SAN FRANCISCO GENERAL HOSPITAL
AND TRAUMA CENTER

# Environment of Care

# Annual Report

## FY 2014-2015

Approvals
Environment of Care Committee: August 27, 2015
Nursing Executive and Patient Care Services Committee: (scheduled September 1, 2015)
Medical Executive Committee: (scheduled September 17, 2015)
Quality Council: (scheduled September 15, 2015)
Hospital Executive Staff Committee: (scheduled September 1, 2015)

# INTRODUCTION

The goal of the Environment of Care (EOC) Program is to provide a safe, functional and effective environment for patients, staff and visitors. The EOC Program encompasses the following six programs/areas:

- Safety Management
- Security Management
- Hazardous Materials and Waste Management
- Life Safety Management
- Medical Equipment Management
- Utility Systems Management

In addition, the SFGH Emergency Management Program is integrated with the EOC Program and all patient care services, ensuring the hospital's overall preparedness for emergencies and disaster response.

The EOC Program is managed by the EOC Committee. The EOC Committee:

- Identifies risks and implements systems that support safe environments.
- Works to ensure that hospital staff are trained to identify, report and take action on environmental risks and hazards.
- Sets and prioritizes the hospital's EOC goals and performance standards and assesses whether they are being met.
- Works to ensure the hospital is compliant with the EOC-related requirements of all applicable regulatory bodies.

Membership of the EOC Committee is comprised of:

- Program managers for each of the six EOC Management Programs and the Emergency Management Program.
- Representatives from Nursing, Infection Control, Clinical Laboratory, Pharmacy, Environmental Services and Quality Management.

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

This report highlights the activities of the EOC Program in Fiscal Year 2014-2015. For each of the major areas, it is organized as follows:

- Scope
- Accomplishments
- Program Objectives
- Performance Metrics
- Goals and Opportunities for Improvement

# SAFETY MANAGEMENT

## SCOPE

Safety Management is designed to identify and address potential safety risks in the SFGH environment. The Environmental Health and Safety (EH&S) Department provides consultation, resources and training to create, maintain and improve the hospital's working environment in order to reduce or eliminate employee occupational injuries and illnesses, and provide a safe environment for all. The Safety Management Program's scope encompasses all departments and areas of the SFGH campus, including the current hospital rebuild.

## ACCOMPLISHMENTS

- Continued work with Nursing, Security and Quality Management to improve hospital-wide response to "Code Green" missing at-risk patients and to ensure patient safety.
- Worked with Environmental Services and Facilities Services to proactively reduce slip, trip and fall hazards and achieved a significant reduction in outpatient, visitor and staff falls due to environmental causes.

## PROGRAM OBJECTIVES FOR FY 2014-2015

| Objectives | Met / Not Met | Comments and Action Plans |
|---|---|---|
| Hire and orient a new Safety Officer. | **Not Yet Met** | Excellent candidate was recruited and hired, but withdrew due to lack of reciprocity with UC retirement plan. **Action Plan:** Recruit, hire and complete orientation of Safety Officer in 2015-16. |
| The hospital identifies safety and security risks associated with the environment of care. Annual risk assessments are conducted of all areas, equipment, staff activity, and the care and work environment for patients and employees. Additional risk assessments are conducted when substantive changes involving these issues occur. | **Met** | Hospital-wide risk assessment updated July, 2014. Updates include highlighting the risk of aggressive or violent behavior in areas beyond Psychiatry and the Emergency Department, including all inpatient areas and clinics, and recognized potential for ergonomic issues and repetitive motion injuries. Action plans addressing these updates are included in performance metrics below. |
| The hospital manages magnetic resonance imaging (MRI) safety risks by:<br>• Restricting access to the scanner room.<br>• Ensuring restricted areas are under the supervision of trained staff.<br>• Posting signage regarding potential MRI dangers and indicating that the magnet is always on. | **Met** | Worked with Radiology and Facilities to develop and implement access restrictions, appropriate signage, and corresponding policies and procedures to ensure overall safety in the MRI suites. |

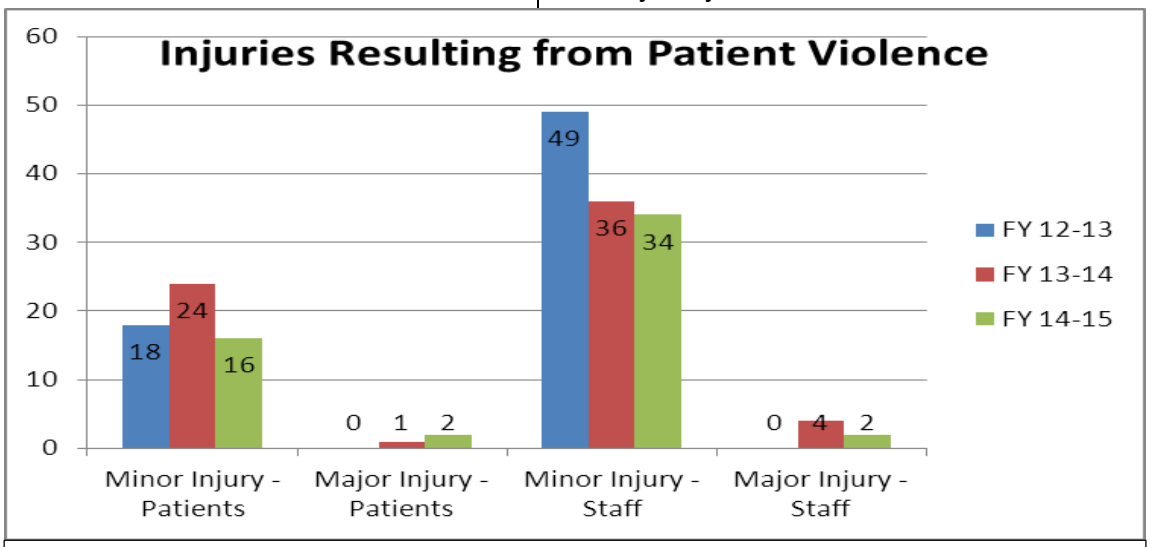
| Objectives | Met / Not Met | Comments and Action Plans |
|---|---|---|
| The Environmental of Care (EOC) rounds include all areas of the hospital. All patient care areas are inspected at least twice a year, and other areas are inspected annually. | **Met** | EOC Rounds were completed as required in all areas, and follow-up rounds were conducted to monitor specific regulatory survey findings. **Action Plan:** Update schedule to include Building 25 by 4/30/16. |
| Research, purchase and implement an electronic tracking system for Environment of Care Rounds findings and related issues. | **Not Yet Met** | Research completed and system selected in partnership with Environmental Services. **Action Plan:** Purchase and implementation will continue in 2015-2016. |
| The EOC Committee receives information from the managers of each of the EOC programs and other sources, identifies key issues and trends, and makes appropriate recommendations for improvement. | **Met** | Continue to provide detailed summaries of staff injuries and EOC Rounds findings in order to target follow-up actions to successfully address issues and identify trends. |
| The hospital manages its environment during demolition, renovation, or new construction to reduce risks. | **Met** | Updated the EOC Policy on Construction Project Risk Assessment & Required Approvals in August, 2014 to ensure comprehensive management of constructions projects and their potential impacts. |
| All departments have access to the current organization-wide safety policies and procedures. Departmental safety procedures have been reviewed within the past three years and are updated as new procedures are implemented or needs arise. | **Met** | EOC policies are maintained online. Numerous other policies and procedures have been updated. Departmental procedures have been updated and are inspected during EOC Rounds. |
| An annual evaluation of the scope, objectives, key performance indicators, and the effectiveness of the Safety Management plan and programs is conducted. | **Met** | Completed via this document. |

The Environment of Care Committee has evaluated these objectives for the Safety Management Program and determined that they have been met.

## PERFORMANCE METRICS

The following metrics provide the Environment of Care Committee with information needed to evaluate performance of the Safety Management Program activities and to identify further opportunities for improvement:

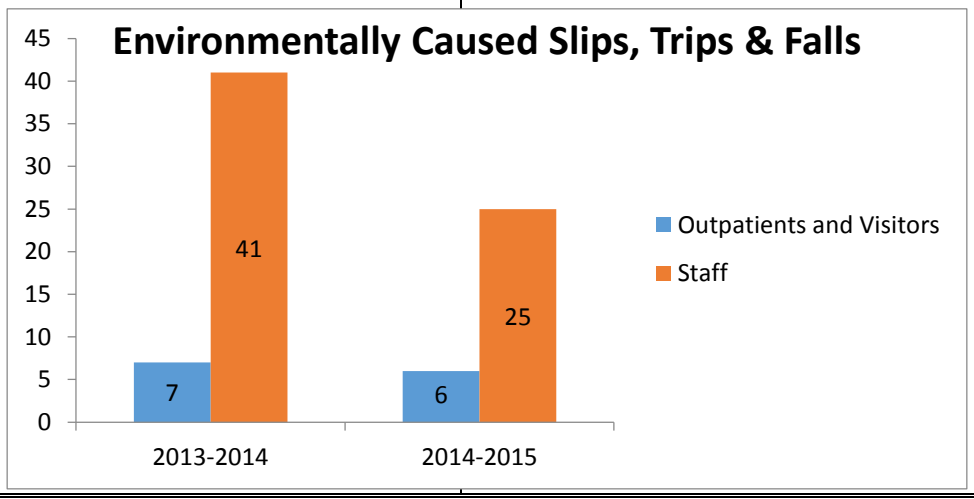
| Objectives & Performance Indicators | Results |
|---|---|
| **AIM: The Hospital conducts Risk Assessments to identify safety risks associated with the environment of care. Additional risk assessments are conducted when substantive changes occur or when opportunities for improvement are identified. Risk Assessment Focus Areas for 2014-2015 were:**<br>• **Hospital-wide All Risks Update**<br>• **Construction Project Risk Assessments** | **MET – 100% Completed**<br>• **Updated Hospital-wide Safety Risk Assessment – July, 2014**<br>• **Updated EOC Policy on Construction Project Risk Assessment & Required Approvals – August, 2014**<br>**2015-2016 Follow-Up Actions:**<br>• **Update Hospital-Wide Safety Risk Assessment to include Building 25.**<br>• **Continue Construction Project Risk Assessments for Other Renovations.** |
| **AIM: To prevent violence and decrease injuries resulting from aggressive behavior & assaults by at least 20% from prior year results by 6/30/15.**<br>• Minor Injuries - Patients: **Goal < 18**<br>• Major Injuries - Patients: **Goal 0**<br>• Minor Injuries - Staff: **Goal < 29**<br>• Major Injuries - Staff: **Goal 0** | **PARTIALLY MET**<br>**Actual injuries resulting from aggressive behavior:**<br>• Minor Injuries - Patients: **16 – down 12%**<br>• Major Injuries - Patients: **2 – up 100%**<br>• Minor Injuries - Staff: **34 – down 5%**<br>• Major Injuries - Staff: **2 – down 50%** |




## Action Plan:

**The SFGH Violence Prevention Committee is in the process of restructuring and implementing more effective Crisis Prevention Institute (CPI) training of staff to de-escalate potentially violent patients and visitors and thereby prevent physical assaults resulting in injuries.**

| Objectives & Performance Indicators | Results |
|---|---|
| **AIM: To reduce outpatient, visitor & staff injuries resulting from environmentally caused falls by at least 10% from prior year results by 6/30/15.**<br><br>Outpatient and Visitor slips, trips and falls attributable to environmental causes.<br>Prior year: 7 **Goal: ≤ 6**<br><br>Staff slips, trips and falls attributable to environmental causes.<br>Prior year: 41 **Goal: ≤ 36** | **MET – Significant Decrease**<br>**Actual Slips Trips and Falls involving Patients or Visitors Attributable to Environmental Causes: 6 – down 16%**<br><br>**Actual Slips Trips and Falls involving Staff Attributable to Environmental Causes: 25 – down 39%**<br><br>**Follow-Up Actions:**<br>Continue work with Falls Prevention Task Force, Environmental Services and Facilities to increase staff awareness of the environment and proactively avoid and eliminate slip, trip and fall hazards. |




## EFFECTIVENESS

Effectiveness is based on how well the goals are met and how well the scope of the performance metrics fit current organizational needs. The Safety Management Program has been evaluated by the Environment of Care Committee and is considered to be effective.

## GOALS AND OPPORTUNITIES FOR IMPROVEMENT IN 2015-2016:

- Developing People: Hire and orient the new Safety Officer and the Ergonomics Program Coordinator.
- Financial Stewardship: Purchase and implement an electronic tracking system for Environment of Care Rounds findings and related issues, thereby reducing redundant data entry time and improving overall accountability.
- Safety: Implement a comprehensive ergonomics program at SFGH, aimed at improving staff safety and comfort and reducing injuries resulting from patient handling, lifting and repetitive motion tasks including computer work, which account for approximately one third of all Workers' Compensation claims.

- Safety: Update training, reference materials, and monitoring tools to integrate Building 25, and thereby improve staff knowledge regarding their roles and responsibilities relative to the Environment of Care.
- Safety: Partner with Security to continue to improve staff awareness and training to recognize potentially violent situations and more effectively use de-escalation techniques to prevent injuries resulting from aggressive patient and visitor behavior.
- Safety: Continue efforts to further reduce outpatient, visitor and staff falls resulting from environmental causes.

The proposed performance metrics for these goals are:

| **Safety Management<br>Proposed Performance Metrics for 2015-2016** | **Target** | **Comments<br>& Action Plan** |
|---|---|---|
| **AIM: Complete updates of Environment of Care training modules, policies and procedures, Rainbow Charts, Rounds schedules and staff questioning focus areas to integrate Building 25 by 4/30/16.** | **100% Complete** | All updates will be reviewed and approved by multi-disciplinary EOC Committee. |
| **AIM: Improve Staff knowledge of their key roles and responsibilities relative to the Environment of Care by 10% by 6/30/16.** | **Improve by 10%** | Staff knowledge will be monitored during EOC Rounds. Results will be reviewed quarterly by EOC Committee. |
| **AIM: Provide departmental ergonomics awareness training and workstation evaluations for 90% of departments implementing eClinicalWorks or with high levels of data entry tasks by 6/30/16.** | **Complete 90%** | Ergonomics program priority targets and coordinated follow-up; Results will be reviewed quarterly by EOC Committee. |
| **AIM: Reduce the number of staff injuries and total lost work days due to repetitive motion injuries by 10% by 6/30/16.** | **Reduce by 10%** | Implement a comprehensive Ergonomics Program focusing on high risk areas and tasks. Results will be reviewed quarterly by EOC Committee. |
| **AIM: Reduce the number of staff injuries and total lost work days due to patient handling injuries by 10% by 6/30/16.** | **Reduce by 10%** | Implement a comprehensive Ergonomics Program focusing on high risk areas and tasks. Results will be reviewed quarterly by EOC Committee. |
| **AIM: To prevent violence and decrease injuries resulting from aggressive behavior & assaults by 10% from prior year results by 6/30/16.**<br>• Minor Injuries - Patients: **Goal < 16**<br>• Major Injuries - Patients: **Goal 0**<br>• Minor Injuries - Staff: **Goal < 28**<br>• Major Injuries - Staff: **Goal 0** | **Reduce by 10%** | Implement improved early recognition and de-escalation training. Results will be reviewed quarterly by Violence Prevention Committee and EOC Committee. |
| **AIM: To reduce outpatient, visitor & staff injuries resulting from environmentally caused falls by 10% from prior year results by 6/30/16.** | **Reduce by 10%** | Continue work with EVS, Facilities, and Nursing to increase awareness and improve correction of environmental fall hazards. |

# SECURITY MANAGEMENT

## SCOPE

The Security Management Program is designed to ensure the physical and personal security of patients, staff and visitors at San Francisco General Hospital and Trauma Center (SFGH). The Security Management Program implements and evaluates processes to minimize the risks of security threats, incidents, or violations, which include injuries, property damage, or theft on the SFGH campus.

## ACCOMPLISHMENTS

- Completed the Sheriff's Operations Center (SOC), significantly improving law enforcement communication, monitoring and coordination capabilities.
- Significantly reduced the number of Code Green Missing At-Risk Patients.

## PROGRAM OBJECTIVES FOR FY 2014-2015

| Objectives | Met / Not Met | Comments and Action Plans |
|---|---|---|
| The hospital takes action to minimize or eliminate identified security risks in the physical environment. | **Met** | The DPH Security Director will conduct risk assessments and work with hospital leadership to prioritize highest risks to be addressed.<br>SFSD on-site leadership attends daily Nursing Administration report-outs twice per day (bed meetings).<br>SFSD on-site leadership attends weekly security leadership meetings with the SFGH CEO and the DPH Security Director.<br>SFSD adjusts security patrols and response procedures as needed to secure Building 25 during construction, and will continue interaction with the Rebuild Committee to stay abreast of future changes. |
| When a security incident occurs, the hospital follows its identified procedures. | **Met** | Hospital staff follow established protocols for security incidents as outlined in the SFGH Emergency & Safety Response Resource "Rainbow" Chart. |
| The hospital establishes a process for continually monitoring, internal reporting and proactive risk assessments to identify potential security risks. | **Met** | Accomplished through quarterly reports to the EOC Committee and annual Security Management plan updates.<br>Enhanced the computer capabilities at the SFGH SOC to link with the SFSD law enforcement infrastructure and criminal justice database. |

| Objectives | Met / Not Met | Comments and Action Plans |
|---|---|---|
| The hospital reports and investigates incidents of damage to its property or the property of others. | **Met** | Quarterly incident reports are reported to Environment of Care Committee (EOC) and to the DPH Director of Security. |
| The hospital will utilize a multi-disciplinary workplace violence prevention team to review all policies, procedures and operations to identify and respond to hazards that exist currently and plan for future threats. | **Met** | The Violence Prevention Committee (VPC) meets monthly to discuss violence prevention policies, education and exercises. Threats to public safety will be mitigated by a combination of physical and procedural controls. The VPC discusses potential solutions and makes recommendations to improve the safety and security of patients, visitors and staff. |
| The San Francisco Sheriff's Department will utilize Community Oriented Policing concepts. The SFSD will distribute campus Safety and Crime Prevention bulletins. The SFSD will hold regular community meetings on campus to solicit input, receive feedback and develop community-based solutions to campus security threats and problems. | **Met** | The SFSD began producing monthly safety and crime awareness bulletins on a monthly basis in January of 2014. |

**PERFORMANCE METRICS**

An analysis of the program objectives and performance metrics is used to identify opportunities to resolve security issues and evaluate the effectiveness of the program. Additionally, it provided the Environment of Care Committee with information that can be used to adjust the program activities to maintain performance or identify opportunities for improvement.

**Sheriff's Operations Center – Phone Call Audits**

**AIM: Incoming calls to the Sheriff's Operation Center will be documented accurately, comply with hospital privacy standards and meet professional standards.**

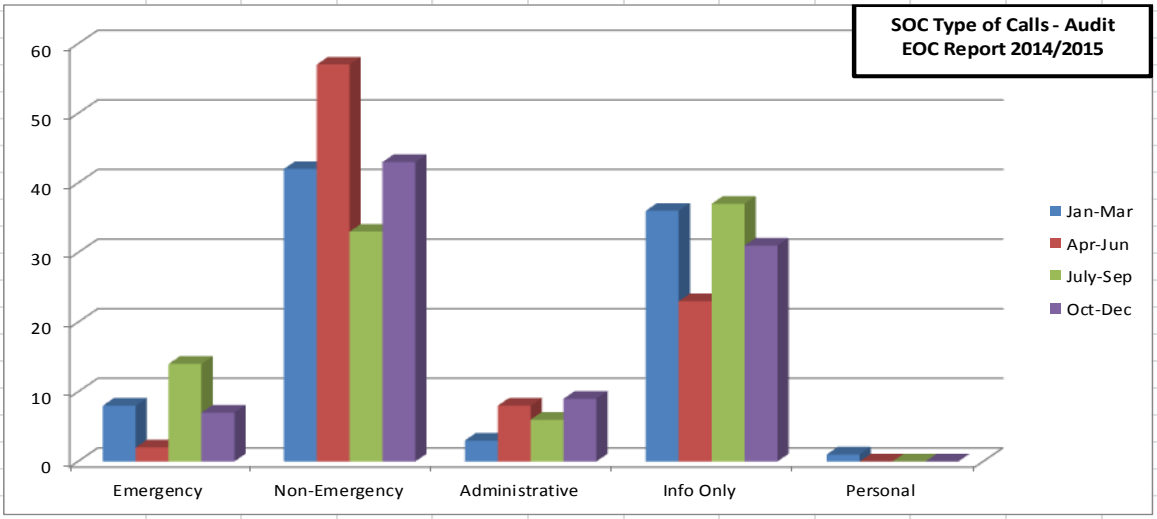
- 100% of audited dispatch records will be accurate.
- Zero HIPAA Violations on audited phone calls.
- 100% of audited calls demonstrate professional standards met.

Ten phone calls per shift (30 calls per month) were audited by the Unit Commander or his designee (Asst. Unit Commander). During this year, **360 phone calls and associated dispatch records were audited** for documentation accuracy, compliance with HIPAA and SFSD professional standards with the following results:

- Complete and accurate documentation was found for 343 calls (95.5%). Personnel responsible for incomplete documentation received counseling and retraining.
- There were no HIPAA violations on any calls (100%).
- All calls conformed to SFSD professional standards (100%).

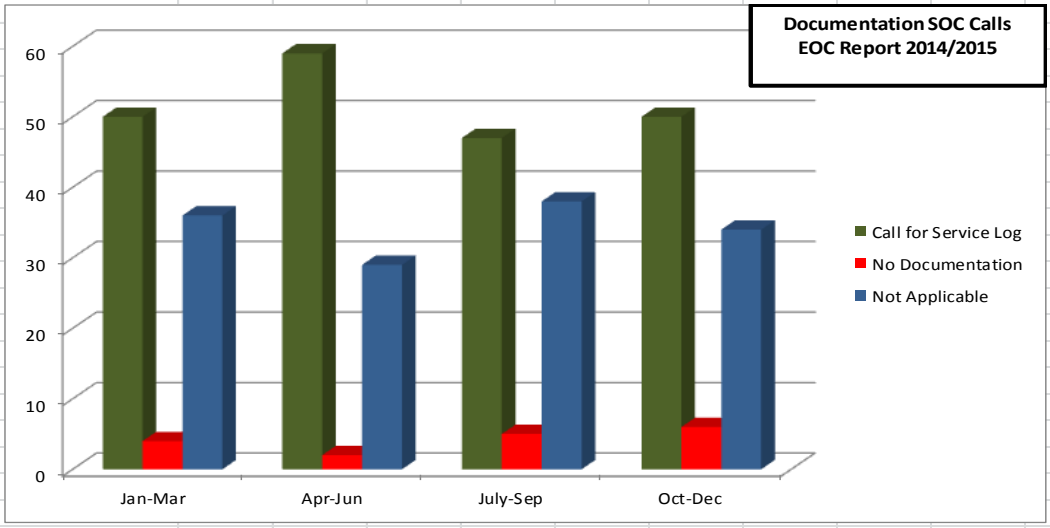
## SOC Call Type – FY 2014-2015

| | Jan-Mar | Apr-Jun | July-Sep | Oct-Dec | Total |
|---|---|---|---|---|---|
| Emergency | 8 | 2 | 14 | 7 | 31 |
| Non-Emergency | 42 | 57 | 33 | 43 | 175 |
| Administrative | 3 | 8 | 6 | 9 | 26 |
| Info Only | 36 | 23 | 37 | 31 | 127 |
| Personal | 1 | 0 | 0 | 0 | 1 |
| Total Audited | 90 | 90 | 90 | 90 | 360 |




## Documentation of SOC Calls – FY 2014-2015

| | Jan-Mar | Apr-Jun | July-Sep | Oct-Dec | Totals |
|---|---|---|---|---|---|
| Call for Service Log | 50 | 59 | 47 | 50 | 206 |
| No Documentation | 4 | 2 | 5 | 6 | 17 |
| Not Applicable | 36 | 29 | 38 | 34 | 137 |
| Total | 90 | 90 | 90 | 90 | 360 |



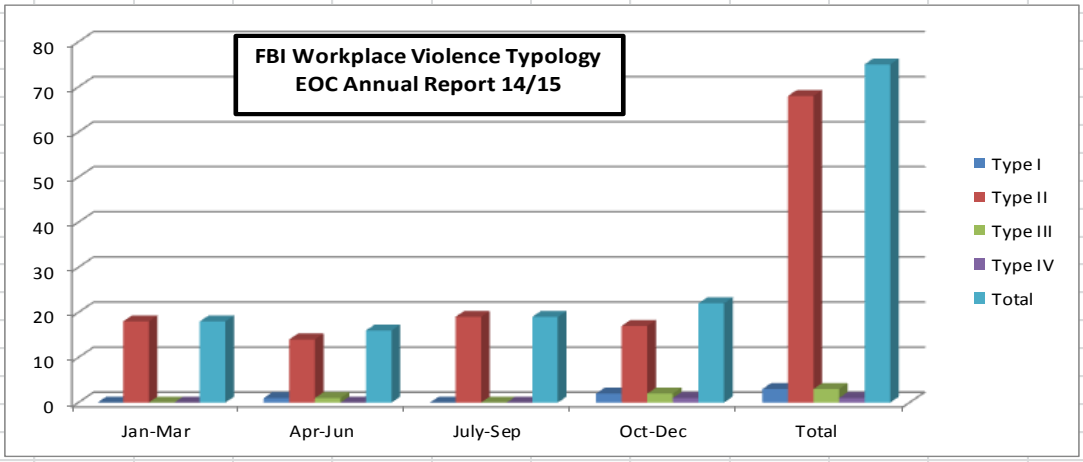
## FBI/DOJ Workplace Violence Typology

The Federal Bureau of Investigation and the Department of Justice use the following typology to categorize workplace violence events. The San Francisco Sheriff's Department now utilizes this typology for reporting incidents of violence on the SFGH campus to facilitate standardized comparisons and ongoing improvement activities.

| Type of Act | Description of Act |
|---|---|
| **Type I** | Offender has no relationship with the victim or workplace establishment. In these incidents, the motive most often is robbery or another type of crime. |
| **Type II** | Offender currently receives services from the workplace, often as a **customer**, **client**, **patient**, **student** or other type of customer. |
| **Type III** | Offender is either a current or former employee who is acting out toward coworkers, managers, or supervisors. |
| **Type IV** | Offender is not employed at the workplace, but has personal relationship with an employee. Often, these incidents are due to domestic disagreements between and employee and the offender. |

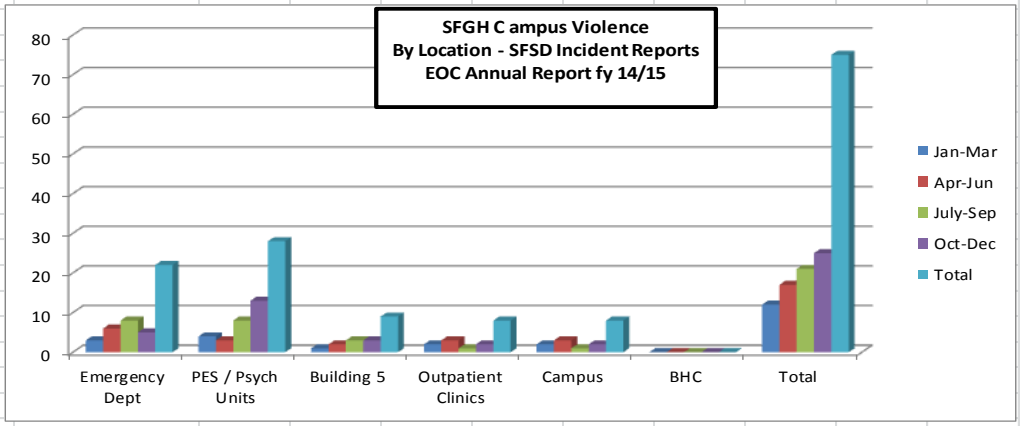
## FBI/DOJ Workplace Violence Typology FY 2014-2015 from SFSD Incident Reports

| | Jan-Mar | Apr-Jun | July-Sep | Oct-Dec | Total |
|---|---|---|---|---|---|
| Type I | 0 | 1 | 0 | 2 | 3 |
| Type II | 18 | 14 | 19 | 17 | 68 |
| Type III | 0 | 1 | 0 | 2 | 3 |
| Type IV | 0 | 0 | 0 | 1 | 1 |
| Total | 18 | 16 | 19 | 22 | 75 |



## SFGH Campus Violence by Location - SFSD Incident Reports FY 2014-2015

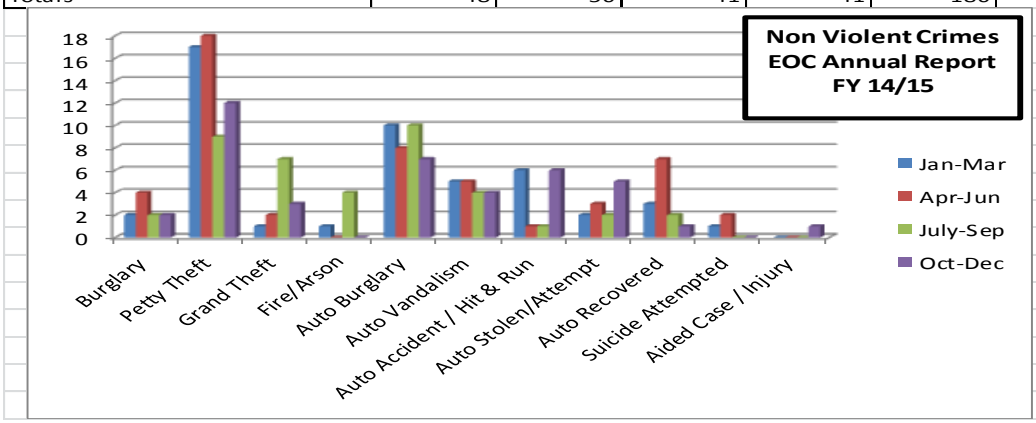
| | Jan-Mar | Apr-Jun | July-Sep | Oct-Dec | Total |
|---|---|---|---|---|---|
| Emergency Dept | 3 | 6 | 8 | 5 | 22 |
| PES / Psych Units | 4 | 3 | 8 | 13 | 28 |
| Building 5 | 1 | 2 | 3 | 3 | 9 |
| Outpatient Clinics | 2 | 3 | 1 | 2 | 8 |
| Campus | 2 | 3 | 1 | 2 | 8 |
| BHC | 0 | 0 | 0 | 0 | 0 |
| Total | 12 | 17 | 21 | 25 | 75 |




The SFGH Campus has 500 beds (including the Behavioral Health Center).

## Non-Violent Crime FY 2014-2015 – SFSD Incident Reports

| | Jan-Mar | Apr-Jun | July-Sep | Oct-Dec | Total |
|---|---|---|---|---|---|
| Burglary | 2 | 4 | 2 | 2 | 10 |
| Petty Theft | 17 | 18 | 9 | 12 | 56 |
| Grand Theft | 1 | 2 | 7 | 3 | 13 |
| Fire/Arson | 1 | 0 | 4 | 0 | 5 |
| Auto Burglary | 10 | 8 | 10 | 7 | 35 |
| Auto Vandalism | 5 | 5 | 4 | 4 | 18 |
| Auto Accident / Hit & Run | 6 | 1 | 1 | 6 | 14 |
| Auto Stolen/Attempt | 2 | 3 | 2 | 5 | 12 |
| Auto Recovered | 3 | 7 | 2 | 1 | 13 |
| Suicide Attempted | 1 | 2 | 0 | 0 | 3 |
| Aided Case / Injury | 0 | 0 | 0 | 1 | 1 |
| Totals | 48 | 50 | 41 | 41 | 180 |

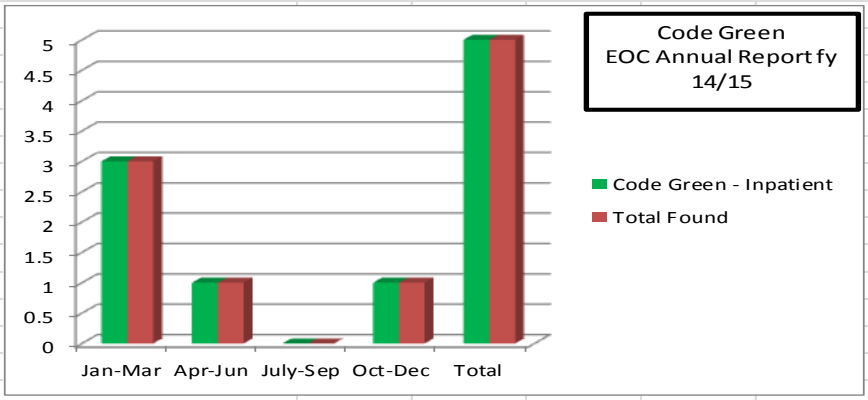



SFGH Campus data represents an analysis of events that resulted in a San Francisco Sheriff's Department response and Incident Report.

## Code Green and AWOL At-Risk Data - FY 2014-2015

**There was a significant reduction in the number of at-risk patients who attempted to AWOL this year, down from an average of nearly 1 Code Green Inpatient per month from January – June 2014 to only 5 total for FY 2014-2015. All (100%) were found and agreed to return to the hospital.** Furthermore, the integration of the AeroScout™ patient tracking system has enabled hospital staff or SFSD to stop most patients attempting to AWOL at the unit doorway or elevators, and convince them to return and complete care.

| | Jan-Mar | Apr-Jun | July-Sep | Oct-Dec | Total |
|---|---|---|---|---|---|
| Code Green - Inpatient | 3 | 1 | 0 | 1 | 5 |
| Total Found | 3 | 1 | 0 | 1 | 5 |




### EFFECTIVENESS

Effectiveness is based on how well the goals are met and how well the scope of the performance metrics fit current organizational needs. The Security Management Program has been evaluated by the Environment of Care Committee and is considered to be effective.

### GOALS AND OPPORTUNITIES FOR IMPROVEMENT IN 2015-2016

A 2015 Security Risk Assessment which identifies security vulnerabilities, and opportunities to address security risk for the coming year has been submitted to the Environment of Care Committee.

In addition, the following goals have been identified:

- **Increase Facility-wide Emergency Response Proficiency** – SFGH will conduct Code Green "At-Risk" Patient, and Code Pink Infant or Child Abduction Drills each quarter.
- **Improve Customer Satisfaction:** The Security Management Plan calls for best in class customer service for patients, visitors, and staff. Customers will be will be surveyed on their experiences with Security each month.

- **Improve Electronic Security System Functionality:** In order to ensure the security of SFGH, the electronic security system must be highly functional and reliable.
- **MOU Security Supplier Performance Survey:** The Director of Security will complete a monthly security provider performance survey (SPS) with input from SFGH and DPH leadership. This assessment is intended to validate the security provider's compliance with MOU obligations, operational performance goals, management responsibilities, and finance provisions.

The proposed performance metrics for these goals are:

| **Security Management<br>Proposed Performance Metrics for 2015-2016** | **Target** |
|---|---|
| **Code Green At-Risk Patient Alert Response Drills**<br>**AIM:** On at least a quarterly basis, SFGH will conduct a Code Green drill to determine effectiveness in the following areas:<br>• Initial Perimeter and Search<br>• AOD Response and Code Green Activation<br>• Hospital-wide Activation and Search<br>• Clearing Code Green | SFGH will be measured on its ability to prevent or return an At Risk patient who is attempting to AWOL.<br>**Prevent or Return Rate 98%**<br>SFGH will be measured on its ability to respond to a Code Green alert activation and search, in accordance with the Code Green policy.<br>**Response Rate 90%** |
| **Code Pink Infant / Child Abduction Response Drills**<br>**AIM:** On at least a quarterly basis, the hospital will conduct a Code Pink drill, to determine the effectiveness in the following areas:<br>• Hospital-wide Activation and Search | SFGH will be measured on its ability to prevent or return an abducted or missing infant or child:<br>**Prevent or Return Rate 98%**<br>SFGH will be measured on its ability to respond to a Code Pink activation and search, in accordance with the Code Pink Policy.<br>**Response Rate 90%** |
| **Customer Satisfaction**<br>**AIM:** On a monthly basis, 100 customers who had a recent contact with Security will be surveyed on their experience, with responses categorized as Very Satisfied, Satisfied, Somewhat Satisfied, Dissatisfied, and Very Dissatisfied. | The Security Department will be measured on its ability to achieve the following:<br>**90% Satisfied or Very Satisfied** |
| **Electronic Security System Functionality**<br>**AIM:** On a monthly basis the Security Operations Center staff will inspect the electronic security system for functionality. The Facilities Department will monitor all service call work orders to ensure timely response. The Security Director and SFSD Unit Commander will develop a plan to mitigate risk resulting from system malfunctions. The action plan will be documented in EOC Security Report. | The functionality and reliability of the Electronic Security System will be varified each month and maintained so that<br>**100% of the system is inspected**<br>**≥ 98% of the system is functional** |
| **MOU Security Supplier Performance Survey**<br>**AIM:** The Director of Security will complete a monthly security provider performance survey (SPS) with input from SFGH and DPH leadership. Values from 1 to 5 will be assigned as indicated in the scoring matrix. | The provider shall maintain scores of:<br>**≥ 3 in each category**<br>**Overall Score ≥ 3.6** |

# HAZARDOUS MATERIALS & WASTE MANAGEMENT

The Hazardous Materials and Waste Management Program is designed to minimize the risk of injury and exposure to hazardous materials through proper selection, use, handling, storage and disposal. The program also works to control the risk of exposures to hazardous components such as asbestos and lead in existing building materials which may be disturbed during construction and renovation activities. The program assures compliance with all applicable local, State, and federal codes and regulations.

## SCOPE

The Hazardous Materials and Waste Management Program applies to the entire campus of San Francisco General Hospital and Trauma Center (SFGH) including Building 25 and other construction activities. While construction and renovation activities with possible impacts on staff, patients, and visitors have increased and changes have been made to chemical hazard communication standards, the scope still accurately reflects the intent of the program.

## ACCOMPLISHMENTS

- Continued to collaborate with Pharmacy and Nursing management and staff to deploy and train staff on an improved chemotherapy spill kit and spill response procedures. Initial training for Hematology/Oncology and Post Anesthesia Care Unit (PACU) Nursing and Pharmacy staff completed. Worked with Hem/Onc Nursing and Materials Management on the evaluation, selection, and deployment of improved, more chemotherapy-agent protective gloves and gowns, which are now in use.
- Collaborated with Infection Control, Nursing, Environmental Services (EVS) and Hospital Leadership on the hospital's response to Ebola Viral Disease (EVD). Worked with Infection Control to develop and revise Personal Protective Equipment (PPE) ensembles to be worn by patient care staff, and train staff on the proper donning, use and doffing of the PPE. Developed a PPE ensemble and trained EVS staff assigned to clean potentially contaminated areas where the risks for chemical exposures from the cleaning agents equaled or exceeded that of EVD exposure. Collaborated with SF DPH Environmental Health and the hospital's municipal waste disposal contractor to assure that the hospital had a safe and regulation-compliant method of disposing of EVD-associated waste.
- Worked with the Department of Education and Training (DET) to develop and deploy a new Chemical Hazard Communication computer-based training module which was incorporated into the 2015 required training for all employees.
- Continued to collaborate with Materials Management, Infection Control, and patient care departments to screen proposed products and verify that they can be used in a safe fashion within the SFGH environment.
- Collaborated with Pharmacy Management on alternate methods for the disposal of pharmaceutical waste with the goal of enhancing regulatory compliance and preparing for changes to Federal and State regulations for pharmaceutical waste. Worked with representatives of the San Francisco Public Utilities Commission regarding the disposal of selected components of the pharmaceutical waste "stream" into the sanitary sewers, confirming that such disposal is safe and does not pose risks to the environment or wastewater treatment processes. Changes in pharmaceutical waste disposal practices expected to be implemented in the first half of FY 2015-2016.

- Continued to collaborate with Employee/Occupational Health Services and Infection Control on respiratory protection issues.
- Continued to work with the Hospital Rebuild Team, SFGH Facilities, and Infection Control to allow construction within operating hospital buildings as well as in very close proximity to staff, patients, and visitors without significant incidents or exposure concerns.
- Maintained SFGH Environmental Permits, and acted as liaison between regulatory agencies including the SF PUC, DPH Hazardous Materials Unified Program Agency, and Cal/OSHA and SFGH. Continued to work with SFGH management and staff regarding Cal/OSHA regulations, policies, and practices and assisted in responding to inquiries from Cal/OSHA regarding concerns about working conditions.

**PROGRAM OBJECTIVES FOR 2014-2015**

| Objectives | Met / Not Met | Comments & Action Plan |
|---|---|---|
| Complete deployment of improved chemotherapy agent spill kits and spill training throughout SFGH:<br>• Modify procedures as needed for other areas of pharmacy and patient care units.<br>• Deploy at least 1 spill kit to each area of pharmacy and patient care units who frequently administer chemotherapy.<br>• Provide or oversee at least one training session for pharmacy and nursing units which frequently administer chemotherapy agents. | **Met** | • Procedure reviewed and accepted by nursing with minimal modifications.<br>• Spill kits deployed to inpatient pharmacy, pharmacy storeroom, 5A Hematology / Oncology, 4C Infusion Clinic, and PACU with spare kits maintained by AOD and EH&S. First replacement of shelf-life dated components successfully completed.<br>• Training for inpatient pharmacy and pharmacy store room trainers completed. Training provided at annual updates for Hematology / Oncology and PACU nurses.<br>Will continue working with Nursing leadership to develop "sustainable" training. Evaluating need for "mini" spill kits with Pharmacy and Nursing. |
| Working with Infection Control identify at least one potentially hazardous cleaning and disinfection practice used in patient care units, and review, upgrade, and standardize practice to both improve staff safety and infection control effectiveness of practice.<br>• Work with Infection Control to jointly review large scale and/or multi-unit cleaning and disinfection practices.<br>• Identify at least one large scale and/or multi-unit cleaning and disinfection practice for in-depth review, identification of the least hazardous most appropriate cleaning and disinfection practice, and training and deployment of the improved cleaning disinfection practice. | **Met** | • Identified enzymatic instrument pre-cleaning process using an active ingredient which is both highly irritating and classified as both a respiratory and dermal sensitizer. Evaluated the hazards of a hydrogen-peroxide containing alternate product and determined it to be a safer, lower risk material. Worked with 6G staff on safe use of the product; trial was successful and the unit permanently adopted the product. Identifying other areas using enzymatic pre-cleaner with plans to make the same substitution where feasible.<br>• Worked with Infection Control, Nursing, and Environmental Services (EVS) to identify an effective disinfecting agent for Ebola Viral Disease. Because of irritating properties of selected disinfectant (sodium hypochlorite, aka chlorine bleach) developed and trained EVS on appropriate Personal Protective Equipment (PPE) ensemble and developed methods for least-hazardous use. |

The Environment of Care Committee has evaluated the objectives and determined that they have been met. The Program continues to direct hazardous materials and waste management in a positive proactive manner.

## PERFORMANCE METRICS

The following metrics provide the Environment of Care Committee with information needed to evaluate performance of the Hazardous Materials and Waste Management Program activities and to identify further opportunities for improvement:

| Objectives | Met / Not Met | Comments and Action Plans |
|---|---|---|
| Implement expanded Hazard Communication training. | **Met** | With the assistance of the Department of Education and Training, developed a new stand-alone computer-based ("Halogen") training module addressing hazard communication. The module was assigned to all employees as part of the mandatory annual training catalog. As of September 30th, 2015 over 91% of all employees had taken the class. |
| Increase hazardous materials spill reporting and investigation. | **Met** | Follow-up investigation of all hazardous materials spills with UOs investigated. Reported spills were of chemotherapy agents validating efforts to deploy new chemotherapy spill kits and train staff on use. New hazard communication training reinforces importance of reporting of chemical spills. |

## EFFECTIVENESS

Effectiveness is based on how well the scope fits current organizational needs and the degree to which current performance metrics result meet stated performance goals. The Environment of Care Committee has evaluated the Hazardous Materials and Waste Management Program and considers it to be effective.

## GOALS AND OPPORTUNITIES FOR IMPROVEMENT IN 2015-2016

- ***(Continued from previous reporting year)*** **Identify, review, overhaul, and standardize potentially hazardous cleaning and disinfecting practices.**
  SFGH Infection Control and Environmental Health and Safety (EH&S) have previously identified cleaning and disinfection practices which pose both excessive risk to staff performing the cleaning and disinfection and may not provide optimal cleaning and disinfection of equipment. Infection Control and EH&S will continue to work jointly to identify potentially hazardous cleaning and disinfection practices, work to identify the appropriate lowest risk cleaning and disinfection practice, and standardize to the practice particularly if it is performed by multiple units.

- **Enhance (chemical) hazard communication at the SFGH site.**
  During the previous (2014-2015) reporting period, a major advance was made by the development and deployment of a stand-alone Hazard Communication computer-based training (Halogen) module. Training was particularly timely because of revisions to the Cal/OSHA Hazard Communication standard, 8 CCR 5194, which incorporated Globally Harmonized System (GHS) changes to Material Safety Data Sheets (MSDSs, now renamed

Safety Data Sheets, SDSs) and product labeling. During 2015-2016 EH&S will work to expand employee knowledge of the content and use of the new SDSs and product labels, and increase access to the new SDSs.

The proposed performance metrics for these goals will include:

| Hazardous Materials & Waste Management Proposed Performance Metrics for 2015-2016 | Target |
|---|---|
| **AIM:** Continue to work with Infection Control to identify at least one additional potentially hazardous cleaning and disinfection practice used in patient care units, and review, upgrade, and standardize practice to both improve staff safety and infection control effectiveness of practice.<br>• Work with Infection Control to jointly review large scale and/or multi-unit cleaning and disinfection practices.<br>• Identify at least one large scale and/or multi-unit cleaning and disinfection practice for in-depth review, identification of the least hazardous most appropriate cleaning and disinfection practice, and training/deployment of the improved cleaning disinfection practice. | Identify at least 1 process to review<br>• Complete at least 1 process overhaul and standardization |
| **AIM:** Enhance Hazard Communication at the SFGH site.<br>• Work with Education and Training to develop method for delivering additional hazard communication information to employees who have already completed the initial Halogen Hazard Communication Module.<br>• Work with units to convert them to “electronic” M/SDS management which will speed dissemination of SDSs as they become available from product manufacturers. | • Prepare and deploy one additional / advanced hazard communication content course.<br>• Convert 3 units to “electronic” M/SDS management. |

# LIFE SAFETY MANAGEMENT

The Life Safety Management Plan demonstrates comprehensive understanding, application, and adherence to the latest life safety codes of the National Fire Protection Association (NFPA), State and local standards, and as required by various regulatory bodies. It is designed to ensure an appropriate, effective response to fire emergencies that could endanger the safety of patients, staff and visitors, and the San Francisco General Hospital environment (SFGH).

## SCOPE

The Life Safety Management Program applies to multiple buildings on the SFGH campus, including all construction projects. The SFGH Rebuild project has developed a Life Safety Management plan that covers any contingencies that should occur within the confines of the construction site. Notification and response to any event includes the SFGH Fire Marshal and Facility Services staff.

## ACCOMPLISHMENTS

- Completed annual test, inspection, and repairs to fire and smoke dampers on the 6th and 7th floors in Building 5 (Main Hospital) per NFPA standards, which is required every four years. The intent is to test and inspect two floors per year to maintain compliance at a minimal and predictable financially responsible cost. Annual damper testing also offers the opportunity to provide a safe HVAC environment.
- Annual HVAC smoke control testing and repairs completed in February. Smoke control testing, in addition to being a requirement, demonstrates a safe and reliable smoke control system.
- Assessed risk and implemented Interim Life Safety Measures (ILSM) as necessary for ADA bathroom projects, and enabling projects to connect Building 5 to Building 25. Continuous project monitoring enhances the care experience in addition to a safe high-quality environment.
- Reduced false fire alarms on campus to one (1) for the year by maintaining cleanliness of smoke detectors and managing project work. All Engineering Watch teams assist in managing the fire alarm system.
- Obtained funding to design an upgrade for the fire protection system Building 5. These funds will be utilized to survey the sprinkler system for future upgrade.
- Began integration of current campus wide fire alarm system with fire alarm system in Building 25. The quality care experience at SFGH begins with a safe and reliable fire alarm system.
- Trained and certified 15 Engineers in Fire Pump testing and operations for Building 25.
- Trained Facilities Services staff on Life Safety features of Building 25.

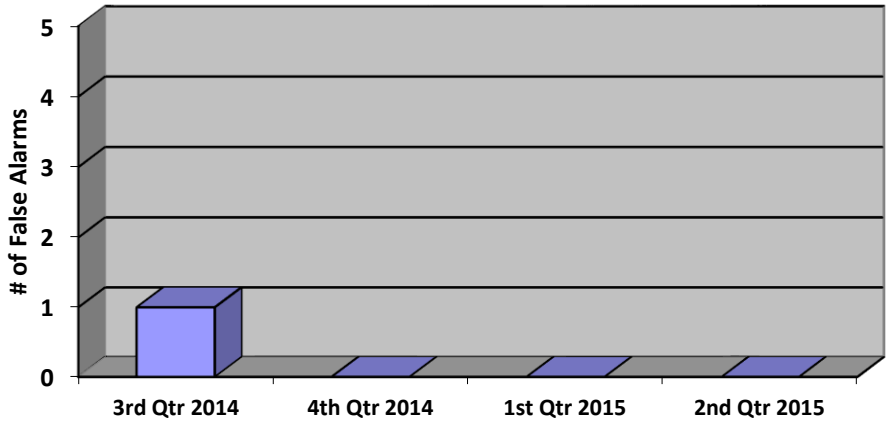
**PROGRAM OBJECTIVES**

| Objectives | Met/ Not Met | Notes/Action Plan(s) |
|---|---|---|
| The Fire Plan defines the hospital's method of protecting patients, visitors, and staff from the hazards of fire, smoke, and other products of combustion and is reviewed and evaluated at least annually. | **Met** | At a minimum, annually review the SFGH Fire Plan. Problems are assessed, and addressed for impact to the hospital's core values of safety, responsibility. |
| The fire detection and response systems are tested as scheduled, and the results forwarded to the EOC Committee quarterly. | **Met** | The Campus Fire Alarm system serving SFGH is routinely tested and repaired as necessary. |
| Summaries of identified problems with fire detection, NFPA code compliance, fire response plans, drills and operations in aggregate, are reported to the EOC Committee quarterly. | **Met** | Any problems or deficiencies of the fire alarm system are reported in the quarterly Environment of care (EOC) report. |
| Fire Prevention and Response training includes the response to fire alarms at the scene of the alarm, critical locations of the facility, use of the fire alarm system, processes for relocation and evacuation of patients if necessary, and the functions of the building in protection of staff and patients. | **Met** | All fire drills required for the facility have been conducted per schedule. Staff training in response and system devices are covered as part of the drill. |
| Fire extinguishers are inspected monthly, and maintained annually, are placed in visible, intuitive locations, and are selected based on the hazards of the area in which they are installed. | **Met** | Fire extinguishers are inspected regularly, and as required. All extinguishers are appropriate to their use and location. |
| Annual evaluations are conducted of the scope, and objectives of this plan, the effectiveness of the programs defined, and the performance monitors. | **Met** | Items monitored in the annual report and fire drills are assessed for effectiveness and improvement. |

**PERFORMANCE METRICS**

| Life Safety Management Performance Metrics | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | Target | Comments and Action Plan |
|---|---|---|---|---|---|---|
| Quarterly Fire Drills; minimum of 6 / quarter - one per shift, with completed department evaluation forms. | 13 | 8 | 7 | 7 | Minimum of 6 drills / quarter; 2 per shift | Target achieved; extra drills due to interim life safety measures. Discussed issues uncovered during drills and took corrective actions. |
| False fire alarms | 1 | 0 | 0 | 0 | $\leq$ 5 false alarms / year | Monitor for trends. Reduced from 5 false alarms in prior year. |
| Post Drill knowledge test score | 99% | 99% | 99% | 99% | 95% | Test scores exceed target and reflect staff's understanding of emergency procedures. |

**Aim:** For FY 2015-16, false fire alarms on campuses maintained at or below three per year.




Target of five or less false fire alarms for FY 2014-15 has been met.
Causes of false fire alarm was due to dirty smoke detector.

## EFFECTIVENESS

The multi-disciplinary Environment of Care Committee has evaluated the Life Safety Management Program and considers it to be effective based on the objectives and performance metrics indicated in the Plan.

## GOALS AND OPPORTUNITIES FOR IMPROVEMENT IN 2015-16

- Monitor and manage false fire alarms for a quality and safe care experience in Building 25.
- Monitor ILSM for on-going construction projects within Building 5 and integration with Building 25. File the appropriate Risk Assessments for a quality, and safe care experience.
- The existing campus fire alarm system is in need of replacement due to age and parts obsolescence. Replacement of the fire alarm system requires financial stewardship; it will be part of the Department of Public Health proposed general obligation bond project (November 2015).
- Train facilities staff on fire safety equipment, plan, and systems for Building 25.
- Engage engineering staff to review and revise all life safety policies and procedures that will be tailored to the enhanced capabilities in Building 25.

The proposed performance metrics for these goals include**:**

| Life Safety Proposed Performance Metrics for 2015-2016: | Target | Comments and Action Plan |
|---|---|---|
| **AIM:** Train hospital staff on the safety equipment, fire plan and Fire Life safety systems for Bldg. 25 | **100%** | Develop and implement staff trainings on revised policies and new life safety equipment; monitor knowledge in annual skills assessments |
| **AIM:** Implement all Life Safety policies and procedures for Building. 25. | **100%** | Review and revise policies in preparation for oversight of Bldg. 25. |

# UTILITY SYSTEMS MANAGEMENT

## SCOPE

The San Francisco General Hospital Facility Services Department implements and maintains the Utility Management chapter of the Environment of Care. The Utility Management Program ensures the operational reliability and assesses the special risks and responses to failures of the utility systems which support the facility's patient care environment. The major utility systems include but are not limited to: electrical distribution, water and waste systems, vertical transportation (elevators), communication systems, heating, ventilation and air conditioning (HVAC) and medical gases.

## ACCOMPLISHMENTS

- Completed installation of two 20,000lb/hr boilers serving the SFGH campus. The one existing boiler was decommissioned, the other is laid up and used to supplement for maintenance purposes on the new boilers. This plan allows for a significant cost reduction in natural gas consumption, while enhancing air quality.
- Successfully completed a review of our facility's emissions by Bay Area Air Quality Management District with no comments or discrepancies. Power plant projects significantly reduced pollution emissions.
- Successfully completed a review of our facility's greenhouse gas emissions by California State Air Resource Board with no comments or discrepancies. Power plant projects significantly reduced our greenhouse emissions footprint.
- Successfully initiated tests of three new diesel generators serving emergency power to Bldg 25 under all load conditions including full load test from the load bank. Switching to diesel generators significantly reduced costs and pollution emissions.
- Completed construction and commissioned new liquid oxygen and nitrous oxide tank plants serving Bldg 5 and Bldg 25 in the future.
- Completed modernization of Main Hospital (Building 5) elevators. All elevators have been accepted as complete by OSHPD. Scope of work included new elevator controllers, ADA features and interior cab finishes.
- Completed modernization of Buildings 80/90 elevators.
- Completed overhaul of #1 chiller at the Power Plant (Bldg 2).

## PROGRAM OBJECTIVES FOR FY 2014-2015

| Objectives | Met / Not Met | Comments and Action Plans |
|---|---|---|
| The hospital maintains a written inventory of all operating components of utility systems or maintains a written inventory of selected operating components of utility systems based on risks for infection, occupant needs, and systems critical to patient care (including all life support systems.) | **Met** | Inventory of equipment for major utility systems maintained in equipment database. |

| Objectives | Met / Not Met | Comments and Action Plans |
|---|---|---|
| The hospital identifies, in writing, inspection and maintenance activities for all operating components of HVAC systems on the inventory | **Met** | Documentation of activities is entered into TMS, the automated work order system. |
| The hospital labels utility system controls to facilitate partial or complete emergency shutdowns. | **Met** | Utility isolation information located at the Engineering Watch Desk. |
| The hospital inspects, tests, and maintains emergency power systems as per NFPA 110, 2005 edition, Standard for Emergency & Standby Power Systems. | **Met** | Testing and inspection of this new system per NFPA 110, 2005 edition |
| The hospital inspects, tests, and maintains critical components of piped medical gas systems, including master signal panels, area alarms, automatic pressure switches, shutoff valves, flexible connectors, and outlets. These activities are documented. | **Met** | The medical gas system is certified annually. Area alarm panels are checked monthly. Documentation is entered into TMS and separate report. |
| Annual evaluations are conducted of the scope, and objectives of this plan, the effectiveness of the programs defined, and the performance monitors | **Met** | Scope and objectives derived from quarterly report data. |

| Report Indicator | FY 2014-2015 Totals | | | | | |
|---|---|---|---|---|---|---|
| | BHC | MH | 80 | 90 | 100 | SB |
| Emergency Power Failures | 0 | 0 | 0 | 0 | 0 | 1 |
| Commercial Power Failures | 1 | 1 | 0 | 0 | 0 | 1 |
| Water System Failures | | | | | | |
| **Domestic** | 0 | 3 | 0 | 0 | 1 | 0 |
| **Waste** | 0 | 12 | 0 | 0 | 0 | 0 |
| Communication Failures | 0 | 1 | 0 | 0 | 0 | 0 |
| HVAC Failures | 0 | 2 | 0 | 0 | 0 | 3 |
| Med Gas Failures | 0 | 0 | 0 | 0 | 0 | 0 |
| Elevator Failures | 0 | 105* | 0 | 0 | 0 | 0 |
| High Voltage Electric Switchgear | 0 | 1 | 0 | 0 | 0 | 0 |

* For FY 2014-15 a new performance metric has been created to track elevator outages of four (4) hours or more, and passenger entrapments of any duration. Often the outages are during nights and weekends where the overtime cost for immediate service is balanced against the need for the out of service elevator.

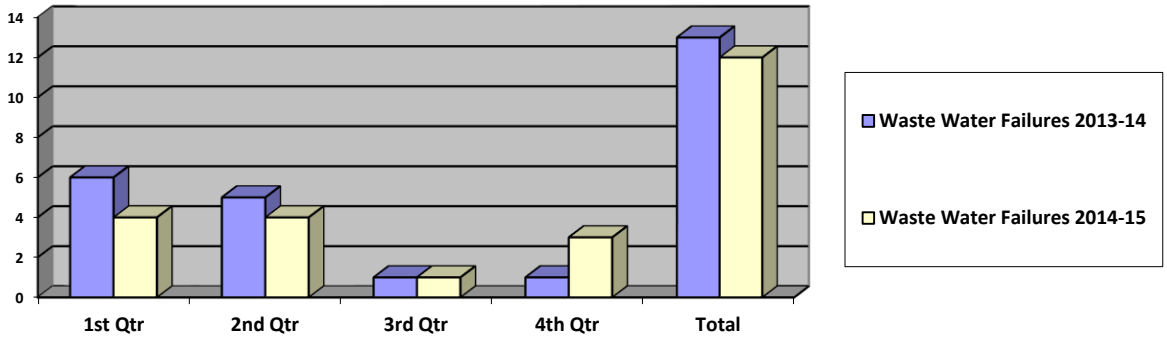
The Environment of Care Committee has evaluated the objectives and determined that they have been met. The Program continues to direct utilities management in a proactive manner.

## PERFORMANCE METRICS

| Utility Management Performance Measurement | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | Target | Comments & Action Plan |
|---|---|---|---|---|---|---|
| Unscheduled Waste Water System Failures | 4 | 4 | 1 | 3 | ≤ 4 per quarter | Goal met; incidents due to vandalism |
| Elevator outages of ≥ 4 hours or any passenger entrapment; | 17 | 21 | 30 | 37 | Monitor for trends | Elevator failures reflect new reporting metric. |

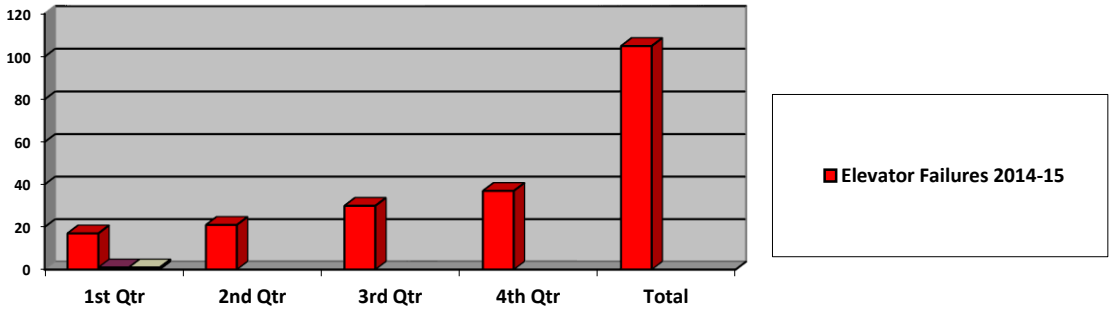
### Waste Water Failures

**AIM:** For FY 2014-15, to reduce by 25% the number of waste water system failures.
Waste water failures at the hospital continue to be a vexing problem. The improvement over the last 2 quarters of 2015 reflect quicker response (by Facilities Services & EVS) to trouble areas before a major flood occurs.




**100%** of waste water failures in 2014-15 were due to vandalism

### Elevator Failures




## EFFECTIVENESS

The Utility Management Program has been evaluated by the EOC Committee and is considered to be effective.

**GOALS AND OPPORTUNITIES FOR IMPROVEMENT IN 2015-16**

- Continue monitoring for unscheduled Waste Water Utility System failures. The target of less than 4 per quarter was met for 2014-15. All waste water failures were due to vandalism. Managing waste water failures improves the safety and quality of the care experience, while managing costs of cleanup and repair.
- SFGH completed Elevator Modernization in Building 5. New monitoring metrics were implemented to track safety and reliability of the elevators.
- The existing high voltage electrical distribution equipment serving Building 5 is at the end of normal service life. The system requires a high level of maintenance and repair to provide a quality and safe electrical distribution system. This equipment has been identified for inclusion in the proposed 2015 Department of Public Health general obligation bond project.
- Facilities Services is exploring new approaches to facilities personnel work schedules in an effort to provide a quality and safe care experience that makes financial sense while developing our staff as Building 25 opens.
- Train facilities staff on utility systems, including elevators, electrical distribution, water/waste, and medical gas systems for Building 25.
- Review and revise all utility systems policies & procedures that will be tailored to a quality care experience for Building 25.

The proposed performance metrics for these objectives include:

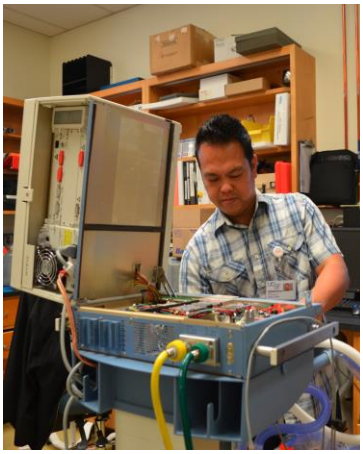
| Utilities Management Proposed Performance Metrics for 2015-2016 | Target | Comments and Action Plan |
|---|---|---|
| **AIM:** Train Facility Services staff on the new Building 25 utility systems, including elevators, electrical distribution, water/waste, and medical gas systems. | **100%** | Develop and implement staff trainings addressing revised policies and new utility equipment; monitor knowledge in annual skills assessments |
| **AIM:** Ensure that all utility systems policies and procedures are tailored to Building 25. | **100%** | Review and revise policies in preparation for oversight of Building 25 in 2015-2016. |

# MEDICAL EQUIPMENT MANAGEMENT

The Medical Equipment Management Program is designed to minimize risk associated with the use of medical devices through the careful selection, acquisition and maintenance of all patient care medical equipment.

## SCOPE

The Medical Equipment Management Program applies to all medical devices and related services provided on the SFGH campus, including planning, procurement and preparations for the opening of Building 25.



## ACCOMPLISHMENTS

Program activities highlights for 2014-2015 include:

- Utilized a strategic and competitive process so that the new monitors purchased for Building 25 met all clinical requirements while saving SFGH nearly **$7 million.**
- Worked with the Chief of Staff to identify an additional **$3 million** in planned purchases that could be eliminated by safely putting current portable equipment to use.
- Participated in the multi-disciplinary Critical Alarm Fatigue Committee; reviewed medical equipment and defined processes and authority levels for setting limits, thereby reducing unnecessary alarms.
- Developing People:
    - One Biomedical Engineering Technician was hired in October 2014.
    - Increased employees' knowledge and skills on a wide range of medical equipment.
    - All six Biomedical Engineering Technicians attended on-site training for Verathon bladder scanners, which will save the hospital over $6K in maintenance.
    - One Technician completed training on Gambro Continuous Veno-Venous HemoDialysis Machines (CVVHD).
    - One Technician completed training on Philips Intellivue monitors.
- Financial Stewardship:
    - Reduced costs of equipment maintenance by approximately $250K by contracting with certified vendors to complete work previously done by original equipment manufacturers.
    - Participated in Operational Database (ODB) efforts to improve processes related to capital equipment planning and acquisitions by incorporating equipment life cycle expectations into strategic budgeting.
    - Ensured that purchases of most new equipment for Building 25 and current use include end user and technician training at no charge.
    - Acquired Phillips diagnostic tools to provide in-house maintenance of monitors.
- Safety:
    - Monitored Medical Device Hazard Alerts and Recalls through the ECRI Institute Alert Tracking System and ongoing follow up with end user departments to ensure that medical equipment in use at SFGH is safe.
    - Developed plan for certifying all medical equipment going into Building 25.

**PROGRAM OBJECTIVES**

| Objectives | Met/ Not Met | Comments and Action Plan |
|---|---|---|
| The hospital maintains either a written inventory of all medical equipment or a written inventory of selected equipment categorized by physical risk associated with use (including all life support equipment) and equipment incident history. The hospital evaluates new types of equipment before initial use to determine whether they should be included in the inventory. | **Met** | Inventory is kept in the Computerized Maintenance Management System (CMMS) Database, categorized by risk level and associated with all related historical records, including but not limited to Initial Inspection (II), Preventive Maintenance (PM), Corrective Maintenance (CM), and alert-related actions. |
| The hospital identifies, in writing, frequencies for inspecting, testing, and maintaining medical equipment on the inventory based on criteria such as manufacturers' recommendations, risk levels, or current hospital experience. | **Met** | Currently SFGH has no equipment under an Alternative Equipment Maintenance Plan (AEM). Equipment is currently classified as Life Support and Non-Life Support. Policies and Procedures will be reviewed and updated to reflect any AEM. |
| The hospital monitors and reports all incidents in which medical equipment is suspected in or attributed to the death, serious injury, or serious illness of any individual, as required by the Safe Medical Devices Act of 1990. | **Met** | All medical equipment-related Unusual Occurrence reports are reviewed, investigated, and tracked in accordance with EOC Policy 12.03 Reporting of Medical Device Incidents. |
| The hospital has written procedures to follow when medical equipment fails, including using emergency clinical interventions and backup equipment. | **Met** | EOC Policy 12.03 Reporting of Medical Device Incidents delineates the procedures for staff to follow when equipment failures occur. |
| Before initial use of medical equipment on the medical equipment inventory, the hospital performs safety, operational, and functional checks. | **Met** | Biomedical Engineering performed these checks on all new equipment in accordance with EOC Policy 11.01 Non-Medical and Medical Equipment Management. |
| The hospital inspects, tests, and maintains all life-support and non-life support equipment identified on the medical equipment inventory. These activities are documented. | **Met** | These activities are governed by SFGH Biomed departmental policies and documented in the Biomed CMMS Database. |
| Annual evaluations are conducted of the scope, objectives of this plan, the effectiveness of the programs defined, and the performance monitors | **Met** | The Environment of Care Committee reviews and approves the annual plan. |

The Environment of Care Committee has evaluated the objectives and determined that they have been met. The Medical Equipment Management Program continues to direct medical equipment procurement and maintenance in a proactive manner.

**PERFORMANCE METRICS**

| PARAMETER | 1st QTR | | 2nd QTR | | 3rd QTR | | 4th QTR | | ANNUAL | |
|---|---|---|---|---|---|---|---|---|---|---|
| TOTAL WORK REQUESTS | 1071 | | 983 | | 1011 | | 1052 | | **4117** | |
| PREVENTATIVE MAINTANCE REQUIRED | 2559 | | 1402 | | 1825 | | 1758 | | **7544** | |
| PREVENTATIVE MAINTANCE COMPLETED | 2555 | 99% | 1392 | 99% | 1806 | 98% | 1624 | 92% | **7377** | **98%** |

The current Biomedical Department Manager implemented changes to how metrics were previously calculated on non-life support equipment, which impacted the Preventive Maintenance (PM) completion rates. Work orders now remain open when a device cannot be immediately located; keeping the work orders open until the equipment can be located impacts the quarterly completion rate. Also, when a device is in use and preventive maintenance cannot be performed within the month, the work order remains open until the equipment is available. The emphasis is shifting to managing 100% of all devices.

| Objectives & Performance Indicators | Met / Not Met | Results |
|---|---|---|
| **AIM: 100% of all medical equipment managed by the Biomedical Engineering Department is accounted for and properly maintained.** | **Met** | **All 7187 devices at SFGH managed by Biomedical Engineering were accounted for and properly maintained. 100%** |
| • Preventative Maintenance (PM) completed by due date: **Target ≥ 90%** | **Met** | • **PM completed by due date: 95%** |
| • Devices that could not be located: **Target ≤ 5%** | **Met** | • **Devices not located: 4%** |
| • Device unavailable for PM: **Target ≤ 5%** | **Met** | • **Devices unavailable / in use: 1%** |
| • Devices with PM not done: **Target = 0%** | **Met** | • **Devices with PM not done: 0%** |
| **AIM: Reduce the number of work orders for unexpected equipment repairs to less than 1,000 per quarter (total of 4,000 per year) in order to minimize the amount of equipment downtime.** | **Not Met** | **There were 4,117 work order repairs required in 2014-2015. Target not met due to high number of infusion pump batteries and thermometer probes that required replacement.** |
| • Devices identified during EOC Rounds as needing repair: **Target ≤ 60** | **Met** | • **Needed repairs identified during EOC Rounds: 48** |
| • Devices identified as needing repair through Unusual Occurrence reports: **Target ≤ 20** | **Met** | • **Needed repairs identified through UO reports: 20** |

**EFFECTIVENESS**

The Medical Equipment Management Program has been evaluated by the multi-disciplinary Environment of Care Committee and is considered to be effective.

**GOALS AND OPPORTUNITIES FOR IMPROVEMENT FOR 2015-2016**

- Safety: Revise Biomedical Department Policies and Procedures to correctly classify life support equipment using evidence-based practices.
- Safety and Accountability: Implement a tracking system for service requests to ensure appropriate prioritization and track response time, thereby improving communication and coordination with end-user departments, ensuring technician accountability, and providing a basis for ongoing improvements in service delivery.
- Modify the CMMS Database to:
    - Categorize work requests to help identify causal trends (e.g., operator error, broken probes, mechanical failures, electrical failure);
    - Categorize preventive maintenance: Could Not Locate (CL), Un-Available (UN), or Completed (PM) and automatically calculate performance levels, which is currently done manually;
    - Identify trends in medical device failures to proactively adjust maintenance schedules and thereby prevent failures and unexpected downtime; and
    - Increase the accuracy of risk level identification for all devices.

The proposed performance metrics for these goals are:

| Medical Equipment Management Proposed Performance Metrics for 2015-2016 | Target | Comments & Action Plan |
|---|---|---|
| **AIM: Revise Biomedical Engineering Department policies and procedures, and train staff on changes and updated performance expectations.** | **100%** | Keeping a feedback line from all staff to department management to continuously update policies to reflect facts, and to ensure that facts reflect policies. |
| **AIM: Record and track response time on monthly sampling basis. Technicians will be expected to acknowledge work requests by contacting the end user department within 60 minutes of receipt.** | **100%** | Respond by acknowledging the reception of the work request and improve communication with end users, thereby reducing the need for follow-up calls to check work request status. |
| **AIM: Modify or replace current system to allow more flexibility and reporting capabilities to improve performance tracking.** | **100%** | Researching the market for capable systems that match the Biomedical department tasks and performance metrics, and develop a proposed solution. |

# EMERGENCY MANAGEMENT

## SCOPE

The Emergency Management Program provides information, planning, consultation, training, resources, and exercises for hospital staff and leadership to ensure that San Francisco General Hospital and Trauma Center (SFGH) effectively mitigates the impact of, prepares for, responds to, and recovers from emergencies and disasters and therefore is able to sustain its Mission of providing quality healthcare and trauma services with compassion and respect. These efforts support SFGH's core value of patient and staff safety as well as the accountability goal of complying with regulatory standards. The Director of Emergency Management develops and implements policies, procedures, protocols and other job aids in accordance with:

- California Administrative Code Disaster and Mass Casualty Program (Title 22)
- The National Incident Management System (NIMS) and the California Standardized Emergency Management System (SEMS)
- Hospital Incident Command System (HICS)
- Standard on Emergency Management and Business Continuity Programs (NFPA 1600)
- The Joint Commission Standards and Elements of Performance.

The Emergency Management Program applies to and encompasses all departments and areas of the SFGH campus, including current hospital rebuild activities.

## ACCOMPLISHMENTS

- Worked with Infection Control, Nursing, the Emergency Department, the Urgent Care Center, and Facilities and Environmental Services to ensure SFGH's preparedness to safely receive, assess and treat potential Ebola patients.
- Completely updated and revised the SFGH Emergency Operations Plan to provide more detail on resources and effective management and coordination strategies for emergency and disaster response.
- Continued to share lessons learned and best practices from SFGH's response to the crash of Asiana Flight 214, with presentations to Marin General Hospital and the Preparedness, Emergency Response and Recovery Consortium conference in Orlando, Florida.
- Continued providing Hospital Incident Command System Basics training for SFGH managers and supervisors and Sherriff's Department staff.
- Hosted the US Marines Corps Shock Trauma Platoon as part of Fleet Week activities.
- Participated in the Statewide Health and Medical Exercise, which focused on mass prophylaxis for hospital staff and their families in the aftermath of a widespread anthrax attack.
- Developing People: Director of Emergency Management completed Certified Healthcare Emergency Professional (CHEP) credentialing.
- Also conducted hospital-wide multi-casualty incident response and earthquake preparedness departmental drills to ensure the ongoing preparedness of all SFGH staff for emergencies and disasters.

## PROGRAM OBJECTIVES FOR FY 2014-2015

| Objectives | Met/ Not Met | Comments and Action Plans |
|---|---|---|
| The hospital conducts an annual hazard vulnerability analysis (HVA) to identify potential emergencies that could affect demand for the hospital's services or its ability to provide those services, the likelihood of those events occurring, and the potential impact and consequences of those events. The HVA is updated when significant changes occur in the hospital's services, infrastructure, or environment. | **Met** | Updated 2/02/15 and shared with SFSD, SFFD, SFPD, DPH, the SF Department of Emergency Management and other SF hospitals on 3/04/15. |
| The hospital develops and maintains a written all-hazards Emergency Operations Plan that describes the response procedures to follow when emergencies occur. The plan and associated tools facilitate management of the following critical functions to ensure effective response regardless of the cause or nature of an emergency:<br>• Communications<br>• Resources and Assets<br>• Safety and Security<br>• Staff Responsibilities and Support<br>• Utilities and Critical Systems<br>• Patient Clinical and Support Activities | **Met** | Updated SFGH's Emergency Operations Plan to incorporate new Hospital Incident Command System guidelines, and reorganized and added additional detail and contingencies for more robust and resilient management of essential services and critical functions. |
| The hospital implements its Emergency Operations Plan when an actual emergency occurs. | **Met** | Water Main Rupture 1/06/15<br>IS Server Failure 1/07/15 |
| SFGH's emergency response plan and incident command system facilitate an effective and scalable response to a wide variety of emergencies and are integrated into and consistent with the Department of Public Health Disaster Plan and the City and County of San Francisco Emergency Operations Plan, and are compliant with the California State Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS). | **Met** | Demonstrated plan effectiveness and scalability during Urban Shield and Statewide Health and Medical Exercises and internal emergency activations for water main rupture and information systems server failure. |
| SFGH will develop and implement a Hazard Specific Plan for Tsunami response to reflect the changes in San Francisco inundation zones and anticipated impacts on infrastructure. | **Met** | Draft Tsunami Hazard Specific Plan reviewed by Disaster Committee. 7/09/15 |
| The hospital trains staff for their assigned emergency response roles. | **Met** | • New Employee Orientation<br>• Annual Halogen Emergency Preparedness & Disaster Response Training<br>• HICS Basics Training |
| The hospital conducts exercises and reviews its response to actual emergencies to assess the appropriateness, adequacy and effectiveness of the Emergency Operations Plan, as well as staff knowledge and team performance. | **Met** | Completed After Action Reports and performance evaluations for two actual emergencies and two multi-functional exercises. |
| Annual evaluations are conducted on the scope, and objectives of this plan, the effectiveness of the program, and key performance indicators. | **Met** | Annual Evaluation by Disaster Committee completed on 8/13/15. |

The Disaster Committee and the Environment of Care Committee have evaluated these objectives and determined that they have been met. The program continues to direct emergency management preparedness and response in a positive and proactive manner.

## PERFORMANCE METRICS

An analysis of the program objectives and key performance indicators is used to identify opportunities to improve performance and evaluate the effectiveness of the program. This analysis provides the Disaster and Environment of Care Committees with information that can be used to update the Emergency Management program activities. The following are current performance metrics:

| Performance Metrics | 2014-2015 Goal | 2014-2015 Results | Comments & Action Plan |
|---|---|---|---|
| **AIM: Measure Performance During Emergency Exercises & Responses to Actual Incidents.**<br>Minimum of 2 activations per year with completed critique of these critical functions:<br>• Staff Roles & Responsibilities in HICS<br>• Patient Care Activities<br>• Communication<br>• Hazard-Specific Critical Actions | **4**<br><br>**(Avg) 95%**<br><br>**95%**<br>**95%**<br>**95%** | **4**<br><br>**(Avg) 95%**<br><br>**99%**<br>**95%**<br>**95%** | **Met.** Completed review of 2 actual incidents and 2 multi-functional exercises.<br><br>**Met.** Continuing focus on HICS trainings for staff. Primary issues are failure to complete Job Action Sheet documentation and provide information and direction to staff and patients during incidents. Continue to monitor and develop more clear and detailed criteria for each function. Also using findings to update Hazard Specific Plans to ensure critical actions are completed. |
| **AIM: Update Emergency Plans and HICS Tools.**<br>• Emergency Operations Plan<br>• Hazard Specific Plans<br>• Job Action Sheets<br>• HICS Forms | **100%**<br>**100%**<br>**100%**<br>**100%** | **100%**<br>**100%**<br>**100%**<br>**100%** | **Met.** Emergency Operations Plan, Hazard Specific Plans, HICS Job Action Sheets and other HICS Forms have been updated to meet the 2014 HICS guidelines and all Joint Commission standards and elements of performance.<br>NOTE: Further updates and revisions to incorporate acute care operations and move of the Hospital Command Center will continue in 2015-2016. |
| **AIM: Staff Will Complete Training on the Incident Command System (ICS).**<br>• Staff completing ICS 100 – 200 – 700 Courses<br>• Staff completing HICS Basics | **240**<br><br>**240** | **202 (84%)**<br>**222 (93%)** | **Partially Met**. Continue providing HICS Basics and other trainings for all Supervisory and Management staff. Follow up with staff who have completed HICS Basics to ensure completion of required FEMA ICS courses. Adjusted completed numbers to remove staff who are no longer at SFGH. |

## EFFECTIVENESS

The Emergency Management program has been evaluated and is considered to be effective by both the Disaster Committee and the Environment of Care Committee. The program continues to direct and promote emergency and disaster preparedness and response capabilities in a proactive manner.

## GOALS AND OPPORTUNITIES FOR IMPROVEMENT IN 2015-2016

- Continue providing training on the Hospital Incident Command System (HICS) for all Incident Management Team members, department supervisors and management level staff.
- Improve overall documentation of incident and completion of HICS Job Action Sheets and appropriate HICS forms.
- Complete updates of Emergency Operations Plan and all related HICS tools and forms to incorporate Building 25 and the new Hospital Command Center location and phone numbers.
- Partner with Security to develop departmental training and implement a progressive exercise program for Code Silver Active Shooter response.

The proposed performance metrics for these goals include:

| Emergency Management Proposed Performance Metrics for 2015-2016 | Target | Comments & Action Plan |
|---|---|---|
| **AIM: Staff Will Complete Training in ICS.**<br>Total Current Staff who have completed:<br>• ICS 100 – 200 – 700<br>• HICS Basics | **240**<br>**240** | Continued from Prior Year due to Management Staff Turnover. Increased target includes all Supervisory and Management staff as well as assigned HICS Incident Management Team members and back-ups. |
| **AIM: During Exercises and Actual Incidents, Staff will Complete Appropriate Documentation.**<br>• HICS Job Action Sheets<br>• HICS Forms | **95%**<br>**95%** | Implementation of new forms, repeated prompts during drills and activations, and new required check-out procedures should help to ensure more thorough completion of documentation. |
| **AIM: Update the Emergency Operations Plan and all related HICS forms and tools to incorporate Building 25 and the new location of the Hospital Command Center.** | **100%** | The EOP and all forms and tools will reflect updated response capabilities and contingencies and show correct phone numbers and locations for Building 25. |
| **AIM: Develop and Conduct Code Silver Exercises to Ensure Hospital Staff are as Prepared as Possible for Active Shooter Incidents.**<br>• Table Top Exercise – Campus Incident<br>• Table Top Exercise – Main Hospital Incident<br>• Departmental Response Exercises – Key Areas: ED, ICUs, Labor & Delivery, Nursery | **1**<br>**1**<br>**4** | Coordinate with Director of Security and SFSD to update plan and provide safe, controlled exercises to further develop and test critical staff actions for initial response and management of an incident after the shooter is neutralized. |