

California State Auditor

B U R E A U O F S T A T E A U D I T S

Emergency Preparedness:

More Needs to Be Done to Improve California's Preparedness for Responding to Infectious Disease Emergencies



August 2005
2004-133

The first five copies of each California State Auditor report are free.
Additional copies are \$3 each, payable by check or money order.
You can obtain reports by contacting the Bureau of State Audits
at the following address:

**California State Auditor
Bureau of State Audits
555 Capitol Mall, Suite 300
Sacramento, California 95814
(916) 445-0255 or TTY (916) 445-0033**

OR

**This report is also available
on the World Wide Web
<http://www.bsa.ca.gov>**

The California State Auditor is pleased to announce
the availability of an on-line subscription service.
For information on how to subscribe, please contact
the Information Technology Unit at (916) 445-0255, ext. 456,
or visit our Web site at www.bsa.ca.gov

Alternate format reports available upon request.

Permission is granted to reproduce reports.



CALIFORNIA STATE AUDITOR

ELAINE M. HOWLE
STATE AUDITOR

STEVEN M. HENDRICKSON
CHIEF DEPUTY STATE AUDITOR

August 11, 2005

2004-133

The Governor of California
President pro Tempore of the Senate
Speaker of the Assembly
State Capitol
Sacramento, California 95814

Dear Governor and Legislative Leaders:

As requested by the Joint Legislative Audit Committee, the Bureau of State Audits presents its audit report concerning California's preparedness for responding to an infectious disease emergency.

This report concludes that despite completing several tasks for responding to infectious disease emergencies, California needs to do more to improve its preparedness. We found that California has emergency plans to guide its response during infectious disease emergencies, has participated in emergency exercises, and has completed many critical benchmarks for two federal cooperative agreements, which are designed to help prepare states and local entities for public health threats and emergencies. However, the Emergency Medical Services Authority has not updated two critical plans: the *Disaster Medical Response Plan*, last issued in 1992, and the *Medical Mutual Aid Plan*, last issued in 1974. In addition, the Department of Health Services (Health Services) does not have a tracking process for following up on recommendations identified in postexercise evaluations, known as after-action reports. Further, although Health Services has completed 12 of 14 critical benchmarks that one of the cooperative agreements required it to complete by June 2004, we cannot conclude it completed the other two. In addition, Health Services has been slow in spending funds for the other cooperative agreement.

Moreover, based on visits to five local public health departments (local health departments), neither their plans nor other local health department policies included written procedures for following up on after-action reports. Also, none of the five local health departments had fully completed all the critical benchmarks for a federal cooperative agreement by the June 2004 deadline; two counties report they have since completed the benchmarks. Factors that we identified at the five local health departments that serve to increase their overall preparedness for responding to infectious disease emergencies included emergency plans, mutual aid, and exercises and after-action reports.

Respectfully submitted,

ELAINE M. HOWLE
State Auditor

CONTENTS

<i>Summary</i>	1
<i>Introduction</i>	5
<i>Chapter 1</i>	
California Would Be Better Prepared to Respond to Infectious Disease Emergencies if It Completed Certain Tasks	19
Recommendations	35
<i>Chapter 2</i>	
Although Improvement Is Needed in Some Areas, Several Factors Help Increase Local Public Health Departments' Overall Preparedness for Infectious Disease Emergencies	37
Recommendations	46
<i>Appendix A</i>	
California's Progress in Meeting the Critical Benchmarks Issued by the Centers for Disease Control and Prevention	47
<i>Appendix B</i>	
California's Progress in Meeting the Critical Benchmarks Issued by the Health Resources and Services Administration	55
<i>Responses to the Audit</i>	
Department of Health Services	61
<i>California State Auditor's Comments on the Response From the Department of Health Services</i>	73
Emergency Medical Services Authority	77
County of Los Angeles, Department of Health Services	79

Sacramento County Department of Health and
Human Services, Division of Public Health 81

*California State Auditor's Comments on the
Response From the Sacramento County
Department of Health and Human Services,
Division of Public Health* 85

County of San Bernardino, Department of
Public Health 87

Santa Clara County, Public Health Department 89

Sutter County, Human Services Department 91

SUMMARY

Audit Highlights . . .

Our review of California's preparedness for responding to an infectious disease emergency revealed the following:

- ☑ *The Emergency Medical Services Authority has not updated two critical plans: the Disaster Medical Response Plan, last issued in 1992, and the Medical Mutual Aid Plan, last issued in 1974.*
- ☑ *The Department of Health Services (Health Services) does not have a tracking process for following up on recommendations identified in postexercise evaluations, known as after-action reports.*
- ☑ *Although Health Services has completed 12 of 14 critical benchmarks it was required to complete by June 2004 for one cooperative agreement, we cannot conclude it completed the other two. In addition, Health Services has been slow in spending the funds for another cooperative agreement.*
- ☑ *None of the five local public health departments we visited have written procedures for following up on recommendations identified in after-action reports.*
- ☑ *None of the five local public health departments we visited had fully completed the critical benchmarks for a cooperative agreement by the June 2004 deadline.*

RESULTS IN BRIEF

Although California has completed several tasks related to responding to infectious disease emergencies, it has more to do to improve its preparedness. Preparedness is ongoing in that an entity is never totally prepared; rather it can only be as prepared as resources and planning allow. Proper preparedness can save lives, protect property, and reduce the costs associated with responding to an emergency.

We found that California has emergency plans to guide its response during infectious disease emergencies, has participated in emergency exercises, and has completed many critical benchmarks associated with cooperative agreements with two federal agencies, which are designed to help prepare states and local entities for public health threats and emergencies. However, the Emergency Medical Services Authority (Medical Services) has not updated two plans that are critical for California's successful response to infectious disease emergencies: the *Disaster Medical Response Plan*, last issued in 1992, and the *Medical Mutual Aid Plan*, last issued in 1974. The chief of the Disaster Medical Services Division within Medical Services said these plans have not been updated because Medical Services lacks resources and has competing priorities. We also found that, unlike Medical Services and the Governor's Office of Emergency Services (Emergency Services), the Department of Health Services (Health Services) does not have a tracking method for following up on recommendations identified in postexercise evaluations, known as after-action reports. Without such a method, Health Services reduces the likelihood that it will take appropriate and consistent corrective action.

Further, we have concerns about the State's implementation of the cooperative agreements with two federal agencies. Although Health Services has completed 12 of 14 critical benchmarks that one of the cooperative agreements required it to complete by June 2004, we cannot conclude it completed the other two. In addition, Health Services has been slow in spending funds from another cooperative agreement. As of June 30, 2005, Health Services had spent only about \$29 million (33 percent) of the almost \$88 million that the federal government provided for its use from April 2002 through August 2005. Factors such as the

State's hiring freeze and compliance with the State's contracting requirements appear to have impeded Health Services' ability to provide prompt funding to local public health jurisdictions, such as county or city public health departments, and private health care providers.

We visited five local public health departments (local health departments) and found room for improvement despite several factors we identified that increase their overall preparedness for responding to infectious disease emergencies. The local health departments had emergency plans that contained sufficient guidance in general for three of the four elements we reviewed that related to the process of requesting assistance from other jurisdictions for additional resources during emergencies (mutual aid), the roles and responsibilities for individuals and entities during an emergency, and the logistics and facilities used for emergency operations centers. However, neither the plans nor other local health department policies fully addressed the fourth element, which relates to exercises, evaluations, and corrective actions, because they did not include written procedures for following up on recommendations identified in after-action reports. Nonetheless, four of the five local health departments took corrective action on a sample of four recommendations identified in their after-action reports for an exercise hosted by Medical Services. Without such procedures in writing, however, the local health departments limit their ability to ensure that they take appropriate and consistent corrective action on recommendations and make necessary changes to emergency plans. In addition, none of the local health departments had fully implemented all the critical benchmarks for a federal cooperative agreement by the June 2004 deadline.

Factors we identified that serve to increase local health departments' preparedness for infectious disease emergencies included emergency plans, mutual aid, and exercises and after-action reports. Additionally, all of the State's local public health laboratories (local health laboratories), which include county and city public health laboratories, obtained certifications or accreditations to ensure that they perform certain types of laboratory tests accurately, have equipment that is in working order, and possess qualified personnel. Further, each local health department can request mutual aid formally during times of emergency and informally during nonemergencies if it becomes too overwhelmed to respond effectively using its own resources. Also, each local health department we visited participated in emergency

preparedness exercises related to infectious disease emergencies. Together, these factors help improve local health departments' ability to respond effectively to infectious disease emergencies.

Finally, laboratory directors at four local health departments we visited warned us that they might have a difficult time filling laboratory director positions in the future because of certain federal and state requirements. A local health department without a laboratory director could lose its certification or accreditation. The options available to it include contracting with another local health laboratory to provide services or contracting with the director of another local health laboratory to direct its laboratory as well.

RECOMMENDATIONS

To ensure that California is better prepared to respond efficiently and effectively to infectious disease emergencies, the following steps should be taken:

- Medical Services should update and issue the *Disaster Medical Response Plan* and the *Medical Mutual Aid Plan* as soon as resources and priorities allow.
- Health Services should develop and implement a tracking method for following up on recommendations identified in after-action reports.
- Local health departments should establish written procedures for following up on recommendations identified in after-action reports related to exercises, prepare after-action reports within 90 days of an exercise, and complete the critical benchmarks set by a federal cooperative agreement.

AGENCY COMMENTS

Health Services stated that it has taken steps to implement one of the two recommendations we directed to it. Additionally, it provided some new information regarding one of the 14 critical benchmarks. Medical Services agrees with our conclusions and the recommendation we directed to it and provided clarifying comments. In general, the local health departments agreed with our recommendations. ■

Blank page inserted for reproduction purposes only.

INTRODUCTION

BACKGROUND

Emergency preparedness is critically important to ensure that California can respond effectively and efficiently to all types of emergencies. Proper preparedness can save lives, protect property, and reduce the costs associated with an emergency response. Preparedness is ongoing in that an entity is never totally prepared; rather, it can only be as prepared as its resources and planning allow. An infectious disease outbreak is one of several types of events that can trigger an emergency response.

Additional focus has been given to being prepared for infectious disease emergencies since the terrorist attacks in September 2001 and the anthrax incidents later that year. Infectious disease emergencies can be caused by biological agents, which include bacteria, viruses, fungi, and other microorganisms and their associated toxins. Infectious disease emergencies arising from biological agents can have natural, accidental, or intentional causes, such as acts of terrorism, often referred to as bioterrorism. Examples of biological agents include anthrax, avian flu, botulism, plague, smallpox, and tularemia.

State law identifies three levels of emergency:

- **Local emergency:** the duly proclaimed existence of disaster conditions or of extreme peril to the safety of persons and property within the territorial limits of a city or county, which are, or are likely to be, beyond the control of the services, personnel, equipment, and facilities of that city or county.
- **State of emergency:** the duly proclaimed existence of disaster conditions or of extreme peril to the safety of persons and property within the State, which, by reason of their magnitude, are, or are likely to be, beyond the control of the services, personnel, equipment, and facilities of any single county, city and county, or city and require the combined forces of a mutual aid region or regions.

- **State of war emergency:** the condition that exists immediately when the State or the nation is attacked by an enemy of the United States or upon receipt by the State of a warning from the federal government indicating that such an enemy attack is probable or imminent.

LOCAL, STATE, AND FEDERAL ENTITIES RESPOND TO INFECTIOUS DISEASE EMERGENCIES

Responsibility for California's preparedness to respond to infectious disease emergencies rests with several local, state, and federal entities. The Governor's Office of Emergency Services (Emergency Services) is the lead emergency management agency in California. It coordinates the State's response to major emergencies in support of local jurisdictions, which have the primary responsibility for responding to the effects of any emergency. When emergencies occur, Emergency Services may activate its state operations center in Sacramento, along with any of its three regional emergency operations centers, to process local requests for assistance or additional resources.

Emergency Services has identified the Department of Health Services (Health Services) as the State's lead entity for responding to public health emergencies such as infectious disease emergencies. Eleven other state entities, including the Department of Social Services, the California National Guard, and the Department of Mental Health, play supporting roles. Health Services generally is responsible for coordinating statewide public health assistance during disasters and providing specialized laboratory services using its Microbial Disease Laboratory and Viral and Rickettsial Disease Laboratory (state health laboratories). Further, the Emergency Medical Services Authority (Medical Services) is responsible for supporting Health Services during public health emergencies by managing the State's medical response and establishing medical response policies and procedures within the framework of the overall state response.

The initial response to any type of emergency, including one caused by an infectious disease, is the responsibility of the local jurisdiction in which the emergency occurs. Under the direction of the local health officer, local public health departments (local health departments)—which include county and city public health departments—provide several basic services, such as collecting, tabulating, and analyzing public health statistics and performing laboratory services. State regulations require that

local health departments serving populations of 50,000 or more provide laboratory services from an approved public health laboratory. The State has 38 local public health laboratories (local health laboratories). A local jurisdiction without its own laboratory can contract with another jurisdiction that has one or use one of the state health laboratories to meet this requirement.

During infectious disease emergencies, local and state health laboratories provide testing services to identify the presence of infectious agents, support county health departments' investigation of disease outbreaks, and aid in efforts to control the spread of disease. When a bioterrorist event is suspected, designated local and state health laboratories perform more complex specimen testing services that require special laboratory safety protocols and testing facilities to confirm or rule out the presence of bioterror agents such as anthrax and smallpox. Further, some local and both state health laboratories provide specimen-testing services that are unavailable from other types of laboratories and are necessary for the proper identification and treatment of public health disease threats. A local health department can investigate a potential infectious disease outbreak, collect or request specimens from sick individuals, and send the specimens to the local health laboratory for testing. Certain local health laboratories can analyze samples sent to them by private laboratories if the private laboratories have difficulty identifying organisms or need to confirm that their initial analyses are correct. Additionally, the state health laboratories may supply other local health laboratories with testing supplies if the necessary supplies are unavailable elsewhere.

Moreover, according to the chiefs of the state health laboratories, for some infectious disease agents, such as smallpox and West Nile virus, the state health laboratories may not need to test all specimens they receive during emergencies. In such cases, once a state health laboratory confirms the presence of an infectious agent for certain diseases, patients can be diagnosed and treated based on clinical symptoms they exhibit rather than on laboratory test results. In these situations, the state health laboratories may not need to test all the specimens they receive, thereby reducing the possibility of being overwhelmed.

The federal government also becomes involved, if needed, in investigating and responding to an infectious disease incident. For example, for certain high-risk biological agents, such as the Ebola virus, sample testing would be performed at a federal laboratory equipped to handle dangerous and exotic biological

agents. In addition, the federal government provides state and local jurisdictions with assistance on epidemiological investigations and treatment advice. Infectious disease emergencies that are started intentionally are investigated by the Federal Bureau of Investigation. Finally, the federal government provides funding to state and local entities to support preparedness and response efforts.

SEVERAL FACTORS AFFECT PREPAREDNESS FOR INFECTIOUS DISEASE EMERGENCIES

The California Emergency Services Act requires the development of an emergency plan that describes the principles and methods to be applied in carrying out emergency operations. Accordingly, Emergency Services has prepared the *State of California Emergency Plan* (state emergency plan), which establishes a system for coordinating all phases of emergency management in California. The phases include the following:

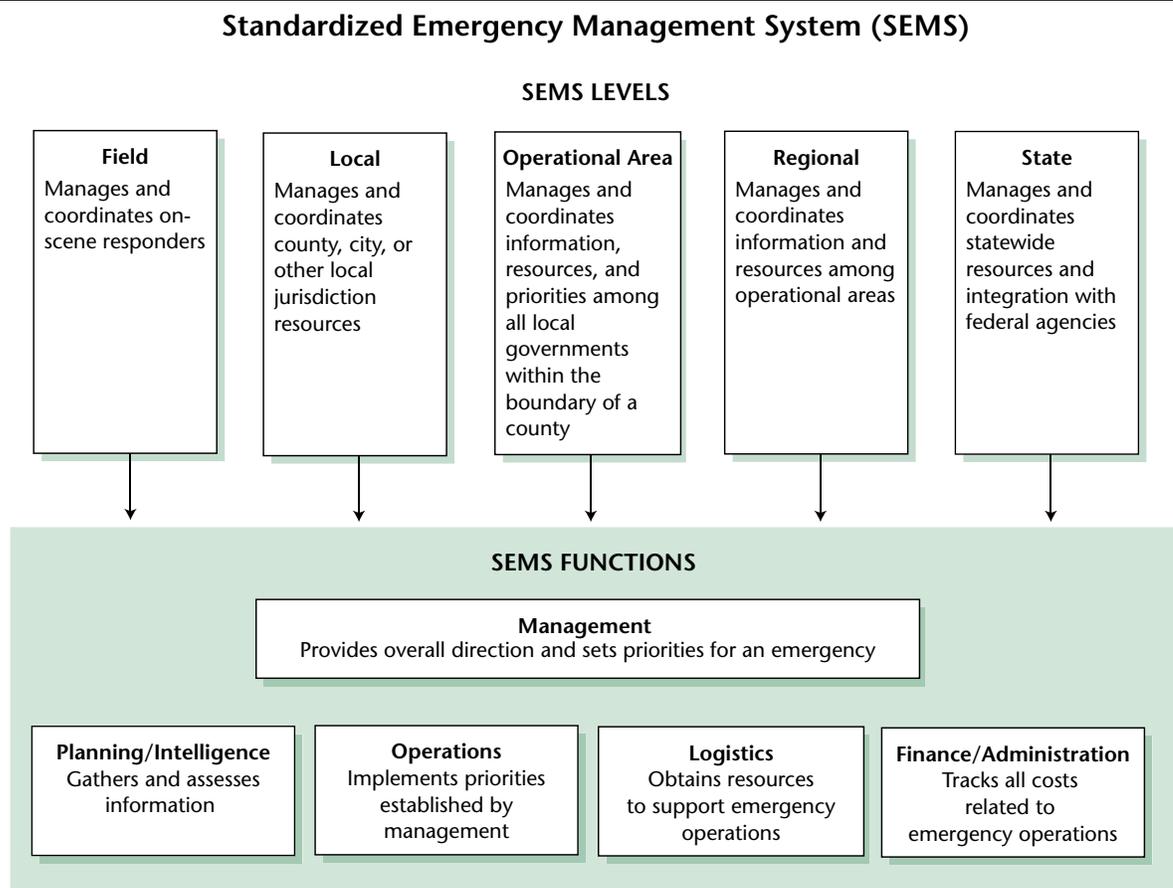
- **Preparedness:** activities undertaken in advance to ensure readiness for responding to an emergency, such as developing emergency plans and mutual aid operational plans, training staff, and conducting exercises to test plans and training.
- **Response:** activities undertaken to respond to an emergency, such as activating warning systems and mobilizing resources. Emphasis is placed on saving lives, controlling the situation, and minimizing the consequences of the disaster.
- **Recovery:** activities undertaken to return to predisaster conditions, such as replacing pharmaceutical supplies.
- **Mitigation:** activities undertaken to eliminate or reduce the impact of future disasters, such as creating pharmaceutical caches for use during emergencies.

For the purposes of our audit, we focused almost entirely on the preparedness phase.

As part of the state emergency plan, Emergency Services developed the Standardized Emergency Management System (SEMS), which is the State's overall framework for managing multiagency and multijurisdictional emergencies in California. Figure 1 shows that the SEMS consists of five organizational levels, which are activated as needed to respond to emergencies, including those caused by infectious disease agents. The SEMS

incorporates the use of the Incident Command System, which provides a means to coordinate the efforts of individual agencies as they work toward stabilizing the incident and protecting life, property, and the environment. State response entities, such as those previously mentioned, are required by state law to use the SEMS. Local jurisdictions must use the SEMS to be eligible for reimbursement of response-related personnel costs under disaster assistance programs.

FIGURE 1



Source: State emergency plan and other information prepared by Emergency Services.

As illustrated in Figure 1, to coordinate the effective use of all available resources, the SEMS establishes five major functions: management, planning/intelligence, operations, logistics, and finance/administration. An emergency may require responses that exceed the resources of the affected entities and jurisdictions. When this occurs, other entities, local jurisdictions, and the State may be asked to provide resources—usually trained personnel and equipment—to assist in responding. This process is known as mutual aid. Mutual aid

is provided between and among local jurisdictions and the State under the terms of the *California Disaster and Civil Defense Master Mutual Aid Agreement* (mutual aid agreement). This agreement was developed in 1950 and has been adopted by most of California's incorporated cities, all 58 counties, and the State.

As shown in Figure 2, California has developed statewide mutual aid systems, which are discipline-specific, pertaining to fire and rescue, law enforcement, medical services, and public works. These systems, operating within the framework of the mutual aid agreement, allow for the progressive mobilization of resources to and from emergency response entities, local jurisdictions, operational areas (a county and all political subdivisions within that county), regions, and the State to provide requesting entities with adequate resources. Local jurisdictions first use their own resources and, as they exhaust those resources, obtain more from neighboring cities and other counties throughout the State through the statewide mutual aid systems. California's mutual aid systems are used to process resource requests during an emergency, while the SEMS provides an organizational structure to ensure adequate communication and coordination from the field to state levels. Mutual aid also can come from the federal government, other states, and volunteer and private entities.

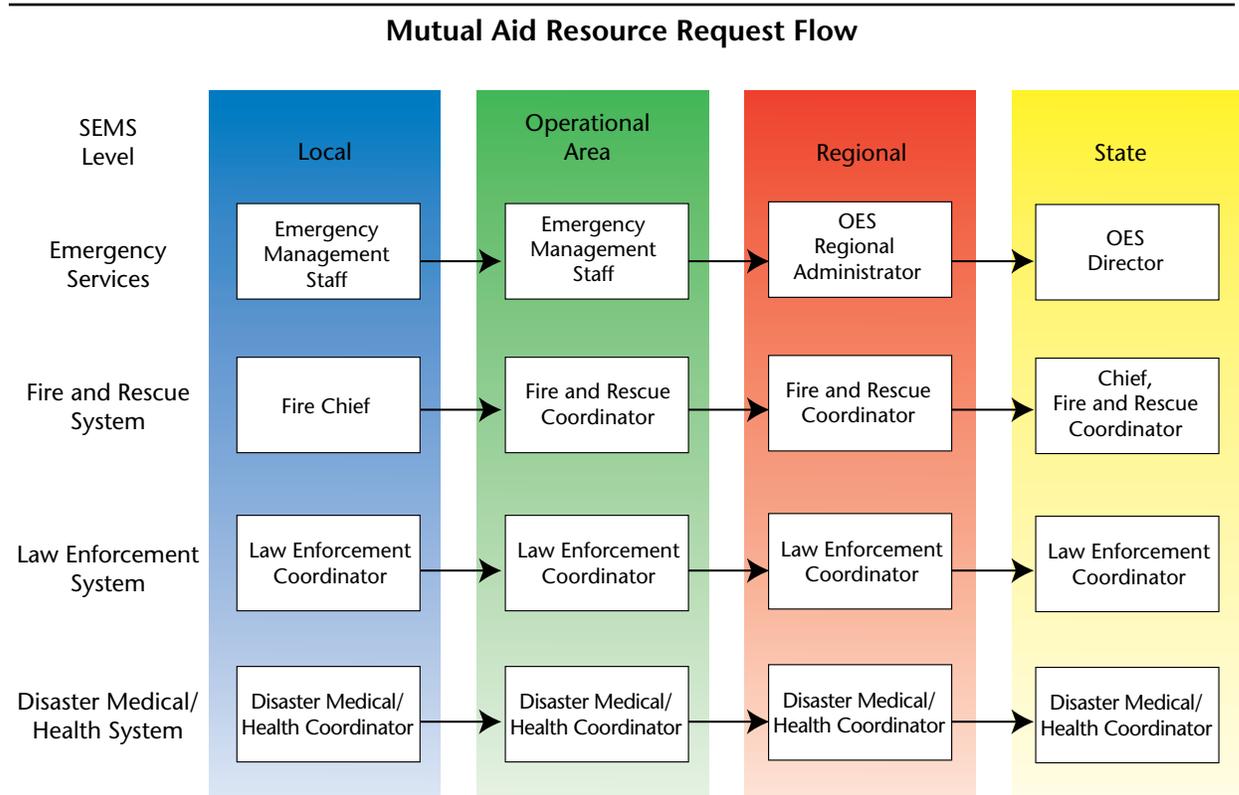
FEDERAL COOPERATIVE AGREEMENTS HELP SUPPORT MANY OF THE STATE'S PREPAREDNESS ACTIVITIES

California receives funding through cooperative agreements from the federal Centers for Disease Control and Prevention (CDC) and the Health Resources and Services Administration (HRSA).¹ These cooperative agreements are designed to help prepare states and local entities for public health threats and emergencies. In 1999, California began receiving CDC funds to upgrade state and local public health jurisdictions' preparedness for and response to bioterrorism, other outbreaks of infectious diseases, and other public health threats and emergencies. The CDC cooperative agreement on Public Health Preparedness and Response for Bioterrorism focuses on areas such as preparedness planning, laboratory capacity, and communication and information technology. The HRSA cooperative agreement

¹ A federal cooperative agreement is a mechanism used to provide financial support when substantial interaction is expected between a federal agency and a state, local government, or other recipient carrying out the funded activity.

on Bioterrorism Hospital Preparedness, which began in 2002, specifically targets upgrading the preparedness of the nation's hospitals and collaborating entities, such as other states and expert national organizations, to respond to bioterrorism. However, as a result of the required activities of the HRSA cooperative agreement, the health care system also would become better prepared to deal with nonterrorist epidemics of rare diseases.

FIGURE 2



Source: State emergency plan.

Note: The arrows represent the progressive flow of resource requests.

Each year, the CDC and HRSA distribute guidance that assists states and local entities in developing their annual applications for the cooperative agreement funds. The guidance for each cooperative agreement also describes critical benchmarks that recipients are expected to meet; otherwise, the CDC and HRSA can place restrictions on the recipient's funds.

At the state level, Health Services is responsible for ensuring that California meets the critical benchmarks and distributes some of the funding under the cooperative agreements to local entities. Health Services also is responsible for overseeing the activities of local health jurisdictions to ensure that they are using funds from the cooperative agreements appropriately.

STATE AND COUNTY HEALTH LABORATORIES ARE CERTIFIED OR ACCREDITED

Health Services' Laboratory Field Services (Laboratory Services) inspects and certifies local health laboratories. Laboratory Services' inspectors must possess appropriate educational backgrounds and are trained, under the auspices of the federal Centers for Medicare and Medicaid Services (CMS), to conduct inspections according to CMS-developed protocols and guidelines. Regulations for the federal Clinical Laboratory Improvement Amendments of 1988 (CLIA) state that laboratories must allow the CMS to perform an initial inspection to assess the laboratory's compliance with CLIA requirements, and the CMS or a CMS agent may conduct subsequent inspections every two years. Federal law allows the CMS to use the assistance of state health agencies—in California, Health Services—to ensure that the local health laboratories meet CLIA standards for certification. Additionally, the CMS monitors Laboratory Services' activities to promote optimal performance of its laboratory certification activities. However, Laboratory Services does not inspect the state health laboratories because the State cannot inspect itself. Instead, the CMS certifies those laboratories.

Since 2003, the CMS has conducted two performance reviews of Laboratory Services' activities through the State Agency Performance Review process. According to a laboratory consultant with the CMS, prior to this process, the CMS conducted other forms of oversight reviews of state agency activities. According to the CMS Special Procedures for Laboratories, which are included in its State Operations Manual, the performance reviews provide the CMS with an evaluation of the quality of Laboratory Services' certification inspections, ensure that Laboratory Services' certification decisions are appropriate, and highlight areas where Laboratory Services can improve.

The Los Angeles County health laboratory receives a laboratory accreditation from the College of American Pathologists, which is a CMS-approved accrediting organization. According to Laboratory Services, the Los Angeles County health laboratory is the only accredited public health laboratory in California, and Laboratory Services does not inspect or certify it. When a CMS-approved, private nonprofit program accredits a laboratory, CLIA regulations state that the CMS may deem the laboratory to meet all the CLIA requirements provided that the accrediting programs' laboratory requirements are equal to or more stringent than CLIA requirements. Thus, Laboratory Services does not inspect those laboratories that choose to be accredited by a private nonprofit program.

CALIFORNIA'S PREPAREDNESS HAS BEEN CHALLENGED

California's preparedness for responding to public health threats—such as those caused by infectious disease emergencies—has come under fire in recent years from various sources. In its April 2003 report, the Little Hoover Commission (commission) stated that it “found broad agreement among local officials, the medical community, and other first responders that the public health system was not as robust as it must be” and made several recommendations to address its concerns. During six hearings conducted in mid- to late 2002, the commission or its public health advisory committee heard testimony from community members, experts, strategic partners, and professionals within and outside government. The commission concluded, among other things, that “poor communication and obsolete procedures hobble the ability of laboratories, medical providers and public health authorities to protect the public; key positions are unfilled; and authorities and responsibilities are unclear.” In June 2005, the commission issued a follow-up letter to the governor and the Legislature that, while acknowledging some improvements such as the filling of vacant positions, reiterated and refined its earlier recommendations.

In July 2004, the CDC sent a letter to Health Services concerning its implementation of the cooperative agreement. The CDC concluded that California was severely limited in its ability to adequately prepare for and respond to a bioterrorist event or other public health emergency. The CDC based its conclusions on the results of site visits conducted in the State in April and May 2004. Although the CDC letter praised Health Services' laboratory as an exceptional facility and a model for other states, it also cited 26 issues and made numerous recommendations for

improvement so Health Services could meet the requirements of the CDC cooperative agreement. Issues that the CDC identified include an inadequate and incomplete emergency operations center; minimal progress in implementing the requirements of the Strategic National Stockpile, which consists of equipment and multiple large packages of vaccines, other drugs, and medical supplies; the lack of redundancy in its communication system; and staffing shortages. Despite the issuance of such a critical letter, a chief within Health Services' Emergency Preparedness Office told us that none of the issues identified by the CDC led to reductions or restrictions of funding for Health Services.

In August 2004, the RAND Corporation (RAND) issued a report that focused on the preparedness of local public health jurisdictions in California for a contagious infectious disease. RAND based its report on two-day site visits and tabletop exercises it conducted at seven local jurisdictions during 2003, among other factors.² Although the RAND report recognized that the local jurisdictions it reviewed had undertaken "significant preparedness activities," one general conclusion the report made was that wide variations in the level of preparedness existed; two counties were relatively well prepared to respond to a public health event such as the one described in RAND's tabletop exercises, and one county was very poorly prepared. The remaining jurisdictions fell somewhere in between. The RAND report specified numerous concerns, including the following: law enforcement personnel in two jurisdictions questioned whether they had the authority to enforce a quarantine; neighboring county health departments had no public health mutual aid agreements; and one jurisdiction provided public messages and information in nine languages, while another provided information in only one language.

SCOPE AND METHODOLOGY

The Joint Legislative Audit Committee (audit committee) requested that the Bureau of State Audits conduct an audit of the State's preparedness to respond to an infectious disease emergency requiring a coordinated response between federal agencies, Health Services, local health agencies, and local infectious disease laboratories. Specifically, the audit committee requested that we (1) evaluate whether Health Services' policies and procedures include clear lines of authority, responsibility,

² A tabletop exercise involves a few emergency management functions, is held in a classroom or meeting place, and focuses on training rather than testing.

and communication between levels of government for activities such as testing, authorizing vaccinations, and quarantine measures; (2) determine whether Health Services has developed an emergency plan; (3) determine whether California's infectious disease laboratories are integrated appropriately into statewide preparedness planning for infectious disease emergencies; (4) determine if the management practices and resources, including equipment and personnel, at the state health laboratories are sufficient to respond to a public health emergency; and (5) review Health Services' standards for providing oversight to local infectious disease laboratories, and determine whether its oversight practices achieved their intended results. The audit committee further requested that we evaluate whether a sample of local infectious disease laboratories are operated and managed effectively and efficiently and have the necessary resources to respond to an emergency, including sufficient equipment and personnel with the appropriate level of experience and training. We also were asked to review the local laboratories' testing procedures for infectious diseases and determine if they meet applicable standards.

For the purposes of our audit, we defined *infectious disease laboratories* as local health laboratories and *local health agencies* as local health departments. Further, because we were asked to review the State's preparedness to respond to an infectious disease emergency, we assessed policies and procedures not only for Health Services but also for other state entities, such as Emergency Services and Medical Services. Finally, we limited our review to *infectious disease emergencies* rather than broader *public health emergencies* because the latter can include events caused by sources other than biological agents—for example, chemical agents or nuclear materials—that fall outside our scope.

The results of our literature review near the beginning of our audit did not identify any generally agreed upon measures of public health emergency preparedness. Therefore, to measure California's preparedness to respond to an infectious disease emergency that requires a coordinated response between federal agencies, state entities, local health departments, and local health laboratories, we used these three yardsticks:

- The existence of relevant emergency plans and mutual aid plans issued by Health Services, Emergency Services, Medical Services, and the five counties we visited: Los Angeles, Sacramento, San Bernardino, Santa Clara, and Sutter.

- The State's participation in exercises of emergency plans and the subsequent completion of after-action reports that identify recommendations for improving California's response to an infectious disease emergency.
- The status of California's implementation of the cooperative agreements issued by the CDC and HRSA, as determined by its meeting certain critical benchmarks and the spending of funds.

Our review examined the State's progress toward completing the requirements for the CDC and HRSA cooperative agreements because we believe that such progress indicates the State's preparedness to respond to an infectious disease emergency. Although the CDC cooperative agreement guidance for 2004 states that completion of any particular critical benchmark does not guarantee preparedness, failure to achieve any one of them is a near-certain indicator that the State is inadequately prepared.

To evaluate whether the State's policies and procedures include clear lines of authority, responsibility, and communication among levels of government for activities such as testing, authorizing vaccinations, and instituting quarantine measures, and to determine whether Health Services had developed an emergency plan, we obtained and reviewed relevant emergency plans and other related documents. We also reviewed the laboratory certification process for testing activities under the CLIA. In addition, we reviewed the State's guidance for providing large-scale prophylaxis of the public. The CDC defines *prophylaxis* as measures, including vaccines, "designed to preserve health . . . and prevent the spread of disease." Generally, the CDC, Health Services, and county health officers provide guidance to local health care providers regarding the use of vaccinations. During an infectious disease emergency, the State has a plan for delivering large amounts of essential medical items, such as vaccines, through the Strategic National Stockpile. Finally, we reviewed state regulations that provide state and local public health officials the authority to issue quarantine orders. *Quarantine* is defined as a restriction of movement of individuals who have been exposed to an infectious agent. Officials at the five local health departments we visited told us they were aware of their powers related to quarantine measures. Additionally, Health Services stated that it offered a series of regional training sessions to health officers that included quarantine information.

To determine whether the local health laboratories are integrated appropriately into statewide preparedness planning for an infectious disease emergency, we reviewed applicable emergency planning documents.

To determine if the management practices and resources, including equipment and personnel, at the local health laboratories are sufficient to respond to a public health emergency, we ensured that the laboratories we reviewed were certified or accredited under the CLIA. During the certification or accreditation process, the reviewing agency performs a laboratory inspection to ensure that personnel meet certain requirements, equipment is calibrated and in working order, and personnel appropriately process test samples.

To review Health Services' standards for providing oversight to local health laboratories, to determine whether Health Services' oversight practices achieved their intended results, and whether the testing procedures used by local health laboratories met applicable standards, we assessed Health Services' process to certify these laboratories under the CLIA.

To evaluate whether a sample of local health laboratories are operated and managed effectively and efficiently and have the necessary resources to respond to an emergency, including sufficient equipment and personnel with the appropriate level of experience and training, we examined the results of local health laboratories' certification or accreditation process, which includes an assessment of their testing procedures, equipment, and staffing. We also reviewed California's mutual aid systems, which can be used when jurisdictions become overwhelmed during an emergency. ■

Blank page inserted for reproduction purposes only.

CHAPTER 1

California Would Be Better Prepared to Respond to Infectious Disease Emergencies if It Completed Certain Tasks

CHAPTER SUMMARY

California has completed several tasks related to responding to infectious disease emergencies, but it needs to finish others to improve its preparedness. Without the existence of any generally agreed upon measures of public health emergency preparedness, the Bureau of State Audits used three yardsticks to measure California's preparedness to respond to infectious disease emergencies: the existence of relevant emergency plans and mutual aid plans, the testing of those plans by conducting exercises, and the status of California's implementation of the cooperative agreements issued by two federal agencies: the Centers for Disease Control and Prevention (CDC) and the Health Resources and Services Administration (HRSA).

Among the tasks that California has completed are creating emergency plans to guide its response during emergencies, including emergencies caused by infectious diseases; testing components of the emergency plans by periodically conducting exercises; and completing many critical benchmarks associated with the federal cooperative agreements. Several necessary steps, however, have not been taken. Namely, the Emergency Medical Services Authority (Medical Services) has not updated two plans that are critical to California's successful response to infectious disease emergencies: the *Disaster Medical Response Plan*, which is more than 10 years old, and the *Medical Mutual Aid Plan*, which was last issued more than 20 years ago. Medical Services has not updated these plans, according to the chief of its Disaster Medical Services Division, because of a lack of resources and competing priorities. Another weakness we observed is that, unlike Medical Services or the Governor's Office of Emergency Services (Emergency Services), the Department of Health Services (Health Services) has not developed and implemented a tracking method

for following up on lessons learned from the exercises in which it participates. Consequently, Health Services reduces the likelihood that it will take appropriate and consistent corrective action.

Finally, we have concerns about the status of the State's implementation of the cooperative agreements it has with two federal agencies. First, we cannot conclude that Health Services has completed two of the 14 critical benchmarks that one cooperative agreement stipulated must be completed by June 2004. According to the CDC, although attaining any one critical benchmark does not guarantee preparedness, failure to complete one is a strong indicator that a state is inadequately prepared. Second, Health Services has been slow in spending funds from another cooperative agreement. As of June 30, 2005, Health Services had spent only about \$29.1 million (33.1 percent) of the almost \$88 million that the federal government provided it for its use from April 2002 through August 2005. It appears that factors such as the State's hiring freeze and compliance with the State's contracting requirements impeded Health Services' ability to provide prompt funding to local health jurisdictions and private health care providers.

As we noted in the Introduction, emergency preparedness is an ongoing process, and an entity is never totally prepared. In reality, an entity can only be as prepared as its resources and planning allow. Proper preparedness, however, can save lives, protect property, and reduce costs associated with responding to an emergency.

CALIFORNIA NEEDS TO UPDATE CRITICAL PLANS THAT GUIDE ENTITIES CHARGED WITH RESPONDING TO INFECTIOUS DISEASE EMERGENCIES

The State of California Emergency Plan and other existing emergency and mutual aid plans guide public entities during their responses to declared emergencies.

The *State of California Emergency Plan* (state emergency plan) and other existing emergency and mutual aid plans guide public entities during their responses to declared emergencies. However, California has not yet updated two other plans that appear to be critical for responding efficiently and effectively to infectious disease and other types of emergencies. Medical Services, the agency responsible for creating and revising the two plans, cites its lack of resources and need to prioritize tasks as reasons for delaying plan updates.

The State Has Implemented Several Emergency Plans

A critical component of being prepared to respond to an emergency is the existence of appropriate emergency plans. Among other things, emergency plans establish guidance for public entities to follow when emergencies occur, including those caused by infectious diseases. Chief among the documents that California already has issued to improve its ability to respond to an emergency is the state emergency plan, which established a system for coordinating all phases of emergency management in California. Related to the state emergency plan is the *California Disaster and Civil Defense Master Mutual Aid Agreement* (mutual aid agreement), which sets up California's systems of mutual aid among the jurisdictions that have adopted it: most incorporated cities, all 58 counties, and the State. Under the mutual aid agreement, local jurisdictions voluntarily give and receive assistance as needed.

The California Department of Health Services Public Health Emergency Response Plan and Procedures augments and supports the state emergency plan and guides the management of emergencies related to public health.

Another plan is the *California Department of Health Services Public Health Emergency Response Plan and Procedures* (public health emergency plan), which augments and supports the state emergency plan and guides the management of emergencies related to public health, including those involving infectious diseases, hazardous or toxic materials, and certain terrorist acts or threats. This plan addresses Health Services' response to external emergencies and disasters, describes the emergency management concepts and structures under which all entities involved in the public health response must operate, and identifies the roles and responsibilities of federal, state, and local entities. In addition, the public health emergency plan includes program responsibilities and activities related to planning and emergencies for the State's Microbial Disease Laboratory and Viral and Rickettsial Disease Laboratory. Further, several annexes to the public health emergency plan guide public entities in their responses for specific types of public health emergencies or are related to specific aspects of an emergency response. These annexes include the *Pandemic Influenza Response Plan*, the *Smallpox Response Plan*, the *Bioterrorism Surveillance and Epidemiologic Response Plan*, and the *Strategic National Stockpile Response Plan*.

Should a terrorist event occur in the State, the *California Terrorism Response Plan* exists to guide those responsible for responding to it. The plan, issued by Emergency Services, "provides direction to state agencies and local governments within California . . . [in] preparing for and responding to terrorist events." In addition, the plan states, "it is intended

to clarify the roles and relationships of agencies at the state and federal levels of government in dealing with the threat or actual occurrence of terrorist events in California.”

Two Plans Need Updating

Although California maintains several plans to guide public entities’ responses to emergencies of various types and magnitudes, it has yet to update two other emergency plans: the *Disaster Medical Response Plan* and the *Medical Mutual Aid Plan*, the latest versions of which are dated 1992 and 1974, respectively. Discussions with the chief of the Medical Services’ Disaster Medical Services Division (chief), the entity responsible for developing and maintaining these plans, revealed that Medical Services had not completed its updates of these two plans as of June 2005.

The state emergency plan, issued in 1998, mentions both plans and describes them as “under development.” The state emergency plan indicates that state entities would use the two plans to help respond to emergencies caused by factors that include epidemics, infestation, disease, and terrorist acts, therefore, we believe the two plans are critical for California’s successful response to infectious disease emergencies. Medical Services agrees that the plans must be updated to ensure that they reflect the State’s current policies and account for any changes in roles or responsibilities since they originally were issued. According to the chief, although the principles embodied by the two plans are essentially the same today as they were when the existing versions were issued, the plans will be updated by 2006 to specifically reference the Standardized Emergency Management System (SEMS), the National Incident Management System (NIMS), and the new National Response Plan and to account for any changes in roles and responsibilities. We discuss the SEMS in the Introduction to this report.

According to the Federal Emergency Management Agency, the NIMS “integrates effective practices in emergency preparedness and response into a comprehensive national framework for incident management” and “will enable responders at all levels to work together more effectively to manage domestic incidents no matter what the cause, size or complexity.” A presidential directive requires federal agencies to make adoption of NIMS by state, tribal, and local organizations a condition for federal preparedness assistance beginning in fiscal year 2005. According to the U.S. Department of Homeland Security, the

Medical Services has not updated the Disaster Medical Response Plan and the Medical Mutual Aid Plan—two critical plans for responding to infectious disease emergencies—since 1992 and 1974, respectively.

National Response Plan “establishes a comprehensive all-hazards approach to enhance the ability of the United States to manage domestic incidents,” such as terrorist attacks.

The chief also stated that among the changes that have occurred since the State issued the current versions of the *Disaster Medical Response Plan* and the *Medical Mutual Aid Plan* are (1) the identification and prioritization of new hazards, such as weapons of mass destruction; (2) changes in resource capabilities, such as the elimination of the medical brigade under the California National Guard; and (3) the enactment of new management or coordination systems, such as the NIMS. Plans that are not current can be misleading or confusing to those who use them.

The chief of the Disaster Medical Services Division said that Medical Services has not yet updated the two plans because of a lack of resources and competing priorities.

According to the chief, Medical Services has not updated the two plans because of a lack of resources and competing priorities. He contends that much of Medical Services’ funding is required for specific outcomes, such as achieving critical benchmarks related to bioterrorism preparedness, rather than for general activities, which include updating the two plans. In addition, he believes that certain priorities take precedence over updating these plans, such as responding to actual emergencies, participating in training and exercises, and other activities to improve emergency medical response, such as providing guidance to local entities regarding the sheltering and care of the medically fragile during a disaster. Finally, the chief stated that Medical Services has further delayed plan updates until California defines its responsibilities regarding the new requirements under the NIMS. The chief also asserted that California is assessing the impact of these requirements on its emergency management system and implementing changes as required. Accordingly, Medical Services is waiting until the impact is clarified before it finalizes its work on updating the plans.

ALTHOUGH STATE ENTITIES HAVE EXERCISED THEIR EMERGENCY PLANS REGULARLY, ONE DOES NOT HAVE A TRACKING METHOD TO ENSURE THAT IT BENEFITS FROM THE LESSONS IT LEARNED

By conducting emergency exercises and completing postexercise evaluations, or after-action reports, state entities can enhance emergency plans and procedures for responding to emergencies when they actually occur. Since 2003, Medical Services, Emergency Services, and Health Services participated in several infectious disease emergency exercises and completed

after-action reports. Federal guidelines suggest that entities establish tracking procedures to ensure that they take corrective action on deficiencies identified in after-action reports, such as making applicable revisions to plans. Medical Services implemented its tracking procedures for following up on recommendations made in after-action reports in June 2005, and Emergency Services stated that it will implement its tracking procedures on August 1, 2005. However, Health Services does not have a tracking method for following up on after-action-report recommendations. Absent such a method, Health Services reduces the likelihood that it will take appropriate and consistent corrective action.

California Participated in Infectious Disease Exercises

The State has participated in at least four exercises related to infectious disease emergencies since 2003. Two were the Statewide Medical and Health Disaster Exercise (medical and health exercise) and Operation Fire Dragon. The annual statewide medical and health exercise, hosted by Medical Services in conjunction with four other state agencies, was last held in November 2004. In what was designed as a six-hour bioterrorism exercise related to botulism, participants included state and county entities as well as representatives from hospitals and other health care providers, such as long-term care facilities and clinics. Local public health departments were responsible for assessing their ability to communicate threats and health alerts to health care providers, including hospitals, clinics, emergency medical service providers, and others; demonstrating their ability to access and transmit information to regional and state medical and health authorities; and various other tasks. Among the responsibilities of the state agencies were coordinating with the operational area and regions for resource requests, or mutual aid, and assessing the process for and ability to order botulism antitoxin and durable medical equipment from the Strategic National Stockpile.

Operation Fire Dragon, which took place in June 2004, was a tabletop exercise related to multiple disease outbreaks, including influenza, West Nile virus, and severe acute respiratory syndrome. Led by the El Dorado County Public Health Department, the exercise included representatives from 13 California counties, Health Services, Emergency Services, the state of Nevada, the federal government, and the private sector. The goal of the exercise was to provide team building and

The State participated in at least four exercises related to infectious disease emergencies since 2003.

to allow all levels of the California and Nevada governments and the private-sector medical and health community to work together in a simulated public health emergency.

One State Entity Could Strengthen Its Process for Following Up on Recommendations Identified in After-Action Reports

Health Services could improve its ability to learn from its experiences by developing and implementing a tracking process for following up on recommendations made in its after-action reports.

Although Medical Services, Emergency Services, and Health Services participated in various preparedness exercises related to infectious diseases and completed after-action reports, Health Services could improve its ability to learn from its experiences by developing and implementing a tracking process for following up on the recommendations made in its after-action reports. According to guidelines set forth by the U.S. Department of Homeland Security's Office for Domestic Preparedness, after-action reports are tools for providing feedback, and entities should establish a tracking process to ensure that improvements recommended in after-action reports are made. Similarly, the National Fire Protection Association also suggests in its Standard on Disaster/Emergency Management and Business Continuity Programs (2004 edition) that exercise participants establish procedures to ensure that they take corrective action on any deficiency identified in the evaluation process, such as revisions to relevant program plans. An exercise allows the participating entities to become familiar, in a nonemergency setting, with the procedures, facilities, and systems they have for an actual emergency. The resulting after-action reports give these entities an opportunity to identify problems and successes that occurred during the exercise, to take corrective actions, such as revising emergency plans and procedures, and thus benefit from lessons learned from the exercise. Therefore, we believe that tracking the implementation status is a sound practice to ensure that state entities address all relevant recommendations in after-action reports, which can then serve as important tools for increasing overall preparedness levels.

We asked Medical Services, Emergency Services, and Health Services to provide their policies for following up on recommendations identified in after-action reports for exercises. In response to our questions, Medical Services established a policy in June 2005 for responding to after-action reports. As part of its policy, Medical Services will use an improvement plan matrix to track corrective actions, the individual or unit responsible for making each action, and the date each action was completed. According to the chief of Medical Services' Disaster Medical Services Division (chief), Medical Services has

not had an opportunity to use the policy because it is so new. In addition, Emergency Services' deputy director of preparedness and training (deputy director) described an automated process that Emergency Services has initiated for tracking, prioritizing, and resolving recommendations resulting from actual emergencies, exercises, and other evaluations. The deputy director indicated that Emergency Services plans to implement its system on August 1, 2005, and noted that the system would aid in supporting its mission by allowing for the corrective action on any substantiated area of needed improvement and support certain federal requirements. However, according to Health Services' acting chief of the Planning and Response Section (acting chief), Health Services did not have a formal process of following up on recommendations in exercise-related after-action reports.

We also asked these three state entities to provide us with their corrective actions to recommendations identified in the after-action report for the 2004 medical and health exercise. At Medical Services, the chief stated that among the steps it took in response to recommendations was conducting its first Disaster Response Call List Notification Drill and providing technical assistance to its regional disaster medical and health staff in each of the six mutual aid regions in an effort to create statewide improvements throughout the medical and health mutual aid system. According to the deputy director, Emergency Services modified the input screens used in its Response Information Management System and its mission-tasking form, an action Emergency Services believes will allow for better understanding and use of the system.

Finally, the acting chief at Health Services indicated that it has begun to address certain recommendations made in its after-action report, and he provided us with one example pertaining to the Strategic National Stockpile. However, the acting chief stated that Health Services could not readily provide us with other examples of corrective actions because it lacks a formal process, such as written procedures, for tracking recommendations and their associated corrective actions. Doing so would require a staff member to research the issue—a process the acting chief estimated could take several days to a week to accomplish. In response to our concerns that it lacked written procedures, the deputy director for public health emergency preparedness provided us on July 14, 2005, with the recently developed policy and procedures for after-action reporting. Among other things, the new policy identifies the

need for evaluating recommendations identified in after-action reports and taking corrective action when appropriate. Further, the new policy assigns the responsibility to the Emergency Preparedness Office for monitoring the implementation of any after-action report finding that needs policy or procedural changes; however, the policy does not include a standard format for tracking the implementation, such as assigning an individual the responsibility for taking action, the current status of recommendations, and the expected date of completion. Therefore, Health Services still needs to refine its policy further by developing and implementing written tracking procedures to ensure it addresses all relevant recommendations that it identifies in after-action reports. Without a tracking method, Health Services cannot be certain that it takes appropriate and consistent corrective action, such as revising emergency plans, and thus reduces its potential effectiveness to respond to infectious disease emergencies.

WE CANNOT CONCLUDE THAT HEALTH SERVICES COMPLETED TWO CRITICAL BENCHMARKS IN THE CDC COOPERATIVE AGREEMENT

In the aftermath of the terrorist attacks in September 2001, and the anthrax attacks later that year, two federal agencies—the CDC and the HRSA—offered cooperative agreements to states, local jurisdictions, and hospitals and other health care entities. The cooperative agreements are intended to provide increased funding to improve the nation’s preparedness for bioterrorist attacks and other types of emergencies, including those caused by infectious diseases. California applied for cooperative agreements with the CDC and the HRSA in early 2002. However, despite making progress toward completing many of the critical benchmarks established in the CDC cooperative agreement with a June 2004 deadline, we cannot conclude that Health Services completed two critical benchmarks as of our review. Therefore, California may not be as prepared as it could be to respond to infectious disease emergencies.

The 2002 guidance for the CDC Cooperative Agreement on Public Health Preparedness and Response for Bioterrorism identifies 14 critical benchmarks (2002 critical benchmarks). As defined by CDC’s guidance, critical benchmarks are milestones on the road to public health emergency preparedness and, although attaining any one critical benchmark does not guarantee preparedness, failure to complete one is a strong indicator that a state is inadequately prepared. We describe the

According to the Centers for Disease Control and Prevention, critical benchmarks are milestones on the road to public health emergency preparedness and, although attaining any one critical benchmark does not guarantee preparedness, failure to complete one is a strong indicator that a state is inadequately prepared.

critical benchmarks for the CDC cooperative agreement and their status in Appendix A. The CDC set a deadline of June 2004 for recipients to complete the 2002 critical benchmarks. The guidance for 2003 and 2004 contains an additional 25 critical benchmarks (2004 critical benchmarks) that do not have an explicit deadline.^{3,4} The 2002 critical benchmarks include activities such as designating an executive director of the bioterrorism preparedness and response program; preparing an assessment of emergency preparedness and response capabilities related to bioterrorism, infectious disease outbreaks, and other public health threats and emergencies; and ensuring that 90 percent of the population is covered by the California Health Alert Network (CAHAN), which is a Web-based system designed to broadcast warnings of impending or current disasters affecting the ability of health officials to provide disaster response services to the public. The CAHAN also provides a collaborative work environment where sensitive disaster planning and response information can be shared securely among local and state health entities throughout California.

In its October 2004 letter to the CDC, Health Services expressed its belief that it had met all 14 of the 2002 critical benchmarks. However, earlier, in July 2004, Health Services had reported to the CDC that it had not met five of the 2002 critical benchmarks by June 2004. The CDC then imposed restrictions on California's funding by making 10 percent of the total CDC award unavailable until California completed all 14 critical benchmarks. After discussions between Health Services and the CDC, however, Health Services reported in October 2004 that it had in fact met all the 2002 critical benchmarks. As a result, the CDC lifted the funding restrictions on Health Services' award.

Notwithstanding Health Services' statements in its October 2004 report to the CDC, we cannot conclude that as of May 2005, Health Services met two of the 2002 critical benchmarks that were due for completion by June 2004. One of the two critical benchmarks is number 3, which requires the State to assess its emergency preparedness and response capabilities related to bioterrorism, other infectious disease outbreaks, and other

³ In our testing, we did not include three critical benchmarks that the CDC grouped in the focus area of "Laboratory Capacity—Chemical Agents" (e.g., acids and mustard gas). Instead, we focused our review on critical benchmarks related to emergencies caused by biological agents.

⁴ Although the 2004 guidance for the CDC cooperative agreements states that fund recipients are expected to attain the critical benchmarks identified in the 2003 guidance by May 2005, Health Services and the current CDC project officer for California told us that the CDC has not set an explicit deadline for completing those critical benchmarks.

We cannot conclude whether Health Services completed the critical benchmark that requires the State to assess its emergency preparedness and response capabilities related to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies.

public health threats and emergencies with a view to facilitating planning and setting implementation priorities. According to its deputy director for public health emergency preparedness (Health Services' deputy director), Health Services prepared an assessment as did all local health departments. She also stated that some staff documented parts of their assessment and that Health Services' application for CDC funding in 2004 included references to the assessments. However, she also acknowledged that Health Services did not prepare a single written summary of the assessment it prepared and the assessments prepared by local health departments. Without such a summary and without complete documentation of the assessments, Health Services has not demonstrated to our satisfaction that it has fully completed critical benchmark number 3. Health Services' deputy director also told us that to obtain a more current assessment, Health Services has entered into a contract with the Health Officers' Association of California to be conducted from mid-2005 through December 2006.

Further, we cannot conclude whether Health Services completed a second 2002 critical benchmark because we received conflicting information from the CDC regarding the interpretation of the requirement for critical benchmark number 6. The CDC guidance indicates that Health Services must "develop regional plans to respond to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies." However, the term *regional* is not clearly defined; it could mean within a single state (intrastate) or between two or more states (interstate). In the past, the CDC interpreted *regional* to mean interstate, but a current CDC project officer told us that *regional* referred to intrastate. In its October 2004 letter to the CDC, Health Services indicated that it interpreted *regional* as interstate; thus, California must create a plan that includes cooperation with other states. Health Services asserted in the letter that the Interstate Civil Defense and Disaster Compact set forth in state law met the requirement of an interstate plan. The CDC subsequently approved this interpretation when it released funds to Health Services in March 2005. However, when we brought this to the CDC's attention in June 2005, the current project officer stated that she expected each state to develop an intrastate plan that would feed into the overall state plan. As a result of the CDC's conflicting interpretations, we cannot conclude whether Health Services has met this critical benchmark.

HEALTH SERVICES IS MAKING PROGRESS TOWARD MEETING THE 2004 CRITICAL BENCHMARKS AND SPENDING THE ASSOCIATED FUNDS

As of May 2005, Health Services has completed 12 of the twenty-two 2004 critical benchmarks we reviewed, and it is making progress toward completing the remaining 10 critical benchmarks.

Documents provided by Health Services show that as of May 2005, it had completed 12 of the twenty-two 2004 critical benchmarks we reviewed. Health Services also is making progress toward completing the remaining 10 critical benchmarks. Among the 2004 critical benchmarks that Health Services has completed are (1) developing an accounting system to track the expenditure of cooperative agreement funds (2) issuing a plan for crisis and emergency risk communication and information dissemination, and (3) ensuring that the technical infrastructure exists to exchange a variety of data types.

Critical benchmarks that Health Services is working on include (1) reviewing the NIMS and assessing any changes needed by the state health department and partner agencies to be in compliance with NIMS, (2) establishing a secure Web-based reporting and notification system that provides for rapid and accurate receipt of reports of disease outbreaks and other acute health events that might suggest bioterrorism, and (3) implementing a training plan that ensures that priority training for preparedness is provided to various groups throughout the State.

However, Health Services has not completed one 2004 critical benchmark even though it reported to the CDC in May 2005 that it had. Specifically, critical benchmark number 20 requires the State to “routinely assess the timeliness and completeness of the redundant method of alerting, as it exists, to reach participants in public health response.” Although a Health Services’ document indicated that several hundred satellite telephones were distributed to key public health emergency response personnel throughout the State to meet the requirement for a redundant alerting method, Health Services provided no evidence that it routinely assessed the timeliness and completeness of the method.

Finally, we found that, as of June 30, 2005, Health Services had spent more than 83 percent of the federal funds awarded to it under its cooperative agreement with CDC. As shown in Table 1, Health Services had spent about \$159 million of the \$191.4 million the CDC awarded it in the last three periods. Further, Health Services encumbered \$26.1 million (13.6 percent), while it has not yet obligated \$6.4 million

(3.3 percent).⁵ The encumbrances consist mostly of contracts with local jurisdictions and other entities to provide goods and services related to bioterrorism preparedness.

TABLE 1

**Status of Federal Funds Awarded Under the
Cooperative Agreement for Public Health Preparedness and
Response for Bioterrorism
(Dollars in Thousands)**

Award Period	Award Amount	Amount Spent	Amount Encumbered	Unobligated Balance
August 31, 2001– August 30, 2003	\$ 62,166*	\$ 59,777	\$ 0	†
August 31, 2003– August 30, 2004	70,102	56,415	8,469	\$ 77†
August 31, 2004– August 30, 2005	59,168	42,787	17,620	6,291
Totals	\$191,436	\$158,979	\$26,089	\$6,368‡
Percent of Award Amount		83.1%	13.6%	3.3%

Source: Records from the accounting section of the Department of Health Services (Health Services).

* Award amount for August 31, 2001, through August 30, 2003, includes \$944,000 carried forward from the two previous periods that are not included on the table.

† Health Services carried forward to the August 31, 2004, through August 30, 2005, award period balances of \$2.4 million from the August 31, 2001, through August 30, 2003, award period and \$5.1 million from the August 31, 2003, through August 30, 2004, award period.

‡ According to Health Services' purchase list, \$1.5 million of this amount is designated for emergency operations center equipment. In addition, Health Services encumbered \$1.3 million in July 2005 for its emergency command center public works project.

CALIFORNIA'S SPENDING OF FEDERAL FUNDS UNDER THE COOPERATIVE AGREEMENT WITH THE HRSA HAS BEEN SLOW

Although California met the first set of critical benchmarks that were due in 2002 under the cooperative agreement on Bioterrorism Hospital Preparedness established by the HRSA and has made progress on the next set of benchmarks that are due in 2007, its spending of HRSA funds has been slow. We describe the HRSA critical benchmarks and their status in Appendix B. According to the guidance that the HRSA issued

⁵ An encumbrance is an obligation to pay for goods and services that have been ordered by means of contracts or salary commitments but not yet received. An unobligated balance is the portion of cooperative agreement funds that have not been spent or encumbered.

related to its cooperative agreement, funding recipients must meet 19 critical benchmarks; the deadline to meet three critical benchmarks was April 2002, and the deadline for the remaining 16 is August 2007. Health Services and Medical Services met the deadline for the first three critical benchmarks by creating a timeline for developing and implementing a regional hospital plan, designating a planning coordinator for bioterrorism hospital preparedness, and establishing a committee for hospital preparedness planning. The remaining 16 critical benchmarks, which California continues to work on, include meeting certain capacities for hospital beds; enhancing communications; improving surveillance capabilities, such as periodic disease reporting to Health Services by health care providers; and conducting training and exercises.

Of the nearly \$88 million in HRSA funds provided for its use from April 2002 through August 2005, California had spent only \$29.1 million (33.1 percent) as of June 2005.

Despite its progress in meeting critical HRSA benchmarks, California had not yet spent a substantial portion of the HRSA funding available as of June 2005. As Table 2 shows, of the nearly \$88 million in HRSA funds provided to it for its use from April 2002 through August 2005, California had spent only \$29.1 million (33.1 percent). Of the remaining HRSA funds, California had encumbered \$37.1 million (42.3 percent), while it has yet to obligate almost \$21.7 million (24.7 percent). Although California spent nearly all the HRSA allocation awarded for the period from April 2002 through August 2003, it has spent only a bit more than 25 percent of the HRSA allocations for the next two years in total.

Several factors appear to have contributed to Health Services' inability to spend HRSA funds more quickly. First, Health Services took responsibility for administering the HRSA cooperative agreement in September 2003, but it did not hire additional staff until June 2004, nearly nine months later. Medical Services administered the HRSA cooperative agreement during the previous award period, which ran from April 2002 through August 2003. According to budget documents provided by Health Services, Health Services assumed responsibility for administering the HRSA cooperative agreement in September 2003 because it needed to integrate the management of the HRSA cooperative agreement with the CDC bioterrorism cooperative agreement.

Health Services established 19 positions to operate the HRSA program in September 2003, but those positions were subject to the State's hiring freeze. Under an executive order, state entities could hire staff only under limited circumstances. In

TABLE 2

Status of Federal Funds Awarded Under the Cooperative Agreement for Bioterrorism Hospital Preparedness (Dollars in Thousands)

Award Period	Award Amount	Amount Spent	Amount Encumbered	Unobligated Balance
April 1, 2002– August 31, 2003	\$ 9,963	\$ 9,001	\$ 0	*
September 1, 2003– August 31, 2004 [†]	38,900	19,210	18,610	\$ 2,042
August 31, 2004– August 30, 2005	38,973	847	18,501	19,625 [‡]
Totals	\$87,836	\$29,058	\$37,111	\$21,667
Percent of Award Amount		33.1%	42.3%	24.7%

Source: Records from the accounting section of the Department of Health Services (Health Services).

* Health Services carried forward the remaining balance of \$962,000 to the September 1, 2003, through August 31, 2004, award period.

[†] The federal government extended the end of the September 1, 2003, through August 31, 2004, award period to August 31, 2005.

[‡] Of the \$19.6 million not yet obligated in the September 1, 2004, through August 31, 2005, award period, Health Services has designated \$13.3 million to be provided to local health jurisdictions.

December 2003, Health Services applied to the Department of Finance (Finance) for an exemption to the hiring freeze. Health Services indicated that the reason for the request was that federal funds rather than the State's General Fund financed the positions. If Finance approved the request, Health Services would be allowed to hire staff from the State Restriction of Appointment (SROA) list or a reemployment list. An SROA list consists of state employees who are facing possible layoff, while a reemployment list contains state employees who are laid off or took a demotion to avoid being laid off. In February 2004, Finance approved Health Services' exemption request; however, Health Services told us it did not hire any staff under this exemption. According to a subsequent request for an exemption to the hiring freeze submitted in April 2004, Health Services indicated that the positions were technical and hard to fill, with few or no applicants available from the SROA or reemployment lists. In its April 2004 request, Health Services called the type of exemption an "imminent and urgent public health and safety threat." Finance approved Health Services' request on June 3, 2004, and the first appointment was made on June 9, 2004. The State's hiring freeze ended July 1, 2004.

Health Services took four and one-half months to approximately one year to review and approve applications for HRSA funds from local health jurisdictions.

Because Health Services did not begin hiring new staff to operate the HRSA program until June 2004, it was slow in reviewing and approving applications for HRSA funding from local health jurisdictions. Health Services provided application guidance to local health jurisdictions in November 2003, asking them to submit applications by January 30, 2004. Based on a sample of applications, we found that Health Services received the applications at or near the deadline. However, with only one person assigned to implement the program, Health Services took four and one-half months to approximately one year to review and approve the applications, thus delaying the distribution of HRSA funds to the local health jurisdictions. A document provided by the HRSA coordinator shows that Health Services had filled eight of the 19 positions as of June 2005.

Another factor that appears to have contributed to Health Services' inability to spend HRSA funds more quickly is that, according to a former HRSA coordinator at Health Services, compliance with the requirements in the Public Contract Code, such as competitive bidding and review by the Department of General Services, hampered Health Services' ability to enter into agreements with certain local health care providers, such as hospitals, clinics, emergency medical services systems, and poison control centers. Although legislation enacted in 2002 exempts agreements concerning public health preparedness between Health Services and local health jurisdictions from the Public Contract Code requirements governing contracts entered into by state agencies, Health Services determined it needed an additional exemption from those requirements for agreements with private entities. Health Services obtained this exemption through additional legislation in April 2004.

Finally, the HRSA coordinator told us that the local health departments had difficulties working with their stakeholders to develop an application and then to actually spend the funds. She explained that Health Services provides the HRSA funds to the local health departments, which serve as fiscal agents for the hospitals, clinics, emergency medical service authorities, and poison control centers. Finally, she stated that because the local health departments had not developed relationships with these groups before receiving the HRSA funds, it was difficult to bring all these groups together.

RECOMMENDATIONS

To ensure that California is better prepared to respond to infectious disease emergencies efficiently and effectively:

- Medical Services should update the *Disaster Medical Response Plan* and the *Medical Mutual Aid Plan* as soon as resources and priorities allow.
- Health Services should develop and implement a tracking method for following up on recommendations identified in after-action reports.
- Health Services should ensure that the contractor performing the current capacity assessment provides a written report that summarizes the results of its data gathering and analyses and contains applicable findings and recommendations. ■

Blank page inserted for reproduction purposes only.

CHAPTER 2

Although Improvement Is Needed in Some Areas, Several Factors Help Increase Local Public Health Departments' Overall Preparedness for Infectious Disease Emergencies

CHAPTER SUMMARY

Our visits to five local public health departments (local health departments) identified two areas in which they could improve their overall preparedness for responding to infectious disease emergencies. The local health departments had emergency plans that in general contained sufficient guidance for three of four elements relating to requesting assistance from other jurisdictions during emergencies (mutual aid), the roles and responsibilities for individuals and entities during an emergency, and the logistics and facilities used for emergency operations centers. Neither the plans we reviewed nor other local health department policies fully addressed the fourth element, which relates to exercises, evaluations, and corrective actions. Specifically, they did not include written procedures for following up on recommendations identified in after-action reports. Despite the lack of written procedures, we found that four of the five local health departments we visited did take corrective action on a sample of four recommendations we selected from their after-action reports for the November 2004 exercise hosted by the Emergency Medical Services Authority (Medical Services). Nevertheless, without procedures in writing, the local health departments reduce their ability to ensure that they take appropriate and consistent corrective action on recommendations and make necessary changes to emergency plans. Second, none of the local health departments fully implemented the critical benchmarks for a cooperative agreement through the federal Centers for Disease Control and Prevention (CDC) by the June 2004 deadline.

Factors we identified as increasing local health departments' preparedness for infectious disease emergencies included the adoption of emergency plans, ability to access mutual aid, and participation in exercises. Also, all 38 local public health laboratories (local health laboratories) in California obtained

a certification or accreditation to ensure that they perform certain types of laboratory tests accurately, have equipment in working order, and possess qualified personnel. In addition, each local health department can request mutual aid during times of emergency if its own resources become overwhelmed; and local jurisdictions that experience short-term workload difficulties can request assistance from neighboring jurisdictions through a process best described as informal mutual aid. Further, each local health department we visited participated in emergency preparedness exercises related to infectious disease emergencies. Collectively, these factors help improve local health departments' ability to respond effectively to infectious disease emergencies.

Finally, the laboratory directors at four local health departments we visited reported to us that in the future they might have difficulty filling director positions at local health laboratories because of certain federal and state requirements. A local health laboratory without a laboratory director could lose its certification or accreditation. The options available to it include contracting with another local health laboratory to provide services or contracting with the director of another local health laboratory to direct its laboratory as well.

LOCAL HEALTH DEPARTMENTS COULD DO MORE TO ADDRESS AFTER-ACTION REPORTS

Local emergency plans generally included sufficient guidance for emergency preparedness.

Local emergency plans, such as the counties' overall emergency operation plans and local health department emergency operations and response plans, generally included sufficient guidance for emergency preparedness; however, the plans did not include specific procedures for following up on recommendations identified in after-action reports. As a benchmark for assessing emergency plans, we used the *Standard on Disaster/Emergency Management and Business Continuity Programs, 2004 edition*, published by the National Fire Protection Association, to determine whether the local jurisdictions' emergency plans contained procedures relating to four key elements of emergency preparedness: mutual aid; roles and responsibilities; logistics and facilities; and exercises, evaluations, and corrective actions. The Office for Domestic Preparedness within the U.S. Department of Homeland Security (Homeland Security) also suggests in its *Homeland Security Exercise and Evaluation Program Volume II: Exercise Evaluation and Improvement* that jurisdictions establish a process to track the implementation of corrective actions to ensure that desired improvements are made.

We found that the five local health departments we visited included in their plans clear descriptions and sufficient procedures for three of the four elements we examined. For example, the plans adequately addressed the process of requesting mutual aid and referenced applicable mutual aid agreements—primarily, the *California Disaster and Civil Defense Master Mutual Aid Agreement*. Commendably, plans at Los Angeles, Sutter, and San Bernardino used graphical elements to illustrate the process and flow of mutual aid. In addition, plans at each of the five local health departments clearly identified the functional roles and responsibilities of individuals and internal and external agencies. To do this, the plans described the Standardized Emergency Management System and generally incorporated matrices of responsibilities, organizational charts, or position checklists. We noted that plans for Santa Clara, Sacramento, and Los Angeles were particularly strong in this area. Further, all five local health departments adequately identified their logistical capabilities and established primary and alternate emergency operation facilities. Santa Clara County again was very strong in this area with its use of graphics and clear position descriptions.

Local emergency plans and other local health department policies did not include specific procedures for following up on recommendations identified in after-action reports.

Each local health department we visited participated in preparedness exercises related to infectious disease emergencies. Although plans at all the local health departments made general references to the fourth element—exercises, evaluations, and corrective actions—none included in their plans or other local health department policies specific procedures for following up on recommendations identified in after-action reports. Generally, the plans include descriptions of the types of emergency preparedness exercises the local health departments offer and indicate the local health departments' intention to update their emergency plans based on the lessons learned from the exercises. Despite these general references, none of the local health departments addressed the process each would take to evaluate, track, and implement corrective action, as suggested by the National Fire Protection Association and Homeland Security. When we asked officials of the local health departments, they agreed with our assessment and confirmed that they did not have written procedures for following up on recommendations in after-action reports. The executive director of Los Angeles County's Bioterrorism Preparedness Program stated that the county is drafting written procedures.

Despite the lack of written procedures, we found that four of the five local health departments took corrective action on a sample of four recommendations selected from each of their after-action reports for the November 2004 exercise hosted by Medical Services. Based on the local health departments' assertions, we determined that their corrective actions met either partial or full implementation or that action was pending. For example, Santa Clara County's health department recommended in its after-action report that it should include emergency medical services material on mutual assistance as a resource in its emergency operations center. According to its manager, the Santa Clara County Public Health Department's Office of Disaster Medical Services completed a matrix identifying how to request medical mutual aid and will include this matrix and other medical mutual aid information in future reference sources located in its emergency operations center. In its after-action report, Sutter County's Health Division recommended that it keep track of its available equipment and the staff trained to operate the equipment for emergencies, especially for public health partners. In response, Sutter provided us with a list of equipment available to the county by department, which it prepared during meetings of its Bioterrorism Advisory Committee. Nevertheless, by not having written procedures, local health departments reduce their ability to ensure that they appropriately and consistently address recommendations and make necessary changes to emergency plans.

Although not required, we believe that promptly writing after-action reports for exercises is prudent and equally relevant to preparing them for actual emergencies.

In addition, the same four local health departments that took corrective actions on selected recommendations also promptly completed their after-action reports for the November 2004 exercise. The California Code of Regulations requires state entities to complete after-action reports for declared emergencies within 90 days of the close of the incident. There is no requirement for preparing after-action reports for an exercise or drill as there is for a declared emergency, but we believe that promptly writing after-action reports for exercises is prudent and equally relevant. Waiting longer than 90 days to complete the reports might make it more difficult for the individuals involved in the exercise to recall specific details accurately. Therefore, we expected all participants in the November 2004 exercise to have prepared after-action reports within 90 days to identify any weaknesses in plans and procedures and to take appropriate corrective actions.

However, as of July 2005, the after-action report from Los Angeles County's health department was still in draft stage, which is approximately seven months after the exercise. According to the executive director of the county's Bioterrorism Preparedness Program (executive director), the Los Angeles County health department had not yet implemented all the recommendations identified. The executive director stated that it experienced delays in drafting its after-action report because the individuals who participated in the exercise were inexperienced with the formalized after-action report process and completing the surveys and observations needed. She further stated that several drafts were reviewed and resubmitted by its management. Although the draft after-action report identified Los Angeles County's accomplishments and strengths during the exercise, it also listed areas that needed improvement. For example, due to problems it experienced following the Incident Command System (ICS), which is a component of the Standardized Emergency Management System, the draft after-action report recommended that it develop a better understanding of the ICS, include contact information in the ICS roster, and clarify certain reporting responsibilities. Los Angeles County has developed a draft policy requiring it to prepare a tracking report with recommendations from an exercise to be submitted to an appropriate person documenting the actions taken, among other requirements. Further, in its draft exercise schematic, the Los Angeles County health department plans to prepare an after-action report within 30 to 60 days of an exercise, including an assessment of goals accomplished and methods for strengthening plans. However, because the Los Angeles County health department did not complete its after-action report promptly, it did not address all the recommendations as quickly as it could have. Consequently, it is not as prepared as it could be to respond to infectious disease emergencies.

NOT ALL LOCAL HEALTH DEPARTMENTS HAVE MET THE DEADLINE TO IMPLEMENT SEVERAL FEDERAL BENCHMARKS

None of the local health departments we visited had met all 14 of the CDC 2002 critical benchmarks by the required deadline of June 2004.

None of the local health departments we visited had met all 14 of the CDC 2002 critical benchmarks by the required deadline of June 2004. As we stated in Chapter 1, although the CDC indicates that attaining any one critical benchmark does not guarantee preparedness, failure to achieve any one of them is a near-certain indicator that the entity is inadequately prepared. The purpose of the CDC cooperative agreement is, in

part, to upgrade local health departments' preparedness for and response to bioterrorism, outbreaks of infectious disease, and other public health threats and emergencies. Therefore, by not meeting the critical benchmarks, these jurisdictions may not be as prepared as possible to respond to an infectious disease emergency.

Los Angeles and Sacramento county health departments did not meet the June 2004 deadline, but they report that they have since completed the benchmarks. Further, two counties did not meet one of the fourteen 2002 critical benchmarks as of June 2005, and the final county did not meet three. Neither San Bernardino nor Santa Clara county health departments has completed a regional response plan. Additionally, San Bernardino County has not completed an interim plan to receive and manage Strategic National Stockpile supplies or a plan to improve the working relationships among laboratories. Sutter County is working to ensure that 90 percent of the population is covered by the California Health Alert Network (CAHAN) but has yet to complete that benchmark. According to the public health director for San Bernardino County and that county's reports to Health Services, difficulties in acquiring and retaining staff contributed to the county's inability to meet the three benchmarks promptly; however, the county has hired additional staff and continues to work to fill vacant positions related to grant activity. The assistant director of human services for Sutter County told us that the county is working closely with its Office of Emergency Services to evaluate systems that would ensure that the CAHAN covers 90 percent of the population, but the county has encountered technological constraints.

LOCAL HEALTH LABORATORIES APPEAR TO HAVE SUFFICIENT RESOURCES TO RESPOND TO INFECTIOUS DISEASE EMERGENCIES, INCLUDING ACCESS TO MUTUAL AID

The State's system of mutual aid could help a local health laboratory that becomes overwhelmed during an emergency.

Local health laboratories generally appear to have or have access to sufficient resources, such as personnel and equipment, to respond to many types of infectious disease emergencies. Also, the State's system of mutual aid could help a local health laboratory that becomes overwhelmed during an emergency. Generally, local health laboratories maintain staffing levels only for their day-to-day operational needs, not for emergencies. As discussed earlier, local health departments maintain emergency plans and periodically perform exercises to help prepare for infectious disease emergencies. All public and private laboratories that test human specimens must meet the quality

All 38 local health laboratories and the two state public health laboratories are certified or accredited as having qualified personnel, properly functioning equipment, and appropriate testing procedures to respond to an infectious disease emergency.

standards that the U.S. Congress established in the Clinical Laboratory Improvement Amendments of 1988 (CLIA), and they must be certified or accredited. These standards set requirements for laboratory testing personnel and require laboratories to have equipment maintenance protocols that include function checks and calibration to ensure that the testing equipment will provide accurate and reliable test results. Additionally, CLIA regulations require all laboratories to participate in a proficiency-testing program, which directly tests a laboratory's ability to identify infectious organisms accurately. Based on reports supplied by Health Services, all 38 local health laboratories and the two state public health laboratories are certified or accredited as having qualified personnel, properly functioning equipment, and appropriate testing procedures to respond to an infectious disease emergency.

In addition to California's formal mutual aid systems that we described in the Introduction, local health departments periodically use a process best described as informal mutual aid. Based on interviews with officials from the local health departments we visited and the state public health laboratories, if a laboratory's resources—including personnel, equipment, and supplies—becomes overwhelmed during a nonemergency situation, the laboratory can send specimens to other laboratories for testing, thereby using the resources of other local jurisdictions and the State through their informal mutual aid network. For example, the health officer for Santa Clara County indicated that the county's laboratory requested assistance from Santa Cruz County's public health laboratory to conduct certain tests on its behalf because the clinic in Santa Clara that typically conducts the tests could not handle the workload. The health officer for Santa Clara County further noted that local health laboratories provide support to each other as a matter of professional courtesy and support. Therefore, local jurisdictions can provide mutual aid to other jurisdictions and be certain that any testing assistance provided during an emergency would meet federal standards. Further, the informal system of mutual aid helps to increase the preparedness levels for responding to infectious disease emergencies.

Health officials at four of the five local health departments we visited stated that their laboratories are, in general, sufficiently staffed to perform their day-to-day activities and are capable of responding to some emergencies. However, the health officer for Sacramento County noted that Sacramento does not have sufficient staffing in its public health laboratory to perform some

of its daily laboratory activities and has stopped performing certain types of HIV testing. Consequently, Sacramento's health clinics have had to use other laboratories to conduct HIV tests. Nonetheless, Sacramento County has access to additional resources through the State's system of mutual aid if needed to respond to an infectious disease emergency effectively.

Some local laboratories are members of the Laboratory Response Network—a national network of about 140 laboratories—that can test thousands of specimens and can transfer specimens to appropriate testing facilities.

Some local health laboratories are members of the Laboratory Response Network (LRN). The LRN is a national network of about 140 laboratories—including federal, state, and local health laboratories—that can respond to bioterrorism and other infectious disease emergencies. The LRN can test thousands of specimens and can transfer specimens to appropriate testing facilities. According to the chief of the State's Microbial Disease Laboratory, an LRN member, laboratories in the network have a mutual understanding that, during an infectious disease emergency, those local health laboratories with the testing capabilities to identify diseases that could have a major impact on public health will assist one another should a local health laboratory become overwhelmed with samples. Further, according to Health Services' acting chief of its Division of Communicable Disease Control, should certain LRN laboratories within California become overwhelmed during an infectious disease emergency, California's LRN laboratories could send specimens to certain LRN laboratories in other states. Because all local health laboratories are certified or accredited to have qualified personnel, calibrated equipment, and a proficiency testing program, and because they have access to the specimen-testing assistance available through mutual aid as well as the LRN, we believe that local health laboratories likely would have access to sufficient resources to respond to infectious disease emergencies.

CERTAIN REQUIREMENTS MIGHT HINDER THE ABILITY OF LOCAL HEALTH LABORATORIES TO HIRE DIRECTORS

During our audit, directors we interviewed at four local health laboratories informed us of a concern they have that could affect the operations of local health laboratories. Specifically, they told us that, in the near future, local health laboratories may have difficulty replacing directors who retire or otherwise leave their positions. This concern is based on their belief that the supply of applicants who meet both federal and state requirements will be too low to meet the eventual demand for vacant director positions and thus may prevent some local health laboratories from hiring directors. To be certified, a local health laboratory must have a director that meets CLIA requirements as well as all

applicable state requirements. If a local health laboratory cannot identify applicants who meet these requirements, it may not be able to fill the position and ultimately might jeopardize its CLIA certification. Alternatives include contracting with another local health laboratory to provide services or contracting with the director of another local health laboratory to direct its laboratory as well.

Federal regulations require a local health laboratory director to have either of the following: (1) a doctoral degree in a chemical, physical, biological, or clinical laboratory science and certification by a board approved by U.S. Department of Health and Human Services; or (2) a degree in medicine or osteopathy and certain board certifications or other specified training or experience, as outlined in the federal regulations. To meet state requirements, a local health laboratory director must have (1) a public health microbiology certificate and (2) four years of public health laboratory experience. According to the laboratory director for Santa Clara County, who is also the president of the California Association of Public Health Laboratory Directors (laboratory directors' association), only three of the local health laboratory directors currently meet federal regulations; the remaining directors were grandfathered into their positions under the federal CLIA regulations.

The laboratory director for Los Angeles County told us that at least 13 of the State's current laboratory directors are planning to retire in the next two years, and half will leave within the next five years. She further stated that there are no replacements. According to its president, the laboratory directors' association has been working for 12 years toward obtaining a federal exemption for county and city public health laboratories or adding to federal law a provision allowing local health laboratories to hire directors that meet only state standards. Currently, the laboratory directors' association and other interested parties are working with the office of the State's public health officer to develop postdoctoral programs within California designed to provide a pool of qualified candidates within the State. The president of the laboratory directors' association noted, however, that even if the State moved forward with the postdoctoral program immediately, it would take at least five years before the first candidates would be ready.

RECOMMENDATIONS

To ensure that local health departments are as prepared as they could be to respond to infectious disease emergencies, they should:

- Establish written procedures for following up on recommendations identified in after-action reports.
- Prepare after-action reports within 90 days of an exercise.
- Complete the critical benchmarks set by the CDC cooperative agreement with a deadline of June 2004.

We conducted this review under the authority vested in the California State Auditor by Section 8543 et seq. of the California Government Code and according to generally accepted government auditing standards. We limited our review to those areas specified in the audit scope section of this report.

Respectfully submitted,



ELAINE M. HOWLE
State Auditor

Date: August 11, 2005

Staff: Denise L. Vose, CPA, Audit Principal
Dale A. Carlson, CGFM
Bryan Beyer
Heather Kopeck
Erika J. Sindhuphak
Leonard Van Ryn, CIA

APPENDIX A

California's Progress in Meeting the Critical Benchmarks Issued by the Centers for Disease Control and Prevention

The tables in this appendix summarize the State's progress toward completing critical benchmarks described in the guidance for the Cooperative Agreement on Public Health Preparedness and Response for Bioterrorism issued by the federal Centers for Disease Control and Prevention (CDC). As discussed in Chapter 1, the purpose of this cooperative agreement is to provide funds to be used to upgrade state and local entities' preparedness for and response to bioterrorism, other outbreaks of infectious disease, and other public health threats and emergencies. The CDC guidance for 2002 required that recipients, including states, complete 14 critical benchmarks by June 2004. The CDC has issued an additional 25 critical benchmarks in its guidance for 2003 and 2004. In addition to describing the CDC's critical benchmarks, Tables A.1 and A.2 on the following page summarize the status of the State's progress in completing both sets of critical benchmarks.

The guidance for the CDC cooperative agreement identifies various activities for recipients to complete. The CDC organizes these activities under seven focus areas:

- Preparedness Planning and Readiness Assessment
- Surveillance and Epidemiology Capacity
- Laboratory Capacity for Biological Agents
- Laboratory Capacity for Chemical Agents
- Health Alert Network/Communications and Information Technology
- Risk Communication and Health Information Dissemination
- Education and Training

Further, the CDC indicates that the State's public health preparedness activities should address the critical capacities and critical benchmarks included in each focus area. The CDC considers the critical capacities to be the core expertise and infrastructure that enable a public health system to prepare for and respond to various public health threats and emergencies. For example, one of the 2004 critical capacities requires a state to establish a process for strategic leadership, direction, coordination, and assessment of activities to ensure state and local readiness for various public health threats and emergencies. According to the CDC, a critical benchmark is a milestone on the road to public health emergency preparedness. Although, by definition, attaining any particular critical benchmark does not guarantee preparedness, failure to complete one of them is a near-certain indicator that the jurisdiction is inadequately prepared. Additionally, the CDC indicated that the State also might consider enhanced capacities for each focus area. Enhanced capacities are the additional expertise and infrastructure beyond critical capacities that enable performance above the core level of preparedness and should be addressed only after critical activities have been achieved or are well along in development.

Our testing methodology for the critical benchmarks set by the CDC for 2002 differed slightly from our testing methodology for the critical benchmarks for 2003 and 2004. We asked appropriate staff in the Department of Health Services (Health Services) to provide documentary evidence of having completed the 2002 critical benchmarks. We then reviewed the documents provided and interviewed staff to determine whether the critical benchmarks have been completed. For the 2003 and 2004 critical benchmarks that Health Services reported as fully complete, we performed the same methodology as we did for the 2002 critical benchmarks. For the 2003 and 2004 critical benchmarks that Health Services reported as less than fully complete, we reviewed Health Services' progress reports to the CDC and interviewed appropriate Health Services' staff. However, we did not validate the percentages for the critical benchmarks Health Services reported as less than fully complete.

TABLE A.1

Centers for Disease Control and Prevention 2002 Critical Benchmarks

Number	Description	Status	Comments
Focus Area A: Preparedness Planning and Readiness Assessment			
1	Designate a senior public health official within the state/local health department to serve as executive director of the bioterrorism preparedness and response program.	Complete	
2	Establish an advisory committee that includes representation from groups delineated by the U.S. Centers for Disease Control and Prevention (CDC).	Complete	
3a	Prepare a timeline for the assessment of emergency preparedness and response capabilities related to various public health threats and emergencies with a view to facilitating planning and setting implementation priorities.	Complete	
3b	Perform the assessment indicated in critical benchmark 3a.	Inconclusive	Although the Department of Health Services (Health Services) collected statewide health care and public health data, it did not prepare written analyses or conclusions based on the data collected. The deputy director for public health emergency preparedness told us that Health Services has entered into a contract with the Health Officers Association of California to obtain a more current assessment by December 2006. See related discussion in Chapter 1.
4a	Prepare a timeline for the assessment of statutes, regulations, and ordinances within the State and local public health jurisdictions that provide for credentialing, licensure, and delegation of authority for executing emergency public health measures, as well as special provisions for the liability of health care personnel in coordination with adjacent states.	Complete	
4b	Perform the assessment indicated in critical benchmark 4a.	Complete	
5a	Prepare a timeline for the development of a statewide plan for responding to incidents of bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies.	Complete	
5b	Develop a statewide plan as indicated in critical benchmark 5a. This should include the development of emergency mutual aid agreements and/or compacts and provision for regular exercises that test regional response proficiency.	Complete	
6a	Prepare a timeline for the development of regional plans to respond to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies.	Inconclusive	See critical benchmark 6b.

continued on the next page

Number	Description	Status	Comments
6b	Develop regional plans as indicated in critical benchmark 6a.	Inconclusive	We cannot conclude whether Health Services completed this critical benchmark because we received conflicting information from the CDC regarding the interpretation of this requirement. Although in the past the CDC interpreted regional to mean interstate, a current CDC project officer said that regional referred to intrastate. See related discussion in Chapter 1.
7	Develop an interim plan to receive and manage items from the Strategic National Stockpile, including mass distribution of antibiotics, vaccines, and medical materiel. Within this interim plan, identify personnel to be trained in these functions.	Complete	

Focus Area B: Surveillance and Epidemiology Capacity

8a	Prepare a timeline for developing a system to receive and evaluate urgent disease reports from all parts of the State (or city) and local public health jurisdictions on a 24-hour-per-day, seven-days-per-week basis.	Complete	
8b	Develop a system to receive and evaluate urgent disease reports as indicated in critical benchmark 8a.	Complete	
9	Prepare a timeline and assess current epidemiologic capacity, and provide at least one epidemiologist for each metropolitan area with a population greater than 500,000.	Complete	

Focus Area C: Laboratory Capacity for Biologic Agents

10a	Prepare a timeline for the development of a plan to improve working relationships and communication between Level A (clinical) laboratories and Level B/C Laboratory Response Network laboratories to ensure that Level A laboratories maintain certain core capabilities to (a) perform rule out testing on critical bioterrorist agents, (b) safely package and handle specimens, and (c) refer to higher-level laboratories for further testing.	Complete	
10b	Develop a plan as indicated in benchmark 10a.	Complete	

Focus Area D: Laboratory Capacity for Chemical Agents*

Focus Area E: Health Alert Network/Communications and Information Technology

11a	Prepare a timeline for a plan that ensures that 90 percent of the population is covered by the Health Alert Network.	Complete	
11b	Ensure that 90 percent of the population is covered by the Health Alert Network.	Complete	
12a	Prepare a timeline for the development of a communications system that provides a 24/7 flow of critical health information among hospital emergency departments, state and local health officials, and law enforcement officials.	Complete	
12b	Develop a communications system as indicated in benchmark 12a.	Complete	

Number	Description	Status	Comments
Focus Area F: Risk Communication and Health Information Dissemination			
13	Develop an interim plan for risk communication and information dissemination to educate the public regarding exposure risks and effective public response.	Complete	
Focus Area G: Education and Training			
14a	Prepare a timeline to assess training needs, with special emphasis on emergency department personnel, infectious disease specialists, public health staff, and other health care providers.	Complete	
14b	Assess training needs as indicated in benchmark 14a.	Complete	

* We identified no 2002 critical benchmarks associated with Focus Area D—Laboratory Capacity for Chemical Agents.

TABLE A.2

Centers for Disease Control and Prevention 2003 and 2004 Critical Benchmarks

Number	Description	Status	Comments
Focus Area A: Preparedness Planning and Readiness Assessment			
1	Develop and maintain a financial accounting system capable of tracking expenditures by focus area, critical capacity, and funds provided to local health agencies.	Complete	
2	Develop or enhance scalable plans that support local, statewide, and regional responses to incidents of bioterrorism, catastrophic infectious disease such as pandemic influenza, other infectious disease outbreaks, and other public health threats and emergencies. Plans must include detailed preparations to administer vaccines and other pharmaceuticals rapidly, and to perform health care facility-based triage and provide short-term acute psychosocial interventions as well as longer-term services to large populations. This should include the development of emergency mutual aid agreements and/or compacts and inclusion of hospitals.	In progress	The Department of Health Services (Health Services) has made progress toward meeting this critical benchmark by creating or enhancing scalable state plans and requiring local public health jurisdictions to revise plans as necessary.
3	Maintain a system for 24/7 notification or activation of the public health emergency response system.	Complete	
4	Exercise all plans on an annual basis to demonstrate proficiency in responding to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies.	In progress	Health Services has conducted annual exercises that indirectly tested key elements of the State's emergency plans.

continued on the next page

Number	Description	Status	Comments
5	Review the National Incident Management System (NIMS), and complete an assessment of conforming changes needed, if any, for your state health department and partner agencies to be in compliance in fiscal year 2005.	In progress	In February 2005, an executive order directed the Governor's Office of Emergency Services (Emergency Services) and the Office of Homeland Security to integrate the National Incident Management System (NIMS) and the Standardized Emergency Management System (SEMS). Emergency Services conducted a May 2005 meeting for the SEMS Technical Group to address integrating the NIMS with the SEMS. Additionally, a document prepared by the Planning Assistance Unit within Emergency Services indicates that it released the NIMS Capability Assessment Tool on the Internet in January 2005 to assist jurisdictions in determining their compliance with the NIMS.
6	Develop or maintain, as appropriate, a Strategic National Stockpile (SNS) preparedness program within the recipient organization's overall terrorism preparedness component, including full-time personnel, that is dedicated to effective management and use of the SNS statewide. This SNS preparedness program should give priority to providing appropriate funding, human and other resources, and technical support to local and regional governments expected to respond should the SNS deploy there.	In progress	Health Services has an SNS program within its Emergency Preparedness Office with three full-time and four contract staff. Some of Health Services' activities to date have included updating the state SNS operational plan and tracking the SNS plans for local health departments across the State. Health Services also has developed an SNS training and exercise plan and provided some SNS training to local jurisdictions.

Focus Area B: Surveillance and Epidemiology Capacity

7	Complete development and maintain a system to receive and evaluate urgent disease reports and to communicate with and respond to the clinical or laboratory reporter regarding the report from all parts of your state and local public health jurisdictions on a 24/7 basis.	Complete	
8	With local public health agencies, identify and maintain a current list of physicians and other providers with experience and/or skills in the diagnosis and treatment of conditions (including psychological and behavioral) possibly resulting from a terrorism-associated event who may serve as consultants during a public health emergency.	In progress	Health Services has a list of medical and chemical experts throughout the State. It also is requiring the local health departments to develop and regularly update a community-based on-line inventory that lists all available expertise for smallpox and specialists in other areas.
9	Establish a secure Web-based reporting and notification system that provides for the rapid and accurate receipt of reports of disease outbreaks and other acute health events that might suggest bioterrorism.	In progress	Health Services stated in its May 2005 progress report that it is developing and testing WebCMR, which is a Web-based confidential morbidity (disease) reporting application to be used by health care providers to provide disease reports to local health departments. Health Services stated that it plans to deploy the WebCMR in August 2005.

Number	Description	Status	Comments
10	At least annually, assess, through exercises or after-action reports to actual events, the 24/7 capacity for response to reports of urgent cases, outbreaks, or other public health emergencies, including any events that suggest intentional release of biologic, chemical, or radiological agent.	Complete and recurring	
11	At least annually, assess adequacy of state and local public health response to catastrophic infectious disease such as pandemic influenza, other outbreaks of disease, and other public health emergencies.	Complete and recurring	The State assessed its response to actual public health emergencies during 2004 and 2005 by conducting exercises of its preparedness. Health Services also requires local public health departments to report whether they have met this critical benchmark.

Focus Area C: Laboratory Capacity for Biologic Agents

12	Based on a jurisdiction-wide inventory of all analytical laboratories, complete and implement an integrated response plan that directs how public health, hospital-based, food-testing, veterinary, and environmental-testing laboratories will respond to a bioterrorism incident.	In progress	The chief of the State's Microbial Disease Laboratory (MDL) indicated that the Emergency Preparedness Office has developed a draft coordinated response plan; however, the laboratory plan is needed to supplement it. Working groups have met to discuss various components of the integrated response plan. The chief of the MDL also said that Health Services has taken the required inventory of laboratories.
13	Ensure capacity exists for Laboratory Response Network (LRN) validated testing for all Category A agents and other Level B/C protocols as they are approved.	Complete and recurring	According to the chief of the MDL, Health Services requires reference laboratories to participate in the LRN proficiency testing program to ensure that the State has the capacity to test the various agents. The LRN is a national network of local, state, and federal public health, food-testing, veterinary diagnostic, and environmental-testing laboratories that provide the laboratory infrastructure and capacity to respond to biological and chemical terrorism and other public health emergencies. The chief of the MDL also noted that the laboratory is approved for testing of all LRN protocols and has therefore demonstrated to the CDC that it is capable of performing these assays.
14	Conduct at least one simulation exercise per year that specifically tests laboratory readiness and capability to perform specimen threat assessment, intake prioritization, testing, confirmation, and results reporting using the LRN Web site.	Complete and recurring	The State has conducted simulation exercises during 2004 and 2005.

Focus Area D: Laboratory Capacity for Chemical Agents*

Focus Area E: Health Alert Network/Communication and Information Technology

18	Implement a plan for connectivity of key stakeholders involved in a public health detection and response including a 24/7 flow of critical health information, such as clinical data, alerts, and critical event data, among hospital emergency departments, state and local public health officials, law enforcement, and other key participants.	Complete	
----	--	----------	--

continued on the next page

Number	Description	Status	Comments
19	Ensure, by testing and documentation, at least 90 percent of the key stakeholders involved in a public health response can receive and send critical health information, including alerts and critical event data.	Complete	
20	Routinely assess the timeliness and completeness of the redundant method of alerting, as it exists to reach participants in public health response.	In progress	To provide a redundant communications method, a Health Services' document stated that several hundred satellite telephones were distributed to key public health emergency response personnel throughout the State. However, Health Services provided no evidence that it routinely assesses the timeliness and completeness of this communication method. See related discussion in Chapter 1.
21	Ensure that the technical infrastructure exists to exchange a variety of data types, including possible cases, possible contacts, specimen information, environmental sample information, laboratory results, facilities, and possible threat information.	Complete	
22	Adopt and implement the Logical Observation Identifiers Names and Codes (LOINC) as the standard for electronic exchange of clinical laboratory results and associated clinical observations between and among public health department laboratories; hospital-based laboratories; and other entities, including collaborating academic health centers, that have a major role in responding to bioterrorism and other public health emergencies.	In progress	According to a bioterrorism information technology specialist with Health Services' Emergency Preparedness Office, although critical information can be placed in the document library of the California Health Alert Network, Health Services is working on creating the WebCMR and Laboratory Information Management System (LIMS). The specialist also indicated that the LIMS will include information on laboratory testing and quality assurance.

Focus Area F: Risk Communication and Health Information Dissemination

23	Complete a plan for crisis and emergency risk communication and information dissemination to educate the media, public, partners, and stakeholders regarding risks associated with the real or apparent threat and an effective public response.	Complete	
24	Conduct trainings, drills, and exercises involving communication systems to ensure channels of communication to inform the public, partners, and stakeholders about recommendations during public health emergencies work in a timely and effective manner.	Complete	

Focus Area G: Education and Training

25	Implement a training plan, which ensures priority preparedness training is provided across all Focus Areas to the State and local public health workforce, health care professionals, and laboratorians.	In progress	Health Services delivered or developed materials for some of the training listed in the plan, either through presentation, the Internet, or other means.
----	--	-------------	--

* In our testing, we did not include three 2004 critical benchmarks that the CDC included in Focus Area D—Laboratory Capacity for Chemical Agents (e.g., acids and mustard gas). Instead, we focused our review on critical benchmarks related to emergencies caused by biological agents.

APPENDIX B

California's Progress in Meeting the Critical Benchmarks Issued by the Health Resources and Services Administration

The federal government began to focus on the ability of hospitals and emergency medical services to respond to bioterrorist events after the terrorist attacks of September 11, 2001, and the subsequent anthrax incidents. Consequently, Congress authorized funding to support activities related to countering potential biological threats to civilian populations, and the Health Resources and Services Administration (HRSA) announced that the funding would be available for cooperative agreements with state, territorial, and selected municipal offices of public health. The HRSA also indicated that these awards are for the development and implementation of plans to improve the capacity of hospitals, their emergency departments, outpatient centers, emergency medical services, and other collaborating health care entities for responding to incidents requiring mass immunization, treatment, isolation, and quarantine in the aftermath of bioterrorism or other outbreaks of infectious disease.

At the outset of the program, the HRSA required potential recipients to meet three critical benchmarks. Recognizing the comprehensive nature of an effective response for bioterrorism and other public health emergencies, the HRSA subsequently identified 16 additional critical benchmarks that must be achieved by August 31, 2007. Tables B.1 and B.2 on the following pages summarize the status of the State's progress in completing both sets of critical benchmarks.

TABLE B.1

**Health Resources and Services Administration
2002 Critical Benchmarks**

Number	Description	Status	Comments
1	Program Direction—Designate a coordinator for bioterrorism hospital preparedness planning.	Complete	
2	Hospital Preparedness Planning Committee—Establish this committee to meet at least once during the planning phase, and quarterly during the implementation phase, to provide guidance, direction, and oversight to the Department of Health Services in planning for bioterrorism response.	Complete	
3	Regional Hospital Plans—Establish a timeline that describes the approach to development and implementation of a regional hospital plan for large-scale epidemics.	Complete	

TABLE B.2

**Health Resources and Services Administration
2003 and 2004 Critical Benchmarks**

Number	Description	Status	Comments
1	Financial Accountability—Develop and maintain a financial accounting system capable of tracking expenditures by critical benchmark and by funds allocated to hospitals and other health care entities. Supplemental language to this benchmark requires the State to expedite the obligation and flow of funds to the subrecipients.	In progress	Although the accounting system used by the Department of Health Services (Health Services) tracks expenditures appropriately, Health Services does not always expedite the obligation and flow of funds to subrecipients, such as hospitals, as required in the supplemental language under this critical benchmark. As discussed in Chapter 1, Health Services' spending of federal funds under the Health Resources and Services Administration (HRSA) cooperative agreement has been slow.
2-1	Surge Capacity: Beds—Establish a system that allows the triage, treatment, and initial stabilization of 500 adult and pediatric patients per 1,000,000 awardee jurisdiction (1:2,000), above the current staffed bed capacity, with acute illness or trauma requiring hospitalization from a chemical, biological, radiological, nuclear, or explosive incident.	In progress	Health Services is progressing on this benchmark by assessing capacities at the local level, facilitating the purchase of equipment, and entering into agreements with entities to address these requirements.

Number	Description	Status	Comments
2-2	<p>Surge Capacity: Isolation Capacity—Ensure that all participating hospitals have the capacity to maintain, in negative pressure isolation, at least one suspected case of a highly infectious disease [e.g., smallpox, pneumonic plague, SARS, influenza, and hemorrhagic fevers] or for any febrile patient with a suspect rash or other symptoms of concern who might possibly be developing a potentially highly communicable disease.</p> <p>In addition, identify at least one regional health care facility in each of its two hospital preparedness regions that is able to support the initial evaluation and treatment of at least 10 adult and pediatric patients at a time in negative pressure isolation.</p>	In progress	<p>Health Services entered into an agreement with the University of California at Davis to conduct an assessment of the statewide airborne isolation capacity, which it plans to complete by August 2005.</p> <p>According to Health Services, it is currently working with a hospital to meet this requirement in one of its two regions. In addition, according to the HRSA coordinator, Health Services is working with San Diego and Imperial counties to implement isolation capacity in several hospitals in that region.</p>
2-3	Surge Capacity: Health Care Personnel—Establish a response system that allows the immediate deployment of additional health care personnel in support of surge bed capacity noted in critical benchmark 2-1.	In progress	The State is progressing on this benchmark through its implementation of the California Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP). This is envisioned as a statewide system to recruit, register, credential, track, identify, deploy, and maintain currently licensed volunteer health care professionals for response to emergencies, disasters, and terrorist incidents in California and throughout the nation. The State plans to accomplish this over a three-year time frame.
2-4	Surge Capacity: Advance Registration System—Develop a system that allows for the advance registration and credentialing of clinicians needed to augment a hospital or other medical facility to meet patient/victim care increased surge capacity needs.	In progress	The ESAR-VHP project discussed in the critical benchmark 2-3 also addresses this benchmark.
2-5	Surge Capacity: Pharmaceutical Caches—Establish regional plans that ensure a sufficient supply of pharmaceuticals to provide prophylaxis for three days to hospital personnel, emergency first responders and their families, as well as for the general community in the wake of a terrorist-induced outbreak of anthrax or other disease for which such countermeasures are appropriate.	In progress	According to Health Services, local jurisdictions are responsible for establishing regional plans that ensure a sufficient supply of pharmaceuticals. Health Services provides the funding to be used for this purpose and requires local jurisdictions to submit applications requesting the funds. However, according to Health Services, these activities have been delayed because of the time it takes to prepare the applications and for Health Services to review and approve them.
2-6	Surge Capacity: Personal Protective Equipment—Ensure adequate personal protective equipment to protect current and additional health care personnel during a chemical, biological, radiological, or nuclear incident.	In progress	According to Health Services, it has met with a number of vendors exploring the availability of products, costs, and services provided for this and benchmark 2-7.
2-7	Surge Capacity: Decontamination—Ensure that adequate portable or fixed decontamination systems exist for managing adult and pediatric patients as well as health care personnel who have been exposed during a chemical, biological, radiological, nuclear, or explosive incident.	In progress	See benchmark 2-6.

continued on the next page

Number	Description	Status	Comments
2-8	Surge Capacity: Behavioral (Psychosocial) Health—Enhance the networking capacity and training of health care professionals to be able to recognize, treat, and coordinate care related to the behavioral health consequences of bioterrorism or other public health emergencies.	In progress	Health Services has contracted with the Department of Mental Health to develop and implement a statewide mental health bioterrorism preparedness assessment by August 2006.
2-9	Surge Capacity: Trauma and Burn Care—Enhance statewide trauma and burn care capacity to be able to respond to a mass casualty incident due to terrorism. This plan should ensure the capability of providing trauma care to at least 50 severely injured adult and pediatric patients per million of population.	In progress	The Emergency Medical Services Authority (Medical Services) is working with its local emergency medical service administrators to provide the funds needed to purchase trauma and burn supply caches and to select trauma centers.
2-10	Surge Capacity: Communications and Information Technology—Establish a secure and redundant communications system that ensures connectivity during a terrorist incident or other public health emergency between health care facilities and state and local health departments, emergency medical services, emergency management agencies, public safety agencies, neighboring jurisdictions, and federal public health officials.	In progress	According to Health Services, it is in the process of developing a statewide vision to address this benchmark. It also plans to hire a data-processing manager to direct efforts toward establishing a communication system.
3	Emergency Medical Services (EMS)—Enhance the statewide mutual aid plan for upgrading and deploying EMS units in jurisdictions/regions they do not normally cover in response to a mass-casualty incident due to terrorism. This plan must ensure the capability of providing EMS triage and transportation for at least 500 adult and pediatric patients per million population.	In progress	According to Medical Services, it has been meeting with key stakeholders for more than a year in developing ambulance strike team plans, procedures, and training courses.
4-1	Hospital Laboratories—Implement a hospital laboratory program that is coordinated with currently funded CDC laboratory capacity efforts and which provides rapid and effective hospital laboratory services in response to terrorism and other public health emergencies.	In progress	Health Services has entered into a contract with the University of California at Davis to initiate processes for providing hospital laboratory connectivity with Health Services for electronic laboratory results reporting by August 2005.
4-2	Surveillance—Enhance the capability of rural and urban hospitals, clinics, emergency medical services systems, and poison control centers to report syndromic and diagnostic data that is suggestive of terrorism to their associated local and state health departments on a 24-hour-a-day, seven-day-a-week basis.	In progress	According to Health Services, it is in the process of developing and testing a surveillance system. Health Services also indicated that extensive training for physicians, nurses, and pharmacists has been conducted at all four poison control center sites.
5	Education and Preparedness Training—Utilize competency-based education and training programs for adult and pediatric prehospital, hospital, and outpatient health care personnel responding to a terrorist incident.	In progress	Health Services is contracting with the California Primary Care Association to meet the requirements of this benchmark.

Number	Description	Status	Comments
6	Terrorism Preparedness Exercises—As part of the State’s or jurisdiction’s bioterrorism hospital preparedness plan, exercises/drills will be conducted during fiscal 2004. These exercises or drills should encompass at least one biological agent. Scenarios involving radiological and chemical agents as well as explosives may also be included as part of the exercises/drills.	Complete	

Blank page inserted for reproduction purposes only.

Agency's comments provided as text only.

Department of Health Services
1501 Capitol Avenue, Suite 6001, MS 0000
PO Box 997413
Sacramento, CA 95899-7413

July 25, 2005

Elaine Howle, State Auditor *
Bureau of State Audits
555 Capitol Mall, Suite 300
Sacramento, California 95614-6404

Dear Ms. Howle:

Enclosed is the California Department of Health Services' (CDHS) response to the recommendations described in the Bureau of State Audits' (BSA) draft report entitled, "Emergency Preparedness: More Needs to Be Done to Improve California's Preparedness for Responding to Infectious Disease Emergencies." The CDHS appreciates the opportunity to respond to the recommendations described in the draft report.

The CDHS is pleased that BSA recognizes achievements made by the department to improve California's ability to respond to infectious disease emergencies, including having emergency plans to guide public health response, and meeting many federal benchmarks that measure state and local entities preparedness to respond to public health threats and emergencies. California is better prepared today than ever before to respond to a public health emergency, including infectious disease emergencies and bioterrorism. CDHS' key emergency preparedness accomplishments include:

- *Leadership:* Established a new position in the Emergency Preparedness Office (EPO) to oversee and coordinate preparedness efforts throughout CDHS. The EPO Deputy Director reports directly to the State Public Health Officer. Under the new leadership, EPO has filled vacant positions to support public health emergency preparedness functions, expedited allocation of funds to local health departments, conducted on-site visits to all local health departments, and revised its departmental emergency response plan.
- *Investing in Preparedness:* CDHS has expended or obligated 97 percent of the federal bioterrorism funds received from the Centers for Disease Control and Prevention (CDC) and 94 percent of the Health Resources and Services Administration (HRSA). Remaining unobligated funds are targeted for specific purposes and the small residual balance will be carried forward to the next grant year. Using federal bioterrorism funds, California has improved its communication with law enforcement and other public agencies involved in emergency response, implemented an around-the-clock emergency communications system and conducted drills and training at the state and local level.

* California State Auditor's comments begin on page 73.

- *Progress on Preparedness:* CDHS met all of the 2002 Critical Benchmarks required by CDC and is on target to meet the current Critical Benchmarks required by CDC and HRSA. Critical benchmarks are milestones in a wide variety of areas that indicate progress toward preparedness. Examples include identification of surge capacity to assure the ability to provide medical care at the time of an emergency; establishment of a financial accounting system to track expenditures by critical benchmark; and development of a departmental emergency response plan.

The CDHS is pleased that the BSA acknowledges our progress in making California better prepared. Your thorough audit of CDHS's public health emergency preparedness efforts, and the resulting two recommendations, provide useful information to our ongoing preparedness activities. In response to your finding, CDHS has implemented procedures to track findings from after-action reports. Another finding relates to meeting requirements of CDC's 2002 critical benchmark regarding assessment of capability to respond. CDC has determined that CDHS met this critical benchmark. Because the assessments were conducted in 2003, CDHS is working to conduct current assessments and provide updated written reports.

As you discuss in your draft report, emergency preparedness is an ongoing activity. As the lead state entity in responding to public health emergencies, CDHS continues to work closely with its federal, state, and local partners to improve California's capacity to detect, respond, and recover from natural hazards and bioterrorism events. Emergency preparedness will remain a top priority for CDHS.

Should you have any questions, please contact Elisabeth Lyman, Deputy Director, Public Health Emergency Preparedness, at (916) 440-7400.

Sincerely,

(Signed by: Sandra Shewry)

Sandra Shewry
Director

Enclosure

**The California Department of Health Services (CDHS) Response and Comments to the
Bureau of State Audits (BSA) Draft Report Entitled:
“Emergency Preparedness: More Needs to Be Done to Improve California’s Preparedness
for Responding to Infectious Disease Emergencies”**

The California Department of Health Services appreciates the opportunity to review and respond to the draft report of the audit on Emergency Preparedness.

The CDHS is the lead state entity in responding to public health emergencies, responsible for planning and organizing statewide preparedness for bioterrorism and other public health events. California is more prepared today for a public health emergency than it has ever been. Emergency Preparedness - including preparedness for acts of bioterrorism - is a top priority of CDHS. CDHS works closely with its partners at the federal, state, and local levels in a continuous process to build and improve California’s capacity to detect, respond, and recover from natural hazards and bioterrorism events. In that regard, CDHS is continuously examining how to strengthen California’s preparedness to respond to public health emergencies.

Recommendations

The Department of Health Services should develop and implement a tracking method for following up on recommendations identified in after-action reports.

CDHS **agrees** that conducting exercises is an important means of identifying areas needing improvement and that an essential component of exercising preparedness is corrective action based on the exercise experience. CDHS evaluates all exercises in which it participates and, for those areas in which corrective action is required, follows up to assure that needed actions are taken. CDHS has established procedures for identifying corrective action issues, assigning responsibility for addressing them, and following these assignments to assure that the issues are resolved.

In response to the auditor’s recommendation that CDHS develop a tracking method for following up on lessons learned in after-action reports, CDHS has revised its procedures to clarify designated responsibility for tracking within the Emergency Preparedness Office, using a standard format and structured tracking process. These revised procedures, adopted by CDHS for use in all exercises, are enclosed with this letter (see Enclosure I)

The Department of Health Services should ensure that its contractor prepares an assessment that fully meets the requirements of critical benchmark number 3 from the 2002 cooperative agreement from the Centers for Disease Control (CDC) and Prevention.

CDHS has received confirmation from CDC that California is in compliance with Critical Benchmark 3.

CDHS agrees that it is important to periodically assess preparedness at both the state and local level in order to determine readiness to respond to public health emergencies and identify areas requiring improvement. However, CDHS does **not agree** with the BSA that CDHS failed to meet this Critical Benchmark. The Benchmark in question states, “Assess emergency preparedness and response capabilities related to BT, other infectious disease outbreaks and other PH threats and emergencies with a view to facilitating planning and setting implementation priorities.”

In response to this requirement, all local health departments completed the assessment issued by CDC. CDHS staff in specific program areas reviewed the section of the assessments related to their area of responsibility and used them to plan activities for the following year. CDHS referenced this review and prioritization process when it advised CDC in October 2004 that this Critical Benchmark had been met.

BSA states that "...failure to achieve any one [of the Critical Benchmarks] is a near-certain indicator that the state is inadequately prepared." While CDHS agrees that the Critical Benchmarks are important indicators of preparedness, it does not agree that the absence of a written report on the 2002 local health department assessments is an appropriate indicator of California's preparedness. As indicated above, CDC has confirmed that this Critical Benchmark does not require a written report and that California is in compliance with this Benchmark.

At this time, the 2002 assessments are out of date in reflecting the preparedness of local health departments. In order to obtain a more current assessment, CDHS has contracted with the Health Officers Association of California to conduct assessments of all 61 local health departments in California during the period from Summer 2005 through December 2006. Written reports are a required deliverable of this contract.

Comments on CDHS Expenditure of Grant Funds

CDHS does **not agree** with the BSA's analysis of CDC and Health Resources and Services Administration (HRSA) grant funds status, summarized on Tables 1 and 2 and described in the text of the report. The two primary reasons for disagreement are 1) the point in time nature of the report, which does not reflect all expenditures and obligations made over the past few months and does not take into account that there are ongoing expenditures through August 2005, and 2) the exclusion of local allocations from the definition of encumbered funds. By CDHS definitions, 97 percent of CDC funds have been expended or obligated and 94 percent of HRSA funds have been expended or obligated. CDHS has commitments for the remaining unobligated funds such as meeting state operating costs for July and August 2005; restructuring CDHS' Emergency Operations Center (EOC); purchasing equipment for isolation capacity in Northern and Southern California; and reimbursing local entities for HRSA grant activities.

Specific comments on Tables 1 and 2 are:

Table 1: CDC Grant Funds

CDHS shows 97 percent of CDC grant funds have been expended or obligated.

8/31/03 – 8/30/04 grant period: CDHS and BSA are in agreement that \$8,469,000 is encumbered. This largely reflects a few large contracts in which the work is near completion but invoices not yet submitted.

8/31/04 – 8/30/05 grant period: Table 1 shows \$17,620,000 in encumbered funds. Approximately \$11 million is being paid to local health departments as the fourth quarter (final) payment following submission of their progress reports on June 30, 2005. These payments are in process but were paid after June 30, 2005.

Table 1 shows \$6,292,000 in unencumbered funds. This reflects the following:

- Funds that CDHS has directed to restructuring an Emergency Operations Center (EOC) for CDHS. This project could not be undertaken until enactment of the State Fiscal Year 2005-2006 budget that included the EOC Capital Outlay project. Total funding of the EOC facility and communications equipment is \$2.8 million.
- State operations costs (salaries, benefits, general supplies and equipment) for July and August 2005, the remaining months of the grant period, are projected at \$3.2 million.

In summary, a balance of approximately \$300,000 remains uncommitted. It will be carried forward to the next grant year, in accordance with CDC directives on grant fund management.

Table 2: HRSA Funds

CDHS shows 94 percent of HRSA grant funds have been expended or obligated.

CDHS acknowledges that HRSA spending was delayed due to the inability to hire staff and issues related to the state contracting requirements. However, with the addition of staff and an exemption from the Public Contract Code, significant progress has been made over the past year.

9/01/03 – 8/31/04 grant period Table 2 shows \$18,610,000 in encumbered funds. Nearly \$8 million is identified for a few very large purchase orders to build surge capacity at local medical facilities. An additional \$4 million will be sent to local entities as their final quarterly payment. The balance of encumbered funds is tied to several contracts, including an interagency agreement between CDHS and the Emergency Medical Services Authority.

Table 2 shows \$2,042,000 in unobligated funds. These funds are committed to build isolation capacity in Northern and Southern California. Purchase orders for the isolation capacity equipment will be in place by August 31, 2005 and funds will be liquidated by November 30 according to grant requirements.

9/1/04-8/31/05 grant period: Table 2 depicts \$19,625,000 in unobligated funds:

- BSA footnotes that \$13,273,000 is identified for local entities. CDHS has approved most local applications, but many local entities have not returned signed agreements to CDHS, due to their internal approval requirements. Although CDHS has allocated these funds for local entities, since CDHS does not have signed agreements in hand, BSA considers these funds unobligated.
- \$5 million has been set aside to meet requests from local entities for critical personal protective and decontamination equipment.

- In July 2005, CDHS executed a \$500,000 contract with the California Primary Care Association for training clinic staff throughout California on incident management and the use of surge equipment.
- State operating costs (salaries, benefits, general supplies and equipment) for July and August 2005, the remaining months of the grant period, are projected at \$200,000.

In summary, \$652,000 remains uncommitted, which will be carried forward to the next grant year in accordance with HRSA directives on grant management.

Specific Comments

- “At the state level, Health Services is the agency responsible for ensuring that California meets the critical benchmarks and distributes some of the funding under the cooperative agreements to local entities.” (emphasis added) (page 12)

CHDS has consistently provided most of the federal bioterrorism funds to the local level: 70 percent of the CDC grant is allocated to local health departments and 80 percent of HRSA direct service funds are spent on behalf of hospitals, emergency medical services, poison control centers, and clinics.

- “Although a Health Services’ document indicated that several hundred satellite telephones were distributed to key public health emergency response personnel throughout the state to meet the requirement for a redundant alerting method, Health Services provided no evidence that it routinely assessed the timeliness and completeness of the method.” (page 33, first paragraph)

CDHS currently performs monthly satellite telephone tests between Sacramento and Richmond for a limited number of telephone sets, using a structured, documented procedure. CDHS is in the process of expanding these monthly tests to include local health departments.

- “...as of June 2005, Health Services has filled eight of the 19 positions...” (page 36, paragraph one)

CDHS has a total of 104.8 positions funded through the CDC and HRSA bioterrorism grants. Although there is always transition, at this time, all but ten are filled and active recruitment is underway for the vacant positions.

- Surge Capacity: Pharmaceutical Caches: “However, according to Health Services, these activities [regional plans to ensure a sufficient supply of pharmaceuticals to provide prophylaxis for three days to hospital personnel, emergency first responders and their families as well as for the general community...] have been delayed because of the time it takes to prepare the applications and for Health Services to review and approve them.” (page 55, number 2-5)

The delay in the purchase of pharmaceutical caches occurred because of a change in strategy. As a result of local entities identifying the cost of establishing pharmaceutical caches in each hospital as exorbitantly high, CDHS is currently arranging to purchase regional caches.

- Surge Capacity: Personal Protective Equipment: “According to Health Services, it has met with a number of vendors exploring the availability of products, costs, and services provided for this and benchmark 2-7.” [Surge Capacity: Personal Protective Equipment and Decontamination] (page 55, number 2-6)

CDHS has contracted with vendors and is currently filling orders from local entities for this equipment.

- Surge Capacity: Communications and Information Technology: “According to Health Services, it is in the process of developing a statewide vision to address this benchmark. It also plans to hire a data-processing manager to direct efforts toward establishing a communication system.” (page 56, number 2-10)

CDHS has hired the data processing manager within the Emergency Preparedness Office; the responsibilities of this position include the statewide health alerting system and information technology support for the Emergency Operations Center.

CALIFORNIA DEPARTMENT OF HEALTH SERVICES

After Action Reporting Policy and Procedures

Policy

The California Department of Health Services (CDHS), Emergency Preparedness Office (EPO) will ensure the completion of an After Action Report (AAR) for all CDHS emergency responses involving the activation of the CDHS Emergency Operations Center (EOC) and Statewide and local exercises where CDHS is actively involved.

AARs are required under CDHS's Administrative Orders with the Governor's Office of Emergency Services (OES) to comply with the Standardized Emergency Management System (SEMS) and with the CDHS Emergency Response Plan and Procedures for program areas involved in a response. AARs are completed to:

- Create a detailed report of all activities and response during the incident or exercise.
- Conduct an in-depth review and critique of response activities and the emergency plan with staff and with other organizations or agencies involved.
- Review activities associated with the incident or exercise and make recommendations for change.
- Identify, document, and when practical, implement those activities that may reduce or lessen the impact of an emergency.
- Establish hazard mitigation as an integral element in operations and program delivery as appropriate.
- Make adjustments to the CDHS Emergency Response Plan and Procedures based on the lessons learned during the response or exercise.

Procedure

Within 60 days of a CDHS exercise or emergency response, a Draft AAR will be completed under the coordination of EPO with the appropriate CDHS program staff. The procedure for completion can be found in the CDHS Emergency Response Plan and Procedures, Chapter 3; Section 10.5 and 12.3. The Draft AAR will be submitted to the Deputy Director of EPO for review.

The Deputy Director of EPO will establish a review committee that will complete an evaluation of the Draft AAR and issue a Final AAR within the following 30 days. The AAR Review Committee will include the responding CDHS Program(s) Manager(s), the EPO Exercise Coordinator within the EPO Planning and Response Section, and a representative of the OES and/or other impacted state or local agencies, as appropriate. The Final AAR will be submitted by the Deputy Director of EPO, as required by statute.

Based on the AAR Review Committee's evaluation, one of the following findings will be made and actions will be taken:

1) No Action Required

- ◆ If it is determined that there is a finding of "No Action Required", the basis for the finding will be documented and shared with the appropriate CDHS staff.

2) Minor Procedural Change is Recommended

- ◆ If it is determined that there is a finding that a "Minor Procedural Change is Recommended", the basis for the recommendation will be documented, along with the programs involved and the changes that need to be incorporated. The appropriate CDHS Program(s) Manager(s) will be given the responsibility of reviewing, implementing, and documenting the recommended changes.

3) Policy and/or Major Procedural Changes are Recommended

- ◆ If it is determined that there is a finding that "Policy and/or Major Procedural Changes are Recommended", the basis for the recommendation will be documented, along with the programs involved and the changes that need to be incorporated. The review committee will direct that an AAR Issue Memorandum be completed for CDHS Executive Management concurrence and support for implementation.

The AAR Issue Memorandum will be prepared under the coordination of EPO and the CDHS Program Manager(s) of the impacted program(s). The AAR Issue Memorandum will be based on the Final AAR and recommendations made by AAR review committee.

AAR Issue Memoranda will be addressed from the Deputy Director of EPO to the Deputy Director(s) of the impacted program(s) and/or the Chief Deputy Director of the impacted division(s) and prepared using the outline below. Issue memos will be recorded, numbered and maintained on file by EPO.

The following elements must be incorporated into the AAR Issue Memoranda:

- Issue statement
- Background
- Statement of facts that have prompted developing the issue
- Discussion
- Discussion of issue, including effect on existing laws, rules, policy, regulations, etc.
- Alternatives
- Different alternatives that would be possible to accomplish the needed results, include the "No Change" alternative
- Discussion of pros and cons of each alternative
- Fiscal Impact of each alternative
- Recommendation
- State the preferred action recommended
- Attach an implementation plan

The EPO Planning and Response Section's Exercise Coordinator is responsible for monitoring the implementation of any AAR receiving a finding of "Minor Procedural Change is Recommended" or "Policy and/or Major Procedural Changes are Recommended".

EPO monitors all Procedural Changes identified through this process. This will be done through specific tracking mechanisms or tools (e.g., Attachment I, "After Action Report—Improvement Plan Matrix") maintained by the Exercise Coordinator as both a hardcopy and secure electronic file. All AAR tracking files identify follow-up needs, action points, and a specific plan of action as well as have a standardized format and location within EPO. The files also identify individuals responsible for completing follow-up actions or recommendations as shown on Attachment 1.

The EPO Exercise Coordinator will conduct systematic reviews of the implementation of recommendations or the need for additional evaluations at the 3-month (i.e. 90-day) and 6-month (i.e. 180 days) milestones after the submission of a final AAR and periodically thereafter as needed.

Blank page inserted for reproduction purposes only.

COMMENTS

California State Auditor's Comments on the Response From the Department of Health Services

To provide clarity and perspective, we are commenting on the response from the Department of Health Services (Health Services). The numbers below correspond to the numbers we have placed in the margin of Health Services' response.

- Health Services has not expended or encumbered 94 percent of the funds available to it under the cooperative agreement from the Health Resources and Services Administration (HRSA). As Table 2 on page 33 of our report shows, as of June 30, 2005, Health Services has spent or encumbered about 75 percent of the HRSA funds. Although Health Services may have *intentions* about how it will spend portions of the \$21.7 million unobligated balance also shown in Table 2, intentions do not constitute spending or encumbrances.
- We amended the text of our audit report based on additional evidence obtained and given to us by Health Services after we provided our draft audit report to Health Services for comment. The draft report stated that Health Services had not completed critical benchmark number 3, one of 14 critical benchmarks that were due by June 2004. Critical benchmark number 3 required Health Services to assess its emergency preparedness and response capabilities related to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies with a view to facilitating planning and setting implementation priorities. As we mention on page 29 of our report, Health Services' deputy director for public health emergency preparedness (deputy director) stated that Health Services prepared an assessment, as did all local public health departments. This assessment consisted of a 28-page survey with 80 questions. The deputy director acknowledged that Health Services did not prepare a written summary of the assessment it prepared or the assessments prepared by local health departments.

On July 27, 2005, Health Services provided us with an e-mail dated July 21, 2005, from the Centers for Disease Control and Prevention (CDC). In this e-mail, a CDC senior public health advisor stated that California is in compliance with the requirements of the 2002 critical benchmarks. Despite CDC's comment, we continue to have concerns about how Health Services' staff could make meaningful and defensible decisions about planning and priorities related to a topic as critical as emergency preparedness capabilities based on raw data from survey responses rather than on formal analyses with verifiable conclusions and recommendations. Nonetheless, rather than stating as we did in the original report draft that Health Services did not meet critical benchmark number 3, we amended our report to state that we cannot conclude that Health Services has completed critical benchmark number 3.

We also clarified our recommendation that arises from this issue. We mention on page 29 of our report that the deputy director told us that Health Services has entered into a contract to obtain a more current assessment by late next year. Under this contract, Health Services requires a final report by December 2006 that contains all statewide findings and recommendations. We therefore amended our recommendation to state that Health Services should ensure that the contractor performing the current capacity assessment provides a written report summarizing the results of its data gathering and analyses and contains applicable findings and recommendations.

- Health Services' disagreement with our analysis is based on unrealistic expectations and its apparent misunderstanding of what an encumbrance is. Health Services asserts that we should present expenditure data through August 2005. However, our tables show the status of Health Services' use of funds under cooperative agreements from two federal entities as of June 30, 2005, because that was the latest date for which Health Services' financial accounting data was available for inclusion in our report. Because we verify the accuracy of the data we include in our reports, it is generally not possible to provide audited data through or beyond the report's issue date. Nonetheless, when evidence existed regarding the events that occurred on or after July 1, 2005, we included appropriate comments in the footnotes to those tables.

Further, Health Services disagrees with the definition of encumbrance that we use in our report. On page 31 of our report, encumbrance is defined as an obligation to pay for goods

and services that have been ordered by means of contracts or salary commitments but not yet received. We obtained this definition from the *Governor's Budget Summary*. Using this definition, we included as encumbrances in our tables any unspent balances of contracts that were signed by both Health Services and the contractor on or before June 30, 2005. In those instances when both parties had not yet signed the contracts—such as was the case for contracts that were still pending on June 30, 2005, between Health Services and 37 counties for implementing requirements under the HRSA cooperative agreement—we noted in the footnotes that Health Services had designated these funds for local jurisdictions.

Blank page inserted for reproduction purposes only.

Agency's comments provided as text only.

Emergency Medical Services Authority
1930 9th Street
Sacramento, CA 95814-7043

DATE: July 25, 2005

TO: Bureau of State Audits

FROM: Richard E. Watson (*Signed by: Richard E. Watson*)
Interim Director

SUBJECT: Emergency Medical Services Authority Response to the Bureau of State Audits' (BSA) Recommendation

The Emergency Medical Services Authority (EMSA) is in receipt of the Bureau of State Audits' (BSA) recommendation regarding the Emergency Medical Services Authority role in preparing for and responding to the medical needs in an infectious disease outbreak. The single BSA finding states that "To ensure that California is better prepared to efficiently and effectively respond to infectious disease emergencies, EMSA should update the 'Disaster Medical Response Plan' and the 'Medical Mutual Aid Plan' as soon as resources and priorities allow".

The EMSA is working to update the "Disaster Medical Response Plan" and "Medical Mutual Aid Plan", a process that was underway prior to the Bureau's recommendation. This revision will be done consistent with California's Standardized Emergency Management System (SEMS) and the new National Incident Management System (NIMS) requirements and targeted dates for NIMS compliance established by the Federal Government. At this time, the federal Department of Homeland Security has not released its guidance regarding the specific FY 2006 NIMS requirements. The completion date for state activities would be September 30, 2006. EMSA's effort will be guided by the Governor's Office of Emergency Services (OES), the state agency responsible for oversight of California's emergency management system.

Although the existing plans have not been recently updated by EMSA, the response principles they contain remain current and continue to formulate the basis of our statewide emergency medical response plan. These include but are not limited to: local operational control and response; a system structured to facilitate mutual aid; state responsibility for resource assistance; and, an all-hazards approach in planning for disasters including terrorism or WMD incidents. EMSA follows these principles in developing a comprehensive medical disaster response program that includes among others:

1. Establishment of a regional disaster medical/health coordinator program for statewide medical mutual aid;
2. Provision of communication systems for EMS agencies and hospitals;
3. Development of state disaster medical guidelines for local EMS agencies, CBRNE training curriculums for healthcare personnel, and an Incident Command System model for hospitals;

4. Coordination of annual California medical and health disaster management conferences and statewide medical and health disaster exercise;
5. Development of a statewide ambulance strike team program; and,
6. Development of a field management support team for deployed Disaster Medical Assistance Teams and other state medical responders.

EMSA is governed by the OES State Emergency Plan which takes precedence over all other (existing) plans, and thus, its requirements to incorporate SEMS are followed by EMSA, all state agencies and local government. EMSA continuously works to incorporate SEMS principles for use by private and non-governmental healthcare delivery industry partners. EMSA promotes a uniform vision regarding disaster medical response by continually assembling subject matter experts, medical/health providers, and system managers in various statewide preparedness activities such as planning, training, and exercises.

The EMSA Disaster Medical Response Plan is the predecessor of the "Disaster Medical Response Plan" referenced as being under development on page 30 of the State Emergency Plan. This document is the lead agency support plan to the current State Emergency Plan for disaster medical response. The Plan is in use by trained and experienced EMSA and local emergency medical staff as a procedural document during tests, exercises, and actual events.

Thank you for this opportunity to respond to your audit recommendation. The EMS Authority remains committed to working with governmental entities, the healthcare delivery industry, and all Californians in the ongoing effort to meet the potential medical needs of a natural disaster or deliberate, terrorist attack in our State. If you have any questions or desire further information, please contact Daniel R. Smiley, Chief Deputy Director, at 916-322-4336, ext. 410. You may also contact Jeffrey Rubin, Chief of the Disaster Medical Services Division, at 916-322-4336, ext. 419.

Agency's comments provided as text only.

County of Los Angeles
Department of Health Services
313 N. Figueroa
Los Angeles, CA 90012

July 22, 2005

Elaine M. Howle
California State Auditor
555 Capitol Mall, Suite 300
Sacramento, CA 95814

Dear Ms. Howle,

Enclosed is Los Angeles County's response to the audit draft report you sent on July 18, 2005.

The audit highlighted three recommendations to which our responses are listed.

Recommendation #1

Establish written procedures for following up on recommendations identified in after-action reports.

Response:

The Department of Health Services Bioterrorism Preparedness Program has since established written procedures which outline how departmental recommendations are identified in a public health emergency exercise and how they will be tracked for implementing needed changes.

Recommendation #2

Prepare after-action reports within 90-days of an exercise.

Response:

The Department will complete after action reports of exercises conducted by Public Health Staff within 90 days. This standard will be consistent with the new standards set in the Centers for Disease Control and Prevention Bioterrorism Cooperative Agreement effective August 31, 2005.

Elaine M. Howle
July 22, 2005
Page 2

Recommendation #3

Complete the 2002 Critical Benchmarks set by CDC Cooperative Agreement with the deadline of June 2004.

Response:

Los Angeles Bioterrorism Preparedness Program has completed all Critical Benchmarks for the referenced period.

If you have any questions or need additional information, please let me know.

Sincerely,

(Signed by: Thomas L. Garthwaite)

Thomas L. Garthwaite, M.D.
Director and Chief Medical Officer

Agency's comments provided as text only.

Sacramento County, Department of Health and Human Services
Division of Public Health
7001-A East Parkway, Suite 600
Sacramento, California 95823

July 25, 2005

Elaine M. Howle*
State Auditor
555 Capitol Mall, Suite 300
Sacramento, CA 95814

Dear Ms. Howle:

I am in receipt of a redacted draft copy of the report No. 2004-133 titled "Emergency Preparedness: More Needs to be Done to Improve California's Preparedness for Responding to Infectious Disease Emergencies. The following are responses prepared on behalf of Sacramento County Department of Health and Human Services, Public Health Division. The responses address those portions of the report that were viewable in the redacted draft.

The following recommendations are noted to apply to local public health:

To ensure that local public health departments are as prepared as they could be to respond to infectious disease emergencies, they should do the following:

- **Establish written procedures for following up on recommendations identified in after-action reports related to exercises**
- **Prepare after-action reports within 90 days of an exercise**
- **Complete the critical benchmarks set by a federal cooperative agreement.**

We are in agreement with the spirit and intent of all of three recommendations. However, it should be noted that the audit findings do not describe a context for prioritizing these recommendations, nor did the audit identify or communicate the factors that influence the consistent ability of local public health departments to achieve these goals.

Operation of local public health functions requires daily adjustment of priorities in order to respond to routine and emergency situations. Recent funding for bioterrorism preparedness represents the first significant influx of funding to local public health entities in many years and only partially compensates for a half-century of fiscal neglect. As a result, funding to date has done little to increase true infrastructure and, instead, has created a heavy burden of administrative requirements that often tend to overshadow and detract from the objectives of the preparedness grants. A complete description of how those requirements inhibit meaningful progress would be too lengthy for this report. In a sense, although much progress has been made in the area of preparedness, it has occurred in spite of the bureaucratic obstacles that local jurisdictions repeatedly encounter.

* California State Auditor's comments appear on page 85.

The lack of investment in Public Health infrastructure is reflected in the shortage of qualified Public Health Microbiologists. This long-term problem will become most acute in the next five years when many of the current Public Health Laboratory directors in California plan to retire. Although the Sacramento County Public Health Laboratory staff has advanced training and meets the Centers for Disease Control requirements for response to a bioterrorism attack, a protracted emergency could rapidly exhaust the staff due to the need for them to work overtime in order to protect the public. In short, there is little “surge capacity” in public health laboratory personnel.

The following comments relate specifically to the individual recommendations:

- **Establish written procedures for following up on recommendations identified in after-action reports related to exercises.**

The implication of this recommendation is that a written policy directing actions to be taken is necessary for those actions to occur. However, many actions in the category of good management practices are undertaken without written policy. There is no disagreement that systematic tracking of recommendations would prevent some items from “falling through the cracks.” To that end, staff has been directed to create a database to assist in this purpose. However, it should be noted that not all recommendations that arise from after action reports carry the same weight. Some fall in the “ideal world” category, but cannot be acted upon without additional resources. Those recommendations of major import are already tracked and followed through regular staff meetings, which are documented. Therefore, the value of compiling a comprehensive database of all recommendations is likely to be of marginal additional value in terms of actual outcome. It is also noted that, while written policy is important, the actual actions of staff represent the meaningful measurable outcome. Where resources do not always support both the writing of policy and the implementation of the actions, the implementation of actions will be the factor that enhances preparedness, not the written paragraph in the manual.

- **Prepare after-action reports within 90 days of an exercise.**

Although preparation of after-action reports within 90 days of an exercise is a standard that has been suggested by the auditors, it is not a requirement. Nonetheless, the practice of Sacramento County’s Public Health Division is to complete after-action reports as quickly as possible after exercises. This is accomplished within 90 days the vast majority of the time. Where it may not always be possible to finalize a formal document within 90 days, feedback is invited and documented within days of each exercise, so that the important concepts are captured when the information is fresh, regardless of the date on the final written report.

- **Complete the critical benchmarks set by a federal cooperative agreement.**

Although there is agreement that it is generally desirable to meet established timelines, the audit’s recommendation that critical benchmarks be completed strictly according to the requirements of the federal cooperative agreement over simplifies a complex situation. To describe the multifactorial issues involved would be too lengthy for this response. However, to arbitrarily set deadlines for achievement of benchmarks by local jurisdictions that vary widely in characteristics is an unrealistic prospect and represents naïve thinking. Clearly, established

benchmarks represent important goals that should be utilized as targets for planning. Definitions for when those benchmarks are met are often subjective. Self-critical jurisdictions that set high standards for themselves tend to be reluctant to ever consider certain types of benchmarks fully “met” because there is always ongoing improvement to be made. Local jurisdictions vary in the size and complexity of their emergency response systems and they range widely in resources available to them. Complicating the situation are factors such as preparedness grant application cycles being significantly out of synchronization with the funded year and by interruptions resulting from various unscheduled priorities that are superimposed by external authoritative entities over the local jurisdiction’s established work plan. In order to fully evaluate the basis for incomplete achievement of grant benchmarks in any local jurisdiction, auditors need to focus more closely on the process of pursuing completion, not whether the benchmark is judged to be fully accomplished. Not only would this reveal more accurately the local jurisdiction’s state of preparedness, but it would also bring to light the barriers to progress against which local jurisdictions must work.

Sincerely,

(Signed by: Karen Tait, M.D. for)

Glennah Trochet, M.D.
Health Officer

Blank page inserted for reproduction purposes only.

COMMENTS

California State Auditor's Comments on the Response From the Sacramento County Department of Health and Human Services, Division of Public Health

To provide clarity and perspective, we are commenting on the response from the Sacramento County Department of Health and Human Services, Division of Public Health (Sacramento). The numbers below correspond to the numbers we have placed in the margin of Sacramento's response.

- As we state on page 43, the local health laboratories indicate that, in general, they have sufficient staff to perform their day-to-day activities and are capable of responding to some emergencies. However, we also indicate that the laboratories have access to the State's system of mutual aid, which could help a local laboratory that becomes overwhelmed during an emergency.
- Despite Sacramento's assertion that our recommendation that it complete overdue critical benchmarks over simplifies a complex situation, the fact is, that failure to complete them could jeopardize its continued receipt of federal funds.
- As we state on page 15, there is a lack of any generally agreed upon measures of public health emergency preparedness. Therefore, we chose to review the status of California's implementation of the cooperative agreements issued by the Centers for Disease Control and Prevention and the Health Resources and Services Administration, as determined by meeting certain critical benchmarks, as one measure of California's preparedness to respond to an infectious disease emergency.

Blank page inserted for reproduction purposes only.

Agency's comments provided as text only.

County of San Bernardino
Department of Public Health
351 North Mt. View Avenue, Third Floor
San Bernardino, CA 92415-0010

July 26, 2005

Elaine M. Howle
California State Auditor
Bureau of State Audits
555 Capitol Mall, Suite 300
Sacramento, CA 95814

Dear Ms. Howle:

Following is the San Bernardino County Public Health Department's response to the report requested by the Joint Legislative Audit Committee, *Emergency Preparedness: More Needs to be Done to Improve California's Preparedness for Responding to Infectious Disease Emergencies*:

To date, San Bernardino County has not completed an interim plan to receive and manage SNS supplies. Because of staffing issues and partnering issues, San Bernardino County has not progressed as expected on SNS preparedness. The current staff is working hard on developing the interim SNS plan using the State template, and should have it completed and submitted to the State by the State-designated deadline of August 31, 2005.

Regarding laboratory working relationships, the County lab has had hiring and retention issues related to BT funded positions. The public health laboratory has had a long-term good working relationship with hospital laboratories. To strengthen the relationship, a laboratory bioterrorism response coordinator (BTR) will be hired within the next few weeks. The lab BTR coordinator primary responsibility is to function as liaison to hospital, environmental and veterinary laboratories and to HAZMAT. The lab BTR coordinator will establish more frequent interactions through onsite visits, planned training, workshops and simulation exercises and possibly the development of online training programs.

If you have any questions or would like to discuss these comments, please contact me at (909) 387-6218.

Sincerely,

(Signed by: Eric K. Frykman)

Eric K. Frykman, MD, MPH
Health Officer

Blank page inserted for reproduction purposes only.

Agency's comments provided as text only.

Public Health Department
Santa Clara Valley Health and Hospital System

Elaine M. Howle
Bureau of State Audits
555 Capitol Mall Suite 300
Sacramento, CA 95814

Dear Ms. Howle:

I have reviewed the redacted draft copy of your report on the audit requested by the Joint Legislative Audit Committee.

In response to the recommendations:

- Santa Clara County will be incorporating language in our Emergency Operations Plan stipulating the procedures we utilize to implement appropriate corrective action/s recommended as part of our after action reports;
- Our after action reports are currently prepared within 90 days of an exercise;
- Santa Clara County is 95% complete on all CDC benchmarks, and expects to complete all appropriate benchmarks by 08/30/05 to close out the fifth year of the first, five-year cycle for the BT grant.

The Lab Director has submitted some editing changes to the report. I am returning those changes to you under separate cover.

Please do not hesitate to call me if you have any questions.

Sincerely,

(Signed by: Rocio Luna for)

Guadalupe S. Olivas, PhD, Director
Santa Clara County Public Health Department

Blank page inserted for reproduction purposes only.

Agency's comments provided as text only.

Sutter County
Human Services Department
1445 Veterans Memorial Circle
P.O. Box 1510
Yuba City, CA 95992

July 25, 2005

Elaine M. Howle
California State Auditor
555 Capitol Mall, Suite 300
Sacramento, California 95814

Dear Ms. Howle:

Sutter County has received and reviewed the findings of your office regarding Emergency Preparedness in selected California County Health Departments.

We concur with your recommendations.

We do not have a written plan in place to assure that the deficiencies reported in our after-action reports are mitigated properly. We are correcting this.

We have not complied with all 14 of the critical benchmarks outlined in the federal cooperative agreement. We have completed 12 as of this date and will complete the 13th soon. The benchmark dealing with communications will not be met soon due to the expensive communication equipment that is needed to bring us to full compliance. We anticipate being fully compliant after the next round of grants.

Thank you for recognizing that much has been done to improve Emergency Preparedness regarding Infectious Disease Emergencies. In particular, we share your concern about the ability to employ adequate professional staff in our laboratory. We have experienced serious difficulty in recruiting and retaining professional staff, and look forward to a resolution of this difficult problem.

Sincerely yours,

(Signed by: Edmund C. Smith)

Edmund C. Smith
Director

cc: Members of the Legislature
Office of the Lieutenant Governor
Milton Marks Commission on California State
Government Organization and Economy
Department of Finance
Attorney General
State Controller
State Treasurer
Legislative Analyst
Senate Office of Research
California Research Bureau
Capitol Press