with LHDs on emergency preparedness. For larger counties, it can be a daunting task to maintain accurate contact information for the large number of these important partners as well as for other community medical providers, and strategies that can help are needed.

Outcome 6C: Worker Health Safety

No further harm to any first responder, hospital staff member, or other relief provider due to preventable exposure to secondary trauma, chemical release, infectious disease, radiation, or physical and emotional stress after the initial event or during decontamination and even follow-up.

CDC/HRSA Performance Area	Mean	Median	*SD*	Range	Average Minimum	Average Maximum
6C: Worker Health Safety	2.63	2.67	.66	2.67	1.333	4.000

CDC Required Critical Task 1: Increase the availability of worker crisis counseling and mental health and substance abuse behavioral support.

Strengths:

- County Mental Health (MH) or Behavioral Health has licensed professionals who would be available to provide crisis counseling and mental health and substance abuse behavioral support to Public Health in a disaster, either directly or through MH contracts with community-based professionals. In addition, most local jurisdictions have established Employee Assistance Program (EAP) services as part of the employment benefit package, which may include MH support for LHD employees and their families.

- Many MH departments reside with Public Health in a single Agency which can help to facilitate implementation of cooperative arrangements.

Areas Needing Improvement:

- Most LHDs do not have a formal arrangement (e.g., MOU) with MH to provide psychosocial support to public health personnel in a disaster but *assume* such support would be provided. Many have not engaged in a joint planning process concerning assessment of available resources and potential needs, which should include consideration of ongoing obligations to existing clients, as well as the potential for increased demand in an emergency. Consequently, the ability of MH counselors to respond during an emergency and assist LHD staff who might need psychosocial support is uncertain (even when there is an MOU).

- Agreements with private mental health professionals in the community are generally not in place regarding worker crisis counseling and support and need to be pursued to assure assistance in an event.

- Clear guidelines need to be developed around mental health surge capacity and included in the EOP.

CDC Required Critical Task 2: Increase compliance with public health personnel health and safety requirements: (a) Provide Personal Protection Equipment (PPE) based upon hazard analysis and risk assessment; (b) Develop management guidelines and incident health and safety plans for public health responders (e.g., heat stress, rest cycles, PPE); (c) Provide technical advice on worker health and safety for IC and UC.

Strengths:

- With regard to HRSA Benchmark 2-6, LHDs have made considerable progress in training and providing personal protective equipment (PPE) to their staff, especially those in CD control, public health laboratory and EH. While not yet universal, the large majority of LHDs have completed protecting all or almost all staff in these "front-line" programs. LHDs have policies and procedures that mandate protections of its workers, and established protocols for follow-up when workers are exposed to hazards or injured.

- Having EH established within the organizational structure of the LHD has directly offered expertise in worker safety, as EH programs such as Hazardous Materials have developed considerable experience in PPE and worker protection.

- LHDs or EH within the jurisdictions possess technical expertise to advise Incident Command concerning worker safety with respect to biological, chemical and radiological hazards.

- With regard to HRSA Benchmark 2-7, a majority of LHDs and hospitals have adequate portable and fixed decontamination equipment available locally to manage exposed patients, public health response personnel and hospital personnel in small incidents; the adequacy may be a little more questionable for medium-sized incidents.

Areas Needing Improvement:

- LHDs in many instances still need to extend training and fit testing of respirators to a broader group of staff who potentially could provide surge capacity during a disaster, especially nurses in public health programs other than CD control.

- Many LHDs have not integrated worker safety fully into disaster preparedness planning. Instead, worker safety during a disaster would be handled as it is during non-emergency times. The potential shortcoming of this approach is that the scale of need and the number of worker safety incidents during an emergency is likely to be vastly higher than during everyday operations. A worker protection system that is adequate for normal operations may be overwhelmed during an emergency. Protecting workers during an emergency starts with planning—and this planning needs to be fully articulated in the LHDs' all hazards plan (Emergency Response Plan).

CDC Required Critical Task 3: Increase the number of public health responders that receive hazardous material training.

Strengths:

- Hazardous materials training has been provided to many EH staff, especially those with direct involvement in the HazMat program. In some instances, additional training would be beneficial. Jurisdictions in which EH is part of the LHD have hazardous materials expertise within their organization; when they are not integrated the expertise is more distant.

Areas Needing Improvement:

- Training of public health staff in hazardous materials varies greatly from one LHD to another. In many jurisdictions, little or no training in hazardous materials or radiation has been provided to staff outside of EH staff.

Outcome 6D: Isolation and Quarantine

Successful separation, restriction of movement, and health monitoring of individuals and groups who are ill, exposed, or likely to be exposed, in order to stop the spread of a contagious disease outbreak. Legal authority for these measures is clearly defined and communicated to the public. Logistical support is provided to maintain measures until danger of contagion has elapsed.

CDC/HRSA Performance Area	Mean	Median	*SD*	Range	Average Minimum	Average Maximum
6D: Isolation & Quarantine	2.85*	2.94	.38	1.81	1.813	3.625

CDC Required Critical Task 1: Assure legal authority to isolate and/or quarantine individuals, groups, facilities, animals and food products.

Strengths:

- In general, LHDs are well prepared to assure legal authority to quarantine people, facilities, animals and food products. Health and Safety Code authority for the local Health Officer is broad. Most LHDs and local Health Officers have experience with the issuance of isolation orders for TB patients, and some have had experience in the issuance of isolation orders for suspect SARS cases.

- LHD staff has participated in CDHS Public Health Law Work Group presentations where legal authority issues have been addressed in detail.

Areas Needing Improvement:

- Specific plans and procedures for isolation and quarantine still need to be developed in some counties, and formal agreements regarding quarantine enforcement have not universally been developed but need to be. Additionally, some counties do not have model legal orders in place.

- Many local Health Officers have not received formal County Counsel support for their authority to issue quarantine orders. In some of the smaller counties, limited local Health Officer availability may impact the capacity to manage isolation and quarantine.

CDC Required Critical Task 2: Coordinate quarantine activation and enforcement with public safety and law enforcement.

Strengths:

- Most LHDs have a good working relationship with local law enforcement, and many have had experience with law enforcement support during the implementation of TB isolation orders.

Areas Needing Improvement:

- Written agreements or a plan delineating law enforcement's role in a quarantine event is not in place in many counties. Many jurisdictions have engaged only some (e.g. Sheriff), but not all, local law enforcement agencies such as local police departments.

- Draft sample quarantine orders are not in place in most counties.

CDC Required Critical Task 3: Improve monitoring of adverse treatment reactions among those who have received medical countermeasures and have been isolated or quarantined.

Strengths:

- Most LHDs have written procedures in place and have staff trained for monitoring adverse reactions especially for smallpox. In addition, some LHDs have had experience with the monitoring of suspect SARS cases.

Areas Needing Improvement:

- In general, LHDs have an inadequate epidemiology infrastructure. Few counties, for instance, have an electronic data system in place to track adverse treatment reactions, and many lack information technology support and/or funding to develop an electronic data system. Most systems that are in place for adverse treatment monitoring do not meet PHIN requirements.

- Many LHDs do not have MOUs in place with expert consultants to assist with management of adverse reactions. Surge capacity for adverse treatment monitoring would be inadequate in many counties in a large event.

- Adverse reaction management plans are specific to smallpox vaccine administration and do not include countermeasures for other diseases.

CDC Required Critical Task 4: Coordinate public health and medical services among those who have been isolated or quarantined.

Strengths:

- Written procedures are generally in place for isolation and quarantine.

- The majority of hospital personnel in most counties are trained in adverse reactions monitoring.

Areas Needing Improvement:

- Many LHDs do not have policies and procedures or an adverse reactions management response plan in place that delineates roles of hospitals, medical providers and the LHD in the management of adverse reactions.

- LHDs have inadequate staff capacity to provide services to those in isolation and quarantine. Additional areas of insufficiency include inadequate plans to administer medications or provide general health needs to individuals in isolation/quarantine, a lack of pre-identified sites for quarantine, and a lack of mental health support for those in isolation and quarantine.

***CDC Required Critical Task 5: Improve comprehensive stress management strategies, programs, and crisis response teams among those who have been isolated or quarantined*.**

Strengths:

- Mental Health (MH) has historically participated in real life disasters (e.g., Hurricane Katrina evacuee planning and management) and worked closely with LHDs in events of isolation or quarantine without formal agreements or MOUs. Some counties have Mental Health Disaster Response Teams or Mobile Crisis Units. In a few Mental Health Departments contracts are in place with private providers for surge capacity, and some have chaplaincy programs that could assist with the provision of psychosocial support services.

Areas Needing Improvement:

- Many MH Departments are currently facing funding reductions and other administrative challenges that are creating turmoil. Lack of engagement with Public Health concerning emergency preparedness has been one result. Having formal MOUs in place between LHDs and their MH Departments that specify mutual goals and agreed-to priorities could increase effective communication/collaboration necessary for sound emergency response planning.

- There is a critical lack of funding for MH involvement in emergency preparedness. This has resulted in a lack of training for MH staff in SEMS, disaster response and isolation/quarantine counseling, and a lack of MH staffing capacity to participate in exercises and drills.

- MH components are not addressed in many LHDs' Smallpox Response Plan or Emergency Preparedness Plan.

***CDC Required Critical Task 6: Direct and control public information releases about those who have been isolated or quarantined*.**

Strengths:

- The real life events in California that frequently occur, such as earthquakes, major flooding and wildfires, have provided experience in information dissemination during emergencies that can be applied in situations where individuals need to be isolated or quarantined. Many LHDs have developed disease-specific press release templates, and virtually all employ or have access to trained PIOs.

Areas Needing Improvement:

- More involvement between LHD and non-LHD county PIOs is needed to assure accuracy and timeliness of information dissemination. Most LHDs have not developed plans or exercises to address the issue of rumor control.

- Many LHDs have not developed working relationships with the CDHS Office of Public Affairs in order to ensure consistency of public information during a quarantine event.

CDC Required Critical Task 7: Decrease time needed to disseminate health and safety information to the public regarding risk and protective actions.

Strengths:

- Almost all LHDs have communication equipment in place to ensure rapid health and safety information dissemination to the public during an event/emergency.

Areas Needing Improvement:

- Many small and medium size LHDs do not have designated PIOs and the individual acting as the PIO has other responsibilities in an event/emergency which may impact information dissemination. Not all LHDs have yet drilled on dissemination of information to the public in an emergency/event.

CDC Required Critical Task 8: Have or have access to a system to collect, manage, and coordinate information about isolation and quarantine, compliant with PHIN Preparedness Functional Area "Countermeasure and Response Administration."

Strengths:

- Many LHDs have identified the data that will be necessary to collect in an isolation or quarantine event.

Areas Needing Improvement:

- Not all LHDs have an electronic data management system that is PHIN compliant to manage isolation and quarantine data; many do not have a plan for managing data from multiple sources, nor the necessary hardware/software to accomplish this effectively. In some cases there is limited epidemiology capacity to analyze data to assist in the management of isolation and quarantine.

Outcome 6E: Mass Prophylaxis Vaccination (Including SNS)[11]

Appropriate prophylaxis and vaccination strategies are implemented in a timely manner upon the onset of an event, with an emphasis on the prevention, treatment, and containment of the disease. Prophylaxis and vaccination campaigns are integrated with corresponding public information strategies.

CDC/HRSA Performance Area	Mean	Median	*SD*	Range	Average Minimum	Average Maximum
6E: Mass Prophylaxis Vaccination	2.44	2.50	.52	2.17	1.500	3.667

CDC Required Critical Task 1: Decrease the time needed to dispense mass therapeutics and/or vaccines. a) Implement local, (tribal, where appropriate), regional and State prophylaxis protocols and plans. b) Achieve and maintain the Strategic National Stockpile (SNS) preparedness functions described in the current version of the Strategic National Stockpile guide for planners. c) Ensure that smallpox vaccination can be administered to all known or suspected contacts of cases within 3 days and, if indicated, to the entire jurisdiction within 10 days. d) Have or have access to a system to collect, manage, and coordinate information about the administration of countermeasures, including isolation and quarantine, compliant with PHIN Preparedness and Functional Area "Countermeasure and Response Administration."

Strengths:

- Almost all LHDs have Point of Distribution (POD) sites identified and job action sheets completed for mass prophylaxis positions. Operational requirements are defined for vaccination of the jurisdictional population in most counties, and call down lists or other notification mechanisms are generally in place.
- For the most part, LHDs are familiar with PHIN requirements.

Areas Needing Improvement:

- Not all staff that needs to be fully trained in mass prophylaxis functions has received training.
- Adequate outbreak management data systems and patient contact tracking systems are not in place in most counties, and the majority of those in place do not meet PHIN requirements. Most

[11] SNS = Strategic National Stockpile.

counties do not have modeling software and many do not have staff knowledgeable in the use of such software.

- Few LHDs have MOUs in place for POD sites, and many have not conducted an exercise to activate multiple sites simultaneously.

- Plans to provide prophylaxsis to special needs populations are still being worked out but remain a significant challenge.

- With regard to HRSA Benchmark 2-5, regional pharmaceutical caches are not in place in many jurisdictions. Caches do not include an adequate supply of antivirals, and HRSA funds cannot be used to purchase these caches. An inventory of pharmacy stock has not been conducted in most counties.

- Many counties do not have a Medical Reserve Corps (MRC) or volunteers in place to assist in staffing PODs in an event.

- Standards for timely notification and return to duty for staff have not been established in many LHDs.

- Formal agreements are not in place with tribal entities in most counties.

CDC Required Critical Task 2: Decrease time to provide prophylactic protection and/or immunizations to all responders, including non-governmental personnel supporting relief efforts.

Strengths:

- Notification/alert procedures are in place in almost all jurisdictions.

- Contact lists and directories are in place and updated regularly.

Areas Needing Improvement:

- Many LHDs have not done an exercise testing the provision of mass prophylaxis to first response personnel. After action reports for drills and exercises are not always completed.

CDC Required Critical Task 3: Decrease the time needed to release information to the public regarding dispensing of medical countermeasures via the jurisdiction's JIC (if JIC activation is needed).

Strengths:

- Authority and responsibility for release of public information is well defined in most LHDs. Many counties have reverse 911 capabilities to reach discrete geographic areas.

Areas Needing Improvement:

- Many counties do not have a Joint Information Center (JIC).

- Not all LHDs have developed templates describing the location and means for access to clinics/PODs or the rationale for prophylaxis. Drills or exercises have not always included advising the population of the need for prophylaxis.

- Alternative communication mechanisms for special needs populations remain a significant challenge.

STRATEGIC NATIONAL STOCKPILE (SNS):

The mission of the CDC's SNS Program is to ensure the availability and rapid deployment of life saving pharmaceuticals, antidotes, other medical supplies and equipment necessary to counter the effects of nerve agents, biological pathogens and chemical agents. The SNS Program stands ready for immediate deployment to any U.S. location in the event of a terrorist attack using a biological toxin or chemical agent directed against a civilian population.

Strengths:

- All LHDs have an SNS Plan that is incorporated into the overall Emergency Preparedness Plan. Many have a planning group that guides the LHD's SNS activities. State policies are usually incorporated into the local SNS operations plans.

- Local Incident Command System is integrated into SNS functions in almost all counties and a local incident commander has been identified. Tactical communication has been well thought out, including plans to coordinate local media efforts.

- Almost all LHDs have identified one or more distributions sites, although many do not have formal MOUs in place. Most LHDs have negotiated with the Sheriff or local police departments to provide security for SNS, dispensing and distribution sites. Many have a plan for 24/7 distribution operations.

- LHDs are continuing to make progress in developing greater preparedness to utilize SNS resources, and the pace of progress has accelerated during the past year in many counties.

Areas Needing Improvement:

- LHDs have not considered all of the legal issues that could be related to SNS operations and worked through how they might be addressed or resolved.

- The local infrastructure is not always adequate to support the SNS Plan and the budget allocation is not sufficient to support SNS functions in many counties.

- Local leads for many SNS functions, such as for distribution, have not been identified in many LHDs, in large part due to limited staffing. This is especially true in smaller counties.

- Public information and communication is improving but still a work in progress in many counties. Many LHDs do not have in place a robust means to communicate exact POD locations, nor prepared templates explaining how the public would be assigned to specific locations or the expected process to be followed. Educating and informing special populations of the need for prophylaxis remains a significant challenge.

- Many LHDs do not have credentialing plans in place for either staff or volunteers.

- Many LHDs do not have a security back-up plan if the Sheriff and police departments are overwhelmed with other functions.
- Distribution sites in most counties have not been reviewed by the State SNS Coordinator.
- Most LHDs only have a paper-based inventory management system and staff have not been identified or trained in inventory functions.
- Some LHDs have not identified or planned for treatment sites that will diagnose and treat symptomatic individuals.
- Many LHDs do not have a training/exercise or evaluation plan; most LHDs have not done an SNS functional exercise.
- Of the 13 Functional Areas in SNS, the two areas where improvement would most significantly affect overall SNS preparedness are Dispensing Oral Meds (Area 11) and Exercises (Area 13).
- The proportion of the local budget supporting SNS preparedness and delivery does not appear adequate in many LHDs and additional funding support is needed.
- In almost all counties, many more community volunteers than currently available would be necessary to staff all the dispensing sites that would be needed to rapidly distribute mass prophylaxis via the SNS to the entire county population.

Outcome 6F: Medical and Public Health Surge

Cases are investigated by public health to reasonably minimize morbidity and mortality rates, even when the numbers of casualties exceed the limits of the normal medical infrastructure for an affected community.

CDC/HRSA Performance Area	Mean	Median	*SD*	Range	Average Minimum	Average Maximum
6F: Medical & Public Health Surge	2.64	2.70	.49	1.90	1.600	3.500

CDC Required Critical Task 1: Improve tracking of cases, exposures, adverse events, and patient disposition. a) Have or have access to a system that provides these capabilities consistent with PHIN Preparedness Functional Area "Outbreak Management".

Strengths:

- Systems are in place for hospitals, clinics and EMS to report data suggestive of terrorism to LHDs on a 24/7 basis in almost all counties. Systems are also in place to receive health-related data for early event detection purposes.
- With regard to HRSA Benchmark 4-2, in almost all counties Category A agent diagnostic information and the rash illness algorithm has been distributed to hospitals.
- CAHAN is widely used for alerting hospitals. Most hospitals are using Reddi-Net or the Emergency Management (EM) system. Almost all LHDs have excellent blast fax technology which in some LHDs, particularly the small ones, may be all that they have for alerting.
- Standardized operating procedures are in place to execute mutual aid agreements in many counties.

Areas Needing Improvement:

- Tracking of cases, exposures, adverse events and patient disposition is paper-based in most LHDs and probably not adequate to handle a large outbreak/event; most systems do not meet PHIN requirements. Most LHDs have a very limited number of staff who have data management skills and are knowledgeable and experienced in the use of epidemiology software.
- LHDs have a limited number of staff who has received formal disease investigation training. Syndromic surveillance capacity is also very limited.
- A written epidemiology surge plan is not generally in place.

- Many LHDs have not worked with Poison Control Centers to assure they are aware of how to report data suggestive of terrorism.

CDC Required Critical Task 2: Decrease the time needed to execute medical and public health mutual aid agreements.

Strengths:

- While all local jurisdictions have signed on to the state master mutual aid agreement, there is opportunity to expand medical and public health agreements locally with appropriate response partners.

Areas Needing Improvement:

- A few LHDs have found it advantageous to expand medical and public health agreements locally with appropriate response partners in order to build a local relationship prior to events, however this activity needs to be expanded.

CDC Required Critical Task 3: Improve coordination of public health and medical services. a) Ensure epidemiology response capacity consistent with hospital preparedness guidelines for surge capacity. b) Participate in the development of plans, procedures, and procedures to identify and manage local, tribal, and regional public health and hospital surge capacity.

Strengths:

- Most LHDs have established joint planning bodies including all relevant stakeholders for the coordination of public health and medical services.

- Most LHDs have participated in the planning for regional public health and hospital surge capacity.

- With regard to HRSA Benchmark 2-1, requirements for bed capacity have been met or exceeded by most hospitals. With regard to HRSA benchmark 2-2, requirements for negative pressure rooms have also been met by most hospitals.

Areas Needing Improvement:

- Barriers to surge capacity, which have been identified in most counties, are numerous, and because most solutions are difficult to accomplish the plans for achieving them may not be realistic.

- Many LHDs do not have the capacity to help hospitals meet their needs for epidemiology response capacity. Most LHDs themselves lack enough staff with adequate skills in epidemiology functions.

- Most LHDs do not have formal agreements with local hospitals, urgent care centers and tribes for the provision of mutual aid and surge capacity. Staffing for surge capacity is a major problem for most hospitals.

CDC Required Critical Task 4: Increase the proficiency of volunteers and staff performing collateral duties in performing epidemiology investigation and mass prophylaxis support tasks.

Strengths:

- Strong working relationships have been formed between LHDs and the Red Cross.
- Some Medical Reserve Corps (MRCs) have been established locally or within the region and have included some training; in a few counties MRCs are in the process of being developed or considered.

Areas Needing Improvement:

- Because many LHDs and counties do not have adequate numbers of volunteers or staff to meet surge capacity needs for epidemiology investigation or mass prophylaxis support tasks, proficiency in this area is questionable.
- In general, LHDs do not have the funding or staff capacity to develop an adequate volunteer pool or develop and maintain an MRC.

CDC Required Critical Task 5: Increase the number of physicians and other providers with experience and/or skills in the diagnosis and treatment of infectious, chemical, or radiological diseases or conditions possibly resulting from a terrorism-associated event who may serve as consultants during a public health emergency.

Strengths:

- With regard to HRSA Benchmark 5, a few of the LHDs have done an assessment of the training needs of providers and some have sponsored training related to the diagnosis and treatment of infectious, chemical, or radiological diseases or conditions.

Areas Needing Improvement:

- A formal assessment of provider training needs for diagnosing and treating infectious, chemical or radiological diseases or conditions has not been done by most LHDs. Most do not have a standardized curriculum or plan for training physicians and other providers in these content areas.
- A specific list of already-trained specialist physicians is not maintained by many LHDs.
- A minimal number of LHD staff has received HazMat training.

Outcome 7A: Economic and Community Recovery

Recovery and relief plans are implemented and coordinated with the nonprofit sector and nongovernmental relief organizations and with all levels of government. Economic impact is estimated. Priorities are set for recovery activities. Business disruption is minimized. Individuals and families are provided with appropriate levels and types of relief and minimal delay.

CDC/HRSA Performance Area	Mean	Median	*SD*	Range	Average Minimum	Average Maximum
7A: Economic & Community Recovery	2.43	2.50	.54	2.25	1.250	3.500

CDC Required Critical Task 1: Conduct post-event planning and operations to restore general public health services.

Strengths:

- Statewide, LHDs have made good use of opportunities to exercise preparedness activities with their response partners. Many LHDs have been involved in recovery efforts from fires, earthquakes, floods, and mass casualty incidents of public health concern.
- LHDs understand the need to engage not only traditional response partners, but other partners such as the business community. Business concerns about the potential effect of a pandemic influenza epidemic on the company have fostered opportunities for LHDs to increase activities and pre-event planning efforts with this sector.
- The Federal Emergency Management Agency (FEMA) *Guide to Recovery Planning* has been a useful tool for LHD development of pre-recovery planning.
- All LHDs are aware of the need to draft written plans for LHD continuity of public health services and this task has been at least discussed in all LHDs.
- LHDs are aware of and understand the need for post-event planning and most expect to make further progress during the next Guidance year.
- Some LHDs have modeled economic impact of the major anticipated hazard vulnerabilities from a public health perspective.

Areas Needing Improvement:

- While many LHDs have been involved in recovery efforts involving incidents of public health concern, very few practice recovery efforts routinely. Very few LHDs have detailed, LHD-specific

written recovery plans that would guide LHD response for the most commonly expected hazards in their communities. Much work is yet to be accomplished in this area statewide.

- While some jurisdictions have modeled economic impact of major hazard vulnerabilities from a public health perspective, many have not included such planning in their response planning documents. Many LHD have not modeled the economic impact of a terrorist, large communicable disease or pandemic event for their jurisdiction.

- LHDs are finding it a challenge to address special needs populations, such as vision and hearing impaired and the homebound and frail elderly, in their recovery plans; however, some plans are being developed.

- While all LHDs are aware of the need to draft written plans for LHD continuity of public health services, few have had the opportunity to fully do so. Consequently, written plans that would guide LHDs during response that would necessitate redeployment of staff and commensurate reduction in services have not been sufficiently developed statewide.

- Few LHDs have developed a plan for redeployment of staff to other emergency operational roles, especially based upon the most expected emergencies identified in the jurisdiction's all hazard mitigation plans.

CDC Required Critical Task 2: Decrease the time needed to issue interim guidance on risk and protective actions by monitoring air, water, food, and soil quality, vector control, and environmental decontamination, in conjunction with response partners.

Strengths:

- All LHD leadership staff know how to and can access information to issue guidance on risk and protective actions regarding monitoring air, water, food, and soil quality, vector control, and environmental decontamination in conjunction with the responsible response partners.

Areas Needing Improvement:

- Although in general EH and LHDs work collaboratively and effectively on risk and protective actions, in some counties roles and responsibilities between the two staffs are not clearly delineated, resulting in ineffective collaboration.

- Some LHD/EH jurisdictions in smaller counties would like to form vector control agencies, but inadequate funding and staffing and competing priorities leave many jurisdictions without adequate vector control programs.

Preparedness Goal 8: Recover

The local health department will increase the long-term follow-up provided to those affected by threats to the public's health.

CDC/HRSA Performance Area	Mean	Median	*SD*	Range	Average Minimum	Average Maximum
Goal 8: Recover	2.14*	2.17	.50	2.17	1.333	3.500

CDC Required Critical Task 1: Develop and coordinate plans for long-term tracking of those affected by the event.

Strengths:

- Where they exist, Medical Reserve Corps and other volunteer organizations, as well as local temporary hire agencies, have been recognized as personnel surge capacity resources.
- LHDs are very experienced in long-term tracking of patients and contacts associated with chronic diseases such as TB.
- Public Health Nurses and Registered Environmental Health Specialists in some jurisdictions have been cross-trained in disease investigation to at least a minimal level adding to personnel surge capacity.

Areas Needing Improvement:

- A plan for the long-term tracking of those affected by an emergency-related event has not been developed by many LHDs. Long-term tracking exercises to determine capacity needs and gaps are not conducted.
- Identification and coordination of the personnel surge capacity required for data entry and management associated with long-term tracking has not been performed. A bar coding system is not in place which could provide rapid patient data entry.

CDC Required Critical Task 2: Improve systems to track cases, exposures, and adverse event reports.

Strengths:

- Wireless laptops have been purchased with HRSA or CDC preparedness funds for use during a large off-site event.

- Immunization registry systems are recognized for potential use for tracking some patient information in a long-term event.

Areas Needing Improvement:

- Robust electronic data management systems to track cases, exposures, and adverse event reports have not been developed or acquired statewide. Further, basic electronic outbreak management capacity such as Epi-Info is not present in many LHDs.

CDC Required Critical Task 3: Increase the availability of information.

Strengths:

- CAHAN or a local alternative system is used for alerting internal and external partners in almost all jurisdictions, though it is not always used for all partners. Blast fax capacity exists in all LHDs, and a reverse 911 system is available in some counties.

- In many counties, the LHD has its own PIO, and press release templates have been developed. A phone bank is available in some LHDs to increase the availability of information.

Areas Needing Improvement:

- A secured web-based system for information dissemination does not exist at the local level in all jurisdictions. For example, there is no secure local Public Health website for physician or other partner access.

- Media training for staff to provide PIO back-up is limited, and LHDs lack experience coordinating messages with the State PIO Office.

- In some of the state's very remote jurisdictions, there is a lack of ready access to television and radio.

Preparedness Goal 9: Improve

The LHD will decrease the time needed to implement recommendations from after-action reports following threats to the public's health.

CDC/HRSA Performance Area	Mean	Median	*SD*	Range	Average Minimum	Average Maximum
Goal 9: Improve	2.26*	2.13	.59	2.50	1.375	3.875

CDC Required Critical Task 1: Exercise plans to test horizontal and vertical integration with response partners at the federal, state, local, and tribal levels.

Strengths:

- LHDs have participated in major drills and exercises involving in many counties OES, EMS, EH, MH, cities, fire, law enforcement, Native American tribal entities, military, and State and federal partners to foster horizontal and vertical integration. Most LHDs have participated in regional or State-sponsored exercises, most notability the Golden Guardian exercises.

- LHDs understand the necessity and value of the improvement cycle (from drill through after action reports to implementation of corrective actions and retesting) to foster improvement within the jurisdiction.

- Some LHDs have developed well-written improvement plans that include all the necessary improvement elements including exercise planning steps encouraging participation in the development phase from all partners.

Areas Needing Improvement:

- About half of the LHDs have had difficulty involving Native American tribal entities in exercise planning and participation.

- A written policy that establishes written improvement plans as a tenet to effective LHD practice has not been prepared in all LHDs. Improvement plans, where they existed, did not always have an evaluation tool for use after exercises, measurable goals and outcomes, post-event hot wash procedures, generation of standard after-action reports for all events and drills, corrective actions, a system for implementing and tracking the improvement process and a method to retest to ensure the improvement occurred. These plans did not always specify how and when to generate after action reports so that corrective actions will be developed in a tracking matrix and implemented in a timely fashion. Written improvement plans were not always actualized.

CDC Required Critical Task 2: Decrease the time needed to identify deficiencies in personnel, training, equipment, and organizational structure, for areas requiring corrective actions.

Strengths:

- Most LHDs have accomplished the basics of debriefing and generating after action reports of exercises and drills completed in the jurisdiction.

Areas Needing Improvement:

- All LHDs need to generate after action reports of exercises and drills completed in the jurisdiction.

CDC Required Critical Task 3: Decrease the time needed to implement corrective actions.

Strengths:

- Many LHDs have developed and implemented corrective actions from after action reports that would improve future exercises, drills or real event response efforts. Many have corrective actions put into a matrix to facilitate planning.

- A few LHDs recognize the planning value of using project tracking software such as *Microsoft Access (IT) Project 2003,* to track corrective action implementation progress.

Areas Needing Improvement:

- Many LHDs have not followed through in a timely fashion to assure implementation of agreed-to corrective actions that were identified. When they were used, many corrective action matrices were not documented properly; for instance, dates of expected completion, persons assigned to complete tasks, and dates completed were not recorded.

- A review process to monitor and instill accountability for corrective action implementation has not been implemented by leadership in all LHDs. A matrix that includes post-event tasks, the person responsible for carrying out the task, start dates and expected completion dates, a measurable deliverable, and the status of the task would enhance the tracking and implementation of corrective actions and should be developed and used statewide.

CDC Required Critical Task 4: Decrease the time needed to re-test areas requiring corrective action.

Strengths:

- While only a few LHDs have embraced the concept fully and have completed the full cycle and objectively measured improvement, all LHDs recognize the value and the need to re-test to measure the effectiveness of corrective action implementation.

Areas Needing Improvement:

- LHDs have expressed willingness to engage in re-test exercises to measure improvement, but staffing situations and other competing needs have made it difficult for them to develop and repeat exercises to measure improvement.

DISCUSSION AND CONCLUSIONS

"This [project] activity has been one of the most proactive, positive efforts we've done as a State." -- Local Health Officer, mid-sized LHD

The Emergency Preparedness in California's Local Health Departments assessment project provided an important source of information about the state of local public health emergency preparedness. It also established an important baseline that will be valuable in measuring future improvement. Under conditions set up for this project, relative strengths among Goal/Outcome areas—and among different county-size groups of local health departments (LHDs)—were identified as well as important gaps and deficiencies. The aggregation of qualitative and quantitative data using a uniform process and common assessment instrument that included a scoring matrix provided useful information that will allow comparisons over time and across specific county groupings.

The findings indicate that LHDs in California are moving in the right direction regarding emergency preparedness. Overall, LHDs have gained significant capacity since September 11, 2001, and made notable progress in many areas of readiness. LHDs have used real events to strengthen planning, implementing, exercising and evaluating. For instance, the influenza vaccine shortages of 2004 and 2005 provided an opportunity for some LHDs to exercise concepts of mass vaccination. Planning related to LHDs' Pandemic Influenza Plans has brought to the forefront deficiencies in personal protective equipment (PPE) and other gaps in protection requirements. Hurricane Katrina—and the aftermath of beginning preparations for receiving evacuees in some counties—was a catalyst in raising the visibility of emergency preparation issues and presented a means of increasing support for local preparedness efforts. The Katrina response efforts served, in many cases, to make LHDs aware of the importance of Public Health and Mental Health working collaboratively in an emergency response effort. And, LHD response to the high ambient temperature concerns of 2006 exhibited the myriad of non-traditional emergency issues that LHDs need to be prepared to handle.

LHDs have successfully engaged most of their internal partners within the jurisdictional structure as well as diverse external community partners including, in most counties, hospitals. Regional collaboration has occurred, particularly in rural areas, and continues to be an area where good ideas and support are shared. Emergency preparedness for many LHDs has provided a framework for strengthening the capacity of other areas of public health—public health laboratory services and communicable disease control in particular—and enhancing local staff skills.

The infusion of federal funds is largely responsible for the newly-created emergency preparedness capacity. While these dollars are still categorical and precise in their requirements, they represent the most significant source of funding available to LHDs in decades for shoring up areas such as communicable disease control, epidemiology and communications, and providing the means for modernizing capabilities related to technology.

These external funding sources must continue to be available to LHDs at a minimum at current levels for emergency capacity to be maintained and improved. LHDs have also made considerable investments of financial and human resources even though the actual costs to LHDs for maintaining this capacity could not be easily calculated. While our data captured personnel and operating expenses that could be directly tied to specific grant sources, it was clear that the actual level of effort related to preparedness was higher than our figures showed. For example, the roles of nearly all LHD staff are now understood to include some responsibility for response to disasters and other emergencies in which the LHD plays a part.

There was much evidence that the public health workforce overall is seasoned, skilled, informed, and highly committed to ensuring achievement of emergency preparedness and response goals. Three central themes ran across most of the LHDs impacting their ability to carry out almost all of the required critical tasks. The first was how tightly stretched staff is trying to meet multiple federal and State expectations for multiple programs; this is especially true in the smaller to medium-sized jurisdictions. The second theme was how the knowledge base for emergency preparedness was centered in so few staff. If these few staff are not available in an event (e.g., because they live outside of the county) or leave the agency, there will be a significant impact on the LHD. The third theme crossing many LHDs was the lack of training for specific roles in an emergency. There are limited means to send staff to training or to redirect LHD resources to meet preparedness requirements. Staff shortages compound the ability for a LHD, especially a smaller one, to be able to function while staff attends training. The ability to sustain preparedness will depend on an appropriately trained workforce with adequate resources at their disposal. A well-trained public health workforce is the foundation for a strong infrastructure with the capacity to prevent, detect, investigate, report, control and treat illness and injury whether from a terrorist attack or an infectious disease outbreak or natural disaster. To fulfill roles and responsibilities placed on public health during emergencies, training is an essential component of preparedness and response.

While most LHDs have identified the need for succession planning and have begun to prepare for it, these efforts may not be enough given the wave of anticipated retirements in the next few years. CDHS can take a leadership role in collaboration with CHEAC, CCLHO and its affiliates in forming a statewide committee to evaluate the magnitude of this problem and recommend potential solutions.

Certain structural organizational characteristics were reviewed that may deserve future study and investigation. Our findings suggest that having Emergency Medical Services (EMS) under the LHD structure may be related to better preparedness in certain Goal/Outcome areas. The inclusion of EMS under Public Health has been optimal for helping to bring about improvements in State and national emergency system management. When EMS was external to the department there tended to be less training in SEMS (Standardized Emergency Management System) and less understanding about mass casualty, for example.

Increased LHD ties with Environmental Health (EH) were noted. When EH was outside of the LHD, working relationships were observed to sometimes be a challenge (for instance during foodborne illness investigations), and MOUs, which were not always in place, could have ensured more effective interactions. Whether or not the relationship between Public Health and EMS and EH has implications for LHDs in considering organizational structuring, it was clear that when local staff in these programs actively collaborated, and when roles were well defined, emergency preparedness overall was stronger.

There is considerable need statewide to strengthen Mental Health involvement in LHD preparedness activities. While significant recent program and funding challenges may have limited Mental Health's ability to engage with others, Mental Health commitment and expertise is needed to fully benefit LHDs; for example, in developing appropriate messages and assuring adequate capacity for providing crisis counseling services to LHD staff, their families and other response partners in an event. Closer communication between CDHS and Mental Health at the State level could have a positive trickle down effect on local efforts between the two programs to engage and collaborate.

Because the timely recognition of infectious disease epidemics can only be accomplished with an ongoing sensitive surveillance system that allows a robust monitoring of public health concerns, what will be essential is continued support for epidemiology positions, particularly those that serve multiple counties. In a major event it will be critical for the State to receive common data elements from all impacted jurisdictions. Currently there is no common database, and LHDs may collect different data

elements or report these in different ways making it difficult for CDHS to gain a statewide perspective about the scope of an epidemic or disaster which may hinder the response. In order to correct this deficiency, an increased investment in PHIN (Public Health Information Network)-compliant electronic data management systems is necessary. Training in basic epidemiology for more non-epidemiologist LHD staff would also be beneficial.

Public awareness and education prior to an emergency or disaster will directly affect California's emergency operations and recovery efforts. This appears to be one of LHDs' stronger areas of preparedness. LHDs have a good understanding that the public's response to an emergency is based on understanding the nature of the emergency, potential hazards, likely response of emergency services and knowledge of what they should do to increase their chances of survival and recovery, and they are doing a good job of trying to educate their communities. An important gap, however, is LHDs' ability to address their special populations. While communication strategies for non-English speakers are generally being addressed, the populations requiring more attention are developmentally and physically disabled persons and the frail elderly.

State leadership has made a difference in familiarizing LHDs with legal and other issues related to isolation and quarantine, as evidenced by our findings of higher levels of preparedness for this Guidance area. The *Public Health Law Workgroup Manual* is widely read and referred to, and has provided the foundation necessary for a successful isolation/quarantine operation.

Staffing is the major barrier to surge capacity. While surge can be created through tents, trailers and buildings, counties need people to staff them. Hospitals' estimated capacity is an assumption only; that is, it is theoretical and cannot fully be tested in the absence of a real event. A bigger cadre of medically-trained and other volunteers is still needed throughout California. EH and Mental Health, which were areas mostly unidentified as resources for public health surge, are now likely to be considered for such as a result of this assessment.

Public Health Nursing capacity must be addressed. Most LHDs are facing critical shortages of PHNs. The majority of the LHD nurses are in categorically-funded programs, such as Maternal and Child Health (MCH), and do not have adequate skills or experience to work in communicable disease or epidemiological investigation. PHNs are critical to an emergency preparedness program and will have key roles to play in such areas as mass prophylaxsis, contact investigation and follow-up, adverse reaction monitoring and quarantine management. It is critical for the State to work with the California Conference of Local Health Department Nursing Directors (CCLHDND), CHEAC and CCLHO to develop innovative solutions to this dilemma.

Public health laboratory capacity is critical for supporting a strong emergency preparedness program. While capacity has improved, the laboratory director shortage due to onerous federal regulations makes recruitment to fill the rapid turnover of existing laboratory directors a critical issue statewide. This deficiency jeopardizes Public Health Laboratory (PHL) capacity and the federal Laboratory Response Network (LRN) in California. Further, without reestablishment of the State Laboratory training program a sufficient number of trained microbiologists will not exist.

Disasters from floods to hazardous materials releases to acts of terrorism have a significant impact on the community, and planning for these events through an all-hazards approach to emergency preparedness is essential. All hazards planning, hazard vulnerability assessment and broader involvement in hazard materials management are relatively new areas in which traditional public health has not been intensely involved. Significant response and leadership will require a new urgency with the increasing threats of pandemic influenza as well as chemical and biological terrorism. While LHD Emergency Operations Plans and other plans generally meet NIMS (National Incident Management System) incident command structure requirements to perform core functions

related to these outcome areas, and plans have been tested in actual incidents and exercises, investment in resources such as access to a comprehensive, countywide GIS system will lead to higher levels of preparedness.

It is anticipated that adequate planning and exercising prior to the occurrence of an emergency will result in a potential reduction in loss of life, injuries and damage and speedier recovery. Increased planning and implementation for recovery and improvement efforts, including setting priorities and exercising, were recent requirements that LHDs had to consider in their FY 05/06 emergency preparedness activities, and relatively lower scores in these outcome areas were not surprising. LHDs understand that preparation operations transition to recovery efforts after significant disasters. The LHDs also understand the need to have a business plan when dealing with recovery. The events following Hurricane Katrina initiated discussions with county administrations regarding post-event planning for public health issues. There is also recognition that the economic interests and well-being of a county are dependent on safety in industries such as agriculture, dairy and poultry—the backbone of many California counties—in which LHDs play a supportive role.

Many LHDs lack specific plans to ensure continuity of services such as instituting a relocation of staff over extended periods as would be necessary in a pandemic. Others have not adequately evaluated how they would maintain minimal public health services in a long-term event. LHDs will need to better conceive of the potential for events where resources, including those of relief organizations, are overly stressed during emergency recovery, and staff must be redeployed elsewhere while priority services to protect the public's health are maintained.

While CDHS met its responsibilities in passing through emergency preparedness funds to LHDs and assigning regional EPO staff to clarify Guidance areas, State leadership from all areas of CDHS continues to be needed in the specific areas identified in this report. Our suggestions regarding additional support for exercises, training, inventory management, scientific consultation, technical assistance and leadership should be considered by CDHS to assure improvement in local emergency preparedness capacity.

While this report aggregated the results of the statewide assessment of 51 of the participating LHDs, findings and recommendations specific to each LHD were provided to the LHDs and CDHS in written individual comprehensive reports. These reports have already begun to allow LHDs to develop or modify their workplans consistent with the assessment findings as LHDs have embraced many of the technical and scientific recommendations for improvement that were made. Future State-provided technical assistance can be tailored to the needs of each local jurisdiction based on these reports. The benefit of the assessment process also included the onsite technical assistance provided to LHD staff by HOAC consultants, including brokering of information between LHDs about exemplary products, practices, and materials that resulted in the compendium contained in Appendix 5 to this report.

APPENDIX 1:

SUGGESTIONS FOR IMPROVEMENT IN EMERGENCY PREPAREDNESS CAPACITY

FOR LOCAL HEALTH DEPARTMENTS AND CALIFORNIA DEPARTMENT OF HEALTH SERVICES

SUGGESTIONS FOR IMPROVEMENT

"Culturally, emergency preparedness has been a good driver to improve other core functions within the public health department." – PHN Nursing Director, Central California

The suggestions below are organized by the CDC/HRSA Guidance Goals and Outcomes, and are driven by the entirety of the assessment process and findings. The first set is directed to the LHDs while the second set beginning on page 134 is directed to CDHS. While this list is being provided to LHDs and CDHS to share the range and depth of possible activities, how much of these improvements that can be done will depend on the resources available. The interrelatedness and complexity of public health preparedness issues makes it difficult to truly rank them.

Suggestions for LHDs

All LHDs received individual, comprehensive LHD-specific reports of findings and scores and extensive site-specific recommendations. The suggestions below, which are organized by Outcome/Goal area, represent a compilation of the recommendations made to individual LHDs and tie back to the common findings and themes. Some suggestions carry more detail than others as necessitated by the issue. Because of the need to parallel the Guidance format, there is redundancy among some of the areas. Since the findings and needs of the LHDs varied greatly, some of the suggestions are applicable to some LHDs while others are not. It is recognized that many of these activities for improvement are already underway or may have been completed; hence, some suggestions pertinent in 2005 may not still be in 2007. LHD leaders and affiliate organizations are encouraged to review these suggestions for relevance and order of priority consideration, and begin to take the necessary steps to implement them.

Key LHD Suggestions Related to Outcome 1A: All Hazards Planning

- Develop a plan for continuity of LHD services in case of a disaster or major event. Formalize the prioritization of services by developing a scalable plan of service redirection in the event that resources were to become stressed.
- Complete the National Incident Management System Compliance Assessment Tool (NIMCAST).

- Consider a test that would evaluate the response time to be physically present in the DOC within the 90-minute goal following notifications. Plan an exercise that will test the response time of staff to notification of an event, time to arrive at the DOC, time to bring the DOC up to function and notification to the operational area, and the time it takes to receive approval of a request for mutual aid.

- Consider language that clearly establishes in the County EOP the authority for the Local Health Officer to declare a local health emergency.

- Consider the use of Registered Environmental Health Specialists (REHS) staff to provide field and other LHD surge support during emergencies.

- Ensure all LHD responders have received ICS-100 and ICS-200 training as soon as possible. Accomplish additional training now to include the 700 level IS program for all senior and DOC staff. Plan for the LHD leadership to complete ICS 300 and 400 level training.

- Ensure that there is sufficient staff to provide for support of the DOC.

- If a LHD borders another state, develop and implement a plan to ensure that planning activities include any nearby emergency response partners and the other state in emergency planning.

- Consider a regional approach to a PHIN-compliant electronic tracking system that would meet the need to track hundreds or thousands of affected individuals.

- Significantly increase the number of PHNs in PPE protection and training and fit testing during this grant cycle so that they will be protected during an event needing expanded epidemiology and surveillance support. Ensure sufficient PPE for REHS staff by encouraging EH to participate in LHD training and fit testing program. Include training in radiological and chemical WMD agents.

- Work with the higher levels of tribal entities to secure their involvement in response planning.

- Obtain buy-in of all managers in the all hazards plan so that there is a clear understanding of the need to redeploy staff, if necessary, as well as the potential for service redirection.

- Provide more training in chemical and radiological hazards components and expand the training to more of the LHD staff. Consider that HazMat staff may be able to offer or organize a short simple lecture regarding chemical and radiological weapons of mass destruction (WMD) issues so all staff can increase basic knowledge in this area.

- Engage local OES, appropriate State agencies or private contractors to provide more SEMS courses for LHD leadership.

- Consider an exercise to test and document the time to organize a National Incident Management System (NIMS)/SEMS compliant medical and public health operations functional area.

- Encourage staff from Mental Health to routinely attend and participate in disaster preparedness planning.

Key LHD Suggestions Related to Outcome 2A: Information Collection and Threat Recognition

- Establish written protocols for roles and responsibilities with Environmental Health during a foodborne or waterborne outbreak. Such written agreements can establish a framework for more discussions and ultimately written agreements that would delineate authority, response agreements, and surge capacity issues to ensure cooperation between the LHD and EH during a crisis event. Ensure that EH's foodborne illness complaint log is shared in a timely manner with CD Control in an effort to increase the sensitivity of surveillance. Additionally, an MOU could foster further agreements, i.e., deployment of REHS staff to the field during an event requiring surge for public health.

- Assure that the LHD after-hours voice mail message refers calling parties with an urgent CD referral or questions/concerns regarding a CD or potential terrorist event to appropriate dispatch.

- Ensure that there is a dedicated and confidentially-located CMR fax machine in the LHD. Determine the frequency with which staff checks the CMR fax for disease reports during working hours.

- Participate in the Regional BioWatch Advisory Committee and implement and drill BioWatch response protocols.

- Provide basic disease investigation and fundamental epidemiology training to all PHNs and LVNs involved in both CD and non-CD control activities.

- Pursue a closer working relationship with the local tribes on communicable and infectious disease issues.

- Test the response system and document the time to contact the person who would make the decision to activate the DOC.

- Complete and submit the EFORS form whenever a foodborne outbreak investigation is conducted.

- Complete development of the "Zebra Binder" (developed by the Santa Clara County Public Health Department to assist providers in responding properly to a possible patient exposure), and distribute it to all local hospitals as soon as possible. Consider incorporating cite and fine information into the reporting section of the binder.

- Assess reporting accuracy, constancy and timeliness by comparing laboratory-based disease reporting with provider based reporting.

- Develop a more robust electronic data management system in order to apply to disease trend analysis for surveillance purposes. Distribute disease incidence and trend reports to surrounding jurisdictions to enhance regional surveillance efforts.

- Obtain security clearances for selected LHD staff to ensure receipt of sensitive health information.

- Expand CAHAN alerting to include local hospitals, Indian Health Clinics and other external partners. Determine response rates and response times to CAHAN alerts and work to increase rapidity and degree of response.

- Consider the use of other software programs such as Virtual CMR in the interim during CDHS development of WebCMR.

- Conduct early surveillance by monitoring school absenteeism and pharmaceutical sales of certain medications that might be indicative of an outbreak or terrorist event.

- Develop a strategy to encourage physicians to submit CMR forms for diseases mandated as physician-reportable rather than relying on laboratories to report them.

- Develop an LHD response protocol for BioWatch, a regional early event detection system.

- If there is a Biohazard Detection System (BDS) in the jurisdiction, work with postal authorities to develop a response exercise.

- Develop and implement PHIN-compliant electronic applications for “Partner Communications and Alerting” and for “Early event Detection”.

- Utilize the reference LRN laboratory for PulseNet isolate submission.

- Conduct a formal analysis of the timeliness and completeness of disease reports (e.g. periodic comparison of CMR diagnosis and reporting dates, chart audits to determine CMR completeness). Develop disease incidence baseline data as an aid to the recognition of trends and clusters.

- Formalize the utilization of an approved Public Health Laboratory (PHL) for accessing molecular typing during outbreak investigations.

- Establish an electronic call down system for staff rather than solely relying on phone trees; once such a system is established it should be exercised regularly.

- Evaluate the timely dissemination and receipt of disease information by key stakeholders; continue to work towards a rate of reaching 90% of the key stakeholders.

- Implement Epi-X in order to provide greater regional surveillance and communications. Ensure access to Epi-X by key disease control staff.

- Where there are Ports, meet with Port authorities to discuss the coordination of surveillance and response planning and activities related to a bioterrorist or communicable disease event.

- Notify State officials as soon as a foodborne outbreak is suspected in order to enhance statewide surveillance.

Key LHD Suggestions Related to Outcome 2B: Hazard and Vulnerability Analysis

- Purchase and implement Reverse 911 capability as an adjunct means to communicate emergency information, including to special populations and those in geographic proximity to selected hazards.

- Develop/maintain GIS capability with respect to hazardous materials sites to enhance ability to perform public health analyses of hazards and vulnerabilities, epidemiology of disease outbreaks, hazardous materials response and location of public health services. Acquire related plume modeling capacity in order to map all-hazard sources and the vulnerable populations associated with them. Ensure that EH chemical inventory information and all items of identified public health significance are included in the county GIS system.

- Assess human health threats from the perspective of greatest threat of lethality and largest affected population, and determine a priority of vulnerabilities based on these criteria. Consider the possibility of convergence of more than one threat. A useful tool may be the Hazard Risk Assessment Instrument developed by the UCLA Center for Public Health and Disasters. Monitor and update these recognized risks including state and regional transportation corridors and specific vulnerabilities associated with agriculture and public utilities.

- Drill or exercise to test communications and the mitigation plan for at least one of the major identified potential public health threats.

- Improve local data handling systems to improve analysis and forecasting tasks. Consider the acquisition of mobile weather monitoring equipment to be used at the site of an event.

- Strengthen the existing CUPA program. Coordinate the CUPA planning for hazardous material issues that overlap with public health responsibilities to ensure the roles and responsibilities are clear among the several entities involved. Improve chemical testing capability of the HazMat teams in the county.

- Review the Hazard Mitigation Plans (HMP) and assess for potential impact on human health, with special consideration for lethality and large populations. Once the assessment is completed, develop specific risk reduction approaches for all identified major human health threats. The HMP and the HazMat Area Plan should be completed and shared with all response partners.

- Increase access to real-time information during an emergency by determining what information would be necessary for hazards identified in the Hazard Mitigation Plans (HMP). Contact the appropriate response partner and arrange methods for rapidly obtaining this information 24/7/365.

- Determine if entities such as the Air Quality Management District (AQMD), Coast Guard, Forestry Services or National Park Service have resources to assist in tracking hazards, especially smoke from fires, during an event, and engage them with the LHD. Develop a formal plan for the coordination of activities of these partners during a major hazardous agent release.

- Ensure the GIS mapping of all potential human health hazard sources in addition to those under CUPA and Cal-ARPS.

- Select at least one or two professionals in either the LHD or EH to take the lead in chemical and radiological release expertise. Consider providing some basic understanding via lecture about chemical and radiological issues to key staff.

- Distribute Disaster Preparedness handouts and 'Citizen Emergency Tool Kits' widely among the general population.

- Work more closely with Environmental Health and other partners such as local fire officials to develop a coordinated effort to utilize data collection and analysis tools for mapping (e.g. GIS) and forecasting (e.g. plume modeling).

- Work with CalTrans to gain a greater knowledge of the chemical testing capability available and to lend assistance in championing additional resources as may be desirable.

Key LHD Suggestions Related to Outcome 3A: Laboratory Services

- Assure that personnel in the public health laboratory (PHL) attend training to obtain the expertise to perform sentinel-level testing for BT agents. Consider establishing the capability to perform sentinel testing.

- Since the PHL relies on the local HazMat staff to screen, ensure that screening for radiological and chemical risk is included in all written HazMat protocols and followed to reduce the potential for staff injury or death and contamination of the PHL. Consider obtaining the HazMat radiological and chemical hazards test result prior to acceptance of a suspected threat test situation.

- Collaborate with the State Laboratory on preparedness issues, including analysis of clinical specimens for agents of chemical terrorism.

- Ensure that there is salary parity with nearby counties to retain the investment of training microbiologists to potentially mitigate the loss of resources from continually training and then losing these staff to nearby counties.

- A remodeled or new facility is recommended for laboratories where it is necessary to provide appropriate air supply, equipment space and bench space to meet the requirements of the *Biosafety in Microbial and Biomedical Laboatories* and current seismic standards.

- A robust after-hours on-call system that would ensure 24/7 availability of laboratory staff and access to the PHL should be assured in every PHL. Consider how the system could be rotated to decrease the chance of failure during an emergency. The after-hours/on-call procedures need to be very specific. The current system of 24/7 laboratory response may in some LHDs fail if there is no requirement for a specifically designated PHL professional to be in the jurisdiction during off hours.

- Conduct an analysis of facility requirements to provide the appropriate biosafety level for work with *M. tuberculosis* and *Cocciodies immitis* organisms and packaging and shipping specimens containing agents of bioterrorism.

- Assure that all contract and catchment counties have updated turn-around time information. Continue to work with these local PHLs to provide annual updates on Sentinel laboratory issues. Consider allowing other catchment area local Health Officers to have direct access to the LRN Reference PHL should the need arise in other counties.

- Continue the specialized training by PHLs for sentinel laboratories and ensure that all receive training every 12 months. LRN/Select Agent reporting requirements should be reviewed and procedures put into place to make sure they are completed in the required time.

- Develop a closer working relationship with local law enforcement for the rapid emergency transport of critical agents to higher level LRN laboratories.

- Address biosecurity policy by delineating who has access to the BSL or wherever agents will be stored. Biosecurity equipment including key card locks and video equipment should also be addressed.

- Work with laboratory information system (LIS) vendors to ensure that the LIS is PHIN compliant. Implement a new LIS if needed. Become aware of PHIN requirements and ensure they are met by the new LIS, requiring LIS vendors to work towards PHIN compliant software.

- Contact the CDC LRN Reference PHL to provide a local update regarding Category A agents and chemical specimen (blood and urine) handling and shipping for area sentinel laboratories.

- Recruit and fill vacancies for PHL Director positions as soon as possible. Consider part-time directors as only a temporary measure.

- Ensure that a chain of custody system is in place in conjunction with the LRN Reference PHL. Ensure that the HazMat professionals have a chain of custody procedure compatible with the Reference PHL requirements.

- Determine the actual capability of the hospital sentinel laboratories to rule out BT agents and whether they perform the College of American Pathologists (CAP) proficiency testing.

- Upgrade the laboratory facility from Biosafety Level 2 to include at least one working area within the laboratory that meets Biosafety Level 3 requirements if a PHL wishes to pursue designation as an LRN Reference Laboratory.

- Ensure that the Reference PHL has provided area hospital and clinical sentinel laboratories and the LHD with the necessary protocols and procedures for both biological and chemical specimen handling and shipping.

- Plan a training event for the catchment area and provide the updated training in at least two or three locations regarding the Category A agents and human specimen handling for chemical agents. Assess the extent and number of hospital staff in the area who have been trained in sentinel laboratory protocols.

- Revise and expand the Integrated Laboratory Response Plan; consult with the State on preferred template.

- Establish sentinel laboratory testing procedures for bioterrorism agents expected to be seen and complete proficiency testing. Review the Select Agent Rule and incorporate requirements for an exempt laboratory into laboratory procedures and document.

- Test the LRN Reference PHL's capability to provide a timeliness of response to be present at the PHL to receive specimens during off hours, and document the response time.

Key LHD Suggestions Related to Outcome 4A: Health Intelligence Integration and Analysis

- Actively pursue the use of laboratory data as an active surveillance tool. Development of the PHL LIS interface with epidemiology software should aid in this effort.

- Provide basic epidemiology and fundamental disease investigation training to non-CD PHNs working in the LHD to serve as back-up for CD control.

- Utilize statistical epidemiological analysis of disease incidence and trends for surveillance purposes. Determine baseline disease incidence data so that significant increases would be detected sooner, resulting in a more sensitive surveillance system. Use trend analyses to detect increased disease spikes in a timely fashion.

- Distribute disease incidence and trend reports to surrounding jurisdictions to enhance regional surveillance efforts.

- Ensure GIS capability to enhance epidemiological and CD control activities.

- Analyze private answering service data or Sheriff dispatch after-hours call records to determine response times to after-hours calls.

- Improve epidemiology efforts through further development of PHIN-compliant electronic information exchange systems, written documentation of notification protocols and increased capacity for timely analysis of disease data so that trends can be determined and clusters, outbreaks or unusual diseases and conditions recognized early.

- Continue to build relationships with the veterinarian community to increase zoonotic surveillance. Consider establishing a simple zoonotic Confidential Morbidity Report (CMR). Arrange for EH or Animal Control to be a conduit to more veterinarian collaboration and involvement with the LHD.

- Test staff capacity to respond to an event and to conduct disease investigation and contact tracking in an effective and timely manner.

- Collaborate with local hospitals to implement the rash illness algorithm and a response protocol.

- Conduct a formal evaluation of the timeliness and completeness of disease reporting. Consider a comparison of physician and laboratory reporting. This might involve a comparison of dates of diagnosis and reporting date to evaluate timeliness. Compare laboratory reports with provider reports to evaluate completeness by providers. When late or incomplete reporting is seen, call the individual physician to discuss the case.

- Consider preparing epidemiological summaries weekly of top diseases, performing active surveillance for “unexplained deaths” with investigational follow-up, and having regular coordinating meetings between Public Health and EH.

- Consider implementation of active surveillance strategies such as syndromic surveillance, pharmaceutical sales monitoring and school absenteeism as a means of increasing the ability to detect an event or an outbreak in a timely manner. ReddiNet might provide this capability. Consider utilizing RODS for pharmaceutical sales surveillance. Add emergency departments to the syndromic surveillance program and to the electronic laboratory reporting system.

- Continue the expansion of active surveillance by routine use of BioSense by key LHD staff. Assure that epidemiologists receive BioSense training.

- Network with other jurisdictions for regional disease surveillance by attending the regional CD Exchange and regional Epi Exchange meetings.

- Continue to support the development of Web-CMR and implement it throughout the jurisdiction once available.

- Improve passive surveillance in the form of disease reporting by physicians and laboratories through the use of cite and fine and the formal evaluation of the accuracy and timeliness of reports received. Distribute disease incidence and trend information on a regular basis to local providers both as an incentive to reporting and to increase their ability to detect trends.

- Develop the census tract tracking capacity of vCMR as an additional tool for early event detection and outbreak control efforts.

- Develop written policies and procedures in order to clarify the roles, responsibilities, and ICS structures of the Public Health and EMS DOCs.

- Assure that the written protocols that delineate the roles and responsibilities of EH and Public Health during a foodborne or waterborne outbreak are updated annually. Working relationships could be strengthened through more joint emergency planning and discussions and ultimately a written understanding that would delineate authority, response agreements and surge capacity issues during a crisis event.

Key LHD Suggestions Related to Outcome 5A: Public Health Epidemiological Investigation

- Ensure that all nurses (PHNs, RNs, and LVNs) working in the LHD receive fundamental epidemiology and basic disease investigation training in order to provide surge capacity for outbreak management. Establish additional surge capacity through the expanded training of EH REHS staff in bioterrorism and disease control principles. Interviewing and questionnaire administration should be included in the training of all staff that may provide surge capacity during a large disease event investigation.

- Consider the Core Infectious Disease Emergency Readiness (CIDER) resource at UC Berkeley for increased training of PHNs and other staff.

- Actively pursue the acquisition of an epidemiologist, or consider creating an epidemiologist position that could be shared between two or more LHDs regionally if at least one position does not exist.

- Identify a source for dermatologic consult for rash illness surveillance.

- Perform a formal assessment of disease report timeliness and completeness and an evaluation of epidemiological investigation response time. Document any evaluation and corrective action taken following drills and exercises.

- Continue to develop working relationships with tribal authorities for communicable disease issues.

- Develop a robust disease outbreak management system to prepare for larger outbreaks and events. Identify IT support capacity for the development and maintenance of electronic data management systems, and utilize packaged electronic data management software such as Epi-Info or CDC's OMS (Outbreak Management System).

- Prepare routine summaries and epidemiologic reviews of CD data and distribute quarterly to key partners outside of the LHD.

- Form a closer working relationship with the veterinary community to participate in emergency preparedness planning and response and to enhance zoonotic disease surveillance. Work with local zoo officials to involve them in zoonotic disease surveillance.

- Develop GIS capacity as a CD Control aid to disease surveillance and control.

- Develop the census tract tracking capacity of vCMR or other such software as an additional tool for early event detection and outbreak control efforts.

- Ensure access to Epi-Exchange for key staff. Participation should include the local Health Officer, Deputy local Health Officer, epidemiologists, and CD Control Manager.

- Evaluate the epidemiological component of after action reports for exercises or real events, establish an action plan for improvement based on lessons learned, and implement desired changes before the next exercise. To complete the improvement cycle, utilize the subsequent exercise to evaluate the effectiveness of the improvements implemented.

- Increase collaboration with the regional Poison Control Center for surveillance activities.

- Conduct a planned outbreak exercise with a fully developed scenario involving as many staff as possible in which CD and epidemiology response are exercised as major goals; the exercise should also re-test the communications component of the public health system.

- Provide for 24/7/365 CD staff availability.

- Consider establishment of MOUs with neighboring jurisdictions for a regional response to public health emergency events. Include border states/countries in this regional approach. Network with other jurisdictions for regional disease surveillance by attending the regional CD Exchange and regional Epi Exchange meetings.

- Consider purchasing more wireless laptops so data can be entered in the field and electronically submitted by epidemiologists or CD staff.

- Use the ICS structure and the activation of the DOC during outbreak investigations.

- Develop a LHD-specific, department-specific CD protocol manual. Develop a formal training plan for CD Control staff, especially for succession planning as current staff retire or resign.

- Distribute reporting requirements and protocols to physicians at least annually. Evaluate the timeliness and completeness of physician reporting of communicable diseases. Consider a comparison of physician and laboratory reporting.

- Exercise a BioWatch “hit,” prepare an after action report and document response times.

- Review a random sample of CMR reports to determine the time between date of diagnosis and report date. If the results are not acceptable, write a corrective action plan and work with local providers to reduce this time.

- Implement early surveillance systems through monitoring school absenteeism and pharmaceutical sales of certain drugs that might be associated with an outbreak or bioterrorist event.

- Establish regular meetings with infection control at local hospitals. Implement strategies (e.g., posting of requirements and contact information) to optimize reporting by hospitals on weekends and by community clinics.

- Provide SEMS training for any public health employees who have not attended and repeat for those who have.

Key LHD Suggestions Related to Outcome 6A: Emergency Response Communications

- Continue efforts to increase the use of CAHAN among key stakeholders in the community to enhance alerting of an emergency. Adding hospitals to CAHAN should be a priority. When hospitals are added, create a plan for training and demonstrating capability.
- Train all staff who work in the DOC in SEMS IC.
- Expand the availability, redundancy, backup capability and interoperability of the communications system so that the LHD can operate without land lines or even without cell phones and communicate with all necessary employees emergency partners. Implement and exercise plans for interoperability of communications with other county departments.
- Assess effectiveness of the partner notification system to verify whether it reaches the CDC goal of 90% of key stakeholders. Provide additional training and drills if necessary to improve notification effectiveness.
- Complete designation of priority service restoration in the event of a physical disruption to the telephone service.
- Explore use of CAHAN blast fax capability as an alternative, or as a redundant method, for blast fax of emergency information internally and to key partners.
- Establish a secure area of the LHD web site for secure communication with community partners.
- Ensure basic IC training and IS 700 level IC to all employees.
- Provide a clear plan for communication equipment/system users for how the primary, secondary and tertiary communication systems are to be utilized, train employees and perform an exercise utilizing primary to secondary to tertiary communication
- Establish reverse 911 capability.
- Add American Indian tribal entities to e-mail lists. Activate fax capability to tribal entities and test by sending an alert randomly each month and reporting results with critique.
- Work with fire and law enforcement agencies on further defining protocols and procedures for the assessment and reporting of medical issues from those personnel.

- Re-test emergency systems on a regular basis within the LHD, and between the LHD and hospitals and other response partners so that the performance can be determined and employees trained to utilize the systems. Some of these drills can be included as part of other scheduled exercises.

- Develop a contingency plan for emergency operations if the DOC is damaged or otherwise not available for use.

- Expand radio network capability in order to bolster communications redundancy during an emergency. Consider the addition of UHF radio capability as an additional redundant communications method.

- Improve the technology of alerting and notifying employees to ensure the method selected can contact a sufficient number of employees rapidly and accurately. Once implemented, test the selected system to determine performance.

- Ensure communications discussions with the U.S. Postal Service during BDS deployment.

- Ensure designation as an essential service provider and priority restoration designation for telephone and utility services for the LHD. Explore essential service status for gas and electric service for designated key staff.

- Test call-down lists and other methods utilized to contact employees for emergencies at appropriate intervals.

- Ensure that the incident commander has sufficient backup and that all backup staff has the necessary training, including advanced training classes, to efficiently respond to an emergency.

Key LHD Suggestions Related to Outcome 6B: Emergency Public Communications

- Analyze the communication plan with clinicians and response partners to determine how to improve efficiency. Consider CAHAN for use in secure communications with clinicians. Assure policies and protocols are in place to ensure message consistency among partner organizations. Assure staff is informed of an alert at the same time the public is informed.

- Analyze the potential for the county/LHD web site to be expanded to provide a source of public health information, including information translated into Spanish, and ability to provide shortcuts from the home page to an emergency information page. Any identified delays need to be rectified. Consider a Virtual Private Network (VPN) or other secured web site for partners' use only to communicate information securely with response partners and community physicians.

- Expand the use of the local alerting system or CAHAN to local medical providers for rapid release of alert information.

- Assess whether travel health advisory information needs to be available, especially in counties with an international and state boundary and border crossings, and make it available.

- Assess training needs regarding crisis communication and media relations and develop a training matrix for the LHD and community partner agencies based upon the findings.

- Improve communication links to special population groups. Work with community-based organizations and the Mental Health Department as these entities can be partners in providing access to and reaching these populations, and consider recruiting individuals from special need populations to become involved in planning efforts.

- Enhance LHD risk communication delivery by reviewing the functions identified in the CERC Plan to ensure that these could be accomplished at the level of intensity that an emergency would necessitate and/or for a prolonged event. Be sure to consider planning for stakeholder coordination and for rumor control. Complete CERC training for all community partners.

- Conduct additional drills and exercises to increase experience and effectiveness of participation in a JIC. Work with PIOs from other jurisdictions to establish and improve joint communications plans.

- Establish reverse 911 capability for the LHD as an adjunct means to communicate emergency information, including to special populations and those in geographic proximity to selected hazards.

- Continue to develop the basic CERC Plan by preparing templates for SNS, including media templates which explain to the public where to go, what to bring, and what to do. Additional templates for SNS are needed for a mass prophylaxis informational flyer, mass prophylaxis fact sheets, and press statements. Actively monitor media for accurate message content as reported by media.

- Develop a comprehensive list of the stakeholder PIOs with their emergency contact information, and develop policies and procedures for 24/7 coverage for PIO type activities in a large ongoing

event. Establish a procedure for contacting the State Duty Officer or PIO during off hours and assure that key LHD staff has this information.

- Increase involvement of mental health professionals in reviewing and commenting on the psychosocial content of alerts and messages MH believes are necessary to distribute during an event. Also ensure increased participation by MH in exercises and training events.

- Ensure increased participation by MH in exercises and training events.

- Work with local businesses and universities/colleges to obtain agreement for these groups to be a conduit for alerts to employees and students.

- Assure that the risk communication plan identifies the person who is responsible for actively monitoring the media for message content as reported by media sources.

- Maintain and update contact information for local physicians. Ensure that the local/regional medical society's blast fax is sufficient to notify physicians, and secure alternate means if necessary.

- Establish MOUs with radio stations and schools that will ensure expedited notifications and information dissemination. Move forward with technology upgrades that will allow for expedited notifications and information dissemination.

- Drill/exercise the methodology for coordinating messages with community partners to assure that all relevant players are at the EOC to assure adequate coordination can take place.

Key LHD Suggestions Related to Outcome 6C: Worker Health Safety

- Complete a comprehensive assessment of PPE needs that is job-class specific for all LHD staff.
- Determine if volunteers or community-based staff will require PPE and set up a training plan for all who may play a supporting role in emergency response.
- Assure N-95 respirator training and fit testing are performed for all appropriate staff throughout the LHD. Once a year designated staff, including all RNs, should be fit-tested with these respirators and receive refresher training. Assure there are adequate supplies of gowns, gloves and face shields. Consider adding EH responders to fit testing plan for N-95 respirators. Ensure staff has a rudimentary understanding of/training in PPE for biological, radiological and chemical agents.
- Collaborate with hospital personnel and other first responders to assure they have adequate supplies of PPE. Incorporate briefing first responders and the medical community on the need for PPE into a future exercise.
- Purchase and equip "Go Kits" with instructions on PPE use. Personal health and safety information could be added to the "Go Kit" reports that are faxed from the field.
- Develop and deliver a curriculum for infectious agents and hazardous materials (biological, chemical, radiological) training for appropriate LHD staff, and coordinate with EH. Field and clinic staff should be included concerning basic recognition of key biological agents. Determine who may require Level C suits and train these individuals. Conduct drills for evaluation of course material.
- Centralize responsibility for exposure to hazardous materials and PPE training to assure training is provided consistently throughout the LHD. Just-in-time training during an actual, stressful emergency that may have to include agent or HazMat knowledge may not be sufficient or rapid enough for adequate response.
- Establish a robust data management system to track exposures of employees and volunteers during an event. Consider an electronic employee exposure and management tracking system that would be required in a large event. Web EOC or a similar software program might be helpful in this area as well.
- Consider dispersing some PPE to different locations throughout the county to improve access.
- Conduct a formal assessment of mental health capacity, including private providers, and exercise the capacity. Confirm that the level of surge capacity that may be necessary is actually available. If not sufficient, obtain a source for surge capacity. Develop a formal MOU with Mental Health and its provider network for crisis counseling for LHD staff.
- Evaluate the adequacy of decontamination equipment and purchase additional tents if capacity is not adequate. Conduct necessary exercises that test the operation of the decontamination unit to ensure it is fully functional and personnel are trained in the unit's operation.

- Designate an LHD employee as the official LHD Safety Officer. Charge that individual with developing an Exposure Control Plan, fit-testing of staff via Risk Management, establishing a Respiratory Protection Plan and adding a Worker Safety component to the Emergency Response Plan. Other local jurisdictions may be able to provide templates for these plans which can be readily modified to meet local needs. Consider augmenting internal Safety Officer expertise with the contract resource of a Certified Industrial Hygienist.

- Ensure that Mental Health workers have received formal SEMS training in disaster response in order to provide adequate services for public health responders.

- Identify additional technical consultant resources such as a PHL professional and ensure consultant availability 24/7/365.

- Discuss with tribal leadership tribal entity responders' needs to receive PPE and training.

- Retest exercises after improvements have been implemented.

Key LHD Suggestions Related to Outcome 6D: Isolation and Quarantine

- Implement a basic data management system to address isolation and quarantine management and work toward PHIN compliance. Develop the use of Epi-Info or a similar software product for the management of large amounts of data. Test the ability of the system to handle extensive data management needs in a large event. At a minimum, utilize Excel spreadsheets or Access databases that will capture information from hospitals, clinics and providers to enhance the LHD's ability to analyze information, and adjust strategies accordingly.

- Establish and test a plan to monitor treatment if large numbers are affected during an adverse event; include a plan for surge. Acquire the capacity to electronically manage a quarantine event.

- Establish designation of a back-up local Health Officer.

- Acquire/maintain the services of a PIO for Public Health information management in an isolation/quarantine event. Assure coordination and release of information. Assure the PIO has a counterpart in Mental Health who can review media releases. Conduct a drill involving the PIO, establishing a JIC to assure coordination of public information dissemination.

- Involve law enforcement, Mental Health, and medical services personnel to a greater degree in the formulation of a quarantine plan that includes adverse treatment reaction management and quarantine safety and enforcement.

- Add Isolation and Quarantine to training courses for LHD staff and appropriate response partners. Just-in-time training during an actual, stressful emergency may not be sufficient or rapid enough for adequate response.

- Consider using the Outbreak Management module of Visual Confidential Morbidity Report (VCMR) as an electronic system to collect, manage, and coordinate information about isolation and quarantine.

- Assure the Pandemic Influenza Plan clearly delineates roles of the LHD, Fire, EMS and Law in a quarantine or isolation situation.

- Assure the emergency preparedness of MH staff by involving them in writing plans and in all drills and exercises. Provide appropriate education or training to MH staff regarding quarantine management issues. Include MH personnel in the next PODS drill.

- Conduct additional planning regarding providing medical care (such as for pre-existing/chronic conditions) to persons who are isolated or quarantined outside of an acute care facility.

- Request a continuity of business plan from vendors that will provide critical support during emergency situations.

- Ensure the recruitment and training of physicians at local hospitals to treat and consult on adverse events for medical countermeasures.

- Implement a “Reverse 911” system for rapid dissemination of public health messages to the public.
- Consider training additional non-LHD medical staff in adverse treatment reaction management to provide surge capacity.
- Continue developing scalable plans that would allow effective response if isolation or quarantine of large numbers were required. Develop communication protocols related to isolation and quarantine, and once they have been developed exercise them to assure they work effectively.
- Implement efforts to involve additional cities’ law enforcement and to foster further Sheriff and police support. Determine whether criminal or civil quarantine orders would be implemented during an event and ensure that law enforcement officials are aware and supportive of the decision.
- Develop and integrate the CD Log for use during a quarantine event.
- Expand CAHAN and its broadcast communications capabilities to LHD first responders and partners.
- Continue to explore staffing methodologies for vaccinating first responders beyond the limited number of LHD staff who are vaccinated.
- Enhance staff capacity to enter and analyze data.
- Formalize agreements and plans with Public Works and the Red Cross for the use of road message boards and the mobile communications vehicle during an emergency event.
- Ensure that the VNA and community hospice programs are able to support the LHD in a large event.
- Periodically drill the emergency radio alert system and local radio public announcement system.

Key LHD Suggestions Related to Outcome 6E: Mass Prophylaxsis

- Identify, evaluate and develop MOUs for all POD sites. Consider equipment and supply needs. Train leads in distribution operations and designate and train a distribution site manager and back-up. Develop a staffing plan for 24/7 operations.

- Conduct a formal exercise that brings up multiple PODs simultaneously. Complete a drill or exercise notifying the population that prophylaxis is needed. Include exercising a plan for crowd control. A formal corrective action plan needs to be done following exercises.

- Pre-designate and pre-train staff for the number of PODS distributed in the county and do not depend on just-in-time strategies. These individuals should represent a core of expertise in POD operation that would be valuable for evaluation and improvement of effectiveness of POD operations. Develop picture identification badges to strengthen security at the POD.

- Complete a drill involving mass prophylaxis and SNS functions if this has not occurred; evaluate the drill and implement corrective action, then repeat it to measure improvement.

- Undertake a communication exercise that tests alternate communication plans for special needs populations. Document the potential sources of delay and work to mitigate each concern. Develop a maintenance plan for rapid repair of communication equipment.

- Develop a comprehensive training plan for the SNS function. Develop a registration and certification plan for supplemental staff and volunteers, and develop a credentialing plan.

- Develop a definitive standard for response time to return to work and conduct an exercise to determine if staff can meet the standard.

- Complete a pharmaceutical inventory and purchase as necessary additional antibiotics to assure an adequate inventory to implement POD operations. Assess the need for a regional pharmaceutical cache and implement strategies accordingly.

- Establish a plan to coordinate local media efforts. A public information template should be developed for each dispensing site. A protocol for the release of information needs to be put in writing. Measure the timeliness of message development and distribution in the next drill testing communication. Test this for messages going to both the general population as well as the special need populations.

- Use and train staff in modeling software. Incorporate modeling into future exercises to assure the epidemiologists can perform projections in a timely manner.

- Allocate a greater proportion of funding to the SNS function as necessary to increase SNS readiness.

- Define specific plans for transportation of supplies. Develop “Go Kits” to assist with the retrieval of supplies.

- Strengthen linkages with tribal governments and evaluate the feasibility of POD sites at tribal medical clinics.

- Develop an evaluation function for the SNS function.
- Conduct an exercise involving first responders and first receivers receiving prophylaxis.
- Develop an inventory management system, or minimally identify the data elements that need to be tracked, and use a basic Excel spreadsheet to collect and track this information. Assure any data systems will be able to meet PHIN requirements, addressing the adequacy of data security systems. Test the current system in an exercise or drill to assure it is robust enough to handle large amounts of data in an event and assure the LHD would be able to analyze the data in a timely fashion. Ensure IT vendors are aware of PHIN requirements and assure any new systems meet these when they are developed or purchased.
- Ensure that County Counsel has reviewed the SNS Plan.
- Formalize agreements in the form of MOUs or other written agreements with response partners including facility (POD sites) and equipment use.
- Ask the State SNS Coordinator to review distribution sites using the Site Survey Tool.
- Assure the Pandemic Influenza Plan clearly describes the chain of command for ordering mass prophylaxis. Test its current call-down system after hours to determine actual length of time it takes to notify staff and receive a response.
- Consider the need for treatment centers and incorporate them into the SNS Plan. Develop MOUs with the potential medical facilities that would be used for treatment centers.
- Continue the build up of CAHAN capability.
- Develop a Patient Management System for enhanced tracking of persons receiving prophylaxis.
- Develop a plan for communication between Command and RSS (receipt-store-stage) locations and distribution sites.
- Develop and implement a formal training plan to assure all staff is trained at an appropriate level for their function in an event.
- Develop and keep current call-down rosters for leads/staff. Assure hospitals and fire departments maintain current employee call-down lists. Update rosters quarterly.
- Sign MOUs with local schools regarding potential POD sites. Finalize MOUs/formalize agreements with law enforcement regarding security.
- Incorporate current training logs prepared by staff into an agency-wide matrix to allow for ongoing public health competency documentation.
- Meet with pharmacies to encourage their participation in a pharmaceutical inventory and participate in emergency preparedness planning.

Key LHD Suggestions Related to Outcome 6F: Medical and Public Health Surge

- Conduct a formal assessment of training needs for providers and develop a plan to address them in conjunction with other partners. Consider having the local Health Officer provide training on infectious diseases to community providers.

- Acquire the capacity of an electronic outbreak management system. Develop the use of Epi-Info or a similar software product for the management of large amounts of data. At a minimum, create and use a simple Excel spreadsheet system to provide some assistance.

- Implement additional hospital-based surveillance activities to enhance the ability of hospitals, clinics and urgent care centers to identify and report a critical event or outbreak. Address any bed capacity gaps, and augment current capacity to reach 100% of HRSA requirements. Attain full negative pressure room capacity.

- Assess the number of volunteers needed for surge capacity. Create and maintain an updated inventory and data base of potential volunteer professionals, such as physicians and nurses that may volunteer in an emergency, in accomplishing tasks related to surge. Work with local medical and dental societies and nursing registries on the recruitment and training of volunteers.

- Analyze current and potential future disease control and epidemiology software and communication systems for adherence to PHIN standards. Train staff in the use of the software. Consider developing and training an Epidemiology Response Team that could be deployed to hospitals during an event.

- Collaborate with CDHS on volunteer recruitment and training and encourage CDHS to assume a more active role in the areas most likely impacted by a large event. Identify help from a community group that is willing to take on volunteer recruitment and training efforts; develop a task force to address surge capacity issues including recruitment of volunteers. Consider incorporating NACCHO's competencies and training curriculum for volunteers.

- Complete a specialty physician data base for surge capacity purposes.

- Complete formal MOUs for surge capacity with Indian tribes.

- Consider assigning LHD leadership to rotate on standby status. Consider expanding the persons available to cover off-duty hours.

- Consider EH staff for surge potential and ensure training and PPE accordingly.

- Include in surge planning consideration for wide population shifts that occur when there are attractive summer and winter vacation sites and high commuter populations in a jurisdiction. Provide CDHS with population projection data for these changes. LHDs should also consider the 24/7/365 availability of LHD and first responders as there can be potential gaps.

- Contact the Regional Poison Control Center to ensure they will be a component of the active surveillance system and be able to quickly contact the LHD 24/7/365.

- Continually review the LHD physician list to evaluate capacity for surgical specialists, burn specialists, consultation for explosive injuries and infectious disease specialists.
- Expand CAHAN use throughout the jurisdiction.
- Pursue the development of a CalPEN epidemiology training module for hospitals.
- Continue to work on implementation of the Medical Reserve Corps (MRC).
- Develop an agreement with local prisons to maximize use of available local correctional facilities for the use of negative pressure rooms during an emergency event.
- Enhance the capacity to do syndromic surveillance. Continue to work with pharmacies to monitor sales of certain medications that could be indicative of an outbreak or bioterrorist event.
- Disseminate a public health emergency preparedness informational binder, such as the "Zebra" binder that has a cover sheet with county emergency contact information, to local health care providers including hospital physicians.
- Ensure that hospital professionals are receiving the competency-base educational activities as described in HRSA Priority Area 5, "Education and Preparedness Training."
- Provide a review of bioterrorism and chemical terrorism agents to all staff through LHD training so that they will be more knowledgeable concerning potential chemical/radiological WMD events.
- Exercise the epidemiology surge response team to determine the capacity to meet epidemiology surge in a large event.
- Join with other LHDs that border the states where there are concerns about timeliness of disease reporting; provide the CDHS with information about the concern and the need for the issue to be resolved at the state level. Consider a regional epidemiology approach to bolster this activity.
- Perform a drill to test the surge capacity for tracking cases for a large outbreak, including rapidly setting up necessary databases, entering information on a large number of cases and analyzing the information to perform necessary activities.
- Provide disease investigation training for all LHD PHNs, RNs and LVNs for surge capacity purposes. Pursue the recruitment of school nurses for surge capacity. Offer continuing education credit to serve as a training attendance incentive.
- Work with UC Davis Telemedicine System or a similar resource if local expertise is not available, or needs to be augmented, to assure basic training is offered to LHD staff regarding infectious, chemical and radiological diseases or conditions including chemical/radiological WMD events.

Key LHD Suggestions Related to Outcome 7A: Economic and Community Recovery

- Draft an LHD pre-event recovery plan for the most expected emergency response hazards such as wildfires, floods, earthquakes, dam or levee failures and pandemic influenza epidemic. The use of the FEMA "Emergency Management Guide for Business and Industry" to develop a LHD recovery and relief plan is a tool that could help guide the LHD in this effort.

- Formalize the prioritization of LHD services by developing a scalable plan of service redirection in the event that resources were to become stressed. Consider also how routine operations and services may be accomplished if a crisis event required sustained local resources.

- Require any LHD subcontractors to provide a continuity of business plan to ensure that they will be able to provide necessary and essential services. Begin or increase discussions with the business community (particularly large employers), Chamber of Commerce, CBOs, Red Cross and other relief organizations about post-event planning that would include LHD responsibilities. Explore and maximize connections the local Health Officer and Agency Director have within the business community and nongovernmental organizations as a means to further discussions regarding pre-event recovery planning. Work with these entities in addressing the needs of special populations.

- Establish an MOU with Environmental Health regarding cooperative relationships in issuing interim guidance during recovery.

- Complete economic modeling or forecasting for the highest priority potential public health emergencies. Consider engaging an economics or business professor to provide economic models of potential loss to community for the highest -risk disasters.

- Establish the length of time that redeployment is sustainable by program and for varying lengths of time.

- Initiate written agreements and MOUs with key partners to ensure mutual understanding of commitments and resources.

- Develop plans to decrease the time needed to issue guidance on risk and on proactive monitoring.

- Establish a list of priority public health services that has been agreed to by senior managers in the event that services have to be altered or curtailed.

- Develop a written continuity of services plan. Develop a scalable plan of relocation of staff that could be redeployed to emergency operations. Identify by job classification what staff could be redeployed to emergency operations and to what potential role. Consider how the plan would deal with various lengths of emergency need, e.g., days, weeks, months. Determine how scaled-back but necessary programs would maintain minimum services. Develop agreements and have them signed off by the responsible manager and senior staff.

- Establish plans for a backup DOC so it is available in case the current site is unavailable.

Key LHD Suggestions Related to Preparedness Goal 8: Recover

- Until Web-CMR is available, create and implement a robust data management system for long-term tracking of affected persons during a large-scale event. Acquire IT support for packaged electronic data management software such as Epi-Info or CDC's OMS, and an epidemiologist with the capacity to use it until a more robust system such as web-CMR can be acquired or developed. Establish written procedures for long-term tracking in an emergency.

- Identify the clerical support that would be required during a large, long-term event. Train additional personnel on electronic data entry to provide necessary surge capacity during such an event. Consider creating a volunteer pool for additional surge capacity for data entry.

- Establish and maintain a secure Web site to ensure the security of the large amount of data that would be exchanged from a variety of sources during a long-term, large event. Establish a password-protected portion of an LHD web site for the secure dissemination of confidential information to health officials.

- Expand the use of CAHAN as a valuable tool for rapid dissemination of important health alerts. Ensure that local medical providers could be rapidly provided with information by blast fax or other methods such as CAHAN. Once this is done a long-term event exercise can be held and the plan adjusted as required.

- Develop a written plan which identifies the necessary personnel surge capacity for the long-term tracking of those affected by an event, and then conduct an exercise to test it.

- Develop disease-specific media message templates for immediate use.

- Equip laptops for field use with wireless capacity and tracking software.

- Formalize agreements and plans with Public Works Departments and the Red Cross for the use of communications equipment during an emergency event.

- Investigate the use of ham radio operators as a means of emergency communications in remote areas.

- Perform a drill to determine the timeliness and effectiveness of an emergency public service announcement by the local radio stations.

Key LHD Suggestions Related to Goal 9: Improve

- Develop formal relationships with Air Quality Metropolitan Districts if these are not already developed.
- Initiate and monitor follow-up of after action report recommendations to improve the LHD's ability to complete the improvement cycle.
- Retest previous exercise or drill (such as for mass vaccination) where corrective actions have been implemented in order to document improvement. Design the retest to capture objective measurable components of the activation exercise. Consider approaching the development of exercises and drills using a team structure to increase input into event development.
- Conduct local or participate in regional drills or exercises to decrease the time needed to identify deficiencies, implement corrective actions and retest corrective actions.
- Leverage limited resources by turning routine activities into training opportunities.
- Timed indicators should continue to be exercised; solid relationship with OES should have the effect of improving timed performance measures.
- Put into place a written Improvement Plan that includes development of an evaluation tool to help in post-event improvement exercises. The Plan should specify how and when to generate after action reports so that corrective actions will be developed and implemented in a timely fashion. Develop a matrix that includes post-event tasks, the person responsible for carrying out the task, start and expected completion dates, a measurable deliverable and the status of the task to enhance the tracking and implementation of corrective actions. Monitor to ensure that barriers to rapid improvement can be identified and addressed.
- Implement strategies that allow multiple issues to be addressed by single solution.
- Retest a notification event on off hours to test for improvement. Consider other drills or exercises to retest and measure improvement.
- Engage all American Indian tribal entities in the jurisdiction in meeting Recover Goals.
- Exercise plans to test vertical and horizontal integration.
- Identify barriers to 100% compliance to the CDC 60-minute target response time; institute corrective actions and retest.
- Once a time and motion exercise is performed and findings are documented and improvement is initiated, perform another exercise to objectively test for improvement.

Suggestions for California Department of Health Services

The suggestions for CDHS, organized by CDC/HRSA Guidance area, are directed to all areas of CDHS, not the Emergency Preparedness Office (EPO) specifically, as coordination and commitment of required resources will need to occur department-wide. While all of the suggestions are important, they have been prioritized for consideration in allocating resources and providing assistance to LHDs. The foremost suggestion, in consideration of the assessment findings and recommendations, is that CDHS assemble LHD lead peers in all of the Guidance areas and facilitate a process to prioritize the development of work plans based on peer-based agreement so that jurisdictions can deploy resources to accomplish mutually agreed-to priorities.

Outcome 1A: All Hazards Planning

1. Increase support and leadership for border issues, such as surge, licensing issues and cross-border communicable disease reporting working with the border state and national governments of California, Nevada, Oregon, and Arizona, and Mexico. California should consider federal legislation to foster closer working relationships by the governments in this critical area.

2. Increase support and play a greater leadership role in increasing integration of state and local emergency preparedness efforts with Native American tribal entities.

3. Provide more training opportunities in chemical and radiological hazards components geared to expanding preparation for both professional and non-professional LHD staff. Such training should result in all LHD staff having a basic understanding of chemical and radiological WMD (weapons of mass destruction) issues to increase basic knowledge in these areas.

4. Meet with CCLHO, CHEAC and the California Conference of Local Health Department Nursing Directors to find a way to fully engage all PHNs working in LHDs to be fully versed and trained in all the areas of all hazards response, including SEMS, IC, Category A agent, chemical and radiological hazard and epidemiological investigation training. PHNs from non CD-specific areas such as Maternal and Child Health and “field nursing” should be targeted for more immediate training to be able to be more helpful to the LHD mission during emergencies. This is a critical shortcoming within the Public Health Nursing profession statewide and has put the state at risk for adequate response to pandemic disease, BT and other emergency response issues. Consideration might also be given to identifying and developing other resources, e.g., bachelor’s-level Communicable Disease Investigators (CDIs), which can provide some of the necessary local surge.

5. Take the lead in developing standards and competencies for emergency preparedness for all nursing staff and then develop a training curriculum based on the competencies. Work with the Board of Nursing to require a minimum number of hours of emergency preparedness training for every licensed RN in the State for each licensure period.

6. Meet with the Directors of EH statewide to strategize and implement solutions for increased involvement of Registered Environmental Health Specialist (REHS) staff in LHD jurisdictions in SEMS, IC, Category A agent, chemical and radiological hazard, and epidemiological investigation training to support surge in LHD—which will necessitate further training and fit testing for N-95 respirators.

7. Form a state-level work group involving LHDs and local Port Authorities to develop cooperative agreements leading to closer working relationships.

8. Take the leadership role, after evaluating systems that are currently available, in developing a standard system to help LHDs address Public Health Information Network (PHIN) Preparedness Functional Area Countermeasure and Response Administration to maintain and track vaccination or prophylaxis status of public health responders.

9. Develop an exercise that would evaluate the response time for LHD responders to be physically present in the DOC within 90 minutes following notification of activation, the goal required by the CDC. Require LHD participation in the exercise or equivalency at least annually.

10. Develop an exercise that would specifically assess and document the local ability to activate a fully functional operational area within the CDC Preparedness 3-hour target. Require LHD participation in the exercise or equivalency at least annually.

11. Complete the review local Pandemic Influenza Plans and give specific guidance to LHDs so that all LHDs have a realistic plan in place.

Outcome 2A: Information Collection and Threat Recognition

1. Complete and implement Web CMR as soon as possible as this is critical for California to be prepared to respond to a major disease event.

2. Provide more frequent regional, state-sponsored disease investigation/epidemiology seminars and workshops. Many LHDs are utilizing employees for disease surveillance and investigation that lack formal disease investigation and basic epidemiology training. This is especially true of staff PHNs in programs other than CD who are expected to provide disease investigation surge capacity during a large outbreak or bioterrorist activity. Staff turnover requires frequent, periodic training and updates. Standardization of these trainings is paramount.

3. Help to establish cooperative agreements with border states. LHDs that border other states are challenged by the need to collaborate and share resources during a multi-state disease outbreak or bioterrorist event. Assistance from CDHS leadership would be helpful in the development of the necessary cooperative agreements with other states.

4. Organize and manage additional regional Epi Exchange Forum and other strategies for the timely exchange of disease information. Many smaller and/or remote LHDs experience difficulties attending organized forums with colleagues from other jurisdictions. This exchange is important in terms of regional disease surveillance and the standardization of surveillance and investigation procedures. The option of making available attendance by teleconference would also be helpful for remote jurisdictions.

Outcome 2B: Hazard and Vulnerability Analysis

1. Require all LHDs to have direct rapid after-hours alert systems in place.

2. Encourage and continue to support the development of regional resources and formal agreements (i.e., HazMat teams, epidemiology resources, GIS laboratory resources) that are essential for LHDs with limited resources or lacking staffing redundancy.

3. Encourage the implementation of Reverse 911 or similar systems within local jurisdictions to enhance communications with the public.

4. Support the expanded utilization of standardized application software that allows information sharing and economies of scale. This includes GIS/GPS, CUPA inventory and monitoring/ dispersal modeling software.

5. Continue to enhance the features and utility of the CAHAN system to meet the needs of a growing base of users.

Outcome 3A: Laboratory Testing

1. Increase the number of LRN Reference Laboratories. The capability to respond to bioterrorism events with rapid, accurate laboratory tests should exist where the majority of the state population resides. The current CDHS grant distribution plan has left three of the most populated counties in the State without LRN Reference laboratories. In addition to the 14 currently designated Reference Laboratories, all of the ten largest counties in the state (counties with a population of over 800,000) should have LRN Reference laboratory capability. Currently, only seven of these ten are LRN reference laboratories. The remaining three counties should be funded as LRN reference laboratories.

2. Take the lead in making available a matching infrastructure funding plan to build new county laboratory facilities. Modernizing local public health laboratory (PHL) infrastructure is critical. Due to lack of local infrastructure funding capability, state funding is required. The plan should specifically ensure that every LRN reference laboratory has a safe and modern BSL-3 laboratory of sufficient size for working with infectious and bioterrorism agents. Matching funds should assist local health departments in locating and committing local resources. The overall goal should be that every county and city PHL has a facility that meets CDC safety guidelines and can be utilized for infectious agents as their role proscribes. Sentinel laboratories should have at least one small BSL-3 room to utilize for TB testing and to package and refer specimens containing bioterrorism agents as a county resource. LRN reference laboratories should have a medium or large BSL-3 area to be able to safely perform routine as well as surge capacity bioterrorism testing.

3. Consider modifying the administrative methods utilized for distribution of the laboratory portion of the CDC grant to provide greater input by local PHLs and local Health Officers. The LRN planning, budgeting and implementation process should be made much more inclusive and transparent and include many local LRN laboratory representatives and local Health Officer representatives as well as CDHS laboratory and administration leadership personnel. This group should meet monthly and in conjunction with CDHS laboratory personnel prepare coordinated State and local plans and budgets for the laboratory portion of the CDC grant.

4. Establish the State Laboratory training program to ensure that a sufficient number of trained microbiologists are available now and in the future to staff CDHS and local PHLs. The Microbial Disease laboratory and Viral and Rickettsial Disease Laboratory should establish a coordinated full-training program for Certified Public Health Microbiologists and train at least one large class per year. CDHS should also support training in local PHLs that have the capability to train, including technical assistance and funding training positions at local laboratories.

5. Prepare a standard procedure manual (in the form of a template) to support the Public Health sentinel laboratories that covers all sentinel laboratory duties. Provide it to all Public Health Sentinel laboratories in conjunction with a training session. The model for this is the CDHS materials and training provided by CDHS to county PIOs.

6. Offer courses for local LRN reference PHL personnel through the State Laboratory in LRN bioterrorism tests and technologies.

7. Establish, as part of a formal program at the CDHS Laboratory, implementation of rapid molecular techniques for infectious disease agents at local laboratories. Provide funds for at least one PCR thermocycler for laboratories that do not have one. Supply testing reagents for important diseases. A successful limited pilot for this type of program has been the CDHS VRDL "Respiratory Virus Network".

8. Provide funding to a few core local PHLs that can maintain advanced food testing capability, Salmonella serotyping capability and Pulse Net testing to provide for local and surge capacity for food borne outbreaks. This will reduce the work load of CDHS laboratories, provide for surge capacity and expand food testing ability in the state.

9. Administer Electronic Laboratory Reporting (ELR) and other laboratory information systems network planning on an equal partnership basis with the California Association of Public Health Laboratory Directors (CAPHLD), the CCLHO affiliate that represents all local PHLs in the state. Including local users as part of the planning and administration is likely to contribute much to develop a plan that will be functional and successful.

10. Assess all LRN reference laboratories semi-annually to ensure they meet the requirements of the grant and CDC safety requirements. This should be done either by state laboratory personnel or consultants with an intimate knowledge of California county laboratory operations and bioterrorism testing. Funded county LRN reference laboratories that cannot become fully capable in an appropriate amount of time should not receive grant renewal, and other PHLs should be approached.

Outcome 4A: Health Intelligence Integration and Analysis

1. Sponsor local or regional training on basic data analysis to better prepare LHDs to control and track small and medium-sized disease outbreaks. Many LHDs lack the capacity to use basic electronic disease investigation data management products such as Epi-Info. In many instances the barrier is lack of training.

2. Complete and implement a statewide electronic laboratory reporting system. Many LHDs are not utilizing laboratory-based surveillance to enhance the sensitivity of early-event detection programs. The implementation of electronic laboratory reporting would greatly aid in the development of laboratory-based surveillance. State-sponsored pilot projects have recognized this need.

3. Provide State-sponsored local or regional GIS training to assist in the statewide effort to detect and control disease outbreaks. GIS is a valuable tool in the surveillance and control of communicable diseases, whether naturally-caused or bioterrorism-related. Most LHD CD Control programs do not currently possess GIS capacity. A major barrier is the lack of technical GIS training.

Outcome 5A: Public Health Epidemiological Investigation

1. Sponsor local or regional training on data analysis basics (e.g., Epi-Info, and/or CDC's OMS) to better prepare LHDs to control and track small and medium-sized disease outbreaks. In many instances, the barrier to LHD capacity is a lack of training.

2. Complete and implement Web CMR or alternative in a timely fashion in order for California to be prepared to respond to a major disease event.

3. Implement and make LHDs aware of policies that reduce barriers and support local efforts to assure adequate surge capacity. Categorical program funding for employees, especially PHNs, often presents barriers to employee participation in education, training, and exercises aimed at building the surge capacity required to respond to a large disease event.

4. Reinstate CDC emergency preparedness funding for the regional epidemiologists to ensure continuous access to epidemiology resources without taxing General Fund. The State regional epidemiology programs are critical to the ability of many, especially small, jurisdictions to benefit from regional surveillance and to have access to technical epidemiology resources.

5. Develop statewide exercises that focus on more complete assessments. While many statewide preparedness exercises are based on communicable disease scenarios and therefore include a CD investigation component, few exercises emphasize the complete cycle involving CD surveillance, response, investigation, control and recovery. As a result, LHD preparedness to manage large CD outbreaks in a timely manner is not evaluated in a way that gaps can be easily identified and resolved.

6. Develop additional State regional epidemiology programs in area of greatest need to enhance the state's ability to detect and respond to large disease events. There are remote jurisdictions without local or even regional epidemiology resources.

Outcome 6A: Emergency Response Communications

1. Ensure that CAHAN capacity permits maximal use of CAHAN by all LHDs, including potentially thousands of external partners from larger jurisdictions. LHDs that do not utilize CAHAN or use it widely should be strongly encouraged to do so.

2. Continue the CAHAN users group that includes representatives from small, medium and large LHDs to assess and improve CAHAN usability.

3. Consider further PCRI (Project Collaborative Research Initiative) development in LHDs.

4. Encourage the deployment of at least one LHD support staff to the Emergency Operations Center to assist the Public Health Director/Local Health Officer at the EOC.

5. Identify jurisdictions where an enhanced electronic communication system between the DOC and the EOC would offer significant benefit and catalyze deployment through appropriate incentives.

6. Continue to work on solutions, including legislative remedies, which would establish more reliable telephone service and more reliable 911 emergency services in remote rural counties.

Outcome 6B: Emergency Public Communications

1. Continue to support LHDs by providing risk communication training for more staff.

2. Develop an automated solution for LHDs to maintain accurate contact information for physicians and other medical providers. Maintaining this information for thousands of providers in a large jurisdiction can be an overwhelming task for local staff.

3. Re-evaluate the necessity and practicality of attempting to establish resources sufficient for LHDs to handle calls simultaneously from 1% of the population. A more realistic goal and guidance are needed regarding innovative approaches toward fulfilling this need.

4. Assist LHDs in their attempts to involve Mental Health staff in the review of public information releases prior to dissemination. State-level efforts are necessary to increase involvement between local Public Health and Mental Health programs.

Outcome 6C: Worker Health Safety

1. Require that planning for worker safety during an emergency is a fully articulated element of the LHD's all hazard plan.

2. Assist LHDs in establishing a central electronic database that would track the status of training and PPE needs of all staff and volunteers. It is essential for LHDs to establish such a system to oversee, track and follow up to assure that sufficient staff have been protected and received needed immunizations, training and PPE. Assure that LHDs have designated an overall coordinator with this responsibility.

3. Require that LHDs train and provide PPE, including N-95 respirators, to as many staff as possible. It is unlikely that just-in-time training would be adequate in the event of such a threat.

4. Support additional basic training for all LHD employees so that the awareness of chemical, biological, nuclear, radiological, and explosives, (CBNRE) hazards is increased. EH HazMat staff may be able to provide some of this training.

5. Support LHDs in establishing formal agreements (e.g., a Memorandum of Understanding (MOU) with their Mental Health Departments that set out the roles and expectations of the two organizations during a disaster or emergency. For example, in many instances formal training of Mental Health workers in both disaster response and in SEMS is needed in order to provide adequate services for public health responders. Require that a joint planning process that identifies needs, resources and strategies precede the development of an MOU.

6. Encourage LHDs to consider developing small infection control kits consisting of gowns, gloves and masks for staff that will be utilized in the field. "Go kits" for field staff and PPE kits for other staff will be beneficial for personnel to avoid having to come to a central office to access PPE.

7. Develop a more formal cooperative understanding with executive leadership at the State Department of Mental Health regarding emergency preparedness to foster more active engagement and closer working relationships between the two programs at the local level.

Outcome 6D: Isolation and Quarantine

1. Develop a model plan for the care and treatment of individuals in isolation and quarantine including an assessment protocol.

2. Develop a model agreement LHDs can use with Mental Health for the provision of services in an event or large outbreak.

3. Develop model policies and protocols LHDs can use for the role of law enforcement in isolation and quarantine.

4. Develop a basic electronic data management system for isolation and quarantine that meets PHIN standards and distribute to all LHDs.

5. Assist LHDs with epidemiology capacity and in developing a plan to manage data from multiple sources and in identifying/purchasing hardware/software to assist them in this task.

6. Pursue clarification with state legal counsel regarding the Local Health Officer authority to seize infectious materials pre-disease in order to prevent the occurrence/spread of a disease and consider incorporating the findings into the Local Health Officer authority.

7. Develop model standards for the coordination of public health, hospitals and urgent care providers in the management of adverse reactions, or a matrix which defines the roles and responsibilities by type of agency or provider and distribute to all LHDs.

8. Develop a standardized training curriculum for physicians regarding adverse reaction monitoring.

9. Create an assessment tool to determine the emergency preparedness training needs of Mental Health staff, and develop a standardized basic curriculum based on the assessed needs.

10. Arrange for the State PIO Office to work with LHD PIOs proactively to ensure the consistency of state and locally-issued public information releases during a quarantine event.

Outcome 6E: Mass Prophylaxis Vaccination

1. Complete and deploy Web CMR or an alternative PHIN compliant system for reporting communicable diseases.

2. Take the lead in developing the following: standardized public information messages informing the public of the need for prophylaxis and advising them what to bring and do at a POD; basic standardized electronic data systems for management of outbreak data, patient contact tracking

and persons receiving mass prophylaxis; standards and competencies for mass prophylaxis; a basic survey tool in an electronic format that could be sent to potential volunteers; and a standardized registration and certification plan for volunteer staff.

3. Develop a standardized competency based training curriculum for mass prophylaxis for LHD staff and volunteers.

4. Provide all LHDs with a data set of registered nurses and physicians within their jurisdiction and update this annually.

5. Consider strategically located Rapid Response Teams statewide that could assist local jurisdictions in their initial response efforts.

6. Provide material regarding all Category A Agents and fact sheets for all primary antibiotics or vaccines that would be used in an event/outbreak in all major languages.

7. Develop a standardized pharmaceutical inventory form.

8. Develop standardized information concerning malpractice coverage for volunteer staff.

9. Develop standardized language for regional mutual aid agreements.

Outcome 6F: Medical and Public Health Surge

1. Complete and make Web CMR or alternative available as soon as possible.

2. Develop a standardized tool to assess the training needs of providers required in a surge situation.

3. Assume a more active role statewide in the recruitment and training of volunteers. For example, assist in the development of a web-based volunteer recruitment technology.

5. Pursue the development of a Cal Pen epidemiology training module for hospitals.

6. Coordinate with large universities to provide Telemedicine training to physicians on infectious, chemical or radiological diseases or conditions.

7. Give legal guidance to LHDs regarding the use of unlicensed workers in a surge capacity scenario.

Outcome 7A: Economic and Community Recovery

1. Develop with input from a representative LHD work group a template that would guide LHDs in developing a locally scalable plan of staff redeployment to emergency operations during a crisis of public health significance. The template should include identifying by job classification who could be redeployed to emergency operations and to what potential role, and the length of time that redeployment is sustainable by each program, e.g., days, weeks and months. The template should also include determining how scaled back but necessary programs would maintain minimum services to continue protecting the public from other public health threats.

2. Provide statewide regional workshops and related materials and tools for a locally-developed process of assuring continuity of services.

3. Convene meetings with LHD and EH leadership and study those jurisdictions with close LHD/EH working relationships to determine how CDHS can help foster these relationships in all jurisdictions.

4. Develop template language and require LHDs to inform all county purchasing departments of the need to use it for requiring assurance of private sector contractor continuity of business when contracted services are critical to public health safety.

5. Discuss among CDHS, LHD and EH leadership avenues to increase local vector control coverage statewide.

Preparedness Goal 8: Recover

1. Assure that all LHDs develop a written plan for the long-term tracking of patients and contacts in a large-scale event. The plan should identify the personnel surge capacity needed for tracking those affected by an event on a long-term basis.

2. Provide guidance and training to LHDs on appropriate database systems for long-term tracking of those affected by emergency events or disasters, such as State-sponsored local and/or regional Epi-Info applications, Immunization Registry systems, CDC's Outbreak Management System (OMS) training and CDC's Countermeasure and Response Administration (CMR).

3. Complete and implement Web CMR and an associated outbreak management module as soon as possible.

Preparedness Goal 9: Improve

1. Consider whether smaller-scale exercises offered more often may be a better test to prepare LHD for response than one large exercise annually. Engage a group of LHD peers representing LHDs, EMS, EH, MH, law enforcement, OES, fire and the Native American tribal entities to further discuss innovative ways to provide State-sponsored, smaller-scale exercises that can be held more often.

2. Take the lead in developing, planning and offering repeat exercises that are manageable so that LHDs can participate in re-test exercises to measure improvement.

3. Provide more leadership and support for Native American tribal entity integration into exercise planning and participation.

4. Facilitate a statewide written improvement plan document developed by a representative state and local work group.

5. Consider assisting LHDs in engaging the business community by hosting regional forums with the business sector.

6. Develop and share with LHDs a library of tabletop drills and dress rehearsal exercises.

7. Assist LHDs in developing criteria to guide them in determining which corrections will be re-tested and how quickly re-testing will be done. As a practical matter, not every deficiency identified in an after action report can be re-tested after correction.

8. Encourage LHDs to develop an agency-wide training matrix to be used to document Public Health competencies for all staff members.

APPENDIX 2

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PROJECT STAFF AND CONSULTANTS

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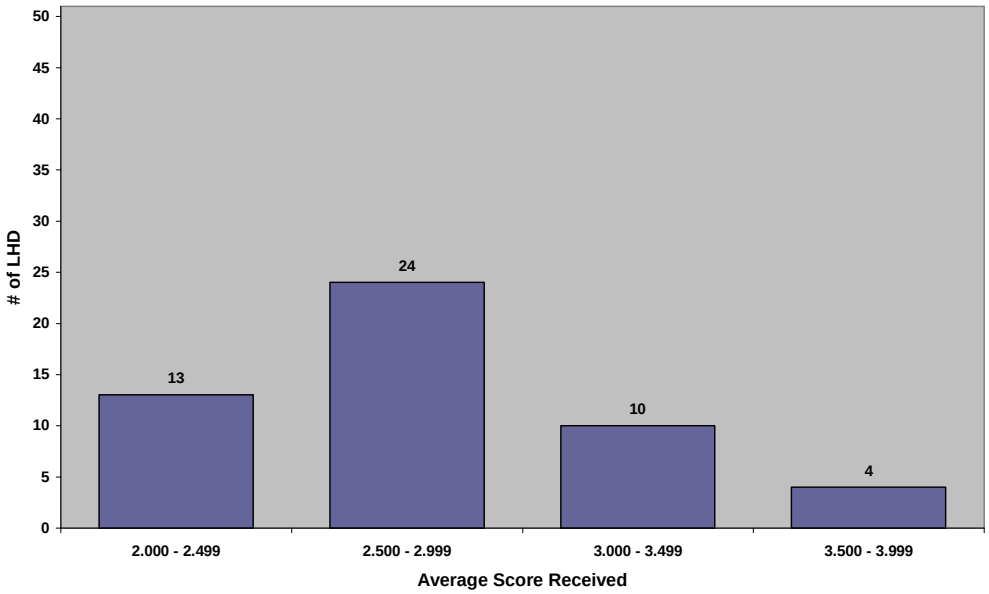
APPENDIX 3

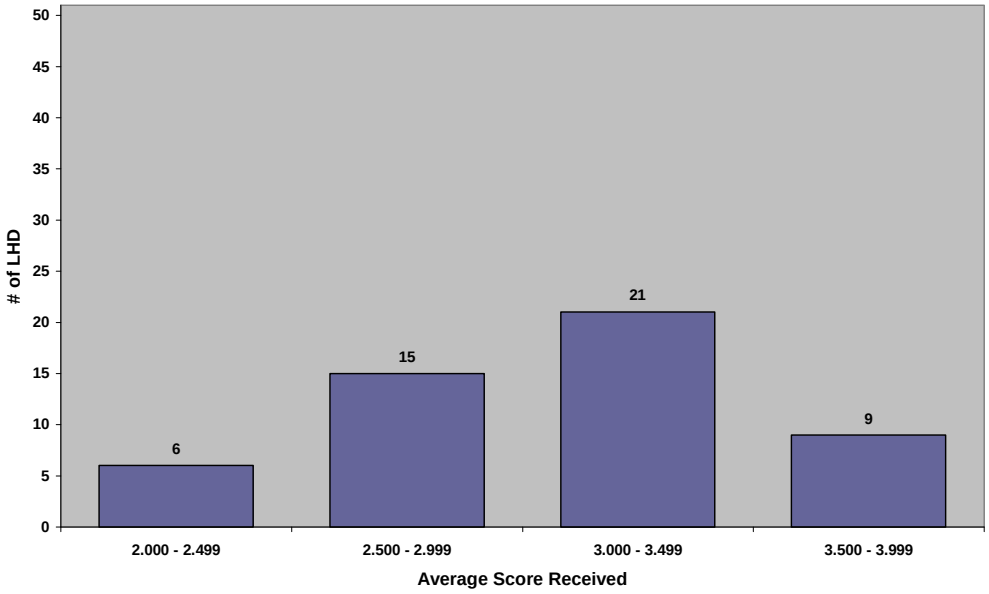
15 CDC/HRSA Outcomes/Goals Grouped by Scoring Intervals of Average Scores

15 CDC/HRSA Outcomes/Goals Grouped by Scoring Intervals
Average Scores of Assessed LHDs

Outcome 1A



Outcome 2A



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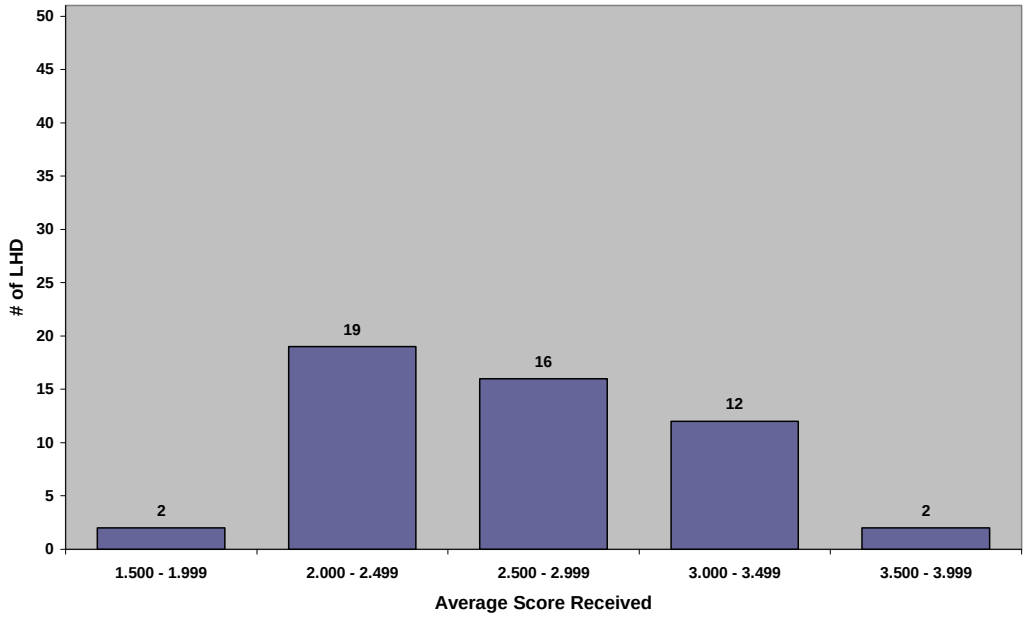
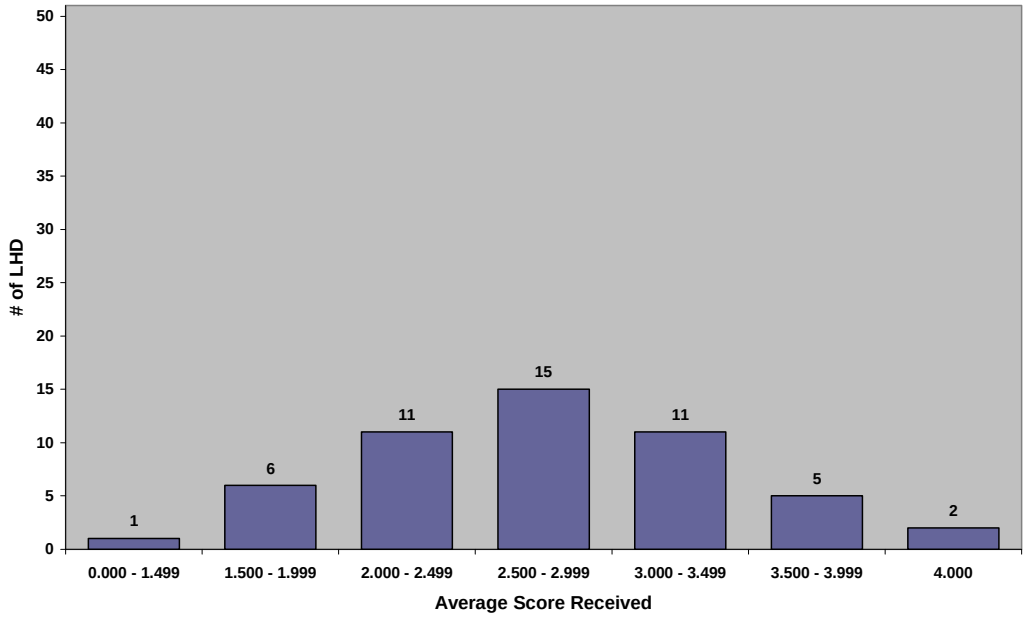
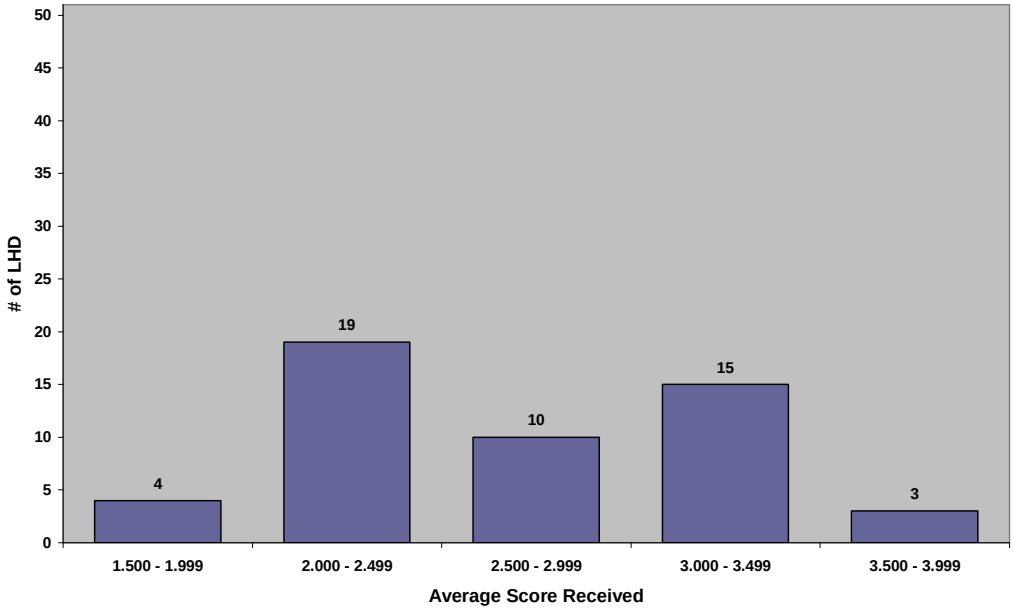


Outcome 3A



Outcome 4A



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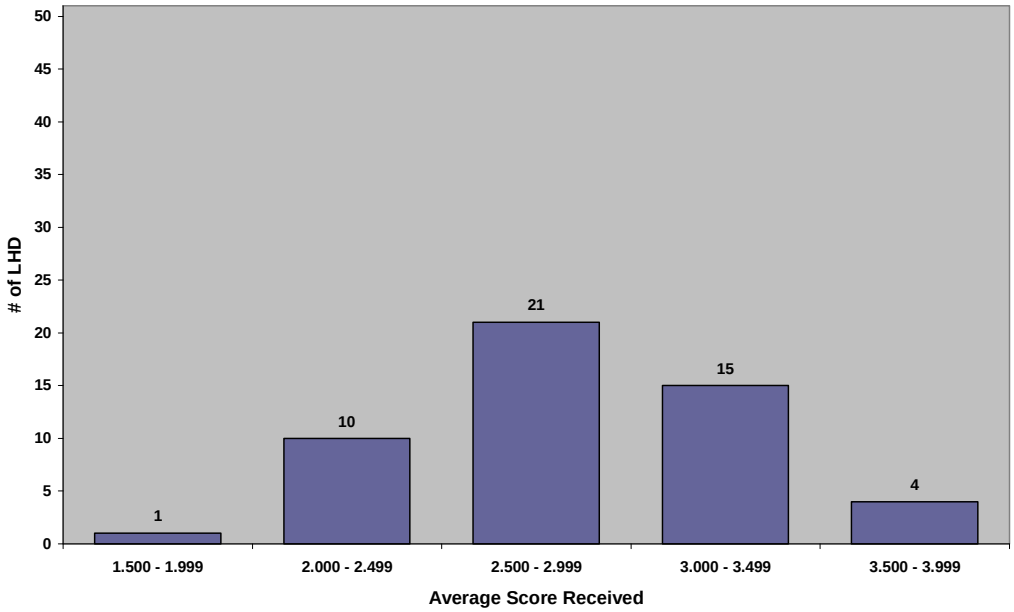
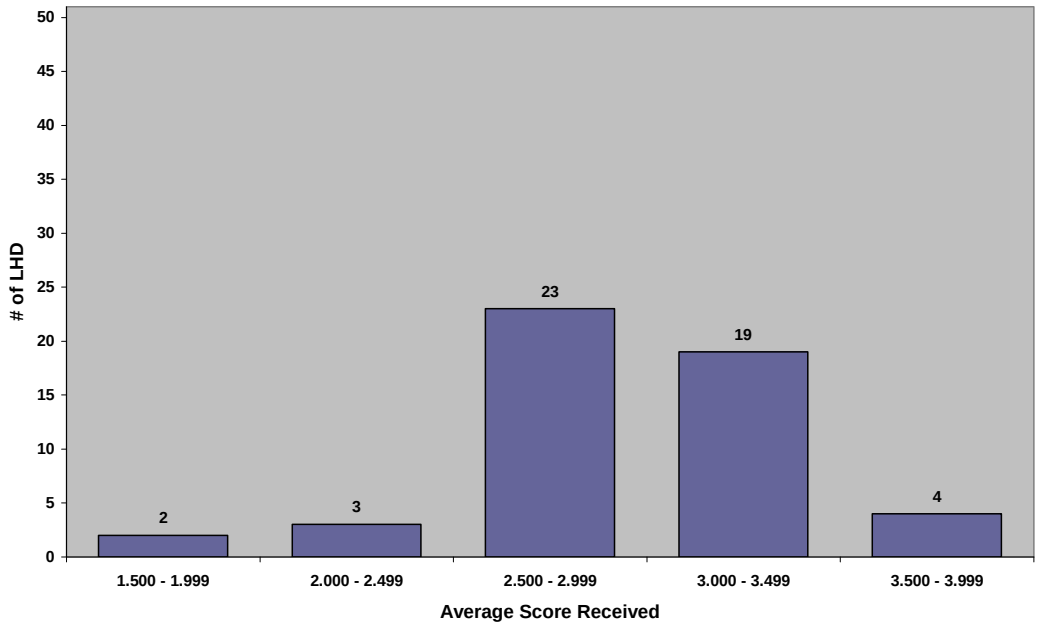


Outcome 6A



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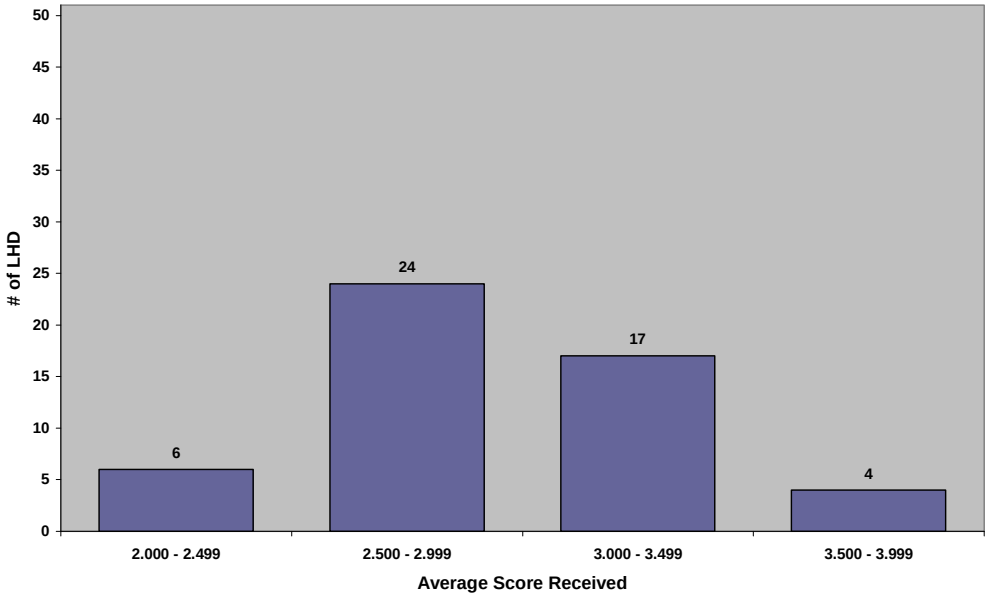
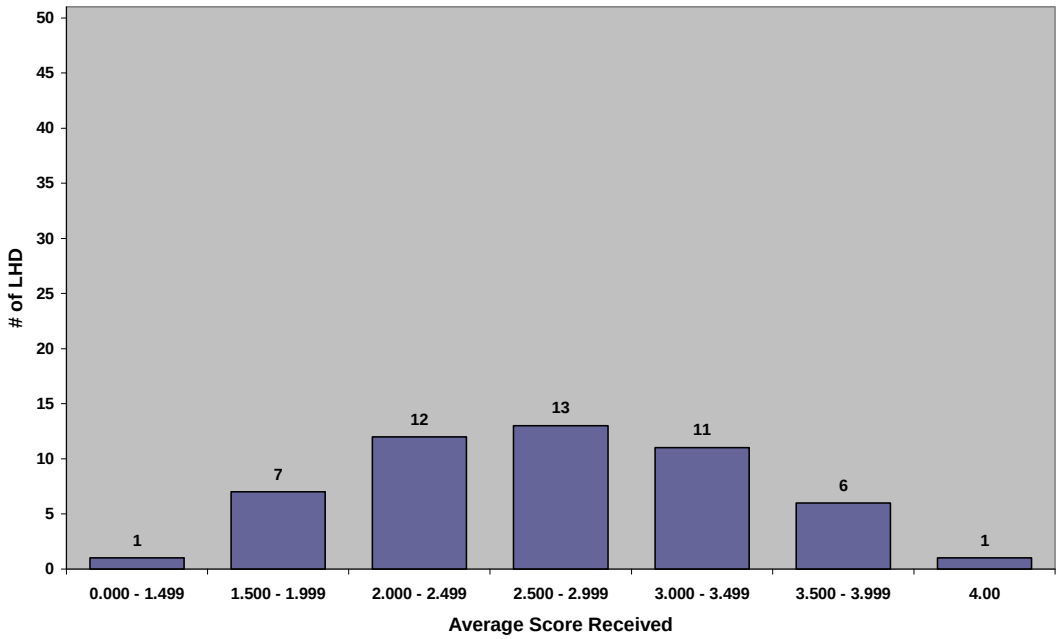
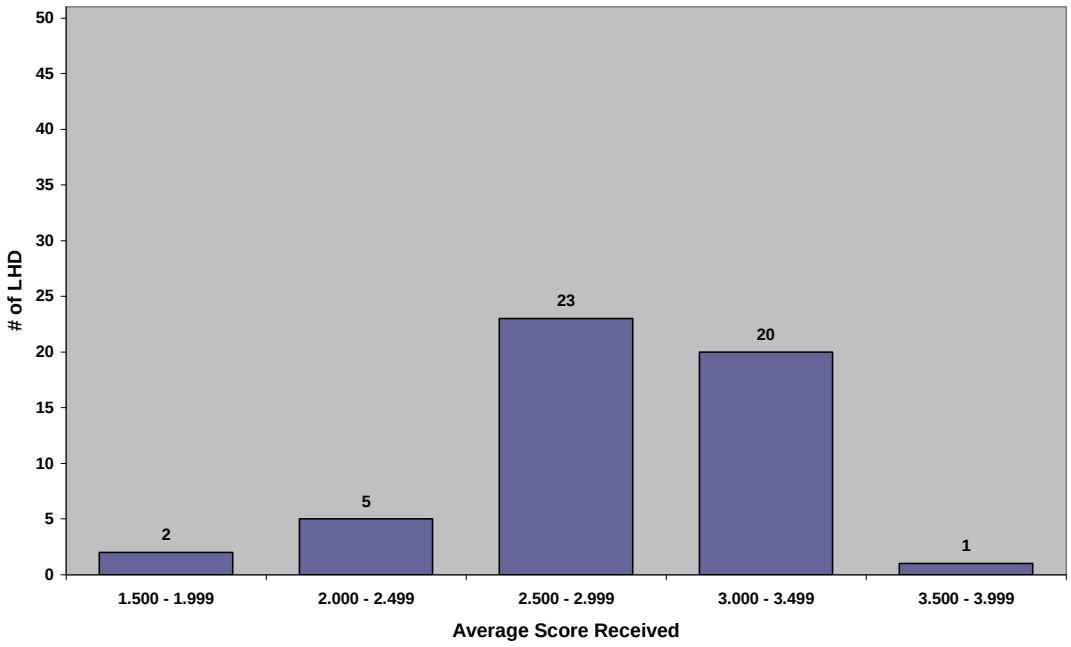


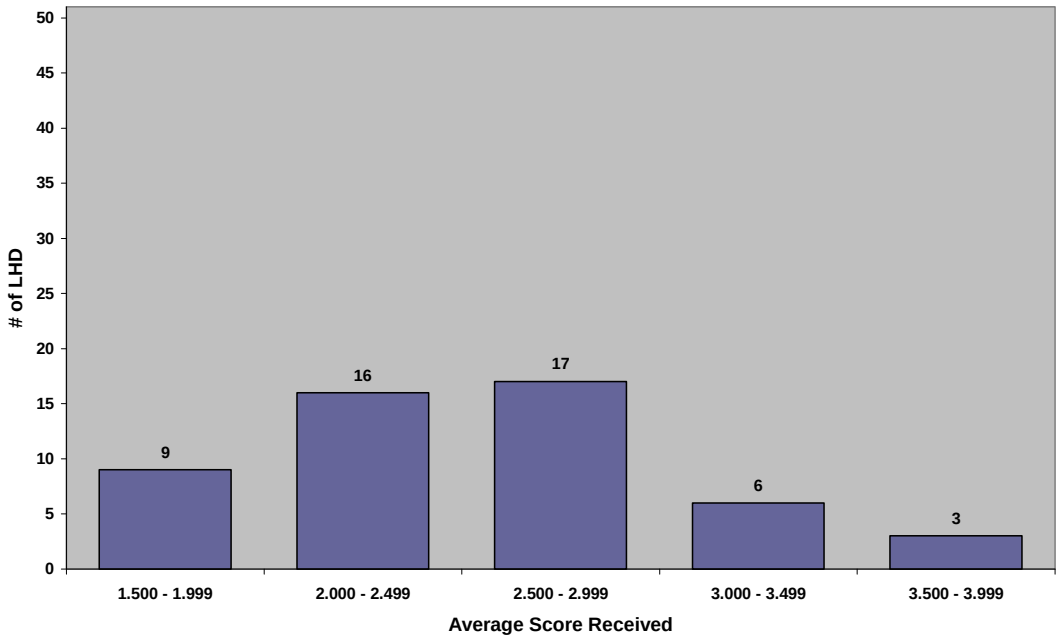
Outcome 6C



Outcome 6D



Outcome 6E



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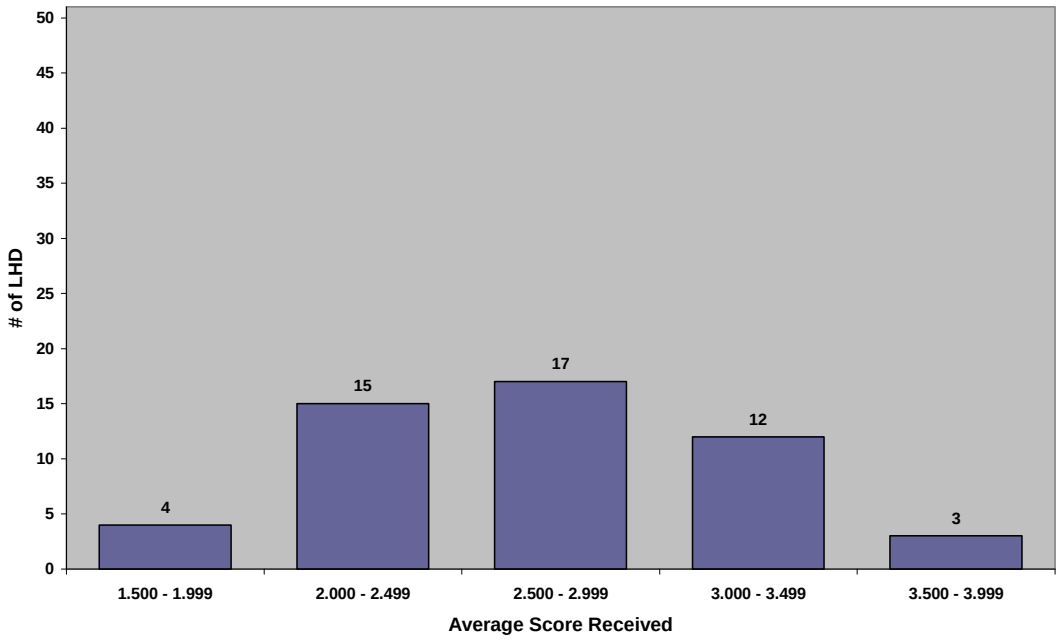
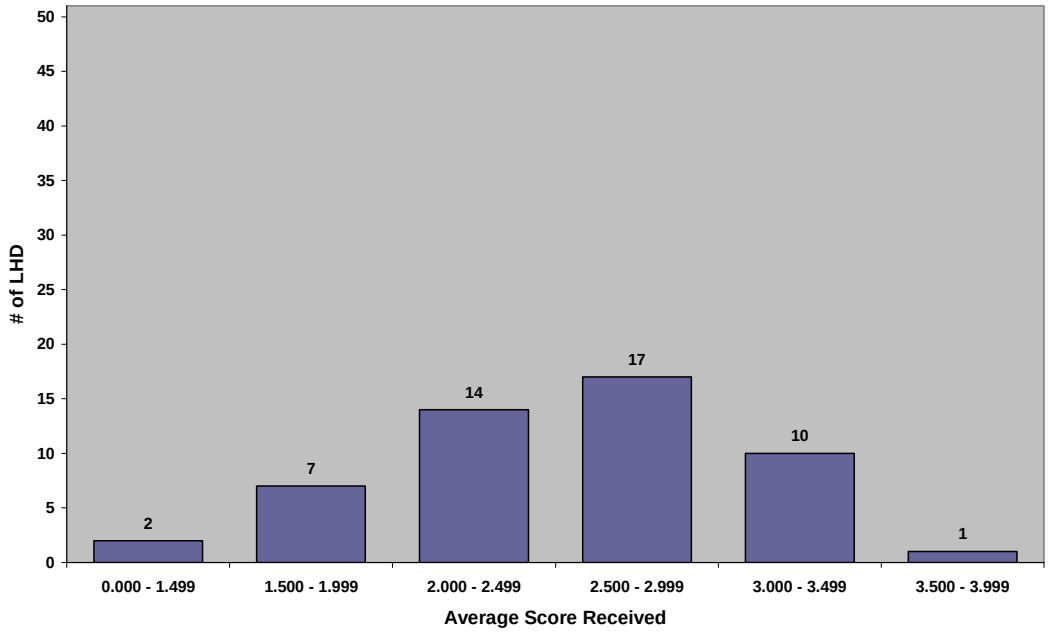
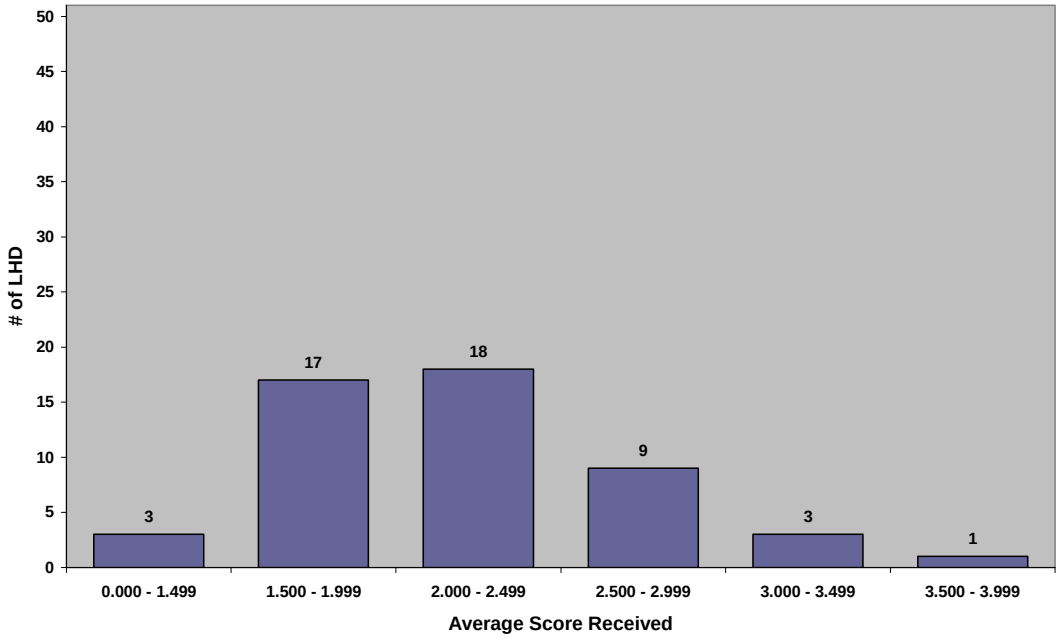


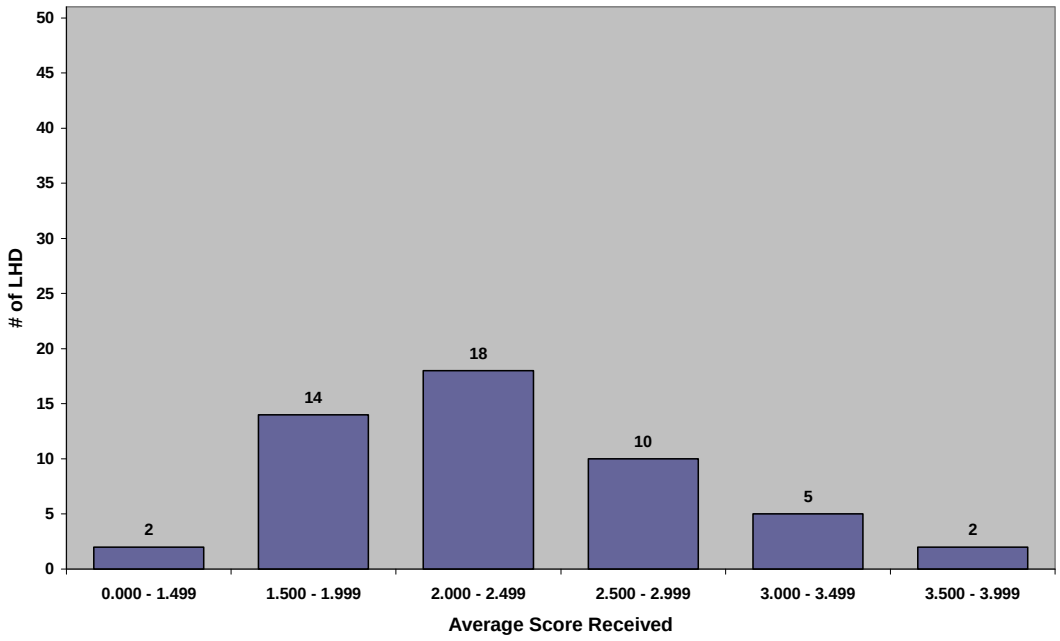
Outcome 7A



Goal 8



Goal 9


50
45
40
35
30
25
20
15
10
5
0
# of LHD
2
14
18
10
5
2
0.000 - 1.499
1.500 - 1.999
2.000 - 2.499
2.500 - 2.999
3.000 - 3.499
3.500 - 3.999
Average Score Received

APPENDIX 4

CALIFORNIA LOCAL PUBLIC HEALTH EMERGENCY PREPAREDNESS ASSESSMENT INSTRUMENT

CALIFORNIA LOCAL PUBLIC HEALTH EMERGENCY PREPAREDNESS ASSESSMENT INSTRUMENT

INTRODUCTION

In April 2005, under the joint governance of the California Conference of Local Local Local Health Officers (CCLHO), the County Health Executives Association of California (CHEAC), and the California Department of Health Services (DHS), DHS contracted with the Local Local Health Officers Association of California (HOAC) to assess the preparedness of local public health departments (LHDs) in developing emergency readiness. On May 23, 2005, Sandra Shewry, Director of CDHS, sent a letter to Local Health Executives, Local Local Health Officers, and Bioterrorism Coordinators, informing them of the high priority of this assessment in California's emergency preparedness efforts, and encouraging the 61 city and county public health departments to participate.

This assessment instrument is based on the 2005/06 Guidance issued by CDC and HRSA and is designed to enable a peer-based, participatory evaluation of LHDs' preparedness to respond to bioterrorism and other public health emergency events *in which the LHD has the primary role*. While this instrument consists of specific questions and indicators keyed to the Guidance, and will be applied in a standardized manner statewide, the assessment process is expected to be dynamic to accommodate changes in state and federal guidance and public health circumstances in California. The assessment instrument, which builds upon HOAC's demonstrated experience in assessing public health resource and services capacity in core public health areas, has been approved by the joint governance Steering Committee. Additionally, a Technical Advisory Committee (TAC) of 15 local health department experts (epidemiologists, lab directors, local Local Health Officers, etc.) reviewed drafts of the instrument and provided valuable technical and scientific comments and recommendations that informed the final version.

Structure of the Instrument

The assessment instrument is organized in three parts. Part I contains demographic, financial and other information LHDs are asked to supply in advance of the site visit. The information will be reviewed by the consultant team and referenced during the visit. Part II addresses the domains of leadership, management, planning and progress toward preparedness, and overarching workforce issues; information about these issues will be obtained onsite when the consultants interview key agency leaders and managers during the assessment visit.

Part III is organized in nine sections consistent with the 2005/06 CDC Preparedness Goals. Each Preparedness Goal includes the CDC Outcome(s)—a comprehensive description of the major roles and capabilities needed to respond to an event of significance—and the CDC Required Critical Tasks and

applicable HRSA requirements as written by CDC and HRSA. Each Critical Task has been broken out into Assessment Areas with basic questions for LHDs to explain their current capability for preparedness, and Indicators or measures, which indicate progress in achieving critical tasks. The materials the evaluators will ask to review onsite, such as reports, training plans, call down lists and MOUs, are listed at the beginning of each Goal area. The LHD is not expected to gather these materials in one central location, and some of the items may not be applicable to all LHDs.

This instrument is not formatted for recording, and except for Part I is not intended to be completed as a self-assessment by LHDs.

Scoring and Recording

A scoring system has been developed so that there is a quantitative means for analysis. Assigning scores or values provides accountability and is also important for comparative purposes. While the project will provide value in helping local jurisdictions identify areas of strengths and needed improvements, it is also expected to be important for providing an aggregate picture of California's public health emergency preparedness.

Figure 1 below shows how the consultants will score, record and report their findings to LHDs. The Assessment Areas developed for each CDC Required Critical Task and HRSA requirement will be evaluated using local standard materials review and a brief series of descriptive system-level questions, taking into account the Indicators or measures, then assigned a numeric rating between 1-4. The basis for scoring at the Critical Task level will be the average of the scores from the associated Assessment Areas. Key findings, including strengths and areas for improvements, will be summarized for each Critical Task and specific issues of note in the Assessment Areas will be referenced.[12] Recommendations, including any technical assistance offered, will be made at the end of each Outcome section. The preparedness rating category definitions are shown in the sample grid below.

Figure 1. Sample Consultant Scoring and Reporting Forms

Assessment 1.1: Incident response operations according to all hazards plan	
LHD Assessment Questions	***Indicators***
1. How does the LHD support incident response operations according to all hazards plan?	***All hazards procedure and training for emergency responsibilities with senior public health oversight***
2. How does the plan address the mitigation of secondary and cascading emergencies?	***Scalable plan with trigger points, including procedure for mutual aid.***
Assessment 1.1 ***Score*** ____ *4 = Well prepared (the agency is prepared to fully perform the critical required task in this area)* *3 = Prepared (the agency is prepared to adequately perform the critical required task at a minimum performance level)* *2 = Mostly prepared (the agency is partially prepared to perform the critical required task and still developing capacity in this area)* ***1= Minimally prepared (the agency is least prepared to perform the critical required task in this area)***	

Key Findings
A summary of findings, including strengths and areas of improvement, at the end of each Critical Task
CDC Required Critical Task 1 Score ____ **(Average of All Assessment Area Scores)**

[12] Because neither CDC nor the State has weighted the tasks, the working assumption is that the assessment areas and critical tasks are equal; hence there is no weighting of scores.

Key Recommendations
A summary of recommendations, including any technical assistance officered, at the end of each Outcome

Assessment Team

An independent consultant team will carry out the peer-based site visit assessments. Two- to four-person teams will be assigned to each LHD assessment depending on the size/complexity of the city/county public health jurisdiction. The consultants are experienced public health professionals and represent technical, scientific and management expertise in various areas of emergency preparedness addressed by this instrument.

Assessment Protocol

Site visit instructions and materials have been developed for LHDs to help them to prepare for the assessment. These materials will be sent to LHDs well in advance of the scheduled visit. An assessment protocol that defines roles and responsibilities has also been developed for the consultant team and DHS Emergency Preparedness Office regional staff who will observe during the site visits.

Assessment Reports

HOAC will send the LHD a written report of findings and recommendations within approximately two-three weeks of the site visit. The report will consist of summarized scores, key findings, including strengths and areas needing improvement, and recommendations with any technical assistance information, which will all be recorded onto the tool format as described in the previous page. The individual LHD reports will be used to develop an *aggregated* report of findings and recommendations for DHS to better understand where resources are needed.

Glossary

A glossary of terms used in this instrument is included in Appendix II.

PART I. ADVANCE DATA

(Note: This section of the tool will be sent to LHDs prior to the site visit, formatted for response by the LHD.)

INSTRUCTIONS

PUBLIC HEALTH EXECUTIVE OR LOCAL HEALTH OFFICER (or designee) ➡ *PLEASE COMPLETE THIS SECTION OF THE ASSESSMENT INSTRUMENT (PART 1. ADVANCE DATA) AND RETURN BY THE DATE REQUESTED. IF YOU COMPLETE BY HAND, PLEASE WRITE LEGIBLY. THE INFORMATION WILL BE PROVIDED TO THE ASSESSMENT TEAM PRIOR TO THE VISIT AND REVIEWED WITH THE LHD DURING THE SITE VISIT. PLEASE BE BRIEF BUT COMPLETE.*

RETURN BY: _____ ***RETURN TO:*** ***BARBARA AVED ASSOCIATES***

BY E-MAIL: ***barbara@barbaraavedassociates.com***
BY FAX: ***(916) 428-6632***

A. County Profile, Selected Demographics

% of County Population by Age Group:

<5 years ____% 5-17 years ____% 18-64 years ____% 65 years+ ____%

% of County Population by Race/Ethnicity:

White, non Hispanic ____% White, Hispanic ____%

Black ____% Native/American Indian ____% Asian/Pacific Islander ____%

B. Local Public Health Department Profile

County/City Health Department_____ Population Size _____

Agency Director _____ Public Health Executive/Director _____

Local Health Officer _____ BT Coordinator _____

Medical/Health Operational Area Coordinator _____

Regional Disaster Medical/Health Coordinator _____

Person completing this form_____ Title _____

B.1. Brief Description of LHD Structure, Recent (in the last 6 months) Changes and Characteristics:

1. Please describe recent organizational changes (if any) in the agency/local health department that could impact preparedness capacity: *Please attach a copy of your current organization chart(s) that shows which staff serve in which preparedness functional areas and their functional relationships.*

2. Please describe recent major changes (if any) in health department funding and staff that could impact preparedness capacity.

3. Please describe recent public health emergencies (if any) and the health department's role and response.

4. Please describe any special geographic considerations, including regional issues, which impact how your city/county LHD delivers public health-related services.

5. Briefly describe the type and extent of community input (advisory roles) in your city's/county's emergency preparedness planning process and continuing planning activities.

6. What PH lab provides your routine (non BT) services? __ Your county ___Other county (*Which?*)

__ State

What PH lab provides your BT services? ___ Your county ___ Other county (*Which?* _____)

__ State

7. Are the following under the Public Health Department (as opposed to being another department under the Health/Human Services Agency)?

Yes	No	
___	___	Environmental Health
___	___	Mental Health
___	___	Substance Abuse
___	___	EMS
___	___	Animal Control/Veterinary Services
___	___	HRSA local entity

B.2. Financial Profile

1. How do BT and other emergency preparedness funds fit into the total financial resources available to the Public Health Department?

Please provide the following information for FY 2005-06:

Source:	Amount:
Total Public Health Department budget appropriation:	$_____
Emergency Preparedness and Response Funds:	
a) CDC BT Grant Allocation	$_____
b) HRSA*	$_____

c) County Fund (General Fund and Realignment) $_____

_____

d) MMRS $_____

e) CRI $_____

f) Other (specify source: _____) $_____

g) State Homeland Security Grant Program * $_____

h) UASI $_____

Total $_____

Percent of total LHD budget represented by total Emergency Preparedness budget .%

2. Please describe your experience with HRSA funds. For example: are you having any bureaucratic struggles? What is your experience in setting up committees? Are you having any problems expending the HRSA funds?

_____

* Funds that directly support *public health* preparedness, including health systems planning, not funds that are utilized to support preparedness and response by other health care partners, i.e., only the amount that stays in the LHD.

B.3. Workforce Profile

1. What is the total number of current positions for the LHD by type and employment status?

	# of Positions	# Currently Filled
a. Professional positions	_____	_____
b. Support positions	_____	_____

2. What is the status of the Local Health Officer position? ___Full-time ___Part-time (*How much?*___%) ___Contract (*How much?*__%)

3. How many new positions for preparedness-only activities were created? _____

4. How many existing positions had their job duties modified to add emergency preparedness duties/activities? ____

5. What are the main LHD positions working on preparedness activities? What percent of time, shown in FTEs, is spent by these staff related to these activities? [Show <u>total</u> FTE if there is more than one person in the class or position working on preparedness activities, e.g., 3.5 FTE PHNs; 2.0 FTE epidemiologists.]

LHD POSITIONS FUNDED FROM CDC BT GRANT:

Job Title or Class	*% time spent on those activities*
_____	_____
_____	_____
_____	_____
_____	_____

LHD POSITIONS FUNDED FROM HRSA BT GRANT:

Job Title or Class	*% time spent on those activities*
_____	_____
_____	_____

LHD POSITIONS FUNDED FROM OTHER SOURCES THAT SPEND AT LEAST 10% ON THESE ACTIVITIES:

Job Title or Class	*% time spent on those activities*
_____	_____
_____	_____
_____	_____

☑ ***Please attach a list of the individuals and their titles of the LHD staff who are expected to participate/ be interviewed during the site visit.***

C. Quarterly/Semi-Annual Report

☑ ***Please attach an electronic copy of the most recent State BT and, if applicable, HRSA grant progress reports you submitted to DHS.***

PART II. LHD INFRASTRUCTURE

Local Health Jurisdiction ➡ Please Note:
Do Not Complete This Section

[This section will be completed during the site visit interviews
with the Local Health Officer and/or Public Health Executive and others]

Individuals interviewed:

Name	Title
Name	Title
Name	Title

A. General

1. How far do you think you've come in public health emergency preparedness since 9/11? Discuss your most significant accomplishments.

2. What have been the main internal and external barriers or obstacles to meeting preparedness goals and expectations?

3. What would you identify as your department's main strengths and weaknesses relative to preparedness?

4. Who are your essential local partners and key stakeholders in assessing, planning, implementing, and evaluating preparedness efforts? How effective have the collaborations been?

B. Workforce Issues

1. What is the Local Health Officer, and Deputy Local Health Officer's, if any, administrative authority over the preparedness activities?

2. Of the positions you listed in the Advance Data that are directly responsible for assuring preparedness, please answer the following:

   a. Were the majority of the BT preparedness staff previously employed in other functions in the LHD? Did the LHD fill behind them?

   b. What is the current vacancy rate of preparedness-related positions? How does the vacancy rate compare in general to other LHD positions?

   c. What is the turnover rate among staff in the preparedness-related positions? What do you think mainly contributed to turnover in these positions? How does the turnover compare in general to other health department positions?

d. Are there any recruitment challenges for any of these positions, and if so, for which ones? Have you made any special recruitment efforts or used unique strategies (e.g., incentives) to fill these positions?

3. Approximately what percentage of your LHD professional staff (e.g. administrators, microbiologists, PHNs) related to efforts on preparedness and response capacity of the department are anticipated to be nearing retirement in the next few years? What specific efforts are being done to prepare more junior staff to assume these positions?

4. Describe the development of any community volunteer (lay people/citizens, retired health care workers, etc.) capacity in public health activities, including training and registering.

C. Funding Issues

1. How do BT and the other emergency preparedness funds you listed in the Advance Data fit into the total financial

resources available to the LHD, and what are your additional resource needs?

PART III. PERFORMANCE AREAS

PREPAREDNESS GOAL 1: PREVENT

The local health department will increase the use and development of interventions known to prevent human illness from chemical, biological, radiological agents and naturally occurring health threats.

Outcome 1A: All Hazards Planning

The local health department will put into place emergency response plans, policies and procedures that identify, prioritize, and address all hazards across all functions. All plans are coordinated at all levels of government and address the mitigation of secondary and cascading emergencies.

Name of LHD staff interviewed for this section	Title	Telephone

Materials to be Reviewed: (☑ if reviewed)

- ☐ LHD all hazards plan including ICS charts is specific to the event e.g. biological, chemical, radiological
- ☐ Department organization chart or documentation showing preparedness leadership
- ☐ MOUs relating to jurisdiction-wide/multi-agency emergency response planning
- ☐ Pandemic influenza plan
- ☐ Jurisdiction-wide self-assessment
- ☐ DOC policies and procedures
- ☐ Procedure for Personal Protective Equipment (PPE) requirements of the LHD
- ☐ Public health responders PPE training and certification
- ☐ Public health responders vaccination or prophylaxis policy and procedure
- ☐ Public health responders vaccination or prophylaxis tracking documents
- ☐ Regional mutual aid agreements
- ☐ Regional mutual aid plan

- ☐ MOUs or other documentation identifying collaborative working relationship with adjacent jurisdictions (local, state, Mexico)
- ☐ Training events offered by the LHD during the past 12 months
- ☐ Training events attended during the past 12 months
- ☐ Number of staff that have attended training during the past 12 months
- ☐ Indian tribal government MOU or similar agreement

CDC Required Critical Task 1: *Support incident response operations according to all hazards plan*

Assessment 1.1: Incident response operations according to all-hazards plan.	
LHD Assessment Questions	**Indicators**
1. How does the LHD support incident response operations according to all hazards plan?	All hazards procedure and training for emergency responsibilities with senior public health oversight.
2. How does the plan address the mitigation of secondary and cascading emergencies?	Scalable plan with trigger points, including procedure for mutual aid.

CDC Required Critical Task 2: *Improve regional, jurisdictional and State all hazard plans (including those related to pandemic influenza) to support response operations in accordance with NIMS and the National Response Plan.*
(a) Increase participation in jurisdiction-wide self-assessment using the National Incident Management System Compliance Assessment Support Tool (NIMCAST); (b) Agency's Emergency Operations Center meets NIMS incident command structure requirements to perform core functions: coordination, communications, resource dispatch and tracking and information collection, analysis and dissemination.

Assessment 2.1: Regional and jurisdictional all hazard plans	
LHD Assessment Questions	**Indicators**
1. How has the LHD improved regional and jurisdictional all hazard planning?	Appropriate inter-jurisdictional MOUs and plans (including pandemic flu) with tribal and border partners and date last tested or exercised.

Assessment 2.2: Participation in jurisdiction-wide self-assessment	
LHD Assessment Questions	**Indicators**
1. How has the LHD participated in a jurisdiction-wide self-assessment?	LHD completed a jurisdiction-wide self-assessment using the NIMS Assessment Support Tool or other assessment.

Assessment 2.3: Agency's Department Operations Center and NIMS (SEMS) incident command structure requirements to perform core functions	
LHD Assessment Questions	**Indicators**
1. How has the LHD DOC met NIMS (SEMS) incident command structure	NIMS/SEMS procedure and NIMS/SEMS compliant; notification of initial personnel in 60 minutes; response to DOC in 90 minutes. A plan or procedures that identifies the structure.

CDC Required Critical Task 3: *Increase the number of public health responders who are protected through Personal Protective Equipment (PPE), vaccination or prophylaxis. a) Have or have access to a system that maintains and tracks vaccination or prophylaxis status of public health responders in compliance with Public Health Information Network (PHIN) Preparedness Functional Area Countermeasure and Response Administration*

Assessment 3.1: Number of public health responders protected	
LHD Assessment Questions	**Indicators**
1. Has the LHD identified their public health responders?	LHD identified their public health responders. The number of

2. How has the LHD increased the number of public health responders who are protected?	public health responders who are protected has increased.
3. What number and percent public health responders have received training in the use of Personal Protective Equipment (PPE)?	
4. What number and percent public health responders have received vaccination or prophylaxis?	

Assessment 3.2: Access to a system that maintains and tracks vaccination or prophylaxis status of public health responders	
LHD Assessment Questions	**Indicators**
1. How does the LHD track the vaccination or prophylaxis status of public health responders?	A system consistent with PHIN standards is used for tracking.

CDC Required Critical Task 4: *Increase and improve mutual aid agreements, as needed, to support NIMS-compliant public health response*

Assessment 4.1: Mutual aid agreements	
LHD Assessment Questions	**Indicators**
1. What steps have been taken to increase and improve mutual aid agreements?	Multi-jurisdictional all hazards plan with senior public health oversight includes training and expected response time. The presence of a mutual aid agreement.

CDC Required Critical Task 5: *Increase all hazard incident management capability by conducting regional, jurisdictional and State training to: a) Include the Emergency Management Independent Study Program, IS 700, "National Incident Management System: An Introduction" in the training plan for all staff expected to report for duty following activation of the public health emergency response plan and/or staff who have emergency response roles documented in their job descriptions.*

Assessment 5.1: Regional, jurisdictional and State training for all hazard incident management capability	
LHD Assessment Questions	**Indicators**
1. How has the LHD increased all hazard incident management capability through training?	LHD supports courses or advanced training for appropriate public health staff; percent of emergency response staff who have completed programs such as IS 700, NIMS 100 and 200.

CDC Required Critical Task 6: *Provide support for continuity of public health operations at regional, State, tribal, local government, and agency level.*

Assessment 6.1: Continuity of public health operations at regional, State, tribal, local government, and agency level	
LHD Assessment Questions	**Indicators**
1. What is the LHD plan to provide for continuity of public health operations at the local government level?	LHD plan for continuity of local public health operations, including priority and surge capacity issues.

2. What is the LHD plan to provide for continuity of public health operations at the regional and State level?	LHD plan to provide continuity in support of public health operations at the regional and State level.
3. What is the LHD plan to provide for continuity of public health operations among Indian tribes?	LHD plan to provide continuity in support of public health operations at the tribal level; evidence they have been involved in the planning.

PREPAREDNESS GOAL 2: PREVENT

The local health department will decrease the time needed to classify health events as terrorism or naturally occurring in partnership with other agencies.

Outcome 2A: Information Collection and Threat Recognition

Locally generated public health threat and other terrorism-related information is collected, identified, provided to appropriate analysis centers, and acted upon as appropriate.

Name of LHD staff interviewed for this section	Title	Telephone

Materials to be Reviewed (☑ if reviewed)

- ☐ Reporting procedures for providers
- ☐ 24/7 report receipt procedure/coverage schedule
- ☐ Disease reporting assessment documentation
- ☐ Foodborne illness investigation procedures
- ☐ Notifiable conditions procedures
- ☐ Foodborne illness investigation evaluations

CDC Required Critical Task 1: *Increase the use of disease surveillance and early event detection systems. (a) Select conditions that require immediate reporting to the public health agency (at a minimum, Cat. A agents); (b) Develop and maintain systems to receive disease reports 24/7/365; (c) Have or have access to electronic applications in compliance with PHIN Preparedness Functional Area "Early Event Detection" to support (i) receipt of case or suspect case disease reports 24/7/365; (ii) reportable diseases surveillance; (iii) call triage of urgent reports to knowledgeable public health professionals; (iv) receipt of secondary use health-related data and monitoring of aberrations to normal data patterns; d) Develop and maintain protocols for the utilization of early event detection devices located in the community (e.g., BioWatch); e) Assess timeliness and completeness of disease surveillance systems annually.*

Assessment 1.1: Detection and reporting of urgent illnesses and conditions and conditions

LHD Assessment Questions	Indicators
1. What is the LHD's mechanism for immediate reporting of urgent illnesses and conditions?	Application, enforcement and evaluation of 24/7/365 reporting and receipt applying PHIN-compliant system with triage of Category A agents
2. What systems are in place for the early detection of a potential bioterrorist agent?	Application of early event detection devices, rash illness surveillance and trend analysis
3. How have you insured the timeliness and completeness of reporting?	Assessment has been performed and findings documented

CDC Required Critical Task 2: *Increase sharing of health and intelligence information within and between regions and states with federal, local and tribal agencies.. (a) Improve information sharing on suspected or confirmed cases of immediately notifiable conditions, including foodborne illness, among public health epidemiologists, clinicians, laboratory personnel, environmental health specialists, public health nurses, and staff of food safety programs. (b) Maintain secret and/or top secret security clearance for local health officials, preparedness directors, and preparedness coordinators to ensure access to sensitive information about the nature of health threats and intelligence information.*

Assessment 2.1: Information sharing on suspected or confirmed cases of immediately notifiable conditions	
LHD Assessment Questions	**Indicators**
1. With what entities do you share health and intelligence information regarding suspected or confirmed cases of immediately notifiable conditions?	Communications procedure involves all appropriate LHD, state, federal, and tribal personnel; list of positions requiring clearance has been developed

CDC Required Critical Task 3: *Decrease the time needed to disseminate timely and accurate national strategic and health threat intelligence. (a) Maintain continuous participation in CDC's Epidemic Information Exchange Program (Epi-X); b) Participate in the Electronic Foodborne Outbreak Reporting System (EFORS) by entering reports of foodborne outbreak investigations and monitor the quality, completeness or reports and time from onset of illnesses to report entry; c) Perform real-time subtyping of PulseNet tracked foodborne disease agents; submit the subtyping data and associated critical information (isolate identification, source of isolate, phenotype characteristics of the isolate, serotype, etc.) electronically to the national PulseNet database within 72 to 96 hours of receiving the isolate in the lab. D) Have or have access to a system for 24/7/365 notification/alerting of the public health emergency response system that can reach at least 90% of key stakeholders and is compliant with PHIN Preparedness Functional Area "Partner Communications and Alerting."*

Assessment 3.1: Dissemination of critical health information	
LHD Assessment Questions	**Indicators**
1. Through what means do you insure timely and effective dissemination of national data and strategic and health threat intelligence?	Participation in Epi-X, EFORS and PulseNet and evaluate timeliness and completeness of information processing and dissemination to appropriate recipients

Outcome 2B: Hazard and Vulnerability Analysis

Jurisdiction-specific hazards are identified and assessed to enable appropriate protection, prevention and mitigation strategies so that the consequences of an incident are minimized.

Name of LHD staff interviewed for this section	Title	Telephone

Materials to be Reviewed: (☑ if reviewed)

- ☐ Local hazard assessment and/or mitigation report
- ☐ Public health emergency response or emergency operations plan (EOP)
- ☐ Notifications/communications plan or section

CDC Required Critical Task 1: *Prioritize the hazards identified in the jurisdiction hazard/vulnerability assessment for potential impact on human health with special consideration for lethality of agents and large population exposures within 60 days of cooperative agreement award.*

Assessment 1.1: Knowledge of local sources with potential for significant adverse human health impact	
LHD Assessment Questions	**Indicators**
1. Has the LHD or county participated in or conducted a local assessment process that identified potentially significant human health threats in manufacturing, other business, military or security operations, laboratories, transportation or from other local circumstances?	Health threats and vulnerabilities have been assessed; LHD involvement
2. Does a prioritized list or report of human health threat sources exist?	Local threat sources are described
3. For identified potential human health threat sources, has a vulnerability assessment or review been conducted and vulnerabilities documented?	Major vulnerabilities for threat sources are documented

CDC Required Critical Task 2: *Decrease the time to intervention by the identification and determination of potential hazards and threats, including quality of mapping, modeling and forecasting.*

Assessment 2.1: Analytic support for significant hazard event detection and tracking

LHD Assessment Questions	Indicators
1. Are local potentially significant human health hazard sources mapped and geocoded data available for GIS analysis during an event?	Local threat sources have been mapped
2. For threats with potential for air or water dispersion, what modeling or planning for tracking changeable dispersion-related variables such as wind, temperature, or water flow, has been conducted?	Plan for tracking changeable variables and effects on situation
3. What data and data systems are available for analysis, including forecasting, during an event?	Data analysis tools and trained staff or outside consultation arranged

CDC Required Critical Task 3: *Decrease human health threats associated with identified community risks and vulnerabilities (i.e., chemical plants, hazardous waste plants, retail establishments with chemical/pesticide supplies.*

Assessment 3.1: Communication with threat sources and actions to reduce risk of significant event	
LHD Assessment Questions	**Indicators**
1. Has the LHD been involved with communications with local human health threat sources regarding the potential for large scale human exposure or exposure to highly lethal agents?	Plan includes contact list for significant threat sources or LHD knows how to get it; status of response plan.
2. Are communications systems in place for notifications and alerts between the LHD and local human health threat sources? Between the threat source and County OES? For general public warning by the threat source?	Plan describes communication means to receive notification/alert of an exposure incident, public warning capacity of threat source(s), and criteria for activation of public warning.
3. What recommendations have been made and actions implemented that decrease the threat risk at locally identified threat sources?	Threat source-specific risk reduction recommendations, actions or plans. Notifying and alerting plan and risk communication procedures are effective.

CDC Required Critical Task 4*: Through partners increase the capability to monitor movement of releases and formulate public health response and interventions based on dispersion and characteristics over time.*

Assessment 4.1: Tracking and analysis of agent during event	
LHD Assessment Questions	**Indicators**
1. What other local agencies does the LHD work with to monitor human health threat sources and data during event response?	Plan describes monitoring activities and responsibilities of local response partners for different agents
2. Does a mechanism exist to provide the LHD with data and related analysis to track the movement of agents dispersed by air or water or by commercial transportation?	Plan describes mechanism(s) for receiving and analyzing data or receiving analysis results.
3. Has the LHD planned for monitoring agent dispersion and related characteristics such as volume, lethality, or geographic spread, which may vary over time?	Plan for tracking dispersion of agents and time-sensitive characteristics has or can obtain a contractor to provide the service.

PREPAREDNESS GOAL 3: DETECT/REPORT

The local health department will decrease the time needed to detect and report chemical, biological, radiological agents in tissue, food or environmental samples that cause threats to the public's health.

Outcome 3A: Laboratory Testing

Potential exposure and disease will be identified rapidly, reported to multiple locations immediately, and accurately confirmed to ensure appropriate preventive or curative countermeasures are implemented. Additionally, public health laboratory testing is coordinated with law enforcement and other appropriate agencies.

Name of LHD staff interviewed for this section	Title	Telephone

Materials to be Reviewed: (☑ if reviewed)

- ☐ Training handouts to sentinel labs.
- ☐ Inventory of sentinel labs.
- ☐ Training log of sentinel lab training.
- ☐ Contact information for chemical level 3 lab
- ☐ Lab Integrated Response Plan (IRP)
- ☐ IRP exercise documentation
- ☐ Assessment of food testing capacity
- ☐ Plan for lab BT response to attack on food supply
- ☐ PHIN References
- ☐ PHIN consistency policy
- ☐ LIMS Vendor documentation of PHIN consistency

CDC Required Critical Task 1*: Increase and maintain relevant laboratory support for identification of biological, chemical, radiological and nuclear agents in clinical (human and animal), environmental, and food specimens.*

a) Develop and maintain a database of all sentinel (biological)/Level Three (chemical) labs in the jurisdiction using the CDC-endorsed definition that includes: • Name • contact information• BioSafety Level • whether they are a health alert network partner • certification status • capability to rule-out Category A and B bioterrorism agents per State developed proficiency testing or College of American Pathologists (CAP) bioterrorism module proficiency testing • names and contact information for in-State and out-of-State reference labs used by each of the jurisdiction's sentinel/Level Three labs; b) Test the competency of a chemical terrorism laboratory coordinator and bioterrorism laboratory coordinator to advise on proper collection, packaging, labeling, shipping, and chain of custody of blood, urine and other clinical specimens; c) Test the ability of sentinel/Level Three labs to send specimens to a confirmatory Laboratory Response Network (LRN) laboratory on nights, weekends, and holidays; d) Package, label, ship, coordinate routing, and maintain chain-of-custody of clinical, environmental, and food specimens/samples to laboratories that can test for agents used in biological, chemical, and radiological terrorism; e) Continue to develop or enhance operational plans and procedures that include: • specimen/samples transport and handling • worker safety • appropriate Biosafety Level (BSL) working conditions for each threat agent • staffing and training of personnel • quality control and assurance • adherence to laboratory methods and procedures • proficiency testing to include routine practicing of LRN validated assays as well as participation in the LRN's proficiency testing program electronically through the LRN website • threat assessment in collaboration with local law enforcement and Federal Bureau of Investigations (FBI) to include screening for radiological, explosive and chemical risk of samples • intake and testing prioritization • secure storage of critical agents • appropriate levels of supplies and equipment needed to respond to bioterrorism events with a strong emphasis on surge capacities needed to effectively respond to a bioterrorism incident;. f) Ensure the availability of at least one operational Biosafety Level Three (BSL-3) facility in your jurisdiction for testing for biological agents. If not immediately possible, BSL-3 practices, as outlined in the CDC-NIH publication "Biosafety in Microbiological and Biomedical Laboratories, 4th Edition" (BMBL), should be used (see www.cdc.gov/od/ohs) or formal arrangements ((i.e., Memorandum of Understanding (MOU)) should be established with a neighboring jurisdiction to provide this capacity; g) Ensure that laboratory registration, operations, safety, and security are consistent with both the minimum requirements set forth in Select Agent Regulation (42CFR 73) and the US Patriot Act of 2001 (P.L. 107-56) and subsequent updates; h) Ensure at least one public health laboratory in your jurisdiction has the appropriate instrumentation and appropriately trained staff to perform CDC developed and validated real-time rapid assays for nucleic acid amplification (Polymerase Chain Reaction, PCR) and antigen detection (Time-Resolved Fluorescence, TRF); i) *Ensure the capacity for LRN-validated testing and reporting of Variola major, Vaccinia and Varicella viruses in human and environmental samples either in the public health laboratory or through agreements with other LRN laboratories*

Assessment 1.1: Jurisdiction-wide preparedness of all analytical labs	
LHD Assessment Questions	**Indicators**
1. Is there a jurisdiction-wide inventory of all analytical labs?	Jurisdiction-wide inventory of public health, clinical, environmental, hospital, food testing and veterinary analytical labs; appropriate contact information
2. What is the availability of local Public Health laboratory (PH lab) services?	PH lab services provided by the local PH lab and contract lab are identified

3. Was refresher training on rule-out testing, handling and packaging hazardous materials and referral procedures conducted for local Sentinel labs?	Each local sentinel lab trained during the past 12 months.
4. What is the number of hospital lab personnel in your catchment area who are trained in sentinel lab protocols? (HRSA Sentinel Indicator 4-1)	Number of hospitals in catchment area; sentinel lab trainings conducted; number of hospital lab staff trained in sentinel lab protocols.

Assessment 1.2: Capacity to collect/handle/transport human specimens to test for exposure to chemical agents of terrorism	
LHD Assessment Questions	**Indicators**
1. Does the jurisdiction have the training and expertise to collect, handle and transport human specimens to be tested for exposure to chemical agents of terrorism?	PH Lab trained to collect, handle and transport chemical agent specimens (blood and urine); drill or exercise simulating chemical attack; PH lab has ensured clinical laboratories trained in handling, packaging, and transport of samples: PHL has handling, packaging, and transport procedures; procedures have been tested in a drill or exercise

Assessment 1.3: Competency of a chemical and a bioterrorism lab coordinator to advise on proper collection, packaging, labeling, shipping, and chain of custody blood, urine and other clinical specimens	
LHD Assessment Questions	**Indicators**
1. (Reference Lab required) Has the chemical terrorism lab coordinator (CTLC) and bioterrorism lab coordinator (BTLC) received training and demonstrated competency on proper collection, packaging, labeling, shipping and chain of custody of blood, urine and other clinical specimens ?	PH Microbiologist (PHM) has been designated as a BTLC; CTLC has been designated (may be same person as BTLC); Clinical Lab liaison (Lab BT Trainer) has been designated; Lab BT Trainer has been trained on collection and shipping procedures in past 12 months and tested with passing score; Competence is confirmed via certification.

Assessment 1.4: Sentinel Lab competency to send specimens to a confirmatory Laboratory Response Network (LRN) laboratory on nights, weekends, and holidays	
LHD Assessment Questions	**Indicators**
1. Has Sentinel Lab demonstrated competency to send specimens to a confirmatory Laboratory Response Network (LRN) laboratory on nights, weekends, and holidays?	Within the past 12 months, the Sentinel Lab has demonstrated through drill, exercise, or actual event its ability to send specimens to a Confirmatory LRN lab after regular business hours; procedures exist for after hours packaging and shipping of specimens

Assessment 1.5: Capacity of jurisdiction to package, label, ship, coordinate routing, and maintain chain-of-custody of clinical, environmental, and food specimens/samples to testing laboratories	
LHD Assessment Questions	**Indicators**
1. Does the LHD have the capacity to package, label, ship, coordinate routing, and maintain chain-of-custody of clinical, environmental, and food specimens/samples to laboratories that can test for agents used in biological, chemical, and radiological terrorism?	LHD has an integrated Lab BT Response Plan and/or procedures, including: (1) roles and responsibilities; (2) surge capacity within and between jurisdictions; (3) how the plan integrates with other department-wide emergency response efforts; (4) procedures for safe transport of specimens by air/ground; Drill, exercise or event demonstrated capacity, or ability within 12 hrs to obtain it.

Assessment 1.6: Enhancement of operational plans and procedures for laboratory testing.	
LHD Assessment Questions	**Indicators**
1. Does the PH lab have appropriate procedures for transport and handling of specimens/samples?	Procedures for transport and handing of BT specimens and samples are reviewed and revised as necessary
2. Does the PH lab follow appropriate procedures for worker safety?	Safety training program is provided annually to all workers
3. Are working conditions for each threat agent at the appropriate Biosafety Level (BSL)?	PH Lab has done hazard assessment for threat agents, and implemented appropriate BSL for each threat agent.
4. Is staffing and training of personnel adequate?	PH Lab staff trained to handle threat agents appropriately
5. Are appropriate quality control and assurance procedures in place?	PH Lab quality assurance program with quality control procedures performed.
6. Does Laboratory adhere to approved methods and procedures?	LRN validated procedures used; staff trained in LRN procedures appropriate to their Level.
7. Does Laboratory proficiency testing program include routine practicing of LRN validated assays as well as participation in the LRN's proficiency testing program electronically through the LRN website?	(Sentinel Lab) Passes CAP lab preparedness proficiency testing suite, with score of at least 80%. (Reference Lab) Passes CDC and CAP lab preparedness proficiency testing suite, with scores of at least 80%; results reported through LRN website.

8. Does Laboratory conduct threat assessment in collaboration with local law enforcement and FBI to include screening for radiological, explosive and chemical risk of samples?	PH Lab works with local BT response partners on an all hazards procedure for environmental specimens (Reference Lab) Does threat assessment collaboratively in their catchment area for each jurisdiction without a PH Lab.
9. Does the Laboratory have a procedure for intake and prioritization of specimens to be tested?	PH Lab has an intake and testing procedure for BT specimens
10. Does the Laboratory have secure storage of critical agents?	(Reference Lab) PH Lab has secure storage for critical agents
11. Does Laboratory have appropriate levels of supplies and equipment needed to respond to bioterrorism events with a strong emphasis on surge capacities needed to effectively respond to a bioterrorism incident?	PH Lab has equipment and supplies adequate for response to a BT incident, and to handle an increased BT load for two weeks

Assessment 1.7: Availability of operational Biosafety Level Three (BSL-3) facility in the jurisdiction for testing for biological agents.	
LHD Assessment Questions	**Indicators**
1. Is there at least one operational Biosafety Level 3 (BSL-3) facility in the jurisdiction or available to it?	(Reference Labs required) Has BSL-3 or is approved for Select Agent and operates with BSL-3 practices, including personal protective equipment (PPE).

Assessment 1.8: Compliance with Select Agent requirements.	
LHD Assessment Questions	**Indicators**
1. (Reference Lab required) Is the Public Health Laboratory registered in accordance with Select Agent Regulations (42 CFR 73)?	PH Lab registered for Select Agent; has updated Select Agent regulations; compliance with minimum requirements for operations, safety and security; obtained APHIS transport permit.

Assessment 1.9: Capacity to perform PCR and TRF analyses.	
LHD Assessment Questions	**Indicators**
1. (Reference Lab required) Does the PH Lab possess equipment and expertise to perform real-time PCR analysis on Category A and B threat agents as supported by the LRN?	The PH Lab possesses equipment and expertise to perform real-time PCR analysis
2. (Reference Lab required) Does the PH Lab possess equipment and expertise to perform TRF analysis on Category A and B threat agents as supported by the LRN?	The PH Lab possesses equipment and expertise to perform TRF analysis.

Assessment 1.10: Capacity to perform testing for Variola, Vaccinia and Varicella.	
LHD Assessment Questions	**Indicators**
1. (Reference Lab required) Does the PH Lab possess equipment and expertise to perform capacity for LRN-validated testing and reporting of Variola major, Vaccinia and Varicella viruses in human and environmental samples either in the public health laboratory or through agreements with other LRN laboratories?	PH Lab possesses equipment and expertise to perform Vaccinia and Varicella testing; has a procedure to refer testing for Variola to the State DHS; If it does not have the capacity for Vaccinia and Varicella testing, it has a procedure to refer testing to a Reference Lab.

CDC Required Critical Task 2: *Increase the exchange of laboratory testing orders and results a) Monitor compliance with public health agency (or public health agency lab) policy on timeliness of reporting results from confirmatory LRN lab back to sending sentinel/Level Three lab (i.e., feedback and linking of results to relevant public health data) with a copy to CDC as appropriate b) Comply with PHIN Preparedness Functional Areas Connecting Laboratory Systems and Outbreak Management to enable: a) the linkage of laboratory orders and results from sentinel/Level Three and confirmatory LRN labs to relevant public health (epi) data and b) maintenance of chain of custody.*

Assessment 2.1: Policy for transmitting reports	
LHD Assessment Questions	**Indicators**
1. Does the LHD or Lab have a policy for transmitting reports to specimen submitters which specifies required timeliness of transmission?	Policy for timeliness of transmission of results; timeliness of transmission documented by drill or event within past 12 months.

Assessment 2.2: PHIN Compliance	
LHD Assessment Questions	**Indicators**
1. Is the PH Lab aware of PHIN Connecting Laboratory Systems and Outbreak Management?	PH has PHIN documents; lab Information System has documentation from LIS vendor of consistency with PHIN standards.
2. (Reference Lab required /Sentinel optional) Does the PH Lab have appropriate computer equipment, firewall and high-speed Internet connectivity to access the LRN's procedures, reagents, and lab user applications?	Has appropriate computer equipment, firewall and high-speed Internet connectivity. If Reference Lab; has tested readiness /capability to: Report results of testing using LRN web-site.
3. Does the PH Lab plan to continue the adoption and implementation of LOINC as the laboratory data standard?	(Reference Lab required) LIS is SNOMED and LOINC compliant with robust query function, and electronic reporting to PH programs with appropriate security.
4. Is the PH Lab aware of PHIN chain of custody (CoC) requirements?	PH Lab is aware of PHIN chain of custody requirements and is PHIN compliant for chain of custody.
5. Is there an Integrated Lab BT Response Plan (ILBTRP) that includes how lab results will be reported and shared with local PH and law enforcement agencies through electronic means?	PH Lab's Integrated BT Lab Response Plan specifies how lab results are reported and shared by electronic means with local PH and law enforcement agencies.
6. What is the number of hospital lab personnel in your catchment area who are trained in sentinel lab protocols? (HRSA Sentinel Indicator 4-1)	Number of hospitals in catchment area; sentinel lab trainings conducted; number of hospital lab staff trained in sentinel lab protocols.

PREPAREDNESS GOAL 4: DETECT/REPORT

The local health department will improve the timeliness and accuracy of information regarding threats to the public's health as reported by clinicians and through electronic early event detection in real time to those who need to know.

Outcome 4A: Health Intelligence Integration and Analysis

To produce timely, accurate, and actionable health intelligence or information in support of prevention, awareness, deterrence, response, and continuity planning operations.

Name of LHD staff interviewed for this section	Title	Telephone

Materials to be Reviewed: (☑ if reviewed)

- ☐ Case reporting procedures/alert procedures
- ☐ Call down lists for potential alerting/notifying procedures
- ☐ Directories of public health personnel for operation of alert system
- ☐ Early Event Detection
- ☐ Rash Illness Algorithm
- ☐ Non-traditional surveillance procedures
- ☐ Foodborne Illness Complaint Logs

CDC Required Critical Task 1: *Increase source and scope of health information.*

Assessment 1.1: Source and scope of health information	
LHD Assessment Questions	**Indicators**

1. What systems are in place to receive syndromic surveillance information from emergency departments and urgent care centers?	Rapid 24/7 communication procedure and contact list, rash illness algorithm and select agent clinical information distributed to emergency departments (ED) and urgent care centers
2. What non-traditional surveillance systems are in place or planned?	Non-traditional surveillance activities such as BioWatch, pharmaceutical sales data, ED chief complaints, etc. in place and staff trained on procedures for monitoring syndromic data streams.
3. What improvements have been made to existing surveillance systems?	ELR and other improvements.

CDC Required Critical Task 2: *Increase speed of evaluating, integrating, analyzing for, and interpreting health data to detect aberrations in normal data patterns.*

Assessment 2.1: Speed of evaluating, integrating, analyzing interpreting health data	
LHD Assessment Questions	**Indicators**
1. How does the CD unit identify disease clusters and trends and unusual diseases/conditions?	Staff trained in epidemiology work with appropriate partners and use effective data analysis and disease surveillance systems and tools to identify local and regional trends
2. How often are disease data analyzed? How frequently are data summaries made?	Data summaries made at least annually and disease incidence analyzed at least quarterly
3. After a health event is detected, how does your early event detection system provide the ability to localize the population and geographic areas affected, identify other potential cases, and support quick and appropriate response to reduce morbidity and mortality?	Trained staff implement evaluated triage procedure for localizing, identifying, supporting quick/ appropriate response

CDC Required Critical Task 3: *Improve integration of existing health information systems, analysis, and distribution of information consistent with PHIN Preparedness Functional Area "Early Event Detection," including those systems used for identification and tracking of zoonotic diseases.*

Assessment 3.1: Integration of existing health information systems, analysis and distribution of information	
LHD Assessment Questions	Indicators
1. How does the system link Environmental Health with CD Control for foodborne illness surveillance and detection?	Written procedures for foodborne illness complaints to CD Control and EH included in the LHD's written notification and alerting procedures; shared in a timely manner
2. How does the system identify and track zoonotic and emerging zoonotic diseases?	Veterinary community is a component of the zoonotic disease surveillance system; vet community included in alerting and notifying procedures
3. How is the systems integration managed?	Qualified staff identified to maintain, and evaluate systems integration
4. Is laboratory surveillance a component of the integrated system?	LIS data integrated with CD Control system data

CDC Required Critical Task 4: *Improve effectiveness of health intelligence and surveillance activities.*

Assessment 4.1: Effectiveness of health intelligence and surveillance activities	
LHD Assessment Questions	**Indicators**
1. Have you evaluated the system for accuracy and timeliness of information collection and exchange?	Systems exchange messages for confirmed, probable, suspect, etc. cases, for laboratory results, and receive health related data for early event detection purposes. Evidence of LHD self evaluation.
2. If areas of improvement were identified, has a plan for improvement been formulated and/or implemented?	Areas of improvement identified and documented in the improvement plan

CDC Required Critical Task 5: *Improve reporting of suspicious symptoms, illnesses, or circumstances to the public health agency. (a) Maintain a system for 24/7/365 reporting cases, suspect cases, or unusual events consistent with PHIN Preparedness Functional Area "Early Event Detection (EED)."*

Assessment 5.1: Reporting of suspicious symptoms, illnesses or circumstances	
LHD Assessment Questions	**Indicators**
1. What is your system for reporting of cases or suspected cases of unusual health events?	Call reporting system distributes information based on established call triage procedures, a web-based reporting system available to care providers, or automated case report messages from surveillance or other systems
2. What is your call down list for notifying appropriate individuals? Are tribal entities on that list?	Phone numbers, including neighbor public health jurisdictions and appropriate individuals based on type of emergency and escalation criteria
3. How do you communicate your information to applicable state entities? At what point does the public local Health Officer call the state?	Procedures with appropriate names, phone numbers, and time frames
4. How do you alert and notify your local emergency management structure, and when?	Procedures with appropriate names, phone numbers, and time frames

Assessment 5.2: Maintaining 24/7/365 capability for case reporting	
LHD Assessment Questions	**Indicators**
1. How is the system maintained for 24/7/365 reporting of immediately notifiable conditions and emergent public health threats?	Call reporting system has 24/7/365 capability to accept reports of confirmed, probable, and suspect cases (e.g., call-in capability, web-based reporting, electronic case report messages)
2. What is the process for personnel required to accept, triage and escalate those reports for appropriate action?	It has been verified through evaluation that qualified health professional receives reports within 15 min. of initial department receipt and responds within 15 min. and involved in these activities have received training

CDC Required Critical Task 6: *Increase number of local sites using BioSense for early event detection.*

Assessment 6.1: Use of BioSense for early event detection	
LHD Assessment Questions	**Indicators**
1. Is your LHD participating in BioSense?	Integrated into other surveillance systems, how often monitored, has detected trends
2. If not, what other product or process do you use to improve early detection of disease outbreaks of public health importance? If no other product, what referral arrangements are in place for monitoring and detecting environmental contaminants and toxins?	Number of sites using or referring to other sites with this biotechnology-based diagnostics

PREPAREDNESS GOAL 5: INVESTIGATE

The local health department will decrease the time to identify causes, risk factors, and appropriate interventions for those affected by threats to the public's health.

Outcome 5A: Public Health Epidemiological Investigation

Potential exposure and disease will be identified rapidly, reported to multiple locations immediately, investigated promptly, and accurately confirmed to ensure appropriate prevent or curative countermeasures are implemented. Additionally, public health epidemiological investigation will be coordinated with law enforcement and other appropriate agencies including tribal and federal agencies.

Name of LHD staff interviewed for this section	Title	Telephone

Materials to be Reviewed: (☑ if reviewed)

- ☐ Current departmental Preparedness progress report to the State.
- ☐ Sample Confidential Morbidity Reports (CMRs)
- ☐ 24/7 Coverage procedure and staff assignments
- ☐ Disease reporting procedures
- ☐ Current directory of all infection control personnel in local health care facilities
- ☐ Epidemiologic Preparedness and Response Plan or applicable section of Emergency Operations Plan
- ☐ Routine reported disease summaries
- ☐ Written procedures or description of process for review of disease reports.
- ☐ After action report, including corrective action plan, on investigation of actual outbreak(s) during past 12-18 months.

CDC Required Critical Task 1: *Increase the use of efficient surveillance and information systems to facilitate early detection and mitigation of disease.*

Assessment 1.1: Disease reporting component of routine disease surveillance system.

LHD Assessment Questions	Indicators
1. How are confidential disease morbidity reports received and routed during work days?	Trained staff utilize a report processing procedure that has been evaluated
2. What is the system to receive confidential disease morbidity reports after hours?	Trained staff available after-hours utilize an after-hours report receipt and processing procedure that has been evaluated
3. What is the local progress towards capability for hospitals, clinics, emergency medical services systems and poison control centers to report data suggestive of terrorism or other highly infectious disease to the local health department on a 24-hour-a-day, 7-day-a-week basis? (HRSA Critical Benchmark 4-2)	24/7 reporting instructions have been disseminated to local hospitals, clinics, EMS systems, and poison control centers and evaluated

Assessment 1.2: Epidemiological analysis component of routine disease surveillance and control system	
LHD Assessment Questions	**Indicators**
1. How does the CD unit identify disease clusters and trends and unusual diseases/conditions?	Staff trained in epidemiology work with appropriate partners and use effective data analysis and disease surveillance systems and tools to identify local and regional trends; written procedures
2. How often are disease data analyzed? How frequently are data summaries made?	Data summaries made at least annually and disease incidence analyzed at least quarterly

Assessment 1.3: Information systems and their use in routine disease surveillance and control system	
LHD Assessment Questions	**Indicators**
1. What work is in progress towards implementation of WebCMR at local level, or what compatible system is in progress? What is your LHD's commitment to using Web CMR when DHS rolls it out?	Commitment to use Web CMR, or a compatible system is planned or piloted or in place
2. What other systems are used to support routine surveillance?	Use of a system for active vs. passive (reporting) surveillance, e.g. Epi-X for cross-jurisdictional

Assessment 1.4: Collaboration with internal and external partners in surveillance of diseases	
LHD Assessment Questions	**Indicators**
1. How do you collaborate with surrounding local jurisdictions to identify regional and/or cross-jurisdictional disease incidence?	Disease surveillance activities, procedures and plans (e.g. BT, WNV) include coordination with veterinarians, animal control officials, disease control staff in surrounding jurisdictions, and infectious disease specialists; written procedures
2. If applicable, describe cross-border, state, local, tribal and international work towards responses to naturally occurring individual cases of urgent public health importance or outbreaks of disease along our international border. (Early Warning Infectious Disease Surveillance (EWIDS) Guidance Goal #5).	Cross-border disease surveillance and control include rapid, effective lab confirmation of critical agents and training of public health personnel in disease surveillance activities; written procedures

Assessment 1.5: Non-traditional surveillance strategies implemented	
LHD Assessment Questions	**Indicators**
1. Is a system for syndromic surveillance in place or planned?	Exploration of the use of or current use of syndromic surveillance for rash and/or respiratory illnesses
2. What secondary data sources are currently in use for surveillance?	Utilization of DNA fingerprinting and DHS TB molecular typing to identify clusters and outbreaks
3. What secondary data sources are planned for future use?	Future plans exist or are in progress

Assessment 1.6: Steps to increase the sensitivity of or enhance the disease surveillance system	
LHD Assessment Questions	**Indicators**
1. What means have you used in the past 12 months to disseminate to those reporting communicable diseases information regarding reporting requirements or the clinical appearance of typical BT illnesses?	Dissemination of reporting procedures including 24/7 contact information clinical presentations (e.g. rash illness algorithm), and local disease trends

Assessment 1.7: Assessments, exercises, drills, or tabletops performed to evaluate the efficiency of disease surveillance and control system	
LHD Assessment Questions	**Indicators**
1. What strengths were evident from any assessment you performed?	During and after-hours report response determined to be effective and CMR and lab reports reflect timeliness of reporting subsequent to diagnosis
2. Based on drill, exercises or after action reports, what was the average time to initiate epidemiologic investigation after initial detection of a deviation from normal disease/condition patterns or a positive "hit" from an early detection device? (Target: 3 hours from initial detection)?	Average time was determined, documented, and was < or = 3 hours on average
3. What area (s) needs further work?	Areas needing work identified by an after action report and a plan of correction developed

CDC Required Critical Task 2: *Conduct epidemiological investigations and surveys as surveillance reports warrant.*

Assessment 2.1: Staff composition of epidemiological investigations and their training and respective roles and responsibilities	
LHD Assessment Questions	**Indicators**
1. How does the BT Coordinator interface and collaborate with staff conducting epidemiological (epi) investigations?	Coordinator possesses necessary skill set and capacity to collaborate with staff on epi investigations; evidence of working together.
2. What specialized training has CD staff received on BT agent surveillance and investigations?	Staff trained in clinical and lab surveillance and diagnosis of BT agents and NIMS by qualified trainers

Assessment 2.2: Step-wise process for routine investigation of disease clusters and outbreaks	
LHD Assessment Questions	**Indicators**
1. How would a combined response of disease control and environmental health staff occur?	Foodborne Illness Investigation Procedure implemented and links disease control and environmental health staff
2. What are the case investigation components of your smallpox and pandemic influenza response plans?	Smallpox response and pandemic influenza plans developed and evaluated by LHD staff and include surveillance, detection, interventions and prevention strategies

3. What are the components for case investigation of other disease clusters and outbreaks?	Investigation procedures for foodborne illness, meningococcal, etc clusters and outbreaks contain the components above

Assessment 2.3: Work with internal and external partners during a disease investigation, including the reporting of findings.	
LHD Assessment Questions	**Indicators**
1. What is your local forum(s) for public health, first responders (law enforcement including both FBI and local, fire, EMS agency), first receivers, and others (e.g. port authority, animal control, agriculture) to share concerns, develop procedures, MOUs and develop collaborative relationships?	Local hospital representatives and emergency response agency representatives participate in public health response planning and evaluation
2. What MOU or other agreement is in place for a combined response of environmental health and disease control staff?	The disease control and environmental health programs have a mechanism for sharing disease information and data in a timely manner (e.g. FBI Investigation Procedure)
3. What kind of MOU or other agreement is in place concerning a regional response?	MOU or other written agreements provide for a timely, effective regional response; evidence of concurring written procedures for how they will work together

CDC Required Critical Task 3: *Coordinate and direct public health surveillance and testing, immunizations, prophylaxis, isolation or quarantine for biological, chemical, nuclear, radiological, agricultural, and food threats.*

Assessment 3.1: Direction of Incident Surveillance and Testing	
LHD Assessment Questions	**Indicators**
1. What legal authorities exist to allow for the implementation of isolation, quarantine, or other actions necessary in response to a bioterrorism threat or event?	Local Health Officer knowledgeable about and available to exercise Health and Safety Code authority with local legal council support
2. What is the provision for chain of command in absence of Local Health Officer/ coordinator?	Incident Command System clearly specifies chain of command staff in absence of Local Health Officer/coordinator; delegation of authority identified

Assessment 3.2: Coordination of incident surveillance and testing	
LHD Assessment Questions	**Indicators**
1. How do you work with internal and external partners to coordinate incident surveillance and testing?	Incident surveillance and testing procedures/policies in place that coordinate lab, veterinary, disease control, environmental health, immunization staff, hospital staff, community clinics, medical providers,, and local emergency response officials
2. What assessments, exercises, drills, or tabletops have you performed to evaluate the efficiency and timeliness of your response to a bioterrorist threat or event?	After action reports. May include real incidents if properly evaluated
3. What strengths were evident from any assessment you performed?	Documentation that appropriate number of qualified staff provided adequate response capacity
4. What area(s) needs further work?	Evaluation identified and documented areas needing further work and a plan for improvement has been developed

5. How does your LHD evaluate the timeliness of initiation of epidemiologic investigations and testing?	Timeliness was evaluated and If timeliness evaluation identified a need for improvement, an improvement plan has been developed
6. What was the average time from initial detection of a deviation from normal disease /condition patterns, initial report, or positive "hit" from an early detection device to initiation of intervention (e.g., dissemination of protective action guidance, treatment?	Average time was determined and documented by the evaluation and, if average time determined to be unacceptable, a plan for improvement has been developed

CDC Required Critical Task 4: *Have or have access to a system for an outbreak management system that captures data related to cases, contacts, investigations, exposures, relationships and other relevant parameters compliant with PHIN Preparedness Functional Area "Outbreak Management".*

Assessment 4.1: Epidemiological data management system and use during a disease outbreak	
LHD Assessment Questions	**Indicators**
1. Does your data system support the systematic analysis of data to support the following epidemiologic functions: case investigation, Contact exposure tracing, identification and tracking of linkages among cases, contacts, exposed persons, specimens/samples, lab results; aggregate data for analysis, visualization, and generation of reports, graphics and maps, and comparison of characteristics of exposed and non?	System in place capable of analyzing data in the listed categories, and is utilized by adequately trained staff; documentation of what the system is
2. Is your outbreak management data system integrated with systems supporting early event detection, laboratory, surveillance or intervention administration?	Data from outbreak management system is integrated with data from laboratory LIS, early detection/ surveillance systems, and intervention/countermeasure administration.

Assessment 4.2: Assessments, exercises, drills, or tabletops to evaluate efficiency of epidemiological data management system	
LHD Assessment Questions	**Indicators**
1. What strengths were evident from any assessment you performed?	Strengths identified and documented in all major data management areas
2. What area(s) needs further work?	Areas needing further work identified and documented and plan developed to address these areas

PREPAREDNESS GOAL 6: CONTROL

The local health department will decrease the time needed to provide countermeasures and health guidance to those affected by threats to the public's health.

Outcome 6A: Emergency Response Communications

A continuous flow of critical information is maintained among emergency responders, command posts, agencies, and government officials for the duration of the emergency response operation.

Name of LHD staff interviewed for this section	Title	Telephone

Materials to be Reviewed: (☑ if reviewed)

- ☐ Public Health Emergency Operations or Disaster Plan
- ☐ Communications Plan or communications section of Emergency
- ☐ Operations Plan
- ☐ Notifications and alerts section of Emergency Operations Plan or Communications Plan
- ☐ Procedure for alerts/notifications
- ☐ Sample Health Alert or alert template

Critical Task 1: *Decrease the time needed to communicate internal incident response information; a) Develop and maintain a system to collect, manage and coordinate information about the event and response activities including assignment of tasks, resource allocation, status of task performance, and barriers to task completion*

Assessment 1.1: Incident situation status assessment and reporting	
LHD Assessment Questions	**Indicators**
1. What is the LHD's process for rapid assessment and reporting related to medical-health incidents, including from the incident site to the Department Operations Center or County EOC?	EOP describes situation assessment and status monitoring and reporting; supporting job action sheets

2. What standardized process support (e.g. forms/format, frequency, transmission means) is used by the DOC to record and report incident situation status and control activities to the EOC?	DOC – EOC situation status reporting described
3. How are incident objectives and response activities documented in the DOC?	Forms/format and frequency of documentation; staff trained; exercises and after action reports consistent with County EOC

Assessment 1.2: Resource allocation tracking	
LHD Assessment Questions	**Indicators**
1. What standardized process support (e.g. forms/format, frequency) is used by the DOC to record and track resources allocated during an incident, including personnel, supplies and equipment?	Forms/format for tracking resources allocated countywide; supporting job action sheets; staff trained; exercises and after action reports

Critical Task 2: *Establish and maintain response communications network.(.Includes HRSA Benchmark 2-10: Communications and IT)*

Assessment 2.1: Emergency communications partners	
LHD Assessment Questions	**Indicators**
1. What emergency response partners have the LHD identified that need to be included in the local medical-health and/or county emergency communications network?	Contact list of emergency response partners exists and alerting and notifying procedures includes Indian tribes
2. What is the planned or existing communications network with these partners?	Communications network described including notification of jurisdiction PIO.

Assessment 2.2: Emergency communications capacity	
LHD Assessment Questions	**Indicators**
1. What primary means of communications has been or will be established among response partners during an emergency (e.g., standard telephone, cellular telephone, email, other information system)?	Primary communications equipment acquired; staff trained on equipment use; exercises and after action reports
2. What, if any, technical or other issues have been identified that could impede communications during an emergency?	Technical assessment describes issues/barriers
3. How are these issues being addressed?	Process in place to address communication issues or barriers

Critical Task 3: *Implement communications interoperability plans and procedures.(Includes HRSA Benchmark 2-10: Communications and IT)*

Assessment 3.1: Interoperability systems planning	
LHD Assessment Questions	**Indicators**
1. Has a technical assessment of the current emergency communications capability of each medical-health response partner been conducted? Of each county emergency response department?	Communications capacity assessment, including interoperability needs, conducted for medical-health, law enforcement and fire agencies
2. Have interoperability needs and requirements been specifically identified among response partners, including medical-health, law enforcement, and fire?	Functional and technical communication interoperability requirements are established
3. What is the county's planned or ongoing process to create emergency communications interoperability for the network of emergency response partners? How is the LHD involved?	Process exists to plan and achieve communications interoperability

4. Has a short or long range plan to create interoperable emergency communications systems been developed? Do communication procedures currently exist?	Actual plan developed to achieve interoperability; communication procedures exist

Critical Task 4: *Ensure communications capability using a redundant system that does not rely on the same communications infrastructure as the primary system.(.Includes HRSA Benchmark 2-10: Communications and IT)*

Assessment 4.1: Redundant communications system	
LHD Assessment Questions	**Indicators**
1. What is the redundant or alternate means of communications established or planned between various response partners for emergency use? Does this system utilize a different communications infrastructure than the primary communications means?	Communications plan is in place and describes redundant emergency communications mechanisms
2. Is redundant communications capacity currently set up among medical-health agencies? Among county emergency response departments? With other response agencies such as fire?	Department has redundant communications equipment and related infrastructure installed; staff trained; exercises conducted; after action reports
3. What special alternate communications needs or issues exist for the LHD (e.g., lack of technical personnel, inadequate communications infrastructure in health facility, mountainous areas with no, limited or unreliable reception; inadequate or aging repeaters or other equipment)?	Assessment and ongoing process to address special alternate/redundant communications needs exists

Critical Task 5: *Increase the number of public health experts to support Incident Command (IC) or Unified Command (UC).*

Assessment 5.1: Public Health Incident Commander	
LHD Assessment Questions	**Indicators**
1. What position/individual is designated as primary IC for a Public Health DOC and/or Unified Command with county OES?	Plan designates primary and alternate ICs for Public Health DOC and Unified Command; supporting job action sheets
2. What positions are designated as alternates for the DOC IC in the absence of the primary IC?	Persons designated for primary or alternate IC trained in Advanced Incident Command
3. Describe the training provided to the primary and alternate ICs related to Advanced Incident Command System for DOC management? For Unified Command with county OES, law or fire?	Persons designated as primary or alternate IC have participated in exercises

Critical Task 6: *Increase the use of tools to provide telecommunications and information technology to support public health response. A) Ensure that the public health agency has "essential service" designation from their telephone provider and cellular telephone provider. B) Ensure that the public health agency has priority restoration designation with from their telephone provider.*

Assessment 6.a.1: Essential service designation	
LHD Assessment Questions	**Indicators**
1. Does the LHD have essential service designation for telephone and cellular phone service?	Department designated as an essential service provider for telephone and cellular phone service

Assessment 6.b.1: Priority restoration designation	
LHD Assessment Questions	**Indicators**
1. Does the LHD have a priority restoration designation with their telephone provider?	Department has priority restoration designation with their telephone provider

Critical Task 7: *Have or have access to a system for 24/7/365 notification/alerting of the public health emergency response system that can reach at least 90% of key stakeholders and is compliant with PHIN Preparedness Functional Area "Partner Communications and Alerting."*

Assessment 7.1: Alerting partners of incidents and updates	
LHD Assessment Questions	**Indicators**
1. Has the Health Department created directories of local response partners to receive alerts regarding significant health events or emergencies?	Local partners identified for notification
2. What technical means does the LHD use or plan to use to send alerts locally and to partners outside the jurisdiction? Is the LHD using California Health Alert Network (CAHAN)? If an electronic system such as CAHAN will be used, have local directories of authorized users been established? What types of local agencies are included – health care providers, emergency departments, EMS providers, law, fire?	Technical means developed to rapidly send alerts to partners 7/24/365; alert/notification procedures describe how CAHAN is being used with other providers

Assessment 7.2: Secure communications	
LHD Assessment Questions	**Indicators**
1. How has the LHD or County planned for ensuring that restricted information is available only to the intended recipients (secure communications)?	Procedure/plan describes secure communications and responsibility for determining when it is needed
2. Has a secure Web site for jurisdictional emergency communications been established for the County or LHD? Have approved users and a method of user authentication been established?	County or Department has a alert system that supports secure intra-jurisdictional communications or is using CAHAN as their secure Web-based alerting system

Assessment 7.3: Alert format and content standards	
LHD Assessment Questions	**Indicators**
1. Has a standard format or template for a health alert been established?	Procedures developed for composing, sending and auditing an alert and has a defined template
2. Does the LHD have procedures defining required alert fields or attributes, including: ▪ Message delivery time requirement ▪ Secure communications status ▪ Indication of: - sensitivity - severity - whether acknowledgement is required - alert status - message type ▪ Intended audience	Attributes related to timeliness, secure communications, sensitivity, status, severity, message type, audience and acknowledgement are used for each alert

3. Has a standard alert vocabulary or standard definitions been established for the above alert/message attributes?	Standard definitions exist for required alert message fields/attributes

Assessment 7.4: Alert distribution	
LHD Assessment Questions	**Indicators**
1. Describe the LHD's process for development, review and approval of alerts. Who is authorized to send an alert during an emergency?	Alert procedures define authorized positions to send alerts and process for review and approval
2. Has the LHD conducted or planned any exercises that test the development, distribution/broadcast and receipt of health-related initial alerts and update notifications? Does the LHD have a planned schedule of exercises or drills to test and improve alerting capability?	Exercises have been conducted; after action reports developed. Routine periodic functional system tests are conducted ; reports developed

Outcome 6B: Emergency Public Communications

The public is informed quickly and accurately, and updated consistently, about threats to their health, safety, and property and what protective measures they should take.

Name of LHD staff interviewed for this section	Title	Telephone

Materials to be Reviewed: (☑ if reviewed)

- ☐ Public Information Officer job description
- ☐ Organization Chart of LHD and emergency preparation unit(s)
- ☐ Crisis/Emergency Response Communication plan (CERC Plan)
- ☐ Training assessment of emergency response/crisis communications staff
- ☐ Training schedules
- ☐ Media contact list
- ☐ Public contact list
- ☐ Partners contact list
- ☐ Special needs populations contact list
- ☐ LHD fact sheets on emergency topics
- ☐ LHD policy for response to media inquiries
- ☐ Public health emergency information on LHD Web Site
- ☐ Sample press releases
- ☐ CDC CERC Manual
- ☐ Progress reports including drills, debriefing and revisions

CDC Required Critical Task 1: *Decrease time needed to provide specific incident information to the affected public, including populations with special needs such as non-English speaking persons, migrant workers, as well as those with disabilities, medical conditions, or other special health care needs, requiring attention; a) Advise public to be alert for clinical symptoms consistent with attack agent; b) Disseminate health and safety information to the public; c) Ensure that the Agency's public information line can simultaneously handle calls from at least 1% of the jurisdiction's population*

Assessment 1.1: Plan for crisis and emergency risk communication (CERC) and information dissemination	
LHD Assessment Questions	**Indicators**
1. What is the plan for crisis and emergency risk communication (CERC) and information dissemination?	PIO designated and has Emergency Risk training; plan to systematically produce media releases and fact sheets; SNS media needs are part of plan; media coverage monitored and media errors corrected; capacity demonstrated annually via exercises or events with debrief.

Assessment 1.2: Advice to public for clinical symptoms	
LHD Assessment Questions	**Indicators**
1. How will you advise the public to be alert for clinical symptoms consistent with attack agent?	Specialists use topic-specific materials and multiple media outlets; plans for smallpox and border issues; translation for key target languages; hotline capability; coordinated with State

CDC Required Critical Task 2: *Improve the coordination, management and dissemination of public information.*

Assessment 2.1: Coordination, management and dissemination of public information	
LHD Assessment Questions	**Indicators**
1. How are you working to improve the coordination, management and dissemination of public information?	Chain of command structure and operational plan; procedure for authorization to release information; media triage response system; layperson language strategy; procedure to validate messages; multiple methods of dissemination; media monitoring and correction strategy; Capacity shown via drill, exercise or event

Assessment 2.2: Plan for activities to meet the specific needs of special populations	
LHD Assessment Questions	**Indicators**
1. What is your plan to meet specific needs of special populations?	CERC Plan meets needs of special populations with targeted strategies that overcome identified barriers of language, culture, hearing, sight and mobility impairments and other physical and mental disabilities

CDC Required Task 3: *Decrease the time and increase the coordination between responders in issuing messages to those that are experiencing psychosocial consequences to an event*

Assessment 3.1: Messages to those experiencing psychosocial consequences	
LHD Assessment Questions	**Indicators**

1. How do you coordinate with responders in issuing messages to those experiencing psychosocial consequences?	LHD works with local mental health to craft messages to public; has the capability to refer people for mental health help via "hotline."

CDC Required Task 4: *Increase the frequency of emergency media briefings in conjunction with response partners via the jurisdiction's Joint Information Center (JIC), if applicable*

Assessment 4.1: Emergency media briefings	
LHD Assessment Questions	**Indicators**
1. Does the jurisdiction participate in emergency media briefings by the JIC?	Joint Information Center participation by LHD staff and other procedures that show how LHD will operate their public information process
2. How has the LHD increased the frequency of media briefings?	Drills, exercises and events. Cycle time to brief media via a press release or conference; frequency related to level of crisis.
3. During drills, exercises or events, what is the frequency of media briefings?	Frequency of media briefings in a drill, exercise or event.

CDC Required Task 5: *Decrease time needed to issue public warnings, instructions, and information updates in conjunction with response partners*

Assessment 5.1: Public warnings, instructions, and information updates in conjunction with response partners	
LHD Assessment Questions	**Indicators**
1. How do you coordinate with response partners to issue public warnings, instructions and information?	Coordinates with community organizations and agencies on CERC media releases and information to public.
2. How has the LHD decreased the time needed to issue protective action information to the public?	LHD staff meets with local and regional partners who will be communicators during an event. LHD has 24/7 contact information for partners and state PIO. Drills, exercises and events. Procedures in place for getting approval to release the information
3. During drills, exercises or events, what is the time needed?	Cycle time to issue protective action information to the public in a drill, exercise or event.

CDC Required Task 6: *Decrease time needed to disseminate domestic and international travel advisories*

Assessment 6.1: Public warnings, instructions, and information updates in conjunction with response partners	
LHD Assessment Questions	**Indicators**
1. What is your process for disseminating domestic and international travel advisories?	LHD has plan for issuing travel advisories; developed a travel advisory template

2. How has the LHD decreased the time needed to disseminate advisories?	LHD staff familiar with state and CDC websites to obtain travel advisory information; drills, exercises and events.
3. During drills, exercises or events, what is the time needed?	Cycle time to issue travel advisories to the public in a drill, exercise or event

CDC Required Task 7: *Decrease the time needed to provide accurate and relevant public health and medical information to clinicians and other responders*

Assessment 7.1: Public health and medical information to clinicians and other responders	
LHD Assessment Questions	**Indicators**
1. What is your process to provide accurate and relevant public health and medical information to clinicians and responders?	LHD has plan for issuing PH/med info to clinicians; developed an appropriate template; has means to rapidly send out information.
2. How has the LHD decreased the time needed to provide this information?	Has updated list of PH and clinical contacts; familiar with state/CDC websites for agent specific medical information. Drills, exercises and events.
3. During drills, exercises or events, what is the time needed?	Cycle time to issue PH/med information to clinicians in a drill, exercise or event; tests annually.

Outcome 6C: Worker Health Safety

No further harm to any first responder, hospital staff member, or other relief provider due to preventable exposure to secondary trauma, chemical release, infectious disease, radiation, or physical and emotional stress after the initial event or during decontamination and even follow-up.

Name of LHD staff interviewed for this section	Title	Telephone

Materials to be Reviewed: (☑ if reviewed)

- ☐ List of mental health/crisis counselors/addiction providers available for public health personnel
- ☐ MOUs or other formal agreements with mental health providers
- ☐ Emergency response plan concerning mental health counseling
- ☐ Management guidelines and incident health and safety plans for worker safety
- ☐ Training outline or curriculum/materials
- ☐ Attendance log/roster for trainings during last 12 months
- ☐ MOU/agreement(s) with training partners (e.g., university medical center)

CDC Required Critical Task 1: *Increase the availability of worker crisis counseling and mental health and substance abuse behavioral support.*

Assessment 1.1: Emotional/psychological/stress reduction support for personnel	
LHD Assessment Questions	**Indicators**

1. What kind of mental health, crisis counseling, and substance abuse behavioral support is available for public health response personnel, and from whom? What is the LHD relationship with the local Mental Health Department for these services?	Breadth and scope of available services; agreements with appropriate community providers/partners; cadre of appropriately trained mental health responders and crisis counselors; assistance to responders through written materials (fact sheets, brochures), websites, internal training; assistance to public from prepared news releases, prepared messages for radio broadcast, prepared messages on telephone hot line.
2. How much availability of these services is there, i.e. what are the resource limitations or other restrictions that would limit availability? How is capacity assessed?	Mental health and addiction providers' capacity assessed and can respond to a major disaster
3. If mental health, crisis counseling support is limited, what procedures are in place for acquiring support from other jurisdictions if necessary?	Procedures for acquiring needed level of services
4. How are applicable LHD personnel made aware of the counseling, mental health and substance abuse support services available to them?	Personnel who have awareness; rapid alert/communication system provision for information on threat from exposure; speed of information in drills, exercises or tabletops
5. Has the LHD established any support services to provide information and crisis counseling to families of public health response workers or arranged such services through community resource centers?	Type of available services; agreements with appropriate community providers/partners

CDC Required Critical Task 2: *Increase compliance with public health personnel health and safety requirements: (a) Provide Personal Protection Equipment (PPE) based upon hazard analysis and risk assessment; (b) Develop management guidelines and incident health and safety plans for public health responders (e.g., heat stress, rest cycles, PPE); (c) Provide technical advice on worker health and safety for IC and UC.*

Assessment 2.1: Compliance with Personal Protection Equipment (Includes HRSA Benchmark 2-6: PPE)	
LHD Assessment Questions	**Indicators**
1. How have you assessed risks for hazards and needs for PPE?	Job hazard analysis for PPE; new PPE requirements incorporated into planning and budgeting
2. What kind of Personal Protection Equipment (PPE) is available at the LHD, and is the supply adequate for the number of personnel at risk?	Emergency response plan with procedures for protection of emergency response personnel; adequate PPE supply, functional and appropriately matched to hazard for effective protection, durability, and proper fit
3. How many designated personnel, including volunteers, have been trained in safety and health practices and know how to use PPE? Do these personnel know how to locate PPE?	Percent public health responders trained and cleared to use PPE appropriate for their response roles; understanding of limitations of PPE (especially respiratory protection) and location

4. What kind of PPE is available for hospital-based patient care and response workers, and is the supply adequate for the number of personnel (including surge capacity staff)?	Availability and adequacy of PPE

Assessment 2.2: Management guidelines and incident health and safety plans (Includes HRSA Benchmark 2-7: Decontamination)	
LHD Assessment Questions	**Indicators**
1. What are the LHD's management guidelines and incident health and safety plans for worker safety?	Emergency response plan with procedures for protection of emergency response personnel, including PPE; guidelines and incident health and safety plans for public health responders; incidents with unique hazards (e.g., WMD) addressed; availability and management of safety resources needed by responders
2. What provisions have been made for monitoring and information tracking for worker exposures? Who does it and how is it monitored?	Worker exposure data collection, management, and dissemination; monitoring procedures
3. What is the plan to coordinate incident response support/services?	Coordination of public health with overall emergency management, and with safety officer to identify hazards/ unsafe conditions; ongoing assessment of worker health and safety resource needs/locate sources, and worker psychological support; PPE program development and implementation
4. Are decontamination guidelines included in incident health and safety plans and is adequate portable and fixed decontamination equipment available locally to manage exposed patients, public health response personnel and hospital personnel?	Incident health and safety plans include appropriate guidance

Assessment 2.3: Technical advice on worker health and safety for IC and UC	
LHD Assessment Questions	**Indicators**
1. Which staff have been designated with responsibility for providing technical advice on worker health and safety for Incident Command and Unified Command?	Staff assigned safety responsibility aware of role and trained; understands unique hazards of collecting, securing and transporting specimens
2. What is the process for providing technical advice on worker health and safety for Incident Command and Unified Command? What experts do you consult with?	Procedure for briefing first responders evaluated by drill, exercise, or tabletop; provision for 24/7/365 coverage; provision for and type of experts consulted with

CDC Required Critical Task 3: *Increase the number of public health responders that receive hazardous material training.*

Assessment 3.1: First responders' training	
LHD Assessment Questions	**Indicators**
1. Who in the LHD is responsible for planning and delivering or assuring that training for workers occurs to protect themselves from exposure to hazardous materials?	Designated staff adequately supported for function; formal relationship between LHD and training entity(ies) if conducted externally.
2. How many in the public health workforce have received training in hazardous materials? What steps are being taken to increase the number of public health responders that receive this training?	Number of responsible personnel, including volunteers, who received applicable training on emergency plans, procedures and systems related to hazardous materials; training schedules
3. When has hazardous material training for public health responders been conducted?	Timing of last training and repeat trainings; curriculum evaluated by drill, exercise, or tabletop.
4. What is the scope of the hazardous material training for your public health workers? What specific knowledge and skills are expected for your workforce to safely respond to an event involving a hazardous material?	Training includes recognition and treatment of key biological and other agents and use and limitations of PPE, makes provision for both emergency response operations and post-emergency response operations (e.g., decontamination), and new threats coordinated with other agency emergency preparedness training.

Outcome 6D: Isolation and Quarantine

Successful separation, restriction of movement, and health monitoring of individuals and groups who are ill, exposed, or likely to be exposed, in order to stop the spread of a contagious disease outbreak. Legal authority for these measures is clearly defined and communicated to the public. Logistical support is provided to maintain measures until danger of contagion has elapsed.

Name of LHD staff interviewed for this section	Title	Telephone

Materials to be Reviewed: (☑ if reviewed)

- ☐ State's Quarantine Document
- ☐ Smallpox Response Plan
- ☐ Training documentation
- ☐ Draft Isolation and Quarantine Orders (e.g. TB)

CDC Required Critical Task 1: *Assure legal authority to isolate and/or quarantine individuals, groups, facilities, animals and food products.*

Assessment 1.1: Legal authority for quarantine	
LHD Assessment Questions	**Indicators**
1. What steps have you taken to insure legal authority to quarantine people, facilities, animals, and food products?	Local Health Officer availability and county counsel support per H&S Code and State's Quarantine guidelines
2. Have you looked at the draft Public Health Law Work Group manual?	Evidence of familiarity

CDC Required Critical Task 2: *Coordinate quarantine activation and enforcement with public safety and law enforcement*

Assessment 2.1: Quarantine planning	
LHD Assessment Questions	**Indicators**

1. How have you involved public safety and law enforcement officials in your quarantine plans? Have draft sample orders been developed by your county counsel?	Local fire, EMS, county counsel and law enforcement officials involved in development of quarantine component of Smallpox Response Plan

CDC Required Critical Task 3: *Improve monitoring of adverse treatment reactions among those who have received medical countermeasures and have been isolated or quarantined.*

Assessment 3.1: Monitoring of adverse treatment reactions	
LHD Assessment Questions	**Indicators**
1. How do you plan to monitor these adverse treatment reactions?	Written procedure in place; public health staff trained in monitoring and health and law activities are coordinated

CDC Required Critical Task 4: *Coordinate public health and medical services among those who have been isolated or quarantined.*

Assessment 4.1: Medical services staff working with public health	
LHD Assessment Questions	**Indicators**
1. What steps have you taken to insure the coordination of public health and hospital and urgent care personnel in the management of adverse reactions?	Written procedure in place; hospital, urgent care, and hospital personnel helped develop and trained in Smallpox Response Plan's adverse reactions monitoring

CDC Required Critical Task 5: *Improve comprehensive stress management strategies, programs, and crisis response teams among those who have been isolated or quarantined.*

Assessment 5.1: Mental health management	
LHD Assessment Questions	**Indicators**
1. How do you plan to address the mental health issues associated with the implementation of quarantine?	Local mental health officials involved in development of the Smallpox Response Plan and trained in quarantine management

CDC Required Critical Task 6: *Direct and control public information releases about those who have been isolated or quarantined.*

Assessment 6.1: Control of public information dissemination	
LHD Assessment Questions	**Indicators**
1. How do you plan to manage public information dissemination during a quarantine?	Local public information office (PIO) officials involved in development of Smallpox Response Plan which clearly coordinates public information between public health and PIO officials to insure accuracy and timeliness and identifies strategies to manage non-local media personnel

CDC Required Critical Task 7: *Decrease time needed to disseminate health and safety information to the public regarding risk and protective actions.*

Assessment 7.1: Timeliness of public information dissemination	
LHD Assessment Questions	**Indicators**
1. How do you plan to insure the timeliness of public information dissemination during a quarantine?	Smallpox Response Plan includes an effective and timely communication protocol between public health officials and PIO and with state counterparts and communication equipment is in place and has been assessed to insure rapid information dissemination

CDC Required Critical Task 8: *Have or have access to a system to collect, manage, and coordinate information about isolation and quarantine, compliant with PHIN Preparedness Functional Area "Countermeasure and Response Administration."*

Assessment 8.1: Systems management	
LHD Assessment Questions	**Indicators**
1. How do you plan to manage the data necessary to carry out a successful isolation or quarantine?	Data management system consistent with PHIN standards that manages data from all coordinating sources (e.g. public health, medical services) identified and implemented and appropriate staff trained in use of system

Outcome 6E: Mass Prophylaxis Vaccination

Appropriate prophylaxis and vaccination strategies are implemented in a timely manner upon the onset of an event, with an emphasis on the prevention, treatment, and containment of the disease. Prophylaxis and vaccination campaigns are integrated with corresponding public information strategies.

Name of LHD staff interviewed for this section	Title	Telephone

Materials to be Reviewed: (☑ if reviewed)

- ☐ Local mass prophylaxis plan
- ☐ Local SNS plan (if separate)
- ☐ Local training plan
- ☐ Local tribal plan or agreement for delivery of mass prophylaxis to members of tribal entities, if applicable
- ☐ Regional mass prophylaxis plan, if applicable
- ☐ Notifications section of Emergency Operations Plan or Mass Prophylaxis Plan
- ☐ Smallpox Preparedness and Response Plan
- ☐ Epidemiologic Preparedness and Response Plan
- ☐ Mass Prophylaxis Exercise Plan and objectives
- ☐ Exercise After Action Reports
- ☐ Data management or similar section of Epidemiologic Preparedness and Response Plan
- ☐ Communications section of Emergency Operations Plan or Mass Prophylaxis Plan
- ☐ Alerting procedure or plan
- ☐ Crisis and Emergency Risk Communication Plan

CDC Required Critical Task 1: *Decrease the time needed to dispense mass therapeutics and/or* vaccines.

a) Implement local, (tribal, where appropriate), regional and State prophylaxis protocols and plans.

Assessment 1.a.1: Local, regional and/or tribal planning for providing rapid mass prophylaxis to affected populations (Includes HRSA Benchmark 2-5: Pharmaceutical Caches for Hospital personnel)	
LHD Assessment Questions	**Indicators**

1. What are the LHD's local planning assumptions regarding the scope of potential prophylaxis and related scalable capacity to provide prophylaxis within the time period for effective prevention of infection or disease?	Mass prophylaxis plan describes expected prophylaxis needs, POD organization, internal/external support; supporting job action sheets; staff trained; exercises and after action reports; POD locations secured; plans in place for special populations
2. What is the LHD's participation in regional or tribal planning and coordination?	Prophylaxis for tribal entities described in LHD plan or written agreement; tribal participation in planning and exercises; regional planning and exercises
3. Has an inventory of locally available pharmaceuticals been conducted and a gap analysis performed based on 1) the number of health care personnel (including hospital- based patient care and response staff) needing protection and 2) the local planning assumptions about the total jurisdictional number needing prophylaxis?	LHD aware or conducted inventory; inventory information available to LHD
4. Has a regional pharmaceutical cache been developed or planned?	LHD aware or coordinated placement or planning for regional pharmaceutical cache; inventory and location available to LHD
5. What issues or problems have been encountered in establishing local or regional pharmaceutical caches?	LHD is aware of any problems or issues and is aware of a mitigation/improvement plan.

b) Achieve and maintain the Strategic National Stockpile (SNS) preparedness functions described in the current version of the Strategic National Stockpile guide for planners

Assessment 1.b.1: Strategic National Stockpile (SNS) preparedness functions			
LHD Assessment Questions	**Indicators**	**LHD Strengths**	**LHD Areas for Improvement**
CONSULTANT TO COMPLETE THE CDC SNS TOOL FOR QUESTIONS AND ISSUES RELATED TO THIS AREA (SEE APPENDIX 1)			

c) Ensure that smallpox vaccination can be administered to all known or suspected contacts of cases within 3 days and, if indicated, to the entire jurisdiction within 10 days

Assessment 1.c.1: Determination of scope of vaccination	
LHD Assessment Questions	**Indicators**
1. What are the LHD's mechanisms for analyzing outbreak data and determining the number of contacts requiring vaccination?	Outbreak data management activities planned, including contact management
2. What is the LHD's process for deciding the entire jurisdiction requires vaccination?	Local chain of command for ordering mass vaccination defined; includes consultation with state/federal health officials

Assessment 1.c.2: Large scale POD operation	
LHD Assessment Questions	**Indicators**

1. What planning or formal modeling has been performed to project the number of PODs and related staffing, supplies and vaccine needed for vaccinating contacts under different incident scenarios?	Modeling or planning projections incorporated into local mass prophylaxis plan
2. Describe the "through put" requirements to vaccinate the entire jurisdiction within 10 days (e.g. number of POD sites that must be operated; operating schedule of PODs; number of clients per hour per clinic, and related staffing, supply and vaccine requirements).	Operational requirements defined for vaccination of jurisdictional population; staff trained on large scale POD operation; multiple simultaneous POD operations exercises; after action reports; provision for special populations
3. What volunteer or outside deployed personnel training needs have been identified to support POD staffing?	Training needs and staff identified; training provided; medical procedures and supporting job action sheets; exercises involving rapid training of non-Departmental response personnel; after action reports

Assessment 1.c.3: Rapidity of operational response	
LHD Assessment Questions	**Indicators**
1. What communication mechanisms are in place to rapidly notify and deploy needed direct service and support (internal and external services) staff to set up the PODs?	Contact directories; standards for timely notification, response and return to duty; staff trained; exercises testing rapid notice and return to duty; after action reports
2. What is the local pre-positioning of supplies and equipment needed for POD operations and plans for rapid access and utilization?	Inventory of local supplies and equipment; mechanisms for 24/7/365 access and utilization; staff designated to carry out these plans; exercises testing rapid retrieval

d) Have or have access to a system to collect, manage, and coordinate information about the administration of countermeasures, including isolation and quarantine, compliant with PHIN Preparedness and Functional Area "Countermeasure and Response Administration."

Assessment 1.d.1: Determination of scope of vaccination	
LHD Assessment Questions	**Indicators**
1. What planning or information needs analysis has the LHD conducted to identify needed information related to the administration of vaccination or drug prophylaxis (drug actions), isolation and quarantine, or other non-drug actions recommended or ordered as a countermeasure to contain disease during emergency response?	Description of functional patient/contact tracking needs
2. Has the LHD identified the types of information that will be needed to track patients/clients who have received countermeasures and to monitor the efficacy of the countermeasure(s)?	Specific data collection requirements for patients and contact tracking, client and community-level efficacy monitoring.
3. Has the LHD incorporated or reviewed the CDC Public Health Information Network (PHIN) functional requirements for countermeasures and response administration in planning?	Familiarity with PHIN requirements; requirements incorporated into data collection and systems planning

Assessment 1.d.2: Countermeasure data system requirements and capacity

LHD Assessment Questions	Indicators
1. Have the basic technical system requirements for a countermeasure data/information system, including data exchange, security, central repository, and remote locations, been identified?	Plan describes basic technical requirements related to security, data exchange, etc; centralized/remote site utilization described
2. Have needed system integrations (e.g. countermeasure data system and outbreak management system) been identified?	System integration/interface for incident response described
3. How does the LHD currently plan to collect and process countermeasure data that includes: patient-specific demographics and medical data; patient monitoring (e. g. vaccine take, symptom development, compliance, adverse reaction, recall); track patients in isolation or quarantine; analysis of countermeasure efficacy; track progress in campaign to administer countermeasure?	Describes use of state/federal or other software for data management system for countermeasure administration; hardware and site requirements specified or implemented.

CDC Required Critical Task 2: *Decrease time to provide prophylactic protection and/or immunizations to all responders, including non-governmental personnel supporting relief efforts.*

Assessment 2.1: Notification/alerting of response partners	
LHD Assessment Questions	**Indicators**
1. What are the LHD's mechanisms to rapidly contact response agencies, including volunteer agencies, and communicate need for and logistics associated with prophylactic protection?	Notification/alert procedure includes 24/7/365 contact directories for public and non-governmental agencies and current estimate of number of personnel
2. How is the contact directory for governmental and non-governmental response and relief agencies kept current?	Responsibility and frequency of update specified

Assessment 2.2: Exercises and timeliness improvements	
LHD Assessment Questions	**Indicators**
1. Has the LHD conducted or planned any exercises that test the rapid delivery of prophylaxis to response personnel?	Exercises testing mass prophylaxis to response personnel and an after action report
2. Did the LHD actually track the timeliness of furnishing the protective prophylactic intervention?	Timeliness measured
3. What significant after exercise report findings were documented and was a timeline for improvements included? Were needed improvements implemented?	After action reports

CDC Required Critical Task 3: *Decrease the time needed to release information to the public regarding dispensing of medical countermeasures via the jurisdiction's JIC (if JIC activation is needed).*

Assessment 3.1: Pre-crisis planning	
LHD Assessment Questions	**Indicators**
1. What is the LHD's communication procedure for the release of public information through the EOC/JIC during an emergency?	Risk Communication Plan describes authority and responsibility for development and release of public information in coordination with County EOC/JIC
2. What mechanisms have been developed to rapidly communicate with potentially affected persons (e.g. specific geographic area)?	County or Department has acquired/planning to acquire reverse 911 capability or other rapid means to autodial/reach discrete geographic areas, populations or other special directory lists
3. What pre-prepared communication materials have been developed to support notifying affected persons of the need for and local means of receiving prophylaxis at a community clinic or point of distribution?	Message templates developed describing the location and access means to community clinics/PODs, rationale/need for prophylaxis
4. What communication alternatives have been developed for special needs populations (e.g. language other than English, geographically isolated)?	Special needs populations identified ; planned alternative communication mechanisms; pre-prepared materials translated; interpreters identified

Assessment 3.2: Exercises and timeliness improvement	
LHD Assessment Questions	**Indicators**

1. What exercises has the LHD performed or planned that tests the notification and advisement of affected persons to seek prophylaxis at a community POD?	Drills and/or exercises testing advisement that prophylaxis needed and how to access community POD services.
2. What communication exercises has the LHD conducted or planned that tests alternate communication plans for special needs populations?	Drills and/or exercises testing communication with identified special needs populations
3. During the exercise(s), was the timeliness of message development and release actually measured?	Timeliness of message development, approval, and distribution listed as a specific exercise objective and measured
4. Were after exercise reports developed that included recommendations for improving the timeliness of public advisement, with a timeline for implementation?	After action reports

Outcome 6F: Medical and Public Health Surge

Cases are investigated by public health to reasonably minimize morbidity and mortality rates, even when the numbers of casualties exceed the limits of the normal medical infrastructure for an affected community.

Name of LHD staff interviewed for this section	Title	Telephone

Materials to be Reviewed: (☑ if reviewed)

- ☐ Systems manuals
- ☐ Systems specifications
- ☐ IT compliance documents
- ☐ Mutual aid agreements
- ☐ Procedure for executing medical and public health mutual aid agreements
- ☐ Documentation of training relating to increase the proficiency of volunteers and staff
- ☐ Surge capacity planning document
- ☐ HRSA plan

CDC Required Critical Task 1: *Improve tracking of cases, exposures, adverse events, and patient disposition*
a) Have or have access to a system that provides these capabilities consistent with PHIN Preparedness Functional Area "Outbreak Management".

Assessment 1.1: Tracking of cases, exposures, adverse events, and patient disposition	
LHD Assessment Questions	**Indicators**
1. How has the LHD improved tracking of cases, exposures, adverse events, and patient disposition?	System exists for tracking cases, exposures, adverse events, and patient disposition consistent with PHIN standards
2. What is the local progress towards capability for hospitals, clinics, emergency medical services systems and poison control centers to report data suggestive of terrorism or other highly infectious disease to the local health department on a 24-hour-a-day, 7-day-a-week basis? (HRSA Critical Benchmark 4-2)	Disease reporting systems for hospitals, clinics, emergency medical services systems and poison control centers enhanced.

Assessment 1.2: System with capabilities consistent with PHIN Preparedness Functional Area *Outbreak Management*

LHD Assessment Questions	Indicators
1. What system does the LHD have or have access to that has these capabilities and is consistent with PHIN standards?	Electronic or other system in place able to receive health related data for early event detection purposes consistent with PHIN standards

CDC Required Critical Task 2: *Decrease the time needed to execute medical and public health mutual aid agreements*

Assessment 2.1: Medical and public health mutual aid agreements	
LHD Assessment Questions	**Indicators**
1. What has been done by the LHD to decrease the time needed to execute medical and public health mutual aid agreements? What agreements are needed and in place?	Systems, procedures or other measures to decrease time to execute mutual aid agreements.

CDC Required Critical Task 3: *Improve coordination of public health and medical services. a) Ensure epidemiology response capacity consistent with hospital preparedness guidelines for surge capacity. b) Participate in the development of plans, procedures, and procedures to identify and manage local, tribal, and regional public health and hospital surge capacity.*

Assessment 3.1: Coordination of public health and medical services	
LHD Assessment Questions	**Indicators**
1. What has the LHD done to improve coordination of public health and medical services?	An organized joint planning body including all stakeholders; evidence of coordination through meetings, minutes, plans and activities

Assessment 3.2: Epidemiology response capacity	
LHD Assessment Questions	**Indicators**
1. What has the LHD done to ensure epidemiology response capacity consistent with hospital preparedness guidelines for surge capacity?	Planning completed or underway to meet hospital needs for epidemiology response capacity including surge capacity.

Assessment 3.3: Development of plans, procedures, and procedures to identify and manage surge capacity (Includes HRSA Benchmarks 2 -1 : Bed Surge and 2-2 Isolation Capacity)	
LHD Assessment Questions	**Indicators**
1. How has the LHD participated in the development of plans, procedures, and procedures to identify and manage local, tribal, and regional public health and hospital surge capacity?	LHD convenes local and participates and/or convenes regional body for development of surge capacity.
2. Have plans been developed for the rapid expansion of hospital bed and negative air pressure rooms for medical care response to an incident?	LHD is aware plans allow for surge capacity
3. What barriers or problems have been encountered in developing local or regional plans for rapid hospital capacity expansion, including staffing?	Discussions have occurred at local and regional level regarding barriers and a means to resolve them

CDC Required Critical Task 4: *Increase the proficiency of volunteers and staff performing collateral duties in*
performing epidemiology investigation and mass prophylaxis support tasks.

Assessment 4.1: Development of plans, procedures, and procedures to identify and manage surge capacity	
LHD Assessment Questions	**Indicators**
1. How has the LHD increased the proficiency of volunteers and staff performing collateral duties in performing epidemiology investigation and mass prophylaxis support tasks?	LHD provided training or other preparation.

CDC Required Critical Task 5: *Increase the number of physicians and other providers with experience and/or skills in the diagnosis and treatment of infectious, chemical, or radiological diseases or conditions possibly resulting from a terrorism-associated event who may serve as consultants during a public health emergency.*

Assessment 5.1: Number of physicians and other providers (Includes HRSA Benchmark 5: Education and Preparedness Training)	
LHD Assessment Questions	**Indicators**
1. What training has the LHD provided or sponsored to increase the number of local physicians and other providers (pre-hospital, hospital and outpatient) with experience and/or skills in the diagnosis and treatment of infectious, chemical, or radiological diseases or conditions?	LHD recruitment and training or other preparation specific to physicians and other providers; documentation of provider availability

PREPAREDNESS GOAL 7: RECOVER

The local health department will decrease the time needed to restore health services and environmental safety to pre-event levels.

Outcome 7A: Economic and Community Recovery

Recovery and relief plans are implemented and coordinated with the nonprofit sector and nongovernmental relief organizations and with all levels of government. Economic impact is estimated. Priorities are set for recovery activities. Business disruption is minimized. Individuals and families are provided with appropriate levels and types of relief and minimal delay.

Name of LHD staff interviewed for this section	Title	Telephone

Materials to be Reviewed: (☑ if reviewed)

- ☐ List of community/regional recovery partners
- ☐ Recovery and relief plans
- ☐ Policy or procedures that include Federal Emergency Management Administration (FEMA) guidelines related to recovery
- ☐ Policy and procedures for issuance of interim guidance on risk and protective action
- ☐ List of agencies and spokespersons who could issue interim guidance based on their expertise

CDC Required Critical Task 1: *Conduct post-event planning and operations to restore general public health services*

Assessment 1.1: Post-event planning to restore general public health services	
LHD Assessment Questions	**Indicators**
1. What has the LHD done to be able to conduct post-event planning to restore general public health?	Post event planning, including priority setting includes all stakeholders.
2. What has the LHD done to be able to conduct post-event operations to restore general public health?	LHD post-event operations including recovery and relief and training coordinated with other partners.
3. How is the economic impact estimated?	A partnership with LHD involved to estimate economic impact established.

CDC Required Critical Task 2: *Decrease the time needed to issue interim guidance on risk and protective actions by monitoring air, water, food, and soil quality, vector control, and environmental decontamination, in conjunction with response partners*

Assessment 2.1: Time to issue interim guidance on risk and proactive monitoring	
LHD Assessment Questions	**Indicators**
1. What has the LHD done to decrease the time needed to issue interim guidance on risk and protective actions during recovery?	LHD-led plan in conjunction with response partners.

PREPAREDNESS GOAL 8: RECOVER

The local health department will increase the long-term follow-up provided to those affected by threats to the public's health.

Name of LHD staff interviewed for this section	Title	Telephone

Materials to be Reviewed: (☑ if reviewed)

- ☐ Procedure for long-term tracking
- ☐ List of probable events requiring long-term follow-up
- ☐ Partners contact list
- ☐ Confidentiality policy
- ☐ Web site
- ☐ List of media contacts

CDC Required Critical Task 1: *Develop and coordinate plans for long-term tracking of those affected by the event.*

Assessment 1.1: Long-term tracking for affected populations	
LHD Assessment Questions	**Indicators**
1. How has the LHD developed and coordinated plans for long-term tracking of those affected?	Adequate long-term tracking system for persons affected by public health events.

CDC Required Critical Task 2*:* *Improve systems to track cases, exposures, and adverse event reports.*

Assessment 2.1: Systems to track cases	
LHD Assessment Questions	**Indicators**
1. What has the LHD done to improve systems to track cases, exposures, and adverse event reports?	System consistent with PHIN standards identified and implemented.

CDC Required Critical Task 3: *Increase the availability of information.*

Assessment 3.1: Availability of information	
LHD Assessment Questions	**Indicators**
1. How will the LHD increase the availability of information?	A system to disseminate aggregate data information to governmental entities and the public is available

PREPAREDNESS GOAL 9: IMPROVE

The local health department will decrease the time needed to implement recommendations from after-action reports following threats to the public's health.

Name of LHD staff interviewed for this section	Title	Telephone

Materials to be Reviewed: (☑ if reviewed)

☐ List of local response/recover partner organizations

CDC Required Critical Task 1: *Exercise plans to test horizontal and vertical integration with response partners at the federal, state, local, and tribal levels.*

Assessment 1.1: Testing integration with response partners	
LHD Assessment Questions	**Indicators**
1. How have you tested integration with response partners at the local/tribal level?	Local and tribal partners contact information; leadership assignments during incident response in place and appropriate staff aware; documentation of contacts and activities during a drill, exercise, or tabletop; LHD system integrated into existing overall emergency response structure/incident management during acute phase of simulated or real incident.; needs of special populations addressed; written after action report
2. How have you tested integration with the state/federal government agencies?	Available, appropriate State contact names and information; state/federal personnel integrated into locally established response structure; roles and responsibilities clearly written and delineated at all levels of government;; requests for assistance or information an documentation of response activities in drills, exercises or tabletop

CDC Required Critical Task 2: *Decrease the time needed to identify deficiencies in personnel, training, equipment, and organizational structure, for areas requiring corrective actions.*

Assessment 2.1: Identifying deficiencies

LHD Assessment Questions	Indicators
1. What approach are you using to identify deficiencies for areas requiring corrective action?	Consequence-phase disaster mitigation and treatment of longer-term physical and mental health sequelae, along with ongoing risk communication and recovery efforts
2. What drills, exercises or tabletops have you conducted to reduce the time needed to identify deficiency areas requiring corrective actions?	Documentation of time to ID deficiencies for areas needing corrective actions 72 hours after real event or exercise; after action report, corrective action procedures, assignment of responsibilities and follow up

CDC Required Critical Task 3: *Decrease the time needed to implement corrective actions.*

Assessment 3.1: Implementing corrective actions	
LHD Assessment Questions	**Indicators**
1. What drills, exercises or tabletops have you conducted to test timeliness for implementing post-event corrective actions?	Documentation of time to implement corrective actions/integrate changes into plans 60 days after identification of deficiency; post-event activities involve consequence-phase disaster mitigation and treatment of longer-term physical and mental health sequelae, along with ongoing risk communication and recovery efforts; targeted environmental assessment and intervention; strategies that allow multiple issues to be addressed by one solution. LHD staff designated to evaluate exercises and real-event deficiencies; update plans and procedures; and train and conduct re-test exercises to address these deficiencies; after action report, corrective action procedures, assignment of responsibilities and follow up
2. What after-action evaluation tool(s) have you used to assess your performance?	Matrices/models, tools, software

CDC Required Critical Task 4: *Decrease the time needed to re-test areas requiring corrective action.*

Assessment 4.1: Re-testing correction action areas	
LHD Assessment Questions	**Indicators**
1. What drills, exercises or tabletops have you conducted to test timeliness for re-testing areas requiring corrective action? What after-action evaluation tool(s) have you used to assess your performance?	Matrices/models, tools, software; documentation of time to re-test areas requiring corrective actions 90 days after ID of deficiency; post-event activities involve consequence-phase disaster mitigation and treatment of longer-term physical and mental health sequelae, along with ongoing risk communication and recovery efforts; targeted environmental assessment and intervention

➡ ***LHD*** **Please Note: DHS requires that this CDC Draft SNS Tool, dated 7/26/04, be utilized by the consultants as part of the assessment process**

CDC LOCAL SNS ASSESSMENT TOOL

The Strategic National Stockpile (SNS) Program has developed a tool for objectively evaluating Local readiness to receive, distribute, and dispense SNS assets in the event of a national emergency. The assessment tool is an outline of the core functions identified by the SNS program and the key elements that are regarded as either critical or important planning steps within each function.

CDC INSTRUCTIONS TO RATER:

1. Using the following rating criteria, assign a score to each item where there is a blank:

0	=	The element is not in place/was not developed/was not shown to the rater/there is no infrastructure in place to support the element.
.5	=	Part of the element is in place/the item is not complete but is in progress.
1	=	The item is complete/is developed.

While the Critical Elements (in bold) are more important than the Important Elements, the elements are not weighted.

2. Total all scores.

The bulleted lists are a potential part of the items but not all have to be present to get a score of "1." The lists may not necessarily be exhaustive. Check off those that are present.

1. DEVELOPING AN SNS PLAN

Critical Elements

A. _____ Local SNS specific Preparedness Plan has been developed
B. _____ Local SNS Plan is incorporated into overall Local Emergency Response Plan
C. _____ Local SNS Plan is updated annually

Important Elements

D. _____ Planning Group formed and are working together in a collaborative planning effort (Inclusive of all representatives from Local Public Health, Emergency Management, elected officials and other supporting agencies)
- o Advisory Council
- o Workgroup
- o Health Department
- o Emergency Management Agency/Office of Homeland Security
- o Public Works
- o Highway Department/Department of Transportation
- o Law Enforcement
- o National Guard (Army and Air)
- o Emergency Medical Services

- Fire Department
- Hospitals

E. _____ State policies are reviewed and incorporated into local SNS operations plan
- Process for requesting SNS assistance
- Number of doses that a family member can pick-up at a dispensing site
- Minimum identification requirements in order to receive medication
- Credentialing process used to identify volunteers and staff at SNS sites
- Rules of engagement for law enforcement
- Providing prophylaxis to Native Americans on reservations

F. _____ Legal issues reviewed, identified, and addressed to support local SNS operations
- Medical practitioners authorized to issue standing orders and procedures for dispensing sites
- Medical practitioners authorized to dispense medications during a state of emergency
- Authorized overtime pay
- Liability/workers compensation

2. COMMAND AND CONTROL

Critical Elements

A. _____ Local Incident Command System (ICS) integrates SNS functions. Elements could include:
- **Mayor's Office**
- **Health Department**
- **Emergency Management Agency**
- **Emergency Response Organizations**
- **Local Elected officials**

B. _____ Local Incident Commander identified with back-up and point of contact (POC) information

Important Elements

C. _____ Local Emergency Operations Center (LEOC) is able to allow local and state decision makers to communicate with each other

3. REQUESTING SNS

Critical Elements

A. _____ Individual(s) identified with POC information to request SNS materiel from State

B. _____ Local SNS Plan contains request justification guidelines to the state

C. _____ Procedures for dispensing sites and treatment centers to request SNS materiel from the State EOC, RSS or regional distribution site are documented

Important Elements

D. _____ Plan for local elected official or designee(s) to communicate with key state officials to discuss incident and determine when to request SNS materiel from the state

4. MANAGEMENT OF SNS OPERATIONS

Critical Elements

A. _____ Local SNS Coordinator identified with back-up and POC information

The following Local Leads have been identified with back-up and POC information:

B. _____ Communications

C. _____ Security

D. _____ Distribution

E. _____ Dispensing Sites

F. _____ Treatment Centers

G. _____ Training/Exercise/Evaluation

H. _____ Call-down rosters for Local SNS Leads are current and updated at least quarterly

Important Elements

I. _____ Local infrastructure in place to support State SNS plan

- Support from Mayor's office
- Support from the Local Health Department

J. _____ Budget allocation adequately supports local SNS functions
- _____ % of funds used for SNS preparedness activities
- Specified deliverables
- Contract monitoring

5. TACTICAL COMMUNICATION

Critical Elements

A. _____ Local Communications Lead has a job action sheet and has been trained

B. _____ Communication networks and back-up system between Command and Control locations
- **Local EOC**
- **State EOC**
- **Health Department**
- **RSS location**
- **Distribution sites**
- **Dispensing sites**
- **Security**
- **Transportation**

C. _____ Maintenance plans to ensure rapid repair if communications systems go down

D. _____ Staffing call-down lists are reviewed to ensure accuracy at least quarterly

Important Elements

E. _____ Conducts call-down exercises to test call lists quarterly

F. _____ Internal Communications at Dispensing/Distribution sites
- Ham/Amateur Radio Operators
- Cell Phones
- UHF/VHF/ 800 MHz Radio Systems
- Runners/couriers

G. _____ Local EOC able to communicate with various state/local agencies

H. _____ Communication networks are tested and exercised at least once annually

6. PUBLIC INFORMATION AND COMMUNICATIONS (PIC)

Critical Elements

A. _____ Local PIC Lead has a job action sheet and has been trained

B. _____ A plan is in place to coordinate local PIC activities with state PIC activities (If yes, provide plan)

C. _____ A plan is in place to utilize and adapt fact sheets on BT agents for local use (If yes, provide plan)
- **Adaptations for special populations in the community**
- **Storage location (electronic and hard copy) identified and updated regularly**
- **Plan for mass reproduction and storage of printed materials has been developed**

D. _____A public information template about each dispensing site has been developed (If yes, provide plan)
- **Procedures for informing the public about community dispensing operations**

E. _____ A plan is in place to utilize the state public information materials and modify it appropriately to educate and inform the local population (If yes, provide plan)
- **Informing the public prior to arriving at dispensing sites:**
  - **Coordination with local media channels**
  - **Web site information, printed material, newspaper inserts, videos, 24/7 Hotline**
  - **Dispensing site location, news briefs, informing public, rumor control**
  - **What to expect, empathy messages, medication compliance**

- **Educating and informing the public moving through dispensing clinics (POD PIC Plan):**
  - **Signage to educate the public about what to expect at site, about the BT agent, disease and medications being dispensed**
  - **PIC staffing plan and job action sheets for PIC staff responsibilities**
    - **to educate people in line, answer questions, allay fear and concern**
    - **to oversee PIC activities for dispensing site, monitor supply of print materials, translation services, educating special populations**

F. _____A plan to coordinate local media efforts is in place (If yes, provide plan)
- **Local PIC lead has coordinated media activities with state PIC lead**
- **Capabilities and audiences for each media outlet have been identified**
- **Regular meetings with local media are planned to educate, provide background information and foster collaboration between SNS PIC Lead and media representatives.**

Important Elements

G. _____ A plan to translate information is in place for non-English speaking, hearing impaired, visually impaired or functionally illiterate individuals (If yes, provide plan)
- Documents have been translated as appropriate for community
- On-site interpreters available for dispensing sites
- Translators and TTY plans for Public Information Hotlines

H. ____ Staff have been identified and trained in communications function (If yes, provide plan)

7. SECURITY

Critical Elements

A. _____ Local Security Lead has job action sheet and has been trained
B. _____ Security at Distribution Site
- **Ample persons to secure facility**
- **Protect the SNS materiel once received from the state**

C. _____ Coordination with state and local law enforcement
D. _____ Plan in place for protecting staff/volunteers
- **Dispensing sites**
- **Distribution sites**
- **Treatment centers**

E. _____ Crowd control plan for Dispensing sites
F. _____ Crowd control plan for Treatment centers
G. _____ Developed a credentialing plan for SNS staff at Dispensing sites
H. _____ Developed a credentialing plan for SNS staff at Distribution sites

Important Elements

I. _____ Security procedures in place to transport SNS materiel to various locations around the city
J. _____ Traffic control plans for various SNS related sites (Dispensing, Distribution and Treatment Centers)
K. _____ Personnel/volunteers have been identified and trained in security functions

8. REGIONAL/LOCAL DISTRIBUTION SITE

Critical Elements

A. _____ Local Distribution Site Lead has a job action sheet and has been trained
B. _____ Primary location with alternate site(s) identified
C. _____ Locations reviewed by State SNS Coordinator using Site Survey Tool

The following Leads have been identified with back-up and POC information for each facility identified:

D. _____ Distribution Site Manager
E. _____ Materiel Management (Inventory Management System)

F. _____ Apportionment (Pick Teams)
G. _____ QA/QC
H. _____ Safety
I. _____ Security
J. _____ Communications/IT
K. _____ Logistics
L. _____ Appropriate Material Handling Equipment on site or readily available upon request
- **Pallet Jacks**
- **Pallets**
- **Hand Carts/Dollies**
- **Forklifts**
- **Repackaging/Shipping Materials (tape, plastic wrap, pens, paper, etc.)**

M. _____ Appropriate Office Equipment
- **Telephones**
- **Fax machine**
- **Table/chairs**
- **Copier**

N. _____ Call-down rosters for Leads/staff are current and updated quarterly
O. _____ Staff have been identified and trained in warehouse functions

Important Elements

P. _____ Locations have been reviewed by the State
Q. _____ Developed staffing plan for 24/7 operations
R. _____ Developed care/feed plan for staff
S. _____ Distribution Site Manager and back-up trained in distribution operations

The following Leads and back-ups have been trained in distribution operations for each facility identified:
T. _____ Materiel Management
U. _____ Apportionment
V. _____ QA/QC
W. _____ Safety
X. _____ Security
Y. _____ Communications/IT
Z. _____ Logistics

9. CONTROLLING SNS INVENTORY

Critical Elements

A. _____ Inventory Management System (IMS) in place with back-up
- **Computer Program**
- **Electronic Spread Sheet**
- **Paper System**

B. _____ Inventory staff identified and trained in IMS functions *Important Elements*
C. _____ Procedure for chain of custody involving SNS materiel
D. _____ Procedure for chain of custody involving controlled substances

10. DISTRIBUTION

Critical Elements

A. _____ Local Distribution Lead has a job action sheet and has been trained
B. _____ Plan for coordinating delivery of SNS materiel directly to treatment facilities and dispensing sites
C. _____ Agreements are documented and in place with organization(s) that will distribute materiel
D. _____ Plan for 24/7 recovery and repair of vehicles/distribution assets

E. _____ Appropriate Material Handling Equipment for regional distribution sites (off-loading and loading as needed)

- **Pallet Jacks**
- **Hand Carts/Dollies**
- **Forklifts**
- **Repackaging/Shipping Materials (tape, plastic wrap, pens, paper, etc.)**

Important Elements

F. _____ Drivers and Support Personnel have been credentialed

G. _____ Staff have been identified and trained in Distribution functions

- Chain of custody procedure
- Routing information
- Security/communication procedures
- Appropriate Use of Material Handling Equipment
- Assist in loading and off-loading materials

11. DISPENSING ORAL MEDS

Critical Elements

A. _____ Local Dispensing Site Managers have been identified with back-up and POC information for each dispensing site

B. _____ Safety Lead identified with back-up and POC information

C. _____ Security Lead identified with back-up and POC information

D. _____ Communications Lead identified with back-up and POC information

E. _____ Logistics Lead identified with back-up and POC information

F. _____ Plan to rapidly dispense medications to the public

G. _____ Plan contains standard operating procedures/procedures for the operation and management of dispensing sites

H. _____ Plan in place to request and receive SNS materiel from the State

I. _____ Plan contains interpreters/translation services identified to support dispensing operations

J. _____ Dispensing sites identified by city or local jurisdiction

- **Population**
- **Number of Sites**
- **Estimated Thru-put of population/hour**

K. _____ Call-down rosters for SNS Leads/staff are current and updated at least quarterly

L. _____ Core dispensing site staff per site have been identified and trained in Dispensing functions

Important Elements

M. _____ Local Dispensing Site plans are exercised annually

N. _____ Dispensing Site specifications, and POCs for each site are maintained at the local level and are a part of each Local Dispensing Site Plan

O. _____ Agreements are documented and in place for securing dispensing sites

P. _____ Plan to provide prophylaxis to first responders, essential personnel, and their families

Q. _____ Equipment and supplies to support dispensing site operations

- Office supplies
- Medical supplies
- Drug Fact Sheets
- Agent Fact Sheets

R. _____ Name/Address/Patient/History (NAPH) forms and plan developed for patient tracking

S. _____ Triage/Transport plan developed for those who are symptomatic

T. _____ Dispensing Site Manager and back-up trained in dispensing operations

U. _____ Safety Lead and back-up trained in dispensing operations

V. _____ Security Lead and back-up trained in dispensing operations

W. _____ Communications Lead and back-up trained in dispensing operations

X. _____ Logistics Lead and back-up trained in dispensing operations

12. TREATMENT CENTER COORDINATION

Critical Elements

A. _____ Local Treatment Center Lead has a job action sheet and has been trained

B. _____ Point of Contacts for Treatment Centers have been identified and is documented in local SNS plan

Important Elements

C. _____ Coordination exists between local SNS Coordinator and Treatment Center Coordinators

D. _____ Process for treatment centers to request SNS materiel

E. _____ Request process has been exercised

- Forms
- Communications

13. TRAINING, EXERCISE, AND EVALUATION

Critical Elements

A. _____ Local Training/Exercise/Evaluation Lead has a job action sheet and has been trained

B. _____ Training Plan

- **Local agencies**
- **Timelines/ schedules**
- **SNS functions**
- **Incident Command System**

C. _____ Training Plan implemented

D. _____ Exercise Plan

- **Local exercises**
- **Goals and objectives**
- **Orientations/Drills/Tabletops/Functional**

E. _____ Exercise Plan implemented

F. _____ Evaluation Plan

- **After Action Review (AAR)**
- **Written evaluation Report**
- **Corrective Action Plan**
- **SNS Plan updated/revised**
- **Training**
- **Exercises**

G. _____ Evaluation Plan implemented

Important Elements

H. _____ Local Agencies support training/exercise functions

- Administrative
- Financial
- Personnel and equipment

I. _____ Staff have been identified and trained in Training/Exercise/ Evaluation functions as it relates to the overall SNS program

	Exercised	Evaluated	
J.	_____	_____	Overall SNS Plan
K.	_____	_____	Requesting SNS Procedures
L.	_____	_____	Tactical Communications Plan
M.	_____	_____	Public Information and Communication Plan
N.	_____	_____	Security Plan
O.	_____	_____	Regional/Local Distribution Plan
P.	_____	_____	Inventory Management System Plan
Q.	_____	_____	Distribution Plan

R. _____ _____ Dispensing Plan
S. _____ _____ Treatment Center Coordination

Rater Notes:
Total Score _____

GLOSSARY

Biosafety in Microbiology and Biomedical Laboratories (BMBL 4th ed.): Publication of the CDC and National Institutes of Health, setting out biosafety recommendations for hospital and clinical laboratories.

Biosafety Level (BSL): Hierarchy of administrative controls that need to be in effect for different levels of biohazards. BSL-1 is appropriate for working with microorganisms that are not known to cause disease in healthy human humans. The facility, the containment devices, the administrative controls, and the practices and procedures that constitute BSL-2 are designed to maximize safe working conditions for laboratorians working with agents of moderate risk to personnel and the environment. BSL-3 is suitable for work with infectious agents which may cause serious or potentially lethal diseases as a result of exposure by the inhalation route.

Category A Agents: Potential biological terrorism agents having the greatest potential for adverse public health impact with mass casualties. The Category A list agents are:
*Variola majo*r – Smallpox
Bacillus anthracis – Anthrax
Yersinia pestis – Plague
Clostridium botulinum (botulinum toxins) – Botulism
Francisella tularensis – Tularemia
Filoviruses and Arenaviruses (e.g., Ebola virus, Lassa virus) – Viral hemorrhagic fevers

CHEMPAK: A program that contains the cache of nerve-agent antidotes for deployment in the event of a chemical attack.

Chemical Level 3 Lab: State, territorial and local public health laboratories are members of the chemical component of the laboratory response network. A designation of Level 1, 2, or 3 defines network participation, and each level builds upon the preceding level. (Note: the level designations were changed in early 2005 so that laboratories previously designated “Level 1” are now “Level 3,” and laboratories previously designated “Level 3” are now “Level 1.”)

Cities Readiness Initiative (CRI): A program to provide special funding targeted to 21 selected cities/metropolitan areas to aid in increasing their capacity to deliver medicines and medical supplies during a large-scale public health emergency such as a bioterrorism attack or a nuclear accident.

College of American Pathologists (CAP) Proficiency Testing: Bioterrorism-related proficiency testing required through the College of American Pathologists, as surveys or alternative proficiency testing programs.

Crisis Communication: Communicating in the midst of disaster through skillful management of communication channels, message, timing and delivery with the goal of maintaining appropriate public perspective about the crisis by providing authoritative, credible and timely information.

Crisis/Emergency Response Communications Plan (CERC Plan): Crisis and emergency risk communication is the plan to provide information that allows an individual, stakeholders or an entire community, to make the best possible decisions about their well-being, under nearly impossible time constraints, and to communicate those decisions, while accepting the imperfect nature of their choices.

Critical Agents: Biological and chemical agents likely to be used in weapons of mass destruction and other bio-terrorist attacks.

Cross Functional Requirements: The components of the Public Health Information Network (PHIN) that are common across PHIN functional areas for preparedness. These "cross functional components" are referenced from appropriate points within the PHIN preparedness functional requirements documents, and are an integral part of each area of PHIN preparedness.

Early Event Detection (EED): EED supports the early detection of health events including determining and monitoring the size, location and spread of health events, and providing situational awareness to assist in the investigation and management of health events.

Early Warning Infectious Disease Surveillance (EWIDS): EWIDS focuses exclusively on enhancing infectious disease surveillance (including laboratory) and epidemiology along the U.S. northern and southern borders (in coordination with Canada and Mexico, respectively) and the development of associated capabilities and capacities within the 20 U.S. border states.

Electronic Foodborne Outbreak Reporting System (eFORS): eFORS provides comprehensive, timely, reliable data on outbreaks of enteric illnesses and provides analytic tools so health officials can learn about hazards and assess their importance. It collects data in a web-based surveillance system, receives reports of foodborne outbreaks due to any bacteria, virus, parasite or toxin, whether intentional or unintentional. It is used by all 50 states.

Emergency Operations Center (EOC): The protected site from which state and local civil government officials coordinate, monitor and direct emergency response activities during an emergency.

Epidemic Information Exchange (Epi-X): The CDC's secure, web-based communications network that serves as a communications exchange between the CDC, state and local health departments, poison control centers and other public health professionals. The system provides rapid reporting, immediate notification, editorial support and coordination of health investigations for public health professionals.

Geographic Information System (GIS): An automated information system that is able to compile, store, retrieve, analyze, and display mapped data.

Health Alerts: Messages that notify health officials regarding matters of public health importance. Messages can be conveyed as text messages (e.g., e-mail alerts) or as an electronic alert notification instructing recipients where to obtain alert information (e.g., a page or telephone message directing recipients to log on to a website to read the alert).

Health Resources and Services Administration (HRSA): HRSA is a program of the federal government that focuses on unensured, underserved, and special needs populations in its goals and program activities. For example, *GOAL 6: Enhance the Ability of the Health Care System to Respond to Public Health Emergencies* is particularly relevant to the HOAC assessment. Various Critical Benchmarks for HRSA goal areas are defined.

Incident Command System (ICS): The model for command, control and coordination of resources at the scene of an emergency and a management tool consisting of procedures for organizing personnel, facilities, equipment and communications at the scene.

Joint Information Center (JIC): A center established to coordinate the public information activities on-scene. It is the central point of contact for all news media at the scene of the incident. Public information officials from all participating federal, state and local agencies and organizations co-locate at the JIC. The JIC is designed to improve the effectiveness of the response by creating an instant multi-agency organization whose lines of authority are clear and supercede those of the individual organizations represented in the response.

Laboratory Information System (LIMS): LIM systems provide the infrastructure for public health laboratories to effectively log and accession specimens; unambiguously associate specimen data with epidemiological, clinical, and test result data; and electronically report findings to public health partners. In addition, a complete LIM system incorporates other business processes essential to internal functioning, such as billing, test quality control and assurance, reagent and kit/forms inventory control, etc.

Laboratory Response Network (LRN): The LRN is an integrated consortium of laboratories that provides immediate and sustained laboratory testing and communication in the event of public health emergencies, particularly in response to acts of bioterrorism, chemical terrorism and other public health emergencies. The LRN is comprised primarily of state, local, federal, military and international public health laboratories. An optimum number of registered, participating LRN laboratories throughout the U.S. is determined by the LRN working group. Preliminary testing and screening is performed primarily in a distributed instead of a centralized fashion to ensure a prompt initial response; a system of triage and referral of specimens ensures transfer of appropriate materials to specialty laboratories, where sophisticated equipment and expertise is applied to analyze a specimen.

LHD Local Health Department. Same as local public health department or local department of public health. The organization within a city or county health jurisdiction responsible for public health.

National Incident Management System (NIMS) and Standardized Emergency Management System (SEMS): A consistent approach to incident management to enable various jurisdictions and agencies to work together to prepare for, prevent, respond to and recover from incidents. NIMS provides a balance of flexibility and standardization, common doctrine, terminology, concepts, principles and execution so that execution in response to an incident will be seamless and consistent so that focus is on response rather than on organization.

National Incident Management System Capability Assessment Support Tool (NIMCAST): NIMCAST is a web-based self-assessment instrument for state, local, tribal, and private sector and nongovernmental organizations to evaluate their jurisdiction's capabilities and compliance to effectively prepare for, prevent, respond to, and recover from domestic incidents, regardless of cause, size, or against the requirements established in the recently released National Incident Management System (NIMS).

NIMS Awareness Course: The Emergency Management Independent Study Program IS 700: "National Incident Management System (NIMS), An Introduction." The course is designed to increase knowledge and capability of working in NIMS.

National Response Plan (NRP): The National Response Plan establishes a comprehensive all-discipline, all-hazards plan that establishes a single, comprehensive framework for the management of domestic incidents and includes extensive coordination with federal, state, local and tribal agencies, nongovernmental organizations, private-sector entities, and the first-responder and emergency management communities across the country.

County Office of Emergency Services (OES): The county office responsible for coordinating organized planning efforts with county departments, local cities and special districts to mitigate against, prepare for, respond to, and recover from disasters. The division is responsible for maintaining the County/Operational Area Emergency Operations Centers (EOC) in a continual state of readiness. Emergency Services also designs, conducts, and evaluates periodic emergency staff training and simulated disaster preparedness and response exercises.

Outcomes: CDC outcomes are comprehensive descriptions of the major roles and capabilities needed to respond to an event of significance. They were developed with state and local public health and Office of Homeland Security input.

Personal Protective Equipment (PPE): National safety guidelines define four levels of personal protective equipment needed to handle exposure to biologic and chemical agents. These levels are defined from least severe situations to most severe.
Level D: primarily a work uniform.
Level C: This involves a full-facepiece, air-purifying, canister-equipped respirator and chemical-resistant clothing. It provides the same level of skin protection as Level B, but a lower level of respiratory protection. This protection should be selected when the type of airborne substances is known, concentration is measured, criteria for using air-purifying respirators are met, and skin and eye exposures are unlikely.
Level B: This protection should be worn when the highest level of respiratory protection is needed but a lesser level of skin and eye protection is sufficient. It differs from Level A only in that it provides splash protection by use of chemical-resistant clothing (overalls, long sleeves, jacket, and SCBA).
Level A: This protection should be worn when the highest level of respiratory, skin, eye, and mucous membrane protection is needed. It consists of a fully encapsulating chemical-resistant suit and self-contained breathing apparatus (SCBA). This suit can be worn only for 15 to 30 minutes because the person wearing it can quickly become overheated. Special training is required to utilize the suit.

PHIN Certification: A certification that will ensure that systems have the capabilities necessary including both Functional Requirements to share data and work together and key performance measures in order to implement a national network of capable public health preparedness systems. PHIN Certification helps the CDC determine whether partner systems can meet the specific high-level functionalities and detailed key performance measures required to support public health activities.

Points of Dispensing (POD): The sites an LHD establishes to distribute antibiotics, antidotes or other components of the Strategic National Stockpile. These sites are in certain cities (defined as metropolitan areas to provide oral medications during an event to their entire population within 48 hours.

Public Health Information Network (PHIN): PHIN is CDC's vision for advancing fully capable and interoperable information systems in the many organizations that participate in public health.

PHIN Preparedness: Functional requirements in the areas of Early Event Detection, Outbreak Management, Countermeasure and Response Administration, Partner Communications and Alerting and Connecting Laboratory Systems.

PHIN Preparedness Functional Requirements: EED Functional Requirements and Cross Functional Requirements make up the PHIN Preparedness Functional Requirements.

Public Information Officer (PIO): The person who is the chief information official for the jurisdiction, responsible for communications with the media and public.

PulseNet: PulseNet, which began in 1996, is the national molecular subtyping network for foodborne disease surveillance. It was established by the Centers for Disease Control and Prevention and several state health department laboratories to facilitate subtyping bacterial foodborne pathogens for epidemiologic purposes. PulseNet began with 10 laboratories typing a single pathogen (*Escherichia coli* O157:H7), and now includes 46 state and 2 local public health laboratories and the food safety laboratories of the U.S. Food and Drug Administration and the U.S. Department of Agriculture.

Required Critical Tasks: The required critical tasks associated with the CDC Outcomes/Goals were obtained from the CDC Target Capabilities List (TCL).

Risk Communication: Effective risk communication attends to both message content and delivery and is an interactive process among individuals, groups and institutions. Well-developed procedures address such elements as 1) who is authorized to speak and issue written messages on behalf of the agency; 2) who is authorized to receive messages from various levels of leadership of other agencies, 3) what is the chain of approvals for written messages, 4) what format will text messages use, 5) how will calls, faxes, e-mail, etc. be sorted and logged, and 6) will confirmation of message be required and how will confirmation be recorded.

Select Agent Regulation: The U.S. Departments of Health and Human Services (DHHS) and Agriculture (USDA) published final rules for the possession, use and transfer of select agents and toxins (42 C.F.R. Part 73, 7 C.F.R. Part 331, and 9 C.F.R. Part 121) in the Federal Register that become effective on April 18, 2005. The list includes approximately 40 viruses, bacteria, rickettsiae, fungi and toxins. Agents identified under the DHHS and USDA lists of biological select agents and toxins or USDA's list of High Consequence Livestock Pathogens and Toxins have been deemed a potential threat to human, animal, or plant health or animal or plant products. Under the Select Agent regulation, laboratories must register with CDC and/or with the USDA prior to possession or transfer of select agents.

Sentinel Laboratories: The thousands of laboratories associated with hospitals, clinics and local public health departments that serve as the laboratory front line in emergency response.

SNOMED and Logical Observation Identifiers Names and Codes (LOINC): Standards for electronic exchange of clinical laboratory results, used for the electronic reporting of infectious diseases to CDC, including coverage of bioterrorist attacks.

Special Populations: Special populations include persons who by reason of language barriers, living conditions, confinement, lack of transportation or other unique situations, might require additional assistance to understand publicly-issued instructions or obtain needed care, especially in times of emergency. Homeless persons, nursing home patients, mentally ill or mentally retarded individuals living in group homes, students in university dorms, juveniles in detention centers, prisoner and migrant laborers are examples of special populations.

Strategic National Stockpile (SNS): The mission of the CDC's SNS Program is to ensure the availability and rapid deployment of life-saving pharmaceuticals, antidotes, other medical supplies and equipment necessary to counter the effects of nerve agents, biological pathogens and chemical agents. The SNS Program stands ready for immediate deployment to any U.S. location in the event of a terrorist attack using a biological toxin or chemical agent directed against a civilian population.

Urban Areas Security Initiative (UASI): Very specific activities involve coordination by the identified core city/county, and the California Office of Homeland Security. Effort to ensure that each Urban Area has as many resources as possible to address the needs and priorities identified in the Urban Area assessment and strategy plan. California Urban Areas are: Los Angeles, San Francisco, Santa Ana, Long Beach, San Diego, Anaheim, Sacramento, San Jose, Oakland and Fresno.

Unified Command (UC): A unified multi-agency model for command control and coordination of resources and personnel at the scene of emergencies.

APPENDIX 5:

EFFECTIVE PRACTICES OF LHDS

BY CRITICAL TASK

EFFECTIVE PRACTICES OF LHDs, BY CRITICAL TASK

INTRODUCTION

The following pages list *Effective Practices* identified during the California Emergency Preparedness Assessment Project, November 2005 - November 2006. The project was carried out under contract to the California Department of Health Services (CDHS) Emergency Preparedness Office (EPO) by the Local Local Health Officers Association of California (HOAC).

During site visit assessments to local health departments (LHDs), project consultants, who were Subject Matter Experts (SMEs) with decades of LHD experience, identified practices and written materials particularly effective in achieving the goals of the rigorous CDC/HRSA FY 2005-2006 Public Health Emergency Preparedness Cooperative Agreement Guidance. For many reasons, these *Effective Practices* have not been fully shared among California LHDs, much less the nation. *Effective Practices* was prepared as a stand-alone document so that it could be distributed to individuals responsible for and working in LHD program areas related to public health emergency response to further develop and strengthen local programs.

The information that follows is organized by the 15 CDC Outcomes and Goals, and the Critical Task is specified for each effective practice. Although the name of the LHD (or LHDs) where the effective practice or document was observed is not shown, EPO has the master list for the origin of these examples and with permission of the LHD may release the name so interested persons can make contact with the LHD to obtain additional information. Please contact CDHS/EPO directly to request the name of the LHD when inquiring about a specific example. Although more LHDs in California have undoubtedly adopted these effective practices than indicated in this compendium, they may not be identified on the master list as HOAC consultants credited the LHD where the practice was first referenced or noted during the site visits.

Outcome 1A: All Hazards Planning

CRITICAL TASK	EFFECTIVE PRACTICE
1	A LHD Preparedness Response Plan contains decision algorithms and form templates needed to support the specific response.
1	Established an extremely well-equipped DOC facility; spacious and comfortable including robust electronic support designed for long term.
1	E Team Software for EOC has electronic database to track incident data and wireless EM system for field activities.
1	Updated EOPs contain specific mention of terrorism including bioterrorism and many have specific annexes addressing public health emergencies including pandemic influenza and other outbreaks, as well as biological, chemical and radiological terrorism.
1	The recently drafted (3/7/2006) Public Health Emergency Preparedness and Response Plan delineates scalable response to specific public health emergencies.
1	The Region II production of a Disaster Service Worker (DSW) video is used by many LHDs.
2	The LHD has a Health Emergency Preparedness and Response Plan that is specific to the LHD. The plan contains job check sheets and addresses cascading events and has been activated. The plan is well written and integrates law enforcement in a unified command in the event of a BT emergency event. The Public Health Staff Directory will be enhanced to allow for data entry and tracking of vaccinations and/or prophylaxis status of first responders.
2	The LHD has dealt with a uranium water contamination event and many staff were trained by Lawrence Livermore professionals regarding the emergency.
2	The LHD has worked with American Indian Tribal groups extremely effectively.
3	"Go Kits" or "Go Boxes" containing necessary emergency response material and documents available. Some LHDs have agreed to further define mutual aid in a separately signed document.
5	The LHD benefits by close ties to the UC Berkeley Core Infectious Disease Emergency Readiness (CIDER) program.
5	The LHD is planning to use the competency-based online courses in public health preparedness training for staff offered by the Columbia University School of Public Health Center for Public Health Preparedness (CPHP).
5	The LHD has purchased "Disaster Help" software using CRI funds. The software will assist with managing resources for surge capacity.
5	Training provided by Johns Hopkins Center for Public Health Preparedness- "Roadmap to Preparedness". The Road Map to Preparedness is an interactive, incentive-based and personalized for all levels of health department personnel. The training curriculum enables attendees to achieve the nine competencies outlined in the CDC/Columbia University Bioterrorism & Emergency Readiness—Competencies for All Public Health Workers: (1) Describe the role of public health in emergency response; (2) Identify and locate the agency emergency plan; (3) Describe the agency chain of command; (4) Describe and demonstrate one's functional emergency response role; (5) Recognize deviations from the norm; (6) Identify limits to one's own authority; (7) Describe communication roles during

emergency response; (8) Demonstrate use of communication equipment; (9) Apply creative problem-solving skills.

6 The Local Local Health Officers in the Association of Bay Area Local Local Health Officers (ABAHO) have had discussions regarding surge needs and all have agreed to support one another.

6 The IC Planning and Surveillance section has many tools to anticipate and plan for ongoing cascading situations, which might occur during an event.

Outcome 2A: Information Collection and Threat Recognition

CRITICAL TASK	EFFECTIVE PRACTICE
1	Implementation of syndromic surveillance during major events that attract large numbers of attendees.
1	Duty Officers are provided a kit containing call triage instructions.
1	Back up communication devices and a standard form to document time frames and activities surrounding the receipt and return of an after-hours telephoned disease report.
1	Grant-funded regional surveillance program involving emergency departments, laboratories, and pharmacies.
1	Medical Examiner/Coroner surveillance programs enhance surveillance for critical disease agent cases.
2	A written foodborne infection (FBI) protocol requires CD Control, Public Health Laboratory, Epidemiology, and Environmental Health (EH) to meet and coordinate efforts whenever an outbreak is suspected.
2	The LHD is closed to the public for 1 day each year and provides health topics including disaster preparedness to the Public Health staff.
2	Disease surveillance pilot project utilizing data from the regional poison control center.
2	Proactive FBI illness prevention program implemented for an extremely large gathering.
2	Tribal members attend EH food safety classes.
2	A model quarterly report of Disease Control activities, information and data.

Outcome 2B: Hazard and Vulnerability Analysis

CRITICAL TASK	EFFECTIVE PRACTICE
1	A high percentage of local health departments (LHDs) are utilizing access to the chemical inventory data that is being maintained by local Certified Unified Program Agencies (CUPAs). CUPAs maintain extensive facility and chemical inventory data under the authority of the Hazardous Materials Management Program (HMMP) and the California Accidental Release Program (CalARP).
1	The LHD Identified, assessed, and mitigated a local laboratory that produces botulinum toxin for cosmetic use.
1	Hazard analysis summary for the 15 most likely events needing LHD response was summarized in a spreadsheet on a single sheet of paper. This spreadsheet included the basic LHD response for each event. This format makes it easy to utilize for quick reference and to educate all LHD employees so all employees can see how the LHD is going to respond and what their role will be.
2	A growing number of LHDs are using Geographic Information Systems (GIS) and Global Positioning Systems (GPS) for mapping and modeling identified hazards and threats.
2	HazMat Teams supporting LHDs are employing a variety of computer application software that is used for plume monitoring, modeling and tracking. Common examples include: CAMEO (Computer Aided Management of Emergency Operations): ALOHA (Aerial Locations of Hazardous Atmospheres); and, MARPLOT (Mapping Application for Response Planning and Local Operational Tasks).
2	LHDs are utilizing data in the California Accidental Release Program (CalARP) that requires risk assessment and modeling information be provided to CUPAs by facilities storing threshold quantities of acutely hazardous materials.
2	While most threat and vulnerability assessments are conducted by public agencies, a number of LHDs are enlisting private sector participation in the threat assessment process.
2	The LHD developed a waterborne Cryptosporidium outbreak plan which could be helpful for predicting and tracking the dispersion of other released agents.
2	LHDs are collaborating with partner agencies with specialized expertise and equipment associated with air and water plume monitoring and modeling. These agencies include Air Districts, Regional Water Quality Control Boards, Agricultural Commissioners, the California Department of Forestry, CalTrans and the California Integrated Waste Management Board
3	LHDs have become active participants in the communication networks established by the multiple fire service entities in each jurisdiction.
3	A growing number of jurisdictions have implemented or have plans to implement 'Reverse 911' systems countywide.
3	Many LHDs are utilizing the CUPA HMMP and CalARP facility inventory and contact information to communicate and mitigate hazardous materials releases.
3	A number of LHDs and CUPAs have encouraged and advised HazMat storage facilities to consider less hazardous alternatives. An example would be suggesting the use of liquid chlorine disinfection as an alternative to gaseous

chlorine.

- A high percentage of LHDs have access to local or regional HazMat teams and/or HazMat mobile vans providing ability to identify and track dispersed agents
- A number of coastal and inland LHDs have accessed NOAA (National Ocean and Atmospheric Agency) resources for Tsunami alerts and air plume modeling assistance.

Outcome 3A: Laboratory Testing

CRITICAL TASK	EFFECTIVE PRACTICE
1	LRN Reference Laboratories work with local HazMat, law enforcement, and LHD environmental health to prepare a shared protocol for determining credible threats, detailing communication protocols and providing collection, screening, and transportation protocols for credible threat samples.
1	LHDs funded new construction with Tobacco Settlement Funding.
1	A few LHD's are funding new construction of department facilities (including the laboratory) with innovative financing techniques. The most innovative was utilizing a build to suit-lease option arrangements with a developer. In this model the LHD provides a portion of upfront funding to a developer to build the facility to department specifications, leases the facility when completed, and has the option to buy the facility anytime after occupancy.
1	LRN reference laboratories provide HazMat with collection kits, collection instructions and chain of custody/laboratory forms for submitting environmental specimens. Laboratory has training classes for HazMat in using these collection kits.
1	LRN reference Laboratories with USPS BDS systems in their catchment areas perform real time drills with the USPS postal inspectors to coordinate response, specimen collection, transportation and testing procedures.
1	Reference Laboratories provide a "wet workshop" for bioterrorism agents for local sentinel laboratories. This is very time intensive but appreciated by sentinel laboratories. Training for how to perform these workshops was provided by the State Laboratory.
1	PHL visits and conducts assessment of sentinel laboratories in county to determine if provided emergency contact procedures are available, status of laboratory facility and capability of ruling out agents of bioterrorism.
1	Laboratory provides bioterrorism binders with necessary emergency contact information, shipping procedures and basic sentinel laboratory procedures to local sentinel hospital laboratories. These are designed to be utilized by second and third shift personnel in emergencies.
1	Sentinel hospital laboratory contacts are maintained in both blast fax and e-mail lists so that information can rapidly be sent out for both emergencies and for routine updates by the PHL.
1	LHDs are replacing old and unsafe laboratory facilities with new modern laboratories. These often include at least a small BSL-3 for safely working with certain infectious agents and for packaging and shipping potential bioterrorism specimens. This is a resource that every county needs.

Outcome 3A: Laboratory Testing (continued)

1	When any new laboratory is being built or existing laboratory is remodeled, a dedicated BSL-3 area is included. For sentinel laboratories this can be a small facility. It provides the capability to safely perform testing for agents such as tuberculosis and brucella which are commonly handled by all public health laboratories and also provides a safe facility to package and ship specimens that may contain bioterrorism agents for referral to reference laboratories. This is a resource that every county needs. For a LRN reference laboratory a BSL-3 facility is required and will need to be much larger.
1	Sentinel Public Health Laboratories have developed real time PCR capability to rapidly test for infectious agents such as influenza by funding their own instrumentation and obtaining tests commercially or utilizing State Laboratory or CDC- provided reagents.
1	Sentinel Public Health Laboratories have developed real time PCR capability by funding their own instrumentation and obtaining tests either by buying commercial reagents, utilizing State provided reagents or taking part in the LRN public health availability of avian influenza reagents. Some also have also added the capability of testing non-credible specimens for some agents of bioterrorism utilizing commercial reagents.
1	Local PHLs act as the reference tuberculosis laboratory for the county and forward all isolates to the state laboratory for molecular typing.
1	Laboratories are part of the CDC Pulse Net for performing PFGE analysis of food-born bacterial pathogens such as E. coli O:157:H7.
1	To assist in maintaining a full staff, LHD maintains competitive salaries for laboratory director and Public Health Microbiologists so that they are not hired away by other public health, clinical or industrial laboratories. This helps to maintain a full staff.
2	The laboratory information system (M-Lab) has been interfaced with the Atlas disease reporting system allowing electronic forwarding of reportable disease information to communicable disease control and epidemiologists.
2	Many laboratories, even small ones, are updating to modern computer systems that can interface with other systems. The majority of small laboratories utilize two computer vendors, thus there is potential for designing interfaces for these systems for disease reporting that will cover many laboratories.
2	The P. H. Laboratory utilizes the StarLIMS LIS which uses both LOINC and SNOMED coding and is applying for PHIN certification.

Outcome 4A: Health Intelligence Integration and Analysis

CRITICAL TASK	EFFECTIVE PRACTICE
1	A web-based system allows members of the public to report a concern regarding communicable diseases such as a suspect foodborne illness.
1	An "Unusual Occurrence" form allows for the reporting of undiagnosed illnesses with unusual, uncommon symptoms by health care facilities to enhance active surveillance for critical diseases that may be related to a bioterrorist event.
1	Plan to add a fever of unknown origin (FUO) reporting program on the Rapid Emergency Digital Data Information Network (Reddinet) system to speed reporting.
2	vCMR is a PHIN-compliant electronic data management system with the capacity to perform outbreak management, analyze trends, generate alerts and epidemiological reports, support web-based disease reporting, and receive foodborne illness complaints. A few jurisdictions have developed in-house systems with similar modules.
2	The Regional Epidemiologist provides epidemiology services to 10 local counties.
2	The mortality clerk enters death data into a MS Access database. A query once a week exports all of the mortality data into an MS Excel database. In Excel, there is a table with formulas/formats in place so that when the table is refreshed, numbers of deaths per week are automatically calculated and entered into cells sorted by the cause of death. A cell will also automatically become highlighted if the number of deaths is more than 2 standard deviations away from the mean. Standard deviation and means are based on data from the two years prior. The total number of deaths, number of deaths for persons age 25 and below, pneumonia deaths, and causes of death with outlier counts are all summarized weekly and distributed to the Local Health Officer, Director of Nursing, and the CD Program Manager.
2	Disease control supervisor set up a simple yet powerful disease analysis system utilizing a combination of commercially available software. The system utilizes Excel for data entry. The data is then imported to SAS for analysis. Pre-existing formats and analysis systems are set up for routine work. However, for unplanned emergencies a modified or new Excel sheet can be designed rapidly and data entered by minimally trained personnel even on portable computers at remote sites. An analysis program can then be designed utilizing SAS. This system is very flexible and allows a LHD to invest and maintain one system that can cover many needs.
3	Zoonotic Disease Task Force with representation of local veterinarians, Animal Control personnel, and the Agricultural Commissioner has been facilitated by the LHD.
3	A database linking hospital medical records and Public Health client records in order to enhance regional disease surveillance efforts has been established.
3	BT funding has been used to organize formal Category A zoonotic disease agent presentations to all local veterinarians.

Outcome 4A: Health Intelligence Integration and Analysis (continued)

- 3 A 2-day multi-agency *Shigella* foodborne illness outbreak exercise was conducted.
- 3 The LHD provided the Agriculture Commissioner with a trailer to be used for animal preparation prior to submission for rabies and other disease testing.
- 3 An innovative electronic reporting system has been implemented which allows e-mailed, faxed, or telephoned disease reports to be automatically uploaded to an electronic CD file.
- 3 A Veterinarian CMR form for reporting reportable zoonotic disease agents was developed.
- 5 All local medical providers are provided a copy of the American Public Health Association's (APHA) *Control of Communicable Diseases Manual* labeled with LHD contact information included.
- 5 A hospital-based enhanced passive surveillance program aimed at the early detection of a sentinel event involving comprehensive education of hospital physicians in the clinical diagnosis of Category A agent diseases.
- 5 A library of preparedness references including satellite downlink presentations for use by local physicians is maintained by the LHD.
- 5 A bi-annual report distributed to health care facilities providing information regarding health care facility performance in reporting mandated diseases.
- 5 A "non-reporting" list is published monthly by the LHD to remind local physicians of reporting responsibilities in order to increase compliance with the law and regulation.

Outcome 5A: Public Health Epidemiological Investigation

CRITICAL TASK	EFFECTIVE PRACTICE
1	A weekly CD Briefing meeting is held to assure all appropriate staff are updated on new and continuing disease cases.
1	Tribal Health Centers act as a conduit for LHD access to that community.
1	Weekend monitoring of the fax machine that receives CMRs.
1	An operations plan for zoonotic diseases surveillance and control was developed collaboratively with the Agriculture Commissioner.
1	As a component of disease surveillance, a collaboratively-written plan coordinating disease investigations involving ill passengers, especially those arriving from other countries with the major airport is in place.
1	A foodborne illness (FBI) sample collection kit placed at each Public Health satellite site for timely deployment during a FBI outbreak investigation aids the local response.
2	An FBI outbreak exercise that includes hospital personnel was conducted.
2	A well written Epidemiological Response Plan provides the epidemiological response frame work for the LHD during outbreaks and investigations.
2	A formal written MOU with the local hospital provides for the sharing of nursing staff for epidemiological surge capacity.
2	A unique collaborative effort involving the cross-training of Police, FBI, and LHD employees in interviewing techniques and other emergency response activities increases cooperation among partners.
3	Authority of the Local Health Officer to declare a public health emergency without prior Board of Supervisor approval.
3	Documented County Counsel support of the Local Health Officer's authority to implement disease control intervention strategies within tribal entities.
4	Use of interactive local CD web site as a disease investigation tool. Physicians e-mail case finding information during outbreak investigations.

Outcome 6A: Emergency Response Communications

CRITICAL TASK	EFFECTIVE PRACTICE
1	The DOC and EOC have electronic whiteboards to communicate situational status between centers.
1	The EOC receives operations status data from the hospitals (via ReddiNet) and forwards the data electronically to the DOC.
1	An Incident Response Information System (IRIS) facilitates tracking of resources, i.e. personnel, supplies and equipment.
1	Employee hotlines to facilitate communication with staff who are offsite or at home in an emergency.
1	Hospitals use StatusNet in all disasters and whenever there are more than 10 patients as a result of a particular emergency or disaster event; StatusNet is used to report bed status, pharmacy inventory, and ambulance deployments.
1	Hospital Emergency Department Status (HEDS) system provides real-time status reports from community hospitals to the LHD.
1	Incident Command Staff at the Department Operations Center use wireless-enabled laptops to receive information and communicate by e-mail and to access the Internet during an emergency.
1	Internet telephones using Voice Over Internet Protocol (VOIP) is a cost effective strategy for oral communications at the Department Operations Center.
1	"WebEOC," a customizable electronic communication system that enhances communications (e.g. situational awareness) between the DOC, the EOC and other partners.
1	E-TEAM (incident management software) automates status reporting, including resource tracking, between the DOC and EOC. The E-Team communication system is encrypted, protected by a firewall, password restricted, and both PHIN and HIPPA compliant.
1	The Emergency Operations Center and the Department Operations Center are connected by 2-way video conferencing.
1	E-Team software has been installed to automate communications and resource tracking at the MOC, DOC, and EOC.
2	The Communication Plan team has identified all affiliated groups to be notified by the Emergency Response Communication System (ERCS).
2	There is a Public Health Call Center as a public health information and alert line, which is staffed during emergencies.
2	The LHD has an MOU to use the Red Cross Call Center during emergencies.
2	Extensive and redundant communications system, including CAHAN, Radio Amateur Civil Emergency Service (RACES), UHF radios, dedicated radio and TV channels, Blackberries, cell phones, pagers, blast FAX, walkie talkies, satellite phones and satellite conferencing.
2	"First Call", an emergency notification system, is used to notify city employees and the general public.
2	Public Information Network, a network of all PIOs from the public sector and from private sectors partners.
2	A Health Alert System Training and Education Network (HASTEN) supports "call down" messaging and blast fax for rapid notification of staff and partners.

Outcome 6A: Emergency Response Communications (continued)

2 A powerful automated system, "The Communicator", is used for emergency notification and communication. This system is capable of automated notifications simultaneously by phone, fax, pager and e-mail.

2 The Rapid Emergency Digital Data Information Network (ReddiNet) system is in place at local hospitals and is used to communicate with the LHD.

2 A web-based system (ESAR- the Emergency System Advance Registration) handles the registration of volunteers.

2 Teleworks is an automated telephone system accessible via the Internet that allows the LHD to rapidly contact staff in an emergency.

2 EMSystem provides situational status information to the LHD from hospitals and supports emergency department status tracking, patient tracking, mass casualty incident support, syndromic surveillance, hospital bed tracking, and public health alerting.

3 The LHD conducts a technical assessment of communication capabilities and needs.

3 ACOM is comprehensive and effective interoperable communications system.

3 VHF High Band radio was determined to be the best system due to rugged local topography. The LHD will acquire its own radio band for secure communication.

3 A countywide mutual aid, multi-band radio system supports radio "cross-patching" so that agencies on one radio band can communicate with agencies on other bands.

3 A county Emergency Radio Authority (ERA) ensures workable radio communications among and between all response partners of the county and cities.

4 Redundant communication systems in place include telephone, cell phones, pagers, satellite phones - both fixed and portable and web-based communication.

4 Portable "walkie-talkie" type radios are used at mass prophylaxis Points of Distribution for staff communications.

4 The LHD has enlisted the aid of the local amateur radio club to provide design and staffing of dedicated HAM radio equipment installations for the DOC and the local hospitals. The equipment is very cost effective and is purchased utilizing HRSA grants. It provides emergency communications within the county and to other counties or state facilities with HAM radio functionality.

4 The LHD maintains special telephone lines which when activated accept analog phones, a stock of which is maintained by the LHD. Analog communication may still be possible when digital phone communication has been compromised by earthquake or technical problems during an emergency situation

5 Primary and alternate Incident Commanders for the DOC and for LHD participation at the EOC are designated.

7 The LHD makes extensive use of CAHAN for alerting internal and external partners. All department employees are enrolled and the system is tested monthly with a high level alert every three months.

7 Community Medical Response System (CMRS) is a secured web site for the LHD and other partners to exchange information.

7 E-Team communication system is encrypted, protected by a firewall, password restricted, and both PHIN and HIPA compliant.

Outcome 6A: Emergency Response Communications (continued)

- A high proportion of primary care physicians are enrolled in CAHAN providing an effective multi-channel alerting mechanism to them.
- Community Medical Response System (CMRS) is a secured web site for the LHD and other partners to exchange information and is being developed
- CAHAN or a similar system is utilized to notify all LHD employees and response partners including area physicians. This requires sufficient dedicated personnel to maintain the system but is very efficient, powerful and flexible once established.

Outcome 6B: Emergency Public Communications

CRITICAL TASK	EFFECTIVE PRACTICE
1	LHD has established a bank of "211" Information phone lines to handle incoming calls from the public and refer callers as appropriate.
1	The PIO and alternate have received media training, including a 1-week training at the California Specialized Training Institute (CSTI).
1	The LHD has stockpiled informational materials on the most common emergency conditions, and has established contracts for expanded outreach services and health educator resources.
1	The County web page provides extensive access to health and safety information, with featured links to CDC, FEMA, Homeland Security and various State agencies, including links to CDC travel advisory information.
1	The LHD utilizes established protocols to communicate with Mexico via the Bi-national Border Health group. "Hotline" services are available via the "211" system and an "800" number which can be expanded in emergency situations.
1	The LHD has "Call Center Software", a system that efficiently routes incoming calls from the public to the next available phone bank responder, with ten lines answered.
1	CERC plan includes information and checklists to guide a public communications response. It details communication plans and protocols, staffing, contact information, sample messages, fact sheets, bioterrorism agent information, spokesperson information, tracking forms, and media materials.
1	An innovative enhancement has been the creation of a Media Team - a working group of PIO's from throughout all county departments. The Media Team adds a surge capacity for an extended emergency response, and also has been useful as a training resource during planned exercises. Members of the Media Team role-play as media reporters, enhancing the realism of the PIO function for the exercise.
1	Specific Public Health information lines (aka "Warm lines") are activated during an emergency to provide information to the public.
1	The California Department of Forestry (CDF) has a phone bank which might be available for emergency use by the LHD.
1	With respect to handling telephone calls from the public during an emergency, the LHD has added information lines, and partners with the Red Cross who uses trained call receivers.
1	The LHD has a complete listing of employees' language capabilities and has a hotline for information for citizens and the ability to direct calls to the "Nurse of the Day" when necessary.
1	The LHD has emergency preparedness information in Braille and other materials in at least 8 languages spoken in the community.
1	PIO is head of either a community relations unit or the health education unit in the LHD allowing employees in the department to be backup personnel and to provide surge capability when necessary

Outcome 6B: Emergency Public Communications (continued)

2 The LHD has emergency preparedness brochure, a compact tri-fold that provides the general public with essential information, including how to make a family emergency plan, what to do for a biological, chemical or nuclear disaster, how to prepare for an earthquake and what to do when one strikes, key facts to know for wildfire or flood, contact information for the health department, and what to do if an evacuation or shelter-in-place is ordered.

2 The LHD is well integrated in the incident command structure and a well-established protocol for preparation, approval and release of press releases and other information is established whether the LHD or the County EOC is in charge of a particular event.

2 "Signers" are utilized to communicate with the hearing-impaired in an emergency or disaster and the County has TDY capability.

2 Community bulletin boards are utilized for communication with rural area residents.

2 Partnerships have been established with the Agency on Aging and multiple faith based groups to assist in outreach to the home bound.

2 The LHD has created a Pocket Guide to Emergency Preparedness which it distributes to the public.

2 A Latino Resource Specialist was hired to provide proper communication with this population.

2 The LHD works with community based organizations (CBOs) that serve persons who are developmentally delayed or have hearing, vision or mobility impairments.

2 Special populations have been addressed by the Neighborhood Connection Office which provides outreach to those with special needs and cultural or language barriers.

2 The LHD works with the United Way as an effective umbrella organization to help reach organizations that serve special populations.

2 Utilizing commercial media via satellite media helps provide educational messages for some of the more remote communities in the county.

2 With respect to those who do not speak English, there is a Public Health InfoLine with recorded messages in 7 languages. The InfoLine also uses a translation device ("phrase-a-lator") to help communicate in different languages.

2 Contact information for organizations that serve special populations is maintained, including blind persons, homeless, seniors, and those who are mentally or physically challenged.

2 Special populations have been addressed by the Neighborhood Connections Office which provides outreach to those with special needs and cultural or language barriers.

Outcome 6B: Emergency Public Communications (continued)

2 LHD completed a public awareness television campaign that encouraged county residents to develop a family emergency plan. Television spots were created for a number of language communities. Rather than simply translate an English spot, a sophisticated approach was employed based on results gained from focus groups. Using this specific information, television spot storylines were designed to appeal to each particular community.

2 The LHD has developed a Terrorism Preparedness brochure for the public that describes what to do to prepare and the importance of creating a plan, and gives contact information for the LHD and sources of information in an emergency.

2 The LHD uses focus groups to identify proven approaches for public communication to special populations, which include people who are homebound, physically disabled and homeless.

3 Mental Health staff have had PIO training and are on the BT Task Force; a Mental Health hotline is part of the emergency communication plan; Mental Health is part of review process for press releases and assesses issues surrounding psychosocial consequences.

4 WebBoard is a relatively inexpensive software program which facilitates the JIC function.

5 LHD has had professional local media staff work with them during a training exercise to enhance mutual insights into better public communication.

5 The LHD created an effective public service advertisement to encourage family emergency preparedness; it used a local celebrity of the television show *Survivor*.

6 The LHD has decreased the time for release of travel advisory messages by holding functional drills.

6 The LHD has worked with its local commercial airport on issues that might impact travel, such as avian influenza or SARS.

7 A communications system with a database of thousands of medical providers provides accurate and relevant public health and medical information to clinicians and other providers; output from the database is fed to a burst fax system.

7 The LHD has surveyed local physicians to determine how to best contact each of them- e.g. e-mail, fax, and telephone.

7 The LHD has a well-developed part of its web site designed for health care providers. This web site section has up-to-date information on BT agents, a video library, syndromic information and nuclear and chemical information.

7 The LHD has identified local clinicians and other responders and has the ability to contact them via RightFax system. A recent test of RightFax demonstrated it was possible to send information to a large number of physicians in 15 minutes.

Outcome 6C: Worker Health Safety

CRITICAL TASK	EFFECTIVE PRACTICE
1	Behavioral Health (BH) has two crisis teams that would be available to provide counseling to workers in a public health emergency.
1	The LHD provided Critical Incident Stress management training to Behavioral Health staff. Private mental health providers also attended the training and are available through contracts to provide surge capacity.
1	A formal policy and procedure exists for requesting Mental Health support in an emergency.
1	The LHD "Care and Shelter" teams include Mental Health staff.
1	Obtain information from the California Mental Health Directors Association and the California Association of Marriage and Family Therapists regarding available mental health resources statewide.
1	Confirm with the jurisdiction's Employee Assistance Program (EAP) that it has the level of surge capacity that may be necessary.
1	Critical Incident Stress Debriefing (CISD) is available to employees.
1	Both EAP and BH employees participate in emergency exercises.
1	LHD staff members have received stress reduction training and are very aware of psychosocial support services available.
1	A "Readiness and Resiliency" pre-incident counseling program for emergency workers has taken place for personnel likely to be active in emergency events.
1	A mutual aid agreement exists with the Bay Area Disaster Mental Health (MH) Coordinators Group.
1	The County Mental Health Department is fully integrated into the emergency response plans.
1	Counselors in the Alcohol and Other Drugs Program within PH are receiving disaster worker training provided by a contractor.
1	A Critical Incident Stress Management (CISM) coalition is in place which is a peer-to-peer group for the responder community.
2	The LHD has a cache of N-95 masks and Powered Air Purifying Respirators (PAPRS) that are readily available. More than 90% of field team staff has been trained in PPE use.
2	Develop an agency-wide training log and fit testing log that can document trainings and competencies for all staff members.
2	The LHD has "go kits" for field staff and PPE kits for other staff so they will not have to come to the central office to access PPE.
2	A Departmental wide set of management guidelines for worker safety assures consistency throughout the LHD.
2	There is an LHD safety plan that addresses chemical, biological and radiological training and decontamination.
2	The LHD has a centralized database for tracking vaccination status, PPE needed, fit testing and worker exposure information.
2	Employee job classifications have been assessed for level of risk and PPE has been provided based on job classification.
2	The HazMat Team conducts quarterly field exercises and implements identified improvements.

Outcome 6C: Worker Health Safety (continued)

2	Technical specialists on the Environmental Health HazMat Team provide technical assistance on worker safety to the IC and UC and are available 24/7/365.
2	An exercise is held that tests the operation of the decontamination units to ensure they are fully functional and personnel are trained in the unit's operation.
2	Worker safety is a component of all plans including Mass Prophylaxis, Smallpox Plan, Pandemic Influenza Plan, and other policies.
2	An algorithm is in place for patient management following exposure to an unknown biologic agent.
2	A list of county specialists has been developed who would be responsible for providing technical advice on worker health and safety for Incident and Unified Command.
3	A training coordinator has been identified to ensure provision of worker safety training.
3	Fischer Scientific and the Fire Department have provided various trainings which include hazardous materials information and decon procedures.
3	Hazardous Material Training is mandatory for al new employees and repeat training is provided on a regular basis.
3	CalPEN courses (ie. Hazmat training) provide pre- and post tests as an evaluation activity. CEUs are offered as an incentive.
3	Public Health Response Teams (PHRT) have been formed and trained to respond to specific agents. A pandemic influenza exercise includes the deployment of PHRT hospitals.
3	A designated unit reporting to the Public Health chief is tasked with providing overall hazardous material training as well as other disaster training.
3	The LHD utilizes at least one United States Army Medical Research Institute of Infectious Disease (USAMRID) or CDC satellite downlink hazardous materials training annually to train staff. A tabletop exercise is used to evaluate training.
3	Hazardous Material Training is mandatory for all new LHD employees.
3	LHD staff members have attended PPE training, which includes basic information on hazardous materials, the risks associated with specific agents and decontamination procedures.
3	Hazardous materials training sessions utilize pre and post tests as evaluation tools; regular refresher courses are provided.

Outcome 6D: Isolation and Quarantine

CRITICAL TASK	EFFECTIVE PRACTICE
1	LHD has established policy and procedures for exercising Local Health Officer Authority.
1	LHD has model orders in place for isolation and quarantine
1	LHD has written quarantine guidelines in place. Policies and procedures for quarantine are in place. Sample quarantine orders are in place and approved by County Counsel.
1	LHD has exercised a quarantine scenario and an After Action Report was done.
1	The LHD has drafted sample orders for isolation and quarantine. The LHD has drafted a modified 5150 form in order to provide the authority for the use of appropriate force during a situation posing a health risk.
1	The LHD has developed a draft "Multi Hazard Functional Plan".
2	The LHD has established a judiciary training program for quarantine activation and enforcement.
2	The LHD has developed an adverse reactions photo album as a training tool.
2	The LHD has formed an adverse reaction management expert panel which includes dermatologists, ophthalmologists, mental health staff and other providers.
2	The LHD has developed a Public Health information phone bank system which includes specific scripts. The LHD has also done a formal assessment of media knowledge.
2	An implementation plan for joint investigation of BT events is being developed with law enforcement, fire, FBI, County Counsel, US Coast Guard, Custom and Border Patrol and the CDC Quarantine Station.
3	The LHD has an OES 5-phone bank system for making calls to patients to monitor adverse reactions and it could be used for delivering script messages as well.
3	The LHD has developed mobile Public Health teams that have trained hospital personnel on site in adverse treatment reactions.
4	The LHD has developed a Smallpox Vaccination and adverse events training module.
4	The LHD has developed and trained a cadre of "Epi-SERTs" who could deliver and administer medications and provide other general health needs to small numbers of the population.
4	The LHD has done an assessment pilot involving 20 CBOs to determine their role with Special Populations.
4	The LHD has developed a procedure to assess the general health and medical needs of a quarantined population.
4	The LHD has established a work group with VNA and Community Hospice to establish protocols for dealing with the public health and medical services necessary for those in isolation or quarantine. Additionally, they have an MOU with CDC's Quarantine Division and local hospitals to provide medical care of quarantined persons.

Outcome 6D: Isolation and Quarantine (continued)

5 The Mental Health Department has developed a crisis Response Plan and has a Crisis Response Team. The Crisis Response Team is trained in Critical Incident Stress Management (CISM).

5 The LHD has developed a formal MOU with Mental Health to address the mental health issues associated with implementation of quarantine.

5 The LHD has developed a Chaplaincy Program to assist with Mental Health issues in quarantine.

5 The County has a law enforcement Chaplaincy Program that could be used to provide psychosocial support during an event.

5 Behavioral Health has cooperative agreements with 300 private providers for mental health surge capacity.

5 The LHD has established an Isolation and Quarantine Committee that is charged with developing strategy for the provision of psychosocial support during a quarantine event.

5 The LHD has developed Public Health fact sheets and press releases for all Category A Agents, radiological emergencies and some chemical agents.

5 The LHD has developed a Disaster Mental Health Plan in collaboration with Behavioral Health.

5 The LHD completed a formal assessment of Behavioral Health capacity during the Katrina evacuee event.

6 The LHD has developed an "Administrative Communication Unit" that is responsible for development of health related messages and assisting with translation in an event. This unit has developed an excellent release of information protocol which assures all appropriate approvals are received prior to the release of information.

6 The LHD has a general web site and an Emergency Preparedness web site. Any information sent to the media is posted to one of these web sites. Both web sites have a section that can be accessed by the public and a section that can only be accessed by LHD staff.

6 The LHD has developed very specific media strategies to assure the non-local media does not overwhelm their ability to get specific messages out via the local media.

6 The LHD has developed a Council of PIOs whose role is to coordinate information between the LHD and other agency PIOs. Policies and procedures have been developed to assure coordination of information.

6 The LHD has developed collaborative agreements with high schools to send phone messages via the high schools automated phone systems.

6 The LHD has developed fact sheets and press releases for all Category A Agents, radiological emergencies and some chemical agents.

6 The LHD has collaborated with the Weather Service Channel to place short emergency messages at the bottom of the Weather Service Channel broadcast.

6 The LHD has the capacity to produce a video-taped presentation within 2 hours of an event. They have collaborated with the local cable station to broadcast the video message after development.

6 The LHD conducted a rumor control drill.

Outcome 6D: Isolation and Quarantine (continued)

4	The LHD has a "Community Health Care Disaster Plan" that includes medical management of a quarantined population and identifies the quarantine site. The Plan also triages medical needs into 3 code levels.
7	The LHD has collaborated with the County's Consolidated Utilities billing service for access to their 59-line phone bank in an emergency.
7	The LHD has developed a video utilizing interviews of citizens providing their thoughts and concerns regarding quarantine.
7	The LHD developed methods to reach several special, hard-to-reach populations for a special city project.
8	The LHD has developed an Access based program to collect, manage, and coordinate information on isolation and quarantine.
8	The LHD has developed data bases for food borne illness, Smallpox, and a general outbreak data base. These can be modified quickly to meet other types of outbreak needs if necessary and can be downloaded onto laptops and can be used in the field.
8	The LHD has developed a Data Management System called CDSS that would be used for data management in a quarantine scenario.

Outcome 6E: Mass Prophylaxis Vaccination

CRITICAL TASK	EFFECTIVE PRACTICE
1	LHD has completed multiple simultaneous POD operation exercises and is experienced.
1.c.2	LHD is exploring concept of contracting with a private vendor for POD setup and operations as a strategy to increase the number of persons served quickly within the jurisdiction.
1.d.2	The LHD has developed and piloted a management system for tracking patients who have received prophylaxis.
2.2	The LHD has completed a full scale SNS exercise.
2.2	The LHD has established a Special Populations Committee to address the needs of Special Populations including the deaf, blind, faith-based groups, disabled, homebound, homeless, farm workers, Spanish speaking, tribal government, seniors, children, snowbirds and off-roaders.
1	The LHD has completed a survey of pharmacies to determine available stock of antibiotics.
1	The LHD is developing Field Office Guides (FOG) to facilitate operation of PODS.
1	The LHD has established mobilization centers that could coordinate staff and volunteers, provide "Just In Time Training", and provide transportation to and from PODS.
1	The LHD has developed an Inventory Management System for SNS.
1	The LHD has tested distribution of oral medications utilizing a "rapid protocol" based on the "New York Template" which involves a paperless approach and not taking a medical history.
1	The LHD has developed and piloted a patient management system for tracking patients who have received prophylaxis.
1	The LHD has developed a slide show (including Spanish Audio Version) to orient and inform the public at the PODs about the process for mass prophylaxis.
1	The LHD has developed an electronic record system and a Visual Confidential Morbidity Report (VCMR).
1	The LHD participated in a full scale SNS exercise.
1	The LHD has completed a comprehensive pharmaceutical inventory.
1	The LHD in collaboration with members of the Region has developed an overarching training plan and a training log.
1	The LHD in collaboration with community partners has completed a Pharmaceutical Surge Capacity Plan.
1	The LHD has established a system of staggered stocking so that various pharmaceutical caches have different expiration dates. They also have a return policy for a percent credit as drugs approach their expiration date.
1	The LHD has collaborated with large employers in the community to "push" prophylaxis out to employers for their employees.
1	The LHD held a business forum to further emergency preparation planning efforts and to involve the business community in this effort.
1	The LHD has developed detailed POD checklists to address the mass immunization activity of POD locations.

Outcome 6E: Mass Prophylaxis Vaccination (continued)

3 The LHD is working on a coordinated approach to release public information through a virtual JIC Web Site.

3 The LHD has conducted drills and tabletop exercises notifying the population prophylaxis is needed.

3 The LHD in collaboration with the SAFE Program has developed an extensive data base of persons with Special Needs. SAFE has sent out a form to everyone in their data base asking them to return it to the LHD. When the form is returned the information is entered into a data base and the GIS system so in an event the individuals can be readily identified.

3 The LHD has developed a good automated call-down system.

1 The LHD has designed and conducted a community assessment study about site utilization potential.

1 The LHD has created a model Mass Prophylaxis Plan.

1 The LHD is working on a plan to repackage bulk pharmaceuticals in caches into individual doses for use by first responders.

1 The LHD has created "POD Playbooks" to facilitate its POD operations. This is an important enhancement to a smooth, efficient POD start-up as it provides staff coming in to manage POD operations with an easy to use plan and set of priorities.

1 The LHD will contract with an organization to manage volunteers.

1 The LHD will work with large employers in the distribution of prophylaxis to their employees, or the populations they serve. They are creating "push kits" to implement this strategy.

1 The LHD is in the process of developing a county wide GIS system to map the location of medically fragile clients.

1 The LHD has established a yearly "skill day" for all PHNs where they receive emergency preparedness training.

1 The LHD has developed and maintains an Excel spreadsheet of the equipment and supplies needed for each POD site.

1 The LHD has established a strong call back protocol.

Outcome 6F: Medical and Public Health Surge

CRITICAL TASK	EFFECTIVE PRACTICE
1	The LHD has a system for maintaining disease control records and producing reports and analyses on a routine basis. The system has the capability of being modified to add additional fields to enable new or different information to be tracked.
1	The LHD has enhanced its ability to do passive surveillance in the private medical sector through a SEEPS program.
1	EMS has the ability to attach health alerts to its hospital communication system.
1	The LHD has an automated system to track cases and create ad hoc data bases as necessary to track exposures, adverse events and patient disposition.
1	The LHD has a system for tracking cases, exposures, adverse events and patient disposition. The LHD has field tracking capability via laptops.
1	The LHD has an excellent system for disease reporting that allows for reporting via fax, phone or on the web. CD staff can access reports any time via email. All labs report via fax or emails.
1	The LHD receives admission and discharge reports from hospitals based on ICD 9 codes.
1	The LHD has implemented the vCMR System which allows secure disease reporting by hospitals.
1	The LHD has developed and implemented a simple and effective syndromic surveillance plan that is used by medical partners in the community.
1	The LHD is developing a system to provide syndromic surveillance called Elysuim.
1	The LHD has developed a "Reporting Card" that is distributed annually to physicians to ensure knowledge of reporting mandates, protocols and contact information.
1	The LHD participates in a syndromic surveillance system which incorporates data from 10 large hospitals in the County. The system has a regular daily report which can be accessed by the LHD utilizing Blackberry communicators.
1	The LHD has a syndromic surveillance program which significantly enhances the detection and reporting of diseases to public health.
1	The LHD has an electronic data reporting system to enhance case reporting, tracking and surveillance.
2	The LHD has standardized operating procedures to execute mutual aid agreements.
2	The LHD is working with Senior Care facilities to put interagency agreements in place to facilitate the transfer of patients between facilities in an event.
2	The LHD has developed standardized operating procedures to execute Mutual Aid Agreements.
2	The LHD has a draft MOU between hospitals and the LHD which addresses hospital and LHD capacities and the sharing of resources in a disaster.
2	The LHD has a health and medical cooperative agreement with 9 other counties. The LHD is considering a Mutual Aid Agreement with bordering towns in Mexico and their bordering County.

Outcome 6F: Medical and Public Health Surge (continued)

3 The LHD has had direct experience with surge capacity through helping Katrina victims including providing direct medical care to about 400 persons and helping over 1,200 total persons.

3 The LHD has Epi-Par Teams in place to provide epidemiology surge capacity to hospitals during an event.

3 The LHD has draft procedures for surge capacity in place which addresses the provision of assistance to local hospitals during an event. Public Health Nurses have been assigned as liaisons to specific hospitals.

3 Public Health Strike Teams will be deployed to local hospitals to provide disease tracking during an event.

3 The LHD has developed Epi Field Strike Teams that will be deployed to hospitals in an event or unusual occurrence.

4 The LHD has contracted with *disaster help.net t*o recruit and train volunteers. The LHD paid for licenses for surrounding counties to ensure regional surge capacity.

4 The Red Cross has increased post Katrina the number of volunteers by more than 2000, many of which are nurses.

4 The LHD has established an MRC with 508 members. Involved volunteers have been trained. The MRC has a website for members and has a planned training curriculum. Members have county liability coverage should members be deployed in a real event.

4 The LHD has completed a survey of potential volunteers and 1000 individuals indicted a commitment to serve in an emergency. The LHD has a Medical Reserve Corps with 280 volunteers who have some training in emergency response.

4 The LHD has an MRC with approximately 200 registered volunteers.

4 The LHD has an MRC with 500 licensed members. Registration and identification cards is in the process of being finalized for volunteers.

4 The LHD has an MRC and has contracted with the Medical Society to provide credentialing for volunteers.

4 The LHD has contracted with the Hospital Association of Southern California to provide credentialing for its volunteers.

4 The LHD has developed a "Just In Time" training program for lay volunteers.

4 The LHD has implemented a web based registry for health care providers.

4 The LHD has implemented a specialized physician registry.

4 The LHD has purchased a proprietary software program to register and credential volunteers.

4 The LHD has an MRC of approximately 100 respiratory therapists, nurses and other medical professionals. Health workers can register on the web site.

5 The LHD has a Health Alert data base which has identified all physicians and their respective specialties.

5 The LHD has an alert distribution list which has physicians listed by specialty.

5 The LHD has developed an on-line training program for medical providers including chemical agents.

5 The Medical Society has provided a data base of local physicians by specialty and Board certification to the LHD.

5 The LHD has implemented a specialty physician registry.

Outcome 7A: Economic And Community Recovery

CRITICAL TASK	EFFECTIVE PRACTICE
	The LHD has built faith-based partnerships to reach out to the total community.
1	The LHD has engaged a certain sector of the agricultural business community in recovery planning aspects and has begun to consider how notifications to field workers can occur.
1	Email lists of large high tech employers will be used to connect with businesses to get the word out.
1	The LHD has been working with the Chamber of Commerce to begin discussing items of public health significance with the business community.
1	The Environmental Health Department has access to a large part of the business community, has contacts, and prepared brochures regarding Recovery issues after fires, floods, and earthquakes.
1	The LHD participates with the Association of Bay Area Governments (ABAG) emergency planning efforts.
1	The LHD has held a series of Pandemic Influenza forums with key large employers in the community.
1	The LHD is working the University of Southern California to evaluate the economic impact of pandemic influenza on the community.
1	The LHD worked closely with Cal Tech to forecast the economic importance of canceling an event due to potential lightening strikes on attendees.
1	The LHD uses the FEMA "Emergency Management Guide for Business and Industry" which lists the following steps to engaging business in emergency planning: establish a planning team, analyze capabilities and hazards, develop the plan (include partners) and then implement the plan.
1	The LHD has completed a process of discussion with staff and has established a written Continuity of LHD services plan that includes redeployment of staff and reduction of LHD services that is scalable.
1	The LHD has engaged a local college professor to perform economic models of potential public health emergencies.
1	The LHD has practical experience in recreational area closures and the effects on business associated with such activities. The LHD has been effective in working with businesses in stressful closures.
2	Close connections between Environmental Health and the LHD fosters timely notification of technical information to guide the Local Health Officer.
2	The California Department of Forestry (CDF) has provided logistics and support related to public notifications during emergencies.

Preparedness Goal 8: Recover

CRITICAL TASK	EFFECTIVE PRACTICE
1	Surge capacity for data collection and entry is enhanced by a volunteer corps.
1	Surge capacity for data collection and entry would be attained from other programs using staff with epi/disease investigation training.
1	Bar coding exists to aid in patient data entry.
1	The LHD has an agreement with a temporary employee agency to add necessary data entry surge capacity.
1	A trailer was purchased and equipped to respond to a communicable disease outbreak.
2	Long-term tracking is accomplished using a computerized system that is used in everyday tracking.
2	Secure web-based communications allows reporting of disease case information from remote sites.
2	Outbreak management software on the laptops is available for use in the field.
2	Confidentiality of sensitive information is provided by a secure drive with limited access by identified staff.
2	The Nurse Case Management System is used for long-term tracking of those affected by an outbreak or event.
2	The E Team system offers a viable platform for long-term tracking of those affected by an outbreak or event.
2	A locally-developed Web CMR is able to do case history tracking, including long-term tracking of cases, exposures and adverse events.
2	OCHIN (Oregon Community Health Information Network) is an electronic medical record system, which could be useful for long-term tracking.
3	LHD has the ability to post information on a secured county web site for response partners.
3	An exercise to assess the overall capacity required for the management of a large, long-term event has been conducted.
3	The "Communicator" system provides rapid strategic information delivery to response partners.
3	A locally-developed Web CMR provides the ability to disseminate aggregate data to governmental entities and the public.

Preparedness Goal 9: Improve

CRITICAL TASK	EFFECTIVE PRACTICE
1	A few LHDs have worked closely with American Indian tribal partners in developing exercises and ensuring their inclusion in events at casinos and Rancherias.
1	The LHD has worked closely with the Military and/or Coast Guard in local exercises.
2	The LHD has a quality written Improvement Plan.
2	The LHD has a policy for conducting After Action Reviews (AARS) for emergency response drills and exercises and completing Corrective Action Plans (CAPs) to implement recommended changes.
2	The LHD uses a Continuous Quality Improvement process, and utilizes Root Cause Analysis as an approach to identify areas requiring corrective action. The primary tool for identifying deficiencies is the DOC Event Tracking Forms. The LHD coordinates and facilitates post incident debriefing which is held within 72 hours after the event. All involved personnel are brought together for an organized, process-focused review. An After Action Report is generated which identifies deficiencies, a plan of action is created, assigned tasks and a time frame for implementation occurs.
2	A written Plan of Improvement specifies hot wash, after action reports, and corrective action implementation.
3	A matrix that includes post event tasks, the responsible party for carrying out the task, start and expected completion dates, a measurable deliverable, and the status of the task is developed.
3	The LHD uses "project tracking" software to track progress. The LHD has *Microsoft Access (IT) Project 2003* to support the Plan of Improvement.
4	The LHD is developing a master work plan for emergency preparedness.
4	A well thought out approach to the complex decision making about retesting. The time frame for re-testing areas requiring corrective action depends on the specifics of the issue and relative importance. Conditions requiring improvement are analyzed on a two-by-two matrix, using the parameters of "High or Low Frequency" and "High or Low Risk". The LHD strives to re-test High Frequency / High Risk issues within 90 days.
4	Biohazard Detection System (BDS) drills with the US Postal Service test many emergency response factors and involve many partners and serve as good events to retest the 24/7/365 response when repeated.
4	A few LHDs have discovered that using influenza vaccination clinics to retest some aspects of a pandemic influenza exercise, POD deployment or mass vaccination exercises that included after action reports is an effective use of time and accomplishes retesting to measure and document improvement.