ZUCKERBERG
SAN FRANCISCO GENERAL
Hospital and Trauma Center

# Environment of Care

# Annual Report

# Fiscal Year 2020-2021

Approvals: September 2021

Environment of Care Committee: October 2021

Medical Executive Committee: September 2021

Nursing Executive & Patient Care Services Committee: September 2021

PIPS Committee: October 2021

## Presentation & Review Schedule:

Joint Conference Committee: October 2021

San Francisco Health Commission: November 2021

# INTRODUCTION

The goal of the Zuckerberg San Francisco General Hospital & Trauma Center (ZSFG) Environment of Care (EOC) Program is to provide a safe, functional, and effective environment for the care of patients, as well as for staff and visitor use. The EOC Program encompasses the following seven programs/areas:

I. Emergency Management (Lann Wilder – Director of Emergency Management)
II. Fire & Life Safety Management (Greg Chase – Director of Facilities Services)
III. Hazardous Materials and Waste Management (Mike Harris – Safety Officer)
IV. Medical Equipment Management (Elkin Lara-Mejia – Manager of Biomedical Engineering)
V. Safety Management- (Mike Harris - Safety Officer)
VI. Security Management (Basil Price – SF DPH Director of Security)
VII. Utility Systems Management (Greg Chase –Director of Facilities Services)
VIII. Unsung Heroes- (Additional Members)

The EOC Program is managed by the EOC Committee. The EOC Committee is a multi-disciplinary group which is focused on the continuous improvement of all aspects of the Environment of Care.

Activities of the EOC Committee include:

- Identifying risks and implementing systems that support safe environments,
- Working to ensure that hospital staff are trained to identify, report, and take action on environmental risks and hazards,
- Setting and prioritizing the hospital's EOC goals and performance standards and assessing whether they are being met, and
- Working 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 seven EOC Management Programs, as listed above
- Representatives from:
    - Clinical Laboratories (Andy Yeh),
    - Dept. of Education & Training (Kala Garner),
    - Environmental Services (Francisco Saenz),

- Infection Prevention & Control (Elaine Dekker),
- Nursing (Andrea Chon),
- Quality Department (Tom Holton, Susan Brajkovic, etc, al),
- Pharmaceutical Services (Julie Russell),
- Linen and Messenger Department (Philip Anih), and
- Food Nutrition Services (Katherine Merriman)

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.

As of August 2021, Greg Chase and Val Barnett serve as co-chairs of the EOC Committee.

The EOC Annual Report highlights the activities of the EOC Program during Fiscal Year 2020-2021. For each of the seven EOC chapters, it is organized as follows:

- Scope,
- Accomplishments,
- Program Objects,
- Performance Metrics, and
- Goals and Opportunities for Improvement

This year's additional chapter ("Unsung Heroes of the Environment of Care Committee") details contributions, accomplishments, and challenges from Departments (Education & Training, Environmental Services, Infection Prevention & Control, and Pharmaceutical Services) who devote time and resources to ZSFG EOC activities, but do not have traditional Joint Commission mandated chapters in the report.

# I. EMERGENCY MANAGEMENT

## SCOPE

The Emergency Management Program provides information, planning, consultation, training, resources, and exercises for hospital staff and leadership to ensure that Zuckerberg San Francisco General Hospital and Trauma Center (ZSFG) 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 ZSFG'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, standard work 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);
- The Joint Commission Standards and Elements of Performance; and
- The Centers for Medicare and Medicaid Services (CMS) Conditions of Participation.

The Emergency Management Program encompasses all departments and areas of the ZSFG campus, including those at the Behavioral Health Center.

## ACCOMPLISHMENTS

- Passed our most recent survey by The Joint Commission with excellent results for Emergency Management and no requirements for improvement noted.
- Worked with Nursing Administration and Clinical Informatics to test business continuity policies and procedures for planned downtime for Epic and network maintenance.
- Collaborated to update the ZSFG Emergency Response quick reference "Rainbow Chart" to address Security Alerts.
- Provided HICS Basics and FEMA ICS preparatory training for ZSFG managers and supervisors.
- Clinical and HICS Incident Management Teams effectively and successfully managed departmental earthquake preparedness drills for the Great California ShakeOut, one City-wide Medical Surge Tabletop Exercise, two minor partial power failures, one brief elevator failure, and the prolonged response to the Covid-19 pandemic with significant improvements and adjustments made to the ZSFG Surge Plan.

## PROGRAM OBJECTIVES FOR FY 2020-2021

| Objectives | Met/ Not Met | Comments and Action Plans |
|---|---|---|
| ZSFG 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 3/11/21 and shared with SFSD, SFFD, SFPD, DPH, the SF Department of Emergency Management and other SF hospitals in March and April, 2021. Commended by TJC for comprehensive analysis and collaborative approach. |
| ZSFG 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** | ZSFG's Emergency Operations Plan and Hazard Specific Plans were revised to more closely align with updated CMS and TJC standards. |
| ZSFG implements its Emergency Operations Plan when an actual emergency occurs. | **Met** | Ongoing Covid-19 Response. |
| ZSFG'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 scalability and effectiveness during Citywide Table Top Patient Surge Exercise, internal activations for downtime procedures, and ongoing Covid-19 Response. |
| ZSFG trains staff for their assigned emergency response roles. | **Met** | • New Employee Orientation<br>• Annual Emergency & Disaster Response Training<br>• HICS Basics Training |

| | | |
|---|---|---|
| ZSFG 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 of all actual emergencies, planned downtime events, and two 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 8/12/21. |

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 | 2020-2021 Goal | 2020-2021 Results | Comments & Action Plan |
|---|---|---|---|
| **Specific Staff Will Complete Required Training in HICS.** Current designated Staff who have completed HICS Basics – Baseline 88% | **90%** | **95%** | **Met.** |
| **Ensure that Staff, Patient and Visitor Communication is Distributed During Drills and Actual Incidents.** | **95%** | **100%** | **Met.** Signage and ongoing messaging during Statewide Exercise and Covid-19 Response. |
| **During Disaster Exercises and Actual Incidents, the Incident Management Team will Complete Critical Functions.** | **95%** | **100%** | **Met.** Covid-19 Response. |

| | | | |
|---|---|---|---|
| **During Disaster Exercises and Actual Incidents, HICS Staff will Complete Appropriate Documentation.**<br>• HICS Job Action Sheets<br>• HICS Forms<br>• Communication of Incident Action Plan | <br><br><br>**95%**<br>**95%**<br>**95%** | <br><br><br>**100%**<br>**100%**<br>**100%** | **Met.** Covid-19 Response. |
| **Decrease Everbridge Undeliverables.** - Baseline 0.11% | **< 0.10%** | **0.02%** | **Met.** Updated contact information. |
| **Assess Frontline Staff Knowledge of Emergency Procedures.** | **95%** | **98%** | **Met.** |
| **Implement at Least 90% of Corrective Actions Identified in FY 2016-2020 Exercises and Actual Incidents by 6/30/21.** | **90%** | **95%** | **Met.** Most issues have been completed or are implemented and ongoing. |

## 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 2021-2022

- Continue providing training on the Hospital Incident Command System (HICS) for all Incident Management Team members, department supervisors and management level staff.
- Ensure effective and efficient incident management and documentation.
- Develop and implement Key Performance Indicators (KPIs) for Comprehensive Emergency Management and report quarterly results.
- Improve disaster preparedness and emergency response in terms of equity.

The proposed performance metrics for these goals include:

| Emergency Management Proposed Performance Metrics for 2020-2021 | Target | Comments & Action Plan |
|---|---|---|
| **Specific Staff Will Complete Required Training in ICS.** | **90%** | **Driver Metric.** |
| **Ensure that Staff, Patient and Visitor Communication is Distributed During Drills and Actual Incidents.** | **95%** | **Driver Metric.** Communication will include Incident Action Plan and talking points to share with patients and visitors. |
| **Develop and Implement Key Performance Indicators in 4 Key Areas of Emergency Management with 10-20 Elements each.** | **90%** | **Driver Metric.** New Dashboard to be implemented for quarterly reporting. |

| | | |
|---|---|---|
| **Develop and Implement appropriate plans, procedures and monitoring mechanisms to address new Joint Commission Standards and Elements of Performance.** | **100%** | **Driver Metric.** Continuing focus on standard work and required check-out procedures to ensure training of Incident Management Team members and thorough documentation. |
| **Implement Equity Strategies for Covid-19 Response by incorporating key activities and monitoring results and patient outcomes. Re-Focus Response Priorities as needed. Expand to other categories of response (Mass Casualty Trauma, Natural Disaster, etc.) as further developed.** | **90%** | **Driver Metric.** Will be incorporating newly found best practices from CCHC, CDC, DHHS, NAACP and other agencies. |
| **During Disaster Exercises and Actual Incidents, the Incident Management Team will Complete Critical Functions.** | **95%** | **Watch Metric.** Continuing focus on standard work to ensure training of Incident Management Team members. |

# II. FIRE 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 & local authorities, and as required by various other regulatory bodies, e.g., CMS & The Joint Commission, et. al. The Life Safety Management plan is designed to ensure an appropriate, effective response to fire emergencies that could endanger the safety of patients, staff & visitors, and affect the Zuckerberg San Francisco General care environment (ZSFG).

## SCOPE

The Life Safety Management Program applies to all 15 buildings on the ZSFG campus (approximately 1.8m sqft of floor space), including all construction projects. Notification and response to any event includes the ZSFG Fire Marshal, Facility Services staff, and hospital leadership.

## ACCOMPLISHMENTS

- Completed annual test, inspection, and repairs to fire and smoke dampers on the 2nd & 3rd floors in Bldg 5 per NFPA standards: required every four years. The intent is to test and inspect two floors per year to maintain compliance at a minimal care impact and predictable financial cost. The ZSFG HVAC crew has made repairs per the inspection report and provided damper access to previously inaccessible dampers.
- Completed annual test, inspection, and repairs to fire and smoke dampers on the 1st floor in Bldg 25 per NFPA standards: required every six years. The intent is to test and inspect one to two floors per year to maintain compliance at a minimal care impact and predictable financial cost. The ZSFG HVAC crew has made repairs per the inspection report.
- Annual HVAC smoke control testing and repairs were completed in February. Smoke control testing, in addition to being an LS requirement, maintains a safe and reliable smoke control system.
- Assessed risks at and around various construction projects and assisted the project team implementing Interim Life Safety Measures (ILSM) as necessary. Continuous project monitoring enhances the care experience in addition to providing a quality, and safe patient care environment.
- Assessed risks around campus and assisted with Covid-19 social distancing requirements, set-up of testing sites, and later vaccination sites.
- Utilized False Fire Alarms on the ZSFG Campus, especially in Bldg 25 as an opportunity to train staff on fire life safety features of the Campus, inform the patient population that ZSFG is a no smoking campus, and familiarize responding crews with SFFD to our hospital.

## PROGRAM OBJECTIVES

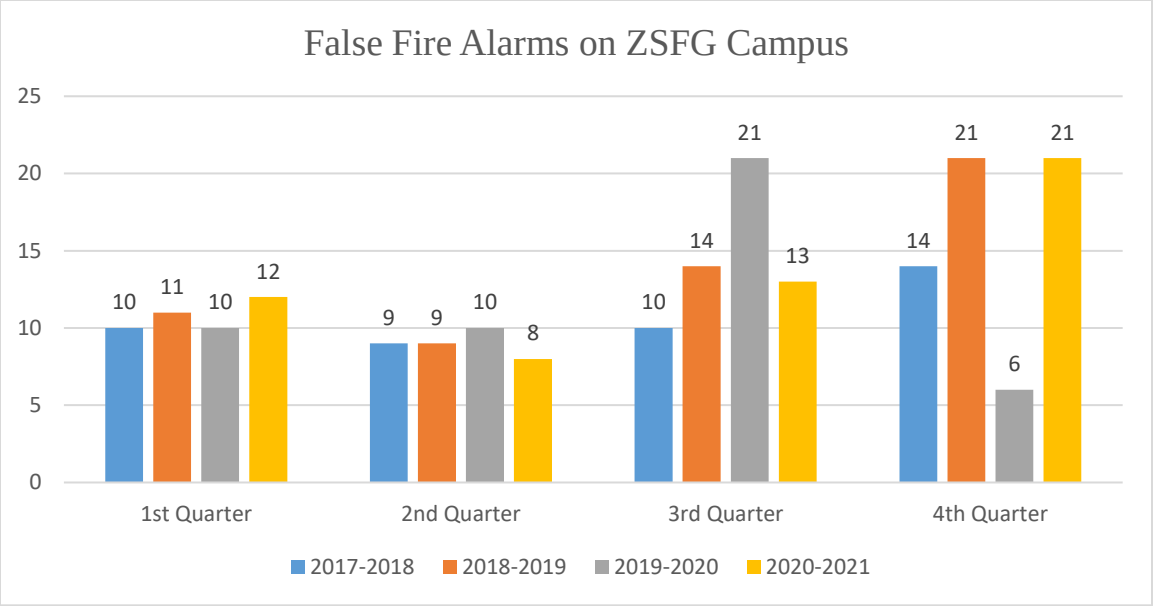
| Objectives | Met/ Not Met | Notes/Action Plan(s) |
|---|---|---|
| The Fire Plan defines the hospital's method of protecting patients, visitors, and staff from the hazards of fire, smoke, and other products of combustion and is reviewed and evaluated at least annually. | Met | At a minimum, annually review the SFGH Fire Plan. Problems are assessed and addressed for impact to the hospital's core values of safety, and 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 maintained, 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 repaired in a timely fashion or is 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 fire alarm, critical locations of the facility, the 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 device functionality 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 and maintained as required. All extinguisher types 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 | 2020 3rd Qtr. | 2020 4th Qtr. | 2021 1st Qtr. | 2021 2nd Qtr. | Target | Comments and Action Plan |
|---|---|---|---|---|---|---|
| Quarterly Fire Drills: a minimum of 9 per quarter - one fire drill per shift, w/ completed department evaluation forms. | 12 | 10 | 10 | 10 | Minimum of 9 drills per quarter.<br>2 per shift | Target achieved, extra drills due to interim life safety measures, or for training purposes. Discussed issues uncovered during drills and took corrective actions. |
| False fire alarms | 12 | 8 | 13 | 21 | 25 or less false alarms per year | Target not met – False fire alarm goal at less than 25 for the year. 29 of 54 FAs were smoking related. |
| Post Drill knowledge test score | 99% | 99% | 99% | 99% | 95% | Test scores exceed target expectations for emergency response procedures. Reflect that staff understand proper emergency response procedures. |

**Aim:** For FY 2020-2021, false fire alarms goal on campus were maintained at 25 per year or fewer.




Target of 25 or fewer false fire alarms for FY 2020-2021 has not been met.

The rise in false fire alarms is directly related to smoking in Bldg 25 patient care bathrooms.

## EFFECTIVENESS

The Life Safety Management Program is effective, however, improvement in the number of false fire alarm is needed.

## GOALS AND OPPORTUNITIES FOR IMPROVEMENT IN 2021-2022

- Monitor and manage false fire alarms for a quality and safe care experience in Bldg 25.

- Continue monitoring construction projects on the ZSFG Campus. Ensure that the appropriate Risk Assessments for a quality, and safe care experience are filed for the projects.

- Continue implementing fire alarm upgrade funded by the 2016 bond.

- Engage staff and contractors to implement projects funded by the 2016 bond measure.

| Proposed Performance Metrics for 2021-22 | Target | Comments and Action Plan |
|---|---|---|
| **AIM:** manage and reduce false fire alarms in Bldg 25 to a more acceptable level through staff training. | **25 or fewer false fire alarms per year.** | Continue staff training and engagement on the fire alarm system in Bldg 25. |
| **AIM:** Engage staff and contractors to review & implement the 2016 bond measure projects pertaining to the fire alarm system. | **Provide ZSFG staff oversight for all projects.** | Involve stake holders in project implementation. |

# III. 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 Zuckerberg San Francisco General Hospital and Trauma Center (ZSFG) apart from UCSF research activities. The Hazardous Materials and Waste Program also works to ensure that construction activities do not result in patient, staff, or visitor exposures to potentially hazardous materials or processes.

## ACCOMPLISHMENTS

- Continued to work with Capital Projects, ZSFG 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 ZSFG Environmental Permits, and acted as liaison between regulatory agencies including the TJC, SF PUC, DPH Hazardous Materials Unified Program Agency, and Cal/OSHA and ZSFG. Continued to work with ZSFG 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/PERFORMANCE METRICS FOR 2020-2021

| Objectives | Met / Not Met | Comments and Action Plans |
|---|---|---|
| Conduct RFP for Pharmaceutical Waste Disposal | **Not Met** | This effort was delayed due to the pandemic. |
| Rebuild pandemic/disaster PPE stockpile | **Met** | Worked with Materials Management to identify and purchase needed PPE for our stockpile. |
| Attempt to reduce and/or eliminate exposure to a hazardous material on campus. | **Met** | Worked diligently with Pharmacy to identify a safer sporicidal disinfectant. While the effort to replace it was ultimately unsuccessful, we did develop policies and procedures to reduce employee exposures. |

## 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 2021-2022

Make the EH&S vacant positions more attractive to potential candidates and staff the EH&S Department.

# IV. MEDICAL EQUIPMENT MANAGEMENT

The purpose of the Medical Equipment Management Program is to support a safe patient care and treatment environment at Zuckerberg San Francisco General Hospital (ZSFG) by managing risks associated with the use of medical equipment and clinical engineering technology. The program includes processes for selection and maintenance of equipment that are based on the risks associated with the equipment.

## SCOPE

The program applies to all personnel, patients, and occupants of ZSFG that includes its main campus. The Biomedical Engineering Department will collaborate with the clinical staff to promote a culture of safety, identify medical equipment located on the main campus, and assign a maintenance strategy.

## ACCOMPLISHMENTS

### Activities:

- Hired a Biomedical Technician II with a background in Dialysis. The technician's focus will be Dialysis (Inpatient and Outpatient) as well as other clinical departments on campus.
    - The hiring of this Biomedical Technician was critical because when Outpatient Dialysis (Ward 17) moves to building 5, it will be expanding the number of patient stations from 13 to 30.
- Discontinued Bair Hugger 750 models (warming blanket system) were replaced with new 775 models. An additional 17 Bair Hugger 775 models were ordered and will be delivered in August 2021.
- Continuously working with clinical department managers to replace capital and non-capital equipment. The goal is to meet with Managers biannual (April and October) to review medical equipment inventory and discuss end of life devices and new available technology.
    - Non-capital medical devices have been replaced to improve overall patient care.
    - Discussions have begun to submit capital medical equipment requests for fall 2021.
- An additional 100 Baxter Sigma Spectrum infusion pumps were rented due to the Covid-19 pandemic
- 11 CareFusion LTV1000 ventilators were brought back to full functionality to be ready to be utilized during the Covid-19 pandemic

## Developing People (Completed Training):

- No training was provided to members of the Biomedical Engineering team due to the Covid-19 pandemic and UCSF travel restrictions.

## Safety:

- Baxter Prismax System (CVVH Machine): MedSun Class II recall filed for the following reason:
    - The the deaeration chamber began accumulating foam and the fluid level started dropping quickly. The foam continued to accumulate and it set off the sensor causing an alarm, which stopped the circuit from running.

## PROGRAM OBJECTIVES

The Objectives for the Medical Equipment Management Program are developed from information gathered during routine and special risk assessment activities, annual evaluation of the previous year's program activities, performance measures, information collection and environmental tours.

## PERFORMANCE METRICS

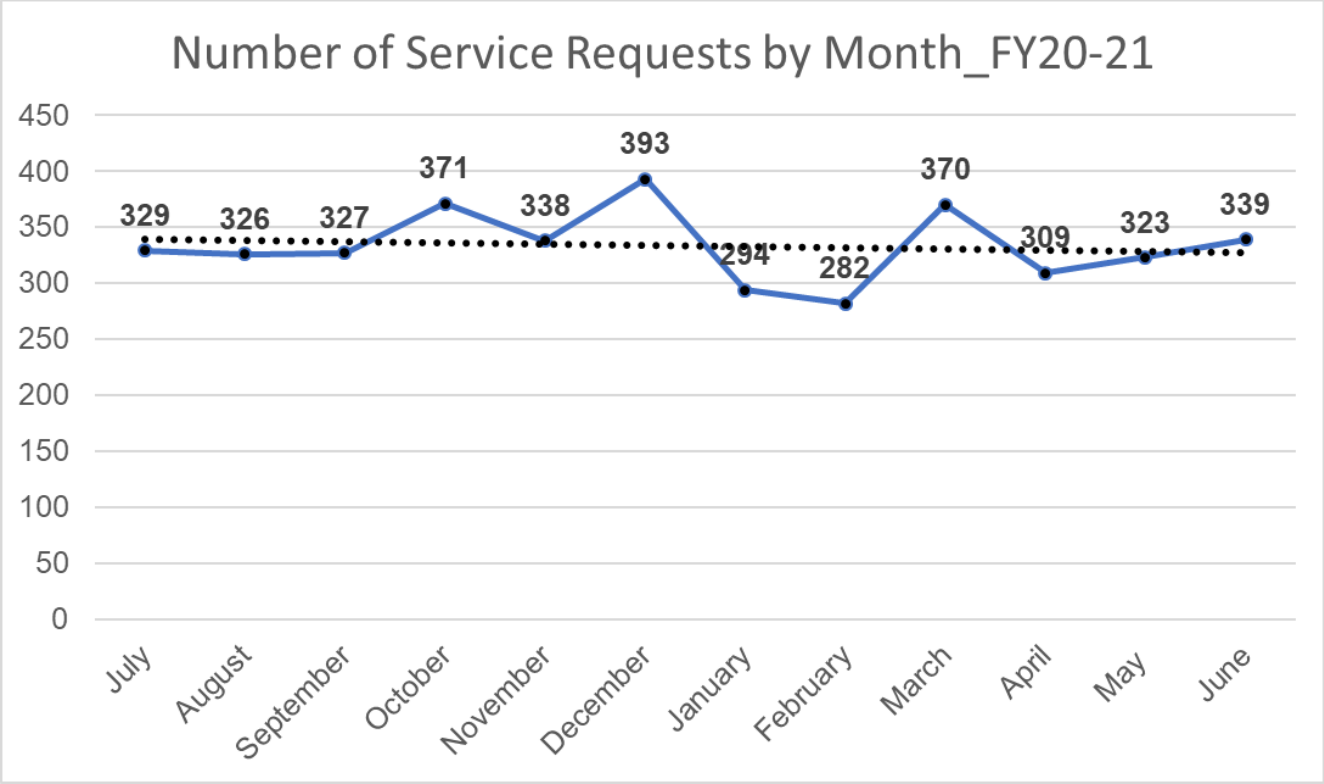
**Preventative Maintenance:**

| Objectives | Met/Not Met | Comments and Action Plan |
|---|---|---|
| Key Performance Metrics<br>• Manage 100% of high risk (life support) medical equipment<br>• Manage 100% of non-high risk medical equipment | Met | Biomed managed 100% of high risk and non-high risk medical equipment during FY20-21. |
| Realignment of medical device PM (Preventative Maintenance)<br>workload per base month | Met | Continuous PM realignment in order for Biomedical Technicians to more efficient on a daily basis to manage both PMs and service calls. The goal is to have each technicians to have less than 125 PMs per month. |
| Reduce cost for maintenance and repair services | Met | Continuous training to increase the number of medical device that can be serviced in-house in order to rely less manufacturers and third-party vendors |
| Biomedical technicians to complete 25% of monthly PMs each week | Met | Biomedical technicians continue completing 25% of their monthly PMs each week. |
| Perform incoming inspection of medical equipment within 24 hours (during business hours) | Met | Holding each Biomedical Technician accountable to complete incoming inspections within a specific time and to upload accurate data to Biomedical Engineering's CMMS database. |

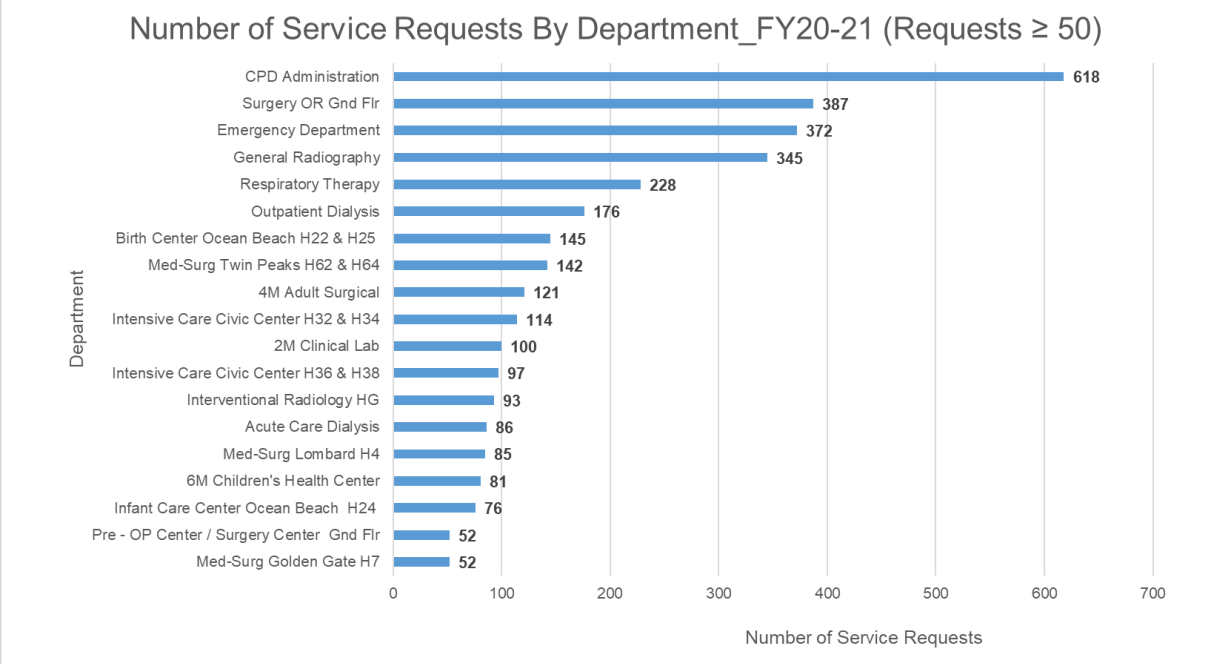
| | July | August | September | October | November | December | January | February | March | April | May | June |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **High Risk (Life Support)** | | | | | | | | | | | | |
| Number of PMs | 180 | 52 | 20 | 39 | 91 | 232 | 109 | 71 | 16 | 17 | 39 | 56 |
| Completion Percentage | 100% | 100% | 100% | 97% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Number of Devices Not Located | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Number of Devices Being Serviced | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Percentage Managed (Goal: 100%) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| **Non-High Risk** | | | | | | | | | | | | |
| Number of PMs | 538 | 622 | 445 | 498 | 1131 | 569 | 621 | 649 | 968 | 749 | 509 | 533 |
| Completion Percentage | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 99.63% |
| Number of Devices Not Located | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

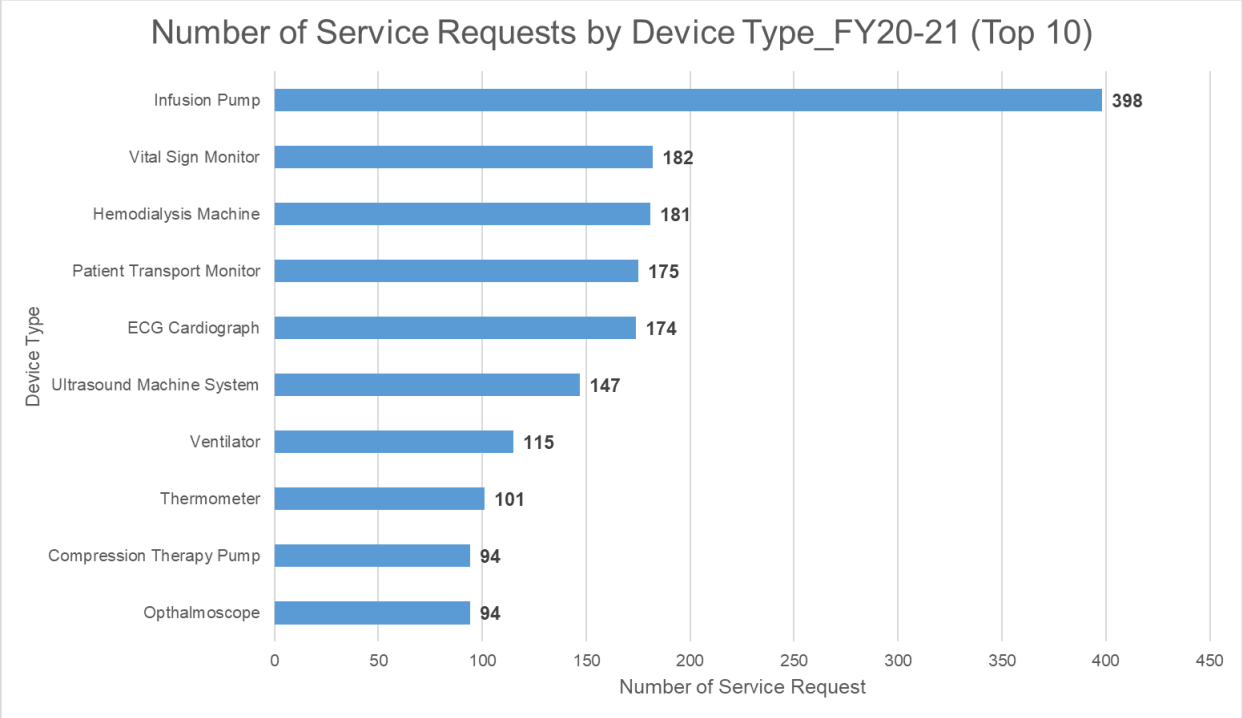
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of Devices Being Serviced | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Percentage Managed (GoI: 100%) | 100 % | 100 % | 100% | 100% | 100% | 100% | 100% | 100% | 100 % | 100 % | 100 % | 100 % |

**Service Request Activities:**



| Categories | July | August | September | October | November | December | January | February | March | April | May | June |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Number of Service Request** | 329 | 326 | 327 | 371 | 338 | 393 | 294 | 282 | 370 | 309 | 323 | 339 |
| **Number of devices retired** | 29 | 34 | 50 | 42 | 31 | 35 | 25 | 26 | 95 | 74 | 30 | 139 |
| **Number of initial inspections performed** | 71 | 40 | 58 | 52 | 38 | 42 | 14 | 100 | 78 | 34 | 47 | 42 |
| **Number of UO reports** | 5 | 6 | 4 | 4 | 4 | 6 | 10 | 4 | 0 | 3 | 2 | 1 |
| **EOC rounds survey** | 7 | 0 | 0 | 2 | 2 | 0 | 4 | 3 | 1 | 1 | 0 | 2 |






**Medical Device Recalls/Hazard Alerts:**

| Manufacturer and Model | Device type, Issue, Solution | Status |
|---|---|---|
| Siemens Healthcare Artis Zeego | The manual installation of the software VD11C Patch distributed earlier via Update Instructions AX030/19/S or AX051/19/P a potential loss of individual room configuration data settings, which are responsible for collision supervision of your system, may occur.<br>Siemens will perform inspection of the affected system to recover the individual room configuration data settings. The correction will be implemented via Update Instruction AX046/20/S. Following the inspection by a service engineer, the individual room | Completed, 1 work order |

| | | |
|---|---|---|
| | configuration data settings will be available again. | |
| Siemens Healthcare Artis Q Biplane 10848282 | The manual installation of the software VD11C Patch distributed earlier via Update Instructions AX030/19/S or AX051/19/P a potential loss of individual room configuration data settings, which are responsible for collision supervision of your system, may occur.<br>Siemens will perform inspection of the affected system to recover the individual room configuration data settings. The correction will be implemented via Update Instruction AX046/20/S. Following the inspection by a service engineer, the individual room configuration data settings will be available again. | Completed, 1 work order |
| GE Healthcare, Innova AFDSA0111, Radiography/Fluoroscopy system | Update Periodic Maintenance for MAVIG Monitor Suspension usage beyond the 10-year lifespan. Radiology supervisor confirmed that system is under a service contract and after system passes its 10-year lifespan (in 2021), a new portion will be added in the INNOVA Yearly PM to check the MAVIG suspension by the GE Field Service Engineer. The next | Completed, 1 work order |

| | | |
|---|---|---|
| | vendor semi-annual PM is scheduled for 7/2021. | |
| Philips Healthcare, Affiniti 70G, Ultrasound Imaging System<br>Philips Healthcare, EPIQ 5, Ultrasound Imaging System | Philips determined that with uncommon workflows there is potential for incorrect patient data to be display and saved into an exam.<br>The software version has been identified which determines which systems are affected. The clinical departments that are affected have been provided the suggested Philips workflow to prevent error. | Completed, 5 work orders |
| Seca, 402, Baby Scale Cart (associated with Seca 333i baby scale) | Instability in the baby scale cart due to the wheels on the cart unexpectedly loosening.<br>All provided labels were placed and the wheels were tightened. Two old wheels with brakes were replaced and then check for operation. | Completed, 1 work order |
| Siemens Medical Solutions, Artis Q Biplane, Radiography/Fluoroscopy C-arm<br>Siemens Medical Solutions, Artis Zeego, Radiography/Fluoroscopy C-arm<br>Siemens Medical Solutions, Artis Q Ceiling, Radiography/Fluoroscopy System | Some electronic components within the generator were equipped with an incorrect protection diode. As a result, protection against overvoltage may be inadequate, and the system may not function properly in the event an overvoltage situation occurs.<br>Siemens will exchange the affected printed circuit boards of the generator. This modification | Active, 4 work orders |

| | | |
|---|---|---|
| | will bring the voltage back to the center of the tolerance range. | |
| Siemens Healthcare, Somatom Definition Edge, Radiography CT (two systems)<br>Siemens Healthcare, Somatom Definition AS, Radiography CT<br>Siemens Healthcare, Somatom Definition Flash, Radiography CT | Software issue that has been identified by Siemens in the current syngo.CT VB20A_SP3 that is running on the Somatom CT. Siemens is planning a software update to correct this issue.<br>Issue will be resolved with an improved software version, syngo CT VB20A_SP4. The service pack will be rolled out free of charge with CT087/20/S update for all affected systems. | Completed, 2 work orders (Somatom Definition Edge and Somatom Definition AS)<br>Completed, 2 work orders ( Somatom Definition Edge and Somatom Definition Flash) |
| Maquet Medical Systems, CardioSave Hybrid, Intra-Aortic Balloon Pump | Software update to correct issues with system | Active, 2 work orders |
| Welch Allyn, VSM 6400, Vital Sign Monitor | Security vulnerability: SW version will need to be updated | Active, 2 work orders |
| Welch Allyn, VSM 6700, Vital Sign Monitor | Security vulnerability: SW version will need to be updated | Active, 6 work orders |
| Welch Allyn, Connex 6000 Series, Vital Sign Monitor | Security vulnerability: SW version will need to be updated | Active, 10 work orders |
| Welch Allyn, Connext Spot Monitor, Vital Sign Monitor | Security vulnerability: SW version will need to be updated | Active, 3 work orders |

| Proposed Performance Improvements, FY20-21 | Met/ Not Met | Results |
|---|---|---|
| The management of medical equipment End of Life (EOL) documentation to help the Biomedical Engineering Department to plan ahead of time and to work with department leaders to purchase replacement medical equipment. To ensure proper medical equipment operation and to allow a proper timeline for the Biomedical Engineering Department to communicate with the manufacturer as to what parts/services will be available in order to maintain the medical device/system in service. The overall goal is to avoid any delay in patient care and improve hospital operations. | Met | Biomedical Engineering has collected EOL documentation from Original Equipment Manufacturer (OEM) that state the EOL date and confirms that end of manufacturer support. Biomedical Engineering will continue to collect EOL documentation in order to plan ahead in replacing medical equipment. |
| Develop a definite path to identify the research medical equipment on the ZSFG campus in those areas that are listed under the ZSFG The Joint Commission (TJC) accredited license. TJC requires that research focused medical device/systems have to be inventoried. The overall goal is to ensure that all TJC standards are met in order to stay compliant with TJC accredited license. | Met | Biomedical Engineering has properly inventoried all research medical equipment that are located in the locations listed under the ZSFG accredited license. |
| Medical Equipment Lifecycle Planning: Continue planning 3-5 years in advance as to what medical equipment will need to be replaced and what the total cost will be. | Not Met | The first stage of defining what medical equipment is currently not supported by the manufacturer has been completed as well as those who |

| | | |
|---|---|---|
| | | will no longer be supported after 12/31/2021. |
| Collaborate with the IT Security and Network Operations teams to develop a standard procedure for adding medical devices to the network on the ZSFG campus. | Not Met | A Biomed Optimization group has been formed to discuss and write up a standard procedure. |
| Create a policy and procedure for new medical equipment that is brought on the ZSFG campus that will connect to DPH network and/or stores ePHI. | Not Met | This is still a work in progress and further meetings will need to take place with DPH IT/Network team. |
| Define a capital strategy that would involve communication with ZSFG senior/executive leadership as to when a device(s) will need to be replaced. Having a proper plan in place would help leadership in determining what device(s) should be included in their annual budget and if any requests need to be submitted to the capital equipment committee. | Met | Initial communication was started with the Value Analysis Committee (VAC) in which medical devices/systems that will be reaching End Of Life or will no longer be supported by the manufacturer would be discussed on a replacement plan. The goal is to present on a monthly/quarterly basis in order to allow committee members from different levels of the organization to discuss the need and what the replacement options would be. |
| Reduce the number of missing wearable patient monitors (Philips MX40 telemetry boxes). | Met | Biomedical Engineering Department purchased RF tags along with holders to place on each monitor. This was the clinical staff are able to know the location of each unit. The number of units have been reduced by 80%. |

| Proposed Performance Metrics for FY21-22 | Target | Comments and Action Plan |
|---|---|---|
| Realignment of Biomedical Technician monthly PM workload | < 125 PM work orders per month | Realign the PM workload for each Biomedical Technician so that less than 125 PMs are assigned. By redistributing the number of PMs throughout the year and/or to different Biomedical Technicians, it would increase the efficiency of each technician. They would be able to address the day-to-day service calls and have more time to troubleshoot in-house and not have to send the medical device to the vendor for repair. |
| Revive risk assessment of medical equipment in Biomedical Engineering's CMMS database and update the Biomedical Engineering Medical Equipment Management Plan (MEMP) | 100% | The plan is to follow TMS (Biomedical Engineering CMMS) database embedded clinical equipment risk classification formula which is E+A+[(P+F+U)/3]. Once all medical devices in the database have an assigned risk score then the MEMP will be updated and presented at an EOC committee meeting. |

## EFFECTIVENESS

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

## GOALS AND OPPORTUNITIES FOR IMPROVEMENT IN FY21-22

- Provide further training for all Biomedical Technicians in order to continue insourcing PM and repair services.
    - This would reduce the total cost of ownership for each medical device.
- Hire a Biomedical Technician I/II with dialysis background to provide support when Outpatient Dialysis (Ward 17) moves to building 5 and expands its patient stations from 13 to 30.
- Continue working on developing a medical equipment lifecycle plan to replace medical devices/systems every 3-5 years.
    - Define a capital strategy that would involve communication with ZSFG senior/executive leadership as to when a device(s) will need to be

replaced. Having a proper plan in place would help leadership in determining what device(s) should be included in their annual budget and if any requests need to be submitted to the capital equipment committee.

- Continue developing a definite path to identify medical technology that will bring ZSFG to the forefront of health care and overall to improve the rate of change at ZSFG when it comes to medical equipment technology.

# V. SAFETY MANAGEMENT

## SCOPE

Safety Management is designed to identify and address potential safety risks in the ZSFG environment. At ZSFG, Safety Management is shared by two complementary programs, Patient Safety and Environmental Health and Safety:

- Patient Safety is a function of Quality Management and oversees the organization's patient safety plan and national patient safety goals. Patient Safety reports via Process Improvement and Patient Safety Committee (PIPS).
- Environmental Health & Safety (EH&S) focuses on staff health, safety, and well-being. The Environmental Health and Safety Department provides consultation, resources and training to create, maintain and improve the hospital's working environment. The goals of EH&S are to reduce or eliminate staff injuries and illnesses, and create a safe environment for all persons including staff, patients, clients, and visitors at the ZSFG site. EH&S reports their activities through the Environment of Care Committee in both this chapter and the Hazardous Materials and Hazardous Waste Chapter.

The Safety Management Program's scope encompasses all departments and areas of the ZSFG campus, except for UCSF research activities, which fall under UCSF management.

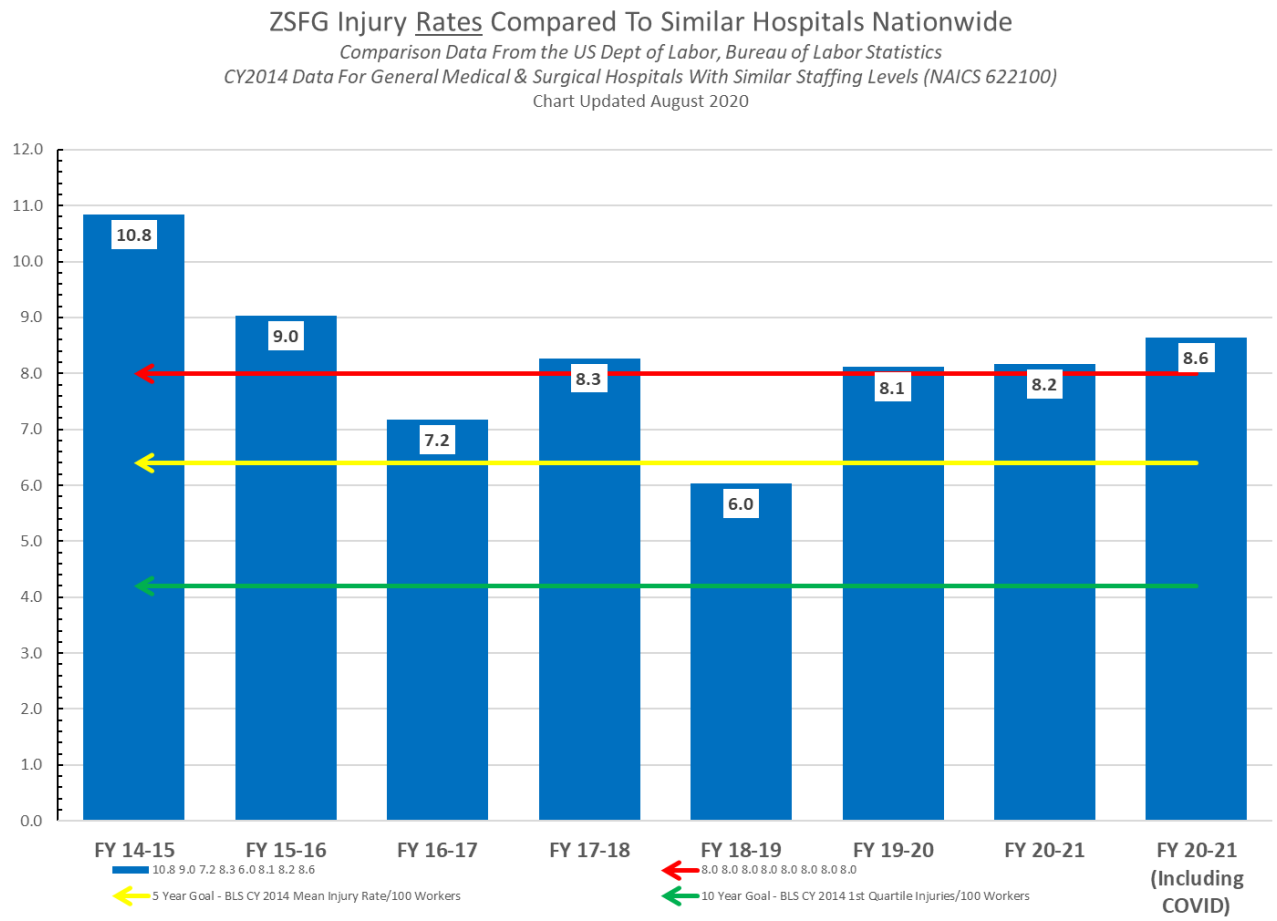
## ACCOMPLISHMENTS

- Worked with Materials Management, Infection Control and DOC Logistics to identify alternate PPE to address COVD-related supply shortages.
- Maintained injury rate comparable to years that EH&S was fully staffed, despite operating at 33% staffing for the entirety of the pandemic.

## PROGRAM OBJECTIVES/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:** Keep injury/illness rate below 2019-2020 rate of 8.1 | **Not Met:** COVID cases among employees drove standardized injury/illness rate ("Incidence Rate") above 8.1. |
|  | |
| **AIM:** Develop no less than two new initiatives specifically targeted at reducing staff injuries/illness. | **Not Met:** Staffing challenges necessitated allocating our resources to other priorities. |
| **AIM:** Develop no less than two new initiatives specifically targeted at reducing staff injuries. | **Not Met:** Staffing challenges necessitated allocating our resources to other priorities. |

| | |
|---|---|
| **AIM:** Create database of EH&S concerns and departmental actions. | **Not Met:** Staffing challenges necessitated allocating our resources to other priorities. |
| **AIM:** Fully staff the EH&S Department. | **Not Met:** Despite three rounds of recruitment, and several job offers made, no applicants were interested in working in the EH&S Department at ZSFG. |

## EFFECTIVENESS

Effectiveness is based on how well the goals are met and how well the scope of the performance metrics fit current organizational needs. Recognizing the significant challenge of reducing staff injuries and given the very limited resources available, the Environment of Care Committee has reviewed the Safety Management Program and found it to be effective, but needs improvement based on the objectives and performance metrics indicated in the Plan.

## GOALS AND OPPORTUNITIES FOR IMPROVEMENT IN 2021-2022:

Make the EH&S vacant positions more attractive to potential candidates and staff the EH&S Department.

# VI. SECURITY MANAGEMENT

## SCOPE

The scope of the Security Management Plan is to assure the ongoing provision of a safe, accessible, and secure environment for staff, patients, and visitors at Zuckerberg San Francisco General Hospital Campus. To that end, it is the overall intent of this plan to establish the framework, organization and processes for the development, implementation, maintenance, and continuous improvement of a comprehensive Security Management Program. This program is designed to provide protection through appropriate staffing, security technology, and physical barriers.

The scope of the Security Management Program includes:

- Continuous review of physical conditions, processes, operations, and applicable statistical data to anticipate, discern, assess, and control security risks, and vulnerabilities
- Ensure timely and effective response to security emergencies
- Ensure effective responses to service requests.
- Report and investigate incidents of theft, vehicle accidents, threats, and property damage
- Promote security awareness and education
- Enforce various hospital rules and policies
- Establish and implement critical program elements to include measures to safeguard people, equipment, supplies, medications, and traffic control in and around the hospital and the outlying medical offices.

Each management objective is listed in the table below and is marked as met or not met. If an objective is not met, the DPH Director of Security will review the objective, and develop a corrective action plan.

## ACCOMPLISHMENTS

- Installation of security technology in Campus Building Clinics, Psychiatric Emergency Services and Emergency Department reception and treatment pods.
- In response to COVID-19, in collaboration with Facility Services addressed campus building access control, resulting in an 88% reduction in loitering and illegal lodging incidents.
- In response to 13,339 patient related service calls, less than 1% resulted in use-of-force.
- Responded to 564 calls to address homelessness related incidents.
- Confiscated 3,394 weapons and contraband through Emergency Department Security Weapons Screening.
- Investigated 23-moderate/high risk workplace violence threat incidents, and developed security plans to address the threat and protect the individuals involved.
- Workplace Violence Awareness efforts resulted in 95% increase in workplace violence reporting.

## PROGRAM OBJECTIVES

| Objectives | Met / Not Met | Comments and Action Plans |
|---|---|---|
| An annual review of the physical conditions, processes, operations, and applicable statistical data is conducted to anticipate, discern, assess, and control security risks, and vulnerabilities.<br><br>A security management plan is developed, and monitored, quarterly to address security vulnerabilities, and minimize risk. | Met | A 2019-2020 security risk assessments was completed, and the security risks, vulnerabilities, and sensitive areas were identified and assessed through an ongoing facility-wide processes, coordinated by the DPH Director of Security, and hospital leadership. These processes were designed to proactively evaluate facility grounds, periphery, behaviors, statistics, and physical systems. |
| Ensure timely and effective response to security emergencies, and service request, including the enforcement of hospital rules and policies. | Met | Security emergency response times are monitored weekly, and the outcomes are reported to the Security Leadership Committee. Service request are responded to in accordance with the Security Response Standard Operating Procedures. |
| Report and investigate incidents of theft, vehicle accidents, threats, and property damage. | Met | SFSD quarterly call-for-service data, incident reports: Unusual Occurrence reports, and Threat Management and Workplace Violence data supports that time investigations are initiated for all crimes against persons and facility property. |

| | | |
|---|---|---|
| Promote security awareness and education. | Met | Through Environment of Care Rounds, employees are provided security awareness training. Additionally, security awareness and education programs include: Non-violent Crisis Intervention, and Security Alert publications. |
| Establish and implement critical program elements to include measures to safeguard people, equipment, supplies, medications, and traffic control in and around the hospital and the outlying medical offices. | Met | The Director of Security in partnership with the San Francisco Sheriff's Department, collaboratively establishes, and maintains communication and mutual ownership for outcomes, identification and troubleshooting of emergent safety concerns. |

# PERFORMANCE

| Performance Metrics #1 | Performance Metrics #2 | Performance Metrics #3 | Significant Reporting Performance | Significant Reporting Performance |
|---|---|---|---|---|
| **Code Green/At Risk (Patient Elopement)** | **Customer Satisfaction** | **Electronic Security System Functionality** | **DPH and SFSO, MOU Performance** | **Employee Security Awareness** |
| **Standard:** The security provider will be measured on their performance during Patient Elopements, Patient "At Risk" and Missing Person incidents, including:<br>• Initial Perimeter and Search<br>• Notification of SFPD, BART, and MUNI<br>• Documentation of Search Activity<br>• Locate/Not Located Procedure | **Standard:** A monthly basis survey of 100 customers consisting of patients, visitors, employees, and physicians will be surveyed regarding their overall experience with Security Service/Sheriff's Office. | **Standard:** All electronic security equipment will be inspected monthly for functionality. Facilities, Security Services and the Sheriff's Operations Center will develop security plans to address vulnerabilities resulting from malfunctioning equipment. | **Standard:** A monthly security provider performance survey will be completed to assess the Sheriff's Office compliance with MOU obligations in the areas of operational performance, issue resolution, management responsibilities and finance provisions. | **Standard:** During Environment of Care Rounds, hospital staff be tested on 6 questions regarding security awareness (See Appendix B.)<br>(Sample size: 300 employees per quarter) |
| **Threshold – 80%**<br>**Target – 90%**<br>**Stretch – 100%** | **Threshold - 80%**<br>**Target - 90%**<br>**Stretch – 98%** | **Target: 98%** | **Threshold – 3.0**<br>**Target – 3.5**<br>**Stretch – 4.5** | **Threshold - 80%**<br>**Target - 90%**<br>**Stretch – 98%** |

**Analysis of Performance Metrics Results and Corrective Action Plan**

FY 2020-2021, Annual Performance Metrics

| | Target | Overall Performance |
|---|---|---|
| Code Green Response (Patient Elopement) | 90% | 100% |
| Customer Satisfaction | 98% | 59% |
| Electronic Security Systems | 90% | 98% |
| San Francisco Sheriff Office MOU Compliance | 3.5 | 3.2 |
| Employee Security Awareness | 90% | 100% |

# EFFECTIVENESS

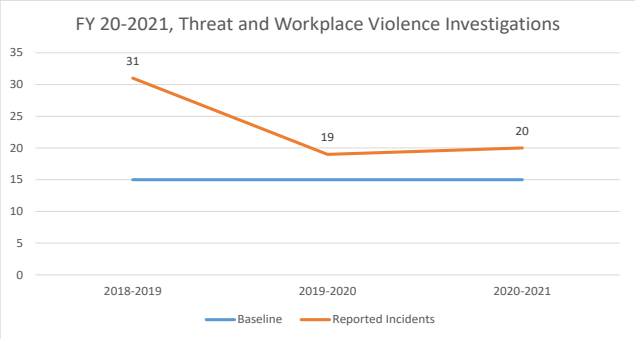
The 2020-2021 significant reporting metrics were developed to further demonstrate the security program's effectiveness. The metrics include Threat and Workplace Violence Investigations, Crimes against Persons and Property, Use-of-Force, and Campus Tunnel and Stairwell Patrols.

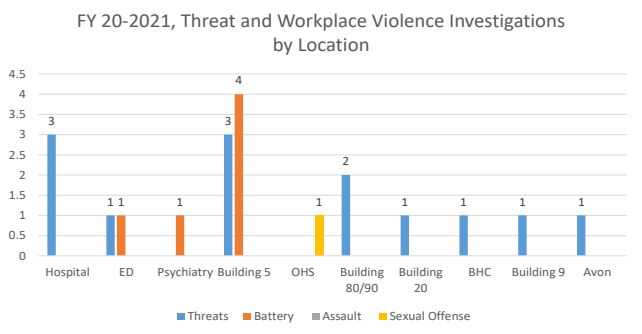
**Threats Management and Workplace Violence Prevention Investigations**

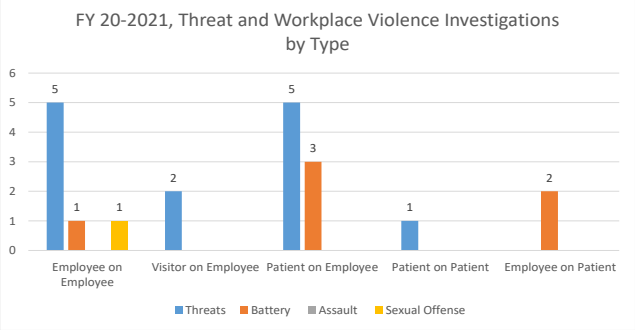
**Standard:**

Security will investigate reported moderate and high-risk threats where there is reasonable cause to believe that the personal safety of an individual or group of individuals may be at risk.

Moderate and High-Risk threats are incidents that required management and security intervention, where it is determined that without specific remedial action, the potential for escalating behavior or the imminent danger of injury or death to one or more individuals is highly probable.




- Over a 3-year period, moderate and high-risk investigations decreased 39%. There was a 5% increase in investigations from FY 19-2000.

- Threat reports accounted for 65% of the investigations, and 66% of investigations that involved physical violence, occurred in Building 5.

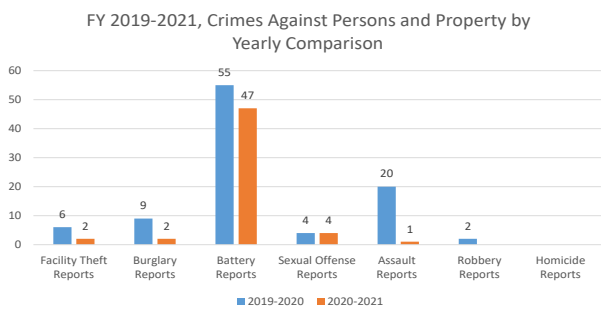
· Patient against employee reports accounted for 40%, followed by 35% of employee against employee of moderate and high-risk investigations.

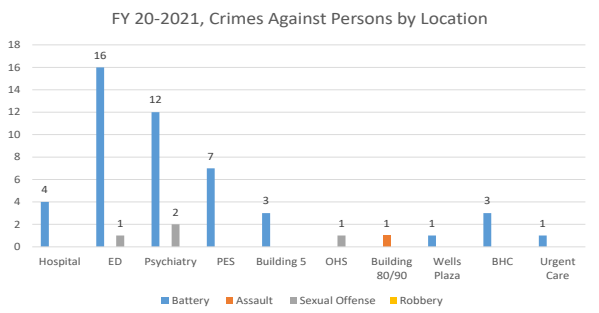
- Security-plans to address threats and acts of violence, included:

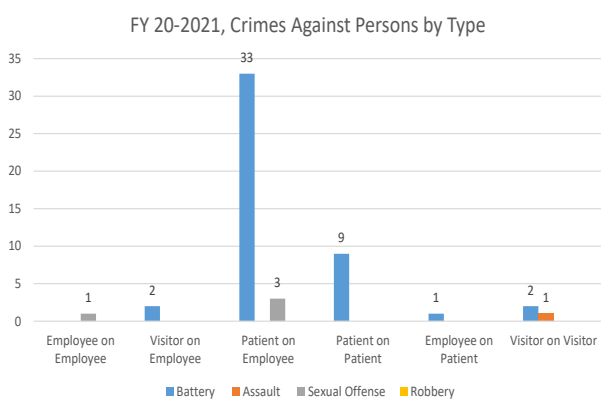
| Remedial Action Taken | |
|---|---|
| Behavioral Plan | 1 |
| Citation Issued | 1 |
| Treatment Transferred | 1 |
| Protection Plan | 1 |
| Employee Disciplinary Action | 4 |
| SFSO Admonishment | 2 |
| SFSO Detention | 3 |
| SFSO Standby | 1 |
| SFSO Investigation | 1 |

| Crimes Against Persons and Property | | |
|---|---|---|
| **Yearly Comparison** | **2019-2020** | **2020-2021** |
| SFSO - Facility Property Thefts Reports (>$900) | 6 | 2 |
| SFSO - Burglary Reports | 9 | 2 |
| SFSO - Battery Reports | 55 | 47 |
| SFSO - Sexual Offense Reports | 4 | 4 |
| SFSO - Assault Reports | 20 | 1 |
| SFSO - Robbery Reports | 2 | 0 |
| SFSO - Homicide Reports | 0 | 0 |
| **Total** | **96** | **56** |

| FY 20-2021, Crimes Against Persons and Property Action Taken | |
|---|---|
| Deputy Arrest | 4 |
| Private Person Arrest | 20 |
| Citation Issued | 9 |
| Psych Evaluation | 1 |
| Criminal Investigation Unit | 3 |
| Emergency Protective Order | 1 |
| Detention | 6 |



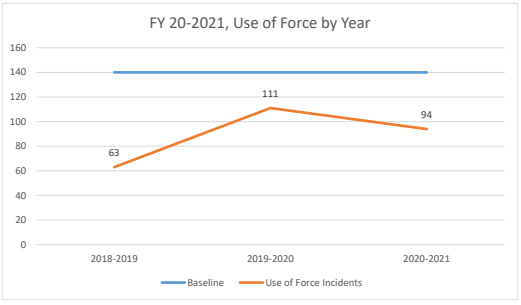




- Crimes against Persons and Property decreased 42% from FY 19-2020.
- Battery reports decreased 15% from FY 19-2020.
- Assault reports decreased 95% from FY 19-2020.
- Battery reports accounted for 84% of crimes against persons.
- Reports from the Emergency Department accounted for 32% of person-crimes, followed by Psychiatry with 26%.
- Patient against Employee reports accounted for 69% of crimes against person incidents.
- 38% of persons that were victims of physical attack, pressed charges against their assailant.

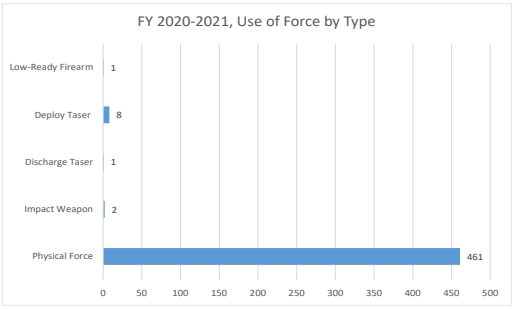
| 2020-2021 Crimes Against Property by Location | | |
|---|---|---|
| | **Theft** | **Burglary** |
| Building 40 | 1 | |
| Building 80 | | 1 |
| CHN | 1 | 1 |

**2019-2020 Use of Force Statistics**

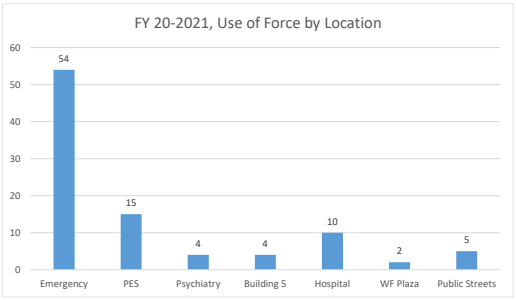
Use-of-force data is tracked of all SFSO incidents occurring on ZSFG campus. In 2020-2021, there were 94 incidents involving use-of-force. The incidents were analyzed by the types of force, type of incidents, location, cases, demographics, and reported acts by demographics.



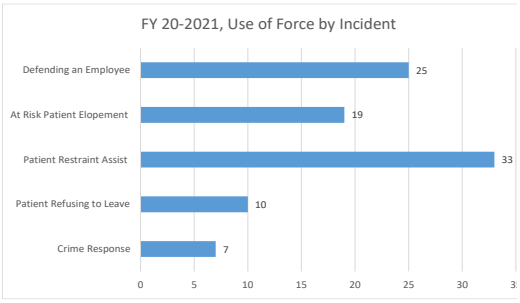

Use-of-force decreased 15% from FY 2019-2020.



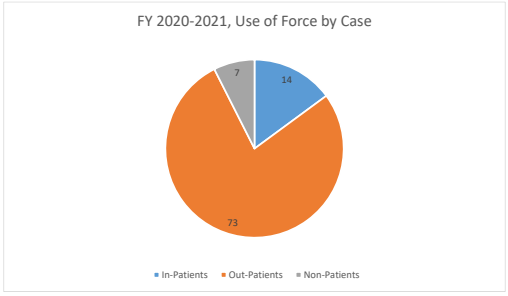

Of the 94 use-of-force incidents, there were 473 types of force used. Physical force accounted for 97% of the force used.



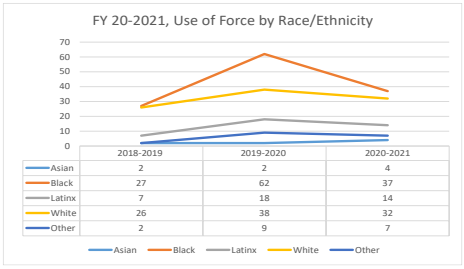

Fifty-seven percent of use-of-force incidents occurred in the Emergency Department.




Deputies assisting with patient restraints and defending staff from patient-initiated attacks, accounted for 62% of use-of-force incidents.



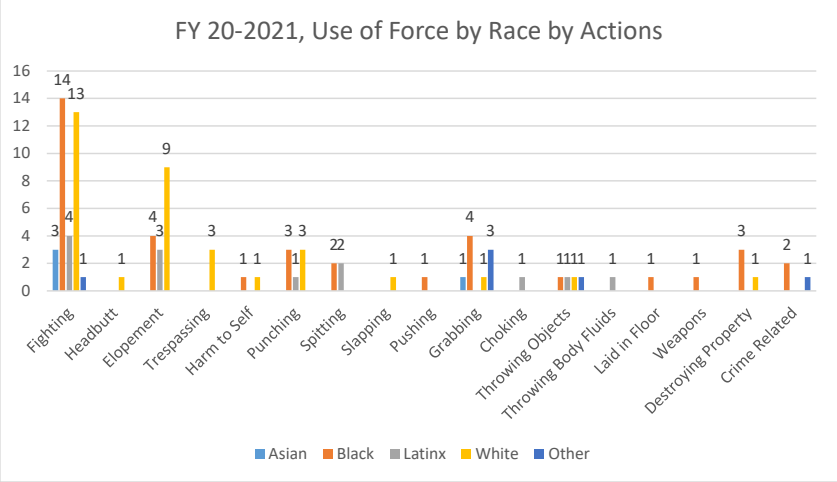

Seventy-one percent of use-of-force is against outpatients that includes the Emergency and PES patients.




Use-of-force decreased in every race/ethnicity, except Asians. Black/African Americans were subjected to force more than other race/ethnicities.

| Use-of-Force by Patient Related Service calls and Clinical Data | |
|---|---|
| Per 1K Patient Related Service Calls | 10 |
| Per 1K ED Registrations | 1 |
| Per 1K PES Intakes | 3 |
| Per 100 Psychiatry Admissions | 1 |

**Use of Force by Race and by Actions**



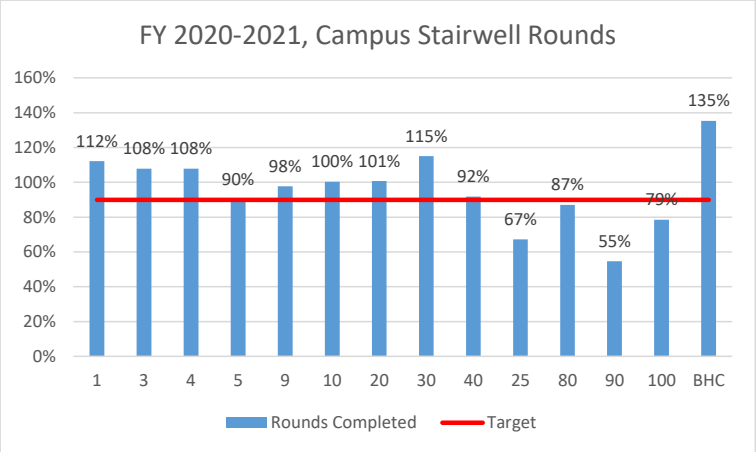

- Use-of-force is used in response to reports of fighting 42% more than other reported acts.
- Acts committed by Whites were reported 50% more (13 incidents) than other race/ethnicities.

| Patient Initiated Physical Attacks by Race/Ethnicity | |
|---|---|
| Asians | 7% |
| Blacks | 41% |
| Latinx | 14% |
| White | 32% |
| Other | 7% |

**Campus Tunnel and Stairwell Rounding**

**Standard:**

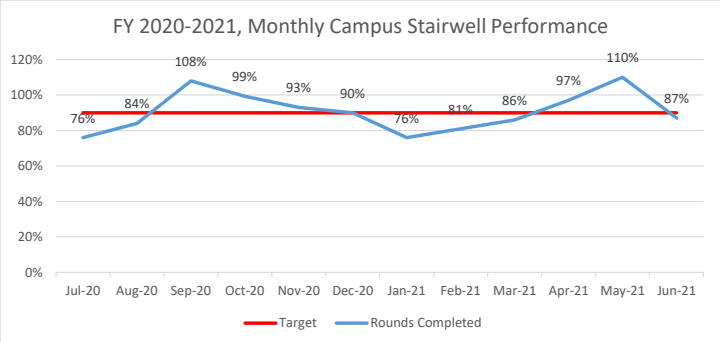
To demonstrate the effectiveness of the crime prevention through frequent patrols of campus tunnels and stairwells, there were 5,934 rounds conducted in 2020-2021




**Numbers are based on supporting documentation provided by SFSD.*

**Stairwell Rounding Analysis**

In 2020-2021, 93% of the campus stairwells were patrolled. The Security Leadership Committee continues to monitor monthly rounding results. SFSO reported that staffing challenges were the primary driver for each building not meeting the 90% patrol target.




**Other Campus and Tunnel Rounding Activity:**

During FY 2020-2021, there was 1 finding related to campus tunnels, and 152 service calls related to homelessness, which is a 73% reduction from FY 2019-2020.

# VII. UTILITY SYSTEMS MANAGEMENT

## SCOPE

The Zuckerberg 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, domestic water and wastewater systems, vertical transportation, communication systems, HVAC, and medical gases.

## ACCOMPLISHMENTS

- Installation of the temporary chiller to support the chiller replacement project.
- Supported Bldg 5 projects including, Urgent Care Clinic phase I, UCC phase II (in process), 6H surge space (in process), Bldg 5 Seismic upgrade (in progress), Bldg 5 Dialysis center (in progress), Bldg 5 Physical Therapy (in progress), Bldg 5 Electrical distribution upgrade (opening phase), Bldg 5 Mechanical systems upgrade (opening phase), ZSFG Fire Alarm system upgrade as part of the aforementioned projects, et al.
- Completed re-roof of "D" section on Bldg 5 and the "M" section of Bldg 5.
- Supported the many projects associated with the hospital's and the City's response to Covid-19.

## PROGRAM OBJECTIVES FOR FY 2020-2021

| 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. |

| | | |
|---|---|---|
| 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 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 provided by 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 2020-2021 Totals** | | | | | | |
|---|---|---|---|---|---|---|---|
| **Systems** | **5** | **25** | **BHC** | **80** | **90** | **100** | **SB** |
| Emergency Power Failures | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Commercial Power Failures | 3 | 0 | 1 | 0 | 0 | 0 | 0 |
| Water System Failures | | | | | | | |
| **Domestic** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Waste** | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Communication Failures | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HVAC Failures | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Med Gas Failures | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Elevator Failures | 19 | 9 | 3 | 2 | 0 | 1 | 0 |
| High Voltage Electric Switchgear | 1 | 1 | 0 | 0 | 0 | 0 | 0 |

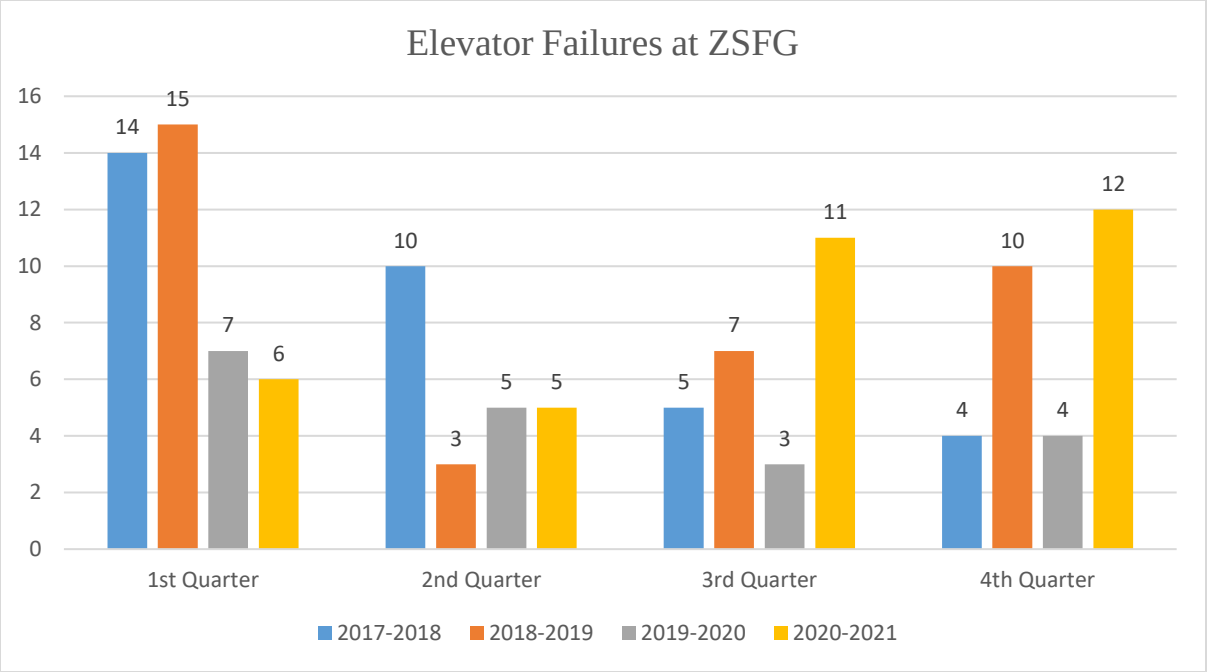
The Environment of Care Committee has evaluated the objectives and determined that they have been met. The Program continues to actively direct utilities management awareness.

## PERFORMANCE METRICS

**AIM:** For FY 2021-2022, there was an uptick in elevator failures on Campus. Target met. 19 elevator outages in FY 2019-2020 vs 34 for 2020-2021.

### Elevator Failures

| **Elevator Failures** | **1st** | **2nd** | **3rd** | **4th** | **Action** |
|---|---|---|---|---|---|
| Elevator outages of 4-hours plus in duration, or passenger entrapment of any duration, (34 total cars) | 6 | 5 | 11 | 12 | Monitor for trends |




**AIM:** For FY 2021-22 continue to manage and monitor outage trends with an overall goal to manage overall elevator outages. Note: the most common cause of elevator outage was damaged doors to the Bldg 5 cargo elevators (19 & 20). These elevator car doors are often hit by material moved in and out of the elevator (11 of 34 outages).

## EFFECTIVENESS

The Utility Management Program is considered effective.

| Proposed Performance Metrics for<br><br>2021-2022 | Target | Comments and Action Plan |
|---|---|---|
| **AIM:** manage elevator failures at ZSFG to a minimum through contract unification | **Reduce outages from 2020-21 level.** | Manage and monitor elevator outage trends. |

| | | |
|---|---|---|
| **AIM:** Engage staff and contractors to review & implement the 2016 bond measure projects pertaining to the utility system. | **ZSFG staff engaged in all project work.** | Involve stake holders in project implementation. |

## GOALS AND OPPORTUNITIES FOR IMPROVEMENT IN 2021-22

- Continue support the chiller replacement project in Bldg 2.
- Continue support the cooling tower replacement project in Bldg 2.
- Further develop, with the assistance of the project management team, the replacement project for the main switchgear, and electrical distribution system in Bldg 5.

# VIII. UNSUNG HEROES OF THE ENVIRONMENT OF CARE COMMITTEE

Traditionally, the Environment of Care (EOC) Annual Report consists of seven chapters which align with Joint Commission requirements for management of a hospital's EOC. Reflecting ZSFG's strong emphasis on collaboration and a shared mission and vision, EOC activities at ZSFG include far more than these seven-chapter heads and their programs, with other program participants working hard behind the scenes, without getting recognition for their valuable contributions. This section identifies some of these participating groups, their EOC activities in the past year, their accomplishments, and challenges:

## Department of Education and Training (DET):

<u>Major EOC Activities</u>

- DET continues to manage all education and training activities related to Workplace Violence Prevention (WVP). This includes development of curriculum,

implementation; managing multi-discipline training teams; tracking compliance and training evaluation.
- DET incorporated WVP questions into EOC Rounding Tool to identify education and training gaps.
- DET continues to collaborate with EOC stakeholders to develop Annual Education material for staff.

Accomplishments

- Redesigned & implemented ZSFG's Workplace Violence Prevention (WVP) training plan. All departments/units providing patient contact activities will have a training team. Incorporating this model allows for curriculum to be modified to meet department/unit needs to focus on specific Crisis Prevention Intervention (CPI) strategies, such as deceleration techniques.

Challenges

- Due to COVID-19, in-person training is limited to adhere to social distancing guidelines. Training schedule for department/unit WVP trainers will be extended until fall 2021.

## Department of Environmental Services (EVS):

Major EOC Activities

- EVS maintains the built environment of the facility where healthcare services are provided, following regulations and guidelines, i.e., OSHA, TJC, CDC, AORN, APIC, and AHE. The EVS works in collaboration with Infection Control preventionists to review and revise policies and procedures for environmental cleaning that includes proper use of PPEs. Also ensures safe and effective chemicals selection and use for achieving disinfection. The policies include essential items such as checklists, timelines, and frequencies, and develop a mechanism by which to assess and improve consistency and quality. We develop and update new Porter orientation program and maintain a standard of cleanliness by providing a reporting methodology for tracking compliance and effectiveness of cleaning processes (ATP tests).
- EVS is responsible for pest control activities, by implementing an integrated pest management program (IPM) to mitigate exposure to pests in the facility.
- EVS collects, transports, separates, and discards waste streams, such us Regular and Regulated Medical Waste, Recycle and Compost, etc. We Train staff in the proper handling and separation to minimize landfill waste.

- EVS participates in the twice a month EOC Rounds to make sure Porters follows proper protocols during their tour of duty. Also, to minimize the risk of accidents by following proper cleaning standards.
- EVS completes on-line work orders/requests for cleaning projects; requests for tables, chairs, trashcans and segregated containers for compost/recycling/confidential.

Accomplishments

- Worked in collaboration and guidance of IC for the participation in a joint San Francisco Chapter of the Association for Professionals in Infection Control and Epidemiology (APIC) and Association for the Healthcare Environment (AHE) pilot project. The project aims to standardize environmental cleaning practices in local healthcare facilities, and to decrease HAI. A group of Porters and Supervisors were trained and certified in CHEST (Certified Healthcare Environmental Services Technician). The project was successfully completed, resulting in an increase in patient and staff satisfaction, HCAHPS and e-Videon (patient satisfaction) scores.
- Monitored and complied with all trainings and provided key information to IT for the proper creation of the EVS module for the new Electronic Health Record (EHR), to be used at ZSFG. Worked to implement Epic Electronic Health Record system in our department. Implementation was successful and we have eliminated most of the manual work to provide cleaning services to ZSFG.
- Collaborated with the Department of Human Resources, early in the new year, to hire and train the large number of employees necessary to replace the retirees and long-term leave of the previous season. Following this, with the advent of the Covid-19 crisis, worked again with HR Dept. to acquire a number of new DSW workers, kindly provided by SFO and the Public Library, needed to deal with the ongoing pandemic.

Challenges

- The department is dealing with an increase in Capital project work cleaning across campus and Extended Leave of Absence of front-line staff that resulted in a substantial increase in OT hours used. We are working with HR Operations to expedite hiring EVS staff and reduce OT.

## Department of Infection Prevention & Control (IC):

Major EOC Activities

- IC provides technical guidance and oversight to the Environmental Services Department. This includes the review and revision of policies and procedures, ensuring safe and effective chemicals are selected/used for achieving disinfection,

and providing a reporting methodology for tracking compliance and effectiveness of cleaning processes.

- IC obtains input from EOC stakeholders to develop and update annual infection prevention and control educational material for staff.
- In addition to daily IC rounding, IC participated in the twice a month EOC Rounds to identify infection prevention and control issues and process gaps until COVID-19 safe work practices required their temporary suspension.
- IC has worked with six of the seven EOC chapters to establish standard work that incorporates infection prevention and mitigation strategies in critical aspects of their work with the Security Management chapter being the exception.

Accomplishments

- IC, EH&S, Facilities Management and Capital Projects collaboration on development of standard work for construction projects. This successful collaboration continues to find opportunities for improvement to include participation in the development of a master planning document for ongoing seismic safety upgrade projects and renovation of building 5 from inpatient to outpatient setting.
- IC increased efficiency for Facilities Management by modifying the IC permit process for small scale renovation and construction projects. The combined contractor work permit now allows projects whose IC risk assessment places in a no or low risk to patients category to proceed without an additional stand-alone IC permit.
- IC worked with Facilities Management to assess and improve workplace environments to meet the needs of COVID-19 social distancing practices.

Challenges

There are multiple competing “high priority” issues and projects which make it difficult for IC to establish stable partnerships with the various departments, e.g. nursing, EVS, Facilities and the ORs, to allow for CQI activities. The primary focus for IC department since February 2020 has been the COVID-19 pandemic. The activities done in response to COVID-19 include the development of a COVID-19 FAQ intranet site that is maintained by IC program manager, multiple site visits to majority of campus to assess safe work practices, creation and implementation of multiple COVID-19 specific policies in addition to modification of existing policies, primarily related to use of PPE and development of appropriate COVID-19 patients based on their phase of diagnosis, illness and exposure status. Other examples of on-going issues include high patient census, implementation of the new electronic healthcare record (EHR) system with its new processes for managing infection and isolation needs, and the multiple current and planned construction activities across the campus.

## Department of Pharmaceutical Services (DPS, “Pharmacy”)

Major EOC Activities

- DPS is responsible for ensuring the safety and integrity of pharmaceuticals in medication rooms to comply with the various regulatory requirements (eg. Board of Pharmacy, CDPH-Title 22, TJC). This includes checking the medication room for proper labeling and storage, security & documentation of compliance for emergency drug supplies, access to pertinent information (eg. LASA list, High Alert medications list, Do Not Crush list).
- DPS participates in the twice a month EOC Rounds to identify medication labeling and storage issues and gaps.

Accomplishments

- Provided medications and staffing to COVID Command Center, Containment sites and alternate care sites throughout the city during the COVID-19 pandemic
- Medication-related information (eg. LASA list, High Alert Med List, Hazardous Drugs, Do Not Crush list) is now readily available electronically on the VDI desktop
- Continued to work with Materials Management to transition from multi-pack IV fluid bags to single pack thereby mitigating the repeat findings of undated bags that were deemed "expired."

Challenges

- Medication room size and configuration variations from one nursing unit to another, making it difficult to standardize storage processes.

- Continuing to optimize EPIC functionalities to improve workflow for Nursing and Pharmacy

In addition to the listed groups, Andrea Chon, RN, MSN, the nursing liaison for EOC activities requires special recognition for actively and aggressively participating in EOC rounds, and taking information and issues raised at EOC Committee meetings back to her peers with nursing management and leadership. Other persons supporting EOC activities on a routine basis include:

- Josie Huang, Regulatory Affairs
- Eunice Santiago, Biomedical Engineering
- Louis Moreno, Environmental Services
- Reyland Manatan, Environmental Services