

**San Francisco General Hospital**  
**ENVIRONMENT OF CARE (EOC)/SAFETY MANAGEMENT**  
**2007 Annual Report**

The goal of SFGH's EOC/Safety Program is to provide for a safe and effective environment of care for patients, visitors, volunteers and staff in accordance with organizational needs and regulatory requirements. The Environment of Care (EOC) Safety Program encompasses the following seven elements:

- Emergency Management
- Safety Management
- Hazardous Materials/Waste Management
- Medical Equipment Management
- Utility Management
- Fire/Life Safety
- Security Management

**The Environment of Care (EOC) Committee**

- Tasked with setting a prioritizing the medical center's safety goals/performance standards and assessing whether those goals have been met.
- Meets on a monthly basis
- Membership is comprised of;
  - Program managers for each of the seven EOC element
  - Representatives from nursing, infection control, clinical laboratory, pharmacy and quality management.

EOC projects and initiatives include opportunities for improvement identified during ongoing hazard surveillance, risk assessment, and other EOC activities. These projects and initiatives further enable the EOC Committee to proactively promote a culture of safety awareness.

"Constant Readiness" is a major focus of the EOC Safety Program and ensures compliance with Joint Commission Accreditation and other regulatory standards.

## REPORTS ON THE EOC SAFETY ELEMENTS

### 1. Emergency Preparedness

**Objective:** To adequately prepare staff to function in a competent and safe manner in response to either an internal or external disaster. It is the intent of SFGHMC that staff is prepared to be self-sufficient both in the home and the workplace for at least 96 hours following a disaster.

#### **Accomplishments:**

- Developed and implemented hospital-wide Multi- and Mass Casualty Response guidelines including testing of critical performance tasks through a multi-functional exercise.
- Fully implemented the SFGHMC Patient Decontamination Team including multiple “surprise” activation and set-up exercises to ensure overall readiness of this capability.
- Collaborated with Infection Control and Pharmacy to develop the SFGHMC Pandemic Influenza Plan, and successfully tested the plan through a Citywide Tabletop Exercise hosted by the Department of Public Health’s Communicable Disease Control and Prevention branch and an internal multi-functional exercise.
- Completed training of over 200 Hospital Incident Management Team members and Departmental Managers and Supervisors and Emergency Department staff in basic Incident Command System Principles and Practices for Healthcare and the National Incident Management System (ICS 100HC, ICS 200HC, and IS 700 NIMS).
- Developed and implemented Disaster Service Worker training for all hospital staff.
- Developed and implemented a progressive evacuation exercise and evaluation program, including successful completion of a horizontal evacuation exercise with several best practices identified to be included in departmental evacuation procedures.
- Developed clinical contingencies, hospital-wide priority actions and a model unit-based plan for power alerts and power failure emergencies.
- Proactively implemented enhanced exercise and evaluation standards to meet 2008 Joint Commission Standards and Homeland Security Exercise Evaluation Program requirements and improve our progressive disaster exercise program.
- Successfully managed 4 actual Bomb Threat events including two with live explosives found, and conducted 6 Functional and Full Scale Exercises, over a dozen functional decontamination drills, and participated in two Citywide coordination Table Top Exercises.

**Goals for 2007/2008 and Opportunities for Improvement:**

- Complete advanced section- and role-specific Hospital Incident Command System (HICS) training to ensure at least 3-deep coverage of all major positions (Command Staff, General Staff, and Key Branch Directors and Unit Leaders).
- Customize HICS Job Action Sheets and forms for SFGH.
- Revise SFGHMC Emergency Operations Plan to incorporate new California Surge Plan guidelines and new Joint Commission critical function standards.
- Expand progressive emergency response exercise program to include at least quarterly multi-functional or full-scale exercises, and further integration of departments beyond the Main Hospital, with key focus areas to be critical functions of communication, resource management, safety and security, staff roles and responsibilities, utilities management, and patient clinical and support activities.

**Annual Program Review:** As required by Joint Commissions, the Emergency Preparedness program objectives, scope, performance, and effectiveness were reviewed and evaluated by the EOC Committee and were found to be effective.

## 2. Safety Management

**Objective:** To provide for a safe environment through ongoing assessments that identify conditions or practices related to the buildings, grounds, equipment, occupants, and internal physical systems that are potential safety risks.

### Accomplishments

- A multi-disciplinary inspection team conducts Environmental, Health and Safety Inspections in patient care and non-patient care areas of the Medical Center to identify actual and/or potential hazards and address dept/unit safety issues/concerns. 100% of EOC Safety Inspection Rounds were conducted for buildings and grounds, patient care and non-patient care areas.
- Safety Surveys are conducted with Department and Unit personnel participation. First quarter FY 06/07 noted a 66% completion rate, the 3<sup>rd</sup> quarter noted a 91% completion rate. A noted 25% improvement in Dept/Unit participation and completion rate, this was largely due to collaboration amongst EH&S office, EOC Safety Committee liaisons and dept/unit leadership.
- Safety Management program – continues to promote a Smoke Free Environment for SFGHMC, designated smoking areas were identified and additional signage identifying new designated areas have been designed and are in place. In addition the Stop Smoke program located on the SFGHMC campus has worked closely with the EOC Safety Management program to ensure smoke cessation programs are available to both patients and staff. During the period Sept 06 through June 07, 8 employees participated in the Stop Smoke program - out of 86 total participants or 9.3 percent. Out of those, 5 are not smoking, 2 are smoking and 1 is unknown. Approximately a 72% quit rate.
- “Constant Readiness” has been a major focus of the EOC Safety Management Program, monthly program and document review of all seven EOC elements are conducted by the Safety Officer, Administrative Executive representative (Support Service Administrator), and Quality Management Liaison. As a result, this level of readiness has been proven to effective and beneficial; as program managers and their staff are familiar with program criteria and are able to present documentation and articulate the scope, objectives and effectiveness of their programs. Program managers and their staff; have been commended on their readiness and competency of their program in recent regulatory and/or accreditation surveys.

### Goals for 2007/2008 and Opportunities for Improvement:

- EOC Inspection Team to maintain a 90% completion rate for administrative discrepancies and 75% completion rate for support service discrepancies and continue to track via TMS in FY07/08.
- EOC Inspection Team utilized the Total Maintenance System (TMS) to track and close out EOC rounds deficiencies/work orders. This allowed the team to manage EOC rounds discrepancies from identification/start to corrective

actions/finish. A 90% completion rate was established for administrative discrepancies and 75% completion rate for support service discrepancies. The quarterly completion rate for; administrative discrepancies completed was 88%, support service discrepancies completed was on target with a 75% completion rate. EOC Inspection Team will continue to track via TMS in FY07/08; the process is being reviewed and revised accordingly.

- In collaboration with a multi disciplinary task group develop and implement a Smoke Free Campus program at SFGHMC

**Annual Program Review:** As required by Joint Commission, the Safety Management program objectives, scope, performance, and effectiveness were reviewed and evaluated by the EOC Committee and was found to be effective.

### **3. Hazardous Materials/Waste Management**

**Objective:** Properly manage identified and potential hazards, handle and store hazardous materials, monitor and dispose of hazardous gases and vapors, manage waste streams, respond to spills of hazardous materials. Provide staff with the appropriate skills and knowledge to safely use and handle hazardous materials/waste. Maintain documentation required by local, regional, state, and federal environmental health and safety rules and regulations.

#### **Accomplishments**

- Upgraded emergency eyewash stations throughout the hospital
- Updated Hospital Hazardous Materials Inventory. Initiated work on web-based Material Safety Data Sheet (MSDS) delivery system which will ultimately replace hard copies of MSDSs which have to be maintained at multiple locations.
- Maintained Hospital's environmental permits and registrations.
- Worked with issuing agencies to resolve ambiguities in permit conditions.

#### **Goals for 2007/2008 and Opportunities for Improvement:**

- Overhaul Hospital's Respiratory Protection Program to reflect changes in regulatory focus and the increasing expectation that respirators will be needed during emergencies.
- Improve Hospital's waste disposal processes and procedures including continued efforts to reduce municipal (non-hazardous) waste, improvements to the tracking and handling of universal waste ("eWaste"), streamlining of hazardous waste disposal, and re-issuance of Hospital's bio-hazardous waste disposal contract.
- Improve identification of hazardous materials storage locations at the hospital including the preparation of electronic maps and the deployment of standard identification markers or signage.
- Continue work on deployment of web-based MSDS delivery system

**Annual Program Review:** As required by Joint Commission, the Hazardous Materials/Waste Management program objectives, scope, performance, and effectiveness were reviewed and evaluated by the EOC Committee and was found to be effective.

#### 4. Medical Equipment Management

**Objective:** The assessment and control of the clinical and physical inventory of fixed and portable electrical equipment used for the diagnosis, treatment, monitoring, and care of patients. This program is in place to ensure that all medical equipment, products, devices and non-medical equipment used throughout the Medical Center comply with appropriate safety and operational standards prior to initial use and on an ongoing basis. To ensure that all medical equipment, products, devices and non-medical equipment used to support the SFGH Medical Center mission, complies with appropriate safety and operational standards prior to initial use and on an ongoing basis.

##### **Accomplishments**

- Maintained monthly preventive maintenance completion rates above 95% to meet Joint Commission (JC) standards. Completion rate above 95% since May 2006, and above 99% since April 2007. Results are a significant improvement from prior years.
- Provided staff with outside training to expand and improve the department's technical skills and capabilities on at least two pieces of equipment that will reduce equipment downtime. 12 technical training classes attended since June 2006
- Improved new tracking system for device alerts to include providing responses and alert resolution monthly update reports to Quality Management (QM) and department managers. Completed and on going since March 2007
- Medical Equipment replacement program developed to prioritize critical equipment needing replacement due to inability to continue to get parts to maintain in safe condition. A six year phased equipment replacement plan presented to Facility Advisory Board (FAB) in October 2007
- Entered EOC rounds notification and responses into the automated maintenance management system, to facilitate tracking. Completed and on going since February 2007
- Created a vendor services management program to monitor existing vendor qualifications and proactively add new vendors as 'city qualified vendors', to avoid equipment downtime. Completed and on going since January 2007

##### **Goals for 2007/2008 and Opportunities for Improvement:**

- Review and update all equipment Preventive Maintenance Procedures

- Complete Development of Biomed Disaster program to create plan to distribute backup equipment to departments to support operations
- Complete annual user survey to assess service quality, and respond to area that require improvement

**Annual Program Review:** As required by Joint Commission, the Medical Equipment Management program objectives, scope, performance, and effectiveness were reviewed and evaluated by the EOC Committee and were found to be effective.

## 5. Utility Management

**Objective:** To provide a safe, controlled, comfortable environment; assesses and minimizes the risk of failures and outlines appropriate responses to failures; and ensures operational reliability and effectiveness of all utility systems.

### Accomplishments

- Because multiple paging systems are used in the Main Hospital for contacting staff in the event of an emergency situation, i.e., code blue, code pink and disaster response. Implementation of a new paging system capable of contacting discreet groups on the system will eliminate the need for multiple pagers and increase pager coverage on the SFGHMC Campus. The benefit to all staff will be a reliable, discriminating system, allowing efficient targeting of staff resources when responding to emergencies.

Paging software has been upgraded to allow programming of different groups in one pager, thus minimizing the number of pagers staff carries. The addition of "burst" paging capability (messages transmitted to all members simultaneously, as opposed to sequentially) was also included in this upgrade. This feature was beneficial in the development of the disaster notification group, which consists of staff who are primary emergency respondents.

- Reduced the number of nurse call system failures. Continue systematic replacement of aging nurse call systems in patient care wards. The existing system technology is dated and increasingly unsupportable due to a lack of available parts and knowledgeable technical support. Newer systems have proven to be more reliable and better supported by parts availability and manufacturer support.

SFGH has been making major repairs/minor upgrade to our Nurse Call systems. Wards 5A, 5C & 5D are completed. Wards 5A & 5C & 5D are no longer dependent on expander boards, as such are not prone to system wide failures. Further nurse call renovations are planned for other medical/surgical units. Additionally the Facility Services Department has increased our testing & repairs frequency for Nurse Call systems throughout the campus. This too has helped with better functionality of the Nurse Call Systems

- Pneumatic Tube System modernization:  
In December 2006 SFGH upgraded to Electronic controls w/computer monitoring of our Pneumatic Tube system. System reliability has increased greatly as a result. Uptime for the system is in the high 90 percent now. 100% uptime on many days & 99% on most others. Prior to this system

upgrade we often experienced hours of down time & occasionally days.

In addition to increased reliability, we have also increased number of daily transactions.

- Additional preventive maintenance tasks were added to the automated work order system. The intention is to better maintain and track equipment status to the purpose of increasing operable run time.

**Goals for 2007/2008 and Opportunities for Improvement:**

- Implementation of a Building Management Program tracks efficacy of the preventative maintenance program in the following areas; exit signage and fire/smoke door operational integrity. Quarterly inspections are conducted per policy in various areas to provide a statistical analysis of the preventative maintenance programs for these items.
- Critical equipment in the Power Plant has reached end of service life. This has resulted in major equipment failures to one of the main chillers and one of the stand-by steam turbine generators. Obsolescence of the major components of the electrical distribution system threatens the ability of the emergency power system to service the load when necessary. Facility Service personnel will increase measures to ensure operational capability but the assessment and planning process for replacement of Campus Power plant equipment must be made a priority.

Planning is underway to study feasibility of replacing the steam turbine generators with emergency diesel generators. This project will replace the current steam turbines which are at end of service life and inadequate as the major source of emergency power for the new hospital.

**Annual Program Review:** As required by Joint Commission, the Utility Management program objectives, scope, performance, and effectiveness were reviewed and evaluated by the EOC Committee and was found to be effective.

## 6. Fire Life Safety

**Objective:** To provide for a safe facility, protection of patients, visitors, employees and property from fire and the products of combustion, fire safety prevention, training and drills, fire response plans, well maintained protection systems, and a medical center design which inherently protects against fire.

### Accomplishments

- Systematic maintenance and repair of the Main Hospital fire and smoke dampers. Instituting a contract-based, scheduled maintenance and repair program will result in a documented system with fewer system failures. Any noted equipment deficiencies can be immediately repaired increasing the likelihood of containing smoke or fire in the building increasing fire safety for all SFGH patients, staff, and visitors.
- In calendar year 2007, we had the Main Hospital fire & smoke dampers inspected by Mintie Corp. Here are the pertinent facts,
- The total cost of having Mintie inspect, clean and document the MH HVAC dampers was \$88,000, or approximately \$11,000/floor.  
For the 68 dampers we had to have an HVAC contractor repair (LIVCO HVAC) the total cost was \$15,000, or \$221/each damper.

Recommendation is to have 2 floors of dampers checked and repaired each year. The approximate cost on an annual basis would be \$22,000 for the inspections and \$4,000 for the repairs (give or take for price increases).

- Continue project to augment existing fire alarm system.
- Electronic Tracking System for SOC/PFI

### Goals for 2007/2008 and Opportunities for Improvement:

- Have the laundry dryer lint ducting in the Behavior Health Center cleaned on a semi-annual basis vs. an annual basis. Cost of increased cleaning is approximately \$2,000/visit.
- Increase fire/life safety training for off shift staff (Operators, Sheriff's staff, ER personnel, Radiology, Pharmacy, etc). Cost of increased training opportunities is mostly in overtime costs (\$300/training session X # of training sessions).

**Annual Program Review:** As required by Joint Commission, the Fire Life Safety Management program objectives, scope, performance, and effectiveness were reviewed and evaluated by the EOC Committee and was found to be effective.

## 7. **Security Management**

**Objective:** To provide a safe, secure and accessible facility; promote security awareness and education; prevent crime; to protect patients, visitors, staff and physicians from harm and reasonable fear of harm; to protect personal and hospital property from theft, misuse and vandalism; and to enforce medical center rules and policies.

### **Accomplishments**

- Continued decrease of thefts occurring in the Bldg 80/90 complex, due to additional security measures put in place. Safety awareness presentations were made to staff.

#### Elevator

locks were changed in Buildings 80 and 90.

- A Physical Security Assessment was completed in Buildings 80/90 focusing on future relocation of Urgent Care clinic and additional medical services. Hours of operation will be extended and traversing between Main Hospital and treatments areas were taken into consideration. Recommendations were submitted to SFGH Administration
- Infant/Child Security Task Force met and discussed issues surrounding recent events involving minor patients fleeing or leaving In/Outpatient Units voluntarily. Changes to the main definition of Code Pink were made and a new AWOL Policy referring to Juveniles was developed.
- Security enhancements identified during recent risk assessment included successful completion of items such as electrical and tree trimming.
- SFSD worked closely with SFGH Disaster preparedness staff and Incident response teams during recent critical events, involving explosives. SFSD implemented regular sweeps of SFGH campus for explosives, via use of K-9 Explosive detection teams.
- Increased passing calls were established through Psych Emergency Services with the intent to decrease incidents of violence on staff/patients.

### **Goals for 2007/2008 and Opportunities for Improvement:**

- Work with DPH Administration in securing additional staffing for SFGHMC.
- Decrease the amount of Thefts (Grand / Petty) occurring on the San Francisco General Hospital Medical Center campus.
- Engage hospital personnel in discussions of security related matters and the shared responsibilities of all

affected by attending staff meetings to address unit based or global security concerns affecting them.

- Update and produce a Crime Prevention Handbook for distribution to all staff members. Identify resources for production.
- Continue working with Facilities in Physical Security Recommendations, as they were identified in the Physical Security Assessment Update
- Continue to monitor all areas for theft and/or trends.

**Annual Program Review:** As required by Joint Commission, the Security Management program objectives, scope, performance, and effectiveness were reviewed and evaluated by the EOC Committee and was found to be effective.

## **2007 EOC Performance Improvement Project**

In addition to the managing the seven elements of the EOC/Safety Management Program, the EOC Safety Committee continued to work on our combined Performance Improvement Project, the implementation of the Patient Decontamination Program. This project involved the combined efforts of Emergency Management / Disaster Preparedness, Security, Facilities, Hazardous Materials Management, Environmental Services, Administration and Clinical Services, specifically Occupational Health, Trauma and the Emergency Department to further develop and implement policies and procedures for the program, and training and frequent drilling of the Patient Decontamination Team.

### **Accomplishments in 2007 include:**

- Updated policies, procedures and checklists and other tools to provide clear guidelines for recognition of potential decontamination, rapid activation of the Patient Decontamination Team, and safe and efficient Decon Corridor set-up.
- Acquired and integrated new equipment including a two-stall “instant on” decontamination shower for small incidents and initial use, and a rapidly deployable large two-corridor shower with roller tables to handle larger events and non-ambulatory patients.
- Reduced Decon Corridor set-up from a 45-minute operation requiring 25-40 staff to a less than 15-minute operation requiring 5-10 staff.
- Completed medical screening and First Receiver training of 65 SFGH clinical and support services staff members for Patient Decontamination Team duties, including selection and use of personal protective equipment, patient assessment and washing procedures, overall safety practices, and equipment set up.
- Successfully completed 16 functional drills and exercises including both scheduled and surprise activations to test team communication and coordination as well as performance of critical tasks with very good results.

While the EOC Safety Committee did achieve the goals set out for this project, the ongoing development and quality improvement to sustain patient decontamination capabilities will require budgetary and scheduling commitments for regular training and exercises.