

2005-2006 Civil Grand Jury

City and County of San Francisco

**DISASTER PLANNING:
THE REALITIES OF
EMERGENCY / DISASTER MEDICAL PREPAREDNESS
IN SAN FRANCISCO**

Report Released: May, 2006

Purpose of the Civil Grand Jury

The purpose of the Civil Grand Jury is to investigate the operations of the various departments, agencies, and officers of the government of the City and County of San Francisco to develop constructive recommendations for improving their operations, as required by law.

Each Civil Grand Jury has the opportunity and responsibility to determine which departments, agencies and officers it will investigate during its one year term of office. To accomplish this task, the Civil Grand Jury divides into committees. Each committee conducts its research by visiting government facilities, meeting with public officials, and reviewing appropriate documents.

The nineteen members of the Civil Grand Jury are selected at random from a pool of thirty prospective jurors. San Francisco residents are invited to apply. More information can be found at:

http://www.sfgov.org/site/courts_page.asp?id=3680; or by contacting: Civil Grand Jury, 400 McAllister Street, Room 008, San Francisco, CA 94102; (415) 551-3605.

State Law Requirement

Pursuant to state law, reports of the Civil Grand Jury do not identify the names or provide identifying information about individuals who spoke to the Civil Grand Jury.

Departments and agencies identified in the report must respond to the Presiding Judge of the Superior Court within the number of days specified, with a copy sent to the Board of Supervisors. For each finding of the Civil Grand Jury, the response must either (1) agree with the finding, or (2) disagree with it, wholly or partially, and explain why. Further, as to each recommendation made by the Civil Grand Jury, the responding party must report either (1) that the recommendation has been implemented, with a summary explanation of how it was implemented; (2) the recommendation has not been implemented, but will be implemented in the future, with a time frame for the implementation; (3) the recommendation requires further analysis, with an explanation of the scope of that analysis and a time frame for the officer or agency head to be prepared to discuss it (less than six months from the release of this report); or (4) that recommendation will not be implemented because it is not warranted or reasonable, with an explanation of why that is. (California Penal Code, sections. 933, 933.05).

TABLE OF CONTENTS

	Page
I. Summary	1
II. Introduction	3
III. Procedure	5
IV. Background	6
A. Possibility of a Mass Disaster	6
B. Organization of Emergency Services in San Francisco	7
C. San Francisco's Health Care Delivery System	9
D. Components of Emergency Medical Planning	11
V. Discussion	12
A. Strategic Planning	12
B. Organizational Structure	15
C. Leadership	18
D. Surge Capacity	20
E. Training and Drills	23
F. Communications and Information Technology	26
G. Public Information and Education	29
VI. Conclusions: Findings and Recommendations	33
VII. Required Responses	36
VIII. Appendices	I
A. Acronyms	II
B. Hospital Utilization in San Francisco	III
C. Disaster Council Members	IV
D. Hospital Council Emergency Preparedness Scorecard	V
E. Department of Health Organizational Chart	VIII
F. EMS Landing Sites	IX
G. Sources Consulted	XI

PURPOSE OF THIS REPORT

The intent of this report is to evaluate the ability of the City and County of San Francisco to respond to the medical needs of its citizenry during a mass disaster/emergency; and to make recommendations to improve citywide preparedness, including the collaboration of the public and private health sectors.

I. SUMMARY

“Preparedness is the responsibility of every American.”¹

In response to problems identified in the handling of the September 11, 2001 and Hurricane Katrina disasters, this report evaluates medical emergency preparedness in San Francisco. The report begins with an overview of how emergency medical services are delivered, focusing on the roles of the Disaster Council, the Office of Emergency Services and Homeland Security (OES/HS) and the Department of Public Health (DPH). San Francisco’s healthcare delivery system in the public and private sectors is described, with a detailing of the city’s vulnerabilities in a mass disaster.

Key findings and recommendations relate to seven broad topics, as follows:

- 1. Strategic Planning:** San Francisco lacks a coherent strategic planning process for delivery of emergency medical services. Instead planning has been reactive, focusing on federal grant application requirements and benchmarks. Input from the private hospitals has been missing from the process, yet the private sector provides 80% of the hospital care in the city. The Mayor should expand the Disaster Council to include private sector members; the Disaster Council should have high-level work groups, organized by subject matter, feeding information into a “Master Strategic Plan.”
- 2. Organizational Structure:** Delivery of emergency services is hampered by the City’s bureaucratic structure; namely, information does not flow readily within or across city departments or agencies. This Civil Grand Jury identified the need for a high-level cabinet or clearinghouse to share ideas. Work groups under the Disaster Council could serve as a potential vehicle for such information-sharing.
- 3. Leadership:** To effectively coordinate emergency medical preparedness, a single articulate voice should oversee the delivery of care in the public and private sectors after a mass disaster. This individual should be a medical expert, with a proven track record of strong and effective leadership in the private or governmental sector. The

¹ Jim Hahn, Los Angeles Mayor, August 2, 2004 Press Release, Quoting Los Angeles Fire Department Chief William Bamattre, accessed on April 3, 2006, <<http://www.laobserved.com/archive/002286.html>>.

position should be located at OES/HS for maximum visibility; an alternative, but less preferable option, would be to locate the position at DPH.

4. **Surge Capacity:** The ability of hospitals to expand services in a disaster (known as “surge capacity”) is critical for emergency preparedness. Hospital representatives that were interviewed expressed concern that their emergency departments would be overwhelmed in a disaster, both by the seriously ill and by patients with non-acute conditions. Non-acute patients need to be diverted to alternative sites, such as local clinics, which in turn must have appropriate procedures for accepting referral patients. Hospitals and clinics need to participate in annual city-wide drills to test their ability to handle a large surge in patients.
5. **Training and Drills:** Emergency drills require prompt issuance of After Action Reports, detailing problems identified during the drills to ensure timely corrective action. Provided in this Civil Grand Jury report are details on drills held in October and November, 2005, where After Action Reports were released many months later.
6. **Communications and Information Technology:** The City is in need of a detailed communications work plan to cover, at minimum, three problem areas: phones, sirens and the development of a 311 call center (to alleviate misuse of 911). City departments should regularly update and distribute contact information for key emergency personnel. Contact lists for key personnel at hospitals also need to be regularly distributed.
7. **Public Information and Education:** The City should implement a mass media campaign to inform San Franciscans about the realities of a potential disaster and the necessary steps to take in deciding where to seek medical care. Six critical messages to include in the campaign are described. Recommendations for upgrading the www.72hours.org Web site are also made.

II. INTRODUCTION

“Since the Fall 2001 terrorism attacks, there has been a flurry of activity focused on the preparation of emergency preparedness plans. The emphasis on plans substantially understates what are really needed – emergency preparedness programs.... [T]his level of preparedness implies a tightly knit system among the key emergency preparedness participants that simply does not exist in most communities today.”²

There has been much publicity about the chaos and suffering in New York City following September 11, 2001, and in New Orleans during and after Hurricane Katrina in August 2005. Given the documented problems in New York City and New Orleans, the Civil Grand Jury decided to investigate just how prepared the City and County of San Francisco is for a catastrophe, whether that be an earthquake, terrorist attack, or any other disastrous event. We have focused on the health aspects of this preparedness with special reference to the Department of Public Health and the Office of Emergency Services and Homeland Security. However, caring for the sick and injured does not occur in a vacuum. Therefore, this report will also touch on the readiness of the San Francisco Fire Department (SFFD) and San Francisco Police Department (SFPD) to support medical preparedness.

This report is in no way meant to find blame, accuse, or denigrate any individuals or city departments/offices for the shortcomings or gaps in preparedness identified in this report. It is our intent to inform and educate. During our investigation, we learned about significant improvements in emergency preparedness since the last investigation by the Civil Grand Jury in 2002-2003.³ The Civil Grand Jury is pleased to report notable progress in securing federal grants, in regional planning, and in the provision of administrative services. Nevertheless, deficiencies remain, particularly in the areas of strategic planning, interdepartmental communications, and the integration of preparedness efforts in the public and private sectors. This report identifies challenges facing city government as it seeks to improve its emergency planning process.

In evaluating medical preparedness, the Civil Grand Jury has benefited from the extensive studies conducted since Hurricane Katrina destroyed much of New Orleans. In particular, two lengthy reports, one by a U.S. House of Representatives Select Bipartisan Committee, *A Failure of Initiative*⁴, and the other by the White House, *The Federal Response to*

² Joint Commission on Accreditation of Healthcare Organizations, *Health Care at the Crossroads: Strategies for Creating and Sustaining Community-wide Emergency Preparedness Systems*, 2003, p. 6.

³ “*It’s A Catastrophe: The State of Emergency Planning in San Francisco*,” A Report of the 2002-2003 Civil Grand Jury, June 19, 2003.

⁴ U.S. House of Representatives, 109th Congress, 2nd Session, *A Failure of Initiative: Final Report of the Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina*, accessed on February 15, 2006, <www.gpoaccess.gov/congress/index.html>.

*Hurricane Katrina*⁵, have provided key insights into the problems that occurred in New Orleans. These include:

1. Local difficulties coordinating the provision of medical care, due to poor planning and inadequate pre-positioning of medical supplies and equipment;
2. Lack of adaptability and flexibility in government responses;
3. Poor execution of the local, state, and national responses;
4. Lapses in command and control due to insufficient numbers of qualified and trained personnel;
5. Communication breakdowns and information gaps, leading to delays in decision making; and
6. Ineffective, confusing, and uncoordinated public communications.

An overarching conclusion of both reports was that during the Katrina catastrophe there was a failure of leadership at the local, state and federal levels.

In this investigation, the Civil Grand Jury identified seven broad areas of concern: 1) strategic planning; 2) the organizational structure used to deliver emergency services in San Francisco; 3) the ability of local hospitals to expand medical services in an emergency, known as “surge capacity”; 4) the standards of medical leadership within the public and private sectors; 5) the use of training and drills to assess local readiness for an emergency; 6) communications and information technology; and, finally, 7) public awareness and education.

Another area of concern involved the funding available to support emergency preparedness. Documents from the Office of the Budget Analyst (for the Board of Supervisors) indicate that OES/HS has been awarded \$82.7 million in federal funds from FY 2001-2002 through FY 2005-2006.⁶ Of this amount, approximately \$38.0 million (46 %) has been expended or encumbered. Most of the \$44.7 million (54.1%) in unspent funds dates from FY 2003-2004 through FY 2005-2006. According to the current federal directive, any unspent funds will expire at year end (December 2006).

Starting in FY 2006-2007, federal Department of Homeland Security (DHS) grant funds will be allocated to a regional consortium composed of ten Bay Area counties and their respective cities.⁷ Also, beginning in FY 2006-2007, the Homeland Security Grant Program integrates five separate federal programs for which funding in FY 2005-2006 amounted to

⁵ Office of the President of the United States, *The Federal Response to Hurricane Katrina: Lessons Learned*, February 2006, as prepared by Frances Fragos Townsend, Assistant to the President for Homeland Security and Counterterrorism, accessed on March 1, 2006, <<http://www.whitehouse.gov/reports/katrina-lessons-learned.pdf>>.

⁶ The total of \$84.5 million does not include any funds that individual city departments may have received directly from federal or state agencies, without the involvement of OES/HS. Detail on federal funds awarded, expended, and encumbered obtained from Office of the Budget Analyst, e-mail communication of May 8, 2006.

⁷ The ten counties are Alameda, Contra Costa, Marin, San Francisco, Santa Clara, Solano, San Mateo, Sonoma, Napa, and Santa Cruz, plus the Golden Gate Bridge District and the Port/Airport in Oakland.

\$2.345 billion.⁸ In FY 2006-2007 federal funding for the combined programs will be reduced to \$765 million nationwide.⁹ Meanwhile, the San Francisco Bay Area region has submitted a two year proposal with a budget of \$322 million.

At this time, it is unclear what the impact of regionalization and reduced funding will be on the sustainability of San Francisco's emergency programs. Because the budget analyst undertook a major study on the funding of emergency preparedness concurrent with the Civil Grand Jury's investigation, funding issues were not a primary focus of this study.

III. PROCEDURE

The Civil Grand Jury's evaluation of emergency/disaster preparedness involved a review of steps taken toward that end in the public sector, through various city departments and agencies, and in the private sector, through local hospitals and their coordinating body, the Hospital Council of Northern and Central California (HCNCC). As a result, there are three levels of findings from this Civil Grand Jury's analysis: 1) those that apply citywide to the public and private sectors, 2) those that apply across city departments, and 3) those that pertain to operations within a given department.

In deciding how to approach its analysis, the Civil Grand Jury began by looking at planning guidelines, grant applications, rules and regulations, and recommendations issued by:

1. Federal agencies, such as the Health Resource Services Administration (HRSA), the Department of Homeland Security (DHS), and the Centers for Disease Control and Prevention (CDC);
2. National organizations, such as the American Red Cross, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), and the American College of Emergency Physicians;
3. State agencies, such as the Emergency Medical Services Authority, the Governor's Office of Emergency Services, the Emergency Preparedness Office, and the Office of Statewide Health Planning and Development (OSHPD); and
4. Local government, such as the Mayor's Office, OES/HS, DPH, and SFFD.

The Civil Grand Jury developed its findings through interviews with involved parties from the public and private sectors, by attending meetings of various governmental entities and hospital committees, and by reviewing write-ups in local media and in publications of various health-related organizations.

⁸ See U.S. Department of Homeland Security, Office of Grants and Training, accessed on March 30, 2005, <http://www.dhs.gov/interweb/assetlibrary/Grants_Summary_StLocal.xls>.

⁹ Rachel Gordon, "\$320 Million Wish List for Homeland Security for Everything from Terrorist Attacks to Quakes," *San Francisco Chronicle*, February 24, 2006.

The contents of this report reflect the status of medical emergency preparedness in San Francisco as of April 5, 2006. As noted earlier, unspent federal grant monies will expire in December 2006, while future monies involving regional collaboration will be greatly reduced. Given the potential loss of federal funds at year end, city departments involved with preparedness are currently speeding up their planning, purchasing and contracting efforts. Therefore, some details provided in this report may change within a short period of time, but the overall recommendations in the report will still need to be addressed.

IV. BACKGROUND

The background information presented in this section looks briefly at the likelihood of San Francisco facing a major disaster. It then outlines the organization of emergency services in San Francisco and describes the City's health care delivery system.

A. Possibility of a Mass Disaster

As a financial and commercial center and a city with well-known tourist sites, San Francisco has been identified by the DHS as a potential terrorist site. Within the realm of possibility are deployment of hazardous chemical materials in the Bay Area Rapid Transit System or the Municipal Railway System (MUNI), dissemination of aerosolized biological agents (in the form of ultramicroscopic solid or liquid particles) in public buildings or restaurants, or a bomb attack on a major building or city location.

San Francisco also faces the probability of a major earthquake devastating the city and surrounding communities. The United States Geological Services has reported that "there is a 62% probability of at least one magnitude 6.7 or greater quake, capable of causing widespread damage, striking the San Francisco Bay region before 2032."¹⁰ For the San Andreas Fault, considered "the master fault of the San Francisco Bay Region," the probability is 24%, with a rupture of 7.5 or more at 9%.¹¹ Given anticipated damage to local streets, freeways and bridges, and the fact that San Francisco is located on a peninsula surrounded by water on three sides, there are significant issues regarding access to medical services and reliance on mutual aid from surrounding counties.

¹⁰ Working Group on California Earthquake Probabilities, *Executive Summary: Earthquake Probabilities in the San Francisco Bay Region: 2002-2031*, U.S. Geological Survey, Open-File Report 03-214, accessed on March 31, 2005, <<http://pubs.usgs.gov/of/2003/of03-214>>.

¹¹ *Ibid.*, at 6:7.

B. Organization of Emergency Services in San Francisco

The San Francisco Administrative Code stipulates “an emergency shall exist when proclaimed by the Mayor.”¹² The Mayor, in turn, is the chair of the Disaster Council, which currently is composed of 22 to 30 additional members.¹³ Members of the Disaster Council include officers from those departments involved with emergency preparedness, as well as three members from the Board of Supervisors, the Office of the Controller and a representative from the American Red Cross. The Mayor has the authority to appoint “other representatives of civic, business, labor, veterans, professional, or other organizations having an official emergency responsibility,” but none are currently serving on the Disaster Council.¹⁴

The Director of OES/HS is the executive secretary of the Disaster Council, which meets quarterly. The Disaster Council is responsible for developing an emergency plan for the “effective mobilization of all the resources of the community, both public and private.” It also is empowered to recommend to the Board of Supervisors such ordinances, resolutions, rules and regulations necessary to implement the city’s emergency plan.¹⁵

OES/HS has responsibility for coordinating the emergency activities of the various city departments. During the past four years, these activities have been primarily supported through a federal allocation of approximately \$82.7 million in grants. (Twenty-one out of twenty-six positions at OES/HS are currently funded through federal monies.) OES/HS maintains an Emergency Operation Center (EOC) to coordinate emergency response activities to be carried out by the Mayor and designated city departments, including the Department of Public Health, the Fire Department, the Police Department, and the Sheriff’s Department. On the OES/HS Web site is the City’s 107 page *Emergency Operations Plan*, dated January 2005. This plan defines five key components to emergency preparedness: training, conducting exercises, emergency planning, public education and awareness, and resource management.¹⁶ However, less than two pages deal explicitly with medical services and public health during an emergency; instead the plan delegates these responsibilities to DPH.

Specific DPH responsibilities in an emergency include allocating available medical resources in the public and private sectors, prioritizing requests from healthcare providers, obtaining mutual aid from surrounding areas, and determining the impact of any disaster on the healthcare infrastructure in San Francisco. DPH is also responsible for handling emergency responses to environmental, chemical, radiological, nuclear, explosive and infectious disease events. Two entities within DPH handle emergency preparedness. The Office of Policy and Planning (OPP), prepares grant applications to various federal agencies, writes DPH’s own *Emergency Operations Plan*, and manages overall disaster planning. The Emergency Medical Services Agency (EMSA) oversees the regulation of emergency medical technicians (EMTs) and paramedics, maintains a patient disaster registry for the elderly and disabled, and establishes

¹² San Francisco Administrative Code, Ordinance 275-05, Approved November 30, 2005, sections 7.1-7.18.

¹³ San Francisco Office of Emergency Services and Homeland Security, Disaster Council, *Revised Meeting Agenda*, January 11, 2005, lists 22 members plus the Mayor. The distributed Agenda on January 17, 2006 lists 30 members, plus the Mayor.

¹⁴ San Francisco Administrative Code, Section 7.3(d).

¹⁵ *Ibid.*, at 7.4(a) and (b).

¹⁶ City and County of San Francisco, *Emergency Operations Plan:Part I: Basic Plan*, January 2005, p. 2-2.

standards for a broad range of emergency services including communication, transportation, hospital services, data collection, public education and information. In recent years DPH has been awarded \$18.6 million in federal grants and has added approximately twenty staff positions dedicated to disaster preparedness.¹⁷

The mission of the SFFD, apart from its traditional firefighting role, is to save lives by providing emergency medical and rescue services. Out of a total of 1,670 firefighters, 238 individuals are trained as paramedics and 1,118 as EMTs; in effect, four out of every five firefighters (81.2%) have been trained to provide emergency medical services. SFFD currently operates 19 Medic Units on a 24-hour basis, plus one or two ambulances operating on a ten hour basis.¹⁸ The department has received federal funding for an Emergency Structural Collapse Response Team to rescue individuals trapped in fallen structures. The SFFD also supports the Neighborhood Emergency Response Team (NERT) program to provide disaster training to San Francisco residents.

Each city department has its own emergency plan and its own disaster command center. A major issue facing all departments is the fact that a high percentage of city employees, as well as hospital/medical personnel, do not live within San Francisco city limits. For example, out of a total SFFD force of 1,600, approximately 65% reside outside of San Francisco. Depending on the kind of emergency, the day of the week, and the time of day, basic services may be curtailed until employees return to the city.

California Government Code Section 3100 designates all public employees as Disaster Service Workers (DSW), regardless of their job classification. OES/HS has developed a program, "Operation Safe Return," to facilitate transportation of city workers and hospital/medical personnel by ferry if bridges and roadways are damaged or impassable. The city's plan assumes that ferries will land passengers at the Ferry Building. From there, MUNI will have three routes that pass within a few blocks of every hospital in the city.

As of March 25, 2006, the City's Department of Human Resources has produced over 20,000 employee badges for city workers to identify them as DSW. The City plans to supply all city workers with the new badges by the end of April 2006.¹⁹

Going forward, as federal funding for emergency preparedness diminishes and regional planning is stressed, the sustainability of the City's existing emergency programs becomes an issue. Staffing cutbacks at OES/HS and DPH seem inevitable since some 40 positions in these two departments are funded entirely through federal grants.

¹⁷ Department of Public Health, Report on Homeland Security/Disaster Preparedness and Response Activities, *Report to the Health Commission*, April 4, 2006.

¹⁸ Joanne Hayes-White, Chief of San Francisco Fire Department, Letter to Civil Grand Jury dated April 12, 2006.

¹⁹ City and County of San Francisco, Department of Human Resources, Memorandum DHR No. 01-2006, April 12, 2006. Also see the volunteer center, "City and County of San Francisco Disaster Service Worker ID Distribution, last updated on March 25, 2006.

C. San Francisco's Health Care Delivery System

Within the public sector, DPH provides inpatient, outpatient and emergency services through its Community Health Network (CHN), which includes San Francisco General Hospital Medical Center (SFGH), the San Francisco Behavioral Health Center for mental health services, and Laguna Honda Hospital for skilled nursing and long-term care. SFGH accounts for approximately 13% of general acute/surgical bed days in San Francisco and 20% of total bed days.²⁰ (See Appendix B for detailed statistics.) The Primary Care Division of CHN includes six clinics at SFGH and 15 community clinics located throughout the city.²¹ Five non-profit private clinics are affiliated partners of the City's CHN consortium.²²

State-owned facilities include the University of California at San Francisco (UCSF) Medical Center, with UCSF Children's Hospital, and UCSF Medical Center at Mount Zion. Federally-operated facilities include the Veterans Affairs Hospital at Fort Miley and its clinic network.

Private sector hospitals include California Pacific Medical Center (CPMC), with three campuses (California, Davies and Pacific), Chinese Hospital, Kaiser Permanente Medical Center, St. Francis Memorial Hospital (with the only burn center in San Francisco), St. Luke's Hospital (now part of Sutter Health, along with CPMC), and St. Mary's Medical Center. Additionally, Seton Hospital in northern San Mateo County participates in San Francisco's emergency planning activities. Each hospital has its own emergency preparedness protocols, with HCNCC coordinating emergency/disaster-planning meetings for all public and private hospitals on a citywide basis. OES/HS and DPH representatives also attend these meetings.

While San Francisco has a highly sophisticated delivery system, it does have four distinct vulnerabilities:

1. As in other cities nationwide, San Francisco faces heavy patient demand for emergency services in the face of strained inpatient capacity, nursing shortages, and a growing number of uninsured.²³ When emergency departments (EDs) are operating at full capacity, they stop accepting additional ambulance patients. These patients are then diverted to other facilities to receive treatment. For the twelve months beginning in December 2004, San Francisco hospitals were on diversion 10% of the time. The diversion rate by hospital ranged from a low of 0% at Kaiser Permanente Medical Center to a high of 21% at SFGH and 16% at UCSF.²⁴ The diversion of patients, some

²⁰ California Office of Statewide Health Planning and Development, 2004 Hospital Data File from Annual Utilization Report, accessed on March 3, 2006 <<http://www.oshpd.ca.gov/hqad/Hospital/hosputil.htm>>

²¹ San Francisco Department of Health, *Annual Report for Fiscal Year 2004-2005*, p. 37.

²² These clinics include the Haight Ashbury Free Medical Clinic, Lyon-Martin Women's Health Services, Mission Neighborhood Health Center, Native American Health Center, and South of Market Health Center. For locations of all DPH and private affiliated clinics, accessed on March 3, 2006, <<http://www.sfdph.org/chn/HlthCtrs/MapHlthCtr.htm>>.

²³ Ann S. O'Malley, Anneliese M. Gerland, Hoangmai H. Pham and Robert A. Berenson, "Rising Pressure: Hospital Emergency Departments as Barometers of the Health Care System," Center for Studying Health System Change, *Issue Brief No. 101*, November, 2005.

²⁴ San Francisco Emergency Medical Services Agency, accessed on March 20, 2006 <<http://www.sanfranciscoems.org/index.php?cat=no&name=diversionReports&exten=html>>

of whom are uninsured, from SFGH to the private hospitals has been a source of tension between DPH and local hospitals. More importantly, the high diversion rates are indicative of a statewide and a nationwide phenomenon of “severe Emergency Department crowding at public hospitals” serving indigent populations with limited access to primary care services.²⁵

2. The only Level I Trauma Center in San Francisco is located at SFGH, where a trauma team is available 24 hours a day, 7 days a week. Pediatric trauma is referred to Children’s Hospital in Oakland when appropriate. Since SFGH does not maintain multiple trauma teams to care for the acutely injured, patients may need to be diverted to other local or regional hospitals in a mass emergency. This situation is problematic, at best, since the other local hospitals lack full trauma capabilities and access to regional hospitals could be blocked as a result of damaged bridges and freeways or gridlock on the roads out of the city.
3. None of the San Francisco hospitals has a functioning helipad, including SFGH. A 2003 study reported that of the 25 largest cities in the United States, only San Francisco fails to provide direct helicopter access to any of its hospitals.²⁶ The San Francisco Health Commission and the state Emergency Medical Services Authority have endorsed San Francisco’s Trauma Care System Plan, which calls for air medical access at SFGH. Planning for a helipad awaits completion of a Draft-Environmental Impact Report and a commitment for project funding.²⁷ For emergency planning, the city has identified 29 helicopter landing sites and their nearest hospitals, but most of these sites remain untested.²⁸ (See Appendix F)
4. Many of the hospitals in San Francisco need seismic retrofitting and/or have plans to rebuild. A 2001 evaluation by the California Office of Statewide Health Planning & Development (OSHPD) found that in a major earthquake 62% of the hospital buildings in San Francisco were “at significant risk of collapse” as compared to 37% statewide.²⁹ Should one or more hospitals be severely damaged or collapse in an earthquake, the intake process at the remaining hospitals is likely to be overwhelmed within a few hours, effectively closing off these hospitals to new patients.

All acute care hospitals must meet state seismic requirements by January 2008 unless they file for extensions and agree to meet the state standards on or before January 2013. As of February 2006, extension requests had been filed by all three

²⁵ Benjamin C. Sun et al., “Effects of Hospital Closures and Hospital Characteristics on Emergency Department Ambulance Diversion, Los Angeles County, 1998 to 2004,” *Annals of Emergency Medicine* 47:309-316, April 2006.

²⁶ Gerson/Overstreet Architects, *San Francisco General Hospital Air Medical Access Needs and Feasibility Study: September 2002-March 2003*, Prepared for San Francisco Health Commission, March 4, 2003, p. 2-22.

²⁷ Chris Wachsmuth, *SFGH Medical Helipad Project Timeline*, , December 5, 2005, accessed on March 29, 2006 <<http://www.sfdph.org/Meetings/SFGH/Attach/JCCSFGHM11082005AttachA.pdf>>.

²⁸ Emergency Medical Services Agency Aircraft Utilization, September 1, 2005, pp.16–17, Policy Reference #4020, accessed on April 5, 2006, <http://www.sanfranciscoems.org/policy/SFEMSA_0905_Policy_4020_EMS_Aircraft_Utilization.pdf>.

²⁹ California Office of Statewide Health Planning and Development, *Summary of Hospital Seismic Performance Ratings*, April 2001.

campuses of CPMC, Laguna Honda Hospital, UCSF at Mt. Zion, St. Mary’s Medical Center, and St. Francis.³⁰

In effect, a major unknown facing San Francisco will be the physical integrity of its hospitals after a major earthquake. For this reason, San Francisco has been actively involved in a regional planning process with Marin County and San Mateo County, and with a ten county plan formulated under the latest DHS grant application.

D. Components of Emergency Medical Planning

Emergency medical preparedness involves a broad range of services and the involvement of numerous city departments/agencies plus the private sector, as previously discussed. Table I displays a series of community-wide recommendations for medical preparedness developed by the Joint Commission on Accreditation of Healthcare Organizations (JHACO). A summary of identified gaps, using these recommendations, is included as Table II, Section VI.

TABLE I: COMPONENTS OF EMERGENCY PREPAREDNESS

<i>Community-wide Emergency Preparedness Recommendations:</i> ³¹	<i>See discussion in Section V on:</i>
1. Determine standardized, universal measures of surge capacity.	Surge Capacity
2. Identify latent space capabilities and human resources capacities.	Surge Capacity
3. Ensure hospitals have a 48-72 hour stand-alone capability through the appropriate stockpiling of necessary medications and supplies.	Surge Capacity
4. Establish mutual aid agreements among community hospitals and other health care organizations.	Surge Capacity
5. Support the provision of decontamination capabilities in each hospital.	Surge Capacity
6. Assign highest priority to training of direct caregivers and their receipt of protective equipment, vaccinations, prophylactic antibiotics, chemical antidotes, and other protective measures.	Surge Capacity
7. Develop a centralized community-wide patient locator system.	Surge Capacity
8. Engage the mass media in the emergency preparedness planning process.	Public Information & Education
9. Assure direct caregiver access to current information about the emergency on a continuing basis.	Communications/IT
10. Create redundant, interoperable communication capabilities.	Communications/IT

³⁰ California Office of Statewide Health Planning and Development, Facilities Development Division, *Summary of Requests for Extensions to Seismic Safety Deadlines*, April 28, 2006.

³¹ Joint Commission on Accreditation of Healthcare Organizations, *Health Care at the Crossroads: Strategies for Creating and Sustaining Community-wide Emergency Preparedness Systems*, 2003.

11. Regularly test, at least yearly, community emergency preparedness plans through reality-based drill.	Training & Drills
12. Prospectively establish appropriate metrics to assess effectiveness of emergency plan.	Training & Drills
13. Assure inclusion of all community emergency preparedness program participants in emergency plan tests	Training & Drills
14. Explore alternative options for providing sustained funding for emergency preparedness activities.	Organizational Structure

In its review of various documents the Civil Grand Jury identified two other critical elements that determine the overall effectiveness of medical emergency preparedness: organizational structure and leadership. The report on Hurricanes Katrina and Rita by the federal General Accountability Office contained this notable statement: “In the absence of timely and decisive action and clear leadership responsibility and accountability, there were multiple chains of command, a myriad of approaches and processes for requesting and providing assistance, and confusion about who should be advised of requests...”³² This report will look at the ability of two key City departments, OES/HS and DPH, to take “timely and decisive action” and to exhibit “clear leadership responsibility and accountability.”

V. DISCUSSION

A. Strategic Planning

A central goal of quality improvement is to maintain what is good about the existing system while focusing on the areas that require improvement. Strategic planning, sometimes called "Long Range Planning," is a useful mechanism to improve the functioning of health care organizations and facilities. Most organizations of necessity spend their time on the minutiae of daily operations, "putting out brush fires" with little opportunity to take a look at the "big picture," and to plan the future course of the organization.³³

As noted previously, OES/HS, which reports directly to the Mayor, is responsible for coordinating emergency preparedness across multiple departments. The Disaster Council, for which the Director of OES/HS is the executive secretary, must develop “a plan for meeting any emergency” and for ensuring the “effective mobilization of all the resources of the community.”³⁴ The City’s Disaster Council has not been a forum for the sharing of ideas, but a

³² U.S. General Accountability Office, GAO-06-365R, Enclosure I, “Statement by Comptroller General David M. Walker on GAO’s Preliminary Observations Regarding Preparedness and Responses to Hurricanes Katrina and Rita,” February 1, 2006.

³³ *Strategic Planning for Healthcare Organizations*, Montana Area Health Education Center, accessed on April 5, 2006 <<http://healthinfo.montana.edu/mtahec/stratpln.html>>.

³⁴ San Francisco Administrative Code, Sec. 7.4.

vehicle to provide department heads with a quarterly update on federal grant applications, program developments at OES/HS, training, and future events. Currently the Disaster Council is composed entirely of representatives from the governmental sector, with the exception of an American Red Cross participant. Missing are health care providers from the private sector, including the local hospitals that provide 80% of the patient care in San Francisco. (See Appendix C).

While the state of emergency preparedness in San Francisco has been significantly upgraded since the last Civil Grand Jury Report of 2002-2003, the City still lacks a coherent strategic planning process. Instead, planning has been reactive and focused on federal requirements or benchmarks built into grant applications. A key example relates to surge capacity or the ability of the health care system to expand services in an emergency. Using HRSA measures, DPH originally calculated hospital bed surge capacity based on San Francisco's weekday population of approximately 1.1 million and a goal of one bed per 2,000 in population. This calculation resulted in a need for 550 surge beds which is an increase of 30% above the average daily hospital census in San Francisco. More recently, the number has been increased to 600 beds, or 35% above the average daily hospital census.

Local hospitals have felt that the HRSA number is highly arbitrary. As noted by several hospital affiliated representatives, what plan does San Francisco have if there are mass casualties numbering in the thousands? What happens if one or two hospitals collapse? Where will their patients be transported and how? What alternative care sites will be set up? Will these sites have appropriate staffing, supplies, and equipment? Hospital interviewees felt that they have yet to see any documents with appropriate answers.

Another example relates to the purchasing process. In regards to disaster supplies and training, the City should better strategize fundamental needs, logistics and training with the hospitals. DPH purchased equipment and supplies for local hospitals, including Conex boxes (storage boxes which can be relocated), emergency generators, decontamination showers, satellite phones, and surge tents (to expand hospital capacity). However, several hospital interviewees noted that the equipment had just shown up on their doorsteps, without any instructions or training to ensure appropriate use. (Training is presently planned for later in the year.) Complete installation of communication equipment purchased by DPH has been delayed because hospitals need to obtain approval from OSHPD to erect roof top antennae. Meanwhile, city employees mentioned that there are no contracts signed between DPH and the hospitals, calling for equipment maintenance because the proposed contracts never received legal approval from the City.

In response to being largely ignored in the planning process, local hospitals set up their own voluntary Emergency Preparedness Task Force in 2002, under the auspices of their trade association HCNCC. Generally, it has been through attendance at these meetings that personnel from DPH and OES/HS learn about hospital preparedness concerns, such as communications, patient tracking, surge planning, mutual aid and JCAHO requirements.

At the request of the hospital leadership, the HCNCC Emergency Preparedness Task Force recently completed its own "Emergency Preparedness Scorecard" to facilitate the planning

process. (A copy is included in Appendix D.) This scorecard defines tasks to be completed in three month increments, beginning July 1, 2006.³⁵ These tasks encompass a broad range of emergency services, with responsibilities assigned to hospital personnel and/or DPH.

Finding A.1: San Francisco lacks an effective strategic planning process to deal with emergency preparedness. The situation is particularly important in the area of medical preparedness, since private hospitals provide the bulk of health care in the city. Yet, historically private providers have had only limited input into the planning process.

➤ **Recommendation A.1.a:** The Civil Grand Jury recommends that OES/HS develop a strategic planning process for emergency preparedness, with defined goals and priorities. The process should spell out specific tasks, deliverables, and timelines and should include input from both the public and private sectors.

➤ **Recommendation A.1.b:** Because the Disaster Council has not been used effectively for the planning process, the Civil Grand Jury recommends that the Mayor, as chair of the Disaster Council, make the following changes:

1. Redefine the role of the Disaster Council, with a new emphasis on using formal work groups involving key stakeholders from the public and private sectors;
 - a. Work groups to be organized by topic, such as transportation, health, communications, and public works.
 - b. One work group, dealing specifically with health/medical preparedness, to include representatives from local hospitals, clinics, and the physician community, at minimum.
2. Develop planning goals for each work group, with enumeration of specific action steps, implementation schedules, and budgets:
 - a. Prioritization of goals
 - b. Identification of strengths and weaknesses in existing emergency preparedness programs
 - c. Determination of any baseline data needed to set measurable targets for drills and exercises, where appropriate.
 - d. Products from each work group to be rolled into the Master Strategic Plan incorporating City Plans, Departmental Plans, Hospital/ Health Facility Plans, private sector emergency plans.
3. Initiate a “Master Strategic Planning Committee” and place representatives from each work group on the Master Strategic Planning Committee.

³⁵ Hospital Council of Northern and Central California, communications from Ron Smith re Emergency Preparedness and Scorecard, received by the Civil Grand Jury March 23, 2006.

4. Use an outside consultant – an expert in disaster preparedness and planning – to act as facilitator at meetings of the Master Strategic Planning Committee and to oversee the writing of the Master Strategic Plan, which should subsequently be updated annually.

► **Responses required from:**

Office of the Mayor (60 days), Board of Supervisors (90 days), OES/HS (60 days), and HCNCC (optional). For further details, refer to Section VII.

B. Organizational Structure

“Too often during the immediate response to Katrina, sparse or conflicting information was used as an excuse for inaction rather than an imperative to step in and fill an obvious vacuum. Information passed through the maze of departmental operations centers and ironically-named “coordinating” committees, losing timeliness and relevance as it was massaged and interpreted for internal audiences.”³⁶

San Francisco’s Administrative Code states explicitly that the Director of OES/HS “shall be subordinate only to the Mayor and he or she shall work in close cooperation with the Disaster Council and with the heads of the several departments of the municipal government and the officers in charge of the Emergency Services.”³⁷ During its six month investigation, the Civil Grand Jury did not see the Director of Public Health at any events associated with medical preparedness – namely, a January meeting of the Disaster Council, monthly “table top” drills/Disaster Forums, and monthly meetings of the HCNCC Emergency Preparedness Task Force. It appears that he has delegated full responsibility for medical emergency preparedness to the Office of Policy and Planning, headed by an able administrator without a background in emergency medical services. Within DPH, the agency responsible for emergency services, EMSA, is headed by a medical director but is subordinate to OPP.

DPH’s draft *Emergency Operations Plan*, dated January 12, 2006, confirms the relegation of EMSA to secondary status. The plan calls for two lines of leadership succession for any emergency or disaster: departmental management and medical management. Administratively, if DPH’s Director of Health is unavailable, then the next person in line is the Deputy Director heading OPP, followed by the Deputy Director responsible for Community Health Programs. As the City’s health officer, the responsibilities of the director pass through five deputy health officers before reaching the health officer who heads EMSA.³⁸ In effect, DPH administrators have relegated EMSA to a minor role in their emergency protocols. Yet, EMSA is the agency legally designated by the state with the regulation and oversight of pre-hospital medical services.

To date, reporting lines to OES/HS have been up through departments – based on the seniority of personnel using pre-defined lines of communication. For example, within DPH,

³⁶ *A Failure of Initiative*, p. 360

³⁷ San Francisco Administrative Code, Sec. 7.7.

³⁸ San Francisco Department of Health, *Emergency Operations Plan*, draft dated January 12, 2006, pp. 1-2 to 1-4.

personnel in EMSA must report through DPH's Office of Policy and Planning, which in turn reports up to OES/HS. While informal communications do take place horizontally across departments to a limited extent, the reporting process, based on the chain of command, takes precedence over the informal process. For example, in DPH, staff in EMSA cannot override policies set by OPP, or suggest alternatives directly to OES/HS. (See DPH organization chart in Appendix E.)

The apparent "silo" mentality that characterizes emergency planning in San Francisco has some significant negatives with respect to relations with the private sector, flow of information within and across departments/agencies, and effective coordination of public and private planning efforts.

With regards to the private sector, the bureaucratic approach to planning has effectively cut off valuable input from the city's private hospitals and clinics and created a "them versus us" mentality. Examples include:

1. While hospital, clinic and ambulance personnel do sit on some DPH committees including the Disaster and Emergency Operations Advisory Committee, the Infectious Disease Working Group, and the Hospital Pharmacy Emergency Preparedness Working Group, their role in the planning process is largely geared to review and comment, not policy-making. (In April 2006, two hospital representatives were invited to participate in an existing Multi-Casualty Working Group, headed by DPH.). The desire of the hospitals to be a part of the emergency planning process was repeatedly emphasized at HCNCC Emergency Preparedness Task Force meetings and in interviews with various hospitals representatives.

Without a direct voice into the overall planning process, hospitals may not always buy into city directives. As noted by one hospital interviewee, "We haven't taken time to download DPH's emergency procedures."

2. As previously noted, the hospitals in the city have developed their own Emergency Preparedness Scorecard, with specific responses spelled out for DPH, rather than both parties – the hospitals and DPH - jointly producing a combined planning tool.

Equally a problem is the fact that information does not flow readily within departments or from one city department or agency to another. In the words of one interviewee, "The city departments are built around silos for political safety." Examples include the following:

1. A number of interviewees talked about the reluctance of their superiors to acknowledge problems in emergency exercises. Yet, without an honest assessment of where there are glitches in policies and procedures, the learning process built into these drills and exercises is compromised. (See Section sub-section E, "Training and Drills," for additional detail.)
2. Several of those interviewed noted that the culture within San Francisco government is "to suppress bad news." For example, interviewees described the Fast Track II and

Golden Guardian exercises in October and November 2005 as “failures,” as “disasters.” Apparently, this situation was not communicated effectively to the Mayor, because at the meeting of the Disaster Council on January 17, 2006, he spoke about how proud he was of San Francisco’s preparedness and of its performance at the last drill.

3. Studies generated in one department are not necessarily shared across departments, leading to conflicting visions of how to handle emergency preparedness. One example relates to an analysis of surge capacity, prepared by an officer in SFFD, which was apparently not shared with senior staff at DPH or OES/HS. This report, which shows San Francisco hospitals being overwhelmed in the first few hours after a major disaster, has different modeling assumptions than the more conservative numbers used by EMSA in DPH. Other suggestions in this report include discussions about readily deployable caches of medical supplies and design of self-contained emergency support vehicles.

Finding B.1: While emergency preparedness requires “out of the box” thinking and the ability to foster new lines of communication across departments and with the private sector, the City continues to rely on a traditional bureaucratic approach to medical preparedness.

► **Recommendation B.1:** There is a need for a high-level forum or clearinghouse that cuts across city departments and includes the private sector. The City needs a vehicle to allow for sharing of ideas about how to best upgrade elements of disaster preparedness such as existing policies and procedures, drills, planning goals, and implementation plans. As previously discussed, work groups under the Disaster Council could serve as such a forum.

Finding B.2: The issue of how best to devise a public-private partnership has yet to be resolved. The current solution, from the perspective of DPH, is to hire a hospital coordinator to work with the hospitals to review each hospital’s emergency/surge plan, including its training and exercise procedures, and to coordinate those plans with appropriate city departments. This approach, while helpful to the hospitals, does not address their desire to be “at the table” in the planning process.

► **Recommendation B.2:** To create a strong public-private partnership for delivery of health services, hospitals, clinics, health centers and medical providers must be considered integral partners in the planning process, not an afterthought. Committees continue to be formed, such as the Multi Incident Work Group, without bringing in hospitals from the start. The Mayor should issue a directive to OES/HS and DPH about inclusion of private hospitals, and when appropriate, other healthcare providers, on key emergency planning task forces, committees, and work groups.

► **Responses required from:**

Office of the Mayor (60days), OES/HS (60days), DPH (60days), EMSA (60days), Health Commission (60days), Disaster Council (60days), HCNCC (optional). For further details, refer to Section VII.

C. Leadership

“The problem is that well-intended leaders, practicing what they believe is effective leadership, could be just as much part of the problem as they are part of the solution. Leadership could work - and it has - to fortify the silo mentality of agencies, this despite the fact that it is the coordinated action of many agencies working together that is essential to advancing the national preparedness effort....[W]hat different brand of leadership is necessary to get beyond the silo thinking to achieve the cross-agency coordination of effort required for terrorism preparedness?”³⁹

An overarching concern about medical preparedness in San Francisco relates to the lack of a single articulate voice, with appropriate emergency training and medical experience, to oversee and coordinate preparedness activities in the public and private sectors. At present, neither OES/HS nor DPH has a dynamic leader with an extensive background in medical preparedness and emergency planning to drive the strategic planning process and communicate it across all sectors. Numerous interviewees stated to the Civil Grand Jury, “There is a complete lack of leadership.”

As stated in the San Francisco Administrative Code, the Director of OES/HS is required to have “expert qualifications for the work of emergency preparedness and relief.”⁴⁰ The current Director, while having taken course work in emergency planning, does not have the requisite experience for leading the charge of medical preparedness. Similarly, the Director of OPP in DPH lacks an appropriate background.

To obtain needed expertise, both OES/HS and OPP have recruited staff with backgrounds in emergency services to assist in the preparation of emergency plans and design of drills. Within DPH, some of the needed talent was already available, but not used. In fact, numerous interviewees described, both explicitly and implicitly, the poor working relationship and duplication of skills between OPP and EMSA.

Finding C.1: San Francisco is missing a strong and effective leader, with appropriate training and experience, to take charge of emergency medical preparedness. There is no person able to communicate on a professional level with hospital executive officers, with managers of emergency departments and clinics, and with hospital planners, as well as with city officials, administrators and staff.

Recommendation C.1: The Mayor must ensure that the City recruits a senior level person, preferably at OES/HS, to oversee medical preparedness, including observing and correcting any deficiencies in DPH. The Mayor should explicitly require and oversee the hiring

³⁹ Leonard J. Marcus, Barry C. Dorn, and Joseph M. Henderson, “Meta-Leadership and National Emergency Preparedness: Strategies to Build Government Connectivity,” Harvard University, John F. Kennedy School of Government, Center for Public Leadership, *Working Papers*, Spring 2005, p. 43.

⁴⁰ San Francisco Administrative Code, Sec. 7.7.

of an executive, with a proven track record of leadership in the private or governmental sector and with expertise in emergency medical services. This person should be recruited from outside of OES/HS and DPH. Recruitment should begin no later than September 2006. Specific tasks for this position would include:

1. Developing a process, in conjunction with the Mayor and Board of Supervisors, for incorporating the private sector into the emergency planning process;
2. Providing realistic input on best practices in other communities and the military and incorporating such into the City's *Emergency Operations Plan* and into DPH's separate *Emergency Operations Plan*;
3. Taking an active role with OES/HS and key stakeholders, public and private, in design and oversight of emergency drills; and
4. Ensuring that policies and procedures implemented by OES/HS, DPH, and SFFD are achievable and understood by all city departments and the private sector.

Finding C.2: According to DPH, it is the intention of OPP to hire a hospital coordinator to assist hospitals with their emergency/surge plans and training.

➤**Recommendation C.2:** Ideally, the newly recruited leader, whether located at OES/HS or DPH, should be involved in selection of the hospital coordinator. However, if recruiting of the hospital coordinator occurs before creation of the new leadership position, the Mayor should have the Director of DPH take responsibility for hiring the coordinator. In particular, the Mayor and the Director of DPH have to ensure that the new hospital coordinator has an appropriate emergency or hospital background and has the leadership qualities sought by the HCNCC Emergency Preparedness Task Force. One or two members of the HCNCC task force should be included on any committee that interviews job candidates.

Finding C.3: The poor working relationship between OPP and the EMSA in DPH must be addressed to prevent continued disharmony, and to maximize the potential of existing talent and knowledge.

➤**Recommendation C.3:** Another task for the new medical preparedness leader at OES/HS or DPH would be to assess OPP and EMSA operations to determine appropriate placement of personnel and reporting lines. If a leader is not hired by fall 2006, then the Mayor and the Director of DPH should be compelled to thoroughly evaluate the situation, including whether to merge the two operations.

► **Responses required from:**

Office of the Mayor (60 days), OES/HS (60 days), DPH (60days), OPP (60days), EMSA (60 days). For further details, refer to Section VII.

D. Surge Capacity

“Few, if any hospitals in American today could handle 100 patients suddenly demanding care. There is no metropolitan area, no geographically contiguous area that could handle 1,000 people suddenly needing advanced medical care in this country right now.”⁴¹

Surge capacity is the ability of a hospital or health system to expand services quickly beyond normal capabilities to handle a sudden increase in patients. Surge capacity is measured in terms of added beds, along with necessary staffing, equipment, and supplies. There are two key factors in determining surge capacity: the number of additional patients needing care and the length of time required to meet the increased demand.

Hospitals can expand by converting ambulatory facilities, such as surgery centers, opening closed wings or floors in an existing facility, temporarily using non-medical facilities in the community, such as schools and recreation centers, and by setting up portable or mobile facilities. The topic of surge capacity has been and continues to be a major topic at meetings of the HCNCC Emergency Preparedness Task Force. Also the California Department of Health Services is currently conducting an assessment of surge capacity statewide.⁴²

To date, DPH has used federal benchmarks, set by the Health Resources and Services Administration, to develop its surge estimates, as discussed earlier. On May 17, 2005, EMSA presented its assessment of health preparedness to the San Francisco Public Health Commission. The Medical Director stated that “The San Francisco EMS System has surge capacity gaps in the areas of essential personnel, essential equipment, personal protective equipment, decontamination capabilities, pharmaceuticals, communications and training.”⁴³ It was noted that dealing with personnel shortages in an emergency would require working with “regional partners in the hope that the disaster would not affect all regions equally” and that San Francisco may need to bring in federal medical disaster teams.⁴⁴ Since then, local hospitals have received federally-funded equipment and supplies through DPH, but gaps in meeting surge capacity requirements still remain.

Civil Grand Jury interviewees from both the public and private sectors believe that San Francisco’s hospitals would be overwhelmed by having to care for an additional 550 to 600 severely injured patients. With SFGH the only certified trauma center in San Francisco, most of the other hospitals do not have the specialized equipment and on-duty professional staff to handle severely injured patients. Moreover, those hospitals currently operating at or near capacity would have to discharge existing patients and/or relocate them before accepting large numbers of new patients. If one or more hospitals were to be rendered unsafe from a terrorist

⁴¹ U.S. Congress. Senate: Committee on Government Affairs, July 23, 2001 Testimony of Tara J. O’Toole, M.D., M.P.H., Johns Hopkins Center for Civilian Biodefense Studies, as quoted in Joint Commission on Accreditation of Healthcare Organizations, *Surge Hospitals: Providing Safe Care in Emergencies*, 2006, p. 1.

⁴² The California Department of Health Services (CDHS) issued the hospital survey on February 5, 2006.

⁴³ San Francisco Department of Public Health, *Health Commission Minutes*, May 17, 2005, pp. 7-8.

⁴⁴ *Ibid.*, p. 8.

attack or an earthquake, interviewees questioned whether the other hospitals would be able to absorb the overflow. Finally, interviewees felt that the calculation of 550 to 600 additional patients underestimates patient demand after a major earthquake or terrorist attack, since the so-called “worried well,” the “walking wounded” with minor injuries, and persons with chronic conditions are likely to inundate hospital emergency departments.

Depending on the cause of the emergency, several interviewees stated that the HRSA number of 550 to 600 severely injured patients was far too conservative. These interviewees suggested that a large scale incident will cause the emergency medical operations of DPH, SFFD and the entire city government to fail catastrophically within the first 30 minutes to two hours, before medical, fire and police personnel residing out-of-town can return and before the arrival of any regional aid. An underestimation of the number of injured resulted in major logistical difficulties following Hurricane Katrina, as quoted in the *Failure of Initiative* report.⁴⁵

Another problem identified from the review of the Hurricane Katrina experience involves patient tracking. DPH is currently addressing the problem through its purchase of EMTrack™, software and hardware, including Personal Digital Assistants and communication kits, with laptop computers. A pilot program using the equipment is scheduled for May-June 2006, with distribution to the hospitals to be completed by August, followed by troubleshooting in September. Integrated with EMTrack™ software is EMResource™, a Web-based communication system to view regional ED status and available hospital beds to support decisions on patient transport.

Another aspect of dealing with surge capacity involves creating alternative delivery sites to take pressure off hospital emergency departments. Community-based clinics – both city-operated and members of the Community Clinic Consortium – represent a potential safety valve. However, as best as the Civil Grand Jury could determine, the emergency plans developed by these clinics do not address caring for overflow hospital patients during a mass disaster. However, clinics at local hospitals have been built into disaster planning.

Finding D.1: To expand their capacity, hospitals must identify surge beds and practice setting them up. Individual hospitals have tested their own surge capacity, but a test has never occurred that involved all hospitals citywide. Also, the Civil Grand Jury is unaware of any recent or proposed citywide drills that focus on meeting the HRSA goal of 600 severely injured patients arriving at San Francisco hospitals.

➤**Recommendation D. 1:** All hospitals should participate in an annual citywide disaster exercise, which involves setting up the maximum number of surge beds called for in each hospital’s emergency/surge plan. Since local hospitals are very concerned about the disruption of their normal daily operations during drills, particularly at times when their facilities/EDs are at capacity, the timing of the drills is crucial. Therefore, local hospitals must be included from the start in the planning process.

Finding D.2: The Civil Grand Jury is unaware of provision for community clinics to accept patient overflow from local hospitals in an emergency or of any recent emergency drills that

⁴⁵ *A Failure of Initiative*, p. 271

have involved clinics operated by the City or by the Community Clinic Consortium.⁴⁶

► **Recommendation D.2.a:** At minimum, DPH should mandate that its own clinics address surge capacity in their own emergency plans. Also, DPH should work with the Community Clinic Consortium to ensure that their clinics have appropriate policies and procedures for accepting patients from nearby hospitals in an emergency. All clinics, city-sponsored and non-profit facilities, need to test their surge capabilities in citywide drills.

► **Recommendation D.2.b:** DPH should ensure the distribution of sufficient supplies, drugs, and equipment to clinics in an emergency. Also, DPH needs to identify alternate sites, such as schools, for those neighborhoods without clinics and to develop policies and procedures for assignment of personnel and distribution of supplies, medications, and equipment to those sites. The availability of services at clinics and alternate sites has to be publicized. (See Recommendations G.1.a through G.1.c.)

Finding D.3: DPH has purchased software and hardware to support patient tracking, with a pilot program using the equipment scheduled for May-June 2006.

► **Recommendation D.3:** DPH should give highest priority to maintaining the implementation schedule of the patient tracking software, including its testing in a scheduled Golden Guardian drill in November 2006.

Other worthwhile recommendations that the Civil Grand Jury received but did not investigate fully include:

1. Require all new hospital construction in San Francisco, including plans for SFGH and Laguna Honda, to incorporate dual-purpose disaster-ready spaces in their design, and
2. Provide logistical support for hospitals and first aid or field stations by equipping one or two ready-to-roll field hospitals and medical supply trucks.

► **Responses required from:**

Office of the Mayor (60 days), OES/HS (60 days), DPH (60 days), EMSA (60 days), San Francisco Community Clinic Consortium (60 days), CHN Health Clinics (60 days) HCNCC (optional). For further details, refer to Section VII.

⁴⁶ Five clinics in the Consortium are affiliated with CHN. (See f.n. #20.) The five non-affiliated clinics are Curry Senior Center, North East Medical Services, St. Anthony Free Medical Clinic, San Francisco Free Clinic, and Glide Health Center, accessed on April 4, 2006, <www.sfccc.org/sfcccclinics/index.htm>.

E. Training and Drills

“Disaster management ...requires a paradigm change, from the application of unlimited resources for the greatest good of each individual patient to the allocation of limited resources for the greatest good of the greatest number of casualties. This change is achieved most effectively by planning and training for disasters, through both internal hospital drills and regional exercises involving all community resources.”⁴⁷

City government is mandated to do everything within its power to secure the safety of its citizens. One aspect of preparedness involves having first responders practice their skills in various types of drills to identify shortcomings in existing emergency plans. In the City’s *Emergency Operations Plan*, three types of such exercises are described:

1. *Tabletop Exercises* where officials and key staff from departments with emergency management responsibilities gather together to discuss various simulated emergency scenarios. “These exercises are designed to elicit constructive discussion and problem-solving by the participants without time constraints.”⁴⁸
2. *Functional Exercises* to test one or multiple emergency functions. These exercises take place under some type of time constraint and are more complex than tabletop exercises.
3. *Full-Scale Exercises* involve actual deployment of personnel and equipment to disaster “sites” to demonstrate coordination of services and response capabilities.

While Table Top drills were described by interviewees as “inadequate” or “unrealistic,” the biggest issues involved the handling of Full-Scale Exercises. The most recent of these exercises were Fast Track II (FT II) and Golden Guardian, held in October and November 2005 respectively. FT II, which was sponsored by the City and County of San Francisco, involved detonation of two explosive devices, one in a MUNI bus and the other in a vehicle in the Financial District. One of the primary purposes of the exercise was to test the federally-mandated Incident Command System (ICS). Applicable to multiple disciplines, including federal disaster workers, public works, law enforcement, and public health personnel, ICS establishes lines of supervisory authority and formal reporting relationships.⁴⁹

City departments failed to follow ICS protocols during FT II, resulting in information gaps that delayed provision of first aid services. Since then, OES/HS has drafted recommendations and an Improvement Plan, which calls for ICS/Unified Command training for SFPD and SFFD staff and a redesign of the OES/HS Emergency Operations Center (EOC).

⁴⁷ Statement on Disaster and Mass Casualty Management, American College of Surgeons, Ad Hoc Committee on Disaster and Mass Casualty Management of the Committee on Trauma, June 2003.

⁴⁸ City and County of San Francisco, *Emergency Operations Plan* of January, 2005, p. 6-3.

⁴⁹ FEMA Position Paper, http://www.fema.gov/txt/nims/nims_ics_position_paper.txt, accessed on April 3, 2006.

The Golden Guardian exercise, held in November, was an exercise sponsored by the California Homeland Security Exercise and Evaluation Program to test the coordination of responses by city, county and state governments, by volunteer organizations and by private industry. The November 15, 2005 exercise was predicated on the use of explosive devices and a chemical release at multiple sites in California. San Francisco's role in the exercise was to provide mutual aid to two hundred volunteers, acting as patients, who arrived by ferry from the East Bay. These “patients” were then to be triaged and transported to participating San Francisco hospitals. When the “patients” arrived by ferry at Pier 31, SFPD did not seem to know what to do with the arrivals. At the hospitals, staff waited for the “victims” who never arrived. Meanwhile, DPH assumed that the patients had arrived at Pier 31 and had been transported to the hospitals, as expected. The exercise again revealed a failure to use the ICS, resulting in miscommunication or no communications between the involved parties.

Those participants who were interviewed, commented candidly that both the October and November drills were each “a disaster.” Complaints included: poorly conceived exercises; poor communications between city departments and with local hospitals; plans that became garbled and confused; and planned responses that never were tested.

There have been significant delays in releasing information related to the October and November, 2005 drills. While there was an informal “hot wash” or discussion by participants immediately after a drill, the written “After Action Report” is the official document for identifying problems and determining the need for additional training. The After Action Report for the October Fast Track II drill noted “many minor” problems at the central EOC. Problems with seven department operations centers (DOCs) were attributed to the newness of the DOC model and the fact that their role “is still somewhat foreign to many departments.”⁵⁰ Even though this exercise occurred in October 2005, the final report was not released until February 2006.⁵¹

The November Golden Guardian After Action Report was not finalized as of mid-April, 2006, although drafts were shared earlier with the involved departments. (The Civil Grand Jury was unable to obtain a copy of the After Action Report for Golden Guardian from state officials as of this writing.)

Another citywide drill, conducted in April 2006, was designed to test the ability of the emergency medical services system in San Francisco to respond to a major earthquake. DPH’s role was designed as a tabletop exercise involving numerous casualties and fatalities.”⁵² As of the writing of this report, the Civil Grand Jury has no knowledge about how successfully the

⁵⁰ San Francisco, Office of Emergency Services & Homeland Security, “After Action Report: Fast Track – Part II, Full Scale Exercise,” October 12, 2005.

⁵¹ The Civil Grand Jury requested copies of the Fast Track After Action Report in December 2005, but was told that the report was not yet available. Correspondence with OES/HS indicates that the initial drafts of the report were sent out for comments on January 10th, with comments received back from SFFD on Feb. 2nd. The exact date when the document was formally released was not supplied to the jury by OES/HS.

⁵² San Francisco Department of Public Health, Office of Policy and Planning, EMS Agency, and the Environmental Health Section, “Earthquake 2006 Disaster Exercise,” March 20, 2006 (1st Draft).

hospitals and first responders performed during the drill. Some of the tested hospital capabilities involved their abilities to:

1. Communicate with each other and DPH/EMSA;
2. Identify surge capabilities related to personnel, space, equipment and supplies, including setting up surge areas;
3. Identify alternate care locations in event of patient evacuation; and
4. Assess damage to their infrastructure.

Finding E.1: The delay in circulating After Action Reports, such as for the October and November drills, undermines the ability of city leaders to understand operational issues at the departmental level.

➤**Recommendation E.1.a:** After completion of city-sponsored drills, participating departments must submit written comments within 10 working days. Following compilation of the departmental comments into a draft After Action Report, this document should be sent to the participating departments for review and comment. Counting from the original date of the drill, the final document should be available no later than 45 days after a drill.

➤**Recommendation E.1.b:** The Mayor’s Office should automatically be given initial “hot wash” write-ups and After Action Reports for all citywide drills. If the reports are not provided on a timely basis, his staff should follow up with appropriate personnel in OES/HS, DPH, SFFD and SFPD, at minimum. The intent of this process is two fold: 1) to see how long before the After Action Report write-ups become available; and 2) to see if the “official” version accurately reflects the experience recorded by participants in the drill.

➤**Recommendation E.1.c:** Final After Action Reports should be distributed to the members of the Disaster Council upon their release.

► **Responses required from:**

Office of the Mayor (60 days), Board of Supervisors (90 days), OES/HS (60 days), DPH (60 days), EMSA (60 days), Disaster Council (60 days), SFFD (60 days), and SFPD (60 days). For further details, refer to Section VII.

F. Communications and Information Technology

“Clear, precise communications are never more crucial than when human lives, property and equipment loss, environmental damage, and perhaps even corporate survival are at risk. The success of an emergency response plan to minimize loss and destruction depends on the effectiveness of communications”.⁵³

Multiple means of communication are a must during any disaster/mass emergency. If one system is inoperable, another should stand in its stead. The City’s *Emergency Operations Plan* of January 2005 identifies multiple warning systems, some of which include:⁵⁴

1. The Outdoor Emergency Warning System - the sirens activated every Tuesday noon;
2. The Community Alert Network – a high-speed telephone emergency notification system;
3. SFGTV – Cable Channel 26 to convey information following an emergency;
4. Emergency Digital Information System - a state-operated system to deliver emergency public information and advisories to the news media;
5. Public Telephone System – a city-wide telephone network located within city buildings;
6. Mayor’s Emergency Telephone System – a city-owned communications system that bypasses the public telephone system;
7. 800 MHz Radio/Microwave System – a wireless system linking safety-related departments, including SFPD, SFFD, and DPH;
8. RapidCom – a federal program to enable the ten largest urban areas to communicate with each other after a large emergency incident;
9. Auxiliary Communications Service – a volunteer communications unit of HAM operators under the purview of OES/HS; and
10. State communications systems, including Operational Area Satellite Information System that links all 58 counties with each other and with the State Warning Control Center in Sacramento.

⁵³ Sam Mullen, *Critical Communications: An Operations Guide for Business*, accessed on April 5, 2006, <<http://www.disastercenter.com/Rothstein/cd491.htm>>.

⁵⁴ City and County of San Francisco, *Emergency Operations Plan*, January 2005.

In discussing the City's investment in communication systems, interviewees spoke largely about the gaps or deficiencies in existing systems. Individuals within city government spoke about dialing numbers repeatedly during a drill and never reaching their party. One individual noted trying to contact someone within DPH and ending up in contact with a hospital on the Peninsula. Another became so frustrated with trying to reach the right party through specified phone channels that, "I finally just used my personal cell phone."

The failure to reach the correct party was attributed to malfunctioning equipment and/or use of wrong phone numbers. Interviewees noted that listings of contact names and phone numbers by city department were often incorrect, since phone lists are not regularly updated. In fact, during one Fast Track exercise apparently some of the hospitals did not know the new Department Operation Center fax number for sending out required forms for patient tracking. (Installation of EMTrack™ will eliminate faxing of patient information.) Conversely, DPH lacked updated call-back rosters for many of the hospitals.⁵⁵

Local hospitals have separately begun an evaluation of communications equipment distributed by DPH. While the new equipment represents a major upgrade to communication capabilities, the preliminary assessment of existing and new equipment shows the following vulnerabilities:⁵⁶

1. Telephone, faxes and cell phones are vulnerable to circuit overload and power failures, and are very likely to fail in a large event.
2. Satellite phones are prone to power failure and misalignment of antennae; currently there is only one fixed satellite phone location per hospital.
3. 800 MHz radios are used only to communicate with city departments. All hospitals currently have 800 MHz radios in their EDs only.
4. HEARNet (Hospital Emergency Administrative Radio Network) radios are vulnerable to power failure, have limited channels, and all locations may not be able to communicate directly with one another.
5. HAM radios have limited channels and are not a secure means of transmitting confidential information.

Three modes of communication, satellite phones, 800 MHz radios, and HAM radios, require approval from the Office of Statewide Health Planning and Development (OSHPD) for antenna installation. OSHPD requires submission of engineering, electrical and architectural details and installation plans, with the approval process taking up to six months. (At the April 5, 2006 meeting of the HCNCC Emergency Preparedness Task Force, the OPP representative volunteered to see if the application process could be expedited.) As of this writing, most of the

⁵⁵ Mary Vassar and Kate Garay, "EMS System Surge Capacity & Capability Assessment," as presented by John F. Brown, M.D. to the San Francisco Health Commission, May 17, 2005.

⁵⁶ Hospital CEO meeting, *Overview of Communications Capabilities and Gaps* (PowerPoint presentation), February 6, 2006.

city's private hospitals are still in the process of preparing their OSHPD applications, with their communication systems yet to be fully installed.

Interviewees also spoke about problems with the citywide alert system installed by ATI Systems of East Boston, Massachusetts under a \$2.1 million federal grant. Sirens are tested on Tuesdays at noon but are not audible in some parts of the city. Oral announcements on the siren system are not audible or intelligible in many locations. Thus, it is unclear what process San Francisco officials will use to provide local residents/workers with warnings and accurate, up-to-date instructions following a major disaster. A report by one of the local TV stations indicates that "it will take almost a million dollars to fix the dead spots by installing more sirens."⁵⁷

Another issue relates to public misuse of the emergency phone number 911. Because of widespread confusion among San Franciscans about how to access some 140 different city departments and agencies by phone, they end up calling 911 for assistance; on an annual basis, non-emergencies account for approximately 70% of all calls to 911.⁵⁸ A solution is to establish a 311 call center to access information on city services.

Planning for the 311 Call Center is under way. On March 14, 2006, the Board of Supervisors approved a lease by the Municipal Transportation Agency for space at One South Van Ness Avenue to house such a phone system.⁵⁹ The plan is to have all calls to 311 answered by a live operator, 24 hours a day, seven days a week. Immediate access to translation services in multiple languages will be available. The 311 Call Center will use a database of information about city services, updated on a regular basis, and will be designed to quickly serve as a back-up to 911 in an emergency situation. The 311 System has received seed funding from the Mayor's budget. The 311 Call Center is planned to start operations in late 2006.

Finding F.1: Interviewees described problems with installing hospital phone equipment, with the city's siren system, and with potential overloading of 911 in an emergency.

► **Recommendation F.1:** Based on the complaints heard by the Civil Grand Jury, it is apparent that the City needs a detailed communications work plan, with an outline of required steps, responsibility for implementation of each step, and timelines for their completion. At minimum, the work plan must cover the three identified problem areas: phones, sirens, and 311 development. The plan also needs to identify by neighborhood the "dead spots" in the siren alert system; gaps in other types of communication; and subsequently develop solutions to remedy the problems.⁶⁰ Within the available budget, the highest priority should be given to developing 311

⁵⁷ Dan Noyes, I Team Follow-UP: "Official Wants Hearings On City Siren System," accessed on Nov. 15, 2005, <http://abc.pca/gp/cp/kg/story?section=i_team&id=3636119&ft>.

⁵⁸ San Francisco, Office of the Mayor, "311: Improved Customer Service and Public Safety of San Francisco," September 2, 2004, accessed on March 23, 2006 <http://www.sfgov.org/site/uploadedfiles/mayor/policy/NEWSOM_311.pdf>.

⁵⁹ San Francisco Board of Supervisors, Resolution 0140-06, File # 060079, March 14, 2006.

⁶⁰ New York City Department of Information Technology and Communications, accessed on April 5, 2006, <http://www.nyc.gov/html/doitt/html/about/about_311.shtml>.

capabilities to support medical services after a disaster, including directing individuals to hospitals and alternate care sites in their neighborhoods.

Finding F.2: City departments do not have accurate and current listings of key contacts, along with names of alternative contacts, to ensure communications with appropriate personnel during a disaster.

► **Recommendation F.2:** The Mayor should require all city departments to maintain and distribute electronically updated contact information for key emergency staff as personnel changes occur. Each Departmental Operations Center should maintain hard copy of the contact list in case of power failure. The listings should also include information on cell phone numbers, work schedules, and alternate contacts.

► **Responses required from:**

Office of the Mayor (60 days), OES/HS (60 days), EMSA (60 days), DTIS (60 days), HCNCC (optional). For further details, refer to Section VII.

G. Public Information and Education

“This country [Israel] has excelled in safety and security. What really strikes me here is that preparedness and security is a culture. It’s something that we don’t understand in the U.S. There are people in California who have zero resolve when it comes to this issue.”⁶¹

Public officials in San Francisco recognize that in the event of a major disaster, such as an earthquake, it might be several days or more before vital public services are restored to the city. The city’s emergency personnel will need to concentrate their efforts on the most dangerous situations and the most seriously injured. Details on steps that San Francisco residents should take to cope with a major disaster are posted on the Web site, www.72hours.org. The federal Department of Homeland Security also maintains a similar Web site at www.ready.gov.

The 72hours.org Web site indicates that residents should maintain first aid supplies, a three day supply of prescription medications, and three days or more of oxygen, if necessary. There is no discussion, however, about potential patient overloads at local emergency departments and about the advisability of seeking care in alternative sites for minor injuries. (In fact, the Civil Grand Jury is unaware of any formal plan for use of local clinics as alternative treatment sites. There is, however, a shelter plan.)

The Neighborhood Emergency Response Team Program(NERT), formed by the San Francisco Fire Department after the 1989 Loma Prieta earthquake, is another vehicle to promote individual involvement in disaster planning. Funded through federal grants and SFFD

⁶¹ San Francisco Chronicle, “U.S. Security Officials Train with the Pros”, March 24, 2006, Quote from Erroll Southers, Deputy Director, California Office of Homeland Security during conference on counter-terrorism in Israel.

volunteers, the NERT program has taught hands-on disaster skills to more than 11,000 San Francisco residents since 1990.⁶²

A pilot program, entitled the Community Disaster Plan for District 5, which stretches from the Inner Sunset to the Western Addition and includes Haight-Ashbury and Japantown, is being led by OES/HS, in conjunction with the office of Supervisor Ross Mirkarimi, the Mayor's Office of Neighborhood Services and the organization of SF 5 Together. The intent is to roll this program out to each district in San Francisco. The program is designed to empower neighborhood communities to work with city agencies to develop emergency response plans that are tailored to their unique needs.

Another program is a state-mandated Disaster Registry Program for the elderly and the disabled. Approximately 9,000 residents have registered for the program, 80% of whom are elderly, the rest disabled.⁶³ Administered by EMSA in DPH, the program maintains a confidential database of vulnerable individuals who wish to have someone check on them following a disaster. A listing by neighborhood is distributed to select fire stations. Following a disaster, SFFD battalion chiefs will provide authorized rescuers, such as NERT volunteers, with information sheets for their neighborhoods. Rescuers will then make an assessment at each address. However, because the program relies on the availability of volunteer responders, a timely response is not guaranteed and program participants are advised to be self-sufficient for at least 72 hours.

Finding G.1: A preceding section on "Surge Capacity" discussed the likelihood that hospital Emergency Departments will be overrun with patients in the first few hours after a mass emergency/disaster. Many of the patients who arrive at the EDs, such as "the worried well" and "the walking wounded," could be treated at alternative sites.

➤**Recommendation G.1.a:** The City should develop a formal plan for treating less severe injuries at sites other than hospital EDs. Basic policy guidelines should be established by October 2006, with the plans incorporated into the City's and DPH's *Emergency Operations Plans* by June 2007.

➤**Recommendation G.1.b:** It is imperative that the City design and implement an ongoing and comprehensive mass media campaign to inform San Franciscans about the realities of a potential disaster and necessary steps to take in deciding where to seek medical care. The campaign should include a mapping of alternate delivery sites to encourage the general public to identify the nearest clinic/health center to their home and/or place of work and discourage use of EDs for non life-threatening injuries or illness. The media campaign should stress six critical messages for the public:

1. It might be days, a week or even more, before vital public services are restored, so be prepared. Log on to www.72hours.org at your home or library for details on what your stockpile of supplies should include.

⁶² Accessed on April 4, 2006, <http://www.sfgov.org/site/sfnert_index.asp>

⁶³ San Francisco Emergency Medical Services Agency, *The San Francisco Disaster Registry Program Information*, accessed on February 16, 2006, <www.sanfranciscoems.org/drp.php>.

2. Seek care for minor illness/injury at the nearest alternative care site (clinic or health center) to your home or work. Remember that the medical resources of the city's hospitals will be limited and reserved for the most severely injured.
3. Get official updates and public announcements on Channel 26, on public radio (NPR station 88.5) and Channel 9 (KQED-TV), plus other designated stations and channels. Listen carefully to alerts and announcements through public loudspeakers.
4. Participate in NERT. Have block meetings to determine how neighbors will check up on each other.
5. If you are a senior citizen, have special medical needs or are disabled, sign up for the Disaster Registry Plan through the Department of Public Health. NERT volunteers will check on you eventually, but you need to be prepared "to go it alone" for the first hours, and possibly days, after the emergency.
6. Avoid calling 911 to ask questions about the disaster. Overloading the 911 phone lines means that people with serious injuries or problems won't be able to get the assistance they need. Listen to your radio or TV instead. (When 311 becomes operational, then the public should be advised to call 311 in lieu of 911.)

The campaign should be broad-based, with radio and television coverage; advertisements on buses/street cars; inserts in tax bills, utility bills, and paychecks to city employees; and poster materials and classroom curriculum for school-age children. Most importantly, the media campaign needs to be on-going, not a one-time project, in order to sensitize the public to the six critical issues, discussed above.

➤**Recommendation G.1.c:** The www.72hours.org Web site should be upgraded to include more detail on where and when to seek medical care, by type of condition. For example, people with minor injuries should be advised to seek care in a clinic or alternate site, but people with potentially serious conditions should be advised to go to the nearest ED. Mapping of all EDs, clinics and alternate care sites should be included on the Web site, with phone numbers and detail on available services. Reflecting the message shared on the 72hours.org Web site, a multi-lingual *audio* CD should be distributed at various neighborhood venues to be shared with those that cannot speak or write English.

➤**Recommendation G.1.d:** The City must determine which radio stations and TV channels, in addition to Channel 26 and public radio/television, will receive "official" city announcements and updates. This information needs to be disseminated to the public via the city's media campaign and whenever stations broadcast their emergency alert test signals.

➤**Recommendation G.1.e:** Neighborhood disaster planning, such as currently being done in District 5, should be expanded, particularly in districts with vulnerable populations. NERT should continue to be funded as it is another critical element in both individual and neighborhood preparedness.

► **Recommendation G.1.f:** For those neighborhoods without clinics/health centers, it is essential that DPH identify alternative delivery sites, whether schools, fire stations or medical office buildings. DPH would work with personnel at alternative sites to identify needed supplies, equipment and pharmaceuticals. These sites would be listed on the 72hour.org Web site and in the mass media.

Finding G.2: Public, private, and parochial schools in San Francisco are an important vehicle for disseminating information on emergency preparedness. Multilingual materials distributed by the schools and by neighborhood programs (NERT, District 5) are important in overcoming language barriers and in encouraging self-help responses.

► **Recommendation G.2:** The Civil Grand Jury recommends developing a full scale preparedness program for ages 6 to14, using multilingual materials to be taken home, to permit non-English speaking parents with no computer access to understand necessary steps for disaster preparedness. The materials should also include details on other city-sponsored programs, such as NERT and the Disaster Registry. There also should be neighborhood drills, using scenarios that have been described in the media and that allow volunteers to test their knowledge base. Planning for these drills should take into account the experience in other countries, such as Japan (earthquake responses) and Israel (terrorism responses).

► **Responses required from:**

Office of the Mayor (60 days), Board of Supervisors (90 days), OES/HS (60 days), DPH (60 days), EMSA (60 days), SFFD (60 days), SFPD (60 days), SFUSD (60 days), HCNCC (optional). For further details, refer to Section VII.

VI. CONCLUSIONS: FINDINGS and RECOMMENDATIONS

There are three levels of findings from the Civil Grand Jury's analysis: 1) those that apply citywide, including surge capacity at public and private healthcare facilities, 2) those that apply across city departments, including budget limitations and other priorities driven by political, Civil Service and labor agendas, and 3) those that pertain to operations within a given department, involving staffing issues and morale.

At the city level, the most important finding relates to the lack of surge capacity at local facilities to meet the immediate health care needs of San Francisco residents, commuters and visitors after a mass emergency. Across city departments, disaster preparedness planning is not well-coordinated, with limited sharing of information. At the individual department level, there is a distinct gap between the written planning process and the ability to train and to oversee implementation of those plans. Medical preparedness requires strong leadership at OES/HS and DPH and a collaborative vision across all departments about how best to ensure the safety of all San Franciscans when a disaster strikes.

The Civil Grand Jury submits to the City and County of San Francisco and to the people of San Francisco that there are significant gaps in medical emergency preparedness. The key recommendations that underlie the findings in this report to be addressed in the immediate future are as follows:

1. OES/HS has to develop a strategic planning process and change the composition and use of the Disaster Council. The Disaster Council should become a true planning body, with high-level work groups having defined tasks and timelines. Hospitals want and need to be integral partners in the emergency planning process, including serving on the Disaster Council and in its work groups. (Recommendations A.1.a, A.1.b, B.1 and B.2)
2. The Mayor needs to ensure that a knowledgeable and experienced senior level person, with a proven track record of dynamic leadership, is recruited, preferably at OES/HS or possibly at DPH. This person needs to develop a process, in conjunction with the Mayor and Board of Supervisors, for incorporating the private sector fully into the emergency planning process and for ensuring that emergency procedures are achievable and understood by all city departments and the private sector. Another task involves assessing OPP and EMSA operations to determine appropriate placement of personnel and reporting lines. (Recommendations C.1, C.2 and C.3)
3. Emergency drills need to be realistic and test the ability of hospitals to meet surge goals and to properly use recently purchased or newly installed equipment. These drills should include local clinics to test their ability to handle patient overflow from nearby hospitals. The drills should also test *all* aspects of the City's communication plan. "Dead spots" for the siren alerts system should be noted by neighborhood and corrected. (Recommendations D.1, D.2.a, D.2.b, D.3, F.1, F.2 and G.1.a.)
4. OES/HS should issue official After Action Reports for city-sponsored drills no later

than 45 days after their completion. To ensure that the Mayor is kept apprised about the performance of individual city departments during drills, the Mayor's Office should review both initial write-ups and official After Action Reports for each drill. In this way, the Mayor will also see if the After Action Reports reflect the experience recorded by participants in the drill. (Recommendations E.1.a to E.1.c.)

5. The City needs to design and implement a mass media campaign to inform San Franciscans about the realities of a potential disaster and necessary steps to take in deciding when to seek medical care. The www.72hours.org Web site needs to have additional information on where and when to seek care. The City needs to designate specific radio stations and TV channels, in addition to Channel 26 and public radio/television, to receive "official" city announcements and updates. (Recommendations G.1.b to G.1.f)
6. Neighborhood disaster planning, as started in District 5, needs to be expanded to all districts. Implementation of neighborhood drills is recommended. (Recommendation G.2)

Principal findings regarding the status of community-wide preparations in San Francisco are summarized on the following page in Table II, using some key JCAHO recommendations seen earlier in Table I.

The primary recommendations that flow from the findings involve completion of the steps described as "not done," "in progress," "under discussion," "not yet operational," "not always working," and "inadequate."

TABLE II: GAPS IN EMERGENCY PREPAREDNESS

<i>Community-wide Emergency Preparedness Recommendations:</i>	<i>San Francisco Status:</i>
1. Determine standardized, universal measures of surge capacity.	Done using only conservative HRSA measures.
2. Identify latent space capabilities and human resources capacities.	In progress.
3. Ensure hospitals have a 48 to 72 hour stand-alone capability through the appropriate stock-piling of necessary medications and supplies.	In progress.
4. Establish mutual aid agreements among hospitals and other health care organizations.	Not done; under discussion.
5. Support the provision of decontamination capabilities in each hospital.	Equipment provided, but training not done.
6. Assign highest priority to training of direct caregivers and their receipt of protective equipment, vaccinations, prophylactic antibiotics, chemical antidotes, and other protective measures.	Some equipment distributed; other supplies to be distributed in Summer 2006.
7. Develop a centralized community-wide patient locator system.	System purchased, but not yet operational.
8. Engage the mass media in the emergency preparedness planning process.	Not done.
9. Assure direct caregiver access to current information about the emergency on a continuing basis.	Communications devices in place, but not always working.
10. Create redundant, interoperable communication capabilities.	Partially in place.
11. Regularly test, at least yearly, community emergency preparedness plans through reality-based drill.	Done semi-annually, but with limited success.
12. Prospectively establish appropriate metrics to assess effectiveness of emergency plan.	Not done; reports on drills are inadequate and not timely.
13. Assure inclusion of all community emergency preparedness program participants in emergency plan tests.	Clinics not included to date.
14. Explore alternative options for providing sustained funding for hospital emergency preparedness activities.	Not done; City is currently dependent on federal grants.

In summary, since the last Civil Grand Jury report of 2002-2003, much has been done to improve medical preparedness, thanks to the availability of federal funding and the work of OES/HS, DPH and SFFD. With federal funding likely to be curtailed, starting in 2007, the City needs to ensure that medical preparedness remains a high priority and that appropriate leadership is recruited to oversee the medical planning process. As noted in the write-ups on Katrina, it was “the failure of leadership” at the local, state, and federal level that led to the confusion in New Orleans after the hurricane. San Francisco needs to ensure that its local leadership never warrants similar criticism.

Finally, the Civil Grand Jury wishes to express its thanks to all the interviewees who participated in its investigation. Their well-articulated concerns about medical preparedness were the impetus for this investigation and report.

VII. REQUIRED RESPONSES

Responses to the recommendations in this report are required to be received from the Board of Supervisors and city departments and agencies in accordance with the following Table. Responses are to be sent in writing and addressed to:

The Honorable Robert Dondero, Superior Court of California, City and County of San Francisco, San Francisco Civic Center Courthouse, 400 McAllister Street, San Francisco, California 94102

TABLE III: REQUIRED RESPONSE TIME TO RECOMMENDATIONS

	<i>Recommendations</i>																							
	A.1.a	A.1.b	B.1	B.2	C.1	C.2	C.3	D.1	D.2.a	D.2.b	D.3	E.1.a	E.1.b	E.1.c	F.1	F.2	G.1.a	G.1.b	G.1.c	G.1.d	G.1.e	G.1.f	G.2	
<i>Response Required Within 90 Days</i>																								
Board of Supervisors	●	●										●	●	●			●	●	●	●	●	●	●	●
<i>Response Required Within 60 Days</i>																								
Office of the Mayor	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
OES/HS	●	●	●	●	●	●	●					●	●	●	●	●	●	●	●	●	●	●	●	●
DPH			●	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●	●	●	●	●
OPP					●	●	●																	
EMSA			●	●	●	●	●	●	●	●		●	●	●		●	●	●	●	●	●	●	●	●
Disaster Council			●									●	●											
Health Commission			●	●																				
CHN									●	●														
Community Clinics Consortium									●	●														
DTIS															●									
SFFD												●	●											●
SFPD												●	●											●
SFUSD																								●
<i>Response Optional</i>																								
HCNCC	●	●	●						●	●					●	●	●							●

VIII. APPENDICES

- A. Acronyms
- B. Hospital Utilization in San Francisco
- C. Disaster Council Members
- D. Hospital Council Emergency Preparedness Scorecard
- E. Department of Health Organizational Chart
- F. EMS Landing Sites
- G. Sources Consulted

APPENDIX A: ACRONYMS

CDC – Centers for Disease Control and Prevention
CHN – Community Health Network (San Francisco Department of Health)
CPMC - California Pacific Medical Center
DEIR - Draft-Environmental Impact Report
DHHS - Department of Health & Human Services
DHS - Department of Homeland Security
DOC - Department Operating Center
DPH - San Francisco Department of Public Health
DHS - Department of Homeland Security
DSW – Disaster Service Worker
DTIS – Department of Technology and Information Services
EDs – Emergency Departments (a term now used in lieu of Emergency Rooms)
EMS - Emergency Medical Services (San Francisco)
EMSA - Emergency Medical Services Agency
EMT - Emergency Medical Technician
Civil Grand Jury - San Francisco 2005-2006 Civil Grand Jury
EOC – Emergency Operations Center
HCNCC – Hospital Council of Northern and Central California
HRSA - Health Resources & Services Administration
ICS - Incident Command System
JCAHO - Joint Commission on Accreditation of Healthcare Organizations
MONS - Mayor's Office of Neighborhood Services
MUNI - Municipal Railway System (San Francisco)
NDMS – National Disaster Medical System
NERT - San Francisco Neighborhood Emergency Response Team Training program
NIMS - National Incident Management System OES/HS - San Francisco Office of Emergency Services & Homeland Security
OES/HS - Office of Emergency Services / Homeland Security
OPP - Office of Policy & Planning
OSHPD - California Office of Statewide Health Planning & Development
SFFD - San Francisco Fire Department
SFGH - San Francisco General Hospital Medical Center
SFPD - San Francisco Police Department
SFUSD – San Francisco Unified School District
UASI - Urban Area Security Initiative
UCSF - University of California at San Francisco Medical Center
VA – Veterans Affairs

APPENDIX B: HOSPITAL UTILIZATION IN SAN FRANCISCO

General Acute Care Facility Name	GAC Lic. Beds	GAC Bed Days	Total Lic. Beds	Total Lic. Bed Days	Total Hosp. Discharges	Census Days Total
CALIFORNIA PACIFIC-CALIF. EAST	95	34770	190	69540	1531	21556
CALIFORNIA PACIFIC-CALIF. WEST	382	139812	382	139812	8006	31708
CALIFORNIA PACIFIC-DAVIES	279	102114	341	124806	4577	40630
CALIFORNIA PACIFIC-PACIFIC	295	107970	325	118950	15549	82155
CHINESE HOSPITAL	54	19764	54	19764	2193	11100
KAISER FND HOSP - GEARY S F	247	90402	247	90402	13052	64976
SAN FRANCISCO GENERAL HOSP.	403	147498	639	242616	16816	143361
ST. FRANCIS MEMORIAL HOSPITAL	287	105042	356	130296	6784	43344
ST. LUKES HOSPITAL	150	54900	260	95160	6237	52474
ST. MARYS MEDICAL CENTER	336	123226	403	150873	7563	48305
UCSF MEDICAL CENTER	547	200202	547	200202	26588	155052
UCSF MEDICAL CENTER-MT. ZION	140	51331	140	51331	2460	9328
TOTALS:	3215	1177031	3884	1433752	111356	703989
SFGH as % of TOTALS:	12.5%	12.5%	16.5%	16.9%	15.1%	20.4%
<u>Source:</u>						
California Office of Statewide Health Planning and Development, <i>State Utilization Data File of Hospitals, Calendar Year 2004.</i>						
<u>Abbreviations:</u>						
GAC = General Acute Care Lic. = Licensed Hosp. = Hospital						

APPENDIX C: DISASTER COUNCIL MEMBERS⁶⁴

Honorable Gavin Newsom, Chair
Annemarie Conroy, Office of Emergency Services / Homeland Security, Executive Secretary
Heather Fong, Chief of Police
Joanne Hayes-White, Fire Chief
Trent Rhorer, General Manager, DHS
Dr. Mitchell Katz, Director, DPH
Edwin Lee, Director, DPW
Chris Vein, Director, DTIS
Chris Cunnie, Executive Director, ECD
Susan Leal, General Manager, SFPUC
Honorable Michael Hennessey, Sheriff
Arlene Ackerman, Superintendent of Schools
Edwin Lee, City Administrator
Edward Harrington, Controller
Dennis Herrera, City Attorney
Harold Brooks, CEO, American Red Cross, Bay Area Chapter
Honorable Fiona Ma, Member, Board of Supervisors
Honorable Ross Mirkarimi, Member, Board of Supervisors
Honorable Michela Alioto-Pier, Member, Board of Supervisors
Gloria Young, Clerk, Board of Supervisors
Dr. Amy Hart, Medical Examiner
Honorable Kamala Harris, District Attorney
Nathaniel Ford, Executive Director, MTA
Stuart Sunshine, MTA
Bond Yee, Acting Director, Department of Parking and Traffic
Monique Moyer, Executive Director, Port of San Francisco
Yomi Agunbiade, General Manager, Recreation and Parks
John Martin, Director, San Francisco Airport
Phil Ginsburg, Human Resources Director
Naomi Little, Director, Office of Contract Administration
Amy Lee, Acting Director, Bureau of Building Inspection

⁶⁴ OES & DHS Council Meeting CITY AND COUNTY OF SAN FRANCISCO DISASTER COUNCIL January 17, 2006, Video available at <http://sanfrancisco.granicus.com/ViewPublisher.php?view_id=15> (accessed on March 28, 2006).

**APPENDIX D: HOSPITAL COUNCIL EMERGENCY
PREPAREDNESS SCORECARD**⁶⁵



TO: San Francisco Hospital Leaders
FROM: Ron Smith
RE: Emergency Preparedness and Scorecard

At the request of the hospital leaders at the February 6th meeting, the Hospital Council Emergency Preparedness Taskforce has prepared the attached “San Francisco Hospitals – Emergency Preparedness Scorecard”. (Approved by the Taskforce representing all SF hospitals, the Scorecard was written by Debi Simon of CHW.)

I have two major concerns about the City’s emergency planning process. As far as we know there is no surge plan for more casualties than those our hospitals can handle.

The second concern is that there is no City plan to transport patients from our hospitals to other hospitals, helicopter landing sites, or SFO.

The City has twenty-one sites where helicopters can land. However, the City reports that none of these sites could accommodate a military helicopter that could hold several patients. The City also said that it would be politically impossible for the City to identify sites for such activity. The City pointed out the difficulty they have in getting even one helicopter pad approved at SFGH.

Cheryl Fama has suggested that perhaps now is the appropriate time to inform the Mayor of our progress and concerns. (Draft letter attached.)

⁶⁵ Received by the 2005-2006 Civil Grand Jury on March 23, 2006

SAN FRANCISCO HOSPITALS – EMERGENCY PREPAREDNESS SCORECARD

ITEM	ACTION NEEDED	RESPONSIBLE PARTY(IES)	COMPLETED
ITEMS BELOW DUE TO BE COMPLETED BY 7/1/06			
Surge Plan to 135% of ADC	Write Surge Plan to include:	Hospital EM Committee	
	<ul style="list-style-type: none"> • Physical space 		
	<ul style="list-style-type: none"> • Facility based alternate care sites • surge tent 		
	<ul style="list-style-type: none"> • Beds/cots/gurneys 		
	<ul style="list-style-type: none"> • Staffing 		
	<ul style="list-style-type: none"> • Supplies/equipment 		
Decontamination	Identify Team members (disciplines, shifts, names); write Decontamination procedures	Hospital Haz Mat/EM Coordinators	
Revise Disaster Plans to reflect	<ul style="list-style-type: none"> • revised HEICS IV (if received) • revised JCAHO EM Standards (major changes go into effect 7/1/2006) 	Hospital EM Coordinator	
MOU for Mutual Aid	Approve draft; submit to Legal for approval	Hospital EM Coordinator/ Materials Manager	
Communications	Participation in all daily and weekly communications tests (800MHz, HEARNet, EMSsystems)	DPH/Hospital Pharmacist	
	Assess needs for structural work to accommodate satellite phone, 800 megahertz and HAM radios	Hospital Facilities Personnel with OES/ACS	
	HAM Training: at least 2 per shift or minimum of 6 hospital staff trained	Hospital EM Coordinator	
	Identify all locations which need dedicated backup power supply - telephone switches, all radio systems, all critical computers	Hospital Facilities Personnel	
	Identify and establish working relationship with local SFPD and SFFD chiefs	Mgr, Public Safety/Security; Chief Engineer	
	Begin document detailing information flow, communication priorities, location and operating procedures for all communications equipment	Hospital EM Coordinator	
Pharmaceutical Cache	Cache cart located in all participating hospitals; prophylactics can be provided to all staff, family, and patients.	DPH/Hospital Pharmacist	

Patient Tracking system	Hardware selected/purchased	DPH	
SFCC HRSA Coordinator	Job description written and position approved	DPH	

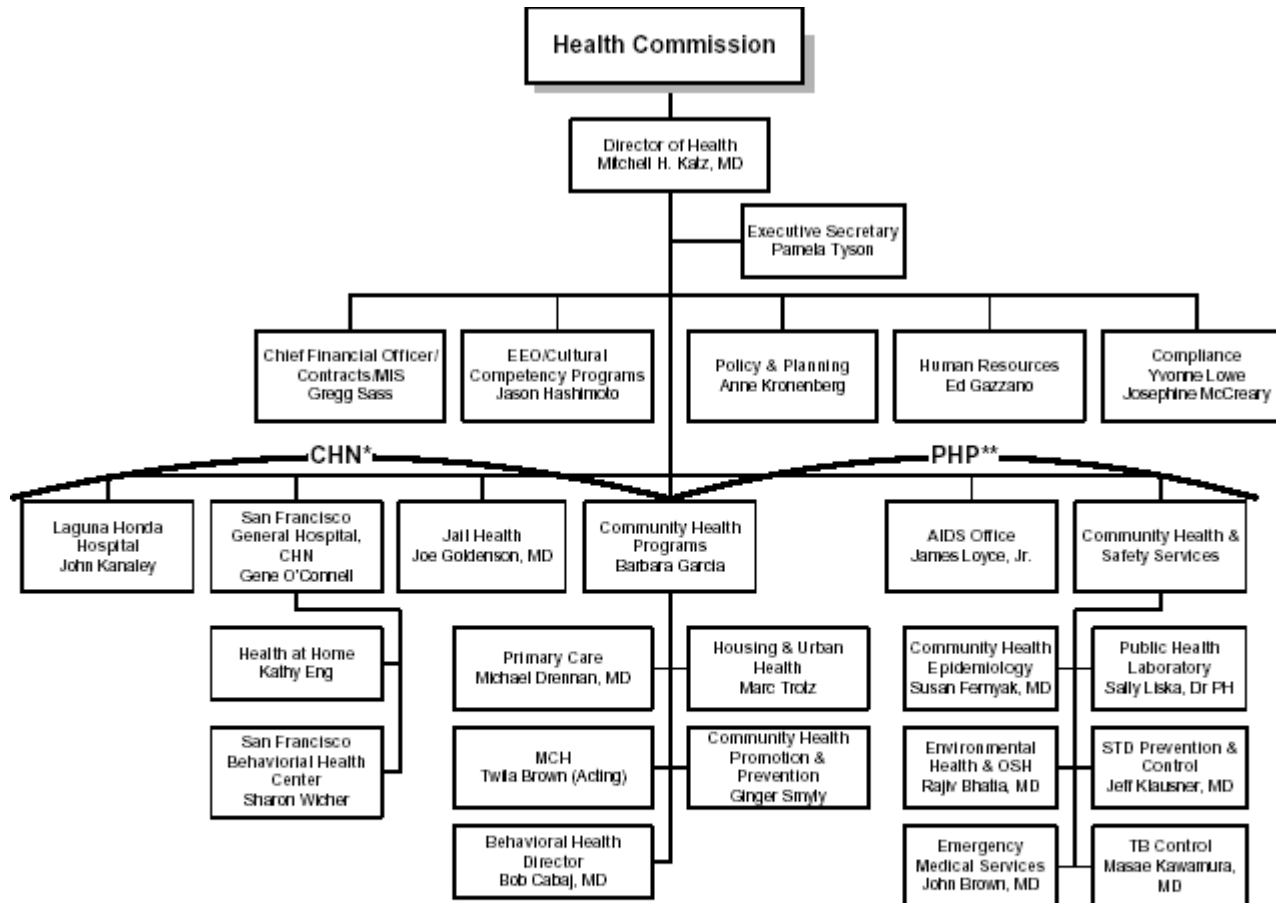
ITEMS BELOW DUE TO BE COMPLETED BY 10/1/06*

Surge Plan	Plan and related policies and procedures finalized in preparation for 11/14/06 drill	Hospital EM Committee	
MOU for Mutual Aid	Finalized in preparation to drill 11/14/06	Hospital EM Coordinator/ Materials Manager	
Communications	Requests for satellite phone, 800 megahertz and HAM radios submitted to OSHPD	Hospital Facilities Personnel	
	Install dedicated backup power for all radios and critical computer equipment (battery / Universal Power Supply)	Hospital Facilities Personnel / Hospital IT Personnel	
	Complete document detailing information flow, communication priorities, location and operating procedures for all communications equipment	Hospital EM Coordinator	
Patient Tracking system	Hardware distributed	DPH	
	Initial training complete	DPH and Hospital ED staff	
Decontamination	Train at least 3 potential Decon Team members per shift (no <9 per facility, by 8/31 per HRSA funding mandate*	Hospital EM Committee/Education Dept	
SFCC HRSA Coordinator	Hired	DPH	

ITEMS BELOW DUE TO BE COMPLETED BY 1/1/07

Surge Plan	Plan finalized based on drill findings Staff educated	Hospital EM Committee	
MOU for Mutual Aid	Finalized based on drill findings	? Materials Manager	
Patient Tracking system	All hospitals trained to use system; website up	DPH	
Decontamination	Drill decontamination team 2 times	Hospital Haz Mat/EM Coordinators	
SF HRSA Coordinator	Trained and productive	DPH/Hospital EM Coordinators	

APPENDIX E: DEPARTMENT OF HEALTH ORGANIZATIONAL CHART



*CHN = Community Health Network, the integrated health service delivery system of the Health Department

**PHP = Population Health and Prevention

14 Feb, 2005, 09:22 AM, DPH Org Chart.2005.vst

APPENDIX F: EMS LANDING SITES

Appendix B: EMS LANDING SITES (page 1 of 2)							
ID	SFFD BATT. STN.	LOCATION	STREET	CROSS STREET	LATITUDE	LONGITUDE	NEAREST HOSPITAL
SF 1	1	Galileo High School football field	Polk	Bay			Chinese, St. Francis, CPMC
SF 2	1	Nob Hill (stop traffic on California St.)	1000 block California	Taylor & Mason			Chinese, St. Francis
SF 3	1	Pier 29 parking lot (behind Teatro Zinzani; rear of parking lot)	Embarcadero	Battery & Sansome			Chinese, St. Francis
SF 4	1	Washington Square	Union	Stockton			Chinese, St. Francis
SF5	2	James Lang Playground	Turk Street	Octavia Street	37° 46.897'	122° 25.527'	ST FRANCIS
SF6	3	Jackson Playground	17 th Street	Arkansas Street	37° 45.903'	122° 23.926'	SF GENERAL
SF 7	3	Pier 30, 32	Embarcadero	Bryant & Brannan			Chinese, St. Francis, SFGH
SF8	3	Treasure Island—Soccer Field/asphalt parking lot	9 th Street	Avenue "D"	37° 49.411'	122° 22.410'	ST FRANCIS; SF GENERAL
SF 9	3	Yerba Buena Gardens	Mission	3 rd & 4 th Streets			St. Francis, SFGH
SF10	4	Kimball Playground	Pierce Street	O'Farrell Street	37° 46.995'	122° 25.527'	CPMC-PACIFIC; KAISER SF
SF 11	4	Lafayette Park: grass clearing at the Southeast corner of Washington & Laguna	Laguna	Washington			CPMC, St. Francis
SF12	4	Moscone Playground	Chestnut Street	Buchanan Street	37° 48.079'	122° 25.995'	CPMC-PACIFIC
SF13	7	Big Rec—Golden Gate Park	Near Lincoln Way	Between 5 th & 8 th Ave.	37° 46.002'	122° 27.760'	UCSF
SF14	7	Kezar Stadium—Golden Gate Park	Near Frederick	Willard	37° 46.042'	122° 27.296'	UCSF
SF15	7	Polo Field—Golden Gate Park	Near Lincoln Way	Between 31 st & 36 th Avenues	37° 45.932'	122° 29.652'	VA Med Cntr; UCSF
SF16	7	Rossi Playground	Arguello Blvd.	Edward Street	37° 46.702'	122° 27.499'	ST. MARY'S
SF17	7	Upper Great Highway—parking lot area	Upper Great Highway	Fulton Street	37° 46.276'	122° 29.981'	VA Med Cntr
SF18	8	South Sunset	40 th Avenue	Wawona Street	37° 44.184'	122° 29.840'	VA Med Cntr, UCSF
SF19	8	West Sunset #3 Playground	39 th Avenue	Ortega Street	37° 44.967'	122° 29.981'	VA Med Cntr, UCSF
SF20	8	West Sunset #2 Playground	41 st Avenue	Pacheco Street	37° 45.069'	122° 29.867'	VA Med Cntr, UCSF

EMS LANDING SITES. Page

2

ID	SFFD BATT. STN.	LOCATION	STREET	CROSS STREET	LATITUDE	LONGITUDE	NEAREST HOSPITAL
SF 21	9	Balboa Playground	Ocean Avenue	San Jose Avenue	37° 43.355'	122° 26.725'	ST LUKES
SF22	9	Crocker Amazon Field	Geneva Street	Moscow Street	37° 42.777'	122° 26.004'	ST LUKES
SF23	10	Candlestick Park Parking Lot—K-railed area between gates “E” & “F”	North of traffic control tower	Across from R.V. Park	37° 42.83'	122° 23.12'	SF GENERAL
SF24	10	Hunters Point Naval Shipyard	Hussey	Manseau	37° 43.24'	122° 21.97'	SF GENERAL; ST. LUKES
SF25	6, 10	Rolph Playground	Cesar Chavez (Army)	Potrero Avenue	37° 44.979'	122° 24.362'	SF GENERAL; ST. LUKES
SF 26	NPS*	Crissy Field (NPS* LZ# 63)	Marine Drive	Access through Marina Gate, W on Marine Dr.	37° 48.15'	122° 28.01'	VA Med Cntr
SF 27	NPS*	Presidio Main Parade Grounds (#65)*	Montgomery	Lincoln	37° 48.02'	122° 27.29'	VA Med Cntr
SF 28	NPS*	Fort Scott Parade Grounds (#66)*	Ralston	Stone	37° 48.04'	122° 28.28'	VA Med Cntr
SF 29	NPS*	Baker Beach Parking Lot (#67)*	Battery Chamberlin	Bowley	37° 47.34'	122° 28.60'	VA Med Cntr

APPENDIX G: SOURCES CONSULTED

Interviews with Representatives from:

City and County of San Francisco Office of Emergency Services and Homeland Security

City and County of San Francisco Disaster Council

City and County of San Francisco Board of Supervisors Budget Analyst's Office

City and County of San Francisco Department of Health

City and County of San Francisco Office of Policy & Planning

City and County of San Francisco Emergency Management Services Agency

City and County of San Francisco Community Clinics Consortium

City and County of San Francisco Office of Emergency Services and Homeland Security –
Auxiliary Communications Service

City and County of San Francisco Unified School District, Emergency Planning

City and County of San Francisco Fire Department

San Francisco VA Medical Center, Emergency Management Strategic Healthcare Group

Hospital Council of Northern and Central California

San Francisco General Hospital

San Francisco General Hospital Foundation

Various Private Hospitals in San Francisco

State of California Office of Homeland Security

Resources - City & County of San Francisco:

2002-2003 Civil Grand Jury for the City and County of San Francisco, *It's a Catastrophe: the State of Emergency Planning in San Francisco*, June 19, 2003.

City and County of San Francisco, Office of the Mayor, "311: Improved Customer Service and Public Safety of San Francisco," September 2, 2004, <http://www.sfgov.org/site/uploadedfiles/mayor/policy/NEWSOM_311.pdf>.

City and County of San Francisco Board of Supervisors, Resolution 0140-06, File # 060079, March 14, 2006.

City and County of San Francisco, *Emergency Operations Plan, Part I: Basic Plan*, January 2005.

City and County of San Francisco Administrative Code, Ordinance 275-05, Approved November 30, 2005.

City and County of San Francisco Department of Public Health, *Annual Report for Fiscal Year 2004-2005*.

City and County of San Francisco Department of Public Health, *Health Commission Minutes*, May 17, 2005.

City and County of San Francisco Department of Public Health, Health Commission Meeting, October 18, 2005.

City and County of San Francisco Department of Public Health, Health Commission Meeting, November 15, 2005.

City and County of San Francisco Department of Public Health, *Emergency Operations Plan*, draft dated January 12, 2006.

San Francisco Department of Public Health, Office of Policy and Planning, EMS Agency, and the Environmental Health Section, "Earthquake 2006 Disaster Exercise", March 20, 2006 (1st Draft).

City and County of San Francisco Emergency Medical Services Agency, *The San Francisco Disaster Registry Program Information*, April 12, 2006, <http://www.sfgov.org/site/uploadedfiles/dhr/intranet_memo/Memo_07-2006.pdf>.

City and County of San Francisco Emergency Medical Services Agency, *Policy and Procedure Manual*, compiled Nov. 14, 2005.

City and County of San Francisco Emergency Medical Services Agency Aircraft Utilization, September 1, 2005, pp.16–17, Policy Reference #4020, April 5, 2006, <<http://www.sanfranciscoems.org/policy/SFEMSA0905Policy4020EMSAircraftUtilization.pdf>>.

City and County of San Francisco Emergency Medical Services Agency, March 20, 2006 <<http://www.sanfranciscoems.org/index.php?cat=no&name=diversionReports&exten=html>>

City and County of San Francisco, Department of Human Resources, Memorandum DHR No. 01-2006, February 3, 2006.

City and County of San Francisco Office of Emergency Services and Homeland Security, Disaster Council, *Revised Meeting Agenda*, January 11, 2005.

City and County of San Francisco, Office of Emergency Services & Homeland Security, “After Action Report: Fast Track – Part II, Full Scale Exercise,” October 12, 2005.

San Francisco Unified School District, “Emergency Plan Overview”, <<http://portal.sfusd.edu/template/default.cfm?page=emergency.overview>>, (March 14, 2006).

Disaster Service Worker Program: Executive Summary, as presented to the meeting of the City and County of San Francisco Disaster Council, January 17, 2006.

Operation Safe Return (Interim Plan), Draft #1 6/17/2005

Fast Track Terrorist Simulation Press Release: from the Office of the Mayor of the City and County of San Francisco Tuesday, July 26, 2005.

After Action Report Fast Track – Part II Full Scale Exercise, San Francisco Office of Emergency Services & Homeland Security. (Limited distribution, for official use only).

Hospitals (of San Francisco) CEO meeting, *Overview of Communications Capabilities and Gaps* (PowerPoint presentation), February 6, 2006.

Brown, John F. MD , Medical Director, EMS Section, San Francisco Department of Public Health, “*How Would San Francisco Manage A Complex Emergency? Response to a Terrorist Attack*“, Vol. 75, No. 1 January 2002.

Brown, John MD, “Ambulance Diversion, It’s Time for a Change”, *San Francisco Medicine*, Publication of the San Francisco Medical Society October, 2005.

Brown, John F. MD , Medical Director, Emergency Medical Services Agency, San Francisco Department of Public Health,, Power Point Presentation, “EMS System Surge Capacity & Capability Assessment,” presented to the Health Commission, May 17, 2005.

Cabanatuan, [Michael](#), “[San Francisco Area’s Infrastructure Graded a C-minus](#)”, *San Francisco Chronicle*, October 18, 2005.

Campbell, Scott J. MD, MPH, Chairman Department of Emergency Medicine Kaiser Permanente Medical Center, San Francisco, “*Rethinking San Francisco’s Ambulance Diversion Crisis*”, Report to the San Francisco Board of Supervisors the “Emergency Room Diversion” Task Force, January 27th, 2003.

Epstein, Edward, “House Panel Rips Administration on Katrina Response”, *San Francisco Chronicle*, February 16, 2006.

Epstein, Edward, “Homeland Security Directive Shocks Local Governments, 12 Major Cities Must Single Grant Application”, *San Francisco Chronicle*, January 4, 2006

Fagan, Kevin, and Charlie Goodyear, “San Francisco’s Emergency Services Chief Blasted by Supes”, *San Francisco Chronicle*, September 21, 2005.

Fagan, Kevin, “[Bay Area Cities to Pool Disaster Resources, Homeland Security Will Fund Regional Emergency Plan](#)”, *San Francisco Chronicle*, October 18, 2005. Noyes, Dan, “Flaws Found In SF’s Emergency Warning System”, *ABC I-Team*, November 11, 2005.

Fancher, Emily, “Helicopter Pad Fight Ready to Take Off Again,” *San Francisco Chronicle*, November 1, 2005.

Gerson/Overstreet Architects, *San Francisco General Hospital Medical Center: Air Medical Access Needs and Feasibility Study*, Prepared for the San Francisco Health Commission, March 4, 2003.

Gordon, Rachel, “State Sets February 24 Deadline to Review Anti-terror Request”, *San Francisco Chronicle*, January 18, 2006.

Gordon, Rachel, “\$320 Million Wish List for Homeland Security for Everything from Terrorist Attacks to Quakes,” *San Francisco Chronicle*, February 24, 2006.

Greenwald, Alan MD, “Disaster Readiness”, *San Francisco Medicine*, Publication of the San Francisco Medical Society October, 2005.

Hampton, Adriel, “S.F. Unveils Wide-ranging Alert System,” *The San Francisco Examiner*, March 9, 2005.

Hayes-White, Joanne, Chief of San Francisco Fire Department, Letter to Civil Grand Jury dated April 12, 2006.

Health Management Associates, The San Francisco Department of Public Health: Its Effectiveness as an Integrated Health Care Delivery System and Provider of a Continuum of Long Term Care Services, a Report submitted to the Office of the Controller, City and County of San Francisco, July 2005.

Holbrook, Karen, MD, PhD, “San Francisco Physician Guidance for Public Health Emergencies Due to Bioterrorism or Infections Disease Outbreaks,” *San Francisco Medicine*, Vol. 78, No.1, February 2005.

Jouvenal, Justin, Bay Area Cities Laggin in Bid for Federal Anti-Terror Funds, *San Francisco Chronicle*, January 12, 2006.

Lagos, Marisa, “Homeland Security Funding Proposal Goes Down to Wire”, *San Francisco Chronicle*, February 23, 2006.

Noyes, Dan, “Is San Francisco Ready for a Major Disaster?”, *ABC I-Team* September 7, 2005.

Noyes, Dan, “Official Wants Hearing on City Siren System”, *ABC I-Team*, November 15, 2005.

Noyes, Dan, “Out of State SF Firefighters Face Investigation”, *ABC I-Team*, December 1, 2005

Rauber, Chris, “Deadline Looking Shaky,” *San Francisco Business Times*, January 23, 2006
Stannard, Matthew, “Mastering Homeland Security, Naval School Offers Anti-Terrorism Degree”, *San Francisco Chronicle*, July 6, 2004.

Ross, Carol, SF Planning Department, Environmental Analysis of the Helipad at SFGH, <www.SFDPH.org>, (March 10, 2006).

Southers, Erroll, Deputy Director, California Office of Homeland Security
quote from during conference on counter-terrorism in Israel, “U.S. Security Officials Train with the Pros”, *San Francisco Chronicle*, March 24, 2006.

Vassar, Mary, Emergency Medical Services Agency,, *November 2005 Ambulance Diversion Data, SFPD*, December 7, 2005.

Vassar, Mary and Kate Garay, “EMS System Surge Capacity & Capability Assessment,” as presented by John F. Brown, M.D. to the San Francisco Health Commission, May 17, 2005.

Wachsmuth , Chris, *SFGH Medical Helipad Project Timeline*, December 5, 2005, March 29, 2006 <<http://www.sfdph.org/Meetings/SFGH/Attach/JCCSFGHM11082005AttachA.pdf>>.

“URS Selected for Bay Area Regional Emergency Coordination Plan”, *Business Wire*, October 17, 2005.

Resources - State of California:

California Healthcare Foundation, *California Healthline*, “Two San Francisco Hospitals Might Miss Seismic Retrofit Deadline,” January 25, 2006.

California Office of Statewide Health Planning and Development, 2004 Hospital Data File from Annual Utilization Report.

California Office of Statewide Health Planning and Development, *Summary of Hospital Seismic Performance Ratings*, April 2001.

California Office of Statewide Health Planning and Development, Facilities Development Division. *Summary of Requests for Extensions to Seismic Safety Deadlines*, February 2, 2006.

Joint Commission on Accreditation of Healthcare Organizations, *Health Care at the Crossroads: Strategies for Creating and Sustaining Community-wide Emergency Preparedness Systems*, 2003.

Hospital Council of Northern and Central California, communications from Ron Smith re Emergency Preparedness and Scorecard, received by the Civil Grand Jury March 23, 2006.

Working Group on California Earthquake Probabilities, *Executive Summary: Earthquake Probabilities in the San Francisco Bay Region: 2002-2031*, U.S. Geological Survey, Open-File Report 03-214, March 13, 2006, <<http://pubs.usgs.gov/of/2003/of03-214>>.

“*The Role of Local EMS Agencies in California EMS System*,” <www.sanfranciscoems.org/epf;pca:e.s.php>, (1/13/2006).

Bamattre, William, Los Angeles Fire Department Chief, quoted by Jim Hahn, Mayor of Los Angeles, August 2, 2004 Press Release, April 3, 2006, <http://www.laobserved.com/archive/002286.html>.

Sun, Benjamin C. et al., “Effects of Hospital Closures and Hospital Characteristics on Emergency Department Ambulance Diversion, Los Angeles County, 1998 to 2004,” *Annals of Emergency Medicine* 47:309-316, April 2006.

Resources - Federal Government:

U.S. Congress, Senate: Committee on Government Affairs, July 23, 2001 Testimony of Tara J. O’Toole, M.D., M.P.H., Johns Hopkins Center for Civilian Biodefense Studies, as quoted in Joint Commission on Accreditation of Healthcare Organizations, *Surge Hospitals: Providing Safe Care in Emergencies*, 2006.

Office of the President of the United States, *The Federal Response to Hurricane Katrina: Lessons Learned*, February 2006, as prepared by Frances Fragos Townsend, Assistant to the President for Homeland Security and Counterterrorism, March 1, 2006, <<http://www.whitehouse.gov/reports/katrina-lessons-learned.pdf>>.

U.S. House of Representatives, 109th Congress, 2nd Session, *A Failure of Initiative: Final Report of the Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina*, February 15, 2006, <www.gpoaccess.gov/congress/index.html>.

Health and Social Services Committee Report and Recommendations to the Commission January 18, 2006, *Failure of Initiative*.

U.S. Department of Homeland Security, *National Response Plan*, December 2004

U.S. Department of Homeland Security, Office of Grants and Training, March 30, 2005, <http://www.dhs.gov/interweb/assetlibrary/Grants_Summary_StLocal.xls>.

U.S. General Accountability Office, GAO-06-365R, Enclosure I, “Statement by Comptroller General David M. Walker on GAO’s Preliminary Observations Regarding Preparedness and Responses to Hurricanes Katrina and Rita,” February 1, 2006.

FEMA Position Paper, April 3, 2006, <http://www.fema.gov/txt/nims/nims_ics_position_paper.txt>.

Resources - Other

“A Deadly Vacuum”, *New York Times* Editorial, February 16, 2006

American College of Surgeons, *Statement on Disaster and Mass Casualty Management*, Ad Hoc Committee on Disaster and Mass Casualty Management of the Committee on Trauma, June 2003.

Lipton, Eric, “Handling of the Infirm During Katrina Assailed”, *New York Times*, February 1, 2006

Marcus, Leonard J., Barry C. Dorn, and Joseph M. Henderson, “Meta-Leadership and National Emergency Preparedness: Strategies to Build Government Connectivity,” Harvard University, John F. Kennedy School of Government, Center for Public Leadership, *Working Papers*, Spring 2005, p. 43.

Montana Area Health Education Center, *Strategic Planning for Healthcare Organizations*, April 5, 2006 <<http://healthinfo.montana.edu/mtahec/stratpln.html>>.

Mullen, Sam, *Critical Communications: An Operations Guide for Business*, April 5, 2006, <<http://www.disastercenter.com/Rothstein/cd491.htm>>.

New York City Department of Information Technology and Communications, April 5, 2006, <http://www.nyc.gov/html/doitt/html/about/about_311.shtml>.

O’Malley, Ann S., Anneliese M. Gerland, Hoangmai H. Pham and Robert A. Berenson, “Rising Pressure: Hospital Emergency Departments as Barometers of the Health Care System” *Center for Studying Health System Change, Issue Brief No. 101*, Nov. 2005.

Wolf, Gary, “Reinventing 911”, *Wired Magazine*, Issue 13-02.

Testimony by Director Henry Renteria, Governor’s Office of Emergency Services, Little Hoover Commission Hearing May 26, 2005.