ZUCKERBERG
SAN FRANCISCO GENERAL
Hospital and Trauma Center

Environment of Care

Annual Report

Fiscal Year 2018-2019

Approvals:

Environment of Care Committee: September 2019

Medical Executive Committee: October 2019

Nursing Executive & Patient Care Services Committee: October 2019

PIPS Committee: October 2019

Presentation & Review Schedule:

Joint Conference Committee: October 2019

San Francisco Health Commission: November 2019

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 – Acting Safety Officer)
IV. Medical Equipment Management (Elkin Lara-Mejia – Manager of Biomedical Engineering)
V. Safety Management- Mike Harris (Acting 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),
    - Patient Safety (Tom Holton),
    - Pharmaceutical Services (Julie Russell),
    - Risk Management (Susan Brajkovic),
    - Linen 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 2019, 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 2018-2019. 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

- Worked with Nursing Administration and Clinical Informatics to develop business continuity policies and procedures for planned and unplanned downtime for Epic.
- Updated the ZSFG Emergency Operations Plan ("Disaster Manual") and Hazard Specific Plans to more clearly align with regulatory standards.
- Promoted the Everbridge Emergency Notification System and increased the number of staff enrolled in the system by 13%.
- Worked with DPH PHEPR and to improve overall hospital response to extreme heat (over 85°F) and poor air quality.
- Worked with Violence Prevention Team and Nursing Administration to improve staff knowledge and response to Code Tan incidents to ensure patient, visitor and staff safety and compassionate and equitable care during high profile traumatic incidents.
- Continued to serve on the Hospital Incident Command System (HICS) National Advisory Committee, working on reviewing and updating the national standards for how hospitals and other healthcare agencies manage emergencies and disaster.
- Continued to provide HICS Basics training for ZSFG managers and supervisors.
- Clinical and HICS Incident Management Teams effectively and successfully managed one full-scale communicable disease outbreak exercise, departmental earthquake preparedness drills for the Great California Shakeout, one extreme heat event, one prolonged high patient census and acuity incident, a bomb threat, two City-wide Medical Surge Tabletop Exercises, four labor actions impacting UCSF staffing at ZSFG, several planned computer system downtime incidents, and two unplanned information system failures, one of which resulted from a chiller failure.

PROGRAM OBJECTIVES FOR FY 2018-2019

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 4/09/19 and shared with SFSD, SFFD, SFPD, DPH, the SF Department of Emergency Management and other SF hospitals on 5/01/19.
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: • Communications • Resources and Assets • Safety and Security • Staff Responsibilities and Support • Utilities and Critical Systems • 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.
The hospital implements its Emergency Operations Plan when an actual emergency occurs.	**Met**	Extreme Heat, High Census and Labor Action Incidents
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 effectiveness and scalability during the Statewide Disaster Exercise, Bomb Threat, Chiller and IS Failures, Extreme Heat and High Census incidents and internal activations for downtime procedures.
The hospital trains staff for their assigned emergency response roles.	**Met**	• New Employee Orientation • Annual Halogen Emergency Preparedness & Disaster Response Training • 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 of four actual emergencies, four planned downtime events, four labor actions, two table top City-wide and one regional full-scale exercise.
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 9/12/19.

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	2018-2019 Goal	2018-2019 Results	Comments & Action Plan
Specific Staff Will Complete Required Training in ICS. Total Current Staff who have completed: • ICS 100 – 200 – 700 46% • HICS Basics 79%	 **90%** **90%**	 **44%** **88%**	**Partially Met.** Implementation of Epic rightfully slowed promotion of HICS Basics and ICS course completion
Decrease the number of staff with missing contact information in Everbridge. (Baseline 3.7% undeliverable)	**< 1%**	**0.11%**	**Met.** Corrected numerous errors and deleted staff who have left the hospital.
Increase Everbridge Enrollment. (Baseline 5112 in FY17-18)	**5500**	**5789**	**Met.** Continuing outreach to UCSF staff.
Conduct Everbridge Training for SFSD Watch Commanders and ZSFG AODs and Operators to ensure timely dispatch of emergency messaging. • SFSD Staff Trained • AODs Trained • Operators Trained	 **6** **6** **8**	 **3** **6** **12**	**Partially Met.** Focus will be on training of SFSD SOC staff.
During Exercises and Actual Incidents, Staff will Complete Appropriate Documentation. • HICS Job Action Sheets • HICS Forms • Incident Action Plan	 **95%** **95%** **95%**	 **97%** **97%** **100%**	**Met.** Continuing HICS trainings for staff to reinforce improvements made.
Implement at Least 90% of Corrective Actions Identified in FY 2016-2018 Exercises and Actual Incidents by 6/30/19.	**90%**	**94.8%**	**Met.** Most issues have been completed or are implemented and ongoing.
Develop and Implement a Hazard Specific Plan for Response to Extreme Heat Events	**100%**	**100%**	**Met.** Drafted and implemented Hazard Specific Plan for Extreme Heat and a related HSP for Poor Air Quality. Tested Extreme Heat Plan in June with positive results.

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 2019-2020

- Continue providing training on the Hospital Incident Command System (HICS) for all Incident Management Team members, department supervisors and management level staff.
- Continue to improve Code Tan communication and response.

- Ensure effective and efficient incident management and documentation.
- Improve Code Pink response.

The proposed performance metrics for these goals include:

Emergency Management Proposed Performance Metrics for 2018-2019	Target	Comments & Action Plan
Specific Staff Will Complete Required Training in ICS.	**90%**	**Driver Metric.** Will renew focus on ICS compliance after implementation of Epic.
Ensure that Patient and Visitor Communication is Distributed to Staff During Drills and Actual Incidents.	**95%**	**Driver Metric.** Communication will include Incident Action Plan and talking points to share with patients and visitors.
Conduct and Evaluate at Least Two (2) Code Tan Drills or Actual Incidents, Focusing on Staff Response.	**100%** **2**	**Driver Metric.** Evaluation criteria will include measurement of equity and family support.
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.
During Disaster Exercises and Actual Incidents, Staff will Complete Appropriate Documentation. • HICS Job Action Sheets • HICS Forms • Communication of Incident Action Plan	 **95%** **95%** **95%**	**Watch Metric.** Continuing focus on standard work and required check-out procedures to ensure training of new Incident Management Team members and thorough communication and appropriate documentation.
During Code Pink Drills and Actual Incidents, ZSFG Staff will cover designated posts and report appropriate information immediately. • Designated Posts Covered • Sightings of Child Reported to 64911 • Departmental Search Results Reported	 **90%** **100%** **90%**	**Watch Metric.** Code Pink response monitoring is shifting from Security to Emergency Management.

II. 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 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 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 4th & 5th floors in Bldg 25 per NFPA standards: required every six years. The intent is to test and inspect two floors per year to maintain compliance at a minimal and predictable financial cost. The ZSFG HVAC crew has made repairs per the inspection report.
- Annual HVAC smoke control testing and repairs was completed in February. Smoke control testing, in addition to being a Life Safety requirement, demonstrates a safe and reliable smoke control system.
- Assessed risks at and around various construction projects; 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.
- Utilized many 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 and familiarize responding crews with SFFD to our new hospital.

PROGRAM OBJECTIVES

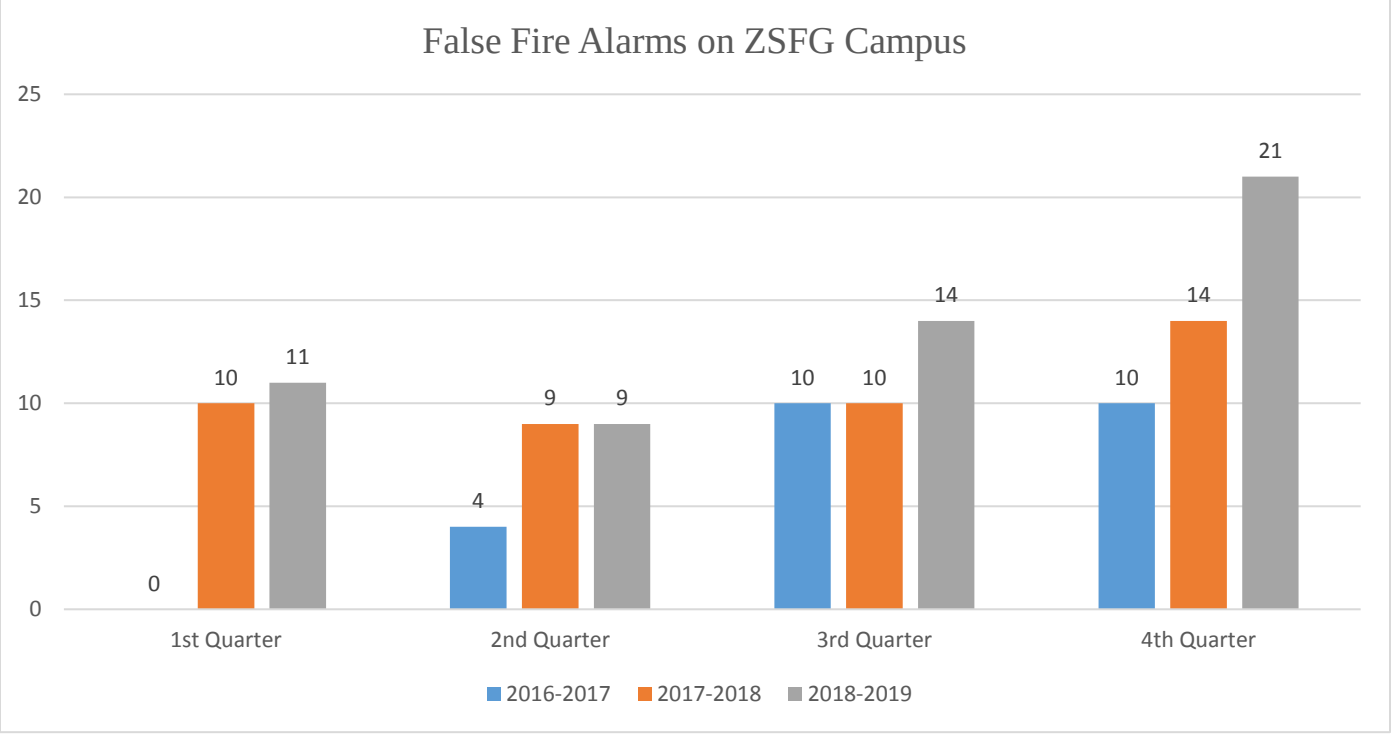
Objectives	Met/ Not Met	Notes/Action Plan(s)
The Fire Plan defines the hospital's method of protecting patients, visitors, and staff from the hazards of fire, smoke, and other products of combustion and is reviewed and evaluated at least annually.	Met	At a minimum, annually review the SFGH Fire Plan. 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 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 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 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	2018 3rd Qtr.	2018 4th Qtr.	2019 1st Qtr.	2019 2nd Qtr.	Target	Comments and Action Plan
Quarterly Fire Drills; a minimum of 6 per quarter - one fire drill per shift, w/ completed department evaluation forms.	7	7	7	9	Minimum of 6 drills per quarter; 2 per shift	Target achieved; extra drills due to interim life safety measures, or for training. Discussed issues uncovered during drills and took corrective actions.
False fire alarms	11	9	14	21	10 or less false alarms per year	Target not met - monitor for trends. Extend false fire alarms goal at less than 25 for the year.
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 2017-18, false fire alarms on campuses extended to 25 per year or fewer.



Target of five or less false fire alarms for FY 2017-18 has been 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, but needs improvement based on the objectives and performance metrics indicated in the Plan.

GOALS AND OPPORTUNITIES FOR IMPROVEMENT IN 2019-20

- Monitor and manage false fire alarms for a quality and safe care experience in Bldg 25. This has proven difficult, but we continue with staff education, training, and engagement.

- Monitor on-going 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 planning and 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 2018-19	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 of waste. 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

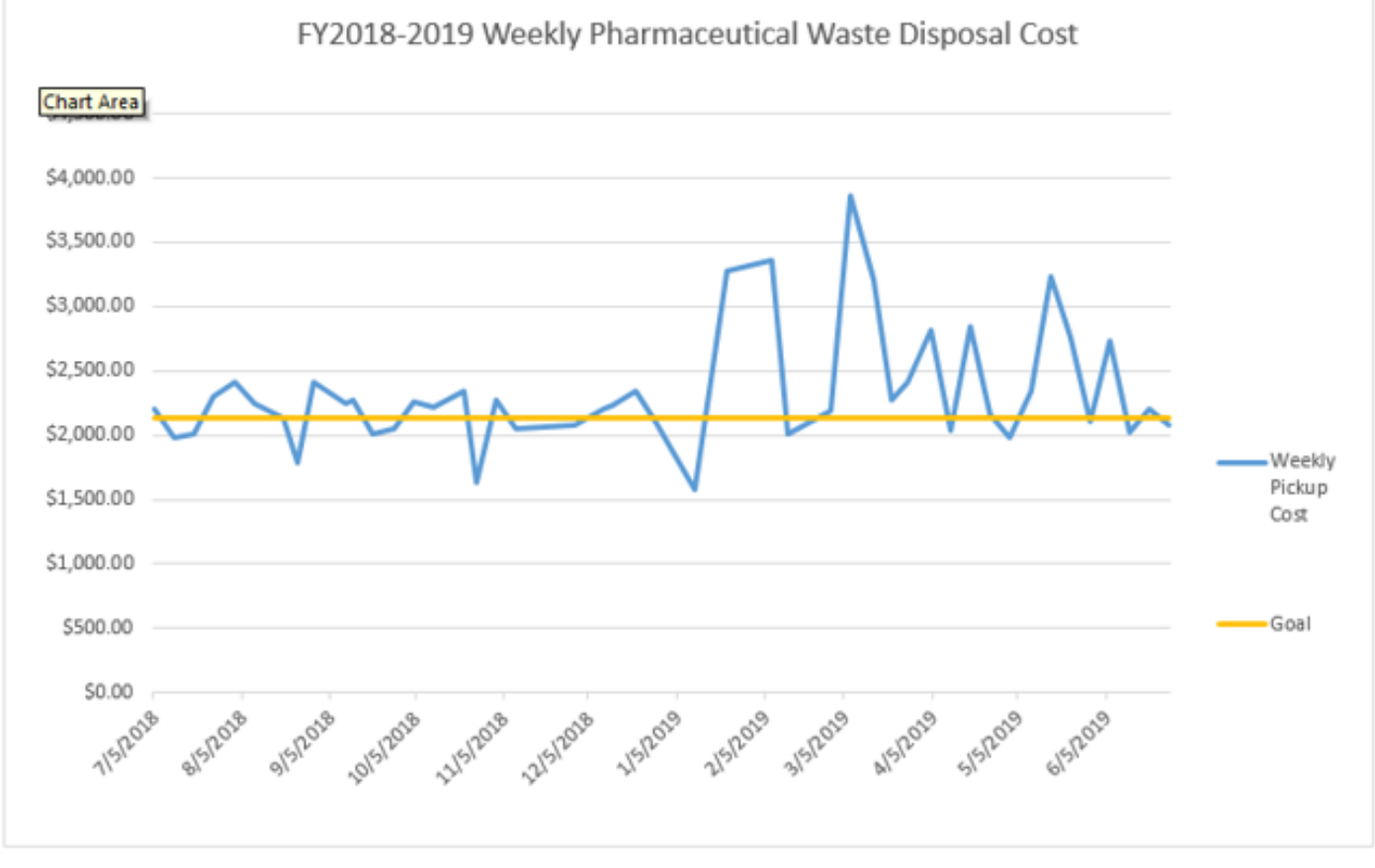
- Continued to work with Capital Projects, ZSFG Facilities, and Infection Control to allow construction within operating hospital buildings as well as in very close proximity to staff, patients, and visitors without significant incidents or exposure concerns.
- Maintained ZSFG Environmental Permits, 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.
- Trained various units on the proper use of chemotherapy agent spill cleanup kits.

PROGRAM OBJECTIVES/PERFORMANCE METRICS FOR 2017-2018

Objectives	Met / Not Met	Comments and Action Plans
Conduct study of eyewash water quality to determine efficacy of monthly flushing.	**Met**	Precept Environmental conducted an initial assessment of eyewash water quality.
Reduce and/or eliminate exposure to a hazardous material on campus.	**Met**	Worked with DPW to identify non-hazardous, mechanical means of constructing containments instead of using highly flammable spray adhesives.
Keep average cost per pickup <$2138 (5% reduction from 2017-2018)	**Not Met**	The average cost per pickup was $2331. At the end of Q2 concerns with proper processing of containers necessitated procedural changes that caused an increase in waste disposal costs.

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 2019-2020

- **Establish new pharmaceutical waste disposal practice.** The current challenges of reusing pharmaceutical waste bins created opportunities to evaluate the most effective manner to guarantee cleanliness of the containers. Considering this concern, EH&S will identify and implement a new practice that will eliminate the concerns associated with the sanitation of bins.
- **Ensure that pandemic/disaster supplies are adequate for Ebola preparedness and wildfire smoke events.** A new assessment of current equipment is needed to determine what we have versus how much equipment we think we need during potential disasters. EH&S will catalog the current supplies, determine if they are adequate for our needs, and obtain additional supplies as needed.
- **Reduce and/or eliminate exposure to a hazardous material on campus.** The most effective ways to minimize exposure to a chemical are to limit/eliminate the chemical's use or to implement engineering controls. In 2019-2020, EH&S will seek to reduce employee exposures to a hazardous material using these control methods.

The proposed performance metrics for these goals will include:

Hazardous Materials & Waste Management Proposed Performance Metrics for 2018-2019	Target
AIM: Ensure that current pharmaceutical waste disposal risks are mitigated.	• Establish new practice that does ensure the proper sanitation of bins.
AIM: Ensure that pandemic/disaster supplies are adequate for Ebola preparedness and wildfire smoke events.	• Establish inventory of existing supplies. • Work with stakeholders to establish minimum quantities. • Obtain additional supplies as needed.
AIM: Reduce and/or eliminate exposure to a hazardous material on campus.	• Eliminate hazardous substances currently used at ZSFG or reduce exposure to substances through the implementation of engineering controls.

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:

- The following Biomedical Engineering policies were updated and approved:
  - 11.03 Medical Equipment Modification
  - 11.04 Medical Equipment Rental
  - 11.07 Patient-Owned Medical Equipment
  - 12.03 Reporting of Medical Device Incidents
  - 12.04 Implantable Medical Device Tracking
  - 25.02 Biomedical Equipment Repair Requests
- Pediatrics got approval to purchase a new Philips Affiniti 70 ultrasound
  - The department was previously borrowing an ultrasound from UCSF Mission Bay
- Implemented a process to verify that medical equipment PM procedures are being held to manufacturer recommendations and standards.
- Provide departments (OR, NICU, Pediatrics, and ED) weekly/monthly repair work orders
- Improve tracking of medical device recalls by implementing ECRI Automatch (connecting to Biomed's inventory database)
- New medical test equipment (total: 46) was purchased to become more efficient as a department and address the change of medical technology.

Developing People (Completed Training):

- Ultrasound Boot Camp: 1 Biomedical Technician
- Gambro Healthcare Prismaflex: 1 Biomedical Technician
- Marco R/O: 1 Biomedical Technician
- Draeger Evita XL ventilator: 2 Biomedical Technicians
- CareFusion LTV 1200 ventilator: 2 Biomedical Technicians

Safety:

- Medtronic PB980: A new batch of 48 units were placed into service in May 2019. A total of five service work orders that were generated in June 2019.
  - It was decided on 8/20 by ZSFG executive leadership that the Medtronic PB980s will be pulled from service.
- Philips EGC monitoring failures in the ICU
  - ECG modules (142/158) currently active had their firmware version confirmed and updated (if they previously were not).
  - An in-house clinical trial will take place from September 16-20 to determine the root cause of the ECG monitoring failures.
  - Smith's Medical H-1200s: Due the design change with the device's chamber door, performance of the device was impacted. The device does not meet performance standards for use at ZSFG.
    - ZSFG Nursing Leadership is looking at options to replace this model; biomed conducted a pilot in the emergency department with a potential replacement device
    - Biomedical Engineering is communicating with the sales representative to obtain a refund on four of the H-1200 devices since they were never placed into service.

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.

Objectives	Met/Not Met	Comments and Action Plan
Key Performance Metrics • Manage 100% of high risk (life support) medical equipment • Manage 100% of non-high risk medical equipment	Met	Biomed managed 100% of high risk and non-high risk medical equipment during FY18-19.
Realignment of medical devices per PM base month	Met	Continue to align medical devices by PM base month based on department in order to effectively complete all maintenances within the allotted time
Reduce cost for maintenance and repair services	Met	Increase the number of medical device that can be service in-house and depend less on manufacturers and third-party vendors
Biomedical technicians to complete 25% of monthly PMs each week	Met	Biomedical technicians completing 25% of their monthly PMs each week in order to hit 100% completion by the end of the month
Perform incoming inspection of medical equipment within 24 hours (during business hours)	Met	Holding each biomedical technician accountable to complete an incoming inspection within a time period to make sure accurate data is uploaded in Biomed's database

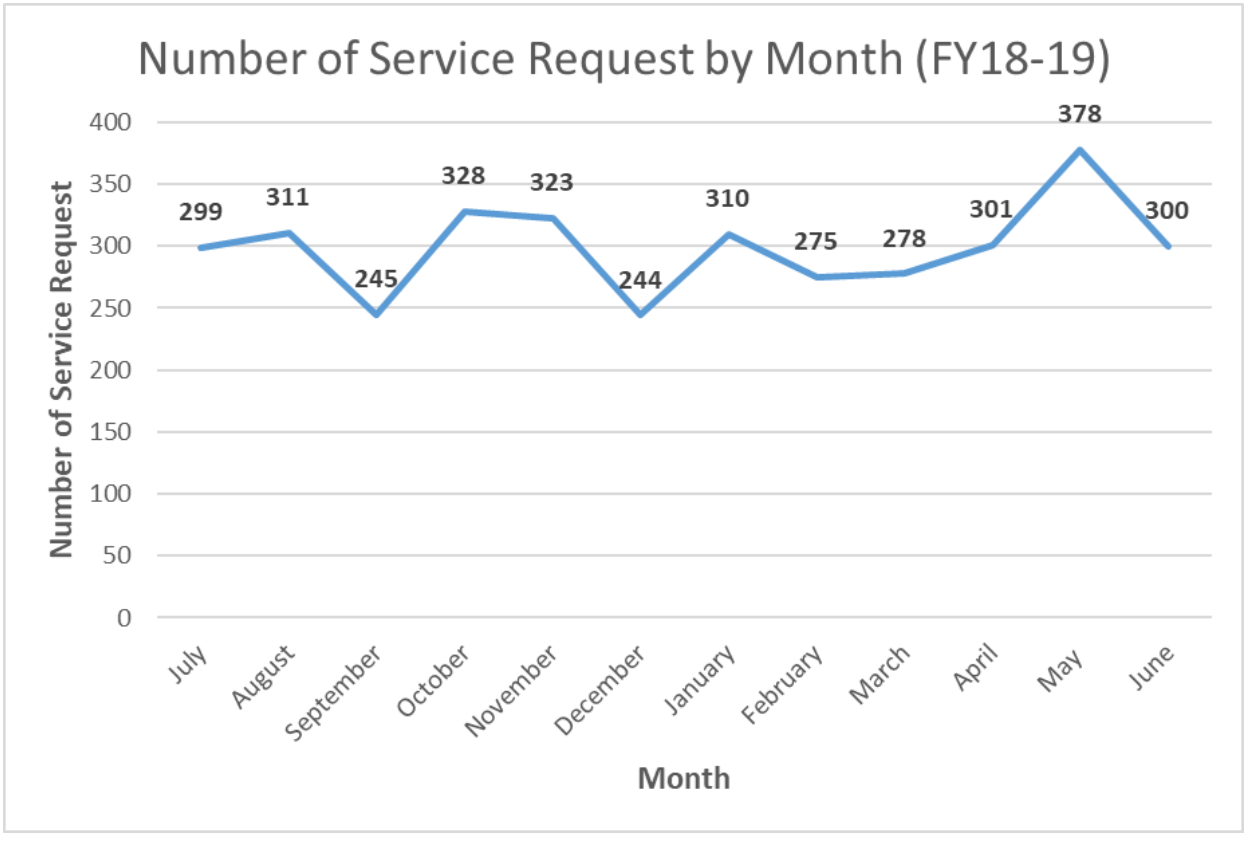
PERFORMANCE METRICS

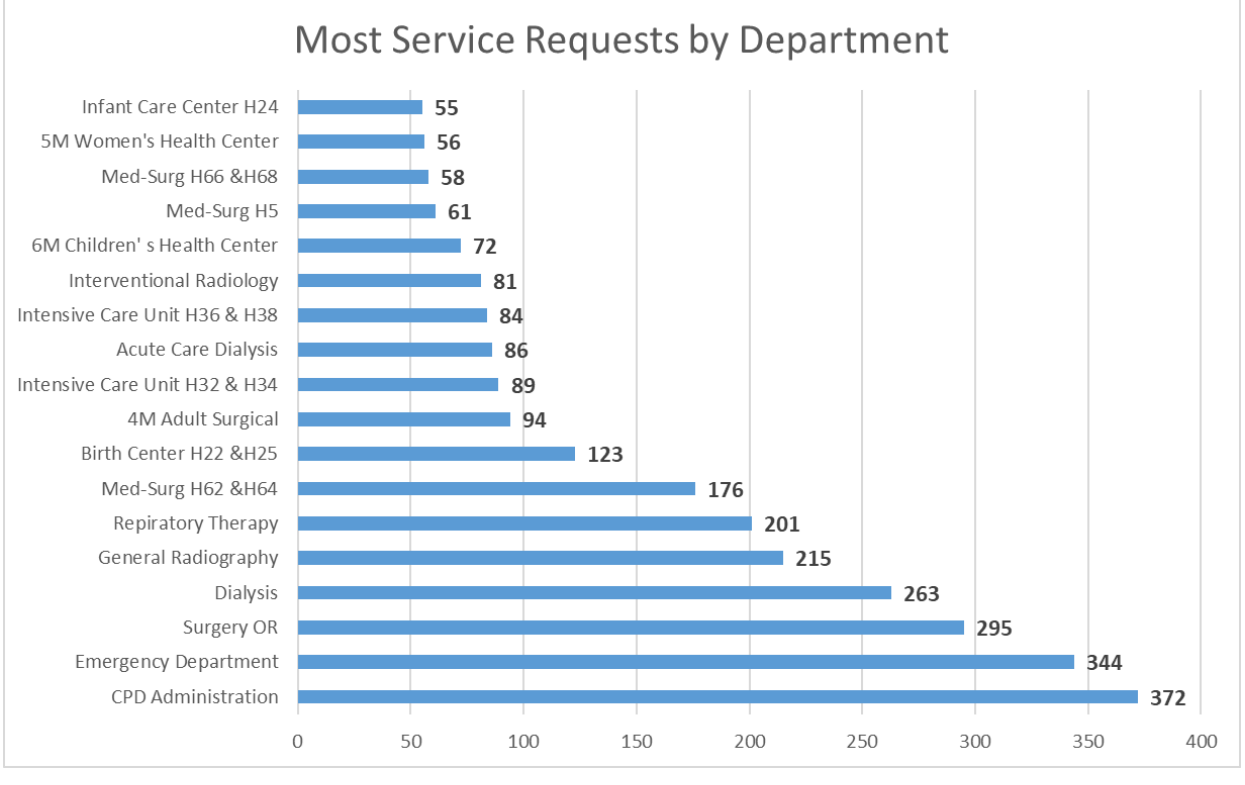
Preventative Maintenance:

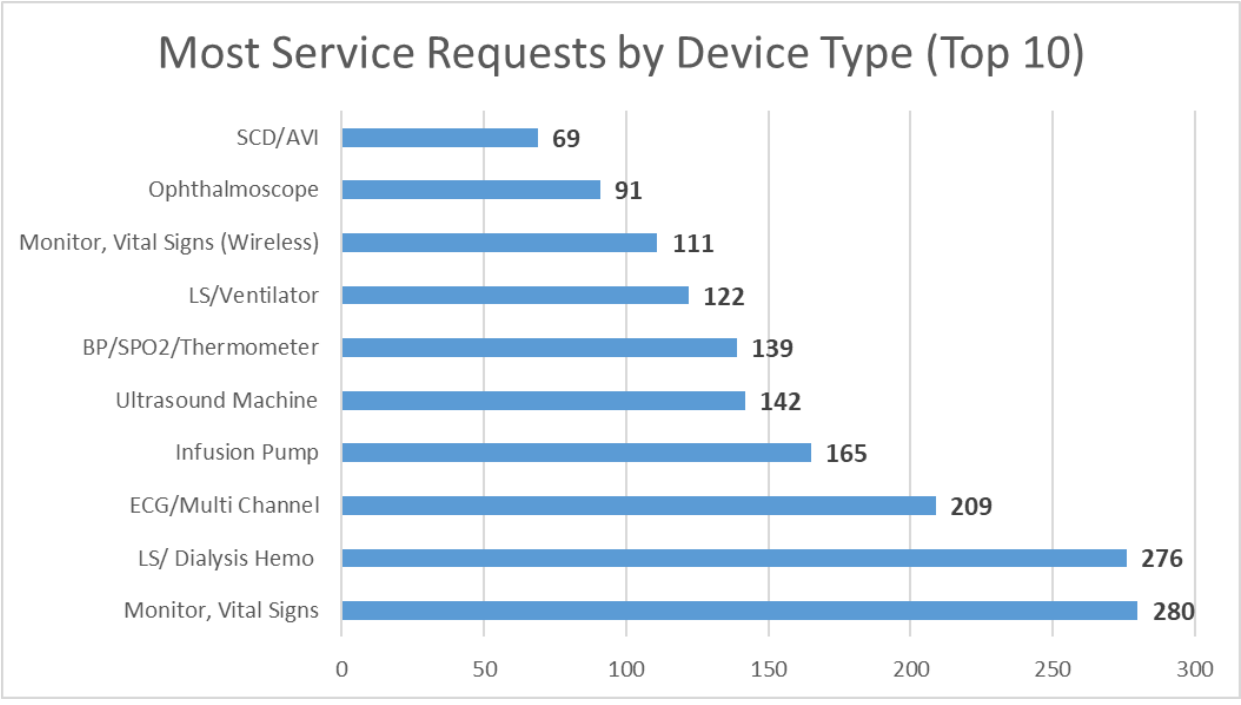
	July	August	September	October	November	December	January	February	March	April	May	June
High Risk (Life Support)												
Number of PMs	170	42	30	19	25	280	149	76	23	17	33	37
Completion Percentage	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Number of Devices Not Located	0	0	0	0	0	0	0	0	0	0	0	0
Number of Devices Being Serviced	0	0	0	0	0	0	0	0	0	0	0	0
Non-High Risk												
Number of PMs	324	564	576	587	978	518	445	522	1787	736	472	441
Completion Percentage	100%	100%	100%	99.83%	100%	100%	100%	100%	100%	100%	99.36%	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	1 (2 WOs)	0
Percentage Managed (Goal: 100%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Service Request:

	July	August	September	October	November	December	January	February	March	April	May	June
Number of Service Request	299	311	245	328	323	244	310	275	278	301	378	300
Number of Devices retired	17	25	18	88	24	24	39	59	29	37	61	108
Number of initial inspec. performed	24	48	30	45	35	49	39	26	35	26	248	52
Number of UO reports	6	2	3	2	0	1	2	2	1	0	3	4
EOC rounds survey	14	0	5	NA	NA	NA	7	8	33	38	57	31


Number of Service Request by Month (FY18-19)
Number of Service Request
400
350
300
250
200
150
100
50
0
299
311
245
328
323
244
310
275
278
301
378
300
July
August
September
October
November
December
January
February
March
April
May
June
Month


Most Service Requests by Department
Infant Care Center H24 55
5M Women's Health Center 56
Med-Surg H66 &H68 58
Med-Surg H5 61
6M Children' s Health Center 72
Interventional Radiology 81
Intensive Care Unit H36 & H38 84
Acute Care Dialysis 86
Intensive Care Unit H32 & H34 89
4M Adult Surgical 94
Birth Center H22 &H25 123
Med-Surg H62 &H64 176
Repiratory Therapy 201
General Radiography 215
Dialysis 263
Surgery OR 295
Emergency Department 344
CPD Administration 372
0
50
100
150
200
250
300
350
400



Medical Device Recalls/Hazard Alerts:

Device type	Problem	Manufacturer	Status
Electroencephalograph	Video pole upgrade	Natus	Completed
O2 Imaging System	Manufacturer releases software update to address potential problems	Medtronic	Completed
Jaundice Meter	Firmware changes need to be completed	Draeger	Completed
Infant Incubator	Canopy seals are not cleaned properly on systems with original seal design, potential contamination	GE Healthcare	Completed
Aspirator	Battery terminal may come in contact with the Pump causing an electric short leading to damage to wiring and resulting in loss of function or an inoperable	Ohio Medical	Completed
Somaton CT	Systems Using CARE Dose4D Algorithm: Unnecessary Radiation Exposure May Occur	Siemens	Completed
Circulatory assist unit, cardiac	Battery operating time may not last the expected time	Maquet Medical Systems	Completed
Cardiac output unit	Fluid ingress into the AC power outlet on power adapter	Edwards Lifesciences	Completed
Infant Warmer	Bedside panels and latch areas can crack/break if unit is moved using bedside panels instead of front handle or the maneuvering handle	GE Healthcare	Active; 17 work orders have been created
PageWriter TC Cardiograph	Lithium ion battery can overheat and ignite – if battery exceeded its life expectancy	Philips	Completed

Telemetry transmitter	Excessive battery power consumption; SPO2 automatic measurement mode may result in intermittent or missing low battery alerts	Philips	Active; 75 work orders have been created
Infant Warmer	Bedside panels and latch areas can crack/break if unit is moved using bedside panels instead of front handle or the maneuvering handle of Panda and Giraffe warmer	GE Healthcare	Completed
Cardiac Monitor	Manufacture received reports regarding fluid ingress into the AC power outlet on both the EV1000A power adaptor and the EV1000NI pump unit	Edwards Lifesciences	Completed
Vital Signs Monitor	Release of a customer installable system software update for all the SureSigns Monitors. This system software can enhance the users' ability to monitor battery condition and will alert users when it is time to replace the battery	Philips	Completed
Vital Signs Monitor	VS4 system software does not measure, display, and alarm for pulse rates above 240 beats per minute. Philips is releasing a system software update for the Sure Signs Monitor VS3/4 to restore the specified functionality	Philips	Completed
C-MAC Pocket Monitor Video Laryngoscopes	New Software Version Adds Warning before Powersave Shutdown.	Karl Storz	Completed
Phototherapy System	A potential issue of discoloration/degradation/melting of the fiber optic bundle at the pad connector which is inserted in the neoBLUE blanket light box. Natus Medical completed a redesign of the device and is initiating this field action to replace those systems shipped from 2011 through March 21, 2016. Newer systems shipped after March 21, 2016 do not need to be replaced. Natus will provide an updated literature kit for each of the newer devices	Natus Medical	Completed

EFFECTIVENEESS

The Medical Equipment Management Program has been evaluated by the Environment of Care Committee and the program is effective.

GOALS AND OPPORTUNITIES FOR IMPROVEMENT IN 2019-2020

- The management of the medical equipment security is necessary to ensure proper equipment operation.
    - The Biomedical Engineering Department to identify 100% of the medical devices that are connected to the ZSFG network or that store ePHI. Record the software version, IP address, and MAC address of these devices.
    - 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.
    - For existing medical equipment that is already connected to the DPH clinical network, get 100% up to current IT security standards either by updating necessary software or working with IT Security to put in a security mitigation plan in place.
    - Work with CEC (Capitol Equipment Committee) to develop process/policy for purchasing new medical equipment to meet regulatory and maintenance guidelines.

- Ensure that the standard procedure created and policy for purchasing new medical equipment adheres to for any medical device that is brought on the ZSFG campus, that needs network connectivity or stores ePHI.

- Develop 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.
  - Obtain purchase/install dates for 100% of Biomedical Engineering's inventory
  - Obtain End of Life dates for 100% of the inventory in order to implement a medical equipment lifecycle plan. In capturing this information, this will lead to a 5 to 10 year replacement/cost plan.
  - 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.
  - Develop ongoing plan that verifies that 100% of new medical equipment that is purchased or installed at ZSFG has an EOL listed and there is an EOL plan for replacement. Perform yearly audits of equipment to ensure plan is being followed.

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 through the Process Improvement and Patient Safety Committee (PIPS).
- Environmental Health & Safety (EH&S) focuses on the health, safety, and well-being of staff. 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 (EOC) in both this chapter and the Hazardous Materials and Hazardous Waste Chapter.

Proposed Performance Metrics for 2019-2020	Target	Comments and Action Plan
Manage and reduce the repair turnaround time for repair work orders.	8 days or less	Work with purchasing, materials management, and accounting to streamline a process to ensure the following occur: POs are generated to vendors and parts are ordered the same day, and parts are delivered within the expected time.
Manage and reduce the number of PM and repair services that are outsourced	10-15%	Continue providing further training to the biomedical technicians via the manufacturers, third-party vendors, and cross training in order to bring more services in-house.

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.

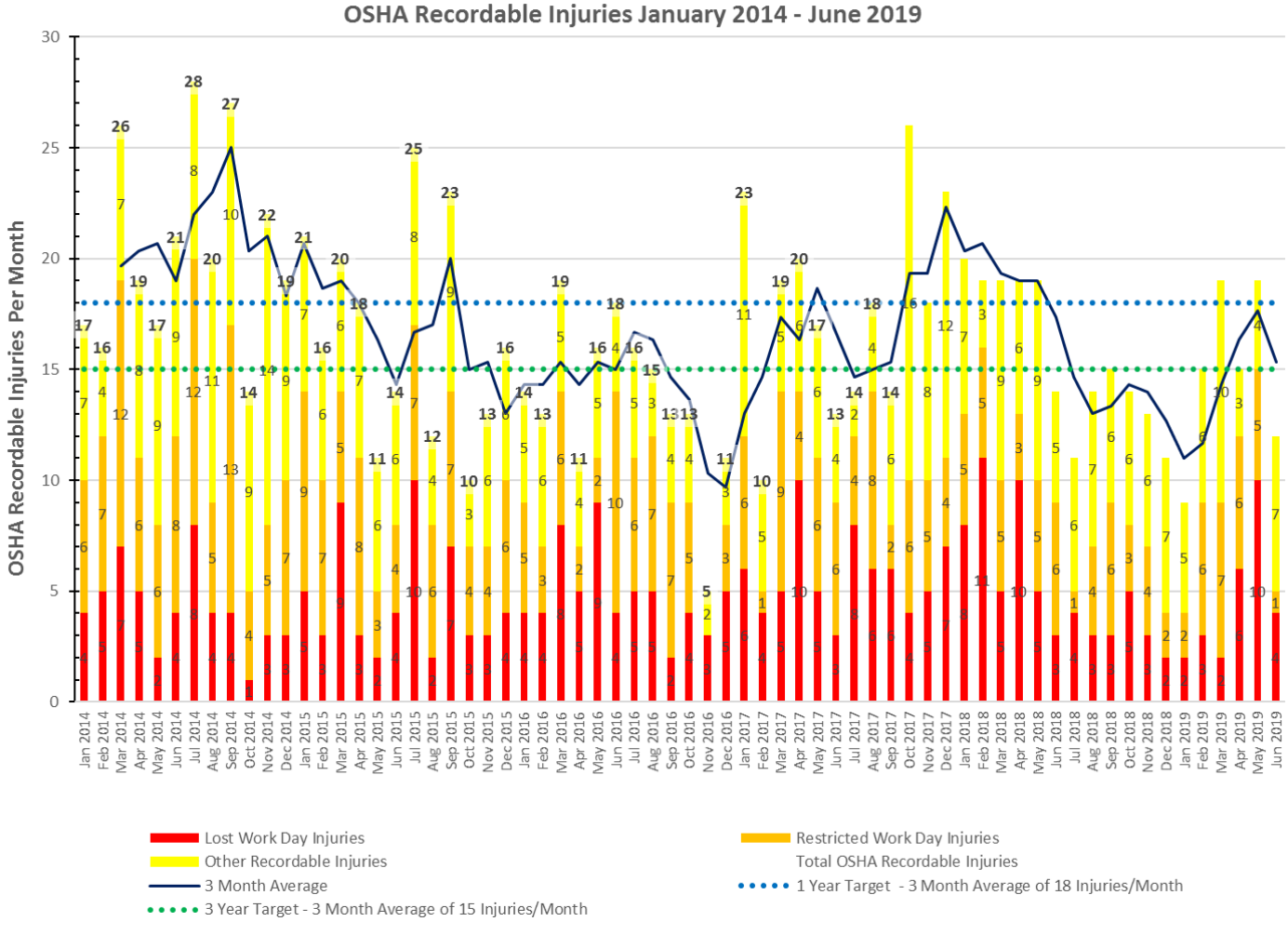
ACCOMPLISHMENTS

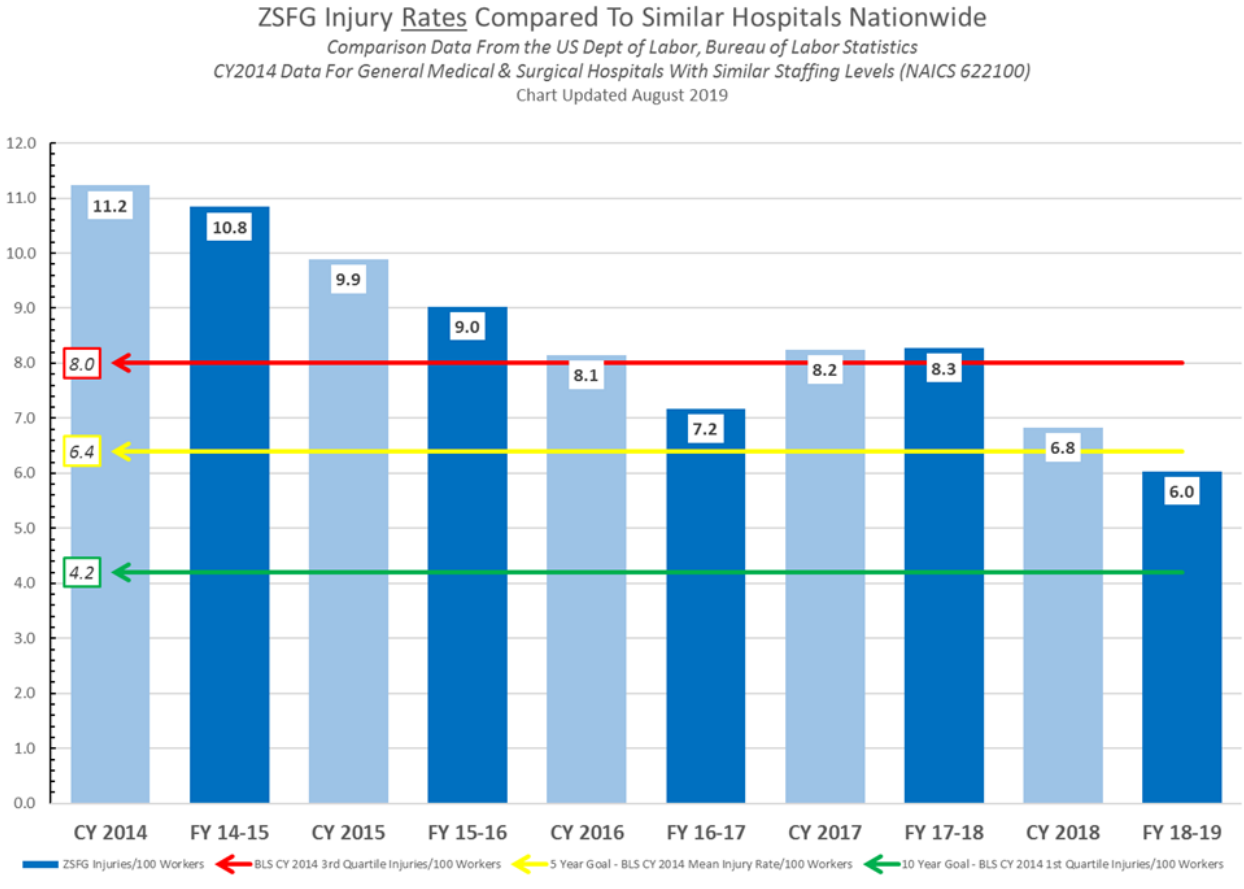
- Based on a multi-year analysis of blood and body fluid exposure reports submitted to the SF DPH Needlestick Hotline, identified possible gaps or lapse in the use of personal protective equipment (PPE) to protect against splashes. Worked with the DPH Safe Device/Bloodborne Pathogen Committee to develop a bulletin and poster entitled “Face the Facts” which provided information for managers, supervisors, and employees to discuss during staff huddles and the ordering information for PPE which should be worn to prevent splash exposures.
- Worked with Infection Control, Facilities, and Capital Projects to define standard procedures and work to prevent releases of hazardous materials (asbestos and lead) during construction and renovation activities and to ensure that health and safety and infection controls were incorporated into projects during the planning phase.
- Worked with the Safe Patient Handling Committee providing them with analysis of the types and locations of injuries associated with patient handling. Continued to work with the Committee on the deployment of single patient lifting slings to allow lifting devices such as overhead lifts to be used to prevent staff injuries while meeting infection control requirements.
- Worked with Food & Nutrition Services to support and foster their Safety Committee. Activities included a “train the trainer” session to both help safety committee members understanding the mechanics of a safe lift and develop the skills to coach their fellow employees on using safe lifting techniques.
- Continued to support UCSF Graduate Medical Education with their performance goal of reducing resident needlestick and sharps injuries. FY2018-2019 resident sharps injuries fell to a 6-year low, thanks to the efforts of the residents and Dr. Esther Chen who chairs GME.

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: Show continued progress in reducing staff injuries and injury rates, measured by no increase in Recordable Injury Counts or Injury Rates from FY2017-2018	**Partially Met:** Injury counts and the standardized injury rate ("Incidence Rate") decreased from FY2017-2018





AIM: Initiate no less than two initiatives specifically targeted at reducing staff injuries.	**Met:** Worked with Safe Device Committee on initiative to reduce sharps injuries among residents. Partnered with Safe Patient Handling on effort to purchase disposable patient slings.
AIM: Working with Hospital Leadership and Human Resources develop and start to implement plan for long-term stabilization of Ergonomics Program and address staffing for Environmental Health & Safety.	**Met:** TX of Health Program Coordinator II to 6138 Industrial Hygienist was approved. Hiring will commence in FY2019-2020.
AIM: Working with Nursing leadership, engage in PDSA to develop injury/incident investigation training for unit managers.	**Not Met:** Conflicting priorities and staffing gaps did not permit training to be developed and tested.

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 the 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 2018-2019:

- Safety: Continue efforts to reduce the number of staff injuries. See proposed Performance Metrics for 2018-2019 for additional details.
- Safety: Continue to identify and develop countermeasures for activities and areas where significant numbers of staff injuries occur.
- Safety: Create a log of EH&S concerns that are reported as well as how these were resolved.
- Safety: Revitalize the Ergonomics Program

.

The proposed performance metrics for these goals are:

Safety Management Proposed Performance Metrics for 2018-2019	Target	Comments & Action Plan
AIM: Show continued progress in reducing staff injuries and injury rates.	**Keep recordable injury counts and injury rates at/or below FY2018-2019 levels.**	Want to ensure that 2019-2019 reductions were not the result of increased classroom hours due to Epic implementation.
AIM: Develop no less than two new initiatives specifically targeted at reducing staff injuries.	**Two initiatives by end of FY2019-2020**	Focus on high injury rate activities and workgroups.
AIM: Create database of EH&S concerns and departmental actions.	**Create database and track 2019-2020 data**	EH&S needs a formalized way of tracking complaints and our responses to them. Resulting data may be a helpful leading indicator.
AIM: Restart Full Ergonomics Program.	**Hire permanent program manager**	Staffing issues have necessitated cuts in ergo program services. By hiring a new program manager, we will restore the program to its previous effectiveness.

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 duress buttons in Building 80 and 90 reception workstations.
- In collaboration with Facility Services, installed, in the tunnels, security gates/doors equipped with access control functionality
- Developed and maintained working partnerships with San Francisco Police and UC Police, and the UC Threat Management Team.
- Implementation of enhanced security measures for the Urgent Care Clinic
- Responded to 19,162 calls for service that involved patient/medical assist, patient standby, and patient restraint/support incidents.
- Confiscated 3,527 weapons and contraband through Emergency Department Security Weapons Screening.
- Completion of 3,000 campus-stairwell patrols
- Investigated 26-threat/workplace violence incidents.
- Reported serious incident crimes decreased 5% from 2017-2018, and has decreased 57% since 2014-2015.
- Use of Force incidents decreased 50% from 2017-2018, and has decreased 60% since 2014-2015.
- The San Francisco Sheriff's Department exceeded the overall SFDPH & SFSD MOU compliance target.

PROGRAM OBJECTIVES

III. 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. A security management plan is developed, and monitored, quarterly to address security vulnerabilities, and minimize risk.	Met	A 2018-2019 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.

These objectives were reviewed and evaluated. They were found to be effective and will remain unchanged in 2019-2020.

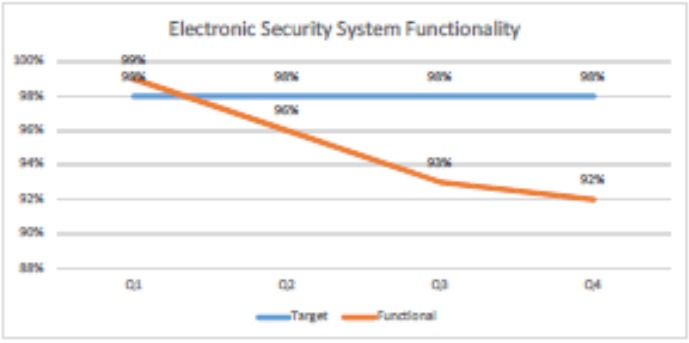
PERFORMANCE

The 2018-2019 performance metrics to measure the Security Management Program included, SFSD Response to Code Green “At Risk” Patients; Customer Satisfaction, and Electronic Security System Functionality.

The functional effectiveness of the 2018-2019 Security Management Plan Performance Metrics has been reviewed and found to be effective and will remain unchanged in 2019-2020.

Performance Metrics #1 **Code Green, “At Risk” Patient Alert Response Incidents/Drills**	**Q1**	**Q2**	**Q3**	**Q4**
Performance Metric: The contract security provider will be measured on their ability to effectively respond i.e. initial perimeter search, and notification of SFPD, BART, and MUNI as applicable, and documenting the search activity: **Response-rate Threshold – 80%** **Response-rate Target – 90%** **Response-rate Stretch – 100%**  **SFSD Response Rate** – Exceeded the target in each quarter, achieving 100%.	100%	100%	100%	100%

Performance Metrics #2 Customer Satisfaction	Q1	Q2	Q3	Q4
Performance Metric: On a monthly basis, a sample size of 100 customers, consisting of patients, visitors, employees, and physicians are surveyed on their Security Services experience. The Security Department is measured on its ability to achieve a rating of Satisfied - Very Satisfied: **Threshold - 80%** **Target - 90%** **Stretch – 98%**  **Customer Satisfaction Results** – The overall satisfaction rate for the year was 78%. The results from Q1-2 was based on hospital employees, and physician's feedback. Due to the DPH Employee Satisfaction Survey, no Security Survey was conducted in Q3. The results of the Q4 survey was based on Patient and Visitors feedback. **Opportunities for Improvement:** increased security visibility, public relations, and loitering, and illegal lodging on campus.	**70%**	**80%**		**85%**

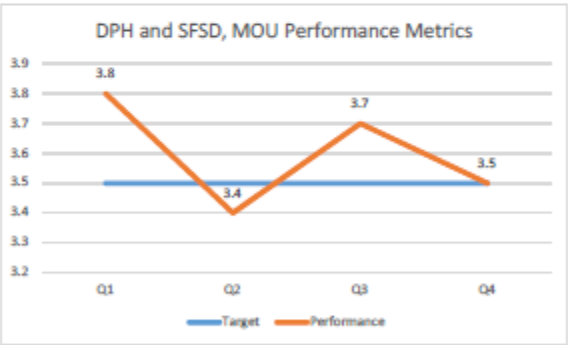
Performance Metrics #3 Electronic Security System Functionality	Q1	Q2	Q3	Q4
Performance Metric: On a monthly basis the SOC will inspect every element of the electronic security system for functionality. **Target**: 100% Electronic Security will be inspected, and will be 98% functional.  **Electronic Security System Results** – The overall performance target for 2018-2019 was 95%. Challenges in meeting the performance target included, system malfunctions due to power outages, network, server and system failures, and outdated security system technology in the outlying buildings.	**99%**	**96%**	**93%**	**92%**

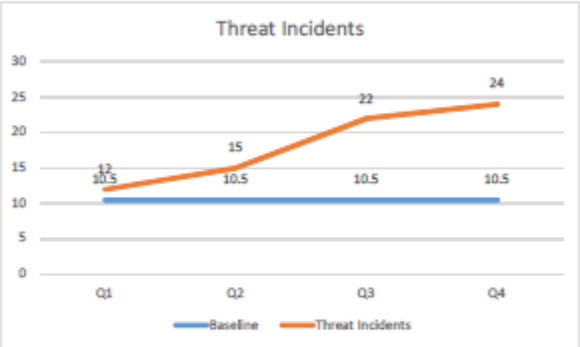
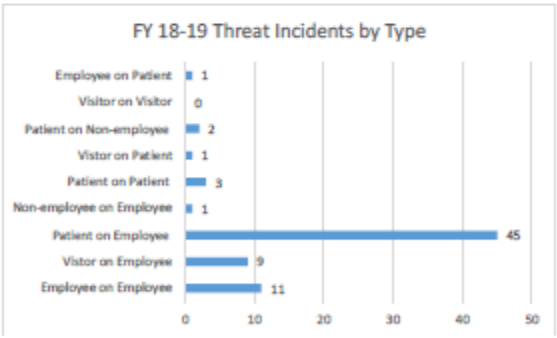
EFFECTIVENESS

Significant reporting metrics demonstrated the plan's effectiveness. SFSD continues to serve an active role in supporting medical and nursing staff with patient-care issues. Increased patrols have aided in addressing the vulnerabilities identified by the security risk assessment. The significant reporting objectives will remain unchanged in 2019- 2020.

The Security Management Plan achieved the following significant reporting results:

SIGNFICANT REPORTING:

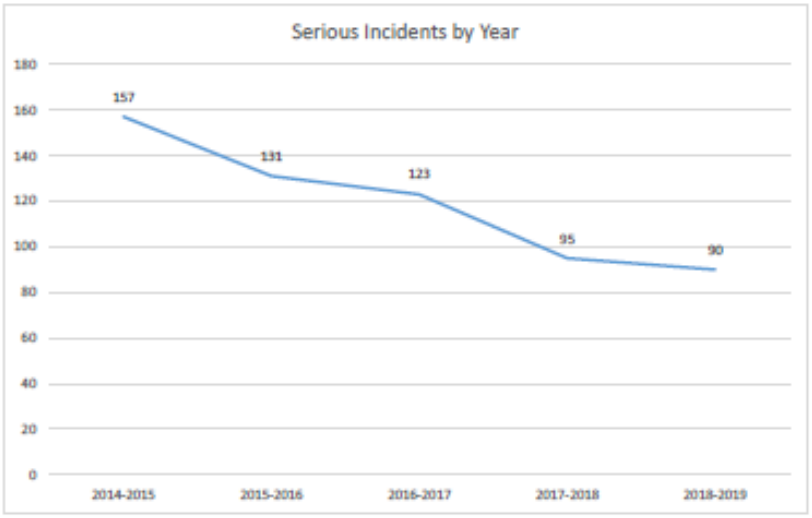
DPH and SFSD, MOU Performance Metrics	Q1	Q2	Q3	Q4
Performance Metric: A monthly security provider performance survey (SPS) will be completed, and submitted to DPH and SFSD Leaders. The assessment is intended to validate the security provider's compliance with MOU obligations, operational performance, management responsibilities and finance provisions. The provider is expected to maintain scores in the 3.5-5 range. A score of 1 to 2 indicates that a problem or issue exists that needs to be immediately addressed. A score of 0 indicates a substantive problem or issue that requires immediate correction or resolution.  Each line-item in the MOU is given a value, which ranges from "0 to 5." SFSD was measured on their ability to maintain scores in the 3.5-5 range. The overall MOU compliance for the year was 3.6.	3.8	3.4	3.7	3.6

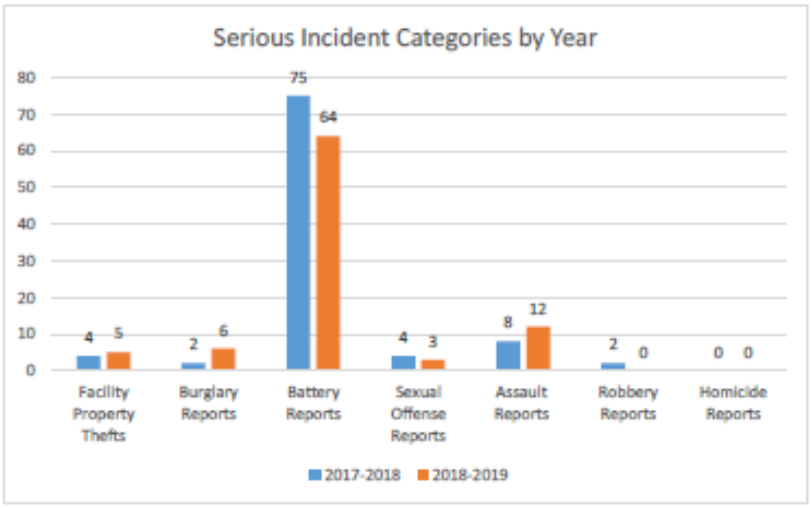
Threats Management: Moderate and High Risk Incidents	Q1	Q2	Q3	Q4
Standard: In accordance with Cal/OSHA Workplace Violence Prevention in Health Care Standard, Title 8 Section 3342, the Security Services Department, and SFSD will maintain records of all reported moderate and high risk threats/acts of violence. 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, including imminent danger is probable. To demonstrate the effectiveness of the hospital's Threat Management and Violence in the Workplace Prevention Plan, quarterly data of all moderate and high risk threat reports.  There were 73-reported threats, which exceeded the annual baseline by 58%.  Patient threats against employees accounted for 72% of reported threats.	**12**	**15**	**22**	**24**

Serious Incident Reporting	Q1	Q1	Q2	Q2	Q3	Q3	Q4	Q4
Yearly Comparison	2017-2018	2018-2019	2017-2018	2018-2019	2017-2018	2018-2019	2017-2018	2018-2019
SFSD - Facility Theft Reports	1	1	1	1	1	0	1	3
SFSD - Burglary Reports	1	1	0	4	1	0	0	1
SFSD - Battery Reports	23	7	12	15	17	13	23	29
SFSD - Sexual Offense Reports	2	1	0	0	0	1	2	1
SFSD – Assault Reports	0	6	4	5	0	1	4	0
SFSD - Robbery Reports	2	0	0	0	0	0	0	0
SFSD - Homicide Reports	0	0	0	0	0	0	0	0
Total Reports	**29**	**16**	**17**	**25**	**19**	**15**	**30**	**34**

Comparing 2017-2018 and 2018-2019 serious incidents decreased by 5% (5-incidents.) Battery incidents accounted for 71% of all the serious incidents.

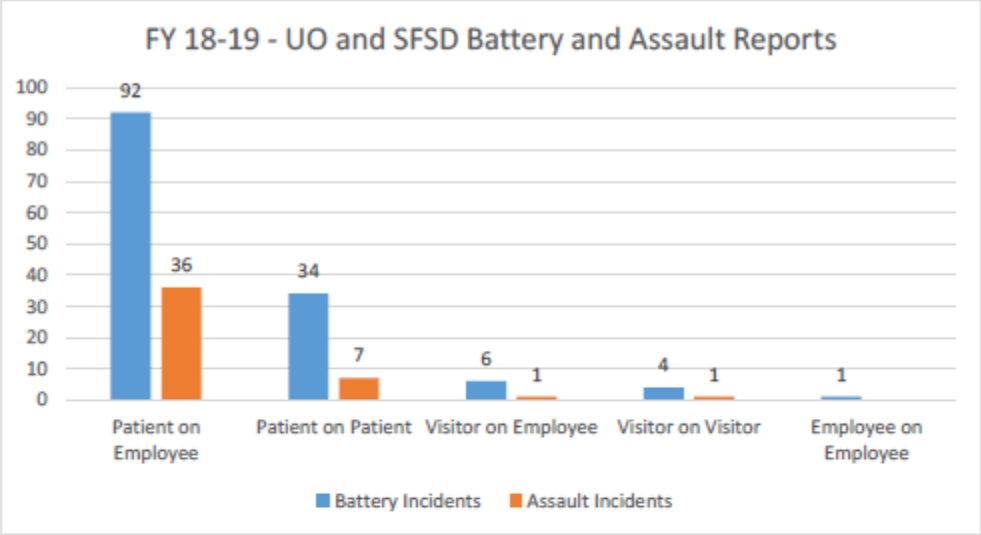
Serious incident crimes have decreased 57% since FY 14-15.



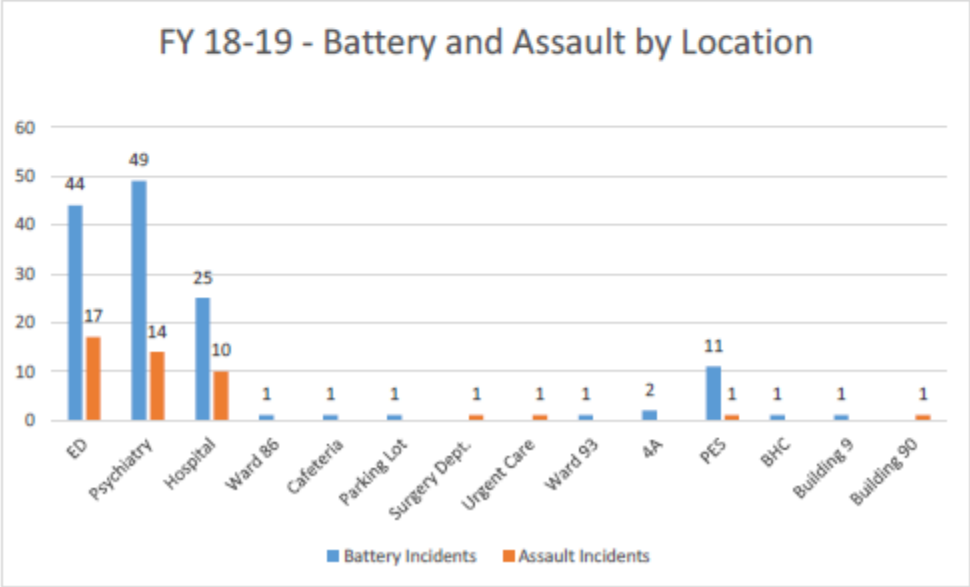


California Penal Code *Section 242:* ***battery*** *is defined as "any willful and unlawful use of force or violence upon the person of another." It is important to note that an individual may be charged with* ***battery*** *even if there is no injury.*

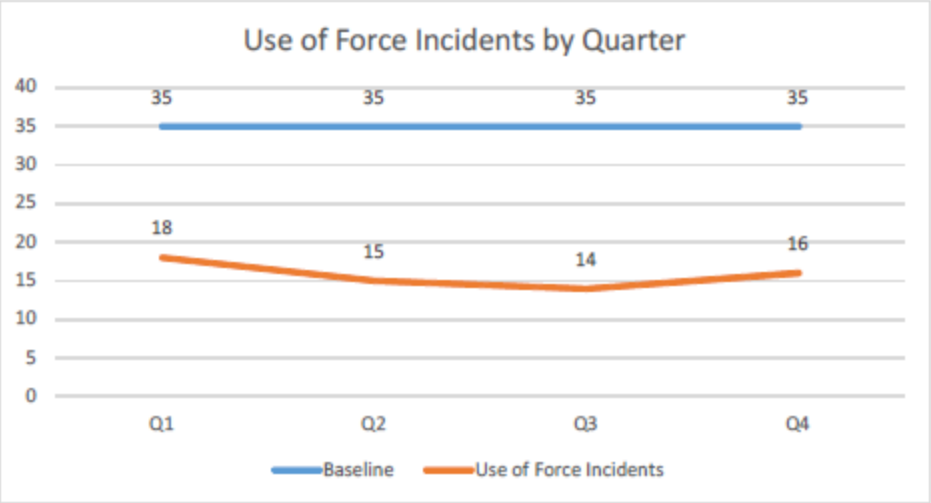
California Penal Code *Section 240:* ***assault*** *is an unlawful attempt, coupled with a present ability, to commit a violent injury on the person of another.*

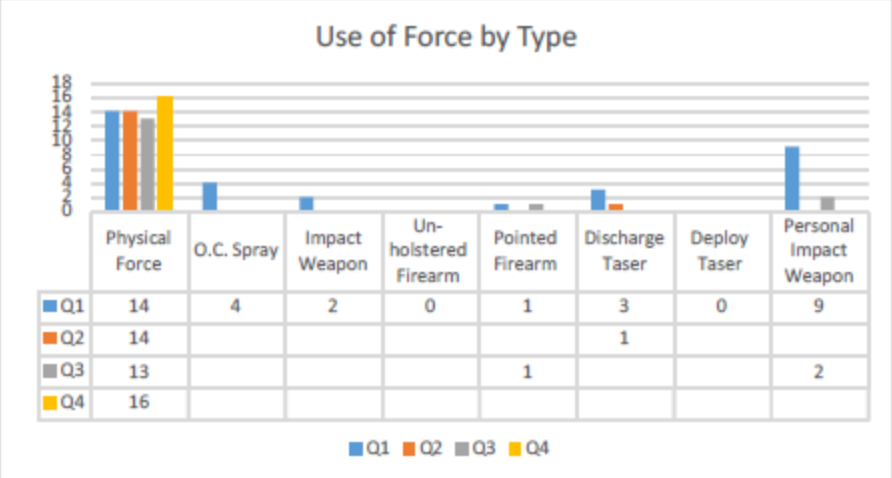


Patient on Employee battery and assault incidents account for 86% of the reported crimes on the hospital campus.

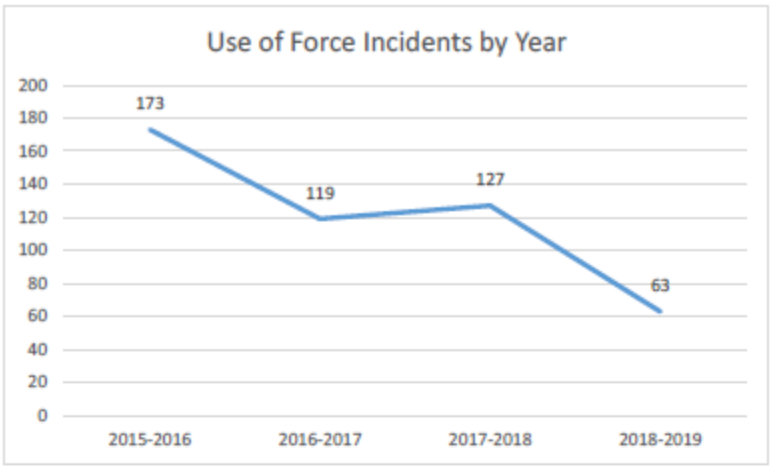


2018-2019, Use of Force Statistics	Q1	Q2	Q3	Q4
Monthly use-of-force data is tracked of all SFSD incidents occurring on ZSFG campus. In 2018-2019, there were 63 incidents involving use-of-force, broken down under the following categories: 1. Type of Force 2. Number of incidents 3. Cases 4. Location 5. Demographics	18	15	14	16

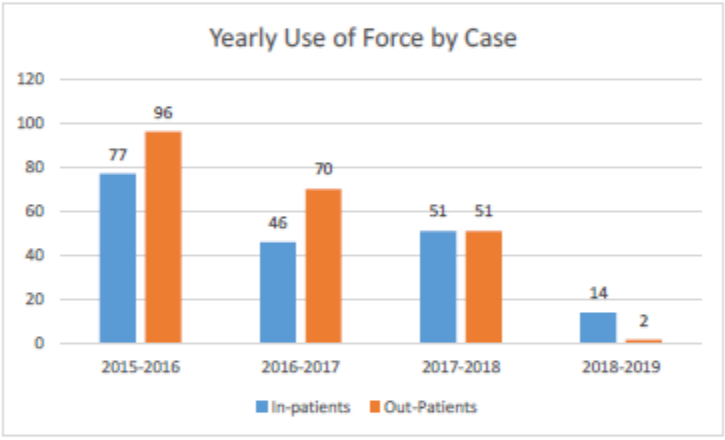




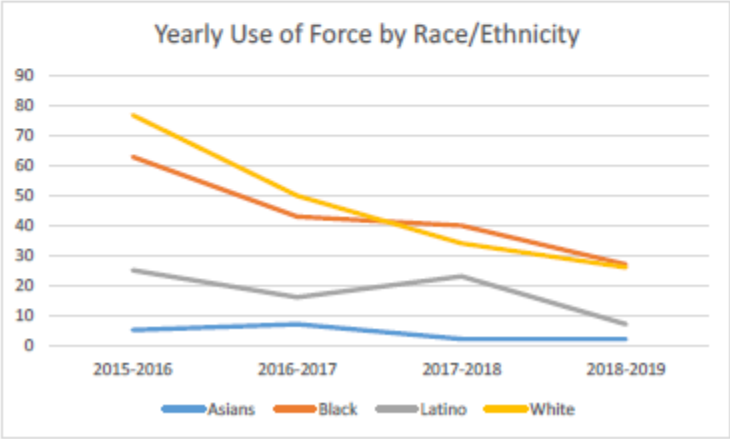
** The numbers do not equal by category. There are incidents where more than one type of force was used on an individual in a given incident.*



Use of force incidents have decreased 50% from 2017-2018, and decreased 63% since 2015-2016.

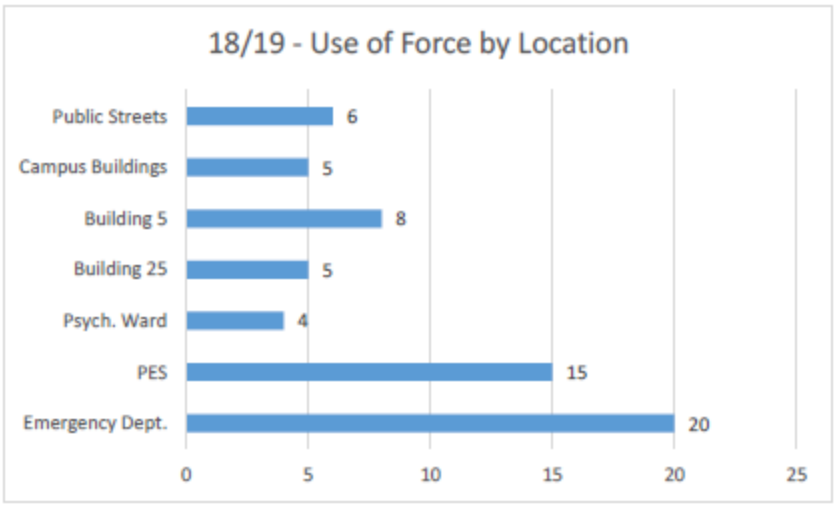


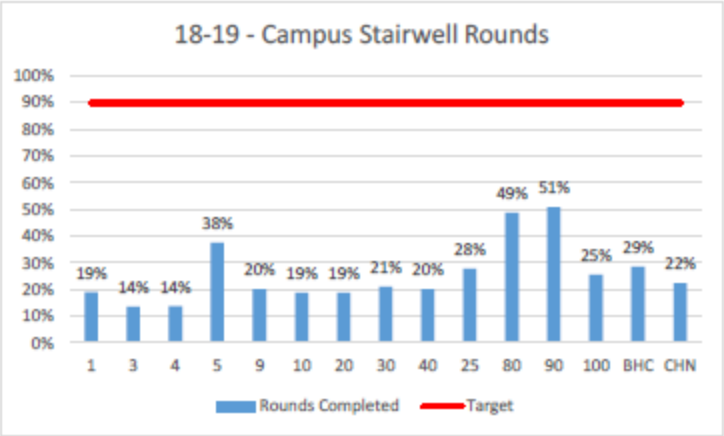
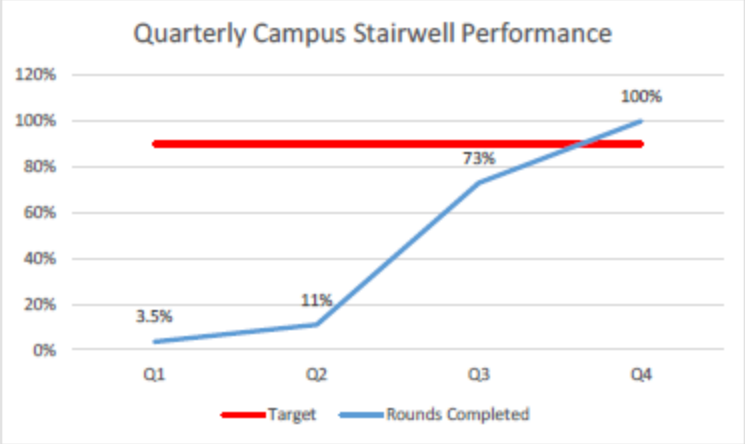
Since 2015-2016, 54% of use-of-force incidents occurred in out-patient settings, which includes the Emergency Department.



Since 2017-2018, use-of-force has been inflicted on African Americans more than other races/ethnicities (43% in 2017-2018, 42% in 2018-2019.)

In 2018-2019, use of force incidents occurred in following locations:



Campus Tunnel and Stairwell Rounding	Q1	Q2	Q3	Q4
Standard: Security Services will provide a quarterly report to demonstrate the effectiveness of a crime prevention program to minimize/eliminate unauthorized access to the campus tunnels and stairwells. The report will include data for the following: 1. Stairwell Rounding Frequency 2. Crime Analysis 3. Other Campus Rounding Activity  **Stairwell Rounding Analysis and Corrective Action** In 2018-2019, 25% of the campus stairwells were patrolled (3014 rounds.) The Security Leadership Committee continues to monitor monthly rounding results. The performance results in Q1-2 were the result of staffing shortages, and insufficient rounding documentation.  **Other Campus and Tunnel Rounding Activity:** There were 42-findings resulting from campus rounding activity that include 12-arrest, 4-citations, and 13-escorts off property for illegal lodging on campus.	**11**	**8**	**5**	**18**

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 waste water systems, vertical transportation, communication systems, HVAC, and medical gases.

ACCOMPLISHMENTS

- Maintain old absorber Chillers in Bldg. 2 (Power Plant) to extend equipment life cycle.
- Supported Bldg. 5 transition projects including, Urgent Care Clinic phase I (unit open), 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 move (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.
- Supported Bldg. 25 Hybrid MRI project to successful completion (unit open).
- Re-roofed "D" section of Bldg. 5.

PROGRAM OBJECTIVES FOR FY 2018-2019

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 2018-2019 Totals**					
Systems	**5**	**25**	**80**	**90**	**100**	**SB**
Emergency Power Failures	0	0	0	0	0	0
Commercial Power Failures	0	0	0	0	0	0
Water System Failures						
Domestic	0	0	0	0	0	0
Waste	7	0	0	0	0	0
Communication Failures	0	1	0	0	0	0
HVAC Failures	0	1	0	0	0	0
Med Gas Failures	0	0	0	0	0	0
Elevator Failures	19	8	3	3	1	1
High Voltage Electric Switchgear	0	0	0	0	0	0

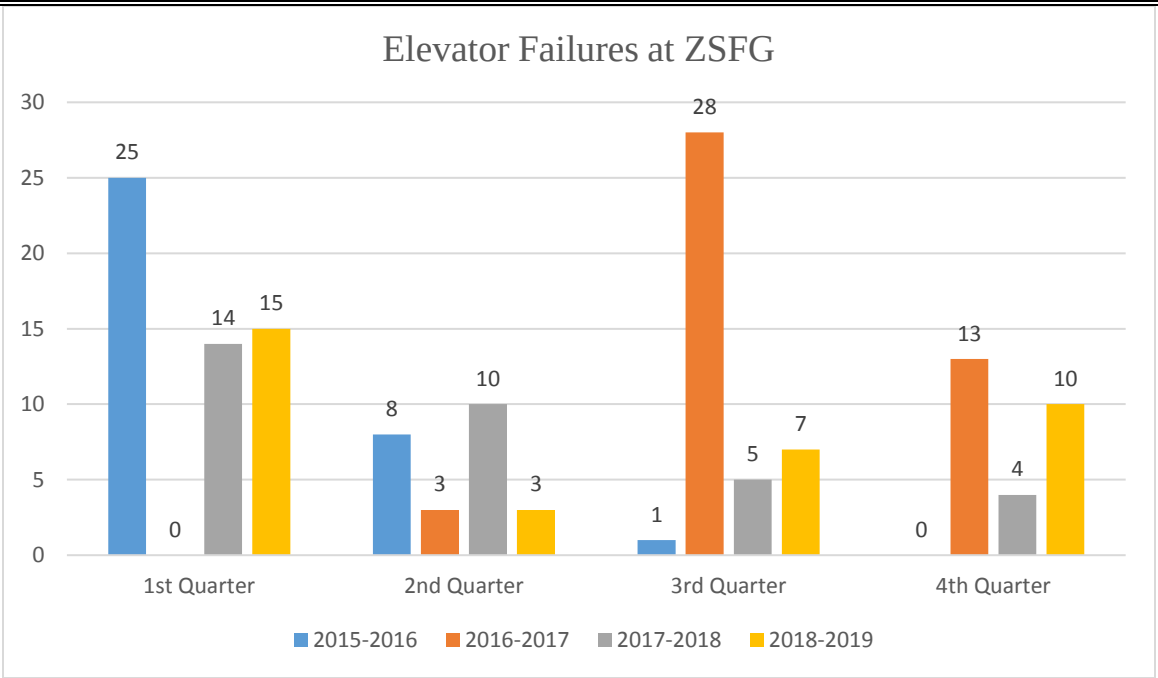
The Environment of Care Committee has evaluated the objectives and determined that they have been met. The Program continues to direct utilities management awareness in a proactive manner.

PERFORMANCE METRICS

AIM: For FY 2018-19, to continue the reduction in elevator failures on Campus. Target not met. 35 elevator outages vs 33 for 2017-2018.

Elevator Failures

Elevator Failures	1st	2nd	3rd	4th	Action
Elevator outages of 4-hours plus in duration, or passenger entrapment of any duration, (33 total cars)	15	3	7	10	Monitor for trends



AIM: For FY 2019-20 continue to manage and monitor outage trends with an overall goal to reduce elevator outages.

EFFECTIVENESS

The Utility Management Program is considered effective.

Proposed Performance Metrics for 2019-2020	Target	Comments and Action Plan
AIM: manage elevator failures at ZSFG to a minimum through contract unification.	**Reduce outages from 2018-19 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 2019-20

- Implement the chiller replacement project in Bldg. 2.
- Implement 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.
- 1 section of Bldg. 5 roofing was replaced in FY 2018-2019. Replace another 2 sections on Bldg. 5 in FY 2019-2020.

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):

Major EOC Activities

- DET continues to manage all education and training activities related to Workplace Violence Prevention. This includes development of curriculum, implementation; managing multi-discipline training team; tracking compliance and training evaluation.
- DET collaborates with EOC stakeholders to develop Annual Education material for staff.
- DET participates in the twice a month EOC Rounds to identify education and training gaps.

Accomplishments

- In the past year, 3075 (2358 existent + 725 new) staff have completed the Workplace Violence Prevention (WPVP) training.
- Developed and implemented Code Tan presentation for ZSFG New Employee Orientation.

Challenges

- There is a shortage in facilitators to effectively implement regulation mandated WPVP training. Currently, the training efforts are supported by 4 facilitators to provide training 2-hour training for all new employees and refreshers course for existing staff. Additionally, due to competing priorities recruitment of new trainers has been difficult. Adding trainers from all major units/departments would not only relieve current trainers, but they can also act as leads/resource person for their specific unit/department.

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.

Accomplishments

- Work 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.
- Monitor and comply with all trainings and provide key information to IT for the proper creation of the EVS module for the new Electronic Health Record (EHR), to be used at ZSFG. Work 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.

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 participates in the twice a month EOC Rounds to identify infection prevention and control issues and process gaps.

Accomplishments

- IC, EH&S, Facilities Management and Capital Projects collaboration on development of standard work for construction projects. This successful collaboration ensured that risk assessments are completed prior to projects going out to bid. It also established twice monthly meetings where the Combined Construction Work Permit is signed, and any outstanding issues are addressed prior to field work starting.
- IC and Pharmacy identified an issue of mold in medication refrigerators (unit-based and main pharmacy walk-in) during EOC rounds. Upon completion of mold remediation activities, a team from Pharmacy, IC, and Regulatory established a routine inspection and cleaning protocol to prevent reoccurrence. In addition, the efforts of this group resulted in the purchase of new pharmacy refrigerator shelving to eliminate areas for mold growth to occur.

Challenges

- There is 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. Examples of these issues include high patient census, implementation of the new electronic healthcare record (EHR) system, 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

- Streamlined inspection checklist to increase efficiency and to standardize what elements to look for among 7-8 pharmacy managers who participate in the EOC rounds
- Worked 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.
- Transition to EPIC requires ongoing workflow modifications that affect both 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:

- Annette Munoz, Security
- Josie Huang, Regulatory Affairs
- Eunice Santiago, Biomedical Engineering
- Gemma Cohen, Bloodborne Pathogen/Safe Device Committee
- Jessica Galens, Pharmaceutical Services
- Lalu Bourey, Quality Management / Regulatory Affairs
- Louis Moreno, Environmental Services
- Manuel Catam, Patient Safety
- Mariel Lontoc, Infection Prevention & Control
- Priyanka Karki, Dept. of Education & Training

- Reyland Manatan, Environmental Services
- Sandra Ladley, Quality Management
- Vilma Barrera, Infection Prevention & Control